Document Title:	**OJJDP Dual System Youth Design Study: Summary of Findings and Recommendations for Pursuing a National Estimate of Dual System Youth**
Author(s):	**Denise C. Herz, Ph.D., Carly B. Dierkhising, Ph.D.**
Document Number:	**252717**
Date Received:	**March 2019**
Award Number:	**2015-CV-BX-0001**

OJJDP Dual System Youth Design Study: Summary of Findings and Recommendations for Pursuing a National Estimate of Dual System Youth

Final Technical Report

Submitted by:

Denise C. Herz, PhD
Principal Investigator
(323) 343-4624
dherz@calstatela.edu
&
Carly B. Dierkhising, PhD
Co-Principal Investigator
(323) 343-4798
cdierkh@calstatela.edu

California State University, Los Angeles
School of Criminal Justice & Criminalistics

Submitted to:

Office of Juvenile Justice and Delinquency Prevention
U.S. Department of Justice, Office of Justice Programs
December 2018

This project was supported by Grant #2015-CV-BX-0001 awarded by the Office of Juvenile Justice and Delinquency Prevention, Office of Justice Programs, U.S. Department of Justice. The opinions, findings, and conclusions or recommendations expressed in this publication/program/exhibition are those of the author(s) and do not necessarily reflect those of the Department of Justice.

Contributing Authors

Site Examples of Integrated System Best Practices:

Center for Juvenile Justice Reform—Macon Stewart, Senior Program Manager, Samuel Abbott, Research Associate, Karen Kolivoski, Assistant Professor, Howard University, School of Social Work

Linked Administrative Data Analyses and Findings:

Cook County, Illinois: Chapin Hall at the University of Chicago—Robert Goerge, PhD, Senior Research Fellow, Shannon Guiltinan, MPA, Researcher, Nick Mader, PhD, Senior Researcher

Cuyahoga County, Ohio: The Center on Urban Poverty and Community Development (the Poverty Center) at Case Western Reserve University—Claudia Coulton, PhD, Co-Director, Youngmin Cho, PhD, Postdoctoral Scholar

New York City: The Center for Innovation through Data Intelligence in New York City—Maryanne Schretzman, DSW, Executive Director, Jessica Raithel, LMSW, MPH, Senior Analyst, Andrew Wallace, PhD, Consultant

Proposed Methodologies:

Westat—Susan Chibnall, PhD, Senior Study Director, Jim Green, PhD, Senior Statistician

Policy and Practice Implications Related to Using Linked Administrative Data:

Actionable Intelligence for Social Policy (AISP) at the University of Pennsylvania—Dennis Culhane, Co-PI and Dana Andrew Stone Professor of Social Policy at the School of Social Policy and Practice, TC Burnett, Associate Director

Acknowledgments

This report reflects the collective work of the Dual Systems Youth Study Linked Administrative Data Subcommittee and the Jurisdictional Case Studies Subcommittee. We would like to extend our appreciation to Diandra Torres and Rebecca Hirsch, California State University, Los Angeles, and all Linked Administrative and Jurisdiction Case Study Subcommittee members for sharing their expertise and time on this project to date (see Appendix A for all members).

In addition to those involved directly in this study, we would like to recognize and thank the following individuals and agencies for their data contributions to this project.

- Shay Bilchik, Director, Center for Juvenile Justice Reform at Georgetown University
- Cook County Juvenile Probation and Court Services; Illinois Department of Child and Family Services (DCFS); Chicago Police Department (CPD); and the Illinois Department of Corrections (IDOC)
- Cuyahoga County Juvenile Court; the Cuyahoga County Department of Children and Family Services; the Cuyahoga County Office of Homeless Services; the Cuyahoga County Sheriff's Department; and the Cuyahoga County Job and Family Services
- NYC Administration for Children's Services; NYC Department of Probation; NYC Law Department; NYC Department of Homeless Services; and NYC Department of Correction

This study would not have been possible without the permission of these agencies to use their data. The findings reported within this report, however, are those of the authors and permission to use data from these entities does not indicate an endorsement of the content or conclusions contained within the report.

TABLE OF CONTENTS

LIST OF APPENDICES

Abstract

Across the country, child welfare (CW) and juvenile justice (JJ) systems now concur that youth involved in both systems (i.e., dual system youth) are a vulnerable population who are often unrecognized because of challenges in information-sharing and cross-system collaboration. These challenges currently prevent estimating the number of dual system youth nationally and limit our understanding of best practices used by jurisdictions implementing integrated systems models. To address this gap in knowledge, two subcommittees, the Jurisdictional Case Studies (JCS) Subcommittee and the Linked Administrative Data (LAD) Subcommittee, were formed as part of the OJJDP Dual System Youth Design Study to address the following goals:

> *Goal 1: To identify the successes and challenges associated with cross-system collaboration, identify best practices for dual system youth, and develop a tool to collect and report such information in a consistent and representative way.*
>
> *Goal 2: To provide insight into the incidence of dual system involvement and describe key characteristics (e.g., race, gender, class, ethnicity, sexual orientation) and trajectories (e.g., timing/type of encounters with the systems) of this population, and to propose a method to generate a national estimate of dual system youth.*

Methods

The JCS Subcommittee reviewed data from jurisdictions participating in the Georgetown University Center for Juvenile Justice Reform's Crossover Youth Practice Model (CYPM). By using these data, visiting five CYPM site meetings, and using the knowledge from the experts in the field, we were able to identify successes and challenges in engaging in cross-system collaboration for dual system youth from a broad range of jurisdictions and stakeholders. These findings, in turn, systematically defined potential best practices for dual system youth and informed the development of a best practices rubric for integrated systems work.

The LAD Subcommittee focused its efforts on the analysis of linked administrative data drawn from Cook County, Illinois; Cuyahoga County, Ohio; and New York City. Data from these sites were used to generate dual system youth incidence rates and a description of their characteristics to "test" the use of linked administrative data to produce a national estimate. The primary cohort of youth examined included all youth with their first juvenile justice petition between 2010 and 2014 in Cook and Cuyahoga Counties and between 2013 to 2014 in New York City. Additionally, other administrative outcomes such as homelessness, incarceration, and receipt of public assistance were explored for this group while they were children/adolescents (homelessness and public assistance) and in young adulthood (homelessness, incarceration, and public assistance) were analyzed. Incidence rates and characteristics were also produced for a cohort of youth with their first arrest between 2010 and 2014 in Cook County. A theoretically derived framework of dual system definitions was used to drive these analyses, and sequence analysis was used to empirically test this framework (see Chapter 4).

Findings from Jurisdictional Case Studies Work

The top three practices addressed or implemented in developing cross-system collaboration under the CYPM were: (1) early identification of dual involvement; (2) improved information sharing across child welfare and juvenile justice systems; and (3) use of coordinated case supervision across juvenile justice and child welfare. The most common positive outcomes among jurisdictions utilizing cross-system collaborative practices were fewer petitions at follow-up (i.e., 9 months) and increased youth involvement in prosocial activities. The OJJDP Best Practices for Dual Systems Youth Rubric was developed based on 11 domains of cross-system collaboration practice (see Chapter 2 and Appendix B). Specifically, the Rubric provides an inventory of essential best practices across levels of implementation to assess a jurisdiction's progress toward achieving integrated systems work.

Findings from the Linked Administrative Data Work

The prevalence of dual system youth was high, varying across sites from 44.8% in Cook County to 68.5% and 70.3% in Cuyahoga and New York City, respectively. The most prevalent group was dual contact (i.e., non-concurrent system contact) youth on a child welfare pathway in all sites, and dually-involved youth (i.e., concurrent system contact) had the longest history with the child welfare and the most extensive involvement than any other group (see Chapter 5 and Chapter 6). Across all additional administrative outcomes dual system youth more commonly utilized additional service systems (i.e., criminal justice system, shelter care, public assistance) in young adulthood compared to their child welfare and juvenile justice only counterparts (see Chapter 7).

The sequence analysis aligned and further clarified the theoretically derived framework for defining dual system youth. Specifically, this analysis produced four empirically derived categories of dual system youth: (1) limited and late child welfare involvement; (2) moderate child welfare involvement; (3) long duration in child welfare; and (4) long duration in out-of-home placements (see Chapter 8).

Finally, study findings informed (1) a proposed methodology for estimating a representative incidence rate for dual system youth at the national level and (2) specific policy and practice implications for improving integrated, cross-system practices for dual system youth. Both the proposal and the implications are presented in detail in Section IV of this report.

Introduction: Project and Report Overview

Across the country child welfare (CW) and juvenile justice (JJ) systems now recognize that youth involved in both systems (i.e., dual system youth) are a vulnerable population who go unrecognized because of challenges in information-sharing and cross-system collaboration. These challenges currently prevent estimating the number of dual system youth nationally and limit our understanding of best practices used by jurisdictions implementing integrated systems models. To address this gap in knowledge, OJJDP released a RFP (OJJD-2015-4126) to fund a design study directed at these two issues. Drs. Denise Herz and Carly Dierkhising at California State University, Los Angeles were awarded the grant in 2015. The overarching goals of the design study were derived from the original Request for Proposals and include the following:

Goal 1: (a) To identify the successes and challenges associated with cross-system collaboration and data integration in jurisdictions, and (b) to use the results from the case studies to design a method by which to collect and report such information in a consistent and representative way nationwide.

Goal 2: (a) To provide insight into the incidence of dual system involvement and describe key characteristics/trajectories of this population (e.g., race, gender, class, ethnicity, sexual orientation, and timing/type of encounters with the systems), and (b) propose a method to generate a national estimate of dual system youth and their trajectories leading to multiple system involvement.

The Jurisdictional Case Studies (JCS) Subcommittee and the Linked Administrative Data (LAD) Subcommittee were formed to address these goals (see Appendix A for a list of all subcommittee members). The JCS Subcommittee reviewed the literature and analyzed Crossover Youth Practice Model (CYPM) data to develop a best practices rubric that could be used to capture the level of cross-system collaboration and use of best practices for dual system youth within jurisdictions (i.e., Goal 1). The LAD Subcommittee focused its efforts on the analysis of linked administrative data drawn from Cuyahoga County, Ohio; Cook County, Illinois, and New York City to "test" the use of such data to generate an estimate of dual system youth nationwide (i.e., Goal 2).

Ideally, the integrated system practices in linked administrative data sites (i.e., Cook County, Cuyahoga County, and New York City) would have been highlighted and included in the JCS analysis. Unfortunately, this was not possible due to the parameters placed on the study by OJJDP. Specifically, we were not allowed to collect any new data, which limited us to using secondary data produced by the Center for Juvenile Justice Reform's Crossover Youth Practice Model (CYPM). Thus, it is important to underscore that the LAD sites may be implementing best practices in integrated systems work, but those practices were not directly included in the JCS analysis. Whenever possible, however, notable developments and practices implemented by those sites are included in the report.

The Research Team's collective work is summarized in this report and represents the culmination of three years of work. The findings produced in this study are presented according

to the research questions/study objectives related to Goals 1 and 2. The chapters and the questions they address include:

Section I: Identifying Best Practices for Dual System Youth

- Chapter 1: What are the best practices used for dual system youth, and how can we collect information on best practices for dual system youth in a consistent way nationwide?
- Chapter 2: How have these practices been used in jurisdictions across the nation?
- Chapter 3: A Case Study in Los Angeles County, California

Section II: Defining Dual Systems Youth and Exploring the Incidence of Dual System Contact

- Chapter 4: A proposed framework for defining dual system youth consistently
- Chapter 5: What is the incidence rate of dual system contact among youth adjudicated in the juvenile justice system and what are their characteristics?
- Chapter 6: What is the incidence rate of dual system contact among youth arrested and what are their characteristics?
- Chapter 7: What other social service and criminal justice outcomes do dual system youth have?
- Chapter 8: Are the categories of dual system youth proposed in the framework empirically supported by trajectory analysis?

Section III: Proposed Methodologies for Producing a Nationally Representative Incidence Rate for Dual System Youth

- Chapter 9: What is the viability of child welfare and juvenile justice data to support the production of a representative national incidence rate for dual system contact?
- Chapter 10: What is the most appropriate research design to produce a nationally representative incidence rate and what is the estimated cost?

Section IV: What Does This Body of Work Tell Us?

- Chapter 11: A Summary of Study Findings and Implications for Policy and Practice
- Chapter 12: Producing a National Incidence Rate—The Viability and Challenges Related to Using Administrative Data

SECTION I: Identifying Best Practices Used for Dual System Youth

This section summarizes the work produced by the Jurisdictional Case Studies Subcommittee to address Goal 2 of the current study. Specifically, this section identifies "best practices" in integrated systems work for dual system youth from the literature, analysis of data collected by the Center for Juvenile Justice Reform (CJJR) as part of the Crossover Youth Practice Model (CYPM) between 2013 and 2016, and observations from CYPM site meetings held in three separate jurisdictions. Based on this collective information, a Best Practices Rubric for Dual System Youth was developed. The proposed domains are described in this section and examples of integrated systems work in each of the domains are highlighted.

Related Goal and Research Questions in Section I

Goal 1: (a) To identify the successes and challenges associated with cross-system collaboration and data integration in jurisdictions, and (b) to use the results from the case studies to design a method by which to collect and report such information in a consistent and representative way nationwide.

- Chapter 1: What are the best practices used for dual system youth, and how can we collect information on best practices for dual system youth in a consistent way nationwide?

- Chapter 2: How have these practices been used in jurisdictions across the nation?

- Chapter 3: A Case Study in Los Angeles County, California

Chapter 1: Results from Crossover Youth Practice Model Sites and the Development of a Best Practices Rubric[1]

Lead Authors:
Carly B. Dierkhising, California State University, Los Angeles
Denise Herz, California State University, Los Angeles

Across the country child welfare and juvenile justice systems now recognize that youth involved in both systems (i.e., dual system youth) are a vulnerable population who often go unrecognized because of challenges in information sharing and cross-system collaboration. As part of the work of the Office of Juvenile Justice and Delinquency Prevention's (OJJDP) Dual System Youth Design Study experts from the field and researchers joined the Jurisdictional Case Studies (JCS) Subcommittee to share their knowledge on successes and challenges from the field and collaborate in developing the OJJDP Best Practices Rubric for Dual System Youth. The Rubric is designed for juvenile justice and child welfare system stakeholders to assess their level of cross-system collaboration by identifying where they fall on a spectrum from 'practice not in place' to 'highly developed practice.' In developing the Rubric study partners integrated and synthesized secondary data sources made available to them from the Center for Juvenile Justice Reform's Crossover Youth Practice Model (CYPM) and the practical experience of the JCS Subcommittee members (see Appendix A for list of Subcommittee members).

Assessment of Cross-System Collaborative Practices: Development of the Rubric

Jurisdictions across the country are engaging in a range of practices that support cross-system collaboration for dual system (i.e., juvenile justice and child welfare) and multi-system (e.g., juvenile justice, child welfare, education, mental health, etc.) youth. Synthesizing the successes and challenges of what jurisdictions are doing is essential in moving cross-systems' work forward and contributing to an evidence-base for these innovative practices. In order to summarize the work of various jurisdictions across the country we partnered with the Center for Juvenile Justice Reform (CJJR) and analyzed various program evaluation and practice tools that are used during the implementation of the CYPM. These data sources included:

1) a brief electronic survey regarding the practices jurisdictions enhanced or developed as part of CYPM implementation;
2) a checklist of practices implemented during the CYPM consultants' involvement in technical assistance; and
3) CYPM outcome data which participants are required to collect over the course of their work with the CYPM.[2]

[1]As explained in the Introduction, the linked administrative data sites (i.e., Cook County, Cuyahoga County, and New York City) are not included in the analysis of current approaches and possible best practices for integrated systems work.

[2] Data on individual youth and their progress over the course of nine months was collected using a systematic procedure and data collection tool. Participating CYPM sites were required to identify all youth who met their target population as of a pre-determined "start date" and for each youth, collect data related to their socio-demographic characteristics and experiences in the child welfare and juvenile justice system using a CYPM data collection tool. Each of these youth were tracked for nine months, and at the end of the tracking period, data were systematically collected by each site on their progress or outcomes since their identification as a dual system youth. These data

In addition to secondary data analysis of the CYPM data sources, we also accompanied CYPM consultants to five meetings they held with jurisdictions working on CYPM implementation. Impressions and lessons learned from those meetings also contributed to the development of the Rubric and are described below.

Survey and Checklist Findings

Among the jurisdictions that submitted either a checklist or online survey to CJJR with no more than 15% missing data, the most common practices implemented during their involvement in the initiative were identified. Twenty-three items were matched between the survey and checklist responses, these were then merged and coded to correspond to a yes/no response option based on whether the jurisdiction enhanced *or* implemented the indicated practice (1 = yes) or did not address that practice (0 = no).

It should be noted that some jurisdictions may not have prioritized or addressed certain areas because it may have been a practice that was already established in their jurisdiction. Additionally, the length of time for which the jurisdiction is reporting on varies; it is expected that jurisdictions reported on one year of implementation, but length of time was not captured in the data collection process.

In addition, all jurisdictions that implemented the CYPM in this timeframe focus specifically on youth who are dually involved (i.e., concurrent involvement in both child welfare and juvenile justice). Jurisdictions, when they first begin the implementation of the CYPM, are able to define for themselves the population of dual system youth that they want to focus on and the dually involved population is the most common. Therefore, all responses are in reference to improving cross-system collaboration for youth who are concurrently involved in both juvenile justice and child welfare (see Chapter 4 for a discussion on the various subpopulations of dual system youth).

Results reveal that across the 41 jurisdictions that completed a survey or a checklist at the time of our work, the top three practices addressed by jurisdictions were (see Figure 1.1):

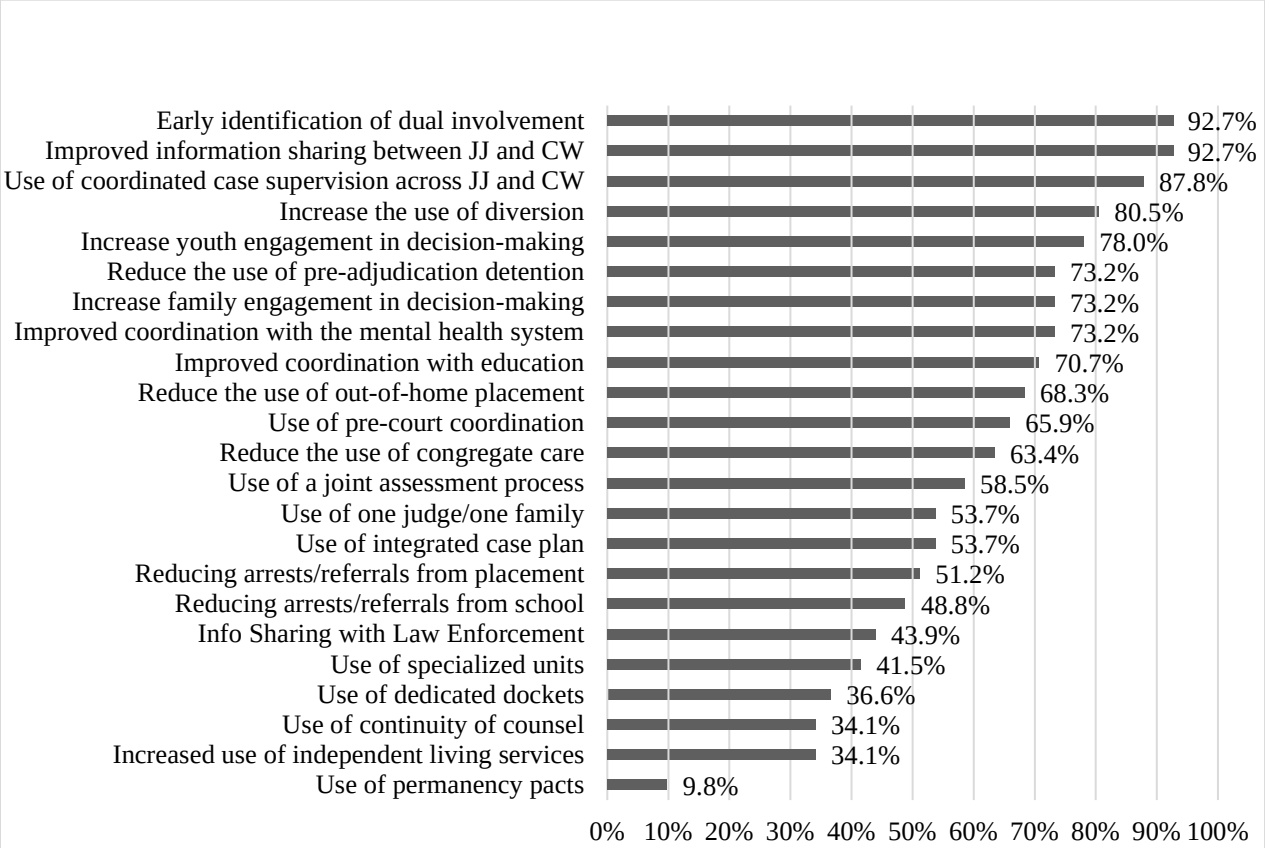
1. Early identification of dual involvement (93 percent),
2. Improved information sharing across child welfare and juvenile justice systems (93 percent), and
3. Use of coordinated case supervision across juvenile justice and child welfare (88 percent).

These top three practices were nearly universally implemented and prioritized.

were analyzed by CYPM researchers and shared with the JCS Subcommittee for use in the Dual System Youth Design Study.

Figure 1.1

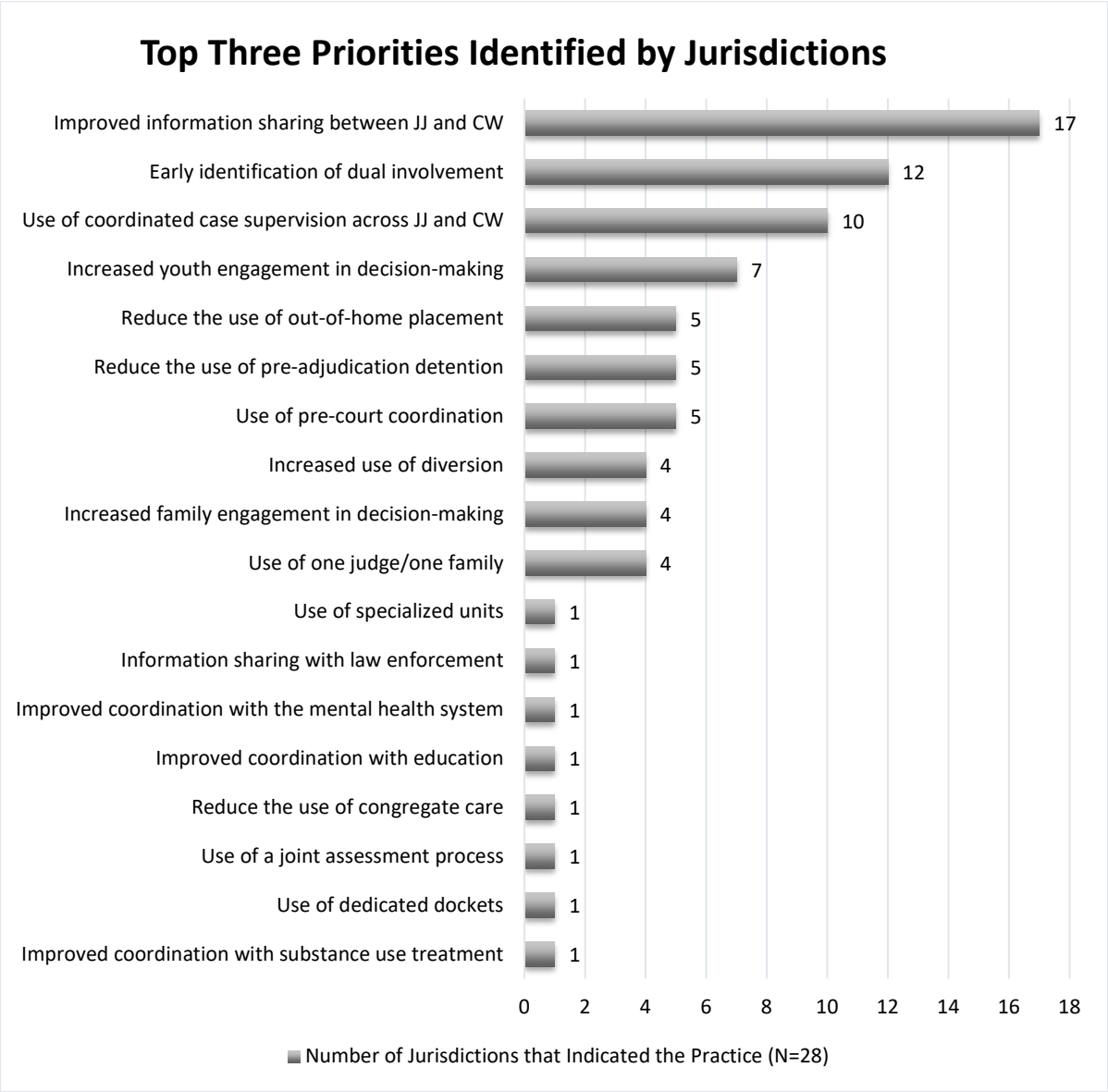
Summary of How CYPM Jurisdictions Enhanced and/or Implemented New Best Practices for Dual System Youth (N=41)



Jurisdictions were also asked what their top three priorities were based on the practices listed above. For these questions, 28 jurisdictions answered this question at the time of our analysis. As shown in Figure 1.2, there was variation in what jurisdictions reported as one of their top three priorities. However, the most frequently reported priorities across jurisdictions reflected the prevalence of enhanced or implemented practices in Figure 1.1. These were: improved information sharing between child welfare and juvenile justice, early identification of dual-involvement, and the use of coordinated case supervision across child welfare and juvenile justice.

Figure 1.2

Top Three Priorities Identified by CYPM Jurisdictions (N=28)



When jurisdictions were asked to describe success they were most proud of (open-ended format), the most common response was the improved relationship, collaboration, and information sharing across child welfare and juvenile justice as well as other agencies. For example:

> *Improved information sharing between agencies has been key. We have gotten many different agencies involved and having professionals from different realms has been helpful.*

> *The coordination between child welfare, disabilities, juvenile justice, and the county attorney office prior to adjudication has been very successful…*

Some jurisdictions reflected on information sharing and communication across systems as a challenge and their ability to overcome this challenge as their proudest achievement.

> *One of our biggest struggles has been communication between JJ and CW. This is something we are still struggling with, but we are currently planning a multi-disciplinary training between JJ and CW with respect to crossover that should help to clear a lot of things up. We firmly believe that breaking down this barrier will greatly improve the effectiveness of [the initiative] in our community. Of course, with staff turnover this is an ever-evolving issue, but we are confident that we can make a difference, resulting in lasting change and understanding between these agencies.*

> *Our juvenile justice and child welfare [systems] historically have NEVER had a good working relationship. At times, our working relationship was hostile, and staff spent more time in disagreements and very little time focusing on serving the children and families. The [initiative] has completely changed our working relationship. There was a lot of issues in the beginning of staff being resistant to the idea of actually working together for these intense cases, but everyone started to see that the process actually worked! Staff started actually listening to others' ideas and thoughts on what would work best in cases and found that their jobs (and lives) were easier. We have a very solid team of staff across juvenile justice and child welfare who work really well together now, and supervisors have become supportive of the program. It has definitely made an impact on the way dual cases are managed, which has served to improve outcomes for the youth and their families.*

Two jurisdictions identified the use of a one family/one judge model or dedicated dockets as what they were most proud of.

> *Both agencies collaborating in the reunification of the child and their family with the concept of 'ONE JUDGE, ONE COURT.' The concept allows the child to have a more successful outcome with both agencies.*

> *One of our biggest accomplishments is one family/one judge….*

Finally, in their open-ended responses jurisdictions also highlighted parent and youth engagement or parent training, reduced use of congregate care or out-of-home placements, and increased access to resources as their proudest achievement.

> *Diversionary Team Meetings center around the youth; youth voice; family voice; direct engagement of the youth and family.*

Recognizing the tools that were already at each agency; it was a matter of communicating & realizing what the other had to offer & build our work off of that.

Our County has drastically reduced the number of children in congregate care (residential treatment level) from 35 in 2009 to 2 currently in residential treatment level…

CYPM Outcome Data Findings

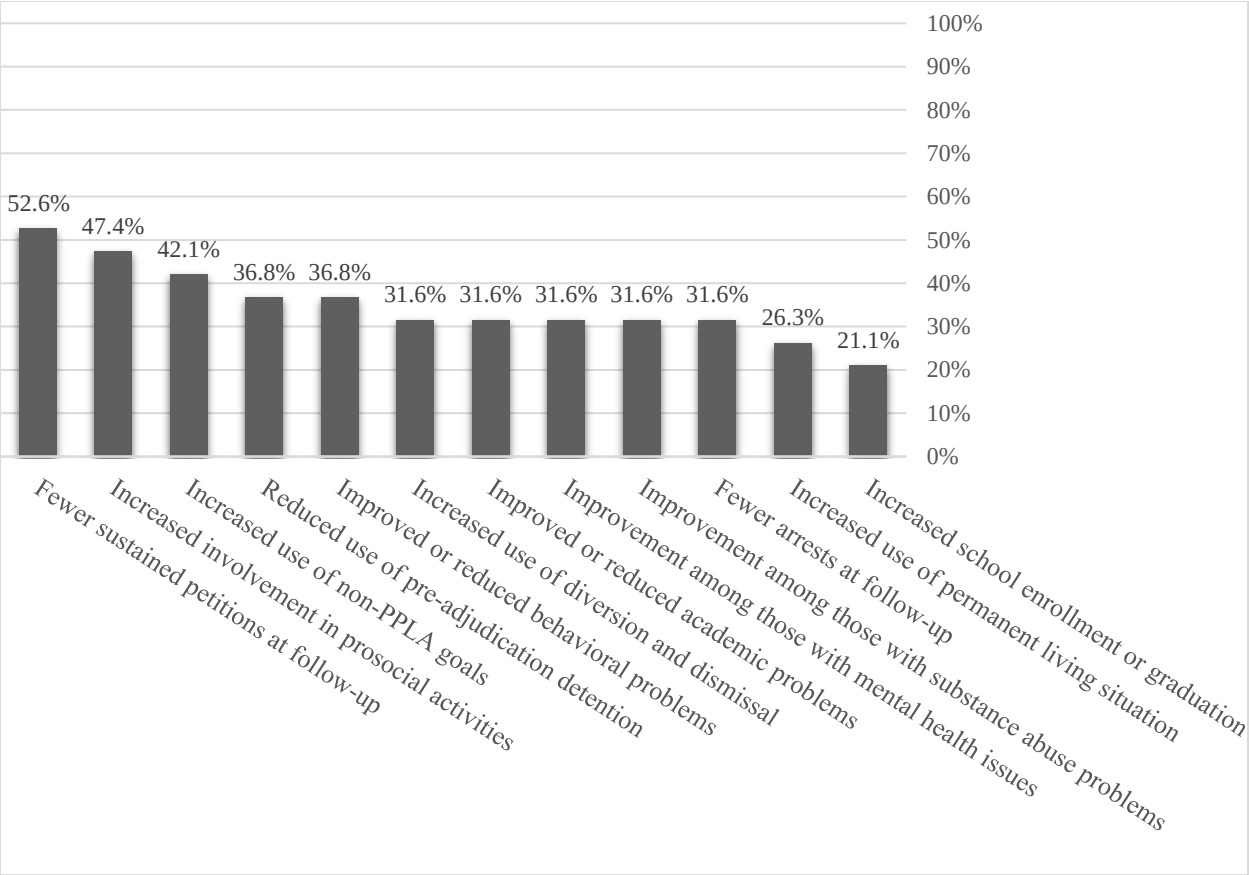
To date, very little evaluation research has been published that examines youth outcomes associated with cross-system collaboration and practice change to support dual system youth. In part, this is due to the difficulty of designing a well-controlled, rigorous evaluation within and across these complex systems. When implementing the CYPM, jurisdictions are required to engage in data collection for internal evaluative purposes. Some of these data were shared with the JCS Subcommittee to inform the development of the Rubric. These outcome data are taken from 19 jurisdictions across the country which varied in their scope and goals in the implementation of the CYPM; thus, the data here were not collected to directly evaluate specific practices. Instead they are used to inform implementation and decision-making within each jurisdiction. For these 19 jurisdictions there were improvements in 12 outcomes (see Figure 1.3). An improvement was identified when there was a 10 percent increase in the positive outcome from pre to post CYPM implementation.

The most common positive outcomes (i.e., the outcomes with more sites reporting them) were fewer petitions at follow-up (9 months) and increased involvement in prosocial activities. Youth targeted by CYPM efforts were less likely to recidivate as measured by receiving a new petition within nine months of being identified as a dual status youth in 52.6% of participating jurisdictions. Similarly, youth in 47.4% of jurisdictions increased their connections to prosocial activities during the nine-month tracking period. Approximately, a third of all jurisdictions showed positive outcomes. Specifically, they had a reduction in the use of pre-adjudication detention; behavior problems; academic problems; mental health and substance abuse issues, and fewer arrests. Conversely, these sites also experienced an increase in the use of diversion and in the dismissal of cases. A quarter of sites also showed an increase in the use of permanent living situations and school enrollment/graduation.

Methodological limitations (e.g., the absence of a randomly assigned control group) prevent concluding these positive results were directly related to CYPM efforts implemented in these jurisdictions. Nonetheless, these results begin to fill a void of research about which practices "work" for dual system youth and offer a necessary starting point to identify practices that may be impacting dual system youth and their families in positive ways.

Figure 1.3

CYPM Juridictions with Positive Youth Outcomes Following the Implementation of Integrated System Practices



*PPLA=Permanent Planned Living Arrangement (e.g., group home, foster care as permanent living situation.

Site Visit Highlights

The CYPM consultants allowed the research team to attend their regular site visits in order to get a sense of what jurisdictions have done to support dual system youth in a variety of regions. The research team joined CYPM consultants on five site visits. Below are the general reflections of the team based on these visits.

Successes and strengths across jurisdictions. Child welfare and juvenile justice professionals across the five jurisdictions highlighted several successes and strengths during the CYPM planning meetings we observed (see Table 1.1). Jurisdictions consistently discussed the ability to identify dually-involved youth earlier due to improved assessments and case planning. The improvement of case planning came from an increased collaboration across agencies and improved communication between staff in diverse roles, which, at times, was adversarial in the past. Aligned with a constructive partnership between private and public partners, agencies discussed being able to increase the amount of services for dually-involved youth and spread the

word of the availability of services. Information sharing posed a roadblock for many agencies but the willingness to share data amongst each other increased among some sites due to the implementation of the CYPM. Agencies expressed comfort in getting to know other options for dually-involved youth and relief in knowing that another system is involved to help guide them. Additionally, judicial leaders were identified as champions for change and were actively participating and advocating for stronger policies to assist dually-involved youth. The strong collaboration among all key staff seemed to begin with unwavering judicial leadership and true belief in the initiative. A few jurisdictions who implemented the one family, one judge model highlighted this practice and how they felt it benefitted the youth. Specifically, these jurisdictions felt it helped because each judicial officer and system was more up to date on the case and aware of the youth's needs.

Table 1.1

Summary of Successful Efforts and Strengths in CYPM Sites

- Early identification of dual-involvement has particularly improved case planning
- Cross-system collaboration and communication, this used to be more adversarial in the past
- Increased options for services and increased knowledge of other agencies' services; knowing that another system is involved allows them to build on their service options
- Family and youth engagement
- Presence of judicial leadership
- Use of diversion

Cross-system collaboration has allowed youth to engage more and include family members in the youth's integrated plan. Encouragement and facilitation of youth and family involvement empower the voices of youth and their families and highlight the importance of their input. Parents and guardians were becoming more active in their participation and staff attempted to meet the needs of the family in their own settings. Further, options for diversion increased at earlier stages. Diversion was no longer seen as punitive and unusual; it became a preferred option when available to dually-involved youth. At some sites, it was discussed that more dually-involved youth were coming into diversion at a greater speed and the number of dually-involved youth successfully completing diversion was at an astonishing rate compared to prior years.

Challenges across jurisdictions. Table 1.2 lists the key challenges discussed by jurisdictions. A recurring issue across sites was balancing the confidentiality of youth and being able to allow the youth to provide information about their background so that the appropriate services can be identified. Attorneys at the sites visited had concerns about the high amount of requests for signing consents and many attorneys were advising their clients not to sign the consents. People appeared to be split on this issue; while some attorneys deemed it necessary and helpful for the youth to disclose information, other attorneys believed those same statements would be used against the youth in court. Relatedly, some agencies expressed frustration with attorneys who discouraged consent who at the same time were not present at team meetings. Consequently, when consents were not signed, the agencies were not able to share information with one another, limiting treatment options and services for youth. The perception that

information could be used against youth indicated that, for some, there was distrust between agencies, the judiciary, and counsel.

Table 1.2

Summary of Challenges Experienced in CYPM Sites

- Confidentiality and consents
- Different languages (e.g., jargon, terminology) between agencies
- Measuring success and quality assurance
- Each agency has a different role and relationship with the client
- It is difficult to keep everyone on the same page or up to date on all the procedures and protocols as well as learn new protocols on top of the workload
- Not having a data system that is integrated across agencies—particularly
- child welfare and juvenile justice
- Available resources change and are often difficult to keep up with

The use of different agency/discipline language and terms across agencies was a challenge because it created confusion. Each agency utilizes a different language, a different system, and overall different policies. The absence of a common language or crosswalk between agencies can create confusion and misunderstandings, but perhaps most importantly, without effective communication, critical opportunities for prevention and intervention are missed.

Improvements in quality assurance were identified as a need in order to ensure that data collection was consistent across agencies. Data findings are intended to be disseminated regularly in order to facilitate meaningful work and quality improvement. However, data collection became cumbersome for sites and overwhelming to translate without the proper training or support. Another challenge across jurisdictions was the lack of data systems integration, predominantly between child welfare and juvenile justice. The narrow bridge between these two agencies made it difficult for some jurisdictions to connect the right services to youth and their families.

Lessons learned from CYPM jurisdiction site visits. Across sites, the importance of keeping communication open between supervisors and frontline staff was recognized (see Table 1.3). Because many things can get lost in translation, it is fundamental to ensure that everyone is on the same page before implementation of new protocols. Relatedly, there is a need for ongoing practice and continuous training to reduce the likelihood of staff reverting back to previous practices. Staff training is vital to infuse new practices and updated approaches and also serves as an opportunity to reconnect, renew commitment, and be reminded of the purpose of the work. The current need for cross-training is essential to help drive the work. There is also a realization that there are different sets of skills for implementation compared to sustaining practices. These skills are not a “one size fits all” model. By teasing out the different levels of training needed, jurisdictions can adequately provide skills to both implement the work and continue to sustain and improve it over time.

Table 1.3

Summary of Lessons Learned from CYPM Site Visits

- Need to keep communication open between Directors/Supervisors and frontline staff
- Size of caseload has to be balanced with complexity of cases
- Need to keep the work in the forefront of people's minds so that it becomes part of ongoing practice, not something that they used to do
- Need for a different set of skills for implementation compared to sustaining practices
- An on-going need for cross-training
- A tendency for jurisdictions to think that they are already utilizing best practices for dual system youth and, therefore, don't feel they need to change practice

Some jurisdictions have reduced the size of their caseloads, but staff noted that the cases are also more complex. Trauma-informed practices are bringing more awareness, although very few jurisdictions have institutionalized policies to support trauma-informed practices. Similarly, there is a tendency for jurisdictions to reject involvement in an initiative because they believe the work is already being done in their jurisdiction. In these cases, jurisdictions assumed the work was already underway, but they did not have a formal protocol in place.

The core practices highlighted through the CYPM data and site visits outline the features necessary to build effective communication, coordination, and collaboration across child welfare and juvenile justice agencies. Based on these findings, a rubric for assessing the developmental stage of integrated system work across jurisdictions was developed. We turn next to a discussion of the domains included in the rubric.

Identifying Domains for the OJJDP Best Practices Rubric for Dual System Youth

Based on the above findings, lessons learned, and the expertise of Subcommittee members, the JCS Subcommittee identified 11 domains, or categories of practice, seen as integral to assessing cross-system collaboration and best practices for dual system youth (see also Appendix B). Using these domains, outlined in more detail below, the OJJDP Best Practices Rubric for Dual System Youth was developed through an iterative process with Subcommittee members for each of the categories of practice. Specifically, the Rubric is intended to identify the extent to which jurisdictions are utilizing, or have implemented, best practices from a cross-system collaborative perspective by having jurisdictions select the statement in each domain that best represents their current situation. This Rubric was designed to inform the assessment of best practices for cross-system collaboration specific to dual system youth by providing an inventory and description of best practices that can be used across jurisdictions. In doing so, it lays the foundation from which to identify a continuum of integrated systems work and a basis for rating jurisdictions on the development of best practices. These domains are:

- Interagency Collaboration
- Judicial Leadership
- Information Sharing
- Data Collection
- Training

- Identification of Dual System Youth
- Assessment Process
- Case Planning and Management
- Permanency and Transition Plans
- Placement Plan
- Service Provision and Tracking

Each of these domains are viewed as equally integral to cross-system collaboration for dual system youth (i.e., there is no particular ranking or ordering of the domains). To effectively build integrated system practices across child welfare and juvenile justice systems, jurisdictions must engage in all these areas. Jurisdictions that are more fully developed in these areas, in turn, should have the most positive impact on dual system youth experiences and outcomes.

In addition to jurisdictions implementing the practices in these different areas, it is important for jurisdictions to recognize and incorporate the important cross-cutting issues that are inherently embedded within each domain. At least three significant cross-cutting issues we've identified are:

1) racial/ethnic disparities;
2) the role of trauma; and
3) family engagement.

Each of these cross-cutting issues have implications and relevance for each of the domains of practice. For example, racial and ethnic disparities accumulate across decision points within and across system involvement. These disparities at all points of contact result in dual system youth having significantly greater racial and ethnic disparities than their single system counterparts (e.g., Chapin Hall Center for Children, 2008; Models for Change Research Initiative, 2011). Thus, work in each domain of the Rubric should pay attention to racial and ethnic disparities to ensure youth of color are treated equitably.

The role of trauma is clear when working with dual system. A significant amount of research illustrates the trauma histories, including child maltreatment, of youth involved in the juvenile justice system (e.g., Dierkhising et al., 2014; Kerig & Becker, 2010). While not all justice-involved youth with child maltreatment histories are dual system youth, nearly all dual system youth have experienced child maltreatment, and many have experienced multiple forms of trauma as well as chronic trauma. For example, the dual system youth described in Chapter 3 had 10 referrals, on average, to the child welfare system for abuse or neglect. In addition, traumatic stress reactions, which can occur following trauma exposure, are associated with the behavioral health problems that are often present in dual system youth's lives (e.g., substance use, mental health problems). These behavioral health concerns, when unaddressed or unrecognized, push trauma-exposed dual system youth further into the system when systems penalize youth for their trauma reactions (e.g., irritability, unexpected outbursts, avoidance). Therefore, trauma must be recognized and efforts to ameliorate its impact and reduce re-traumatization through system involvement must be integrated throughout the Rubric domains.

Finally, family engagement is essential to the success of all cross-system practices. Research findings show that system intervention alone does not prevent crossing over or penetrating the

juvenile justice system deeply; rather, system intervention to stabilize living situations and family interaction make successful outcomes more possible. For instance, those who experience placement instability are more likely to recidivate (see Chapter 3) and when youth receive more visits from family while incarcerated they have less behavioral problems and improvements in school performance (Agudelo, 2013).

In sum, decisions made in each of the domains described below should consider these issues carefully and incorporate deliberate steps to integrate these cross-cutting issues into the practice domains in real and practical ways in order to improve the outcomes and well-being of dual system youth and their families. Following is a description of each domain and its section from the Rubric. The full Rubric can be found in Appendix B.

Interagency collaboration.

Practice Not in Place	Initial Efforts in Place	Emerging Practice	Developed Practice	Highly Developed Practice
Cross-system teams/committees have not been established and key stakeholders have not been engaged.	Potential cross-system teams/committees and key stakeholders have been identified but not engaged.	Cross-system teams/committees and key stakeholders have been engaged in the work but do not meet regularly.	Cross-system teams/committees are established and meet regularly. Key stakeholders are engaged but not in a consistent manner.	Cross-system teams/committees are established and meet regularly. Key stakeholders are consistently engaged and participate in ongoing review of the work.

Interagency collaboration is a cornerstone to improving outcomes for youth that have dual contact with child welfare and juvenile justice or are dually-involved with the two systems. These youth present with a myriad of challenges that require these two or more systems to work collaboratively and integrate other service systems as well. Youth and families being involved with multiple systems is not a new phenomenon. However, the way in which agencies serve them is. Historically, interagency collaboration has presented a challenge for youth serving systems because they traditionally operate in siloes. In most jurisdictions, however, collaboration is no longer an option but a requirement to ensure an organization's ability to fulfill their mission. Therefore, agencies and organizations must work together, oftentimes pooling resources, to strategize on creative and innovative approaches to ensure youth well-being.

Judicial leadership.

No judicial support or leadership. Or, there is active judicial opposition.	No active opposition. Some judicial support but not very involved nor leadership in the work.	Active judicial support for collaboration. Attends meetings but may not take a leadership role.	Active judicial support. Regularly attends cross-system meetings and trainings; provides leadership but in a limited capacity.	Active judicial support and leadership. Convenes and leads cross-system meetings, drives the work, and provides accountability.

Engaged and active leadership is a pillar in any change process—it makes a meaningful difference in every aspect of an organization's work. This support is ever more critical when multiple agencies and organizations are working together collaboratively. In working with dual system youth, leadership from child welfare, the courts, and juvenile justice are essential to achieving success. Because of the authority and high regard that the courts have over not only these two systems but many others, judicial leadership can be used to set the tone for the change process and ensure cross-systems work is a priority to the stakeholders involved. Effective judicial leaders can leverage their authority to identify and convene important stakeholders, determine areas in need of improvement, and implement solutions to address challenges. Given the positioning of judges they are also able to institute measures of accountability to demand collaboration for the wellbeing of youth.

Information sharing.

There is not a protocol in place and/or an MOU/MOA that supports or allows information sharing between CW and JJ systems.	An MOU/MOA or a protocol is in the process of being developed that allows information sharing between JJ and CW systems.	An MOU/MOA or a protocol is in place that allows information sharing between JJ and CW systems, but information is never exchanged or only shared under special circumstances (e.g., challenging case, emergencies, etc.).	An MOU/MOA or a protocol is in place that allows information sharing between JJ and CW systems, but information is not consistently shared.	An MOU/MOA or a protocol is in place that allows information sharing between JJ and CW systems and information is regularly shared between systems in a structured and collaborative manner.

The sharing of information regarding youth involved in multiple systems can help achieve success on two levels: systems and case. At the systems level, sharing aggregate level information on youth that touch multiple systems helps to understand data trends and patterns that support system reform. On the case level, sharing case level information can support better case planning for an individual youth, reduce duplication of services, and increase the understanding of a youth's overall functioning and well-being. The ability to work through information sharing issues can make or break cross-system collaboration efforts. This is often one of the most daunting challenges that communities face in this work. However, the work is worth the reward as it ensures a cohesive understanding of data trends and youth needs at every level of the system.

Data Collection.

There are no data collection efforts in place to identify the prevalence of dually-involved youth and their characteristics.	There is an effort to build a data collection system, but it is not in place ***or*** there is a data collection protocol, but it is not currently in use.	Data collection efforts, informal or formal, are in place separately at each agency, but data are not consistently collected, ***or*** data are not complete.	Formal data collection efforts are in place and consistently collected and available. However, data systems are not integrated between child welfare and juvenile justice.	Data collection efforts are established and ongoing and include key characteristics of the target population (as defined by the jurisdiction). Data are centralized in one database that includes information from both child welfare and juvenile justice.

Data collection refers to ongoing activities related to gathering information within jurisdictions on the number of dual system youth as well as their characteristics. Examples of data collection include demographics (e.g., age, sex, race/ethnicity), pathways to dual system contact (e.g., child welfare pathway, juvenile justice pathway), experiences prior to crossing over (e.g., whether the youth experienced out-of-home placements, other factors related to placement), systems and services experiences (e.g., if a youth was referred for services), and outcomes (e.g., factors related to recidivism, educational outcomes after crossing over, etc.). Ideally, data collection procedures established in a jurisdiction, are systematic, and embedded in regular practice.

Training.

Training on dually-involved youth is not provided to staff.	Training is provided to staff on dual system youth but there is no protocol for how to work with the population.	Training on the protocol for how to work with dual system youth is available typically at one point in time. These trainings may be conducted by each agency and may or may not include staff from multiple agencies.	Training on the protocol for how to work with dual system youth is conducted regularly (i.e., in an ongoing manner). These trainings are done in a cross-system format with staff from multiple agencies attending.	Training on the protocol for how to work with dual system youth is conducted regularly (i.e., in an ongoing manner) along with related trainings (e.g., CW 101, JJ 101). These trainings are done in a cross-system format with staff from multiple agencies attending.

Collaborating on dual or multi system cases often requires staff at child serving agencies to conduct case practice in a new and different way. First and foremost, agency staff need to become familiar with the practices and processes of their partner agencies. Secondly, agency staff need to be familiar with the expectations set forth in their jurisdiction's protocols for collaborating across systems on dual or multi system cases. To support agency staff, partners, and stakeholders in understanding the roles and expectations of cross-system collaboration,

jurisdictions must have a comprehensive training schedule and curriculum. Ideally, these trainings will be offered in a multi-system context, where staff from each agency can network and ask questions of their counterparts.

Identification of dual system youth.

There is no process for identification of dual system youth.	There is an informal and/or inconsistent process for identification of dual system youth.	Process for identification of dual system youth is in place but occurs at varying stages of the case.	Dual system youth are identified but not consistently and not always at entry into the system.	Dual system youth are identified as dually-involved at the point they enter the system, whether JJ or CW, regularly and consistently.

The foundation for cross-system collaboration for dual system youth is the ability to identify these youth in a timely manner. Jurisdictions should have protocols in place to screen youth at the point they become involved in child welfare or juvenile justice for concurrent involvement in the other system. This often requires the necessary information sharing and data infrastructure (e.g., online access to identify youth) to allow identifiable information to be transferred from one system to another. Once identified, agency staff should notify their counterparts in the other system of the youth's dually-involved status to initiate interagency collaboration as soon as possible.

Assessment process.

Assessment of dually-involved youth's risks and needs is not done jointly between juvenile justice and child welfare staff.	Assessment of risks and needs specific to dual system youth is done but done separately by JJ and CW. There is no use of an assessment protocol.	Assessment of risks and needs specific to dual system youth is done by JJ and CW and systems conduct their own assessment. But there is a plan in place to implement a joint assessment protocol within 12-18 months.	Assessment of risks and needs specific to dual system youth is done by JJ and CW and systems conduct their own assessment. However, there are *also* some joint assessment processes that are used regularly.	Assessment of risks and needs specific to dual system youth is done. Assessment is done jointly with both JJ and CW representatives contributing to the process (e.g., during a multidisciplinary team meeting) on a regular basis.

Without an assessment of youth's risks and needs it is not possible to identify the appropriate services for youth. Connecting youth to appropriate services is the goal of an assessment process. Given the increased service needs dual system youth have (see Chapter 3), conducting assessments collaboratively or in a joint process is essential in order to maximize service access and reduce duplication of service referrals. For instance, a service may only be offered by one system and, thus, the joint assessment process will allow for systems to identify the need as well as who can service that need (e.g., juvenile justice or child welfare). In addition, when agencies

conduct assessments without each other's knowledge and input, youth may be referred to, and even mandated to go to, duplicative services. This can put an undue burden on children and families who may already struggle in accessing and attending multiple services.

Case planning and management.

There is no contact between JJ and CW case workers on a case and there is no use of a coordinated or integrated case plan.	There is occasional communication between JJ and CW caseworkers, but no formal coordinated or integrated case plan.	There is regular communication between JJ and CW caseworkers, but no formal coordinated or integrated case plan.	Coordinated case planning is done with one integrated case plan between JJ and CW agencies, but there are not regular interagency or multidisciplinary meetings throughout the life of the case.	Coordinated case planning is done, with one integrated case plan between JJ and CW agencies, in a collaborative and ongoing fashion. There are frequent interagency/multi-disciplinary team meetings and/or contact between JJ and CW case workers throughout the life of the case(s) including case workers attending parallel hearings.

To support the success of dual or multi system youth, child-serving agencies should coordinate their case planning process and execute the management of the case plan in a collaborative fashion. At a minimum, coordinated case planning and management occurs when child welfare and juvenile justice staff communicate, either in person at multi-disciplinary meetings or over the phone, on the content of their individual case plans. Through this communication, workers will identify any gaps or redundancies in their plans. They will also become aware of other requirements dual system youth and their families must contend with in the completion of their case plan. Ideally, after the identification of a dually-involved youth, child welfare and juvenile justice staff will conduct a joint case meeting to review the results of their assessments and develop an integrated case plan. Once the systems and the families develop their integrated case plan, regular communication between the case parties is essential. A schedule of multi-disciplinary team meetings to assess progress on the case and additional treatment requirements will support the youth in staying on track with the case plan and ensure that the plan remains appropriate for any changes in the youth's life or case.

Permanency and transition plans.

PT plans are minimal and often only meet legal requirement minimums. Plans do not involve both CW and JJ systems.	PT plans meet legal requirement minimums and there is some coordination between CW and JJ systems.	PT plans meet or exceed legal requirements and are developed jointly by CW and JJ systems.	PT plans meet or exceed minimum legal requirements, and are developed jointly by CW and JJ systems well before release.	PT planning is conducted jointly by CW and JJ systems at disposition, leading to a formal plan within 90 days. PT plan meets or exceeds all legal requirements and is reviewed on a regular basis by the PT team.

Permanency refers to finding youth a safe, permanent home. Transition refers to preparations for case closure, especially related to placement situations. All youth need permanency as part of finding stable and loving homes to live fulfilling lives, but dual system youth are especially susceptible to losing family and other important connections due to their involvement in multiple systems. Family reunification is typically the main goal, but is not always possible due to a variety of reasons. Additionally, too often youth involved in systems have lengthy stays in out-of-home placement because of the inability to find appropriate, long-term placements. Group care (i.e., congregate care) is not intended to be a suitable, permanent placement; unfortunately, for dual system youth, it is used far too often (see Section II). Permanency and transition planning works best when it is done jointly by child welfare and juvenile justice at the disposition of the case, which lays the basis for a formal plan at the beginning of the case. The permanency and transition plan must also meet all legal requirements and be regularly reviewed by the team.

Placement planning.

There is no communication or collaborative placement planning between CW and JJ. Other parties to the case (and family members) are not routinely informed about a youth changing placements.	There is occasional communication between CW and JJ regarding placement changes but no formal collaborative placement planning that includes other parties to the case and family members.	There is regular communication between CW and JJ regarding placement needs and transitions. Collaborative placement planning occurs on an inconsistent basis and occasionally includes other parties to the case and family members.	There is regular communication between CW and JJ regarding placement needs and transitions. This includes collaborative placement planning with other parties to the case and family members.	There is a robust placement process that includes regular communication between CW and JJ, collaborative pre-placement planning (with all parties to the case including family members) for the transition and a phased in approach that supports an adjustment phase into the new living situation. Relatives and next of kin are consistently reviewed for their viability as a placement or supportive resource.

Typical placements in child welfare are kinship or relatives' homes, foster homes, or in group settings such as group homes or residential facilities. For the juvenile justice system, placements usually occur as temporary stays in detention when a youth is arrested, or for longer stays in residential facilities depending on a youth's disposition. Although out-of-home placements can be beneficial for youth, such as in providing safety from an abusive or neglectful home environment or public safety, research persistently shows placement instability and group home placements may increase the likelihood of delinquency (Ryan & Testa, 2005; Alltucker, Bullis, Close, & Yovanoff, 2006; Ryan et al., 2008).

An ideal jurisdiction would have a comprehensive process in place in which there is consistent communication between the child welfare and juvenile justice systems. Pre-placement planning for transition would be a collaborative process in which all parties related to the case are actively involved, including family members. Consideration would also be given to implementing a phased-in approach that would support a youth in the adjustment phase to his or her new living situation. Relatives and next of kin would be regularly reviewed for their viability as a placement or supportive resource.

Service provision and tracking.

There is no access to behavioral health, and/or prosocial services for dual system youth.	There are some options for behavioral health, and/or prosocial services but they are not provided regularly and whether youth connect to the agency/service is not tracked.	Behavioral health and prosocial services are regularly provided to dual system youth but whether youth connect to the agency/service is not tracked.	Behavioral health, and prosocial services are regularly provided to dual system youth and referrals are made to evidence-based and/or trauma-focused treatment when the need is indicated. But whether youth connect to the agency/service is not tracked.	Behavioral health and prosocial services are regularly provided to dual system youth and referrals are made to evidence-based and/or trauma-focused treatment when the need is indicated. There is also a process in place to track whether youth connect to the agency/services that they are referred to.

Services for dual system youth involve not only those provided in the child welfare and juvenile justice systems, but also include those related to behavioral health (i.e., mental health and substance abuse) and education. Without cross-system collaboration, dual system youth are less likely to receive the services needed to improve short- and long-term outcomes (Widom & Maxfield, 2001; Cusick, Goerge, & Bell, 2009). Similarly, when systems work together this may result in decreasing duplication of services intended to address the same issue. As needed, referrals are made to evidence-based treatments and/or those with a specific focus on addressing trauma. Some examples include cognitive behavioral therapy, motivational interviewing, multi-systemic therapy, treatment foster care, and wraparound services (CYPM Abbreviated Guide, 2015). Service referrals are made, but this also includes tracking whether youth receive those services as well (see Chapter 3). Thus, there needs to be a protocol in place that tracks youth to see if they are connected to the agency or services that they have been referred to. Tracking outcomes of youth also has the added benefit of demonstrating a program or service's effectiveness.

Application of the Best Practices Rubric

The Best Practices Rubric provides a tool for jurisdictions to utilize to identify where they fall on the spectrum of practice development for each of these practice domains. The descriptions provided in the Rubric are meant to aid jurisdictions to have the discussions that are necessary across systems about what they are doing to support dual system youth. By outlining for systems the differences between highly developed practices, emerging practices, and practices not in place we hope that systems can identify the areas for improvement in their jurisdiction as well as what they are doing well in order to encourage sustaining those already developed practices.

With this in mind, the intention of the Rubric is to serve as both a baseline measure and an on-going measure of integrated systems work in jurisdictions. At the local level, a jurisdiction can use the baseline measure to inform its planning for developing and implementing cross-system practices and then measuring their progress over time through on-going administration of the Rubric. If systematically administered at the national level to a representative sample of jurisdictions, the Rubric offers the opportunity to assess how jurisdictions across the nation fall along a continuum of integrated system work. Using the continuum, case studies could be completed in jurisdictions at each developmental stage to compare and contrast (1) what worked in the planning and development process of their work; (2) what practices best exemplify highly developed integrated system models; and (3) what worked to improve outcomes (i.e., if the Rubric data is analyzed in tandem with administrative data).

As a starting point to illustrate the importance of learning from sites implementing practices to enhance cross-system communication and collaboration, we turn next to more detailed descriptions of practices developed and implemented by CYPM sites across the nation.

Chapter 2: Best Practices Rubric Domains—Examples from the Field

Lead Authors:
Carly Dierkhising, California State University, Los Angeles
Macon Stewart, Center for Juvenile Justice Reform
Sam Abbott, Center for Juvenile Justice Reform
Karen Kolivoski, Howard University

This chapter presents practical, real-world examples of each practice domain from jurisdictions across the country. While these examples are drawn from jurisdictions' involvement in the Georgetown University's Center for Juvenile Justice Reform's Crossover Youth Practice Model (CYPM), they are viewed as relevant and important to cross-system collaborative work generally. These examples are not exhaustive and are provided for descriptive purposes in hopes of highlighting on-the-ground successes and challenges in this work. These examples are purposefully diverse and highlight the varying ways that counties, diverse in geography, population size, and legal statutes, have addressed the needs of dual system youth. We hope these examples inspire and motivate jurisdictions to replicate or adapt the use of these highly developed practices.

Interagency Collaboration in Practice: State-level Collaboration in Missouri

In 2012, the State of Missouri sent a team of leaders to the Georgetown University Center for Juvenile Justice Reform Multi-System Integration Certificate Program. This team included leadership from the Missouri Supreme Court, Department of Youth Services, and Office of the State Courts Administrator, Department of Social Services-Children's Division, and Department of Mental Health. Upon completion of the program, this team decided to become a standing body to support the state's focus on issues impacting youth that are involved in multiple systems. The working group became known as Missouri's Crossover Youth State Policy Team. This team developed a shared framework derived from the Full Frame Initiatives Five Domains of Well Being (Full Frame Initiative, 2015) and the Missouri Model (MO Dept. Of Mental Health and Partners, 2014) and works to collaborate on state-level issues that impact the experiences of youth and families in Missouri.

This standing body meets on a monthly basis and has supported the implementation of the CYPM in four circuits. The policy team's role includes operationalizing the principles in the development of policies and practices, and support to assist circuits in their ability to serve youth involved in multiple systems. This team has maintained consistent membership throughout its existence and is focused in its efforts to support localized systemic change. In addition to implementation of the CYPM, the Policy Team has conducted focus groups to better understand the direct needs of youth and families, supported the development of local memorandums of understanding, and provided data support to ensure local access to reliable data. These are just a few of the many ways in which the State Policy Team has supported localized efforts and presents one highly developed practice example of interagency collaboration.

Interagency Collaboration in Practice: County-level Collaboration in Woodbury County, Indiana

For close to a decade, Woodbury County has worked collaboratively to improve how their various youth serving agencies support youth involved in multiple systems. In 2008, through participation in the Breakthrough Series Collaborative (BSC) sponsored by Casey Family Programs and the Georgetown University McCourt School of Public Policy Center for Juvenile Justice Reform, Woodbury County formed a multi-system and interagency Core Team of stakeholders. This Core Team included representation from the County Attorney's Office, community organizations, a parent and youth who were system-involved, and leadership and line staff from the Juvenile Court and the Department of Human Services. The collaborative sought to make a family's contact with the systems more positive. Using the BSC methodology, the County implemented and assessed practices such as having a parent partner to serve as an advocate for the parent once their son or daughter became dually-involved, surveying parents 90 days following the opening of their case to understand the system's performance and having a one-child one-worker model on dual system cases to ensure continuity.

The achievements and momentum built as a result of participating in the BSC led the county to implement the CYPM. This Core Team became a cornerstone in the change process during the implementation of the CYPM during which it grew to include law enforcement, congregate care providers, and a more expansive group of community service providers. This working group continues to meet monthly and has achieved great milestones that include, but are not limited to, full implementation of the CYPM, regular trainings for various professional constituent groups, assistance to the state in the development of a statewide identification database, and the development of a school to court agreement.

Judicial Leadership in Practice: Mahoning County, Ohio

The lead Juvenile Delinquency Court Judge in Mahoning County understood the challenges that came before her: the prevalence of dual system youth. When implementing the CYPM the courts immediately served as a convener for local agencies to begin tackling the challenges set forth in the community by youth involved in multiple systems. The courts, guided by judicial leaders, identified all the necessary stakeholders needed to engage in the change process and facilitated their involvement in technical assistance to implement the change locally. The courts led the working group on dual system youth. This working group set practice and policy priorities based on areas of identified need and worked hand-in-hand with the agencies to implement system changes. For example, the courts convened line staff to better understand what changes could be implemented in the courts. This feedback led to a drastic shift in practice through the development of a judicial pre-court conferencing process that ensures magistrates were reviewing common (i.e., crossover) cases prior to hearings. This allowed for a discussion of, and preparation for, recommendations from the bench that were supportive of the best interests of the youth and were mutually agreed upon between systems. Judicial leadership, a highly developed practice in Mahoning County, recognized their role was not only to lead but to listen and use both of those activities to implement and sustain reform within their community.

Information Sharing in Practice: King County, Washington

Through support from Casey Family Programs and the John D. and Catherine T. MacArthur Foundation Models for Change Initiative, King County Washington sought to improve outcomes for multi-system children and youth through a collaboration entitled Uniting for Youth. One of the many goals this collaborative accomplished was the development of an information sharing resource guide (Uniting for Youth, 2009). This resource guide is for stakeholders working in or connected to youth serving systems. The guide outlines information sharing federal laws and Washington State statutes that delineate how information can be shared between child welfare, schools, court-appointed special advocates (CASAs), juvenile justice, law enforcement, mental health, and substance abuse treatment staff. The guide translates the local laws and policies on what, and how, various types of information can be shared so that it is easily understood by professionals in the field. The guide strategically categorizes for each stakeholder group how information can be shared with their professional counterparts. The information is also provided in a quick reference guide that could be utilized by front-line staff. The guide creates a level playing field for non-legal staff to enhance their practices in a manner that will support improvements in youth and family outcomes.

Information Sharing in Practice: Marion County, Oregon

To support the need for information sharing through the implementation of the CYPM, Marion County Oregon created an Intergovernmental Agreement between the State of Oregon, Department of Human Services, State of Oregon, Department of Human Services, Children, Adults and Families Division District 3/Marion Branch Child Welfare, and the Marion County Juvenile Department. This agreement outlines the system's ability to collect data to evaluate the model's impact on the system and to support front-line information exchange for joint assessment and case planning purposes. This agreement honors all county, state, and federal laws and regulations applicable to information sharing but also operationalized how information sharing translates into case management by front-line staff. The agreement details how information would be accessed between systems and case practice to support the data entry at various decision points in the system. The agreement is time-limited which is intended to ensure the terms of the agreement are consistently updated.

Data Collection in Practice: Douglas County, Nebraska

In 2012, Douglas County, Nebraska adopted and implemented the CYPM, now called Youth Impact! Agencies involved include the county attorney's office, the Department of Health and Human Services, juvenile assessment center (diversion), probation department, private welfare provider, a family advocacy center, a youth advocate, and a facilitator (Wright, Spohn, Chenane, Juliano, 2016). Agency representatives meet weekly to address crossover youth cases and work together to provide needed services. One of the goals of Youth Impact! is to identify system gaps and barriers (Operation Youth Success, 2017). Ongoing data collection to assist in evaluating the program occurs in partnership with researchers at the Nebraska Center for Justice Research, University of Nebraska, Omaha. This includes ongoing data collection and evaluation related to tracking youth outcomes, services provided and improved since CYPM implementation, interviews with professionals about CYPM implementation, and a cost-benefit analysis.

Data Collection in Practice: Prince George's County, Maryland

Another example of a university-agency researcher partnership is in Prince George's County, Maryland, where the county was the first in the state to implement CYPM, with collaboration beginning in 2013. A researcher from Howard University's School of Social Work in neighboring Washington, DC is part of the CYPM data subcommittee, working with professionals from the Department of Juvenile Services (DJS) and the Department of Social Services (DSS) to continue and elaborate on the data originally collected by the Center for Juvenile Justice Reform (CJJR). Continued monitoring of the CYPM over time, both in terms of assessing youth outcomes as well as coordination efforts between agencies, has been a focus of the evaluation efforts. Prince George's County also has a designated Crossover Youth Liaison who has specific frontline knowledge valuable to the ongoing program evaluation and research partnership with the local university professor.

Training in Practice: Training for System-Wide Change in New York City, New York

New York City rolled out new CYPM protocols for handling dually-involved cases in all five boroughs from 2014 – 2016. Due to the size of the city's child welfare and juvenile justice populations, preparing for the new protocols required thousands of workers from different agencies to undergo new training. Initially, Bronx County, the first borough to adopt the protocols, partnered with the Vera Institute for Justice to conduct multiple cross-systems trainings. These consisted of "101" review of the child welfare, probation, and court processes, as well as more detailed training on the protocols, information sharing agreements, and operational instructions for agency staff. Using the lessons learned from these trainings, the Administration for Children's Services (ACS) created a training manual through the agencies training arm, the James Satterwhite Academy, that was used to train workers citywide in the Division of Child Protection, the foster care agency, and agency caseworkers that offer preventive services. Independently, the Brooklyn Family Court held court-centered trainings for the borough's legal partners, including legal defense organizations and the prosecutors. Some agencies developed "Cheat Sheets" for their staff; single-page documents distilling the new protocols into a set of roles and expectations that workers could keep close at hand. As a result of these training activities, spearheaded by ACS, New York City was able to prepare several thousand workers and stakeholders for the successful implementation of their protocols across the city.

Training in Practice: Training Community Partners in Cross-System Cases in Prince George's County, Maryland

While New York City demonstrates how multi-system trainings can be rolled out on a large scale, Prince George's County exemplifies how creatively pursuing training opportunities can create new allies in supporting the dual system population. Every three months, the county conducts trainings for prospective foster parents using the Parent Resources for Information Development and Education (PRIDE) model (Child Welfare League of America). The purpose of this nationally recognized training model, which consists of 27 hours of training across nine modules, is to educate new foster parents on their unique role in a child's life and share a collection of resources and information to strengthen their foster families and promote the permanency of the foster youth. As part of its implementation of the CYPM, Prince George's

County incorporated training on dual system youth and the CYPM into their PRIDE Model. New foster parents now learn about the unique needs and requirements of fostering a dual system youth as well as their responsibilities as caregivers when a child welfare involved youth crosses into the juvenile justice system. Training foster parents on their responsibilities in a dual system case helps clarify their role in a new and unfamiliar system and helps support key partners in the multi-system response to delinquent behavior.

Identification in Practice: Cross-Agency Access to Electronic Information in Marion County, Florida

One method to support the early identification of dual involvement is cross-agency access to databases with identifiable information. In some jurisdictions, this involved two databases communicating when new youth are added to their systems and flagging any case where that youth might have a concurrent file in another agency. More common is the approach taken by Marion County, Florida, which involved agency staff manually cross-checking a youth's name in the appropriate databases. Florida's information sharing protocols were structured in such a way as to allow a specified Department of Juvenile Justice (DJJ) screener to verify whether a youth is dually-involved by searching their name in the Department of Children and Families' (DCF) Florida Safe Families Network (FSFN) database. For youth that are arrested and either released or detained, the DJJ screener will review the FSFN for child-welfare involvement during the intake process. For low-level cases in which a youth is not arrested but instead receives a civil citation, a DJJ Crossover Juvenile Probation Officer will make a daily check in the states' Work in Lieu of Arrest (WILA) or Juvenile Citation Programs (JCP) databases for new cases to crosscheck with DCF. When a dually-involved youth is identified, the DJJ screener is mandated by the county's protocols to notify the appropriate DCF, law enforcement, and DJJ parties of the youth's status. Cross-agency access to electronic information allows for a more immediate identification of dually-involved youth, but it does require specific information sharing conditions to be satisfied that may not be possible in all jurisdictions.

Identification in Practice: Daily Checks for Dual Involvement in San Luis Valley, Colorado

While cross-agency access to electronic information allows for the immediate identification of dual system youth, information sharing, and technology constraints may prevent jurisdictions from establishing that process. Many jurisdictions, including the counties that comprise the San Luis Valley in Colorado, opt for the lower tech, but no less effective, method of manually sharing and crosschecking lists of names involved in the juvenile justice system. In these counties, the juvenile justice agency will send the child welfare agency, either on a daily or weekly basis, a list of names of all the youth arrests during that time period. In addition to names, the lists will include other identifying information such as date of birth. When the child welfare agency receives the list, a screener will either run each name through the jurisdiction's child welfare database or use a computer program, such as Microsoft Excel, to identify matches in both systems. For names that do match, the child welfare screener will notify all appropriate parties of the youth's arrest and new dually-involved status. In contrast to the electronic database method described above, the sharing of regular lists requires less information sharing and technology resources, but it may create short delays in identifying child welfare involved youth at their point of entry into the juvenile justice system.

Assessment Process in Practice: A Statutorily Defined Multi-Disciplinary Team Meeting Protocol in Los Angeles County, California

Los Angeles County utilizes the Multidisciplinary Team (MDT) model, a cross-system collaborative approach, in accordance with the California Welfare and Institutes Code 241.1. This code requires child welfare and probation agencies to conduct a joint assessment to assist in determining the best case plan for a youth who crosses over from the child welfare system to the delinquency system. MDTs in Los Angeles County are comprised of a Department of Children and Family Services (DCFS) Social Worker, a Deputy Probation Officer, a Department of Mental Health (DMH) Court Services Clinician, and an Education Consultant. Together, each of these representatives collects their information from their respective agencies and works collaboratively to assess the youth, provide joint recommendations to the court, and make service referrals.

While multidisciplinary team approaches are used in many other jurisdictions, the Los Angeles 241.1 MDT is unique in several ways. First, it is used for all youth with an open child welfare case who are subsequently petitioned to delinquency court. Typical MDTs may have certain triggering events or can be requested by stakeholders in the case, but they are not typically applied to all dually-involved youth by statute. Second, the 241.1 MDT can recommend an array of dispositional options ranging from diversion to dual jurisdiction (i.e., retaining both the child welfare case and becoming a ward of the delinquency court) to delinquency wardship (i.e., the child welfare case is closed). While MDTs can result in recommendations to the court or collaboratively developed case plans, the statutory authority of the 241.1 MDT to weigh in on questions of wardship is unique. Finally, the 241.1 MDT captures referral information from all agencies as well as follow-up data in an on-line database, providing data and information not routinely collected.

Case Planning and Management in Practice: Establishing a Multi-Disciplinary Case Consultation Team in Montgomery County, Maryland

To ensure coordination and communication on ongoing cases, Montgomery County, Maryland developed a CYPM Case Consultation Team. The Case Consultation Team meets once a month, or as needed in emergencies, to convene a multidisciplinary set of stakeholders and practitioners that review each of the county's dually-involved cases. When a dually-involved youth is identified, either the Child Welfare Services (CWS) or Department of Juvenile Services (DJS) worker will refer the case to the Consultation Team to be put on the agenda for the next meeting. For the new referrals, the Case Consultation Team will work with the CWS and DJS workers to devise an integrated service plan. At future meetings, the Consultation Team will review the status of the case, the services in which the youth is currently engaged, and the youth's progress towards the goals outlined in the case plans. To participate in these meetings, families will need to sign a release-of-information form to allow all parties to discuss the content of the case openly. Alternatively, a judge can order the sharing of information at these meetings if deemed necessary. At the end of the CYPM Case Consultation Team meetings, parties will leave with a completed summary form, which outlines the next-steps in the case for the families and workers.

Case Planning and Management in Practice: Mandated Contact Between Systems in Bexar County, Texas

While Montgomery County developed a new multidisciplinary body to oversee coordinated case planning and management, Bexar County, Texas followed a more straightforward path by mandating specific contact between the two agencies in their CYPM protocols. Within ten days of identifying a youth as dually-involved, the Probation Officer and child welfare caseworker are required to meet in person, with the youth's family/caregiver if possible, to review the information they have on the youth, plan for the first "Crossover Meeting," and notify the appropriate parties at this meeting. Additionally, the two workers will determine the lead agency that will have the primary responsibility of ensuring that the services and goals of the treatment plan are followed. At the initial Crossover Meeting, which occurs pre-adjudication/disposition, caseworkers from both agencies will meet with the youth, their families (including extended and foster families), and a Court Appointed Special Advocate (CASA). During this meeting, the team will review existing case plans and assessments to chart a path forward. Following the initial meeting, the Probation Officer and child welfare caseworker will continue to share information and coordinate changes to their case plans with the goal of making a joint disposition recommendation to the juvenile court. Following disposition, the team will hold similar meetings to develop a unified case plan within 30 days of the disposition. These meetings will continue on a periodic basis to assess progress on the case plan, and the probation officer and child welfare caseworker will conduct joint field visits whenever possible. In creating such specificity in their protocols, Bexar County clearly defines the expectations and responsibilities for agency staff working in the best interest of youth and families.

Permanency and Transition in Practice: Integrated Placement Coordination: San Diego County, CA

As part of the Dual Status Program in San Diego County, California, child welfare and juvenile justice professionals conduct joint visits with youth, attend court together, and travel together to visit youth in far-away placements. Permanency specialists are part of the child welfare system, which has a dual status unit and a dedicated position for youth who utilize extended foster care (per Assembly Bill 12; CA Fostering Connections to Success Act). When issues related to permanency arise, a permanency roundtable is held in which efforts are made to find people in a youth's life who may be able to provide a suitable living arrangement, or, at a minimum, to become engaged or re-engaged with the youth. The permanency teams meet every six months at a minimum or as needed. Transition planning is also a team effort. Independent living program (ILP) workers begin involvement with youth at age 16, create an independent living plan, and conduct an assessment for independent living skills. This is reviewed every six months and forms the foundation for the case plan**.**

Placement Planning in Practice: Polk County, Florida

Given the importance of prevention and early intervention efforts, and especially that out-of-home placements such as group and congregate care may be a "hot spot" for youth to cross over between child welfare and juvenile justice, targeted changes with placements may have a positive effect, such as in Polk County, Florida. The CYPM team there utilized data to identify placements that had higher numbers of crossover youth; this then laid the foundation for a

collaborative discussion among agencies of how to improve practices (Herz et al., 2012). Communication and collaboration between agencies have continued to specifically address and monitor arrests among youth in out-of-home placement. Data from 2016 show that the number of placement arrests have consistently stayed lower than arrests from the community; continued data monitoring and communication into potential placement alternatives are ongoing efforts.

Service Provision and Tracking in Practice: Comprehensive Services Provision in Travis County, Texas

An early CYPM site, and the first in Texas, Travis County has built and sustained highly developed and robust protocols and practices for addressing the needs of dual system youth, including ensuring they are referred to and receive services outside of the child welfare and juvenile justice systems. They utilize a community resource coordination group that includes professionals from the mental health system so that multiple systems are working together, especially if a youth is at-risk of out-of-home placement. Additionally, in Travis County the court has made it mandatory that all dually-involved youth are assigned a CASA who, in addition to traditional CASA duties, also act as educational liaisons to ensure that youths' educational needs are being met. CASAs, in their role as educational liaisons, accomplish this through working with youth to make sure their classes and credits are on track for success, even though a youth's school or living situation may change. Educational success also includes access to extracurricular activities, and CASAs work to make sure those that are important to a youth are addressed as well, such as securing funding to be a member of an athletics or dance team.

Conclusion

The OJJDP Best Practices Rubric for Dual System Youth and the examples from the field are intended to provide a baseline for jurisdictions to assess their level of cross-system collaboration for youth involved in child welfare and juvenile justice systems, as well as other related systems (e.g., school, mental health). We encourage jurisdictions to become familiar with these practice examples and utilize the Rubric to identify where their jurisdiction falls on the spectrum of practice and, subsequently, work collaboratively to continue to develop or sustain each practice.

Chapter 3: System Backgrounds, Psychosocial Characteristics, and Service Access Among Dually-Involved Youth: A Los Angeles Case Study

Published in Youth Violence and Juvenile Justice, 2018[3][4]: DOI: 10.1177/1541204018790647

Carly B. Dierkhising, California State University, Los Angeles
Denise Herz, California State University, Los Angeles
Rebecca A. Hirsch, Department of Children and Family Services
Sam Abbott, Center for Juvenile Justice Reform

Dually-involved youth are youth who are concurrently involved in both the child welfare and juvenile justice systems. These multi-system youth often exhibit higher rates of mental health needs, substance use, and education related challenges, including truancy and academic issues, than youth involved in only one system of care or without system involvement (Herz & Ryan, 2008; Herz, Ryan, & Bilchik, 2010; Leone & Weinberg, 2012). As a higher-needs population, dually-involved youth arguably require a broader array of services compared to single system youth (Herz et al., 2012), particularly later in life. Recent research among young adults who were system-involved as adolescents in Los Angeles and New York City underscores this point (Culhane et al., 2011; New York City Office of the Mayor, 2015). These studies reveal significant service utilization (e.g., Medicaid, emergency department visit, inpatient, jail stay) for dually-involved young adults compared to those with a history of juvenile justice or foster care only (Culhane et al., 2011; New York City Office of the Mayor, 2015). For instance, in New York City about 94% of young adults with a history of dual-involvement were later involved in at least one service domain (i.e., homeless services, justice services, foster care, financial assistance, and health services), 80% in two or more domains, and 50% in three or more domains. Similar data from Los Angeles County corroborates this trend with almost identical percentages, indicating that multisystem involvement often creates long-term dependency on additional systems and subsequent higher costs (New York City Office of the Mayor, 2015).

Long-term service utilization and high costs continuing into adulthood may be associated with unmet or unaddressed behavioral health needs during childhood or adolescence (i.e., mental health, substance abuse/use, behavior, and crisis intervention). Some researchers suggest a causal association between these early behavioral health needs, and childhood maltreatment and delinquency (Bender, 2012; Kerig & Becker, 2012; Smith & Thornberry, 1995; Thornberry, Ireland, & Smith, 2001). The experiences of maltreatment and trauma during childhood and adolescence can disrupt the brain's typical development and physical structure, exposing maltreatment victims to a great risk of mental health issues (Teicher et al., 2003). Additionally,

[3] This chapter is a summary of a published and copyrighted manuscript.

[4] This research was supported in part by Grant # 2015-CV-BX-0001 awarded by the Office of Juvenile Justice and Delinquency Prevention, Office of Justice Programs, U.S. Department of Justice to California State University, Los Angeles. The opinions, findings, and conclusions or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect those of the Department of Justice.

victims may utilize alcohol and drugs as a means of coping with their maltreatment, a practice that often necessitates risky or delinquent behavior (Bender, 2010). Therefore, addressing behavioral health issues through appropriate services may be considered an appropriate intervention in order to disrupt the factors that contribute to dual-involvement, delinquency, and/or recidivism.

Studies that show high long-term service costs for dually-involved youth also emphasize the need to implement effective and targeted services prior to the transition to adulthood to ensure youth can go on to live healthy, safe, and productive lives. Despite the important role of services in the lives of dually-involved youth and the energy expended by multiple systems that fund and administer these services, there is very little research on what type of services are available to, and utilized by, dually-involved youth. Previous research, utilizing a subsample from the current study, focused on education related issues and services which revealed discrepancies between service needs, referrals, and access (Hirsch, Dierkhising, & Herz, 2018). The current study looks more comprehensively at behavioral health needs and service access among the dually-involved population in Los Angeles County, California. Specifically, we examine the behavioral health needs of dually-involved youth, the services youth are referred to and utilize, and factors associated with service access.

Summary of Methodology

The current study capitalizes on an initiative in Los Angeles County to enhance practice related to dually-involved youth. This initiative included the launch of an on-line database to capture information collected as part of the 241.1 MDT process by all participating agencies (i.e., Probation, DCFS, DCFS Education Consultants, and DMH). The database includes all youth who receive a 241.1 referral and captures two types of data: (1) referral data (i.e., baseline); and (2) tracking data (i.e., 6-month post disposition follow up). Referral data includes all information collected by each agency about the youth prior to their arrest as well as some post-arrest/pre-court appearance indicators, such as re-arrest prior to the disposition hearing. Tracking data captures a limited number of outcomes within six months after youth received their dispositions. Referral data is captured on all referrals; however, tracking data is only collected on a small subsample of youth (n = 152) who received their court dispositions between October 2013 and July 2014.

Summary of Findings

Similar to previous research (Herz et al., 2010), females were represented at a higher rate in the dually-involved population compared to the juvenile justice population generally. For example, in 2014 females were involved in 28% of the delinquency cases processed by juvenile courts across the country (Hockenberry & Puzzanchera, 2017) compared to 39.6% of the dually-involved cases in Los Angeles County. African-American youth were also strikingly overrepresented in this population. About 43% of the dually-involved youth in the sample were African-American which is highly disproportionate to the population generally in Los Angeles County as well as in the child welfare and juvenile justice systems singularly. In 2016, African-American youth accounted for only 7.4% of the child population in Los Angeles County, about 13% of the child abuse and neglect reports, and 29% of the foster care population (Webster et al.,

2015). Thus, African-American youth in Los Angeles County are disproportionately dually-involved at a rate almost 6 times their general population numbers (7.4% vs 43%).

Table 3.1

Demographic Information

	All Dually-Involved Youth (N=718)	**Tracked Youth (N=152)**
	%	**%**
Gender		
Female	39.6%	37.5%
Male	60.4%	62.5%
Race/Ethnicity		
African American	42.6%	44.2%
Latino/Hispanic	46.8%	41.9%
Caucasian	9.3%	10.1%
Other	1.2%	3.9%
Average age at time of referral	15.82	15.82
Living situation at time of referral		
Group home	38.2%	39.5%
Home	23.7%	23.0%
Relative (includes legal guardian)	19.0%	23.6%
Foster care or legal guardian	15.4%	12.5%
Other /missing	3.8%	1.3%
Absent without leave (AWOL) at time of arrest	19.6%	15.8%

*Significant difference between tracked and non-tracked youth ($p < .05$).

Youth juvenile justice and child welfare histories reveal significant involvement in both systems. One-third of youth had prior arrests with an average of 1.7 prior criminal charges and 3 status offenses. Youth also had spent over five years in the child welfare system and averaged about 10 referrals to the system. Youth also had significant mental health and substance abuse needs. The majority, approximately 75%, of youth had a diagnosed mental health problem and about half were receiving mental health services at the time of arrest. One-quarter of youth were prescribed psychotropic medication; though, only half of them were taking their medication.

Table 3.2

Mental Health and Substance Use/Abuse Characteristics

	All 300 Youth with Pending Delinquency (N=718)	**Tracked Youth (N=152)**
Mental health history		
Ever placed in psychiatric hospital	30.9%	31.0%
Experienced suicidal ideation	21.3%	24.4%
Ever attempted suicide	9.2%	12.5%
Prescribed psychotropic medication	26.3%	27.0%
Taking prescribed psychotropic medication	55.0%	53.7%
Has a mental health diagnosis	73.8%	77.5%
Receiving mental health services at time of arrest	44%	53.3%
*Substance use/abuse****		
No substance abuse problem	21.9%	30.9%
Misuse/pattern of use	24.3%	27.0%
Abuse/dependency	34.4%	35.5%
Missing data	13.5%	4.6%

*Significant difference between tracked and non-tracked youth ($p < .05$).

Given the psychosocial characteristics of the youth it is not surprising that they also received high levels of service referrals. The most common referrals were for individual therapy (74%), tutoring (43%), and group therapy (35%). However, the largest discrepancies between referrals and access of services were for individual therapy (74% referred, 55% accessed), medication monitoring (33% referred, 15% accessed), and, the largest discrepancy, for tutoring (43% referred, 17% accessed). Conversely, the most commonly accessed services were individual therapy (55%), ensuring the youth was enrolled in school (24%), and group therapy (24%).

In considering factors that impede or facilitate service access, we found that placement changes impeded access to mental health and education services but facilitated access to substance use services. Face-to-face contact with a youth's probation officer also increased access to substance abuse services but had no association with mental health or educational service access. It is possible that this was the case because substance abuse services are often a condition of probation and that may be what the officer is more focused on when interacting with a client.

When evaluating re-arrest, number of prior arrests, placement changes, a substance abuse issue, and receiving mental health services were all significant predictors of re-arrest prior to disposition. It seems counterintuitive that mental health service receipt would be a predictor of re-arrest; however, this finding is consistent with previous research (Jonson- Reid, 2002; Goodkind et al., 2013) where scholars have used mental health service receipt as a proxy or indicator of a mental health problem rather than a potential protective factor.

Finally, the lack of race and gender effects is an important finding and is consistent with previous research on dually-involved youth (Herz et al., 2010). It seems that the race and gender effects that are most often found among child welfare and juvenile justice populations,

essentially, disappear among the dually-involved population. By the time youth penetrate the deeper-ends of both systems their risk factors and behavioral health challenges are strikingly similar.

Conclusion

The results of this study help to inform the growing research on dually-involved youth, particularly as it relates to their service needs and service utilization once involved with both the child welfare and juvenile justice systems. In particular, it provides unique insight into what factors are related to continued instability following the arrest that brought them into the delinquency court and factors related to service utilization. Understanding these needs and experiences of dually-involved youth is critical to building and improving integrated systems work to improve outcomes for youth and families caught between and within systems; yet, this level of information is rarely available for analysis because agencies do not collect such detailed information on clients in a consistent and standardized way.

SECTION II: Defining Dual Systems Youth & Exploring the Incidence of Dual System Contact

This section summarizes the work produced by the Linked Administrative Data Subcommittee to address Goal 2(a) of the current study. Specifically, it presents the terms, definitions and pathways for dual system youth. Using these definitions and pathways, incidence rates and descriptive statistics were produced for dual system youth across the proposed pathways for a cohort of first juvenile justice petition youth in Cook County, Illinois; Cuyahoga County, Ohio; and New York City and for a cohort of first arrest youth in Cook County, Illinois. Using a subset of the first juvenile justice petition cohort from all three sites, additional outcomes derived from administrative data were explored (as available per site). Finally, a preliminary use of sequence analysis using the first petition cohort data was utilized to "test" the viability of the proposed conceptual pathways.

Related Goal and Research Questions/Study Objective in Section II

Goal 2: (a) To provide insight into the incidence of dual system involvement and describe key characteristics/trajectories of this population (e.g., race, gender, class, ethnicity, sexual orientation, and timing/type of encounters with the systems).

- Chapter 4: A proposed framework for defining dual system youth consistently
- Chapter 5: What is the incidence rate of dual system contact among youth adjudicated in the juvenile justice system and what are their characteristics?
- Chapter 6: What is the incidence rate of dual system contact among youth arrested and what are their characteristics?
- Chapter 7: What other social service and criminal justice outcomes do dual system youth have?
- Chapter 8: Are the categories of dual system youth proposed in the framework empirically supported by trajectory analysis?

Chapter 4: A Framework for Defining Categories of and Pathways for Dual System Youth

Lead Authors:
Denise C. Herz, California State University, Los Angeles
Carly Dierkhising, California State University, Los Angeles

Another primary objective of the Dual System Youth Design Study was to develop consistent terminology to describe and delineate the type of contact maltreated youth who engage in delinquency have with the child welfare and juvenile justice systems. To this end, we reviewed various terms used in the literature to define this population and attempted to conceptually clarify which terms were most appropriate for particular types of contact.

With the exception of the Center for Juvenile Justice Reform's Crossover Youth Practice Model (http://cjjr.georgetown.edu/our-work/crossover-youth-practice-model/) and the Robert F. Kennedy Children's Action Corps, Dual Status Youth Reform Initiative (https://rfknrcjj.org/our-work/dual-status-youth-reform/), little attention has been paid to defining maltreated youth who touch both the child welfare and juvenile justice systems consistently or in a way that differentiates their experiences. Instead, a number of terms are used interchangeably in the field and throughout the literature. Perhaps the most often used term is "crossover youth," which currently now captures a wide variety of dual system experiences. In this chapter, we build on the work of the CYPM and Dual Systems Youth Initiative by proposing further refined terminology and criteria by which to distinguish youth according to their experiences and pathways vis-à-vis the two systems. Additionally, we offer criteria to define system contact consistently.

Defining System Contact[5]

A critical starting point for defining system contact is to define the meaning of system contact. We propose that system contact can vary in level or extent of system penetration, both of which are captured by system referrals/investigations and system involvement. A system referral/investigation is when a youth is referred to a system and an investigation ensues. In the case of child welfare, an investigation is used to determine whether the youth is a victim of maltreatment. In the case of juvenile justice, an arrest (i.e., a referral) is made by law enforcement. Referrals/investigations may or may not result in further processing within their respective systems. If founded, further system intervention/processing may occur, but if unfounded, the youth and family may not receive any further contact with that particular system.

[5] System investigations and system involvement were identified to generically encompass all possible system contact options in jurisdictions across the nation, but the processes, decision criteria, and particular options used for youth and family can vary widely depending on the policies and procedures driving decision-making within child welfare and juvenile justice agencies. Thus, even though these proposed definitions establish a critical starting point for defining dual system youth, it is important to identify the specific practices across jurisdictions that would be reflected in these two larger categories. In other words, it may be necessary to further describe the specific options within each contact category for a particular jurisdiction, state, and so on.

System involvement occurs when a referred youth receives some level of system intervention. In the case of child welfare, they may receive preventative family services, have a substantiated case for maltreatment, and/or have an open case with the child welfare system which involves services at home and/or placement in an out-of-home setting (e.g., foster care or congregate care). Similarly, involvement in juvenile justice can result in receiving diversion programming or an adjudication through the juvenile court. The outcome of an adjudication proceeding includes dismissal (no further system involvement), community supervision under probation, and/or placement in an out-of-home setting (e.g., congregate care or correctional facility).

Proposed Terminology

Table 4.1 presents the proposed terminology for different levels of contact across both systems while also taking into account the timing of contact across systems. "Crossover youth" is proposed as an umbrella term to capture all maltreated youth who engage in delinquent acts regardless of whether they touch the child welfare and/or juvenile justice system. "Dual system youth," is limited to crossover youth who touch both the child welfare and juvenile justice systems in some way (i.e., through a system investigation and/or system involvement). Since the timing of contact with each system can vary, Table 4.1 further differentiates these system experiences by whether they occurred independently (non-concurrently) or simultaneously (concurrently). *Dual contact*, for example, includes dual system youth whose contact with both systems is non-concurrent, whereas *dually-involved youth* have contact with both systems concurrently. A third category, *dually adjudicated youth*, represents dual systems youth who penetrate most deeply into both the child welfare and juvenile justice systems: youth who are adjudicated in both systems concurrently.

Table 4.1

Types of Dual System Involvement for Youth Who Experience Maltreatment and Engage in Delinquent Behavior

Proposed Terminology	Definition
Crossover youth	Youth who experience maltreatment and engage in delinquent acts—these youth may or may not have an investigation and/or involvement in one or both systems
Dual system	Crossover youth who are referred for an investigation and/or have involvement with both the child welfare and the juvenile justice systems
Dual contact	Dual systems youth who are referred for an investigation and/or have involvement with both the child welfare and the juvenile justice systems but the referral/involvement across systems is non-concurrent
Dually involved	Dual systems youth who are referred for an investigation and/or have involvement with both the child welfare and juvenile justice systems concurrently
Dually adjudicated	Dual systems youth who are formally adjudicated in both the child welfare and juvenile justice systems concurrently

Dual System Pathways

Another important distinguishing feature of dual system youth is the pathway or temporal ordering with which they touched each system. Two pathways for dual system exist: The child welfare pathway and the juvenile justice pathway. The child welfare pathway applies when youth have contact with the child welfare system before the juvenile justice system, and the juvenile justice pathway applies when youth have contact with the juvenile justice system prior to the child welfare system.

Table 4.2 reflects the intersection of system contact and pathways. As shown in these tables, both child welfare and juvenile justice pathways operate for youth regardless of whether contact was concurrent or non-concurrent. Determining which pathway a dual system youth followed at the point they are identified as a dual systems youth can be complicated based on multiple contacts with one or both systems. For example, youth may have multiple child welfare cases prior to AND at the time of their contact with the juvenile justice system. For these youth, the simultaneous contact is often prioritized (i.e., they are considered dually-involved youth at the point of identification); however, the earlier, previous contact is arguably significant to more fully understanding their experiences across systems. To capture this possibility, pathways are highlighted in Table 4.2 by displaying the relationship between historical and active system contact relative to all the categories of dual system youth.

Table 4.2

Total Number of Categories of Dual System Youth for Child Welfare Pathway

	Historical Child Welfare Contact	**Active Child Welfare Contact**	**Active Juvenile Justice Contact**
Child welfare pathway			
(i.e., contact with child welfare came first at time of identification)			
Dual contact youth			
Dual contact with an historical CW case	Yes	No	Yes
Dual contact with no historical case	No	No	Yes
Dually-involved youth			
Dually involved with an historical case	Yes	Yes	Yes
Dually involved with no historical case	No	Yes	Yes
Juvenile justice pathway			
(i.e., contact with juvenile justice came first at time of identification)			
Dual contact youth			
Dual contact with an historical CW case	Yes	No	Yes
Dual contact with no historical case	No	No	Yes
Dually-involved youth			
Dually involved with an historical case	Yes	Yes	Yes
Dually involved with no historical case	No	Yes	Yes

The intersection of pathways and experience with system contacts produces multiple categories of dual systems youth. These categories, in turn, serve as the basis to explore whether the incidence of dual system contact and the characteristics of dual system youth vary across experiences using linked administrative data from three sites: Cook County, Illinois; Cuyahoga, Ohio; and New York City. To this end, the proposed terms and definitions for dual system youth presented in Table 4.2 serve as the basis for the incidence feasibility test using linked administrative data from three sites: Cook County, Illinois; Cuyahoga, Ohio; and New York City. The results of these analyses are presented in Chapter 5.

Chapter 5: Incidence Rates and a Description of Characteristics by Category and Pathway for First Juvenile Justice Petition Youth in Three Sites[6,7,8]

Lead Authors:
Denise C. Herz, California State University, Los Angeles
Youngmin Cho & Claudia Coulton, Case Western Reserve University
Shannon Guiltinan & Robert Goerge, Chapin Hall at the University of Chicago
Jessica Raithel & Maryanne Schretzman, The Center for Innovation through Data Intelligence in New York City

A primary focus of this study was to assess the feasibility of using linked administrative data to produce incidence rates of dual system youth in three metropolitan areas. The Linked Administrative Data (LAD) Subcommittee led this portion of the study and used the framework proposed in Chapter 4 to drive discussions around the methodology. Analysis was completed using linked administrative data from Cook County, Illinois; Cuyahoga County, Ohio; and New York City. Research teams from Chapin Hall at the University of Chicago, the Center on Urban Poverty and Community Development at Case Western Reserve University, and the New York City Center for Innovation through Data Intelligence conducted the analysis for these sites (see Appendix C for a more detailed description of each entity). Each of these teams had established agreements with various public sector systems that permitted them to receive, match, and analyze administrative datasets within their respective site. The experience of these teams and their ability to access administrative data presented a unique opportunity to "test" the coding parameters and analytic plans for estimating the incidence of dual system youth using matched child welfare and juvenile justice systems. Thus, both the process of conducting the feasibility analysis and its subsequent results were instrumental in informing the development of designs to produce a national estimate of dual system youth.

This chapter provides an overview of the methodology used for the feasibility analysis and a summary of results across sites (for detailed descriptions of the data and methods used by each of the research teams, please refer to Appendix C). It is important to note that these results were derived using administrative data and, as a result, are reflective of both the strengths and

[6] Data used in this report was provided by and belongs to the Cook County Juvenile Probation and Court Services Department and the Chicago Police Department. Any further use of this data must be approved by Cook County Juvenile Probation and Court Services and the Chicago Police Department. Points of view or opinions contained within this document are those of the authors and do not necessarily represent the official position or policies of the Cook County Juvenile Probation and Court Services Department or the Chicago Police Department.

[7] Data used in this report was provided by and belongs to the Cuyahoga County Children and Family Services and the Cuyahoga County Juvenile Court. Any further use of this data must be approved by those agencies. Points of view or opinions contained within this document are those of the authors and do not necessarily represent the official position or policies of these agencies.

[8] Data used in this report was provided by and belongs to the New York City Administration for Children's Services and the New York City Department of Probation. Any further use of this data must be approved by those agencies. Points of view or opinions contained within this document are those of the authors and do not necessarily represent the official position or policies of these agencies.

weaknesses of such data. The results, for example, document who is entering the child welfare and juvenile justice systems and their basic characteristics; however, the data are limited to those who touch the systems and to the types and amount of data collected by systems. This reality does not detract from the significant contribution such data offers, but it is a reminder of the limitations of administrative data to answer all questions about dual system youth experiences (e.g., prevalence of mental health and substance abuse issues, types of services received, and so on).

Description of Sites

Cook County. With a population of over 5.2 million people, Cook County Illinois is the third most populous county in the United States after Los Angeles. Just over half of the county's residents live in the city of Chicago. The population is racially diverse with non-Hispanic whites making up the majority of the population (43%), followed by a nearly equal percentage of Hispanics (25%), and African Americans (24%). Among persons under the age of 18, about 23 percent of the total population, Hispanics represent the largest racial/ethnic group (36%) followed by non-Hispanic whites (31%) and African Americans (25%). Between 2000 and 2015, Cook County lost about 3 percent of its population with marked differences in growth and decline among racial and ethnic groups. While the Hispanic population increased by about 21% during this time period, non-Hispanic White and African American populations declined by 12% and 11% respectively. About 17% of the total population and 25% of children and youth live below the poverty line.[9]

Cuyahoga County. Cuyahoga County, Ohio has a population of 1.3 million with approximately one-third of the residents living in the City of Cleveland, an urban core that is one of the poorest cities in the US. Of all residents, 6% are under 6 years and 23% are under 18 years. Females comprise 52% of the population. The largest racial/ethnic groups are White, non-Hispanic (64%) followed by African American (30%) and Hispanic (6%). Approximately 18% of County residents live in poverty, and the poverty rate for children 18 and under is 26%. This compares unfavorably with a national poverty rate of 14% and a child poverty rate of 21%.

New York City. The five boroughs that make up New York City contain approximately 8.6 million residents, making New York the most populous city in the United States. The poverty rate in 2015 was 20%. The population is about 48% male and 52% female. The racial composition is as follows: 29% Hispanic or Latino, 32% non-Hispanic White, 22% non-Hispanic Black or African American, 14% non-Hispanic Asian, and the remaining 3% are two or more races or a different race. About 1.8 million or 21% of the population is under the age of eighteen. The child poverty rate in 2015 was approximately 29%. The population under eighteen is 51% male and 49% female. The racial composition for the population under 18 is as follows: 35% Hispanic or Latino, 26 % non-Hispanic White, 23% non-Hispanic Black or African American, 12% non-Hispanic Asian, and the remaining 4% are two or more races or a different race.

[9] U.S. Census Bureau, 2011-2015 American Community Survey 5-Year Estimates and Census 2000 Summary File 1 (SF 1) 100-Percent Data Table P004

Study Design

To measure the incidence of dual system youth consistently across sites, the research teams used a cohort sample design. Specifically, all site teams identified a cohort of youth who received their first delinquency court petition between 2010 and 2014. This study targeted delinquency court petitions because (1) arrest data were not available in all three sites and (2) arrest data present significant data quality issues due to the variability in arrest decision-making across jurisdictions. Court petitions, on the other hand, represent formal entry into the juvenile justice system in a more consistent way across sites than arrests. Cohort youth in this chapter, then, include youth with some type of contact with the child welfare system and an adjudicated petition in the delinquency court.

The timeframe for the selection of the cohort was 2010-2014 because these were the most recent data available for analysis. The historical coverage for these cases is strong because all sites were able to match youth to child welfare records dating back to 1992. One exception occurred in New York City. Due to data system changes in 2012, the juvenile justice first petition cohort was limited to 2013 and 2014 (for more explanation of this exception see data description below and Appendix C).

The delinquency petition cohorts for each site were matched to child welfare data dating back to 1992 to identify which cohort youth had any system contact (i.e., referrals or involvement). In the three sites, child welfare contact included all investigations of abuse or neglect whether the allegation was substantiated or not and any record of a child receiving child welfare services (i.e., case openings/closings and foster care placements). In the matching process, dual system youth were further identified as dual contact youth or dually-involved youth based on the definitions presented in Chapter 4. This process also yielded a juvenile justice cohort with no recorded contact with child welfare. This group of youth is reflected in tables as "juvenile justice only youth" and served as a baseline comparison for dual system youth characteristics.

A "child welfare only" group was derived by identifying a separate cohort of child welfare youth who mirrored the juvenile justice first petition cohort youth in age (i.e., youth born between 1996 and 2003) and matching them to juvenile justice administrative data to determine which youth did not have a delinquency petition. Youth with no delinquency petitions filed during this timeframe, "child welfare only," served as a baseline comparison for dual system youth characteristics. It should be noted that this population includes youth who were involved in child welfare at any point; therefore, many of these youth may have started and ended their involvement in early childhood (e.g., adoption as a baby or young toddler). The utility of this group is limited to understanding how the characteristics of dual system youth may differ from youth within the same birth cohort who did not have contact with the juvenile justice system. This method is not suitable to identify the number/percentage of child welfare youth who cross into the juvenile justice system overall (e.g., and incidence rate) and should not be used for such a purpose.

Table 5.1 displays each of the groups described above and the data timeframes used to identify them. As indicated in this table, data available for analysis was limited with respect to identifying youth who followed a juvenile justice pathway to dual system contact. Since the data

were bounded at 2014, no further tracking or checking for dual system contact was possible beyond that year, presenting the possibility that juvenile justice pathway youth may be somewhat underrepresented.

Table 5.1

Definitions and Coding Parameters for Dual System Involvement across Sites (Youth Aged 8-18)

Description	Pathway	JJ Time Frame for Match	CW Time Frame for Match
CW involvement with no JJ contact	N/A	No delinquency petition ever[10]	Youth in the CW data who fall into the same age range as the 2010-2104 first petition JJ cohort
JJ involvement with no CW involvement	N/A	2010-2014 (first petition)	No CW contact/record between 1992-2014
Dual contact	Child welfare (CW) pathway	2010-2014 (first petition)	1992-2014
	Juvenile Justice (JJ) Pathway	2010-2014 (first petition)	Limited—Need more years of data to track
Dually involved	Child welfare (CW) pathway	2010-2014 (first petition)	1992-2014
	Child welfare (CW) pathway + historical case	2010-2014 (first petition)	1992-2014
	Juvenile justice (JJ) pathway	2010-2014 (first petition)	1992-2014
	Juvenile justice (JJ) pathway + historical case	2010-2014 (first petition)	Limited—Need more years of data to track

Data Sources

Cook County. Chapin Hall researchers used four datasets from three Illinois agencies—the Circuit Court of Cook County, the Illinois Department of Children and Family Services (DCFS), and the Chicago Police Department (see *Table 5.2*—see Appendix B for a more detailed description of the data sources used).

[10] Ideally, "no juvenile justice contact" would go broader than petition, to include no arrest etc. Given data availability, however, we will limit the definition to no delinquency petitions during this timeframe.

Table 5.2

Linked Administrative Data Sources for Cook County

Dataset	Data Provider	Years
Juvenile Enterprise Management System (JEMS)	Cook County Juvenile Probation and Court Services	2010-2014
Child Abuse and Neglect Tracking System (CANTS)	Illinois Department of Child and Family Services (DCFS)	1992-2014
Child and Youth Centered Information System (CYCIS)	Illinois Department of Child and Family Services (DCFS)	1992-2014
Chicago Police Department Arrest Data	Chicago Police Department (CPD)	1991-2014

Cuyahoga County. The data used for Cuyahoga County came from (1) juvenile court filings between 2000 and 2014 provided by the Cuyahoga County Juvenile Court; and (2) child welfare records between 1992 and 2014 provided by the Cuyahoga County Children and Family Services (*Table 5.3*).

Table 5.3

Linked Administrative Data Sources for Cuyahoga County

Dataset	Data Provider	Years
Juvenile court filings	Cuyahoga County Juvenile Court	2000-2014
Child welfare records	Cuyahoga County Children and Family Services	1992-2014

New York City, New York. For juvenile justice data, CIDI matched data between the New York City Department of Probation and the Law Department for this study (see Table 5.4). Probation data was used to identify youth with an intake at Probation between 2010 through 2014. These cases were then matched to data from the Law Department to ascertain which youth had their first petition filed in our years of interest. In total, the sample in New York City was modified to include all youth with a first petition that was not sealed (i.e., does not include dismissed cases or others that were sealed by the court). This procedure excluded 2,754 youth who had a sealed case in 2013 and 2014. It also means that youth in the New York City sample may have had a sealed case prior to the unsealed case that is included here.

Data on child welfare involvement was obtained in partnership with the New York City Administration for Children's Services (ACS). Data included indicated investigations, service case openings and closings, and foster care.

Table 5.4

Linked Administrative Data Sources for New York City

Dataset	Data Provider	Years
Child Welfare	New York City Administration for Children's Services	1996-2014
Juvenile Justice	Department of Probation via New York City Law Department	2013-2014

Results across Primary Cohort Groups: Child Welfare Involvement Only vs. Juvenile Justice Involvement Only vs. Dual System Youth

To begin, we present the percentage of youth who fell into all the categories used for this study. Based on the results presented *in Table 5.5, the* prevalence of dual system youth was high, varying across sites from 44.8% in Cook County to 68.5% and 70.3% in Cuyahoga and New York City, respectively.

When dual system contact is broken down by different types of system contact, the most prevalent group was dual contact youth on a child welfare pathway in all sites, but the rates across sites varied with Cook County having the highest percentage of these youth (70.8%) followed by New York City (48.9%) and Cuyahoga County at (48.3%). The second most prevalent category was dually-involved youth by way of the child welfare pathway, and most of these youth had previous, historical child welfare contact. The least common groups were youth who touched both systems through the juvenile justice pathway.

Table 5.5

Incidence of Dual System Youth Across Sites

	Cook County		Cuyahoga County*		New York City	
	N	**%**	**N**	**%**	**N**	**%**
JJ Petition Cohort Youth	**N=14,170**		**N=11,441**		**N=1,272**	
No dual system involvement	7,822	55.2%	3,607	31.5%	378	29.7%
Dual system involvement of any type	6,348	44.8%	7,834	68.5%	894	70.3%
Distribution of Dual System Youth by Type of Contact and Pathway	**N=6,348**		**N=7,834**		**N=894**	
Dual contact						
Child welfare pathway	4,491	70.8%	3,782	48.3%	437	48.9%
Juvenile justice pathway	117	1.8%	73	.9%	41	4.6%
Dual involvement						
Child welfare pathway/no historical contact	604	9.5%	138	1.8%	74	8.3%
Child welfare pathway + historical contact	565	8.9%	1,572	20.1%	237	26.5%
Juvenile justice pathway/no historical contact	142	2.2%	94	1.2%	35	3.9%
Juvenile justice pathway + historical contact	429	6.8%	1,051	13.4%	70	7.8%

*14.4% of cases in Cuyahoga County could not be categorized.

Demographics and System Characteristics

Table 5.6 displays the basic demographics and system characteristics across the child welfare only cohort, juvenile justice only cohort, and dual system youth (i.e., all categories combined). These findings show the following:

- Dual system youth were more likely to be male, but females were represented at a higher rate in dual system youth than in the juvenile justice only cohort. For example, in New York City, 25.1% of dual system youth were female compared to 14.6% of juvenile justice only youth. This pattern was found in all sites.

- African-American youth were overrepresented in all cohorts, but the amount of overrepresentation was greater among dual contact youth. For example, in Cook County, 60.1% of child welfare only cohort and 68.6% of the juvenile justice only cohort were African American compared to 79.4% of dual system youth. This pattern was the same in all sites and most noticeable in New York City with 38.7%, 63.8%, and 71.3%, respectively.

- Dual system youth were slightly older at their first child welfare investigation compared to their child welfare counterparts by approximately a year in all sites. On average, their first investigation was at age 6 (Cook/Cuyahoga Counties) and 8 (New York City) and child

welfare only youth were 5 and 7 years old. Dual system youth were also older than their child welfare only counterparts at their last investigation by approximately three years in all sites.

- The average age at first juvenile justice referral was nearly identical for dual system youth (15 years old) and juvenile justice only youth (15 years old) with the exception of juvenile justice only youth in Cuyahoga County who, on average, were slightly older (16 years old).

- Person offenses[11] were the most likely charge for dual system youth across sites (39.3% in Cuyahoga; 48.7% in Cook; and 58.8% in New York City), but dual system youth were not always more likely than their juvenile justice only counterparts to receive this charge. While dual system youth were more likely to be charged with a person charge than youth in the juvenile justice only cohort in Cuyahoga County, the percentage of person offenses in Cook was nearly the same across groups and dual system youth in New York City were slightly less likely to be charged with a person offense than their counterparts.

- Dual system youth had higher rates of pre-adjudication detention compared to their juvenile justice only peers. Nearly half (47.5%) of dual system youth in Cuyahoga County were detained compared to 24.0% of juvenile justice only youth. Although the detention rate was lower overall in Cook County, the same pattern held: 24.2% of dual system youth were detained compared to 17.9% of juvenile justice only youth.

[11] Person offenses include the FBI's Uniform Crime Report Violent Crime Index offenses of murder/non-negligent manslaughter, forcible rape, robbery, and aggravated assault as well as other less serious crimes against persons.

Table 5.6

Demographic and Arrest Characteristics across Type of Dual System Youth and Site

	Cook County			Cuyahoga County			New York City		
	CW Involvement Only	**JJ Involvement Only**	**All Dual System Youth**	**CW Involvement Only**	**JJ Involvement Only**	**All Dual System Youth**	**CW Involvement Only**	**JJ Involvement Only**	**All Dual System Youth**
	(N=221,565)	(N=7,822)	(N=6,348)	(N=103,974)	(N=3,607)	(N=7,834)	(N=173,928)	(N=378)	(N=894)
Gender									
Female	50.1%	16.7%	22.0%	50.1%	27.6%	35.3%	48.7%	14.6%	25.1%
Male	48.3%	83.3%	78.0%	49.7%	72.3%	64.7%	50.7%	85.4%	74.9%
Unknown	1.6%	0.0%	-	0.2%	0.1%	0.1%	0.6%	0.0%	0.0%
Race/ethnicity									
White	19.3%	9.8%	6.9%	33.4%	42.7%	21.3%	6.5%	19.8%	19.5%
African American	60.1%	68.6%	79.4%	54.1%	51.2%	73.3%	38.7%	63.8%	71.3%
Hispanic	15.3%	19.9%	12.5%	3.5%	3.9%	2.9%	39.4%	7.7%	6.2%
Others	1.4%	1.7%	1.2%	4.8%	1.7%	1.8%	4.3%	7.1%	2.9%
Unknown	4.0%	-		4.2%	0.5%	0.7%	11.1%	1.6%	0.2%
Average age at first CW investigation (in years)	4.9	-	5.7	4.9	-	5.6	6.7	-	8.3
Average age at last CW investigation (in years)	6.6	-	9.9	8.0	-	11.5	8.1	-	11.6
Average age at first JJ petition (in years)	-	15.4	15.3	-	16.0	15.3	-	14.8	14.7
Most serious charge									
Person		45.6%	48.7%	-	28.2%	39.3%	-	63.8%	58.8%
Property	-	27.4%	28.1%	-	34.4%	35.0%	-	23.5%	28.5%
Public order	-	15.0%	12.2%	-	26.8%	20.7%	-	7.9%	8.1%
Other		15.0%	12.2%	-	0.8%	0.7%	-	4.0%	3.7%
Drug	-	11.3%	10.2%	-	9.8%	4.5%	-	-	-
Was Detained Prior to Adjudication	-	17.9%	24.2%	-	24.0%	47.5%	N/A	N/A	N/A

Child Welfare Experiences

Table 5.7 compares child welfare experiences across groups and sites. Highlights from this table include:

- On average, dual system youth had one more investigation than their child welfare only counterparts. In all sites, the difference was between two investigations for child welfare only youth and three investigations for dual system youth.

- The type of allegation for the investigation was most likely to be for neglect followed by physical abuse and sexual abuse in both Cook and Cuyahoga Counties for both groups of youth. The prevalence of neglect allegations, however, was higher in Cuyahoga County for both groups compared to Cook County.

- Placements were noticeably greater for dual system youth than for child welfare only youth. In Cook County, dual system youth were almost 1.5 times more likely to be placed in an out-of-home placement, and in Cuyahoga County and New York City, dual system youth were nearly twice as likely as their child welfare counterparts to receive a placement of some type.

- Dual system youth placed in out-of-home settings had more placements and spent more time, on average, in those placements than child welfare only youth. They experienced, on average, one to two more placements and spent nearly one additional year in placements comparatively.

- Reunification was the most frequent permanency plan outcome for youth in all sites and across groups, except for the child welfare only group in Cook County which had adoption as it most frequent permanency plan. Dual system youth, however, were more likely to have their open cases and less likely to experience adoption than child welfare youth only.

Table 5.7

Child Welfare Involvement across Cohort Groups

	Cook County		**Cuyahoga County**		**New York City***	
	CW Involvement Only	**All Dual System Youth**	**CW Involvement Only**	**All Dual System Youth**	**CW Involvement Only**	**All Dual System Youth**
	(N=221,565)	**(N=6,348)**	**(N=103,974)**	**(N=7,834)**	**(N=173,928)**	**(N=894)**
Average number of investigations (per Child)	1.9	2.9	2.1	3.1	1.7	2.6
% of investigations substantiated	28.8%	23.1%	28.0%	28.5%	100.0%	100.0%

	Cook County		Cuyahoga County		New York City*	
	CW Involvement Only	All Dual System Youth	CW Involvement Only	All Dual System Youth	CW Involvement Only	All Dual System Youth
Type of allegation for first investigation						
Neglect	47.6%	48.3%	65.2%	66.6%	-	-
Physical abuse	33.8%	35.8%	26.1%	25.9%	-	-
Sexual abuse	10.4%	5.3%	8.8%	7.5%	-	-
Placements						
Ever placed	15.8%	21.6%	13.4%	23.6%	16.0%	31.4%
Average no. of placements (per Child)	3.6	5.9	2.9	3.8	3.7	4.8
Length spent in placements (in months)	16.4	37.5	21.9	35.0	20.1	31.6
Permanency outcome						
Adoption	48.6%	20.5%	28.4%	9.4%	24.9%	4.3%
Reunification	26.8%	32.3%	29.2%	34.2%	53.3%	61.9%
Other permanency with family	11.0%	12.0%	15.8%	16.4%	7.4%	8.5%
Emancipation	3.0%	2.3%	8.7%	14.4%	1.8%	1.1%
Case still open	6.3%	19.0%	5.8%	19.4%	9.9%	22.4%
Other	3.4%	12.4%	12.1%	6.3%	2.7%	1.8%

*Notes: (1) The results for NEW YORK CITY are limited to substantiated investigations due to legal constraints and no data were available for the type of allegation. (2) Type of allegation is presented only for the last investigation because there was little difference between first and last investigation allegations. (3) Allegation and permanency percentages do not total to 100% in Cook County because there were missing data.

Juvenile Justice Experiences

Table 5.8 describes the juvenile justice experiences for dual system youth across cohorts.

- Disposition outcomes did not vary across juvenile justice only youth and dual system youth, but there were slight variations in the type of dispositions received by each group across sites. Both groups were more likely to be dismissed or receive community supervisions in Cook and Cuyahoga Counties (excluding the "other" category in Cuyahoga), and they were most likely to receive community supervision followed by correctional/other placement in New York City.

- Using 1-year new petition rates in two counties, dual system youth were more likely to recidivate than their juvenile justice only counterparts in both Cook and Cuyahoga Counties. In Cook County, approximately half of juvenile justice only youth recidivated compared to 57.3% of dual system youth, and in Cuyahoga County, one-quarter of juvenile justice only youth recidivated compared to 37.4% of dual system youth.

Table 5.8

Juvenile Justice Experiences across Cohort Groups

	Cook County		Cuyahoga County		New York City*	
	JJ Involvement Only	**All Dual System Youth**	**JJ Involvement Only**	**All Dual System Youth**	**JJ Involvement Only**	**All Dual System Youth**
	(N=7,822)	(N=6,348)	(N=3,607)	(N=7,834)	(N=378)	(N=894)
Delinquency court disposition						
Dismissed/not delinquent	50.1%	51.2%	33.4%	21.8%	6.1%	6.9%
Community supervision	48.1%	46.8%	14.2%	13.0%	82.6%	78.0%
Correctional/ other placement	0.9%	1.0%	1.6%	2.8%	11.4%	15.2%
Other*	1.0%	1.0%	50.8%	62.5%		
Average Length b/t Petition Filing and Disposition	1.8 months	3.5 months	9.0 months	14.9 months	6.5 months	6.9 months
Average Length b/t Petition Filing and Disposition						
6 Month recidivism: new arrest	35.9%	44.0%	-	-	-	-
6 Month recidivism: new petition	19.1%	25.1%	-	-	-	-
1 Year recidivism: new arrest	49.1%	57.3%	-	-	-	-
1 Year Recidivism: New petition	26.6%	33.7%	24.1%	37.4%	N/A	N/A

*NOTES: (1) Only current petition data were available so recidivism was not measured in New York City. (2) "Other" includes fines, binding the case over, referring the case to another case and unknown—i.e., missing information.

Summary Profiles of Dual System Youth by Type and Pathway

In addition to comparing the three primary cohort groups, sites also produced these results across dual system youth by type and pathway. The number of pathways examined produced a number of tables. To simplify the findings, the results of these analyses are summarized in this section and the tables containing findings are presented in Appendix D.

Despite variation in pathway comparisons across sites, there were more commonalities than differences. The summaries provided below present the general findings across sites. While these summary profiles are instructive, they are not unequivocal with regard to the characteristics and experiences of each group.

A dual contact youth via child welfare pathway is most likely to:

- Be male
- Be African American
- Have, on average, 2 child welfare investigations
- Have a first child welfare investigation around age 7 years old (on average)
- Have a last child welfare investigation around age 9 years old (on average)
- Be involved with child welfare, on average, between 14-24 months
- Have a 10% to 22% chance of being placed in foster care and on average, experience 3 placements
- Have a first delinquency petition around age 15 years old (on average)
- Be charged with an offense against persons
- Have a detention rate falling between 21% to 37%
- Receive community supervision as a disposition from the delinquency court (Note: This excludes dismissals and "other" from consideration)
- Receive a disposition within 3 to 12 months of their petition filing in Cook and Cuyahoga Counties and of their probation intake date in New York City
- Have a recidivism rate of 31% at 1 year

A dual contact youth via juvenile justice pathway is most likely to:

- Be male
- Be African American
- Have a first child welfare investigation around age 15 years old (on average)
- Have a last child welfare investigation around age 16 years old (on average)
- Have, on average, approximately 1 child welfare investigation
- Be involved with child welfare, on average between 4-5 months
- Have a 3% to 24% chance of being placed in foster care, and on average experience 1-5 placements
- Have a first delinquency petition around age 15 years old (on average)
- Be charged with an offense against persons
- Have a detention rate of approximately 20%
- Receive community supervision as a disposition from the delinquency court (Note: This excludes dismissals and "other" from consideration)
- Receive a disposition within 2-6 months of their petition filing in Cook and Cuyahoga Counties and of their probation intake date in New York City
- Have a recidivism rate of 15% to 30% at 1 year

A dually-involved youth via child welfare pathway with no historical child welfare case is most likely to:

- Be male but representation of females over 30% in two sites
- Be African American
- Have a first child welfare investigation at age 15 years old (on average)
- Have a last child welfare investigation around age 16 years old (on average)
- Have, on average, approximately 2 child welfare investigations

- Be involved with child welfare for 1 to 12.5 years
- Have a 16% to 52% chance of being placed in foster care, and on average, experience 4-5 placements
- Have a first delinquency petition around age 15 years old (on average)
- Be charged with an offense against persons
- Have a detention rate between 41% to 63%
- Receive community supervision as a disposition from the delinquency court (Note: This excludes dismissals and "other" from consideration)
- Receive a disposition within 3 to 12 months of their petition filing in Cook and Cuyahoga Counties and of their probation intake date in New York City
- Have a recidivism rate of 15% to 30% at 1 year

A dually-involved youth via child welfare pathway with historical child welfare case is most likely to:

- Be male but representation of females between 30% and 50% in two sites
- Be African American
- Have a first child welfare investigation around age 4 to 9 (on average)
- Have a last child welfare investigation around age 13 (on average)
- Have, on average, approximately 3 child welfare investigations
- Be involved with child welfare for 4 to 12 years
- Have a 48% to 91% chance of being placed in foster care, and on average, experience 5-9 placements
- Have a first delinquency petition around age 15 years old (on average)
- Be charged with an offense against persons
- Have a detention rate between 28% to 57%
- Receive community supervision as a disposition from the delinquency court (Note: This excludes dismissals and "other" from consideration)
- Receive a disposition within 3 to 12 months of their petition filing in Cook and Cuyahoga Counties and of their probation intake date in New York City
- Have a recidivism rate of 30% to 37% at 1 year

A dually-involved youth via juvenile justice pathway and no historical child welfare case is most likely to:

- Be male but representation of females at 30% and 50% in one site
- Be African American
- Have a first child welfare investigation around age 15 (on average)
- Have a last child welfare investigation around age 15 (on average)
- Have, on average, approximately 1 child welfare investigation
- Be involved with child welfare for 6 months
- Have a 6% to 20% chance of being placed in foster care, and on average, experience 3 to 4 placements
- Have a first delinquency petition around age 15 years old (on average)
- Be charged with an offense against persons
- Have a detention rate between 48% to 60%

- Receive community supervision as a disposition from the delinquency court (Note: This excludes dismissals and "other" from consideration)
- Receive a disposition within 7 to 12 months of their petition filing in Cook and Cuyahoga Counties and of their probation intake date in New York City
- Have a recidivism rate of 29% to 32% at 1 year

On average, a dually involved via juvenile justice pathway and a historical child welfare case is most likely to:

- Be male but representation of females at 30% to 40% across all sites
- Be African American
- Have a first child welfare investigation around age 8 (on average)
- Have a last child welfare investigation around age 13 (on average)
- Have, on average, approximately 3 child welfare investigations
- Be involved with child welfare for 2 to 4 years
- Have a 30% to 39% chance of being placed in foster care, and on average, experience 3 to 5 placements
- Have a first delinquency petition around age 15 years old (on average)
- Be charged with an offense against persons
- Have a detention rate between 48% to 60%
- Receive community supervision as a disposition from the delinquency court (Note: This excludes dismissals and "other" from consideration)
- Receive a disposition within 6 to 22 months of their petition filing in Cook and Cuyahoga Counties and of their probation intake date in New York City
- Have a recidivism rate of 43% at 1 year

Taken together, the results produced from the feasibility analysis of linked administrative data underscore the utility and strength of this method to estimate a national incidence rate of dual system youth. To achieve such a goal, however, data must be available from a sufficient number of jurisdictions representing the child welfare and juvenile justice populations across the nation.

Chapter 6: Incidence Rates and a Description of Characteristics by Category and Pathway for First Arrest Youth in Cook County, Illinois[12]

Lead Authors:
Shannon Guiltinan & Robert Goerge, Chapin Hall at the University of Chicago

In Chapter 5, site teams identified a first juvenile justice petition cohort comprised of youth who received their first juvenile court petition between 2010 and 2014 and examined their involvement in both the juvenile justice and child welfare systems. In this chapter, Chapin Hall researchers identified a cohort of Chicago youth[13] with a first arrest between 2010 and 2014, and analyzed their involvement with the child welfare system as well as any subsequent involvement with the juvenile justice system, defined as having a juvenile court petition. We further limited the cohort to youth born before the year 2001 in order to follow their system involvement through age 17 (see Appendix E for a detailed description of the data and methods). It is important to note that although all the youth identified in this cohort had an arrest, their involvement with the juvenile justice system may have ended following the arrest—in other words, these youth may or may not have a subsequent delinquency petition filed.

The arrest cohort was matched to child welfare data dating back to 1992 to identify which cohort youth had any child welfare system contact, i.e., referrals (investigations) or involvement (service receipt). Child welfare contact includes all investigations of abuse or neglect whether the allegation was substantiated or not and any record of a child receiving child welfare services (i.e., family and child case openings/closings and foster care placements). Based on the matching process, cohort youth were grouped into two categories: "Arrest/Child Welfare Involvement Not Concurrent" and "Arrest/CW Concurrent" for further analysis.

This process also yielded a juvenile arrest cohort with no recorded contact with child welfare. This group of youth is reflected in tables as "Arrest/No CW Contact" and served as a baseline comparison for dual system youth characteristics. Arrest/No CW Contact youth included youth who only had at least one arrest.

A "Child Welfare Only/No Arrest" group was derived by identifying a separate cohort of child welfare youth who matched the juvenile justice first arrest cohort youth in age (i.e., youth born between 1993 and 2000). The child welfare records were linked to juvenile justice administrative

[12] Data used in this report was provided by and belongs to the Cook County Juvenile Probation and Court Services Department and the Chicago Police Department. Any further use of this data must be approved by Cook County Juvenile Probation and Court Services and the Chicago Police Department. Points of view or opinions contained within this document are those of the authors and do not necessarily represent the official position or policies of the Cook County Juvenile Probation and Court Services Department or the Chicago Police Department.

[13] We included youth ages 16 and younger. In Illinois, between January 1, 2010 and December 31, 2013 youth under age 16-, and 17-year-olds with only a misdemeanor offense, were under the jurisdiction of the juvenile court. Seventeen year olds who had committed a felony offense were sent to adult court. Effective January 1, 2014 the definition of a delinquent minor was changed to include 17-year-olds charged with felony offenses.

data to determine which youth did not have arrests. These youth also served as a baseline comparison for dual system characteristics. This population includes youth who were involved in child welfare at any point; therefore, many of these youth may have started and ended their child welfare involvement in early childhood (e.g., adoption as an infant). The utility of this group is limited to understanding how the characteristics of youth with an arrest and contact with the child welfare system may differ from youth within the same birth cohort who did not have an arrest. This method is not suitable to identify the number/percentage of child welfare youth who cross into the juvenile justice system overall (e.g., and incidence rate) and should not be used for such a purpose.

Table 6.1

Definitions and Coding Parameters for Arrest with Child Welfare Involvement

Description	Pathway	JJ Time Frame for Match	CW Time Frame for Match
CW Contact/No Arrests	N/A	No arrest in Chicago or delinquency petition filed in Cook County Juvenile Court ever	Youth in the CW data who fall into the same age range as the 2010-2014 first arrest cohort
Arrest/No CW Contact	N/A	1992-2017 (arrest) 2010-2017 (delinquency petition filed)	No CW contact/record between 1992-2017
Arrest/CW Not-Concurrent	Child welfare (CW) pathway	1992-2017 (arrest) 2010-2017 (delinquency petition filed)	1992-2017
	Juvenile justice (JJ) pathway	1992-2017 (arrest) 2010-2017 (delinquency petition filed)	1992-2017
Arrest/CW Concurrent	Child welfare (CW) pathway	1992-2017 (arrest) 2010-2017 (delinquency petition filed)	1992-2017
	Child welfare (CW) pathway + historical case	1992-2017 (arrest) 2010-2017 (delinquency petition filed)	1992-2017
	Juvenile justice (JJ) pathway	1992-2017 (arrest) 2010-2017 (delinquency petition filed)	1992-2017
	Juvenile justice (JJ) pathway + historical case	1992-2017 (arrest) 2010-2017 (delinquency petition filed)	1992-2017

Data Sources

Chapin Hall researchers used four datasets from three Illinois agencies – the Cook County Juvenile Probation and Court Services, the Illinois Department of Children and Family Services (DCFS), and the Chicago Police Department.

Table 6.2

Linked Administrative Data Sources for Cook County

Dataset	Data Provider	Years
Juvenile Enterprise Management System (JEMS)	Cook County Juvenile Probation and Court Services	2010-2017
Child Abuse and Neglect Tracking System (CANTS)	Illinois Department of Child and Family Services (DCFS)	1992-2017
Child and Youth Centered Information System (CYCIS)	Illinois Department of Child and Family Services (DCFS)	1992-2017
Chicago Police Department Arrest Data	Chicago Police Department (CPD)	1991-2017

Arrest with Child Welfare Contact

Table 6.3 displays the distribution of youth by each category, including arrest with child welfare contact and the pathways of that contact. There were 24,047 youth identified in the first arrest cohort. Of these youth, 9,400 or 39% had an arrest and contact with the child welfare system at some point in their lives. Of those with an arrest and child welfare contact, the majority did not have an arrest at the same time as their child welfare involvement. The second most prevalent pathway was youth who had an arrest concurrently with child welfare involvement but with no historical child welfare contact; however, this percentage was quite small at 10% (see Appendix F for descriptive statistics by pathway).

Table 6.3

Incidence of Arrest with Child Welfare Youth in Chicago

	Cook County	
	N	**%**
First Arrest Cohort Youth	**N=24,047**	
No Child Welfare Involvement	14,647	60.9%
Arrest with Child Welfare Involvement of Any Type	9,400	39.1%
Distribution of Arrest with Child Welfare Youth by Type of Contact and Pathway	**N=9,400**	
Arrest/ CW Not-Concurrent		
Child Welfare Pathway	7,033	74.8%
Juvenile Justice Pathway	690	7.3%
Arrest/ CW Concurrent		
Child Welfare Pathway/No Historical Contact	981	10.4%
Child Welfare Pathway + Historical Contact	691	7.4%
Juvenile Justice Pathway/No Historical Contact	3	0.0%
Juvenile Justice Pathway + Historical Contact	2	0.0%

* Arrest with Child Welfare Youth=youth with an arrest and contact with the child welfare system at some point in their lives.

Demographics and System Characteristics

Table 6.4 displays the basic demographics and system characteristics for these youth compared to the child welfare/no arrest cohort and arrest/no child welfare youth. These findings show the following:

- Arrest with child welfare youth were more likely to be male, but females were represented at a higher rate in dual system youth (35%) than the arrest/no child welfare youth (28%).

- African American youth were the majority in all cohorts, but an even greater majority among arrest with child welfare youth. Sixty percent (60%) of the child welfare/no arrest cohort and 65% of the arrest/no child welfare youth were African American compared to 81% of arrest with child welfare youth.

Table 6.4

Demographic and Arrest Characteristics across Groups

	Child Welfare/ No Arrest	First Arrest Cohort (N=23,867)	
		Arrest/ No CW	Arrest/ CW
	(N=107,502)	(N=14,647)	(N=9,400)
Gender			
Female	52.58%	28.14%	34.47%
Male	46.55%	71.86%	65.53%
Unknown	0.85%		
Race/ethnicity			
White	16.81%	6.11%	3.78%
African American	60.21%	65.41%	80.72%
Hispanic	19.09%	27.49%	15.26%
Others	3.88%	0.98%	0.24%

* Arrest with Child Welfare Youth=youth with an arrest and contact with the child welfare system at some point in their lives.

Child Welfare Involvement

Table 6.5 compares child welfare experiences across groups. Highlights from this table include:

- On average, arrest with child welfare youth were older than the child welfare/no arrest cohort by nearly a year at first investigation, and older by more than two and half years at last investigation.

- On average, arrest with child welfare youth had 2.4 investigations per child while the child welfare/no arrest cohort youth had 1.7.

- The type of allegation for the first investigation was most likely to be for neglect followed for physical abuse both groups.

- A higher percentage of arrest with child welfare youth were ever placed in out-of-home placements (21% versus 14%). Of those ever placed, the arrest with child welfare youth had nearly twice as many placements and spent 4 months, on average, longer in out-of-home placements than child welfare/no arrest cohort youth.

- Arrest with child welfare youth were more likely to have their cases still open and less likely to experience adoption than child welfare/no arrest cohort youth.

- Twenty-nine percent of arrest with child welfare youth were reunified with their parents compared to 23 percent of the child welfare/no arrest cohort youth.

Table 6.5

Child Welfare Involvement across Cohort Groups

	Child Welfare/ No Arrest	**Arrest/ CW**
	(N=107,502)	(N=9,400)
Average age at first CW investigation (in years)	6.6	7.5
Average age at last CW investigation (in years)	7.9	10.5
Average number of investigations (per Child)	1.7	2.4
% of investigations substantiated	28.38%	26.43%
Type of allegation for first investigation		
Neglect	36.44%	39.04%
Physical abuse	19.66%	23.93%
Sexual abuse	22.55%	17.45%
Unknown	5.37%	5.78%
No investigation data	15.98%	18.34%
Placements		
Ever placed	13.87%	20.85%
Average no. of placements (per child)	3.58	6.86
Length spent in placements (in months)	50.07	54.9
Permanency outcome		
Adoption	56.64%	18.64%
Reunification	22.36%	29.39%
Other permanency with family	7.55%	11.05%
Emancipation	7.56%	25.93%
Case still open	3.71%	12.43%
Other	2.18%	2.55%

* Arrest with Child Welfare Youth=youth with an arrest and contact with the child welfare system at some point in their lives.

Juvenile Justice Experiences

Table 6.6 describes the juvenile justice experiences for youth in the first arrest cohort at the time of their arrest.

- The average age at first arrest was nearly identical for arrest with child welfare youth (14.6 years old) and arrest/no child welfare youth (14.8 years old).

- Arrest with child welfare youth (35%) were more likely to be charged with a person offense for their first arrest than youth in the arrest/no child welfare group (28%), and slightly more likely to be referred to court for that first arrest.

- On average, arrest with child welfare youth had more total arrests (5.2) than youth in the arrest/no child welfare group (3.9).

Table 6.6

Juvenile Justice Experiences at the Time of Arrest

	Arrest/ No Child Welfare	**Arrest/ CW**
	(N=14,647)	**(N=9,400)**
Average age at first arrest (in years)	14.8	14.6
Most serious charge at first arrest		
Person	27.52%	35.32%
Property	28.16%	25.76%
Public order	30.19%	28.07%
Drug	13.72%	10.18%
Missing		0.67%
Disposition at first arrest		
Detained	5.39%	7.05%
Referred to court	35.99%	39.65%
Formal station adjustment	9.65%	9.03%
Informal station adjustment or released	45.59%	41.01%
Missing disposition	3.37%	3.26%
1 Year recidivism: new arrest	32.27%	42.46%
6 Month Recidivism: new arrest	20.55%	27.21%
Mean number of arrests	3.9	5.2

* Arrest with Child Welfare Youth=youth with an arrest and contact with the child welfare system at some point in their lives.

Table 6.7 describes the juvenile justice experiences for youth in the first arrest cohort who were subsequently involved (i.e., received petitions) in the juvenile delinquency court.

- Arrest with child welfare youth were more likely to ever have a delinquency petition filed in juvenile court than youth in the arrest/no child welfare group.

- For those youth with a delinquency petition ever, disposition outcomes for their first petition varied little across the two groups. Arrest with child welfare youth had a higher percentage of admissions to correctional/other placements; however, this was a rare outcome for both groups.

Table 6.7

Juvenile Justice Experiences across Cohort Groups

	Arrest/ No Child Welfare (N=14,647)	**Arrest/ CW** (N=9,400)
Juvenile court involvement		
Delinquency petition ever filed	30.59%	42.11%
Age at first petition	15.29	15.13
Most serious charge at first petition		
Person offense	45.61%	49.68%
Property offense	23.34%	24.01%
Public order offense	17.56%	13.46%
Drug violation	12.43%	11.59%
First petition disposition		
Dismissed/not delinquent	43.61%	43.78%
Supervision or probation	53.15%	51.93%
Correctional/other placement	2.63%	3.53%
State's Attorney Office Diversion Program**	0.60%	0.76%
Average number of delinquency petitions filed	2.2	2.6
Recidivism		
New delinquency petition filed at 6 months	22.33%	30.29%
New delinquency petition Filed at 1 year	33.07%	41.20%

* Arrest with Child Welfare Youth=youth with an arrest and contact with the child welfare system at some point in their lives.

**Before trial, new information may come to light that results in the state's attorney's office referring the youth to a diversionary program.

Summary

Overall, results from the first arrest cohort analysis were similar to the first petition cohort results. Both analyses showed high rates of youth who touch both the child welfare and juvenile justice systems. African American youth with both child welfare and juvenile justice involvement were overrepresented in the first arrest and first petition cohorts. In both sets of analyses, youth involved in juvenile justice and child welfare had more investigations and more out-of-home placements, on average, than the juvenile justice only and child welfare only groups and they were more likely to recidivate within one year than their juvenile justice only counterparts.

Chapter 7: Other Administrative Outcomes for First Juvenile Justice Petition Youth across Three Sites[14]

Lead Authors:
Youngmin Cho & Claudia Coulton, Case Western Reserve University
Shannon Guiltinan & Robert Goerge, Chapin Hall at the University of Chicago
Jessica Raithel & Maryanne Schretzman, The Center for Innovation through Data Intelligence in New York City
Denise Herz, California State University, Los Angeles

Purpose of Analysis

Analysis using a first delinquency petition cohort in Chapter 5 showed the incidence rates and characteristics for dual system youth in three sites: Cook County, Illinois, Cuyahoga County, Ohio, and New York City. A comparison of results by pathway showed differences across dual system youth groups. These findings, however, were limited to the characteristics of these youth and various system decisions and outcomes in the child welfare and juvenile justice systems only. In this chapter, analyses are extended to examine additional system contact including the extent to which homelessness, public assistance, and adult incarceration varied across the same pathways before and after the age of 18.

Sample

The sample used for this analysis was a cohort of youth who received their first juvenile court petition between 2010 and 2014 for Cook and Cuyahoga Counties and between 2013 and 2014 for New York City. This cohort was originally identified as part of the descriptive results across sites by dual systems youth categories or pathways (see Chapter 5). As mentioned in the earlier analysis, court petition was targeted because arrest data were not available in all three sites and arrest data present significant data quality issues because of the variable nature of how arrests are made and reported across the three sites. Court petitions, on the other hand, represent formal entry into the juvenile justice system in a fairly consistent way across sites. Initially, the years 2010-2014 were targeted because they were the most recent data held by all three subcontractors; however, New York City was only able to use 2013-2014 due to data quality concerns for earlier years. All sites were able to match youth to child welfare records dating back to 1992.

Other administrative data outcomes were produced for the same categories of dual system youth proposed in Chapter 5 and reflected in Table 7.1 below.

[14] Data used in this report was provided by and belongs to the agencies identified within this chapter for all sites. Any further use of this data must be approved by those agencies. Points of view or opinions contained within this document are those of the authors and do not necessarily represent the official position or policies of these agencies.

Table 7.1

Types of Dual System Involvement and Pathways for Youth Who Experience Maltreatment and Engage in Delinquent Behavior

Type of Dual System Involvement & Pathway	**Pathway Descriptions**
Crossover youth: Youth who experience maltreatment and engage in delinquency and touches (1) neither system, (2) only one system, or (3) both the child welfare and juvenile justice systems.	
Dual system youth: Youth who touch both systems, either concurrently or non-concurrently, at some point in their childhood and/or adolescence.	
Dual contact: Youth who touch and receive some level of services/supervision <u>non-concurrently</u> from both the child welfare and the juvenile justice systems.	
Dual contact-child welfare first	*Non-Concurrent Child Welfare Pathway:* Youth enters the juvenile justice system after a child welfare case has been closed CW → || JJ
Dual contact-juvenile justice first	*Non-Concurrent Juvenile Justice Pathway:* Youth enters the child welfare system after the juvenile justice case is terminated JJ → || CW
Dually involved: Youth who touch and receive some level of services/supervision <u>concurrently</u> from both the child welfare and juvenile justice systems.	
Dual involvement-child welfare first & no previous CW case	*Concurrent Child Welfare Pathway:* Youth with an open child welfare case subsequently enters the juvenile justice system while the child welfare case remains open—youth has no previous child welfare contact CW → JJ
Dual involvement-child welfare first & historical CW case	*Concurrent and Historical Child Welfare Pathway:* Youth with an open child welfare case subsequently enters the juvenile justice system while the child welfare case remains open—youth had a previous but not currently open child welfare case CW || CW → JJ
Dual involvement-juvenile justice first & no previous CW case	*Concurrent Juvenile Justice Pathway*: Youth has an open case in the juvenile justice system and subsequently has a child welfare case opened—youth has no previous child welfare contact JJ → CW
Dual involvement-juvenile justice first & historical CW case	*Concurrent and Historical Juvenile Justice Pathway:* Youth has an open case in the juvenile justice system and subsequently has a child welfare case opened—youth had a previous but not currently open child welfare case CW || JJ → CW

Two additional groups were used in these analyses across all sites. First, youth in the sample cohort with no child welfare system contact were classified as "juvenile justice contact only" cases. Secondly, a "child welfare contact only" group was identified using the same birth cohort years as the first juvenile justice petition youth. This group was used as a base comparison; however, results for this group must be considered carefully. Since this cohort was constructed based on matched birth years to the juvenile justice cohort, it includes youth who had limited or only early involvement in the child welfare system and does not reflect the experiences of adolescents who enter or remain in the child welfare system in adolescence.

Data and Methods

Cook County. Cook County administrative outcomes focused on whether youth in our cohort were admitted to adult corrections before the age of twenty-one—i.e., the analytic sample was limited to youth in our original sample who turned 21 by the pull date of the administrative data in order to follow everyone through their entire 20th year.

Adult incarceration data was provided by the Illinois Department of Corrections (IDOC) and contains information on admissions and exits of all prisoners which allow us to determine the timing of the cohort's involvement in IDOC. In Illinois, 17-year-olds who committed a felony offense were sent to adult court between January 1, 2010 and December 31, 2013. Effective January 1, 2014 the definition of a delinquent minor was changed to include 17-year-olds charged with felony offenses. Additionally, youth aged fifteen and older who commit certain serious felonies are automatically tried in adult court. Some of the offenses for which a minor can be automatically transferred are first degree murder, armed robbery with a firearm, aggravated criminal sexual assault, aggravated vehicular hijacking with a firearm, possession of drugs with the intent to sell them within 1,000 feet of a school or on the grounds of a public housing project, or possession of a gun at school. In other types of cases, the prosecutor can ask the judge to hold a hearing to decide whether a minor should be prosecuted as an adult. These laws can be complicated, but in Cook County, the State usually asks for transfer in cases where 13 or 14 year old minors are prosecuted for first degree murder, or cases where minors age 15 and 16 are charged with shooting at someone.[15] Consequently, our analysis included a small number of cohort youth who were incarcerated in adult prison at age 17.

Table 7.2

Summary of Outcomes and their Data Sources in Cook County

Outcome	Brief Description	Data Source	Timeframe
Young adult incarceration	Admission to prison by age twenty	Illinois Department of Corrections (IDOC)	1990-June 30, 2017

[15] Cook County Government Services-Juvenile Court [Web page]. Retrieved January 18, 2019 from https://www.cookcountyil.gov/service/juvenile-court.

Chapin Hall used probabilistic record linkage and BigMatch software to link individual children's records from Cook County Juvenile Probation and Court Services, Illinois Department of Child and Family Services (DCFS), Chicago Police Department (CPD), and the Illinois Department of Corrections (IDOC). Each data source file was unduplicated first to identify duplicate records for the same individual in the same data system. The resulting files included all sets of personally identifying information in the original file (which may have included variations in the spelling or content of certain fields), but records representing the same person have the same Chapin Hall-assigned unique identifier CHMSID). Matching variables include name, birth dates, race, sex, social security numbers, identification record (IR) number (finger print ID), and central booking number. All identifying information was excluded from the analytic files.

Frequencies were produced by group (child welfare only, juvenile justice only, or dual system) and by subgroup of dual system use. The data were broken down into two timeframes: admitted prior to age 18 and admitted to adult prison at any time between turning age 18 and before turning 21. The sample was limited to youth who turned age 21 prior to June 30, 2017, which was the end date for the incarceration data.

Study limitations. The administrative outcomes analysis for Cook County is limited by the age of youth in our cohort for the dual systems youth study. The full cohort includes youth born between 1992 and 2003. The DOC data used for these administrative outcomes analysis includes prison admission records through June 2017, therefore only about half of our study cohort reached the age of 21 by the end of the data range.

Cuyahoga County. Cuyahoga County used three administrative outcomes: homeless services use, jail involvement, and public assistance. Given that involvement in the juvenile justice systems ends at age 18, Cuyahoga County looked at outcomes for youth prior to age 18 and for youth between 18 and up to 21 years old. We limited our analytic sample to youth who were born prior to 1996 to make sure that all youth had the same duration for the outcome period. Data for the use of homeless services were provided though the Cuyahoga County Office of Homeless Services (OHS)'s Homelessness Management Information System (HMIS), which is a data system for collecting data on persons using homeless shelters and other homeless services. These records contain information about entry and exit dates, which capture the timing of youth's involvement in the homelessness system.

Jail stays were provided though the Cuyahoga County Sheriff's Department (CCSD) and include any incarceration episodes in that system. These data include booking and related dates, inmate status (e.g., convicted, parole/probation violator), and reason for release. Incarceration episodes were limited to youth between 18 and up to 21. The public assistance outcome was measured by the following two data sources from Cuyahoga County Job and Family Services (JFS): (1) Temporary Assistance for Needy Families (TANF) and (2) Supplemental Nutrition Assistance Program (SNAP). Individuals were considered to have public assistance if they (as a member of a household) received TANF and/or SNAP benefits within a given time period.

Table 7.3

Summary of Outcomes and their Data Sources in Cuyahoga County

Outcome	Brief Description	Data Source	Timeframe
Use of homeless services	Entry and exist of the County homeless service system	Cuyahoga County Office of Homeless Services	2009-2017
Jail/incarceration episodes	County jail booking and release information	Cuyahoga County Sheriff's Department	2002-2017
Public assistance	TANF and/or SNAP	Cuyahoga County Job and Family Services	1992-2017

Outcome data on homeless services use, jail stays, and public assistance were first standardized in preparation for linkage. A third-party SAS macro, LinkPro, applied deterministic and probabilistic matching to determine whether the records matched across the data files.

Frequencies were produced by group (child welfare only, juvenile justice only, and dual system) and by subgroup of dual system use. The results were provided using two timeframes: prior to age 18 vs. between age 18 and 20 (up to 21). The analytic sample was limited to those born prior to 1996 to allow all youth to have the same observation period of outcome after age 18 (i.e., 3 years).

Data limitations[16]**.** The homeless outcome data (HMIS) is available only from 2009 through 2017, which provides a limited timeframe for homeless services use prior to age 18. In addition, HMIS records do not capture other types of homelessness such as doubling up, couch surfing, and sleeping outdoors, which may underestimate the actual estimate of homelessness. County jail records do not cover other types of adult criminal justice system involvement such as probation or state prison. The public assistance measure has a limitation in that some of the eligible low-income families may not apply for those benefits, and would not be included in these administrative records. Finally, we limited the analytic sample to youth who had complete data up until age 21, which reduced our sample size from the original first petition cohort.

New York City. New York City produced administrative outcomes on homeless shelter stays and jail stays. Because the juvenile justice system ended at age 16 (versus 18 in other jurisdictions), New York City looked at outcomes for youth prior to age 16 and from age 16 through age 18. To ensure that all youth had the same duration for the outcome period, the outcome analyses were limited to youth who were born prior to 1999. This ensures that all youth were at least 18 during the available data timeframe.

The homeless shelter stays were provided through the New York City Department of Homeless Services and include any stay in that system, such as shelters for adult families, families with children and single adults. It does not include stays in the runaway and homeless youth crisis

[16] A more in-depth description of the limitations of the study sample from Cuyahoga County can be found in Appendix C.

shelter system; however, it does include all family members who were in shelter, so youth could be in shelter with their family or as a head of household, for example. It also does not take eligibility into account. Individuals entering the family shelters can stay in shelter for a short period of time while the eligibility process is underway; ultimately, some of these individuals may be found ineligible for shelter for a variety of reasons. The single adult shelter system does not have an eligibility process. All stays that were continuous (began within a day of another stay ending) were merged into one stay.

The jail stays data were provided through the New York City Department of Correction and include any stays in that system; this includes individuals who are awaiting trial, as well as those who were sentenced to a year or less. Because youth did not enter the adult justice system until age 16, no jail stays are listed for prior to age 16. All stays that were continuous (began within a day of another stay ending) were merged into one stay.

Table 7.4

Summary of Outcomes and their Data Sources in New York City

Outcome	Brief Description	Data Source	Timeframe
Homeless shelter stays	Shelter stays in a family with children, adult family, or single adult shelter	New York City Department of Homeless Services	1996-2017
Jail stays	Jail stay because awaiting trial or have a short sentence	New York City Department of Correction	2002-2017

Outcome data on homeless shelter stays and jail stays were each matched to the sample data using probabilistic and deterministic algorithms through SAS LinkKing. Data were then linked across data sets and structured for analyses.

Frequencies were produced by group (child welfare only, juvenile justice only, and dual system) and by subgroup of dual system use. The data were broken down into two timeframes: stays prior to the age of 16 and stays between the ages of 16 through 18 (up to 19). The sample was limited to youth born prior to 1999 to allow everyone to have the same duration of follow-up time after age 16.

Data limitations[17]**.**New York City has a different age range for its juvenile justice system and therefore, the age groupings in this report differ from the other sites: the outcomes are grouped as system use prior to age 16 and from age 16 through age 18 (under age 19). Additionally, because the New York City sample only consisted on youth who had their first non-sealed petition in 2013 or 2014, the birth years included in the sample are more limited and only include youth who were born in 1996 to 1999.

[17] A more in-depth description of the limitations of the study sample from New York City can be found in Appendix C.

Additionally, the jail outcomes include both individuals who are being held prior to their trial, as well as individuals who were sentenced to a year or less of prison time; therefore, the measurement is a mix of outcomes. It does not include individuals who had a longer sentence and were sent to prison.

The homeless outcome data is unique because New York City has a right to shelter law. This means that anyone who is deemed eligible for shelter (i.e., they do not have anywhere else to stay) is guaranteed a shelter bed. In this way, the shelter system must expand to accommodate anyone who needs shelter; it does not have a capacity limit like other cities might. Additionally, the homeless shelter data includes all family members who entered shelter, not just the head-of-household. The data also does not include individuals who are homeless, but unsheltered, or using a shelter bed outside the Department of Homeless Services system, such as individuals using the runaway and homeless youth system, the domestic violence system, or other privately funded shelters.

Results

Table 7.5 shows a breakdown of the first juvenile justice petition youth used for these analyses by type of system contact and pathway. The results mirror those in Chapter 5; however, this is a subset of the original cohort since not all youth would have reached the age of 21 within the timeframe of data available.

Table 7.5

Incidence of Dual System Involvement Overall and By Pathway for 1st Juvenile Justice Petition Cohort

	Cook County Youth Born between 1992-1996		Cuyahoga County Youth Born between 1992-1996		New York City Youth Born between 1996-1999	
	N	**%**	**N**	**%**	**N**	**%**
System Pathways	**7,158**	**100.0%**	**5,645**	**100.0%**	**1,001**	**100.0%**
Juvenile justice involvement only	3,989	55.7%	2,345	41.5%	300	30.0%
Dual system involvement	3,169	44.3%	3,300	58.4%	701	70.0%
Any Dual System Involvement	**3,169**	**100.0%**	**3,300**	**100.0%**	**701**	**100.0%**
Dual contact						
Dual contact—child welfare first	2,210	69.7%	1,998	60.5%	340	48.5%
Dual contact—juvenile justice first	64	2.0%	39	1.2%	38	5.4%
Dual involvement						
Dual involvement—child welfare first & no previous CW case	333	10.5%	62	1.9%	62	8.8%
Dual involvement—child welfare first & historical CW case	288	9.1%	677	20.5%	175	25.0%
Dual involvement—juvenile justice first & no previous CW	79	2.5%	47	1.4%	32	4.6%
Dual involvement-juvenile justice first & historical CW case	195	6.2%	477	14.5%	54	7.7%

NOTE: Descriptive statistics related to socio-demographics, child welfare experiences, and juvenile justice experiences for each of these pathways are found in Chapter 5 and Appendix C.

Homelessness

Cuyahoga County. Table 7.6 displays the results for homelessness in Cuyahoga County. Highlights from this table include:

- Dual system youth have the highest percentage of youth who used homeless services both prior to age 18 (6.2%) and from age 18 to 20 (5.7%). Child welfare only and juvenile justice only groups had relatively lower percentages of youth with homeless services use (3.2% and 1.7% prior to age 18 and 3.4% and 2.0% from age 18 to 20).
- The cases were too small in several pathway categories to report. Cases were most likely to fall into the dually-involved-child welfare first with a historical case and dually-involved-juvenile justice first with a historical case. Between these two groups, dually-involved youth-child welfare first were more likely to be homeless than their juvenile justice first counterparts; however, homelessness was similar across both groups between the ages of 18-20.

Table 7.6

Summary Results for Homeless Services/Shelter Use in Cuyahoga County

		Prior to Age 18		Ages 18-20	
	N	**n**	**%**	**n**	**%**
System Pathways					
Child welfare only	41,195	1,301	3.2%	1401	3.4%
Juvenile justice only	2,345	39	1.7%	46	2.0%
Dual system youth combined	3,300	206	6.2%	187	5.7%
Dual Contact Pathways					
Dual contact—child welfare first	1,998	54	2.7%	49	2.5%
Dual contact—juvenile justice first	39	*	*	*	*
Dual Involvement Pathways					
Dual involvement—child welfare first—no previous CW case	62	*	*	*	*
Dual involvement—child welfare first—historical CW case	677	92	13.6%	72	10.6%
Dual involvement—juvenile justice first—no previous CW case	47	*	*	*	*
Dual involvement—juvenile justice first—historical CW case	477	47	9.9%	51	10.7%

Note: The results for Cuyahoga County capture homeless services including shelter stays for youth back to 2009, when data first became available.
*Data suppressed due to small cell size.

New York City. Table 7.7 contains the results for homelessness in New York City. Highlights from this table include:

- Dual system youth group have the highest percentage of youth who had homeless shelter stays both prior to age 16 (35.1%) and from age 16-18 (9.0%). The child welfare only and juvenile justice only groups had similar percentages of youth with homeless shelter stays (20.8% and 20.0% prior to age 16, and 3.6% and 4.3% from age 16 to 18).
- Among dual system youth, the dual involvement-juvenile justice first0no previous CW case and the dual involvement-child welfare first-historical CW case had the highest percentages of youth with a homeless shelter stay prior to age 16 (43.8% and 41.7% respectively).
- Youth in the dual involvement-child welfare first-historical CW case and in the dual involvement-juvenile justice first-historical CW case had the highest percentages of youth with a homeless shelter stay between the ages of 16-18 (11.4% and 9.3%).

Table 7.7

Summary Results for Homeless Shelter Stays in New York City

		Prior to Age 16		Ages 16-18	
	N	**n**	**%**	**n**	**%**
System Pathways					
Child welfare only	93673	19456	20.8%	3372	3.6%
Juvenile justice only	300	60	20.0%	13	4.3%
Dual system youth combined	701	246	35.1%	63	9.0%
Dual Contact Pathways					
Dual contact—child welfare first	340	115	33.8%	28	8.2%
Dual contact—juvenile justice first	38	11	29.0%	*	7.9%
Dual Involvement Pathways					
Dual involvement—child welfare first—no previous CW case	62	14	22.6%	*	8.1%
Dual involvement—child welfare first—historical CW case	175	73	41.7%	20	11.4%
Dual involvement—juvenile justice first—no previous CW case	32	14	43.8%	*	6.3%
Dual involvement—juvenile justice first—historical CW case	54	19	35.2%	*	9.3%

Note: The results for New York City capture homeless shelter stays for youth back to birth, which is a longer period of time compared to Cuyahoga County.
*Data suppressed due to small cell size.

Incarceration in the Adult Criminal Justice System

Cook County. Table 7.8 shows the results for incarceration in state prison for Cook County. Highlights from this table include:

Note: Data for Cook County are for state prison incarceration. Incarceration in jail versus prison is substantively different; thus, the results for Cook County incarceration are different from those presented for Cuyahoga County and New York City.

- Dual system youth (23%) and juvenile justice only (19%) youth were more likely to be incarcerated between ages 18 and 20 compared to those in the child welfare only group (2%).
- Among dual system youth, youth in the dual involvement-child welfare first-no previous CW case group had the highest percentage of youth incarcerated between age 18 to 20 (29%), while the dual involvement-juvenile justice first-no previous CW case group were the least likely to be incarcerated (17%).
- Incarceration in adult prison prior to age 18 was rare across groups, but more likely in the juvenile justice first pathways than for the child welfare only cohort.

Table 7.8

Summary Results for Incarceration in State Prison for Cook County

		Prior to Age 18		Ages 18-20	
	N	**n**	**%**	**n**	**%**
System Pathways					
Child welfare only	108,519	229	0.2%	2274	2.1%
Juvenile justice only	3,989	87	2.2%	736	18.5%
Dual system youth combined	3,169	86	2.7%	722	22.8%
Dual Contact Pathways					
Dual contact—child welfare first	2210	56	2.5%	487	22.0%
Dual contact—juvenile justice first	64	0	0.0%	13	20.3%
Dual Involvement Pathways					
Dual involvement—child welfare first—no previous CW case	333	13	3.9%	95	28.5%
Dual involvement—child welfare first—historical CW case	288	*	*	68	23.6%
Dual involvement—juvenile justice first—no previous CW case	79	*	*	13	16.5%
Dual involvement—juvenile justice first—historical CW case	195	*	*	46	23.6%

*Data suppressed due to small cell size.

Cuyahoga County. Table 7.9 contains the results for jail stays for Cuyahoga County. Highlights from this table include:

- Dual system youth were more likely to have a stay in the county jail system between age 18 and 20 (25.3%), compared to those in the juvenile justice only group (15.8%) and the child welfare only group (8.4%).
- Among the dual system youth, youth in the dual involvement-juvenile justice first-historical CW case group had the highest percentage of youth who had jail stays from age 18 to 20 (27.9%), followed by the dual involvement—child welfare first—no previous CW case group (27.4%) and the dual involvement-child welfare first-historical CW case group (26.7%).

Table 7.9

Summary Results for Adult Jail Stay in Cuyahoga County

	Ages 18-20		
	N	**n**	**%**
System Pathways			
Child welfare only	41195	3453	8.4%
Juvenile justice only	2345	371	15.8%
Dual system youth combined	3300	834	25.3%
Dual Contact Pathways			
Dual contact—child welfare first	1998	482	24.1%
Dual contact—juvenile justice first	39	*	*
Dual Involvement Pathways			
Dual involvement—child welfare first—no previous CW case	62	17	27.4%
Dual involvement—child welfare first—historical CW case	677	181	26.7%
Dual involvement—juvenile justice first—no previous CW case	47	12	25.5%
Dual involvement—juvenile justice first—historical CW case	477	133	27.9%

*Data suppressed due to small cell size.

New York City. Table 7.10 shows the results for jail stays in New York City. Highlights from this table include:

- Dual system youth had the highest percentage of youth who had a stay in the adult jail system from age 16 through 18 (39.9%). The juvenile justice only group also had a high percentage at 29.3%, while the child welfare only group was relatively low at 3.4%.
- Among the dual system youth, youth in the dual contact-juvenile justice first group had the highest percentage of youth who had jail stays from age 16-18 (52.6%), followed by the dual involvement-juvenile justice first-historical CW case group (46.3%) and the dual involvement-child welfare first-historical CW case group (44.0%).

Table 7.10

Summary Results for Adult Jail Stay in New York City

	Ages 16-18		
	N	**n**	**%**
System Pathways			
Child welfare only	93673	3174	3.4%
Juvenile justice only	300	88	29.3%
Dual system youth combined	701	315	39.9%
Dual Contact Pathways			
Dual contact—child welfare first	340	129	37.9%
Dual contact—juvenile justice first	38	20	52.6%
Dual Involvement Pathways			
Dual involvement—child welfare first—no previous CW case	62	18	29.0%
Dual involvement—child welfare first—historical CW case	175	77	44.0%
Dual involvement—juvenile justice first—no previous CW case	32	11	34.4%
Dual involvement—juvenile justice first—historical CW case	54	25	46.3%

Public Assistance

Cuyahoga County. Table 7.11 displays the results for receipt of public assistance for Cuyahoga County. Highlights from this table include:

- Dual system youth had the highest probability of receiving public assistance both prior to age 18 (86.6%) and between age 18 and 20 (50.3%). The child welfare only and juvenile justice only groups had relatively lower percentages of youth with public assistance (69.3% and 45.5% prior to age 18 and 40.3% and 23.7% from age 18 to 20).
- Among dual system youth, youth in the dual involvement-juvenile justice first-historical CW case group had the highest percentage of youth who ever participated in public assistance (90.4% prior to age 18 and 55.1% between age 18 and 20), followed by the dual involvement-child welfare first-historical CW case group (88.0% and 51.3% respectively) and the dual contact-child welfare first group (86.5% and 49.9% respectively).

Table 7.11

Summary Results for Participation in Public Assistance in Cuyahoga County

		Prior to Age 18		Ages 18-20	
	N	**n**	**%**	**n**	**%**
System Pathways					
Child welfare only	41195	28552	69.3%	16595	40.3%
Juvenile justice only	2345	1068	45.5%	555	23.7%
Dual system youth combined	3300	2859	86.6%	1661	50.3%
Dual Contact Pathways					
Dual contact—child welfare first	1998	1728	86.5%	996	49.9%
Dual contact—juvenile justice first	39	27	69.2%	15	38.5%
Dual Involvement Pathways					
Dual involvement—child welfare first—no previous CW case	62	43	69.4%	23	37.1%
Dual involvement—child welfare first—historical CW case	677	596	88.0%	347	51.3%
Dual involvement—juvenile justice first—no previous CW case	47	34	72.3%	17	36.2%
Dual involvement—juvenile justice first—historical CW case	477	431	90.4%	263	55.1%

Summary and Conclusion

Across all sites and for every outcome, dual system youth had higher rates of service utilization than their counterparts with only child welfare or juvenile justice involvement. This speaks to the continued need for specialized services for this population of youth to help disrupt their continued entrenchment in systems.

In terms of the pathways for dual system youth, several showed high rates across outcomes and sites, including dually-involved youth with historical child welfare contact regardless of which system contact came first. These groups are the youth with some of the deepest involvement in the child welfare system with long lengths of stay and high rates of placement. These results underscore the opportunity for intervention since youth are receiving services for extended periods of time but providing effective services is also a challenge since many of these youths have experienced severe trauma and need adequate support and resources.

Chapter 8: Sequence Analysis—Testing the Validity of Conceptual Pathways

Lead Authors:
Nick Mader, Shannon Guiltinan, & Robert Goerge, Chapin Hall at the University of Chicago
Jessica Raithel, Andrew Wallace, & Maryanne Schretzman, The Center for Innovation through Data Intelligence in New York City
Youngmin Cho & Claudia Coulton, Case Western Reserve University
Denise Herz, California State University, Los Angeles

Whereas Chapter 4 describes theoretically derived pathways of system trajectories for dual system youth, there are new methods for analysis of trajectories that can illuminate distinct patterns or pathways directly from the data. This chapter describes the application of "sequence analysis" methods to the first juvenile justice cohort data. Below, we provide an overview of these methods; describe choices made in applying these methods to data on dual system youth; and present the results from all three sites. The implications of the results for applying pathways consistently across different jurisdictions and with regard to the framework presented in Chapter 4 are also considered.

Sequence Analysis

Sequence analysis provides a means of describing and comparing trajectories that are defined by a series of discrete, unordered states for each observation. Whereas time series analysis is applied to a series of continuously-valued measures, sequence analysis describes specific types of involvement from a limited, predefined set of states. In the example of analyzing employment outcomes, time series analysis might describe wages across a series of time points, whereas sequence analysis might be used to describe transitions between states of being in school, in training, unemployed, employed part-time, and employed full-time. While time series analysis focuses on describing the movements of the outcomes across time points, sequence analysis describes and classifies the entire sequence in terms of duration, ordering, and intermittence of different states. In addition to being discrete categories, these states are unordered, in the sense that they do not necessarily need to have an interpretation of being "low/medium/high" with respect to any conceptual scale.

Distinctive metrics are required to compare these types of sequence definitions, in order to have a tractable notion of similarity. Whereas quantitative indicators can be compared with common notions of distance such as simple difference (for scalar measures) or Euclidean or Manhattan differences for multi-dimensional measures, sequences of unordered categorical values can be compared by the number of insertions, deletions, or substitutions that are required to make one sequence comparable to another, reference sequence. While the number of these modifications can simply be summed, weights can also be considered in certain substitutions where, for example, training may be considered to be more similar to school than it is to other employment states, and thus the "cost" for substituting training for schooling may be less than other substitutions.

By the nature of this class of sequence comparison metrics, sequences will be generally measured as similar if they contain similar duration in given states (e.g. have long experiences of child welfare placement), if experience of certain states occur at the same time (e.g. active cases early in life), or if state experiences are intermittent (e.g. alternating between having, and not having, active child welfare case status).

Sequence analysis has been used to measure differences in employment and housing tenure (rent versus own) trajectories; childbirth, marital status, and family life events; and other sociological phenomena that benefit from life course approaches (see for example, Bürgin, Schumacher, & Ritschard, 2017; Gabadinho & Ritschard, 2013; Pollock, 2007; Simonson, Gordo, & Titova, 2011). It has not been used as widely to identify patterns of social service use, although there are some examples of its use to identify patterns of foster care movements (Havlicek, 2010), mental health services utilization among homeless individuals with chronic mental illness (Wuerker, 1996), and to identify patterns of homeless shelter utilization (McAllister, Kuang, & Lennon, 2010).

More recently, several studies have combined multiple sources of administrative data on service use to develop trajectories associated with different outcomes. Lim et al. (2015) identified four trajectories of service use among people living with HIV/AIDS experiencing both homelessness and jail incarceration: a temporary group who had brief jail incarceration and shelter stays; a continuous incarceration group who had extensive continuous time in jail; a continuous shelter use group who had extensive time in shelter; and a decreasing shelter use group who had continuous shelter stays followed by more sporadic jail and shelter stays. A second study identified patterns of housing stability using administrative data on homelessness, incarceration, hospitalization, and residence in supportive housing and assessed the relationship between these patterns and supportive housing residence and diagnosed sexually transmitted infection (STI) rates (Lim, Singh, & Gwynn, 2016). It found three patterns of housing stability: unstable housing, stable housing, and rare institutional dwelling. Supportive housing residency was found to be positively associated with stable housing and negatively associated with STI rates.

Applying Sequence Analysis to Dual System Involvement

Sequence analysis was chosen in order to empirically test the theoretically derived pathways (Chapter 4) of dual system involvement. In analyses in previous chapters of Section II of this report, groups were determined based on knowledge from the field and theoretical knowledge on which pathways may represent different experiences for youth. These pathways included information on which system use occurred first and whether there was an overlap in system use. However, in examining the data for those groups, it became apparent that some groups were similar on some analyzed metrics and that the groups may not take into account other important information, such as the types of child welfare involvement and the duration youth are in the system for. Therefore, we aimed to develop empirically derived groups from the data using more nuanced information on timing, duration, sequencing, and the types of services used.

Sequence analysis lends itself to this type of pathway analysis as it has the ability to incorporate multiple dimensions of the data in its groupings and can include multiple definitions for the type of involvement that a youth has over any given time (i.e., different types of child welfare

involvement, juvenile justice involvement, and different types of dual contact and/or involvement). The methodology also allowed the three sites to empirically derive groups independently from each other and then examine whether the groups that were developed are similar across sites (i.e., determine whether similar phenomena occur across jurisdictions and, if so, what proportion they represent).

Methodology

In order to use sequence analysis, each youth's child welfare and juvenile justice data was transformed into a "sequence" of service use, i.e., a pattern of their involvement for each quarter over the span of their lifetime from age zero to age twenty (in New York City, the age went to eighteen years based on differences in juvenile justice age cut-offs). Based on each youth's child welfare and juvenile justice use, every quarter during the twenty-year outcome period (80 quarters) was formally classified as one of the following states:

- no involvement in child welfare;
- child welfare investigation;
- a child welfare case;
- a child welfare out-of-home placement;
- delinquency court petition (i.e., court petition— "court involved");
- court-involved and child welfare investigation
- court-involved and child welfare case;
- court involved and child welfare out-of-home placement

If a youth had any child welfare, juvenile justice, or dual involvement, regardless of the length of stay in that system, the entire quarter was labeled as the relevant service. Other, less nuanced, sets of labels that aggregated the labels that were ultimately used were also explored (e.g., a scheme where youth involvements were formally classified either: "child welfare involvement", "juvenile justice court petition", "dual involvement" or "no involvement"), but the most detailed version was chosen to capture the increases in the intensity of child welfare service from child welfare case to child welfare placement.

This resulted in each youth having 80 ordered labels corresponding with quarters 1 through 80 (years 0 to 20) after birth. This was chosen to be computationally feasible (versus examining the data at the month level, resulting in 240 ordered labels), while still allowing for enough detail to examine distinct patterns of service use (versus examining data at the year level). The year level was considered in exploratory analyses but did not allow enough detail to appropriately capture overlaps in involvement and movements from one type of involvement to another. If a youth had both child welfare and juvenile justice involvement within a quarter, this quarter was labeled as one of the dual involvement categorizations. If a youth had both a child welfare case and a child welfare placement during a quarter, the quarter was labeled as a child welfare placement, representing deeper involvement in the child welfare system.

In order to group youth according to their child welfare and juvenile justice trajectories, the differences between service patterns among youth were calculated via distance metrics to create

a matrix of pairwise distances for every sequence in the data set.[18] Clustering methods were used to group youth together based on what systems they were involved in and in what order, the duration they were involved in the systems, and when the involvement occurred within the outcome period (see Studer and Ritschard, 2016 for a comparison and discussion of a range of "dissimilarity measures" for life trajectories). A variety of distance measures were then tested, including Optimal Matching (OM), Optimal Matching between sequences of spells (OMSpell), and Dynamic Hamming Distance (DHD).

Cluster Analysis

The distance metric was used in a clustering algorithm to create groups of outcome trajectories. Hierarchical clustering was used to categorize youth into groups.[19] The algorithm used an extension of Ward's Minimum Variance Method proposed by Szekely and Rizzo (Szekely & Rizzo, 2005; Ward, 1963; Murtagh & Legendre, 2014). The output of the algorithm is a set of cluster solutions ranging from as many clusters as there are observations in the data to a single cluster that contains all observations. The fewer the number of groups, the less homogeneous the groups would be; the greater the number of groups, the less groups would be distinct from each other. As Ward (1963) notes, "Situations often arise in which it is desirable to cluster large numbers of objects, symbols, or persons into smaller numbers of mutually exclusive groups, each having members that are as much alike as possible." When applied to trajectories of system involvement of youth, the aim is to identify potentially policy-relevant groups of youth that are similar across all three jurisdictions.

While common practice involves use of technical criteria (such as scree plots showing Akaike Information Criteria or other summary metrics) to choose the number of clusters, our team of field experts also directly inspected alternate cluster schemes to balance policy-relevance with parsimony. The various cluster solutions (i.e., numbers of groups) were visualized individually and as a sequence tree to create an image showing how the clusters are grouped together as the number of clusters converges to a single cluster (i.e., the hierarchy of clusters).[20] This type of visualization is helpful in choosing a cluster solution as it concisely visualizes multiple numbers of groups to see where distinctions occur.

The appropriate number of groups was chosen based on where youths' system involvement started to distinguish potentially useful groups and where a greater number of groups did not uncover vastly different trajectories among groups. The result was a cluster solution that had enough clusters that they were meaningfully different from one another while not being so numerous that a coherent policy recommendation could not be made. The sample size and the number of observations in each cluster were also considered in developing the groups, as well as where similarities were seen across sites.

[18] This distance metric step—as well as other data visualization steps—was conducted using the TraMineR package in the R statistical computing environment (Gabadinho, Ritschard, Studer, & Müller, 2010).
[19] A different clustering algorithm that does not depend on sequence data—K-means clustering—was also tested as part of a sensitivity analysis. This approach clustered youth trajectories based on a series of quantitative measures—including age of first experience in a given state, total duration in each given state, and number of spells in each given state—rather than on direct use of youth sequences and sequence metric comparisons.
[20] This method for assisting human review of alternate cluster schemes is possible through TraMineR's "seqtreedisplay" function.

Data Limitations and Implications of Different Practices/Policies Across Sites

When considering the sequences of service used in the analysis, it is important to keep in mind a few data limitations and differences in child welfare practices across the three sites.

Years of Available Data. Using data period to that date, each site constructed "balanced panels" of youth trajectories, where each youth's involvements were known between birth and age 20 (for Cuyahoga and Cook Counties) or age 18 (for New York City). Since the data were bounded at 2014, no further tracking or checking for dual system contact was possible beyond that year. It is possible that youth in our petition cohort had child welfare involvement after 2014 and dual system youth with juvenile justice first may be somewhat underrepresented.

Juvenile Justice Spells. The three sites had differing data available to them to determine length of time spent in the juvenile justice system. Cuyahoga County data includes a disposition date, and for those youth with probation records, a probation end date. Cook County data includes start and end dates for all court ordered services. If a youth is adjudicated not delinquent and has no court ordered services or custodial status petitions then their spell in juvenile justice for this analysis will only be one day – their petition filing date. New York data includes a sentencing date that marks the end date of the juvenile justice spell.

In addition to the differences in end dates for a petition spell, Cook and Cuyahoga counties had access to all petitions filed for a youth between 2010 and 2014 while the New York sample only included youth with a first petition not sealed between 2013 and 2014 (i.e., does not include dismissed cases or others that were sealed).

In order to create a comparable juvenile justice spell across sites for the sequence analysis, we only included the first delinquency petition spell. Running the same sequence analysis on the Cook County data, but including all delinquency petitions for a youth rather than just the first, resulted in very similar clusters. Juvenile justice spells were one day for youth adjudicated "not delinquent," while youth adjudicated "delinquent" were assigned a juvenile justice spell of one year starting with the petition filing date. Because of inconsistencies and incompleteness in the way the end of a juvenile justice spell was captured across sites, this method was used to standardize the spells across sites and create a proxy for the length of juvenile justice involvement. For youth adjudicated as delinquent, there were not good records of when their involvement ended because these data were often captured through other agencies not included in this study. For example, if a youth was put on probation, sites did not consistently have a measure for how long that lasted. Therefore, a proxy of a year was used for this purpose. This proxy was supported using data from Cuyahoga County, which showed the average duration of the first juvenile justice spell was 1.07 year.

Child Welfare Spells. For the sequence analysis, the models included youth in our dual system cohort who had an investigation of abuse or neglect but never had a child welfare case opened or an out-of-home placement. Table 8.1 shows the total number of cases available for analysis by site. The number of cases in New York City is noticeably smaller because they were

derived from two years of data rather than four years and had other limitations in terms of data availability (see Chapter 5 for more explanation of this timeframe).

Table 8.1

All Dual System Youth Used in the Sequence Analysis by Site

	Cook County	**Cuyahoga County**	**New York City**
All dual system youth	6,348	8,074	894

Results

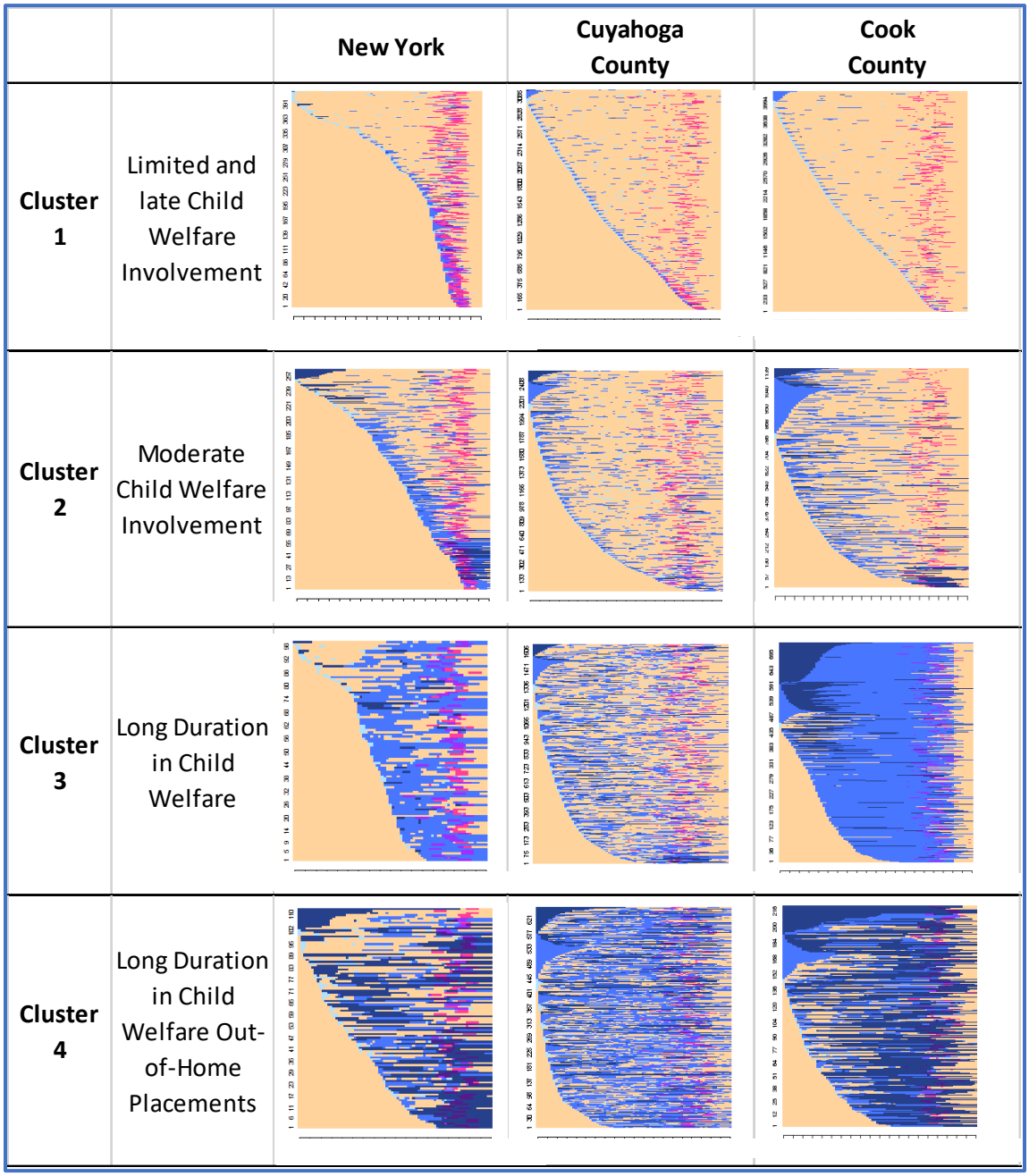
The OM model identified four distinct and meaningful clusters of child welfare involvement: 1) limited and late child welfare involvement, (2) moderate child welfare involvement, (3) long duration in the child welfare system, and (4) long duration in child welfare out-of-home placements. Figure 8.1 illustrates the different sequences of involvement in child welfare and juvenile justice for each.

In these visualizations, the x-axis represents the age of the youth; therefore, from left to right is from birth to age 20 (or age 18 in the case of New York City). Each visualization displays the trajectories of each youth—each represented as a very narrow row—stacked together and sorted by age at first child welfare involvement.

In general, length of time spent in child welfare overall, length of time spent in child welfare out-of-home placements, and number of investigations for abuse and neglect increase moving from Cluster 1 to Cluster 4. While youth in both Clusters 3 and 4 spend long durations in child welfare, youth in Cluster 4 spend much longer, on average, in out-of-home placements.

Figure 8.1

Sequence of Youth Involvement in Child Welfare and Juvenile Justice



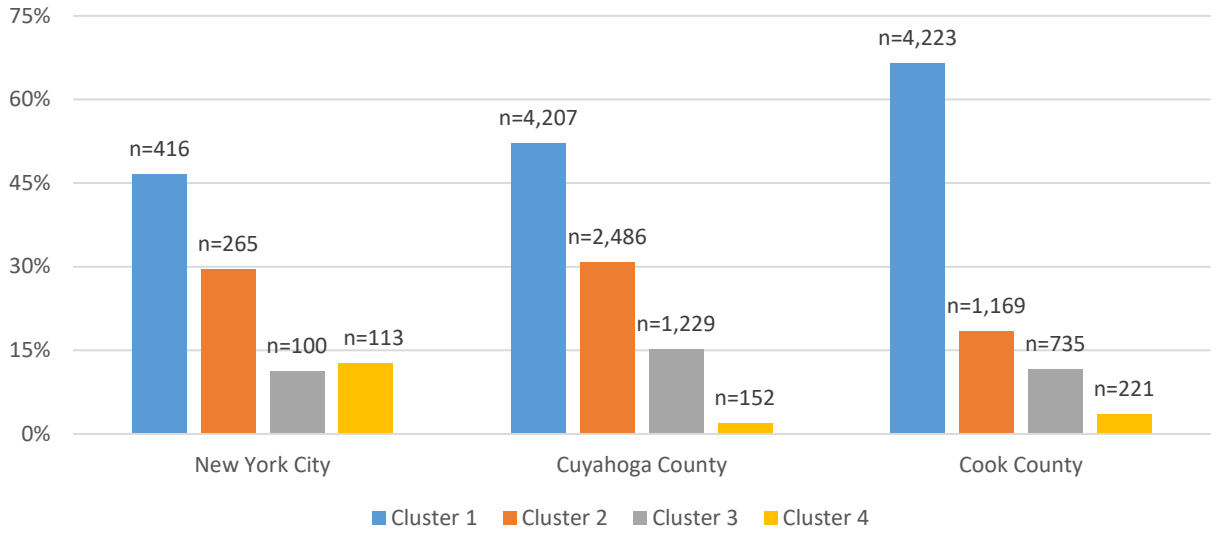
Cluster Prevalence

For all sites, the highest percentage of youth fall in Cluster 1. The least common group is Cluster 4 for Cook and Cuyahoga Counties and Cluster 3 for New York City (though the counts in Clusters 3 and 4 are nearly even in New York). Specifically, these results showed:

- New York City has the highest percentage of youth in Cluster 1 (46.5%) and followed by Cluster 2 (29.6%), 4 (12.6%), and 3 (11.2%).
- Cuyahoga County has the highest percentage of youth in Cluster 1 (52.1%) and followed by Cluster 2 (30.8%), 3 (15.2%), and 4 (1.9%).
- The most common Cluster in Cook County is Cluster 1 (66.5%) and followed by Cluster 2 (18.4%), 3 (11.6%), and 4 (3.5%).

Figure 8.2:

Prevalence of Each Cluster across Sites



Cluster Characteristics

Table 8.3 summarizes both the institutional involvements and demographic information of dual system youth in each cluster by site.

Table 8.3

Characteristics of Dual System Youth across Clusters and Sites

	Cluster 1 Limited and late child welfare involvement	**Cluster 2** Moderate child welfare Involvement	**Cluster 3** Long Duration in child welfare	**Cluster 4** Long duration in child welfare out-of-home placements
Percent Female				
New York City	23.8%	27.5%	17.0%	31.0%
Cuyahoga County	32.5%	36.4%	38.1%	40.1%
Cook County	21.0%	25.1%	22.4%	23.5%
Percent Black				
New York City	70.7%	67.2%	81.0%	74.3%
Cuyahoga County	70.7%	78.5%	79.7%	84.9%
Cook County	75.7%	82.1%	94.6%	85.1%
Percent Hispanic				
New York City	8.2%	5.7%	3.0%	2.7%
Cuyahoga County	3.6%	3.5%	3.7%	0.0%
Cook County	14.9%	10.8%	3.0%	7.2%
Average Number of Investigations				
New York City	0.9	1.7	3.8	3.8
Cuyahoga County	1.6	4.8	8.0	10.4
Cook County	2.0	4.1	2.3	6.7
Percent with A Child Welfare Case Ever				
New York City	74.0%	95.1%	100.0%	87.6%
Cuyahoga County	89.7%	99.9%	100.0%	100.0%
Cook County	38.5%	100.0%	100.0%	100.0%
Percent with A Placement Ever				
New York City	8.4%	38.5%	31.0%	100.0%
Cuyahoga County	6.5%	40.8%	50.2%	100.0%
Cook County	4.7%	43.2%	60.7%	100.0%
Average Number of Placements				
New York City	0.1	0.5	0.4	1.5
Cuyahoga County	0.1	0.6	0.7	2.2
Cook County	0.1	0.5	0.8	1.6

	Cluster 1 Limited and late child welfare involvement	**Cluster 2** Moderate child welfare Involvement	**Cluster 3** Long Duration in child welfare	**Cluster 4** Long duration in child welfare out-of-home placements
Mean Age at First Child Welfare Case				
New York City	10.7	9.2	6.9	4.5
Cuyahoga County	6.7	3.0	1.5	1.2
Cook County	7.1	3.1	2.7	2.4
Mean Age at First Delinquency Petition				
New York City	14.7	14.8	14.5	14.5
Cuyahoga County	15.5	15.3	15.0	15.0
Cook County	15.8	15.7	16.0	15.9
Mean Duration in Child Welfare System (Years)				
New York City	0.6	2.2	6.9	6.7
Cuyahoga County	0.8	4.1	8.3	14.8
Cook County	0.3	3.9	14.6	13.2
Mean Duration in Placements (Years)				
New York City	0.1	1.0	0.3	6.9
Cuyahoga County	0.0	0.8	0.7	8.4
Cook County	0.0	1.1	2.4	10.1

Table 8.4 provides a narrative summary of notable characteristics for youth in each cluster, as well as key contrasts across sites.

Table 8.4

Summary of Youth System Involvement and Demographic Characteristics by Cluster

System Involvement	**Demographic Characteristics**
Cluster 1: Limited and Late Child Welfare Involvement	
• Fewest investigations of abuse and neglect, the lowest number of CW cases and the shortest duration in child welfare in all sites. • Oldest at their first CW involvement in all sites.	• Less likely to be female than other clusters. • Lower percentage of Black youth (i.e., the lowest percentage for Cook and Cuyahoga Counties and the second lowest for New York) and for New York and Cook County, a higher proportion of Hispanic
Cluster 2: Moderate Child Welfare Involvement	
• Longer duration in child welfare than those in Cluster 1, but shorter duration compared to those in Clusters 3 and 4. • They are older at first child welfare involvement compared to youth in Clusters 3 and 4 in all sites.	• Lower percentage of Black youth compared with Clusters 3 and 4 in all sites.

System involvement	Demographic
Cluster 3: Long Duration in Child Welfare	
• Longer child welfare duration compared to Clusters 1 and 2 in all sites. • On average, these youth were younger at their first child welfare involvement than youth in Clusters 1 and 2.	• For New York City and Cook County, this Cluster has the highest percentage of Black youth. • For New York City, this Cluster has the lowest percentage of female youth.
Cluster 4: Long Duration in Child Welfare Out-of-Home Placements	
• All youth in Cluster 4 have a placement. This group has the highest number of placements, and the longest duration in placements in all sites. • On average, these youth were younger at their first child welfare involvement than youth in the other three Clusters.	• Highest percentage of female youth in New York City and Cuyahoga County.

Summary

The purpose of the sequence analysis was to produce empirically defined categories of dual system youth and compare them to the theoretically defined categories proposed in Chapter 4 of this report. The findings were insightful in at least three ways. First, although the empirically derived categories did not replicate the theoretically defined ones, the two approaches were similar in that both sets of categories represented increased levels of involvement in child welfare. In fact, dual contact youth (as described in the proposed framework) were largely found in Clusters 1 and 2 indicating less system involvement while most dually-involved youth were found in Clusters 3 and 4 which represent more system involvement. Second, the majority of dual system youth fell into categories with the lowest amount of system involvement overall. Three-quarters or more of dual system youth were classified as dual contact youth in Chapter 5 and the same proportion were found in Clusters 1 (low system involvement) and 2 (moderate system involvement) within the sequence analyses. Finally, and significantly, despite using data from three sites with different decision-making policies and practices, the distribution of dual system youth across clusters was consistent across sites with only a couple of minor exceptions.

Ultimately, the empirically derived groups provided a more nuanced picture of youth's experiences because they included information about the depth of child welfare involvement (i.e., investigations, case openings, and foster care placements) relative to the amount of involvement in the system. These results underscore the importance of this approach to better define dual system youth. In particular, this approach can serve as a critical proxy measure for the severity of maltreatment and trauma a youth has experienced and their exposure to varying levels of service delivery in future research. Such information is and will continue to be critical in developing meaningful and targeted policies and practices to prevent youth from touching both systems in the first place and to improve their outcomes when they do enter both systems
.

SECTION III: Proposed Methodologies for Producing a Nationally Representative Incidence Rate for Dual System Youth

This section summarizes the proposed methodologies for estimating a representative national, incidence rate as required in Goal 2(b). It describes the results of a landscape analysis conducted with publicly available information related to availability of child welfare and juvenile justice data and considers the implications of availability on the feasibility and cost of undertaking such a project.

Related Goal and Research Questions in Section III

Goal 2: (b) propose a method to generate a national estimate of dual system youth, their trajectories leading to multiple system involvement.

- Chapter 9: What is the viability of child welfare and juvenile justice data to support the production of a representative national incidence rate for dual system contact?

- Chapter 10: What is the most appropriate research design to produce a nationally representative incidence rate and what is the estimated cost?

Chapter 9: Assessing the Availability of Child Welfare and Juvenile Justice Data on a National Scale—Results of a Landscape Analysis

Lead Authors:
Denise Herz, California State University, Los Angeles
Susan Chibnall & Jim Green, Westat
Carly Dierkhising, California State University, Los Angeles

Based on the feasibility studies and their outcomes, the LAD Subcommittee discussed and identified the best methods to produce a national estimate of dual system youth. While various approaches are possible for gathering data related to dual system youth, the committee collectively agreed that producing the most valid, reliable, and efficient estimate requires matching administrative data across child welfare and juvenile justice systems. A necessary first step in assessing the viability of this approach was to determine the availability of both juvenile justice data and child welfare data across the nation. To this end, Westat conducted a "child welfare and juvenile justice data landscape assessment" of jurisdictions (e.g., states or counties) and their administrative data systems. While instructive, the landscape assessment was limited to the literature and resources currently available because original data collection was not possible within the timeframe of this study (i.e., there was not enough time to request OMB approval to do a more in-depth review of data systems from the states themselves).

Results of the Child Welfare and Juvenile Justice Landscape Assessment

Availability of child welfare data. The availability of child welfare data is relatively straightforward because all states maintain statewide databases to capture the child welfare data/outcomes required by the federal government. However, several key challenges related to these statewide systems exist. First, every state is required to have a statewide child welfare data system. Most states have a State Automated Child Welfare Information System (SACWIS) to fulfill federal reporting requirements; however, states are not required to use the federal SACWIS model. In fact, there are currently 13 states that developed their own unique, statewide child welfare data system, and five states are currently developing non-SACWIS systems. This means that the type, structure, and quality of the data available in these systems can vary considerably. In addition, not all states define terms in the same way, creating issues related to data comparability across states. Finally, the administrative framework for child welfare services and programs varies from state to state. All child welfare agencies are responsible for compliance with Federal and State requirements, but they often differ in the way child welfare services are planned and delivered. The majority of states are "state-administered" systems, meaning they are centrally administered at the state level; however, nine states are "county-administered" and three are "hybrids," where they are partially state and partially county administered. In these states, differences in services and operations may exist at the county and local levels. Further, whether a state is "state" or "county" administered may have implications for the data they collect and the kinds of definitions they use in their child welfare data systems. Thus, while each state has data that is housed in a data system, the data across and within states is not seamless and continuous. This, in turn, presents problems that a national study must understand, manage and resolve.

Availability of juvenile justice data. The availability and structure of juvenile justice data vary even more than child welfare data. Juvenile justice is a state-based and defined system. In most cases, juvenile justice is county-based; therefore, successful data collection depends on individual counties/jurisdictions using a database to capture data. As expected, this is not the case in all jurisdictions. Furthermore, when databases do exist, they often define key data points and outcomes differently. To date, there is no body of research or single resource with an inventory of "the state of juvenile justice data capacity" across the nation (i.e., the type of data available, the structure of the data available, and the quality of the data available). Some resources, however, exist as a starting point for this work, including the Dependency Court Data Archive Feasibility Study Report (Sickmund, Deal, Hockenberry, & Furdella, 2015) and Systems Integration: Child Welfare and Juvenile Justice (Fromknecht, 2014). Both resources provide a broad range of detailed information regarding the juvenile justice system in general, and some information on the topic of juvenile justice and child welfare systems integration, in particular.

The Dependency Court Data Archive Feasibility Study Report summarizes the state of delinquency court and dependency court data, concluding that these data sources are too limited for sufficient identification of dual system youth because of structural and consistency issues. The Systems Integration bulletin examines the structure of juvenile justice systems and the extent of data sharing in a broader fashion. *Table 9.1* was reproduced from the JJGPS website (http://www.jjgps.org/systems-integration) and shows the structural relationship between juvenile justice and child welfare systems across all states. Based on these findings, only seven states integrate child welfare and juvenile justice; seven have separate divisions but exist under the same umbrella agency, eleven are in separate state-level centralized agencies, and the vast majority (25) operates as decentralized units within a state.

Table 9.1

Level of Systems Integration by State (Produced by JJGPS)

State	Single Agency Integration	Umbrella Agency Integration (Separate Division/Offices)	Separate State-Level Centralized Agencies	One or All are Decentralized	Does State Integrate Data
Number of states	7	7	11	25	27
Alabama				X	
Alaska		X			Yes
Arizona				X	Yes
Arkansas		X			Yes-Partial
California				X	
Colorado				X	Yes
Connecticut			X		Yes
Delaware	X				Yes
District of Columbia				X	Yes
Florida			X		Yes
Georgia				X	Yes
Hawaii		X			
Idaho				X	Yes
Illinois				X	Yes
Indiana				X	Yes
Iowa			X		
Kansas				X	
Kentucky				X	
Louisiana				X	
Maine			X		Yes
Maryland			X		Yes
Massachusetts			X		
Minnesota				X	Yes
Mississippi		X			
Missouri		X			
Montana			X		
Nebraska		X			
Nevada				X	
New Hampshire	X				Yes
New Jersey			X		
New Mexico	X				Yes
New York				X	
North Carolina				X	
North Dakota				X	Yes
Ohio				X	
Oklahoma				X	Yes
Oregon				X	
Pennsylvania				X	
Rhode Island	X				Yes
South Carolina			X		

Table 9.1, Continued

Level of Systems Integration by State (Produced by JJGPS)

State	Single Agency Integration	Umbrella Agency Integration (Separate Division/Offices)	Separate State-Level Centralized Agencies	One or All are Decentralized	Does State Integrate Data
South Dakota				X	Yes
Tennessee	X				Yes-Partial
Texas				X	
Utah			X		Yes
Vermont	X				Yes
Virginia				X	Yes
Washington		X			Yes-Partial
West Virginia			X		
Wisconsin				X	Yes
Wyoming	X				

Source: http://www.jjgps.org/systems-integration#agency-integration?year=2016

Table 9.1 also provides a slightly deeper look at whether each state engages in data sharing across the two systems. According to these findings, 27 states engage in data sharing regardless of the operational structure of the two agencies. These 27 states represent an opportunity to access administrative data that already matched or data that can be matched for the purposes of estimating the incidence of dual system youth, but the details reported by JJGPS are limited. In particular, this inventory does not clarify what juvenile justice data is available (i.e., are data for arrests through correctional placement available or are they limited to particular decision-making stages?).

A primary challenge with regard to juvenile justice data is identifying the appropriate source for relevant and complete data. Data related to juvenile justice decision-making may be held by multiple agencies or by a single agency defined by the structure of juvenile justice in a particular state. Juvenile court data, for example, are often significantly limited in scope (e.g., petitions and dispositions) and do not collect identifying information that is sufficient for linkage purposes (see also the Dependency Court Data Archive Report, 2015). Often probation departments house the most complete and comprehensive data, but this is not always the case. Only in a few states are data across decision-points warehoused by a state-based juvenile justice entity. Consequently, data from other justice agencies who are involved in diversion, informal probation supervision options, and specific types of placements would also be necessary to get the full spectrum of justice involvement.

Additional concerns for collecting reliable and valid administrative data for both child welfare and juvenile justice systems. In the course of conducting the landscape assessment, several additional concerns surfaced including access to data, confidentiality, incentives to produce the data needed, and identifying measurement consistency across key constructs.

Accessing data can be challenging. Data used to determine dual involvement for youth exist across multiple systems. This leads to multiple data agreements, different rules about access to

data for research or other purposes, and more matching across datasets to get a full picture. For example, as youth go through the justice system in New York City, data are captured in multiple datasets held by the New York Police Department, the Department of Probation, the Law Department, the court system, and depending on the outcome of the case, the Office of Children and Family Services, state placement data or placement or diversion through Administrative Court Services. These challenges are compounded at the local level because there is often a lack of uniformity in the way data is collected or allowed to be analyzed.

Another major challenge is balancing the importance of research on dual system youth with concerns about of confidentiality of youth. For example, data for sealed cases in New York City is inaccessible for research to protect the youth from those cases impacting future outcomes. This, in turn, impacts the validity of the overall data.

The work involved in accessing administrative data is notable and requires jurisdictions/states to expend time and resources. Assuming appropriate and complete data were available to conduct a national incidence rate study, these entities would arguably require an incentive or some level of funding to support the request. It is unlikely jurisdictions/states will voluntarily produce the data without some level of compensation, largely because they would be unable to do so without additional resources.

Finally, the measurement of key constructs will always be a challenge. Sufficient time and resources combined with the use of consistency and clarity in key terms, definitions (as those produced by this study), and measures are imperative to achieve a level of accuracy in the estimates. Taken together, understanding the true viability of the data and which data sources are most productive for this purpose within the juvenile justice system requires further examination by collecting information from jurisdictions/states directly. We propose a "next step" to do so in the next section.

The Next Step: Building upon the Child Welfare and Juvenile Justice Data Landscape Assessment

The proposed methodology for producing a national incidence estimate of dual system youth involves a sampling procedure based on ability to match child welfare and juvenile justice data. If the existence of such data is unknown initially, the sampling methods will need to be iterative until representative sites with sufficient data are identified. This process is extremely expensive and time consuming. One option to make this a more efficient and arguably cost-effective process is to first conduct a deeper, more detailed assessment of the capacities of states and counties/jurisdictions to produce the type of data necessary for estimating the national incidence rate.

The information collected through the landscape assessment in this study helped identify what we can expect in each state with regard to systems integration (or data linkage opportunities). To more fully understand whether states (and counties/jurisdictions) can provide the data necessary to produce a national estimate of dual system youth, a more systematic data collection effort that allows us to ask state and local juvenile justice and child welfare stakeholders directly about their capacity to provide the data to support this effort is necessary. One option is to conduct a more

detailed juvenile justice and child welfare data capacity assessment prior to implementing a sampling strategy to estimate the national incidence rate of dual system youth. A more detailed assessment would inform the sample design at a level of detail not possible through the landscape already conducted and referenced above. Such an effort would be insightful not only for a dual systems incidence rate study but for other large-scale, national juvenile justice and/or child welfare projects beyond the current study.

To understand these data capacities, a more in-depth data assessment would address the following (but not necessarily limited to) key questions:

- At what level do juvenile justice and child welfare data exist in each state (i.e., at the state or county level)?
- What type of data are available for each system—timeframe, variables, parameters of the population included, etc.?
- Can the data be linked across juvenile justice and child welfare?
- Are the data available for research, and if so, what are the required processes to access data for this purpose at the state/local levels?
- Is there a general willingness to provide the data for the purposes of estimating a dual system incidence rate and what would be a sufficient incentive to encourage/support participation?

The answers to these questions will allow us to determine how many jurisdictions are eligible to participate in the national study, and in turn, inform the development of a viable sampling plan to estimate the national incidence rate.

Proposed Methodology for Conducting a More In-Depth Data Assessment

NOTE: The following proposal outlines a general approach we believe must be taken to fully assess data capacity for a dual system national incidence rate study. Methodological details and plans would obviously need to be finalized and coordinated with the subcontractor conducting the assessment.

We anticipate the proposed data assessment will involve five interrelated tasks: (1) developing the assessment instrument; (2) building the sample in all 50 states; (3) obtaining IRB and OMB approvals; (4) conducting the assessment; and (5) analyzing the data and writing the report. Each task is detailed in the following sections. The estimated costs associated with this assessment are presented in Chapter 10 as part of the cost estimates for the entire proposed methodology.

Task 1: Develop and pilot landscape assessment instrument. As a first step in this process, an instrument will be developed to determine the feasibility of child welfare and juvenile justice jurisdictions to provide the data necessary to produce a national estimate of dual system youth. The instrument will integrate questions about the structure and operational characteristics of each jurisdiction (i.e., number of youth served, number of staff), its data system, and the extent to which the system is integrated with other local (or state) data systems, with an assessment of the availability of specific data elements required to estimate the number of dually-involved youth. It is expected that the instrument will be implemented with either state agency directors or individuals identified by them; in some cases, state agency directors may be

able to complete the "systems characteristics and integration" questions, but must identify their IT/research leadership and staff to discuss specific data elements. Because the "linking" aspect of this process is critical to the feasibility of the larger study (i.e., is there a means to link JJ and CW data via a common identifier?), it will be important to assess not only if the necessary data exist, but, importantly, if jurisdictions are willing to share it across systems and for the purposes of the larger study. In some cases, for example, the data might exist, but a jurisdiction may not be willing to share it.

Questions for jurisdictions. Table 9.2 provides a set of questions that serve as a starting point for this task. The questions will capture the context for JJ and CW in each jurisdiction; the answers will be used to make an initial determination about the extent of each jurisdiction to provide the data necessary for an estimate of dual system youth.

Table 9.2

Questions for More In-Depth Assessment of Data Availability

- Name of site (e.g., Florida)
- Type of site: state, county, or jurisdiction
- Overall study point of contact (for discussions related to inclusion)
- Point of contact for child welfare data
- Point of contact for juvenile justice data

1. Number of active cases in child welfare
2. Number of active cases in juvenile justice
3. Number of supervision staff (i.e., case carrying social workers) in child welfare
4. Number of supervision staff (i.e., case carrying probation officers) in juvenile justice
5. Are the child welfare and juvenile justice systems under the same umbrella agency?
6. How are juvenile justice operations primarily organized in your state?
    a. All juvenile justice functions (probation and corrections) are housed under one governing agency
    b. Probation and corrections are separated in two separate agencies
    c. Other (write-in)
7. Which of the following characterizes the organization of your child welfare and juvenile justice agencies?
    a. Both child welfare and juvenile justice are in single state departments
    b. Child welfare is housed in a state department and juvenile justice is organized at the county/jurisdictional level
    c. Juvenile Justice is housed in a state department and child welfare is organized at the county/jurisdictional level
    d. Both child welfare and juvenile justice are organized at the county/jurisdictional level
8. If juvenile justice functions are separated in your jurisdiction, where is juvenile probation housed?
    a. As a juvenile division of state probation
    b. As a juvenile division of state and health and human services agency
    c. As a juvenile division in a different agency: (write-in)

d. As a separate agency (i.e., juvenile probation)

9. If juvenile justice functions are separated in your jurisdiction, where is juvenile corrections housed?
    a. As a juvenile division of state corrections department
    b. As a juvenile division of state and health and human services agency
    c. As a juvenile division in a different agency: (write-in)
    d. As a separate agency (i.e., juvenile corrections)
    e. Other (write-in)
10. How are family and delinquency courts structured in your jurisdiction?
    a. Two separate systems: One for child welfare cases and one for juvenile delinquency cases
    b. One unified system that hears both child welfare and juvenile delinquency cases
11. How is the jurisdiction for youth in child protective custody who are charged with delinquency statutorily defined in your jurisdiction?
    a. Dual jurisdiction
    b. Separate jurisdiction
12. Does your agency regularly document the number of crossover youth? (Yes/No)
13. Do child welfare and probation currently have integrated information systems? (Yes/No)
14. If these systems are not integrated, does the child welfare system have a data field that captures and records a youth's involvement in the delinquency system? (Yes/No)
15. If these systems are not integrated, does the probation system have a data field that captures and records a youth's involvement in the child protective system? (Yes/No)
16. Are you aware of any laws or policies that serve as barriers to the sharing of information among juvenile court, child welfare and other service providers?

Data elements. The instrument will also include an assessment of the availability of the specific data elements needed from jurisdictions initially deemed capable of providing the data required to produce an estimate. These data elements were developed as part of the Dual System Design Study and used by the subcontractors to pilot the feasibility of linking administrative data to estimate the incidence of dual system youth (see Chapter 4 for the type of data elements used in the feasibility analysis).

There are two data request options for pursing a national estimate of dual system youth. The first option, referred to as Tier 1 Data Elements, only includes the minimum number of variables required to produce an estimate. These include: name or system identification numbers that correlate between CW and JJ systems; date of birth; gender; race; date of first system contact. The second option is to request and analyze Tier 2 Data Elements comprise a larger array of information in order to better understand the experiences of dual system youth. Tier 2 data elements include: number of previous child welfare referrals and reasons for referral; type of child welfare services provided/received; length of time in the child welfare system; number, length, and type of placements; living situation at time of placement; pre-adjudication detention status; offense and type of charge; disposition received in juvenile delinquency court; and length of time in the juvenile justice system.

Once the landscape assessment instrument is fully developed, it will need to be finalized. Based on the nature and scope of this task, we expect it will take approximately three to six months to complete the tool and have it finalized by all entities (this does not include IRB approval).

Task 2: Build the data assessment sample in all 50 states. The next step will be to identify state child welfare and juvenile justice primary contact persons who can either complete the data assessment instrument or identify the individual (or individuals) at the local or county agency that can. Contacting state agency directors first will provide an opportunity to inform them of the work being conducted in their state, which is not only a courtesy but also helps with relationship building to support the study. This step will also be important to accurately estimate respondent burden as part of the OMB package.

To start, key documents (e.g., http://www.jjgps.org/systems-integration) will be identified and reviewed to obtain contact information for state agency directors and to delineate how each state's JJ and CW systems are structured. The latter will help estimate how many individuals, overall, will need to be included in the landscape sample. For example, in CW, 38 states are "state-administered" and 12 are "county-administered." Similarly, most JJ agencies operate at the county level. As such, it is likely that in some cases, county-level agency directors (or data staff) will need to be included in the assessment sample. Once a final list of state agency directors (and others) is complete, it will be included, along with the assessment instrument, in OMB and IRB packages (see Task 3). Based on the nature and scope of this task, we expect this will take at least three to six months to complete.

Task 3: Obtain IRB and OMB approvals. Because of the nature and extent of the information collected as part of the data assessment, we will need to obtain both OMB and IRB approvals.

IRB. IRB approval will be required for this effort. Contractors will need IRB approval from their own institution. The nature of this study requires an expedited review, which will take at least between 30 to 60 days to complete. Once IRB approval is granted, the OMB package can be prepared and submitted.

OMB. Once the instrument is complete and the sample estimated for the data assessment, the three OMB documents needed for clearance can be prepared. These include:

- The 60-day Federal Register notice for public comment;
- The 30-day Federal Register notice for public comment;
- The Supporting Statement for the collection, consisting of:
    - Part A (covering the needs, uses, burdens, costs, plans and related aspects of the information collection);
    - Part B (addressing any statistical methods); and
    - Other materials as necessary as appendices to the Supporting Statement.

For the two Federal Register notices, the data collection will need to be fully described—including the time to complete the collection, and respondent burden associated with providing data.

For Part A of the Supporting Statement, the following will need to be addressed: (1) the statutory authorities under which OJJDP is authorized to collect the data; (2) the needs and uses of the information collection (including practical examples of how the data will be used); (3) respondent burden estimates; (4) assurances of confidentiality to be given to respondents; (5) costs to the federal government to field the collection; (6) the overall schedule and any plans for publication.

For Part B of the Supporting Statement, the following will be described:

- Statement of the research questions, analytic objectives and required data items;
- Statement about the target population;
- Estimates of the population and proposed sample size;
- Description of the overall task, sample design and approach.

Finally, the Supporting Statement may require other materials that can be included in appendices. These materials might include survey instruments or a list or roster and definitions of data elements; proposed respondent contact letters or communications, including scripts to be used to contact state or county agency or data staff; results of pilot-test of instrument; and scripts used for follow-up contact with respondents.

A full OMB application and clearance process cannot be completed in fewer than 120 days from the date of posting the 60-day public notice in the Federal Register; generally, the entire process takes about six months to complete, including time for OMB review, any revisions based on OMB questions, and OMB decision making. As such, we expect the time to prepare the submission (two months) and receive approval (six months) to take approximately eight to ten months.

Task 4: Conducting the data assessment. To begin data collection, an introductory packet will be sent to each state/county agency director to explain the landscape, ask them if they can complete it or need to identify a point of contact for child welfare and juvenile justice data who can, and let them know we will schedule a time to speak with them.[21] At the scheduled time, the agency director will be contacted and asked a series of questions designed to determine if he or she is the right person to complete the landscape or if they need to identify someone else (or others) to do so. If the director can complete the landscape, it will begin (and potentially be completed) during this first call. If not, then the landscape team member will share the names of other individuals (e.g., other state staff or county agency directors) identified as part of Task 1 to determine if they are the right people to complete the assessment. Because these individuals will likely already be known to the state/county agency director, they can be using publicly available sources. For each additional individual identified, the introductory packet will be sent to them and they will be contacted, as described. This process will continue until the assessment is complete in each jurisdiction.

[21] While we are proposing phone interviews as the first step in conducting the assessment, the use of web-based surveys will also be considered as an initial point of contact with phone interviews used in the second tier of communication.

Given the nature and scope of this task, we expect it to require a minimum of six child welfare (CW) and juvenile justice (JJ) staff, along with a supervisor who will manage and oversee the work via a subcontract. It is also expected for the assessment to take more than one discussion to complete. Sending the instrument to the respondent sample prior to scheduled telephone calls will maximize the possibility that individuals are prepared to answer questions and provide information during the call, minimizing follow up contacts. However, we recognize that it might take more than one call to get to the person (or persons) who have the information needed to complete the assessment, resulting in multiple calls in a single jurisdiction. To this end, there could be anywhere from two to five follow-up discussions/contacts before the assessment is complete. Given the nature and scope of this task, it is expected to take approximately eight months to complete.

Task 5: Analyze data and write report. For this task, the subcontractor will analyze the data collected from the telephone calls with agency directors (i.e., supplemental information) and the completed data assessment instrument for each participating state or county jurisdiction. Based on experience, we expect responses to uncover information that is directly relevant to this project; for example, in responding to or following up on assessment questions, directors might disclose specific barriers or facilitators to linking data across systems. We will use content analysis of notes taken during these discussions to identify common themes across respondents and summarize the information both within and across states. This information can be used to help us understand why jurisdictions can (or cannot) provide the data required of the larger study and the types of supports necessary to develop data capacity.

To analyze information collected from the assessment instrument, a rubric with corresponding criteria for each rating will be developed by the team and used to categorize states on their ability to provide the necessary data. For example, states could be rated on a scale of 1 to 5, where 1 represents a state that has limited data and no capacity for data linkage, and 5 a state that has a fully integrated data system, which includes a common identifier that can be used to link child welfare and juvenile justice cases. Final ratings will be used to make a final determination as to which states (or counties) are able to provide the data needed for the larger study. Analysis of the data and preparation of the report is expected to take approximately two to three months.

The number of states and jurisdictions that can provide the data represent a critical window into developing a final sampling plan for the larger study to produce a national incident rate of dual system youth. For example, a state and/or jurisdiction must be able to provide Tier 1 data elements—specifically, they must be able to provide a name or system identification number that allows for case linking between the child welfare and juvenile justice systems. Without this, it would be impossible for the state/jurisdiction to participate in the larger study designed to produce a nationally representative incidence estimate of dual system youth. The proposed approaches to achieve this outcome are described next.

Chapter 10: Proposed Designs for Producing a Nationally Representative Incidence Rate for Dual System Youth

Lead Authors:
Jim Green, Westat
Denise Herz, California State University, Los Angeles
Susan Chibnall, Westat
Carly Dierkhising, California State University, Los Angeles

In this chapter, we present and discuss two possible approaches for estimating a national incidence rate for dual system youth. We believe two approaches with the most viability are: (1) a hybrid design involving a census of those states with linked data capability in combination with a sample of counties from other additional states; and (2) a purely-county-based design. As expected, these options have advantages and disadvantages under different circumstances that should be considered based on the overall goals of the project and the amount of time and resources available to produce a reasonably precise and representative national estimate.

Overall Statistical Rationale for Choosing an Approach

This section presents the overall statistical rationale for choosing an approach in consideration of the precision of the estimates. This section is written assuming a census + sample hybrid design approach has merit and provides a framework and guidance on calculating the necessary sample sizes under either design. If necessary, the approach can easily be adapted to a purely county-based approach by setting all census terms to zero.

Calculating the necessary sample sizes for precision requires or assumes an estimate of the population covered via the Census, an overall precision objective, estimates of the number of cases per Primary Sample Unit (PSU, e.g., county) and a design effect resulting from using a clustered sample.

The following formula can be used to calculate the total variance for the Census and sample hybrid:

$$V(\hat{p}) = W_C^2(V_C) + W_S^2(V_S)$$

Where:
$V(\hat{p})$ = the total variance for the Dual Youth study (i.e., combining the census/statewide success and the PSU/county sample),
W_C = the proportion of the population that is a census via the statewide approach,
V_C = the variance of the census that is obtained through the statewide approach,
W_S = the proportion of the population that is to be represented via the PSU sample, and
V_S = the variance of the sample that is obtained through the PSU sample.

Assuming a precision objective (i.e., a standard error) of 1% on an estimate of a proportion (P) assumed to be 50%:

$$0.01 \geq \sqrt{W_C^2(V_C) + W_S^2(V_S)}$$
$$(0.01)^2 - W_C^2(V_C) \geq W_S^2(V_S)$$

Given that the statewide success is a census, which has a variance of zero ($V_C = 0$), the formula simplifies to:

$$(0.01)^2 - W_C^2(0) \geq W_S^2(V_S)$$
$$(0.01)^2 \geq W_S^2(V_S)$$
$$(0.01)^2 \geq W_S^2\left(\frac{P_S Q_S}{n_S}\right)$$

Where:

n_S = the total number cases to be sampled via the PSU sample.
P_S = the overall proportion of interest for the population represented via the sample
Q_S = 1 - P_S

Assuming a worst-case scenario of the proportion of $\hat{p} = 0.5$ to calculate the variance:

$$(0.01)^2 \geq W_S^2\left(\frac{0.5 * 0.5}{n_S}\right)$$
$$n_S \geq \frac{W_S^2(0.5^2)}{0.01^2}$$

The effective sample size required from the PSU sample can be calculated based on the above given the coverage of the statewide Census(W_C). The population to be covered by the sample, W_S, is simply 1 - W_C. The actual sample size required can be calculated assuming a design effect (DEFF), and then the number of PSUs required can be calculated assuming the number of cases per PSU, based on the following formula:

$$n_{PSU} \geq \frac{n_S * DEFF}{\overline{n_S}}$$

Where:

n_{PSU} = the number of PSUs required
n_S = the effective sample size required
$DEFF$ = the design effect due to clustering
$\overline{n_S}$ = the number of cases per PSU

Option 1: A census + sample hybrid approach. To implement this recommended option, administrative data across both systems must be available. For example, if 20 or more states can produce such data, it is estimated that we would cover 35-45% of all juvenile justice and child welfare cases in the United States. Participating states would need to provide statewide juvenile justice and child welfare electronic records covering (1) all cases of interest for the time period requested and (2) necessary data elements (i.e., Tier 1 or Tier 2 Data Elements). This sample would be the census portion of the design. Once the census sites are assessed for viability, counties or jurisdictions can be sampled from the remaining states that do not meet all

criteria. These counties or jurisdictions represent the county sample. Collectively, the two samples will represent juvenile justice and child welfare cases nationwide and provide a strong foundation from which to estimate the incidence rate of dual system youth. Implementation of this approach requires the following steps:

Step 1. Census states (for example) would be identified based on the results from the more in-depth child welfare and juvenile justice data assessment proposed above. If the more in-depth data assessment is not conducted, the findings from the landscape analysis conducted as part of the current study will need to be used and require additional time and resources. This may require a number of conversations and iterations of site selection since data was limited in the initial landscape assessment, and as a result, require more time and resources. Once census states are identified, data sample extracts will be requested from both the child welfare and juvenile justice systems to verify the feasibility of a match. Previous experience shows that states may be willing to deliver a "statewide" data file, but upon further review the file may not meet the requirements (e.g., missing critical variables or only covering a subset of the study population). Sites will be assessed for their viability as a census site based on the analysis of the sample extract. Additionally, we will need to assess the number of files provided by each site. Given the dual system focus of this study, we will receive at least two files from each site, but the number could easily reach eight relation files with all the requested data elements. We anticipate this process to take at least six months to complete.

Step 2. Based on the results of Step 1, a sample of counties/jurisdictions would be designed to represent the balance of the U.S.; those states/counties that had high ratings on the data assessment rubric and results. The counties may be stratified by Census region, landscape assessment rating, and the expected size of the jurisdiction. Counties may be selected with equal probability within stratum or probability proportional to size, depending on the expected possibility or necessity of sampling cases within the county or jurisdiction. Note that any measure of size does not have to accurately reflect the population of dual system youth; rather, the most important property is that it captures the differences in *relative* population sizes between jurisdictions. We anticipate this process to take at least four months.

Step 3. Once identified, it will be important to request data extracts from selected counties/jurisdictions to ensure the data and matching opportunities are appropriate for the study. Again, this process is anticipated to take between six months and one year.

Step 4. In the case of nonresponse, unwillingness or inability to participate, alternate (i.e., substitute) counties may be considered. Such substitutes would likely be from within the same sampling stratum and close in expected size. The substitution process would be repeated until a sufficient number of counties/jurisdictions were selected to create a representative sample. It is unknown how many replacements will be needed. Depending on that number, this process could take between four and 12 months.

Step 5. Participating census states and selected counties/jurisdictions would provide data extracts for matching or, preferably, match the data and provide it to study researchers. These data would be analyzed to estimate the incidence rate of dual system youth along various pathways, summarize their basic demographic characteristics, and when appropriate data are

available, identify key experiences related to their dual contact. This process is anticipated to take approximately 12 to 16 months after final data assessments are completed for all participating locations.

It is important to note the significant benefit the proposed child welfare and juvenile justice in-depth data assessment would offer to this portion of the study. It would more efficiently address the current "mystery" around the existence and viability of data, making the sampling process a much more direct and effective one. Without the results from the data assessment, the timeframes for each step would most definitely increase. With the results of the data assessment, the timeframes may actually contract.

In sum, as the number of states capable of providing the necessary data increases, we are presented with an opportunity to implement the census + sample hybrid approach, which is a more cost-effective option because we can capitalize on the availability of state level data. As the number of states that can provide the required data decreases, it limits the utility of a state-focused data collection effort. If the data assessment finds that states are not able to provide the necessary data, we would move to the second approach, the purely-county-based design.

Option 2: A purely county-based approach. An alternative to the census + sample hybrid design is to sample counties/jurisdictions directly. This approach avoids the preliminary work of contacting states prior to sample selection to assess data capabilities, but the number of sampled counties will be larger than that required in the census + sample hybrid in order to reach a particular precision level. Implementation of a purely county-based sample requires the following steps:

Step 1. A sample of counties/jurisdictions is designed and selected to represent the U.S. The counties may be stratified by census region, data availability (or rating) determined from the landscape assessment results, and the expected size of the jurisdiction (in terms of the number of expected dually-involved youth or a reasonable proxy.) Counties can be stratified by the landscape assessment results, such that counties that the landscape assessment indicates as likely successes could be oversampled, while counties which the landscape assessment indicates as likely non-successes (as well as counties where we know nothing) could be under-sampled. Within the landscape assessment major strata, counties may be selected with equal probability within stratum, or probability proportional to size, depending on the expected possibility or necessity of sampling cases within the county or jurisdiction. As mentioned before, any measure of size does not have to accurately reflect the population of dual system youth; the most important property is that it captures the differences in *relative* population sizes between jurisdictions. This process is estimated to take approximately 3 to 6 months.

Step 2. Selected counties/jurisdictions are contacted to assess their juvenile justice and child welfare data systems, including but not limited to the existence of viable data systems, their coverage of the county and of case types, the variables available in the system(s) and their data quality, and the willingness of selected counties/jurisdictions to provide case-level file extracts or data dumps to the study. If a county/jurisdiction is covered by multiple child welfare and/or juvenile justice agencies, or if a county/jurisdiction is covered by an agency that also serves other counties/jurisdictions, decisions will need to be made about the best way to handle such situations. This process will take approximately 18 to 24 months depending on the number of replacements necessary.

Step 3. For counties/jurisdictions that do not respond to inquiries or refuse to participate in the study, alternate (i.e., substitute) counties may be considered. Such substitutes would likely be from within the same sampling stratum and close in expected size. This process can be repeated until a suitable county/jurisdiction is selected and participates or until no further comparable counties are available. Once substitutes are identified, Step 2 must be repeated to assess the county/jurisdiction's viability to participate in the study. It is unknown how many replacements will be needed, but this process could take up to 12 months.

Step 4. Participating counties/jurisdictions would provide data extracts for matching or, match the data and provide the resulting dataset to study researchers. These data would be analyzed to estimate the incidence rate of dual system youth along various pathways, summarize their basic demographic characteristics, and when appropriate data are available, identify key experiences related to their dual contact. This process is anticipated to take approximately 18 to 24 months after final assessments are completed for all participating locations.

Nonresponse, Alternate Jurisdictions and Substitution

Under either of these two approaches, some jurisdictions will not participate. Nonresponding jurisdictions will include jurisdictions able but not willing to provide the required data, as well as those jurisdictions that are incapable of providing the required data. If the jurisdiction is a state and under the census + sample hybrid, such states simply enter the balance of the U.S. to be represented via the county sample. If the jurisdiction is a county, under either the census + sample hybrid or the purely county-based design, two possible treatments are generally used.

First, we might compensate for nonresponding counties using a nonresponse adjustment. Such adjustments inflate the sampling weights of responding sampled units to represent all sampled units. The adjustment factors are based on ratio of the sums of weights for all sampled units to all sampled and responding units, or the counts of study-eligible cases (or some proxy) when such information is available and reasonably accurate.

Second, nonresponding counties might be represented by other, similar counties that are able and willing to provide the required data. Such counties may be from the same Census region, state, MSA status, and population size (total population or study-eligible) to the extent that such information is available for all counties and is related to the estimates of interest. The relevant variables are often the same variables used for stratification of the sample, and therefore substitute counties may come from the same sampling stratum as original counties.

If the level of nonresponse is relatively low, nonresponse adjustment might be used. If the level of nonresponse is higher, the benefit of substitution is that additional real case-level data is obtained, albeit from substitute counties.

Estimated Costs for the Data Assessment and for Estimating an Incident Rate

The cost estimates for the methodologies proposed below are based on the assumption that the work would be led and managed by Drs. Herz and Dierkhising and relevant partners currently part of the California State University, Los Angeles research team. We recognize this work may not be funded by OJJDP, and if it is, a different institution may be selected to complete the study. This approach was taken in order to have a knowable baseline of costs. Costs can vary widely across institutions based on personnel costs and administrative fees, so "one true cost" is not possible to estimate, but a general estimate based on foundational costs at California State University, Los Angeles is possible and serves as a good starting point.

Based on the proposed methodologies listed above, the length needed to produce a nationally representative incidence rate of dual system youth ranges from four to six years. We believe this timeframe is accurate even if the in-depth data assessment is not conducted first. Without the assessment, identifying an appropriate sample and determining the viability of data will add time to producing the estimates. The costs without the assessment would most likely increase because of the amount of time needed to contact and assess the viability of jurisdiction participation. Thus, we believe the most efficient way forward in both time and resources is to conduct the data assessment first and then use the results to launch the methodology to generate a national estimate.

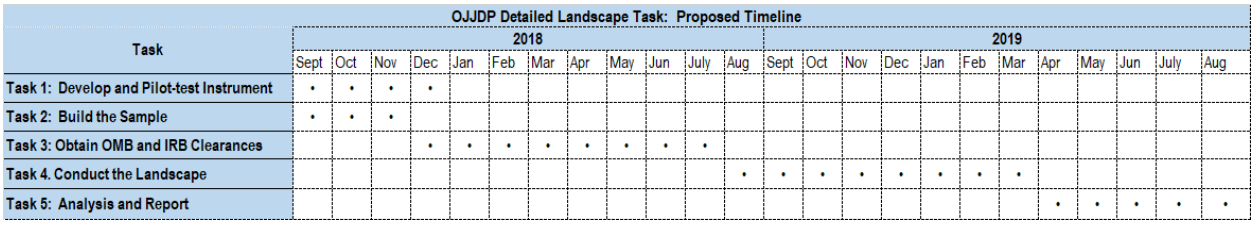
Cost estimates are presented in the next section. They are best estimates based on the parameters that we know from conducting the current study and from the limited literature on the availability of child welfare and juvenile justice data. The costs proposed in this section are subject to change based on the responsiveness of states/counties/jurisdictions to participate, the viability of data, and the number of files necessary from each site to produce the desired estimates. The costs are also reflected in general categories since many details are unknown at this point. We offer these estimates as a starting point for estimating the amount of funding needed to produce a national estimate of dual system youth.

Estimated Costs for the Child Welfare and Juvenile Justice In-Depth Data Assessment

As proposed, the detailed landscape assessment would take at least 24 months to complete (see Figure 10.1).

Figure 10.1

Proposed Timeline for OJJDP Detailed Landscape Task



The estimated costs associated with designing and completing the landscape are presented in Table 10.1. These costs are our best estimate to fully staff this work (costs are rounded for ease of interpretation and can be itemized upon request). We feel this is a cost-efficient approach to the work that balances substantive expertise and cost. Costs are split between overall project leadership and management of the project and subcontractor costs for the preparation of the OMB package and collect/analyze data. The subcontractor cost may change based on the level (and mix) of staff proposed; these estimates assume one senior staff person will oversee and manage the work on a daily basis, combined with a mix of mid-level and junior staff to implement the five tasks associated with completing the detailed landscape assessment.

Table 10.1

Cost Estimates for Conducting the Child Welfare and Juvenile Justice In-Depth Data Assessment

	Year 1	**Year 2**
Project Leadership and Management		
PI time to guide and oversee project/deliverables	$120,000	$120,000
Fringe benefits @ 45%	$54,000	$54,000
Travel to meetings for research partners/consultants	$30,000	$30,000
Consultant stipends (10 *$5,000)	$25,000	$25,000
Subcontract for Conducting Data Assessment		
Preparation and IRB/OMB packages	$80,000	
Conducting the assessment		$200,000
Data analysis and report		$50,000
Project Total by Year	$309,000	$479,000
Project Total		$788,000

*NOTE: Estimates do not include institutional or subcontractor administrative fees.

Estimated Costs to Producing a National Incidence Rate

Only the costs associated with the census + sample hybrid approach are included in this section. As indicated in the section above, the timeframe to implement this approach (not including the time to complete the in-depth data assessment) is approximately four to six years. The completion of an in-depth data assessment prior to conducting the census + hybrid sample approach would arguably reduce the time and cost of producing the dual system youth incidence rate.

The costs to produce an incidence rate fall into two basic categories (1) overall project management; and (2) a per site cost for data acquisition and analysis to produce the incidence estimate. Project management includes costs related to the development of processes and procedures to secure data from sites; coordination of multiple research partners (if multiple partners are involved) oversight/direction of staff involved in contacting the state or counties to request of the data, securing IRB/human subject approvals to receive and use the data; facilitating the extraction and delivery of data; and overseeing the analysis of data and the production of deliverables. Data acquisition and preparation/analysis broadly includes costs associated with negotiating the terms under which data will be provided with states/jurisdictions; cleaning and prepping the data for matching and analysis; conducting the analysis; and preparing reports of the results.

The costs of data collection can be considerable with a sample design like the census + sample hybrid or the purely county-based design. Estimating cost requires a thorough consideration of the various cost components involved, the development of a cost model, and an estimation of the cost components. Cost components can be expressed as coefficients in a cost model, and the results of a cost model can be balanced with precision using the same decision variables (e.g., sample sizes at each stage or level) that correspond with the cost model coefficients.

As a starting point for this process, very rough cost component and coefficient estimates were derived from the recent Survey of Juveniles Charged in Adult Criminal Court (SJCACC), where a hybrid (Census + sample) approach was used. While this study provides a good starting point for estimates, the nature and scope of that project is different from the proposed dual systems estimate study and may underestimate the true cost. First, in the case of dually-involved youth, multiple systems (CW, JJ) are involved per jurisdiction, with possibly multiple files per system. Second, in the case of the SJCACC, some jurisdictions report 0 cases, which is fairly quick to ascertain, and lowers the average costs per jurisdiction. Jurisdictions reporting 0 cases for dually-involved youth (CW, JJ or both) are less likely. Unfortunately, we do not have a comparable multisystems study to use as a baseline for these estimates; thus, many costs must be estimated based on informed perspectives from doing this type of work.

Table 10.2 displays coefficient estimates for data acquisition and preparation/analysis. Estimates range from low to high and are based on the number of hours needed to accomplish these tasks. Since these estimates essentially estimate salaries for staff doing the work, an additional fringe benefit cost was added to these amounts using a 45% cost rate to make costs more realistic.

We believe the low estimates would be more in line with conducting the study using Tier 1 Data Elements and the high estimate reflective of conducting the study using Tier 2 Data Elements. As indicated earlier in the chapter, Tier 1 Data Elements are more limited and include name or system identification numbers that correlate between CW and JJ systems; date of birth; gender; race; and date of first system contact. Tier 2 Data Elements, on the other hand, allow the opportunity to understand more about processes and experiences of dual system youth. Tier 2 data elements include: number of previous child welfare referrals and reasons for referral; type of child welfare services provided/received; length of time in the child welfare system; number, length, and type of placements; living situation at time of placement; pre-adjudication detention status; offense and type of charge; disposition received in juvenile delinquency court; and length of time in the juvenile justice system.

Table 10.2

Estimates of Costs per Site for Data Acquisition and Preparation/Analysis Only

Description of Tasks	Estimates for Tier 1 Data Collection	Estimates for Tier 2 Data Collection
Data collection—recruitment & acquisition	$5,000	$8,500
Data processing, cleaning, & quality control	$10,500	$17,750
Subtotal cost per site	$15,500	$26,250
Fringe Benefits Additional Cost (@.45%)	$6,975	$11,812
Total cost per site	**$22,475**	**$38,062**

*Note: Estimates do not include institutional or subcontractor administrative fees.

Using the proposed hybrid approach and the estimates provided in Table 10.2, we calculated per site cost estimates for the design scenarios in Table 10.3. The number of sites in each approach were multiplied by the low-end (Tier 1) and high-end (Tier 2) costs in Table 10.3. These estimates assume a limited number of replacement iterations. Additional iterations of data requests would increase the costs and time to completion.

Table 10.3

Design Scenarios and Cost Estimates for Data Acquisition and Preparation Only

Tier 1 Data Estimates				
Scenario	**# States**	**# Counties**	**Cost Calculation**	**Estimated Cost***
1	20	50	$22,475*70	$1,573,250
2	20	100	$22,475*120	$2,697,000
Tier 2 Data Estimates				
Scenario	# States	# Counties	Cost Calculation	Estimated Cost*
1	20	50	$38,062*70	$2,664,340
2	20	100	$38,062*120	$4,567,440

*Note: Estimates do not include institutional or subcontractor administrative fees.

A critical component to conducting a study of this kind is project management and oversight of the protocols, processes, and products underlying the project. Such a study may be completed by one entity or by multiple research partners, but in either case, the project management costs would be significant because of the coordination of work across sites selected for the hybrid approach. Table 10.4 summarizes the cost for project management. In contrast to Table 10.2, the costs for project management would not vary depending on Tier 1 or Tier 2 data collection; rather they remain the same in either scenario.

Table 10.4

Estimate of Costs for Project Management

	Estimated Cost per Year
Personnel for project management	$200,000
Fringe benefits @ 45%	$90,000
Travel to meetings for research partners	$30,000
Total per year*	**$320,000**

*Estimate does not include institutional or subcontractor administrative fees.

Table 10.5 forecasts total cost associated with the proposed study using the estimates from the above tables. The total study cost estimate also assumes the need for a $10,000 stipend per site to incentivize participation and compensate participating sites for the staff time required to extract the requested data. Since it is assumed the study would take four to six years, Table 10.5 is based on a five-year timeframe for a hybrid design using 20 states and 100 jurisdictions. In total, we estimate Tier 1 Data collection would cost approximately $5,497,000, and Tier 2 would cost approximately $7,367,440.

Table 10.5

Summary of Estimated Cost for Project Management and Analysis of System Data for a 5-Year Study

	Tier 1 Data Collection	**Tier 2 Data Collection**
Project management costs across all years	$1,600,000	$1,600,000
Stipends for Site Participation ($10,000/site)	$1,200,000	$1,200,000
Analysis of data costs by tier levels		
Tier 1 data analysis (across all years)	$2,697,000	
Tier 2 data analysis (across all years)		$4,567,440
Total Project Cost for Tier 1 Data	**$5,497,000**	
Total Project Cost for Tier 2 Data		**$7,367,440**

*Estimates based on: (1) a five-year timeframe given the estimate of four to six years to complete; and (2) the hybrid design with 20 states and 100 jurisdictions.
NOTES: Estimates do not include institutional or subcontractor administrative fee costs.

Cautionary notes regarding the estimates. The cost estimates presented in Table 10.5 are approximations. While instructive, these figures are significantly limited in several ways described below.

1. These cost estimates do not include the in-depth data assessment (described above); rather, it assumes the in-depth assessment was collected and can be used to begin data acquisition. If the data assessment was not completed, the length of the study would probably require at least five years and the cost may increase significantly because of the work necessary to verify each state/jurisdiction as a viable site and the number of replacements needed to achieve a full sample.

2. As mentioned above, we have no multisystem models from which to base estimates, so these figures are informed speculations especially if the in-depth data assessment is not conducted before embarking on this study.

3. These cost estimates do not include the implementation of the Best Practices Rubric (see Section I). It is assumed that the rubric would be applied to the same sampling frame as the administrative data requests and would not require a tremendous cost increase, but if this aspect of the study were pursued, costs estimates would need to be modified to include it.

4. These cost estimates do not include institutional or subcontractor administrative fees, which will be added onto the total cost of the study.

5. These cost estimates do not include any costs for supplies/materials and equipment. While these costs should be relatively minimal, they will be necessary to support a project of this type.

As shown in these estimates, the cost associated with conducting a prevalence study is quite high. For this reason, we strongly advocate pursuing a study using Tier 2 Data Elements to maximize the value and potential impact of the study on child welfare and juvenile justice policies and practices across the nation. Tier 1 data will only produce a rate of dual system involvement—while interesting, it has limited insight into how systems can begin to reduce this rate. Tier 2 data, on the other hand, will produce a rate and allow exploration of the experiences and pathways of dual system youth. The results of such an analysis hold tremendous insight for understanding (1) what child welfare systems can do to prevent youth from crossing over into the juvenile justice system and (2) what juvenile justice can do to effectively intervene with and reduce further penetration of the criminal justice system for dual system youth. A study using Tier 2 Data Elements, therefore, will arguably pay for its cost many times over.

Summary

In sum, the collective work of the Dual System Design Study points to the census + hybrid as the recommended study design. While the census + hybrid option can be carried out without the landscape assessment we recommend conducting the in-depth data assessment first for two important reasons. First, it would greatly inform the sampling design in the census + hybrid approach which would make the overall study more cost efficient. For instance, it would be

expected that the states or counties that are included in the sampling frame have the capacity to participate in the study rather than wasting efforts with jurisdictions that are unable to participate.

Secondly, the knowledge gained from the landscape assessment alone would be valuable to the field. Findings would point to recommendations on data infrastructure and integration at the national level and inform OJJDP, and other federal agencies, on the gaps and strengths of the data capabilities of CW and JJ agencies across the nation. Indeed, as the use of administrative data becomes increasingly important in social science research the utility of the findings of the proposed landscape assessment for public service systems may yet be realized. The need for linked administrative data across child welfare and juvenile justice agencies is increasing as the demand for rigorous evaluations and improved practices grows. The importance of pursuing and enhancing the capacity to use linked administrative data is discussed in more depth in Section IV.

SECTION IV: What Does this Body of Work Tell Us?

In *Section IV* of this report, *What Does this Body of Work Tell Us,* we summarize the findings from the analytic components of the study (Chapter 11) and we discuss the viability of producing a national incidence rate using administrative linked data as well as the challenges in doing so (Chapter 12).

Chapter 11: Summary of Study Findings and Implications for Policy and Practice

Lead Authors:
Denise Herz, California State University, Los Angeles
Carly Dierkhising, California State University, Los Angeles

OJJDP funded the Dual System Youth Design Study with growing recognition that many youth in the juvenile justice system have touched the child welfare system in some way prior to their involvement in delinquency. A large body of research demonstrates a persistent correlation between maltreatment and delinquency. In fact, there is little to no debate about the relationship; instead, the current debate centers on explaining why the relationship exists and what other factors may moderate and/or mediate the relationship (e.g., Goodkind, Shook, Kim, Pohlig, & Herring, 2013: Kerig & Becker, 2010: Vidal, Prince, Connell, Kaufman, & Tebes, 2017). The current study is timely and important relative to the growth of research and practice developments in this area because it sets the stage for estimating a national incidence rate and capturing the best practices for building integrated system (or cross-system) approaches.

The purpose of this study was not to produce the national incidence rates or evaluate practices used by jurisdictions but rather to propose methodologies and assess the viability of implementing them. To accomplish these goals, the Jurisdictional Case Studies Subcommittee and the Linked Administrative Data Subcommittee were established. The Jurisdictional Case Studies Subcommittee reviewed data collected by Georgetown's Center for Juvenile Justice Reform as part of the Crossover Youth Practice Model (CYPM) to identify the key practices implemented by sites and the lessons learned from this work (see Appendix A for a list of all subcommittee members). The Linked Administrative Data Subcommittee utilized administrative data from Cook County, Illinois; Cuyahoga County, Ohio; and New York City to produce incidence rates and descriptive statistics across three major metropolitan areas (see Appendix A for a list of all subcommittee members).

This study produced several groundbreaking results and helps improve our understanding of dual system youth experiences as well as the cross-system collaborative practices intended to improve those experiences. In this chapter, we highlight these findings and consider their implications for policy and practice in this area. In the next chapter, we continue the discussion as it relates to supporting the use of linked administrative data to document the incidence of dual system youth.

A Brief Overview of the Analytic Components of the Current Study[22]

Jurisdictional case studies work. Data from jurisdictions participating in the Georgetown University Center for Juvenile Justice Reform's Crossover Youth Practice Model (CYPM) were used to understand what types of practices were most often implemented and prioritized by participating sites. By using these data, visiting five CYPM site meetings, and

[22] Chapter 12 provides a summary of the proposed methodology recommendations and a discussion of using linked administrative data.

using the knowledge from the experts in the field we were able to identify "lessons learned" from a broad range of jurisdictions and stakeholders. These findings, in turn, allowed us to systematically define potential best practices for dual system youth and build a Best Practices Rubric based upon them (see Appendix B). This Rubric provides a foundation from which jurisdictions can assess their level of cross-system collaboration and identify areas for further development.

Linked administrative data work. Administrative data were used to examine incidence rates of dual system involvement for a cohort of youth who had their first juvenile justice petition between 2010 and 2014 (2013 to 2014 in New York City) in all three study sites and for a cohort of youth in Cook County who had their first arrest between 2010 and 2014. Using the first juvenile justice petition cohort, other administrative outcomes such as homelessness, incarceration, and receipt of public assistance were examined for dual system youth while they were children/adolescents (homelessness and public assistance) and in young adulthood (homelessness, incarceration, and public assistance).

To drive analysis of the data, the research team developed a theoretically derived framework of dual system youth pathways. Dual system youth represent the core of this framework, capturing all youth who touch both the child welfare and juvenile justice systems. The framework then categorizes dual system youth into pathways using three criteria. The first criterion was the timing of contact with both systems. Youth who touched both systems but not at the same time (i.e., non-concurrently) were defined as *dual contact youth* whereas youth who touched both systems at the same time (i.e., concurrently) were classified as *dually-involved youth*. A second criterion was the pathway by which dual contact and dually-involved youth became dual system youth. The *child welfare pathway* comprised youth who entered the child welfare system before the juvenile justice system, and the *juvenile justice pathway* included youth who entered the juvenile justice system before the child welfare system. Finally, the last criterion was having a previous, but not currently open, child welfare case. Application of these criteria to dual system youth created six different categories:

- Dual contact youth—child welfare pathway
- Dual contact youth—juvenile justice pathway
- Dually-involved youth—child welfare pathway—no historical child welfare case
- Dually-involved youth—child welfare pathway—with a historical child welfare case
- Dually-involved youth—juvenile justice pathway—no historical child welfare case
- Dually-involved youth—juvenile justice pathway—with a historical child welfare case

These categories guided the analysis of site data in order to examine whether different pathways mattered for dual system youth. In other words, we examined whether all youth who touch both the child welfare and juvenile justice system are the same, or whether dual system youth differ in ways necessary for accurately identifying and appropriately servicing them. Descriptive statistics were used initially to explore the differences in these categories of youth (Chapters 5, 6, & 7) and then sequence analysis was applied to the same cohorts of youth to empirically test the pathways of dual system involvement (Chapter 8).

What the Findings Tell Us

Taken together, the findings from these three efforts intersected and unfolded into a meaningful story about who dual system youth are; how systems can collaborate to identify and respond appropriately to dual system youth needs; and the challenges inherent in producing data to inform this work at the national level.

Building integrated systems across child welfare and juvenile justice systems. Without question, the administrative data findings reinforce the need for cross-system collaboration and the implementation of integrated systems practice across the child welfare and juvenile justice system. As mentioned above, the Center for Juvenile Justice Reform's Crossover Youth Practice Model (CYPM) is one effort dedicated to building effective integrated systems practice in jurisdictions across the nation. This work produced a considerable amount of information related to the most commonly implemented practices and highest priorities among CYPM sites as well as lessons learned around successes and challenges.

A review of the data available showed the practices most often implemented across 41 CYPM sites were the early identification of dual involvement (93%); improved information sharing across child welfare and juvenile justice systems (93%), and the use of coordinated case supervision across juvenile justice and child welfare (88%). CYPM sites highlighted several common accomplishments and challenges during five site visits. For example, early identification of dual system youth improved case planning, better communication increased service options across agencies; and youth and family engagement were critical to improving participation and success. Challenges, on the other hand, included concerns related to confidentiality, communication difficulties across agencies with different languages and goals, not having an integrated data system, and access to resources.

The results of the CYPM data analysis informed the development of a "Best Practices Rubric" based on the following eleven domains (see Appendix B):

- Interagency Collaboration
- Judicial Leadership
- Information Sharing
- Data Collection
- Training
- Identification of Dual System Youth
- Assessment Process
- Case Planning and Management
- Permanency and Transition Plans
- Placement Plan
- Service Provision and Tracking

Each of these domains is viewed as equally integral to building effective cross-system collaboration for dual system youth (i.e., there is no particular ranking or ordering of the domains). While we highlight these practice domains in Chapters 1 & 2 we also recognize the

need, based on Chapters 3 – 8, for jurisdictions to incorporate at least three crosscutting issues into their work in each domain: (1) addressing racial disparities; (2) recognizing the role of trauma; and (3) prioritizing family engagement whenever and however possible.

The Best Practices Rubric provides a tool for use by jurisdictions to identify where they fall on the spectrum of practice development for each practice domain. Jurisdictions must engage in all these areas to build effective integrated system practices across child welfare and juvenile justice systems. Jurisdictions who are more fully developed in these areas, in turn, will arguably have the most positive impact on dual system youth experiences and outcomes. The Rubric domains intentionally prompt discussions about what jurisdictions are doing to support dual system youth and how well they are doing it. By defining the differences between highly developed practices, emerging practices, and practices not yet considered, systems can identify areas for continued support as well as areas for improvement. This is one critical step to building the types of system responses necessary to prevent youth from touching both systems and to reduce their involvement in the juvenile justice system if they do.

Incidence of dual system youth. The incidence rate of dual system involvement for the first juvenile justice petition cohort was high in all three sites, ranging from 44.8% in Cook County to just over two-thirds in Cuyahoga County and New York City (68.5% and 70.3%, respectively). Incidence rates across pathways showed that the majority of dual system youth touched both systems non-concurrently: Nearly three-quarters of Cook County youth fell into the dual contact category and just under half of youth were dual contact youth in the other sites. Dually-involved youth (i.e., concurrent involvement) through the child welfare pathway were the second most prevalent group, with approximately one-quarter of all dual system youth falling into this pathway (note: historical and non-historical child welfare cases were combined). The number of youth touching both systems through the juvenile justice pathway (i.e., entering through the juvenile justice system first) was small, especially when historical child welfare cases were excluded from the count of juvenile justice pathway youth.

Rates for youth in the first arrest cohort in Cook County looked similar. Over a third of these youth (39.1%—compared to 44.8% of first juvenile justice petition youth) were dual system youth. Three-quarters (74.8%) were dual contact youth via the child welfare pathway followed by dually involved via the child welfare pathway (17.4%—historical and non-historical child welfare cases combined).

Although incidence rates were not identical across all three sites, the patterns were extremely similar. Approximately one-half to two-thirds of youth with juvenile justice petitions had touched the child welfare system at some point in their lives, and the majority of this contact was non-concurrent. Among concurrent involvement, contact with the child welfare system came before contact in the juvenile justice system.

Pathways and characteristics. The incidence rates found in this study demonstrate that pathways matter because not all dual system youth touch the child welfare and juvenile justice system in the same way. The next question considered was whether the experiences and characteristics of youth varied across pathways. Without exception, the findings parallel those found in the larger literature in all three sites. Dual system youth had higher rates of over representation of African Americans and a higher proportion of females than found in the

juvenile justice only cohort. Additionally, dual system youth had longer histories in the child welfare system, more placements, and higher recidivism than youth in either the child welfare or juvenile justice system only (Dierkhising, Herz, Hirsch, and Abbott, 2018; Citizens for Juvenile Justice, 2015; Ryan, Chui, and Williams, 2011; Halemba & Siegel, 2011; Halemba, Siegel, Lord, & Zawacki, 2004).

Dual system pathway comparisons further revealed that not all dual system youth are the same. For both arrest (Cook County only) and juvenile justice petition cohorts (all sites) dually-involved youth/child welfare pathway with historical child welfare case were more deeply involved in the child welfare system than their counterparts without a historical case. They entered the child welfare system earlier and left later, were more likely to have placements, petitions to the delinquency court, and to recidivate with a new charge. The use of placements is a good example of the differences: dually involved/child welfare pathway youth in the arrest cohort were eight times more likely than dual contact/child welfare pathway youth to have an out-of-home placement.

These results tell us at least two important things. First, dual contact youth are the most prevalent type of dual system youth, and both their characteristics and experiences are different from dually-involved youth. Most notably, dually-involved youth have more extensive involvement with the child welfare system than dual contact youth. Second, having a historical child welfare case among dually-involved youth is significant and potentially redefines the proposed pathways. Having a historical child welfare case revealed more similarity across dually-involved/child welfare first pathway youth and dually-involved/juvenile justice first pathway youth. This finding supports redefining dually-involved/juvenile justice first pathway as dually-involved/child welfare first youth, thereby combining two three categories into one and reducing the original six conceptual categories into four:

- Dual contact/child welfare pathway first
- Dual contact/juvenile justice pathway first
- Dually-involved youth/child welfare pathway first
- Dual involved youth/juvenile justice pathway first

We examined the viability of the conceptual categories in the sequence analysis chapter (see Assessing the validity of pathways section below) and found similar support for this direction; however, we believe these questions should be rigorously explored using data from other jurisdictions to see if this pattern holds or varies by geographical location.

Other administrative data outcomes. Dual system youth identified from the first juvenile justice petition cohort not only looked different from their single system counterparts with regard to their system experiences, characteristics, and short-term outcomes (i.e., recidivism), but they also looked different when other administrative outcomes were analyzed. Similar to descriptive results for characteristics and experiences, the rates varied across study sites, but the pattern of findings were the same. Dual system youth had worse outcomes than youth in the child welfare system only or the juvenile justice system only. Specifically, they were more likely to be homeless in Cuyahoga County and New York City before the age of 18 and between 18 and 21 years old. Incarceration for dual system youth in adult jail (Cuyahoga

County and New York City) and state prison system (Cook County) up through the age of 21 was more common for dual system youth, and dual system youth were more likely to receive public assistance prior to the age of 18 and between the ages of 18 and 21 in Cuyahoga County. Furthermore, these outcomes varied across the pathways. Dually-involved youth had the worse outcomes of all the pathways generally, but dually-involved youth with historical child welfare cases regardless of whether they are in the child welfare or juvenile justice pathways generally had the worst outcomes of any group.

These findings replicate those from a growing body of literature examining long-term outcomes for dual system youth compared to youth involved in only one system (Eastman & Putnam0Hornstein, 2017; Coulton, Crampton, Cho, & Kim, 2015; New York City Office of the Mayor, 2015; Culhane, Metraux, & Moreno, 2011). In fact, to date, all the studies in this area make the same conclusion: Dual system involvement is more likely to have a negative effect on young adulthood outcomes than involvement in only the child welfare or juvenile justice systems. These persistent findings underscore the need to identify dual system youth, assess their needs accurately, and provide them with appropriate services as soon as possible.

Assessing the validity of pathways. A close look at the descriptive results for dual system youth characteristics and experiences across pathways yielded insight into how to reduce the original pathway categories from six categories to four, which is arguably more efficient and informative. Although this process was instructive, it was limited in its consideration of all the factors related to dual system youth trajectories. To further test the validity of the theoretically derived pathways, we applied sequence analysis to first juvenile justice petition youth with dual system contact across all three sites. This process empirically differentiated clusters or groups of dual system youth based on a simultaneous consideration of the type of contacts they had with both systems and the timing of that contact. This process yielded four viable clusters or pathways:

- Limited and late child welfare involvement
- Moderate child welfare involvement
- Long duration in child welfare
- Long duration in child welfare out-of-home placements

At first glance, these clusters or pathways look different from the theoretically derived ones; however, a comparison of the two sets of pathways yields more similarities than differences. Dual contact youth tend to fall in the first two clusters, as they tend to have late contact and limited to moderate involvement with the child welfare system. By all measures, though, dually-involved youth had earlier, longer, and deeper contact with the child welfare system. The empirically derived clusters differentiate the level of contact in a way that is less about whether the contact with both systems happens at the same time but rather the duration and extent to which youth are involved in the child welfare system. This distinction can contribute significantly to improving the way systems understand dual system youth and build practices intended to prevent dual system involvement from occurring at all and if it does, limiting the extent to which youth penetrate deeply into the juvenile justice system.

Making a Positive Difference: Important Considerations for Policy and Practice

The call for cross-system collaboration and the implementation of integrated system practices is not new. Efforts to guide and support this work are currently underway in over 100 jurisdictions across the nation led by the Center for Juvenile Justice Reform (https://cjjr.georgetown.edu/our-work/crossover-youth-practice-model/) and Robert F. Kennedy Children's Action Corps National Resource Center for Juvenile Justice (https://www.rfkchildren.org/our-work/rfknrcjj/). Both entities recommend specific policies to support this work and have developed guidelines for building and implementing collaborative practices (see Siegel & Lord, 2004; *Bridging Two Worlds: A Policy Guide*, 2008; Herz, Lee, Lutz, Stewart, Tuell, & Wiig, 2012; *Building a Brighter Future for Youth with Dual Status*, 2018). We encourage readers to turn to these publications for a detailed review of policy and practice recommendations, as the work in this area is multilayered and well developed.

Current study findings align with the recommendations proposed by these groups and further emphasize particular areas of policy and practice development. Next, we highlight specific policy and practice implications specific to our findings.

Policies needed to guide and support practices. Effective practice depends on well-developed policies for dual system youth, and well-developed policies depend on recognizing dual system youth as a critical target population rather than a marginal one. Research demonstrates that at least half of juvenile justice youth have touched the child welfare system at some point in their lives. This means the child welfare system and juvenile justice system touch a great number of the same youth and families. Since the data consistently show that contact with the child welfare system typically comes before juvenile justice contact, community prevention and the child welfare system can play a critical role in preventing youth from crossing into delinquency and the juvenile justice system.

Prevention is primary in significantly reducing dual system contact and involvement. Prevention has several levels and begins in the community with the prevention of maltreatment. There are several effective approaches to preventing maltreatment in the community with home visiting programs being most common. For example, Nurse Family Partnerships (NFP) a community-based intervention which operates in every state across the country has been extremely effective in preventing child maltreatment (Olds et al., 1997). Importantly, and specific to dual systems work, long term follow up of NFP programs also reveal a reduction in juvenile arrests and delinquent behaviors among those who participated in NFP compared to those who didn't (Olds et al., 1998).

If maltreatment occurs, preventing maltreatment from continuing becomes the priority because research indicates that early intervention can reduce the likelihood of delinquency in adolescence. If maltreatment continues despite these efforts and children/youth enter the child welfare system, service plans should incorporate programming that will help prevent delinquency. There are several effective interventions that exist for this as well (see Blueprints for Health Youth Development: https://cspv.colorado.edu/blueprints/). Findings from the current study indicate that those who have longer histories in child welfare and/or are placed in out of home care should be a primary target for evidence-based interventions. Interventions, such as

Multi-Dimensional Treatment Foster Care, which is specific for those in out of home placement and aims to reduce delinquency and promote healthy development (Chamberlain & Reid, 1998) would be an ideal program for this population.

For those who eventually find themselves in the juvenile justice system, cross-system collaboration is essential to preventing them from penetrating deeply into the criminal justice system. Prevention and intervention do not begin when the youth touches the juvenile justice system—it must begin much earlier and reflect a holistic understanding of the risks and needs of a youth and his/her family. Effectively addressing child safety in child welfare is synonymous with the prevention of substance abuse, mental health problems, teenage pregnancy, delinquency and many other social problems.

At the federal level, this requires a formal recognition of the dual system population and a mandate to states to identify and collect data on these youth and fund prevention efforts. Currently, the recently reauthorized Juvenile Justice and Delinquency Prevention Act (JJDPA) accomplishes this to a point by requiring a study of the coordination of services and treatment between the juvenile justice and child welfare system. Future authorizations will hopefully go further by laying the groundwork for better and more consistent identification of dual system youth and evaluating the integrated system approaches used to improve their experiences and outcomes. Language in federal legislation is important, but it must be married to funding to incentivize the following: building better data systems, particularly for the juvenile justice system; training at the state and local levels related to developing and implementing integrated system practices; and evaluation of those practices.

Support needed for the development and implementation of integrated system practices. When youth touch both systems, systems need to identify them consistently and reliably as early as possible. This action relies on the availability of systematic, electronic data collection in both the child welfare and juvenile justice systems *and* the ability for those systems to communicate with one another. Integrated data systems or crosswalks between data systems that are protective of confidentiality are essential for this purpose. Most jurisdictions do not have the ability to communicate across data systems and miss the identification of dual system youth. Those that do, primarily focus on concurrent involvement rather than non-concurrent involvement. In those cases, the findings of this study suggest that a large portion of dual system youth go unidentified because they are not simultaneously involved in both systems.

A commitment to identify youth as soon as possible, assessing their needs, and providing comprehensive services and supervision is fundamental to building formalized communication and collaboration across child welfare and juvenile justice systems. This commitment is an essential building block for improving practices for dual system youth. Ideally, this commitment starts at the federal level, is echoed at the state level and embraced at the local (typically county) level. Implementing the Best Practices Rubric across jurisdictions nationally, within the state, and/or within jurisdictions is a proactive step in this direction. The Rubric is a tool to identify developmental stages of integrated system implementation. At the national level, data collected using the Rubric would measure the extent of integrated system development currently in place in a wide cross-section of jurisdictions. This offers the opportunity to highlight practices within the highly developed jurisdictions and to develop a resource guide for sites in less developed

stages. While this could also apply at the state and local levels, data from the Rubric in more limited areas arguably provides a baseline of practices and a guide for further development. Finally, it sets the stage for evaluating the impact of cross-system practices on youth outcomes.

Recognizing the need for trauma informed care approaches, utilizing multidisciplinary teams, and building a continuum of care that ranges from prevention to intervention services across agencies and community-based organizations will support the success of integrated system approaches. Previous research (e.g., Dierkhising, Ko, Woods, Briggs, Lee, & Pynoos, 2013) as well as current findings show the importance of addressing trauma in dual system youth lives and doing this as early in the process as possible—starting with prevention in the community and moving into prevention from further system involvement (in both the child welfare and juvenile justice systems). Multidisciplinary teams assess and develop case plans for youth using a holistic perspective and see the youth and his/her family in a larger context. With a well-developed continuum of care, teams can connect youth and their families to appropriate services. Since many systems don't identify whether youth are dual system youth, as highlighted in the current study, it is likely that youth and family needs related to trauma and traumatic stress reactions aren't being assessed and, ultimately, not attended to from a service perspective. Assessing youth and family needs from a holistic perspective, as encouraged in the cross-system collaborative models (e.g., CYPM) is the only way to ensure that youth and families are receiving the appropriate services. Findings from the collective literature in this area indicate that dual system youth may not need different services from their single system counterparts. Instead, they may need blended services to address a myriad of needs resulting from an accumulation of traumatic experiences that occurred both outside of the system and within the system (Dierkhising et al., 2013; Dierkhising, Lane, & Natsuaki, 2014). A well-developed continuum of care accessible across agencies, in turn, facilitates this type of comprehensive case planning.

Practice models and guides related to building integrated systems for dual system youth recognize different pathways and types of dual system involvement, but implementation of the practices is often limited to dually-involved youth with concurrent involvement. Refining the ways in which jurisdictions define and respond to different pathways is necessary to building effective prevention and intervention services and ensuring eligible youth receive appropriate care. We believe that clarity in the types of pathways for dual system youth in combination with a holistic understanding of them and their families will lead to better identification, earlier interventions, more appropriate services, and the ability to keep the youth and family engaged in the services provided.

Finally, as jurisdictions move towards systematic implementation, partnerships with research and evaluation teams are imperative. Having researchers as part of the planning team can contribute to the development of best practices, a data collection plan, and an overall evaluation plan. The goal is to validate these best practices in order to establish promising and evidence-based programs for dual system youth. For example, jurisdictions implementing cross-systems practices can contribute to our understanding of the mechanisms of change associated with these practices and the impact on proximal and distal outcomes. In highly developed integrated systems, for example, we would expect to see improvements in youth's placement stability, connections to family and prosocial peers/adults, improvements in behavioral health, and gains in education. These proximal outcomes, in turn, will hypothetically affect whether a youth

recidivates and potentially whether they continue to be system-involved as an adult. As research and evaluation efforts on these practices move forward it will also be essential to explore whether each practice is essential or if there is a proverbial tipping point for effectiveness. In other words, do some practices matter more than others? This is perhaps the most complex research question to answer moving forward given that so little research has been done on these practices either independently or in an integrated way. Future work must continue to explore these mechanisms of influence in order to improve the impact of policies and practices implemented to improve the lives of dual system youth.

Conclusion

Although most youth involved in the child welfare system do not cross into the juvenile justice system, this study shows that approximately half of youth petitioned to the juvenile delinquency court have touched the child welfare system. Research shows that the outcomes for these youth can be dire and warrant the time and attention to improve integrated systems work across child welfare, juvenile justice, behavior health and educational systems (to name a few). Furthermore, the findings of this study provide evidence that dual system youth pathways matter, and when these pathways are considered, prevention clearly becomes a high and non-negotiable priority. Preventing delinquency among maltreated youth is rarely, if ever, a focal point of policy-makers and practitioners, and our data would indicate that this is a huge missed opportunity with short and long-term consequences for youth, families, and communities. It appears from this study's findings that effective prevention of maltreatment and delinquency could dramatically reduce the number of youth in both the child welfare and juvenile justice systems and potentially change the trajectories of many lives in a long-term, profound, and positive way.

Dual system youth with long durations of involvement in the child welfare system and high levels of placements have the worse outcomes of all dual system youth. This finding underscores the role situational context may play in the lives of youth who find themselves caught in the systems. Be it not for their long involvement in the system and their multiple placements, including placement in a group home, would these youth find themselves taking the same actions that led them into the juvenile justice system? The answer to this question drives an ethical and moral imperative to identify maltreated youth at risk for delinquency and intervene as early as possible in order to disrupt the negative outcomes that (research says) await them.

At its core, delivering effective programming to dual system youth before they become involved in both systems and/or after they touch both systems hinges on our ability to stabilize and normalize their lives: Stabilize their living situation, their interactions with family, and their performance at school while addressing any mental health (including trauma) and substance abuse issues. By stabilizing their lives, we can increase their opportunities for wellbeing and recovery from trauma. Without stabilizing the lives of dual system youth, situational context affects the way they will experience their situation and how they will make decisions for themselves. To remember this and incorporate it into our core practices creates hope—for the youth, their families, the community, and the systems intended to help them.

Chapter 12: Producing a National Incidence Rate—The Viability and Challenges Related to Using Administrative Data

Lead Authors:
Denise Herz, California State University, Los Angeles
Robert Goerge, Chapin Hall at the University of Chicago
Dennis Culhane & TC Burnett, Actionable Intelligence for Social Policy

A primary goal of this study was to propose a methodology for estimating a nationally representative incidence rate of dual system youth. Collectively, our research team reviewed the various options and concluded that producing a nationally representative incidence rate of dual system youth required the use of linked administrative data. Westat conducted a landscape assessment of child welfare and juvenile justice data using extant information available to assess the viability of accessing the data needed for such a study (see Chapter 8). These findings, in turn, informed the methodology recommended in Chapter 9. These processes were informative, underscoring the need to access administrative data while highlighting issues related to doing so. In this chapter, we provide a brief summary of the proposed design and key issues related to using child welfare and juvenile justice data at the national level.

Availability of Data: Key Findings from the Landscape Assessment of Child Welfare and Juvenile Justice Data

Perhaps the most significant hurdle to collecting data on dual system youth is the absence of integrated practices and data systems in the majority of jurisdictions across the United States. The data landscape assessment completed as part of this study confirmed this reality. Whereas child welfare data is often captured at the state level because of federal reporting requirements, juvenile justice data is typically captured at the jurisdiction (e.g., county) level and in less consistent ways (see Chapter 8 for a more detailed discussion of the landscape assessment and its findings). Such variability creates inconsistency in the availability of electronic data and in the way measures are collected.

A starting point for accessing consistent juvenile justice data might be the delinquency court and dependency court data submitted to the National Council on Juvenile Justice on an annual basis; yet, in the Dependency Court Data Archive Feasibility Report (Sickmund, Deal, Hockenberry, & Furdella, 2015), NCJJ noted that these data sources are too limited for sufficient identification of dual system youth because of structural and consistency issues. This refocuses attention on state and jurisdiction data from both systems. The Juvenile Justice Geography, Policy, Practice & Statistics (JJGPS) bulletin, Systems Integration: Child Welfare and Juvenile Justice, (Fromknecht, 2014) found that only seven states integrate child welfare and juvenile justice data; eight have separate divisions but exist under the same umbrella agency, eleven are in separate state-level centralized agencies, and the vast majority (25) operate as decentralized units within a state. Twenty-seven of these states engage in data sharing (in some capacity) across the child welfare and juvenile justice systems. Thus, there is some, albeit limited, basis to access administrative data from both systems to produce a national incidence estimate, but a deeper investigation into which data are available across systems and the quality of that data is necessary.

Proposed Methodology for Pursuing a Nationally Representative Incidence Rate of Dual System Youth

The availability of child welfare and juvenile justice data was a critical piece of information for the design portion of this study. Using this information, our Westat partners estimated models to inform the sampling design for a national study. The final recommended approach was the census + sample hybrid design. This design assumed that statewide administrative data for both systems would be available from 20 states, which would cover 35-45% of all cases in the United States. Once verified, a sample of counties or jurisdictions would be sampled from the remaining states that cannot produce statewide data. Collectively, the two samples would represent all child welfare and juvenile justice cases across the nation—matching the data would then produce an estimate of youth who touched both of the systems (i.e., dual system youth). Another key assumption is that identified states and jurisdictions would be able to produce these data and would allow access to them. To verify this assumption, we recommended a two-phased approach. First, conduct a deeper data landscape analysis nationwide to verify and identify states/jurisdictions capable of providing the data, and second, implement the census + sample hybrid design using the results of that analysis.

In theory, this methodological approach seems straightforward and relatively easy to implement; however, in the course of analyzing the administrative data in the study sites, important issues around data access, the importance of jurisdictional differences, and data quality arose.

Key Issues for Using Child Welfare and Juvenile Justice Data at the National Level

Data access. In this study, research teams from three jurisdictions—Cook County, IL; New York City; and Cuyahoga County, OH—with well-established integrated data systems (IDS) collaborated to develop a data analysis plan to assess the feasibility of using linked administrative data to produce a national estimate of dual system youth. While the three study sites were able to draw upon long-established agreements allowing them to receive, link, and analyze data across multiple governmental departments, jurisdictions without any experience in linking data across these domains would experience significant challenges engaging in this work, (Petrila Cohn, Pritchett, Stiles, Stodden, Vagle, Humowiecki, & Rozario, 2017).

Even when the data are available, permission to use it is not always straightforward. For sites without a data governance process in place, the ad hoc nature of data sharing requests—even between two state agencies—is fraught with barriers. For instance, cross-sector stakeholders have to agree to participate, legal agreements must be established, and the technical process for transferring and matching data has to be determined before the actual data analysis work can begin. At the very minimum, these jurisdictions would need to establish support from stakeholders across two departments to develop and execute a memorandum of understanding and create a project-specific data sharing plan allowing them to match data across child welfare and juvenile justice departments. Absent an integrated data system that streamlines these procedures, it can take up to a year to finalize the agreements that allow data access, linkage, and analysis (The Commonwealth of Massachusetts, 2016).

As more and more states and counties work to adopt data governance practices and the federal government continues to advocate for the use of linked administrative data, the friction associated with data access should be further reduced. Indeed, over the last several years, federal agencies have issued guidance on the storage and use of administrative data for evaluation purposes, which has helped to reduce legal confusion at the state- and county-level around their ability to utilize administrative data for evaluation or audits related to federal- or state-supported education programs (Petrila et al., 2017; Aron-Dine, 2015; Berk, Schur, & Feldman, 2007; Czajka & Beyler, 2016). The federal government could provide incentives to states through audit, evaluation, and performance reporting requirements either by allocating additional funds, requiring cross-systems linkage, or both. Such federal efforts have been effective in the past (Federal Register, 2011).

Quality of the data. Since administrative data are not collected with research purposes in mind, they are not typically in a sufficient state for research. Evaluators often have to convert raw files into research-ready files and must be prepared to address issues of data quality, measurement, reliability and validity, and coding (in)consistencies. In order to do so, it is recommended that they first have a solid understanding of the underlying data structure of any given data source, including both its provenance and metadata (Wulczyn, Clinch, Coulton, Keller, Moore, Muschkin, Nicklin, LeBoeuf, & Barghaus, 2017).

The provenance and metadata should first be reviewed to determine any system challenges within an administrative data source. This review should be done to determine relevance, missing field names or descriptions, combined fields, multiple structural directions, and divided or duplicated values. Once this is complete, the administrative data can be reviewed for completeness, value validity, default values, consistency, uniqueness, and duplication. However, this list is not exhaustive—depending on the data in hand, additional review may be required in order to adequately determine data quality (Wulczyn et al., 2017). Just because these steps were successfully completed does not mean the data is in sufficient quality for research. For instance, the LAD study sites determined that they would not be able to use arrest data to select the study cohort for this project because it was not available across all sites. Instead, each jurisdiction utilized court petition data to construct a cohort of youth who received their first juvenile court petition.

The importance of considering jurisdictional differences in policies and practices. At the outset of the project, the group devoted a significant amount of dialogue to determine which measures should be addressed by all three sites. Since a major focus of this study was to assess the feasibility of using linked administrative data to measure the national incidence of dual contact and dual involvement in child welfare and juvenile justice systems, the LAD Subcommittee first needed to define "system involvement." The sites were ultimately not able to apply the same definitions of system involvement because juvenile justice and child welfare practices vary widely across each jurisdiction. Instead, they chose to define system involvement relative to the standard operations within their respective jurisdictions in order to best benefit both current analyses and future work in this area (see Chapter 5 and Chapter 8 for more discussion of site specific issues).

Future projects utilizing data from more jurisdictions to develop a national estimate of dual system youth would need to allocate a sufficient amount of time and resources to ensure accurate measurement. For instance, key terms must be both clearly defined and applied across all study sites. The same is true for population definitions and measures. Equally important, information on data availability and quality—specifically with regard to juvenile justice data—must be gathered from the participating jurisdiction(s) in order to understand the true viability of the data for this purpose. For instance, within each jurisdiction questions such as what constitutes out-of-home placement, juvenile justice involvement, etc. must be determined. In some cases, qualifications may be required to indicate non-comparability that could not be corrected. Such issues are key as they can have very significant impact on the comparability of results.

Issues related to data reliability and validity are common when using administrative data. Therefore, it is imperative to ensure that measures are actually capturing what they are intended to capture. Site to site variation in interpretation could also exist, and we found examples of this in conducting this feasibility study. In conducting this study, for example, we also encountered age limits for the juvenile court and "sealed" records, both of which can affect the reliability and validity of the data in cross-site comparisons.

The LAD Subcommittee spent a significant portion of the first project year discussing and testing how to best code the pathways and subpopulations of dual system youth to ensure that incidence rates and subpopulations were defined both accurately and consistently across all three sites. Since child welfare and juvenile justice reporting requirements differ across jurisdictions, several coding decisions were made early on to maintain a high level of consistency. Though time consuming, the coding work was critical to the study integrity and cross-site comparability.

Conclusion

Over the past several years, the use of linking existing administrative data across government agencies to generate actionable intelligence in a timely and accurate manner has become more common. This particularly holds true for exploring the incident rate of dual system youth in the United States. Survey-based research methods for this purpose do not work because the majority of individual agencies have no information on the number of youth who also have contact with other agencies. Additionally, experts in social science research highly recommend linking administrative data across multiple systems in order to obtain a more robust, holistic understanding of how policies and practices affect the individuals they are intended to serve (Wulczyn et al., 2017; Groves & Harris-Kojetin, 2017; Groves & Peytchera, 2008). In addition to its growing popularity among social science researchers, the use of linked administrative data has also experienced an uptick in recognition at the federal level. The White House Office of Management and Budget (OMB) issued a series of memos that encouraged linking administrative data across governmental departments in order to drive evidence-based policymaking (The White House Office of Management and Budget, 2009, 2010, 2012, 2013, 2014a, 2014b, 2017, 2018).

While linked administrative data can provide a faster, more cost-efficient route to obtaining data-driven actionable information, care must be taken to ensure the data elements utilized are of good quality. In the course of providing services, the government collects a multitude of data across

several domains (e.g., housing, juvenile justice, health, child welfare, etc.). However, only a small number of data elements within these administrative datasets meet data quality standards for research and evaluation purposes. Therefore, great care and caution must be taken when linking administrative data to ensure that they are both scientifically reliable and valid (Culhane et al., 2017; Wulczyn et al., 2017).

References

Alltucker, K. W., Bullis, M., Close, D., & Yovanoff, P. (2006). Different pathways to juvenile delinquency: Characteristics of early and late starters in a sample of previously incarcerated youth. *Journal of Child and Family Studies, 15,* 475–488. doi:10.1007/s10826-006-9032-2

Aron-Dine, Aviva. (2015). Learning more from the data the Federal Government already collects. [July 2018].

Bender, K. (2012). The mediating effect of school engagement in the relationship between youth maltreatment and juvenile delinquency. *Children and Schools, 34*(1), 37-48. doi: 10.1093/cs/cdr001

Berk, ML., Schur, CL., Feldman, J. (2007). Twenty-five years of health surveys: does more data mean better data? *Health Affairs*.

Braga, T., Goncalves, L.C., Basto-Pereira, M., and Maia, A. (2017). Unraveling the link between maltreatment and juvenile antisocial behavior: A meta-analysis of prospective longitudinal studies. *Aggression and Violent Behavior*, 33: 37-50.

Center for Juvenile Justice Reform. (2015). The crossover youth practice model abbreviated guide. Washington, DC: Georgetown University McCourt School of Public Policy. Retrieved from http://cjjr.georgetown.edu/wp-content/uploads/2015/07/CYPM-Abbreviated-Guide-2015.pdf

Chamberlain, P. & Reid, J. B. (1998) Comparison of Two Community Alternatives to Incarceration for Chronic Juvenile Offenders. *Journal of Consulting and Clinical Psychology, 66*(4):624–33

Citizens for Juvenile Justice. (2015). Missed opportunities. Retrieved from https://static1.squarespace.com/static/58ea378e414fb5fae5ba06c7/t/59020af046c3c44b405cb544/1493306111142/MissedOpportunities2015.pdf

Coulton, C., Crampton, C., Cho,Y., and Kim S. (2015). Effects of foster care and juvenile justice involvement on early adult outcomes: A study of Cleveland's youth. Case Western Reserve, Center on Urban Poverty and Community Development, Jack, Joseph, and Morton Mandel School of Applied Social Sciences.

Culhane, D., Byrne, T., Metraux, S., Moreno, M., Toros, H., & Stevens, M. (2011). *Young Adult Outcomes of Youth Exiting Dependent or Delinquent Care in Los Angeles County.* Retrieved from The Hilton Foundation website: https://hilton-production.s3.amazonaws.com/documents/97/attachments/Hilton_Foundation_Report_Final.pdf?1440966405

Cusick, G. R., Goerge, R. M., & Bell, K. C. (2009). From corrections to community: The juvenile reentry experience as characterized by multiple systems involvement. Chapin Hall at the University of Chicago. Retrieved online: https://www.chapinhall.org/sites/default/files/Corrections%20to%20Community_04_21_09.pdf

Czajka, J. & Beyler, A. (2016). Background paper declining response rates in federal surveys: trends and implications. *Office of the Assistant Secretary for Planning and Evaluation U.S. Department of Health & Human Services*. Retrieved from hhs.gov

Dierkhising, C. B., Herz, D. C., Hirsch, R., & Abbott, S. (2018). System backgrounds, psychosocial characteristics, and service access among dually involved youth: A Los Angeles case study. *Youth Violence and Juvenile Justice*, 1-21. doi: 10.1177/1541204018790647

Dierkhising, C. B., Lane, A., & Natsuaki, M. N. (2014). Victims behind bars: A preliminary study of abuse during incarceration and post-release social and emotional functioning. *Psychology, Public Policy, and Law, 20,* 181-190.

Dierkhising, C. B**.,** Ko, S. J., Woods, B., Briggs, E. C., Lee, R., & Pynoos, R. (2013). Trauma histories among justice-involved youth: Findings from the National Child Traumatic Stress Network. *European Journal of Psychotraumatology*, *4:* 20274 - http://dx.doi.org/10.3402/ejpt.v4i0.20274.

Eastman, A. L. & Putnam-Hornstein, E. (2017). Exit outcomes for probation-supervised youth in foster care: An examination of past child protection involvement. *Child Maltreatment*, 1-10. doi: 10.1177/1077559517718956.

Federal Register. (2011). 24 CFR Parts 91, 576, 580, and 583: Homelessness Management Information System Requirements. [July 2018]. https://www.hudexchange.info/resources/documents/HEARTH_HMISRequirementsProposedRule.pdf

Fromknecht, A. (2014). Systems integration: Child welfare and juvenile justice. Juvenile Justice Geography, Policy, Practice & Statistics State Scan. Retrieved from: http://www.jjgps.org/systems-integration

Full Frame Initiative (2015). The Five Domains of Wellbeing. Retrieved from: www.fullframeinitiative.org

Gabadinho, A., Ritschard, G., Studer, M., and Müller, N. S. (2010). Mining sequence data in R with the TraMineR package: A user's guide. University of Geneva. (http://mephisto.unige.ch/traminer).

Gabadinho, A. & Ritschard, G. (2013), Searching for typical life trajectories applied to childbirth histories, In Levy, R. & Widmer, E. (Eds.) Gendered life courses - Between individualization and standardization. A European approach applied to Switzerland, 287-312. Vienna: LIT.

Goodkind, S., Shook, J. J., Kim, K. H., Pohlig, R. T., & Herring, D. J. (2013). From child welfare to juvenile justice: race, gender, and system experiences. *Youth Violence and Juvenile Justice*, *11*(3), 249–272. https://doi.org/10.1177/1541204012463409

Groves, R. & Harris-Kojetin, B. (2017). Innovations in federal statistics: Combining data sources while protecting privacy. The National Academies Press. Washington, D.C.

Groves, R.M. and Peytcheva, E. (2008). The impact of nonresponse rates on nonresponse bias: A Meta-Analysis. *Public Opinion Quarterly*, *72*(2), 167–189.

Halemba, G.J., & Siegel, G. C. (2011). Doorways to delinquency: Multi-system involvement of delinquent youth in King County (Seattle, WA). National Center for Juvenile Justice: Pittsburgh, PA.

Halemba, G. J., Siegel, G. C., Lord, R. D., & Zawacki, S. (2004). Arizona dual jurisdiction study: Final report. Pittsburgh, PA: National Center for Juvenile Justice.

Havlicek, J. (2010). Patterns of movement in foster care: An optimal matching analysis. *Social Service Review, 84*(3), 403-435.

Herz, D. C., Krinsky, M., & Ryan, J. P. (2006). Improving system responses to crossover youth: The role of research and practice partnerships. *Child Welfare League of America*.

Herz, D. C., Lee, P., Lutz, L., Stewart, M., Tuell, J., & Wiig, J. (2012). Addressing the needs of multi-system youth: Strengthening the connection between child welfare and juvenile justice. *Center for Juvenile Justice Reform and Robert F. Kennedy Children's Action Corps.* Retrieved online: https://cjjr.georgetown.edu/wp-content/uploads/2015/03/MultiSystemYouth_March2012.pdf

Herz, D. C., & Ryan, J. P. (2008). Building multisystem approaches in child welfare and juvenile justice. Los Angeles: Center for Juvenile Justice Reform, American Public Human Services Association and California State University.

Herz, D. C., Ryan, J. P., & Bilchik, S. (2010). Challenges facing crossover youth: An examination of juvenile-justice decision making and recidivism. *Family Court Review, 48*(2), 305–321.

Hirsch, R. A., Dierkhising, C. B., & Herz, D. C. (2018). Educational risk, recidivism, and service access among youth involved in both the child welfare and juvenile justice systems. *Children and Youth Services Review*, *85*.https://doi.org/10.1016/j.childyouth.2017.12.001

Hockenberry, S. and Puzzanchera, C. (2017). *The National Juvenile Court Data Archive.* Washington, DC: US Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention.

Huang, H., Ryan, J. P., & Herz, D. (2012). The journey of dually involved youth: The description and prediction of rereporting and recidivism. *Children and Youth Services Review*, 34(1), 254-260.

Jonson-Reid, M. (2002). Exploring the Relationship Between Child Welfare Intervention and Juvenile Corrections Involvement. *American Journal of Orthopsychiatry, 72*(4), 559-576. doi: 10.1037/0002-9432.72.4.559

Kerig, P. K., & Becker, S. P. (2012). From internalizing to externalizing: Theoretical models of the processes linking PTSD to juvenile delinquency. In *Post-Traumatic Stress Disorder (PTSD): Causes, Symptoms and Treatment* (pp. 33-78). Nova Science Publishers, Inc..

Leone, P. & Weinberg, L. (2012). *Addressing the unmet educational needs of children and youth in the juvenile justice and child welfare systems*. Retrieved from the Center for Juvenile Justice Reform Website: https://cjjr.georgetown.edu/wp-content/uploads/2015/03/EducationalNeedsofChildrenandYouth_May2010.pdf

Lim, S., Harris, T. G., Nash, D., Lennon, M. C., & Thorpe, L. E. (2015). All-cause, drug-related, and HIV-related mortality risk by trajectories of jail incarceration and homelessness among adults in New York City. *American Journal of Epidemiology*, *181*(4), 261-270.

Lim, S., Singh, T. P., & Gwynn, R. C. (2017). Impact of a supportive housing program on housing stability and sexually transmitted infections among young adults in New York City who were aging out of foster care. *American Journal of Epidemiology*, *186*(3), 297-304.

Malvaso, C.G., Delfabbro, P, and Day, A. (2018). The maltreatment-offending Association: A systematic review of the methodological features of prospective and longitudinal studies. Trauma, Violence, & Abuse, 19(1): 20-34.

Maschi, T., Hatcher, S. S., Schwalbe, C. S., & Rosato, N. S. (2008). Mapping the social service pathways of youth to and through the juvenile justice system: A comprehensive review. *Children and Youth Services Review*, 30(12), 1376-1385.

McAllister, W., Kuang, L., & Lennon, M. C. (2010). Typologizing temporality: time-aggregated and timepatterned approaches to conceptualizing homelessness. *Social Service Review*, 84(2), 225-255.

Meyer, B., Mok, K.C., Sullivan, J. (2015). Household surveys in crisis. *Journal of Economic Perspectives*, 29 (4): 199-226.

Missouri (MO) Dept. of Mental Health and Partners (2014). Missouri model: A developmental Framework for trauma informed,. Retrieved from: https://dmh.mo.gov/trauma/MO%20Model%20Working%20Document%20february%202015.pdf

Murtagh, F., & Legendre, P. (2014). Ward's hierarchical agglomerative clustering method: which algorithms implement Ward's criterion? *Journal of Classification*, *31*(3), 274-295.

New York City Office of the Mayor, Center for Innovation through Data Intelligence (2015). Young adult outcomes of foster care, justice, and dually-involved youth in New York City. Retrieved from the New York City Center for Innovation through Data Intelligence website: http://www.nyc.gov/html/cidi/downloads/pdf/foster-care-justice-dually-involved-report.pdf

Olds, D.L., Eckenrode, J., Henderson, C.R., et al. (1997) Long-term effects of home visitation on maternal life course and child abuse and neglect: Fifteen-year follow-up of a randomized trial. JAMA, 278(8):637–643. doi:10.1001/jama.1997.03550080047038

Operation Youth Success. (2017). Youth Impact! of Douglas County. Retrieved online: https://operationyouthsuccess.org/youth-impact/

Petrila, J., Cohn, B., Pritchett, W., Stiles, P., Stodden, V., Vagle, J., Humowiecki, M., Rozario, N. (2017). Legal Issues for IDS Use: Finding a way forward. *Actionable Intelligence for Social Policy*. University of Pennsylvania. [August 2018]. https://www.aisp.upenn.edu/wp-content/uploads/2016/07/Legal-Issues.pdf

Pollock, G. (2007). Holistic trajectories: a study of combined employment, housing and family careers by using multiple-sequence analysis. *Journal of the Royal Statistical Society: Series A (Statistics in Society)*, *170*(1), 167-183.

Ryan, J., Chiu Y.L., & Williams, A. (2011). *Knowledge Brief: Is There a Link between Child Welfare and Disproportionate Minority Contact in Juvenile Justice?* Models for Change System Reforms for Juvenile Justice. Chicago, IL: John D and Catherine T. MacArthur Foundation. Retrieved from the National Juvenile Justice Network website: http://www.njjn.org/uploads/digital-library/Knowledge_Brief_Is_There_a_Link_between_Child_Welfare_and_Disproportionate_Minority_Contact_in_Juvenile_Justice_Models_for_Change_12.1.11.pdf

Ryan, J. P., Marshall, J. M., Herz, D. C., & Hernandez, P. M. (2008). Juvenile delinquency in child welfare: Investigating group home effects. *Children and Youth Services Review*, *30*(9), 1088–1099. https://doi.org/10.1016/j.childyouth.2008.02.004

Ryan, J. P., & Testa, M. F. (2005). Child maltreatment and juvenile delinquency: Investigating the role of placement and placement instability. *Children and Youth Services Review, 27*(3), 227-249. http://dx.doi.org/10.1016/j.childyouth.2004.05.007

Sickmund, M., Deal, T., Hockenberry, S., & Furdella, J. (2015). Dependency court data archive feasibility study. Pittsburgh, PA: Natioanl Cener for Juvenile Justice.

Siegel, G. & Lord, R. (2004) *When system collide: Improving court practices and programs dual jurisdiction cases.* Technical Assistance to the Juvenile Court: Special Project Bulletin, NCJJ, Pittsburgh, PA. Retrieved from the National Center for Juvenile Justice website: http://ncjj.servehttp.com/NCJJWebsite/pdf/dualjurisdiction.pdf.

Simonson, J., Gordo, L. R., & Titova, N. (2011). Changing employment patterns of women in Germany: How do baby boomers differ from older cohorts? A comparison using sequence analysis. *Advances in Life Course Research, 16*(2), 65-82.

Smith, C.A., & Thornberry, T.P. (1995). The Relationship between Child Maltreatment and Adolescent Involvement in Juvenile Delinquency. Working Paper No. 17. *Office of Juvenile Justice and Delinquency Prevention.* Retrieved from Institute of Education Services website: https://files.eric.ed.gov/fulltext/ED408010.pdf

Studer, M., & Ritschard, G. (2016). What matters in differences between life trajectories: A comparative review of sequence dissimilarity measures. *Journal of the Royal Statistical Society: Series A (Statistics in Society), 179*(2), 481-511.

Szekely, G. J., & Rizzo, M. L. (2005). Hierarchical clustering via joint between-within distances: Extending Ward's minimum variance method. *Journal of Classification, 22*(2), 151-183.

Teicher, M.H., Andersen, S.L., Polcari, A., Andersen, C.A., Navalta, C.P., & Kim, D.M. (2003). The neurobiological consequences of early stress and childhood maltreatment. *Neuroscience and Behavioral Review, 27*(1-2), 33-44. https://doi.org/10.1016/S0149-7634(03)00007-1

The Commonwealth of Massachusetts, Department of Public Health. (2016). An assessment of opioid related death in Massachusetts. [August 2018]. http://www.mass.gov/chapter55/#chapter55

The White House Office of Management and Budget. (2009). Increased emphasis on program evaluations. [August 2018]. https://obamawhitehouse.archives.gov/sites/default/files/omb/assets/memoranda_2010/m10-01.pdf

The White House Office of Management and Budget. (2010). Evaluating programs for efficacy and cost-efficiency. [August 2018]. https://obamawhitehouse.archives.gov/sites/default/files/omb/memoranda/2010/m10-32.pdf

The White House Office of Management and Budget. (2012). Use of evidence and evaluation in the 2014 budget. [August 2018]. https://obamawhitehouse.archives.gov/sites/default/files/omb/memoranda/2012/m-12-14.pdf

The White House Office of Management and Budget. (2013). Next steps in the evidence and innovation agenda. [August 2018]. https://obamawhitehouse.archives.gov/sites/default/files/omb/memoranda/2013/m-13-17.pdf

The White House Office of Management and Budget. (2014a). Building evidence with administrative data – *FY 2016 Budget Analytical Perspectives* Chapter 7. [August 2018]. https://obamawhitehouse.archives.gov/sites/default/files/omb/budget/fy2016/assets/ap_7_evidence.pdf

The White House Office of Management and Budget. (2014b). Guidance for providing and using administrative data for statistical purposes. [August 2018]. https://obamawhitehouse.archives.gov/sites/default/files/omb/memoranda/2014/m-14-06.pdf

The White House Office of Management and Budget, President Obama Archives. (2017). *Evidence and innovation*. [August 2018] https://obamawhitehouse.archives.gov/omb/evidence

The White House Office of Management and Budget. (2018). President's management agenda. [August 2018]. https://www.whitehouse.gov/wp-content/uploads/2018/04/ThePresidentsManagementAgenda.pdf

Thornberry, T. P., Ireland, T. O., & Smith, C. A. (2001). The importance of timing: the varying impact of childhood and adolescent maltreatment on multiple problem outcomes. *Development and Psychopathology*, *13*(4), 957–979. Retrieved from the National Center of Biotechnology Information website: https://www.ncbi.nlm.nih.gov/pubmed/11771916

Uniting for Youth. (2009). *King County resource guide: Information sharing*, Second Edition. Seattle, WA: Casey Family Programs.

U.S. Department of Census (2016). *Federal funding opportunity*. [July 2018]. https://www.census.gov/about/business-opportunities/opportunities/fed-fund-opp.html

U.S. Department of Education, Privacy Technical Assistance Center. (2017). *Integrated data systems and student privacy*. [June 2018] http://ptac.ed.gov/sites/default/files/IDS-Final.pdf

U.S. Department of Health and Human Services, Administration for Children & Families, Office of Planning, Research, and Evaluation. (2017). *TANF data innovation project 2017 - 2022 – Overview*. [July 2018]. https://www.acf.hhs.gov/opre/resource/tanf-data-innovation-project-2017-2022-overview

U.S. Department of Labor. (2016). *Join guidance on data matching to facilitate WIOA performance reporting and evaluation*. [August 2018]. https://wdr.doleta.gov/directives/attach/TEGL/TEGL_7-16_Attachment-1_Acc.pdf

Vidal, S., Prince, D., Connell, C. M., Caron, C. M., Kaufman, J. S., & Tebes, J. K. (2017). Maltreatment, family environment, and social risk factors: Determinants of the child welfare to juvenile justice transition among maltreated children and adolescents. Child Abuse & Neglect, 63, 7-18.Ward Jr, J. H. (1963). Hierarchical grouping to optimize an objective function. *Journal of the American Statistical Association*, *58*(301), 236-244.

Webster, D., et al. Child Welfare Services Reports for California, U.C. Berkeley Center for Social Services Research (Jun. 2015).

Widom, C. S., & Maxfield, M. G. (1996). A prospective examination of risk for violence among abused and neglected children *Annals of the New York Academy of Sciences, 794*(1), 224-237. doi:10.1111/j.1749-6632.1996.tb32523.x

Wiig, J., & Tuell, J. A. (2004). *Guidebook for juvenile justice and child welfare system integration: A framework for improved outcomes.* Washington, DC: Child Welfare League of America Press.

Wright, E. M., Spohn, R. E., Chenane, J., & Juliano, N. (2016). The importance of interagency collaboration for crossover youth. *Youth Violence and Juvenile Justice, 15,* 481-491.

Wuerker, A. K. (1996). The changing careers of patients with chronic mental illness: a study of sequential patterns in mental health service utilization. *The Journal of Mental Health Administration, 23*(4), 458-470.

Wulczyn, F., Clinch, R., Coulton, C., Keller, S., Moore, J., Muschkin, C., Nicklin, A., LeBoeuf, W., Barghaus, K. (2017). Establishing a standard data model for largescale IDS use. *Actionable Intelligence for Social Policy*, University of Pennsylvania. [August 2018]. https://www.aisp.upenn.edu/wp-content/uploads/2016/07/Data-Standards.pdf

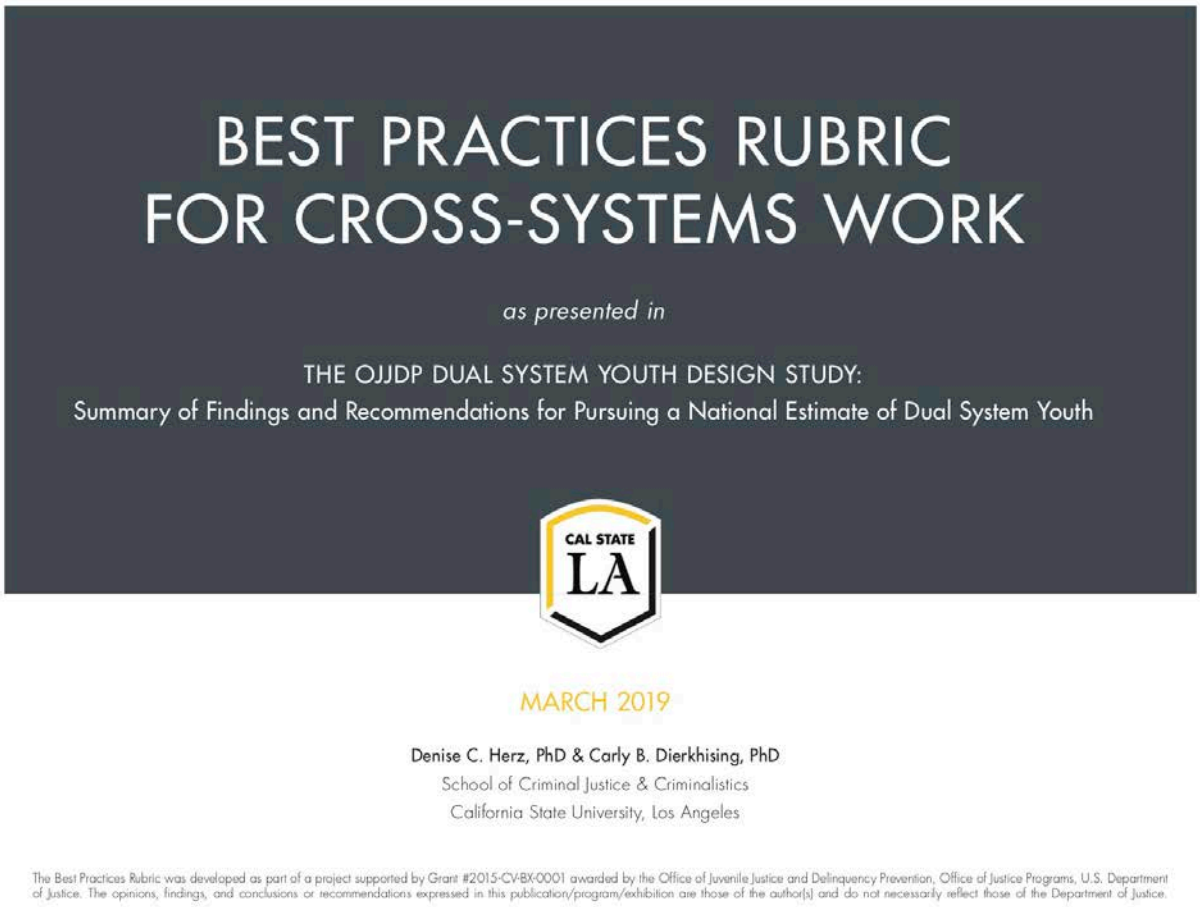
Appendix A

Subcommittee Members

Name of Staff Member	Affiliation	Committee Assignment
Denise Herz	California State University, Los Angeles	Principal Investigator
Carly Bailey Dierkhising	California State University, Los Angeles	Co-Principal Investigator
Diandra Torres	California State University, Los Angeles	Project Coordinator
Tara Herman	California State University, Los Angeles	Fiscal/Administrative Assistant
Shay Bilchik	Center for Juvenile Justice Reform	Workgroup Subcommittee
Macon Stewart	Center for Juvenile Justice Reform	Jurisdictional Case Studies Subcommittee
Sam Abbott	Center for Juvenile Justice Reform	Jurisdictional Case Studies Subcommittee
Liz Barnett	Center for Juvenile Justice Reform	Jurisdictional Case Studies Subcommittee
Shawn Marsh	University of Nevada	Jurisdictional Case Studies Subcommittee
Dennis Culhane	University of Pennsylvania	Linked Administrative Data Subcommittee
TC Burnett	University of Pennsylvania	Linked Administrative Data Subcommittee
Emily Putnam-Hornstein	University of Southern California	Linked Administrative Data Subcommittee
Jacquelyn McCroskey	University of Southern California	Linked Administrative Data Subcommittee
Bryn King	Children's Data Network	Linked Administrative Data Subcommittee
Robert Goerge	Chapin Hall at the University of Chicago	Linked Administrative Data Subcommittee
Shannon Guiltinan	Chapin Hall at the University of Chicago	Linked Administrative Data Subcommittee
Maryanne Schretzman	New York Center for Innovation and Data Intelligence	Linked Administrative Data Subcommittee
Jessica Raithel	New York City Center for Innovation and Data Intelligence	Linked Administrative Data Subcommittee
Eileen Johns	New York City Center for Innovation and Data Intelligence	Linked Administrative Data Subcommittee
Claudia Coulton	Case Western - Mandel School of Applied Social Sciences	Linked Administrative Data Subcommittee
Youngmin Cho	Case Western - Mandel School of Applied Social Sciences	Linked Administrative Data Subcommittee
Susan Chibnall	Westat	Linked Administrative Data Subcommittee

Jim Green	Westat	Linked Administrative Data Subcommittee
Magistrate Richard White	Mahoning County, Ohio	Jurisdictional Case Studies Subcommittee
Judge Theresa Dellick	Mahoning County, Ohio	Jurisdictional Case Studies Subcommittee
Barbara Duey	Children's Law Center of Los Angeles	Jurisdictional Case Studies Subcommittee
Dorothy Wodraska	Arizona Juvenile Justice Commission	Jurisdictional Case Studies Subcommittee
Cassandra Evans	Florida Probation & Community Intervention	Jurisdictional Case Studies Subcommittee
Judge Hope Bristol	State of Florida Circuit Court, 17th Judicial District	Jurisdictional Case Studies Subcommittee

Appendix A: Best Practice Rubric for Cross-Systems Work

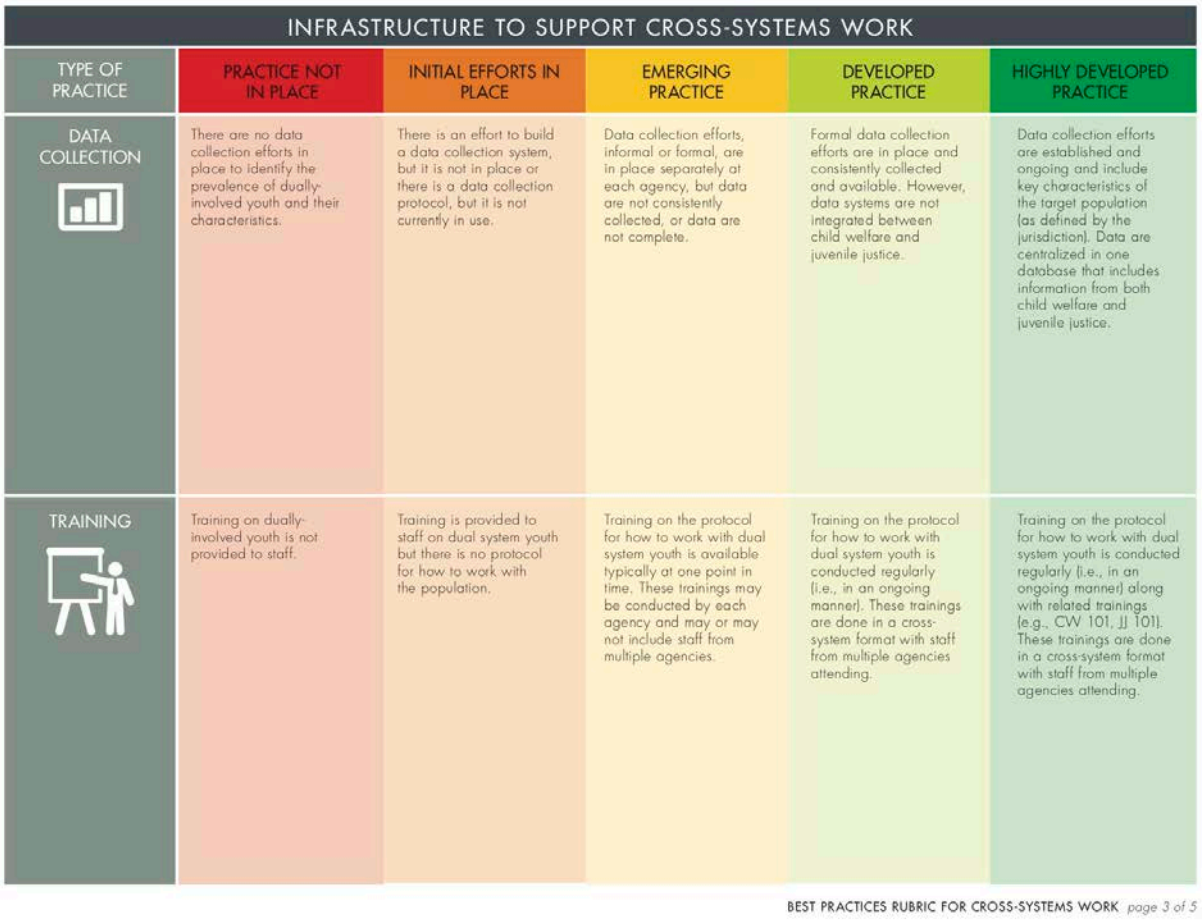


BEST PRACTICES RUBRIC FOR CROSS SYSTEMS WORK

Directions: Please complete the following rubric to the best of your knowledge by circling or indicating where you believe your jurisdiction falls in relation to each practice. The practices are listed vertically in the rubric and your responses will indicate how developed that practice is in your jurisdiction for each category of practices. Please read the description for each category of practice and indicate which description best reflects your jurisdiction.

INFRASTRUCTURE TO SUPPORT CROSS-SYSTEMS WORK

TYPE OF PRACTICE	PRACTICE NOT IN PLACE	INITIAL EFFORTS IN PLACE	EMERGING PRACTICE	DEVELOPED PRACTICE	HIGHLY DEVELOPED PRACTICE
INTERAGENCY COLLABORATION 	Cross-system teams/ committees have not been established and key stakeholders have not been engaged.	Potential cross-system teams/committees and key stakeholders have been identified but not engaged.	Cross-system teams/ committees and key stakeholders have been engaged in the work but do not meet regularly.	Cross-system teams/ committees are established and meet regularly. Key stakeholders are engaged but not in a consistent manner.	Cross-system teams/ committees are established and meet regularly. Key stakeholders are consistently engaged and participate in ongoing review of the work.
JUDICIAL LEADERSHIP 	No judicial support or leadership. Or, there is active judicial opposition.	No active opposition. Some judicial support but not very involved nor leadership in the work.	Active judicial support for collaboration. Attends meetings but may not take a leadership role.	Active judicial support. Regularly attends cross-system meetings and trainings; provides leadership but in a limited capacity.	Active judicial support and leadership. Convenes and leads cross-system meetings, drives the work, and provides accountability.
INFORMATION SHARING 	There is not a protocol in place and/or an MOU/ MOA that supports or allows information sharing between CW and JJ systems.	An MOU/MOA or a protocol is in the process of being developed that allows information sharing between JJ and CW systems.	An MOU/MOA or a protocol is in place that allows information sharing between JJ and CW systems, but information is never exchanged or only shared under special circumstances (e.g., challenging case, emergencies, etc.).	An MOU/MOA or a protocol is in place that allows information sharing between JJ and CW systems, but information is not consistently shared.	An MOU/MOA or a protocol is in place that allows information sharing between JJ and CW systems and information is regularly shared between systems in a structured and collaborative manner.



INFRASTRUCTURE TO SUPPORT CROSS-SYSTEMS WORK

TYPE OF PRACTICE	PRACTICE NOT IN PLACE	INITIAL EFFORTS IN PLACE	EMERGING PRACTICE	DEVELOPED PRACTICE	HIGHLY DEVELOPED PRACTICE
DATA COLLECTION	There are no data collection efforts in place to identify the prevalence of dually-involved youth and their characteristics.	There is an effort to build a data collection system, but it is not in place or there is a data collection protocol, but it is not currently in use.	Data collection efforts, informal or formal, are in place separately at each agency, but data are not consistently collected, or data are not complete.	Formal data collection efforts are in place and consistently collected and available. However, data systems are not integrated between child welfare and juvenile justice.	Data collection efforts are established and ongoing and include key characteristics of the target population (as defined by the jurisdiction). Data are centralized in one database that includes information from both child welfare and juvenile justice.
TRAINING	Training on dually-involved youth is not provided to staff.	Training is provided to staff on dual system youth but there is no protocol for how to work with the population.	Training on the protocol for how to work with dual system youth is available typically at one point in time. These trainings may be conducted by each agency and may or may not include staff from multiple agencies.	Training on the protocol for how to work with dual system youth is conducted regularly (i.e., in an ongoing manner). These trainings are done in a cross-system format with staff from multiple agencies attending.	Training on the protocol for how to work with dual system youth is conducted regularly (i.e., in an ongoing manner) along with related trainings (e.g., CW 101, JJ 101). These trainings are done in a cross-system format with staff from multiple agencies attending.

BEST PRACTICES RUBRIC FOR CROSS-SYSTEMS WORK *page 3 of 5*

IDENTIFYING AND MANAGING DUAL SYSTEM CASES

TYPE OF PRACTICE	PRACTICE NOT IN PLACE	INITIAL EFFORTS IN PLACE	EMERGING PRACTICE	DEVELOPED PRACTICE	HIGHLY DEVELOPED PRACTICE
IDENTIFICATION OF DUAL SYSTEM YOUTH	There is no process for identification of dual system youth.	There is an informal and/or inconsistent process for identification of dual system youth.	Process for identification of dual system youth is in place but occurs at varying stages of the case.	Dual system youth are identified but not consistently and not always at entry into the system.	Dual system youth are identified as dually involved at the point they enter the system, whether JJ or CW, regularly and consistently.
ASSESSMENT PROCESS	Assessment of dually-involved youth's risks and needs is not done jointly between juvenile justice and child welfare staff.	Assessment of risks and needs specific to dual system youth is done but done separately by JJ and CW. There is no use of an assessment protocol.	Assessment of risks and needs specific to dual system youth is done by JJ and CW and systems conduct their own assessment. But there is a plan in place to implement a joint assessment protocol within 12-18 months.	Assessment of risks and needs specific to dual system youth is done by JJ and CW and systems conduct their own assessment. However, there are also some joint assessment processes that are used regularly.	Assessment of risks and needs specific to dual system youth is done. Assessment is done jointly with both JJ and CW representatives contributing to the process (e.g., during a multidisciplinary team meeting) on a regular basis.
CASE PLANNING AND MANAGEMENT	There is no contact between JJ and CW case workers on a case and there is no use of a coordinated or integrated case plan.	There is occasional communication between JJ and CW caseworkers, but no formal coordinated or integrated case plan.	There is regular communication between JJ and CW caseworkers, but no formal coordinated or integrated case plan.	Coordinated case planning is done with one integrated case plan between JJ and CW agencies, but there are not regular interagency or multidisciplinary meetings throughout the life of the case.	Coordinated case planning is done, with one integrated case plan between JJ and CW agencies, in a collaborative and ongoing fashion. There are frequent interagency/multidisciplinary team meetings and/or contact between JJ and CW case workers throughout the life of the case(s) including case workers attending parallel hearings.

IDENTIFYING AND MANAGING DUAL SYSTEM CASES

TYPE OF PRACTICE	PRACTICE NOT IN PLACE	INITIAL EFFORTS IN PLACE	EMERGING PRACTICE	DEVELOPED PRACTICE	HIGHLY DEVELOPED PRACTICE
PERMANENCY AND TRANSITION PLANS 	PT plans are minimal and often only meet legal requirement minimums. Plans do not involve both CW and JJ systems.	PT plans meet legal requirement minimums and there is some coordination between CW and JJ systems.	PT plans meet or exceed legal requirements and are developed jointly by CW and JJ systems.	PT plans meet or exceeds minimum legal requirements and are developed jointly by CW and JJ systems well before release.	PT planning is conducted jointly by CW and JJ systems at disposition leading to a formal plan within 90 days. PT plan meets or exceeds all legal requirements and is reviewed on a regular basis by the PT team.
PLACEMENT PLANNING 	There is no communication or collaborative placement planning between CW and JJ. Other parties to the case (and family members) are not routinely informed about a youth changing placements.	There is occasional communication between CW and JJ regarding placement changes but no formal collaborative placement planning that includes other parties to the case and family members.	There is regular communication between CW and JJ regarding placement needs and transitions. Collaborative placement planning occurs on an inconsistent basis and occasionally includes other parties to the case and family members.	There is regular communication between CW and JJ regarding placement needs and transitions. This includes collaborative placement planning with other parties to the case and family members.	There is a robust placement process that includes regular communication between CW and JJ, collaborative pre-placement planning (with all parties to the case including family members) for the transition and a phased in approach that supports an adjustment phase into the new living situation. Relatives and next of kin are consistently reviewed for their viability as a placement or supportive resource.
SERVICE PROVISION AND TRACKING 	There is no access to behavioral health, and/or prosocial services for dual system youth.	There are some options for behavioral health, and/or prosocial services but they are not provided regularly and whether youth connect to the agency/service is not tracked.	Behavioral health and prosocial services are regularly provided to dual system youth but whether youth connect to the agency/service is not tracked.	Behavioral health, and prosocial services are regularly provided to dual system youth and referrals are made to evidence-based and/or trauma-focused treatment when the need is indicated. But whether youth connect to the agency/service is not tracked.	Behavioral health and prosocial services are regularly provided to dual system youth and referrals are made to evidence-based and/or trauma-focused treatment when the need is indicated. There is also a process in place to track whether youth connect to the agency/services that they are referred to.

BEST PRACTICES RUBRIC FOR CROSS-SYSTEMS WORK *page 5 of 5*

Appendix C

Description of Linked Administrative Data Sources for First Juvenile Justice Petition Cohort Analysis

Cook County, Illinois

Analysis of linked administrative data for Cook County, Illinois was completed by Chapin Hall, an independent policy research center at the University of Chicago focused on providing public and private decision-makers with rigorous data analysis and achievable solutions to support them in improving the lives of society's most vulnerable children. Chapin Hall partners with policymakers, practitioners, and philanthropists at the forefront of research and policy development by applying a unique blend of scientific research, real world experience, and policy expertise to construct actionable information, practical tools, and, ultimately, positive change for children, youth, and families. Established in 1985, Chapin Hall's areas of research include child and adolescent development; child maltreatment prevention; child welfare systems; community change; economic supports for families; home visiting and early childhood initiatives; runaway and unaccompanied homeless youth; schools, school systems, and out-of-school time; and youth crime and justice.

The Chapin Hall Integrated Database on Children's Services (IDB) is a series of linked data files that provide researchers with the ability to study individuals, and in some cases families, receiving a broad array of publicly funded services in Illinois.[23] This data is maintained by a consistent group of researchers and programmers at Chapin Hall, and the component datasets are processed and stored in database systems. The following populations are included in the current iteration of the IDB: children and adults involved with child protection or child welfare services, individuals receiving TANF and/or SNAP benefits, juveniles referred to the Cook County Circuit Court for delinquency, incarcerated juveniles and adults, individuals arrested in Chicago, children and parents receiving child care subsidies, students enrolled in the Chicago Public Schools, and young children enrolled in publicly funded early childhood programming in Chicago. The link files allow researchers to identify the same individuals, and in some cases families, across the systems, facilitating research that considers children and families in their broader context.

Chapin Hall researchers used datasets from three Illinois agencies – the Circuit Court of Cook County, the Illinois Department of Children and Family Services (DCFS), and the Chicago Police Department (see *Table C.1*). Chapin Hall has data sharing agreements with all of the agencies, and IRB approval through the University of Chicago IRB.

[23] Data used in this report was provided by and belongs to the Cook County Juvenile Probation and Court Services Department and the Chicago Police Department. Any further use of this data must be approved by Cook County Juvenile Probation and Court Services and the Chicago Police Department. Points of view or opinions contained within this document are those of the authors and do not necessarily represent the official position or policies of the Cook County Juvenile Probation and Court Services Department or the Chicago Police Department.

Table C.1

Linked Administrative Data Sources for Cook County

Dataset	Data Provider	Years
Juvenile Enterprise Management System (JEMS)	Cook County Juvenile Probation and Court Services	2010-2014
Child Abuse and Neglect Tracking System (CANTS)	Illinois Department of Child and Family Services (DCFS)	1992-2014
Child and Youth Centered Information System (CYCIS)	Illinois Department of Child and Family Services (DCFS)	1992-2014
Chicago Police Department Arrest Data	Chicago Police Department (CPD)	1991-2014

Description of juvenile justice data. Chapin Hall used data from the Circuit Court of Cook County Juvenile Justice Division and the Chicago Police Department to look at involvement in the juvenile justice system for this study (see *Table C.1*). The Circuit Court JEMS data contains a series of tables maintained by the court's Juvenile Probation and Court Services Department to track information about youth with a court petition and to monitor any services ordered by the court to help rehabilitate the minor. In Illinois, between January 1, 2010 and December 31, 2013 youth under age 16-, and 17-year-olds with only a misdemeanor offense, were under the jurisdiction of the juvenile court. Seventeen year olds who had committed a felony offense were sent to adult court. Effective January 1, 2014 the definition of a delinquent minor was changed to include 17-year-olds charged with felony offenses.

Chapin Hall also used Chicago Police Department (CPD) arrest data to find the number of arrests prior to a youth's first court petition. While the CPD data only includes arrests made in the city of Chicago, 87% of the Cook County juvenile justice cohort and 88% of all dually-involved youth had at least one arrest record in the CPD data.

The core study population included youth with a first juvenile court petition between 2010 and 2014. To determine the timing of justice involvement, the petition filing date was used as the start of a spell and the end date of the last court order for that petition was used as the end date of the spell. The date of disposition is not recorded in the Juvenile Court data. If a youth was adjudicated not delinquent and had no court orders associated with their petition, then their spell in juvenile justice will only be one day—their petition filing date.

Recidivism was defined in two ways: time between the first petition filing date and the filing of a second, new delinquency petition; and time between the first petition filing date and the date of a new arrest, regardless of whether that arrest led to a delinquency petition being filed. Recidivism rates were measured at both six months and one year after the original delinquency petition filing.

TablesC.2 summarizes the demographics of youth that had a first delinquency petition filing in Cook County, Illinois between 2010 and 2014. The majority of youth were male, African American, and, on average, 16 years old at the time of the petition.

Table C.2

Characteristics of the First Juvenile Court Petition Cohort (N=14,170)—Cook County

Variable	n or Mean	% or SD
Gender		
Female	2,702	(19.1%)
Male	11,467	(80.9%)
Unknown	1	(0.0%)
Race/Ethnicity		
White	1,200	(8.5%)
African American	10,407	(73.4%)
Hispanic	2,349	(16.6%)
Other	214	(1.5%)
Age at first petition	15.9	(1.3)

Description of child welfare data. Data on Child Welfare involvement was obtained through an agreement with the Illinois Department of Child and Family Services (DCFS). DCFS, the state child welfare agency in Illinois, maintains several information systems that track the children and households to which it provides services and the providers with which it contracts. The Statewide Automated Child Welfare Information System (SACWIS) is used to record all allegations of abuse or neglect, investigation dates, and outcomes of the investigation. The Child and Youth Centered Information System (CYCIS) tracks children in foster care and records all placement types and movements within the foster care system. Chapin Hall receives extracts from these databases on an ongoing basis.

For this study, child welfare involvement would include any youth that had contact with the child welfare system as recorded in either of the above databases at some point between 1992 and 2014. Specifically, any record of a child receiving child welfare services and all investigations of abuse or neglect whether the allegation was substantiated or not was included. If a child only had an investigation with no services, then their duration in child protective services is only one day—the date of finding. We chose this definition because we have all investigation and child welfare case information available to us. We know the exact dates of when contact with the Department occurred. This allows us to calculate the most precise contact with the child protective services system. Our child welfare cohort includes youth in the same birth cohorts as the youth with the first delinquency petition (born between 1992 and 2003) and who resided in Cook County at the time of their last child welfare contact. Residency for our child welfare cohort was restricted to Cook County as we only have juvenile court data for Cook County and arrest data for the City of Chicago. Juvenile justice involvement of any youth in our child welfare cohort who moved out of the county after their child welfare involvement is likely underreported. *Table C.3* summarizes the demographics of the child welfare cohort used in this study.

Table C.3

Characteristics of the Child Welfare Cohort (N=227,913)—Cook County

Variable	n or M	% or SD
Gender		
Female	112,511	(49.4%)
Male	111,790	(49.0%)
Unknown	3,612	(1.6%)
Race/Ethnicity		
White	43,255	(19.0%)
African American	138,079	(60.6%)
Hispanic	34,360	(15.1%)
Other	3,041	(1.3%)
Missing	9,178	(4.0%)
Age at first investigation	4.9	4.7

Linking juvenile justice and child welfare data. Chapin Hall used probabilistic record linkage and BigMatch software to link individual children's records from the Court, DCFS, and CPD. Each data source file was unduplicated first to identify duplicate records for the same individual in the same data system. The resulting files included all sets of personally identifying information in the original file (which may include variation in the spelling or content of certain fields), but records representing the same person have the same Chapin Hall-assigned unique identifier CHMSID). Matching variables include name, birth dates, race, sex, social security numbers, identification record (IR) number (finger print ID), and central booking number. All identifying information was excluded from the analytic files.

Cuyahoga County

Analysis of linked administrative data for Cuyahoga County, Ohio was completed by the Center on Urban Poverty and Community Development Center at Case Western Reserve University (Poverty Center). Founded in 1988, the Poverty Center works to inform public policy and program planning through data and analysis to address urban poverty, its causes, and its impact on communities and their residents. The Center maintains a widely recognized data resource, the Childhood Integrated Longitudinal Data (CHILD). The system covers children and young adults living in Cuyahoga County beginning with the 1989 birth cohort. Data from numerous agencies are linked at the individual level. Data sources include birth and death certificates, home visiting and early intervention records, child care and preschool records, early childhood mental health, elevated blood lead tests, child abuse and neglect investigations, child welfare placements, juvenile justice filings, TANF, SNAP, Medicaid enrollment, public school student records, homeless services, and jail data. Currently, we are building a two-generation component into the system. The CHILD system runs in a highly secure research environment due to the sensitive nature of the records and it complies with the various statutes and regulations pertaining to the

protection of personally identifiable information. The protocol is approved by the Case Western Reserve University (CWRU) Institutional Review Board (IRB).

The data for Cuyahoga County came from the CHILD system. As mentioned above, data from numerous agencies are linked at the individual level within this database. For this portion of the study, though, only two sources of records were used: (1) juvenile court filings between 2000-2014 provided by the Cuyahoga County Juvenile Court; and (2) child welfare records between 1992 and 2014 provided by the Cuyahoga County Children and Family Services (*Table C.4*). Access to these records was covered under two data use agreements with both agencies.

Table C.4

Linked Administrative Data Sources for Cuyahoga County

Dataset	Data Provider	Year
Juvenile court filings	Cuyahoga County Juvenile Court	2000-2014
Child welfare records	Cuyahoga County Children and Family Services	1992-2014

Description of juvenile justice data. We used delinquency filing records data from the Cuyahoga County Juvenile Court. These juvenile court records were used to identify youth with a first delinquency petition between 2010 and 2014. Data included petition, arrest charge, pre-adjudication detention, and disposition. The Poverty Center has access to the juvenile court records data under the Memorandum of Understanding (MOU) with the Cuyahoga County Court of Common Pleas, Juvenile Court Division. The MOU allows us to use the data set provided by the court in the CHILD system at the Poverty Center, which is used for separate policy and evaluation research projects that have IRB approval.

For the purpose of this study, we used last disposition date in court records as an end date of juvenile justice (JJ) supervision. We did not have information on probation periods that would have occurred after disposition. Regarding the categories of disposition in JJ data, we found about 20 categories of disposition in Cuyahoga County. Recidivism was measured as a new delinquency petition within one year from the previous disposition date.

The focus of this study is on 11,441 youth that had a first delinquency filing in Cuyahoga County in 2010-2014. *Table C.5* shows the demographics of the first petition cohort sample identified in Cuyahoga County. As can be seen, juvenile justice youth were predominately male and African American. On average, they were 15.5 years old at the time of the first petition.

Table C.5

Characteristics of Juvenile Justice Cohort (N=11,441)—Cuyahoga County

Variable	n or M	(% or SD)
Gender		
Female	3,754	(32.8%)
Male	7,687	(67.2%)
Race/Ethnicity		
White	3,209	(28.1%)
African American	7,625	(66.7%)
Hispanic	368	(3.2%)
Other	239	(2.1%)
Age at first petition	15.5	(1.7)

Description of child welfare data. We used child welfare records data from the Cuyahoga County Department of Children and Family Services (DCFS). Data included investigations, case openings/closings, and foster care placement. Access to these records is covered under an MOU with the DCFS, which authorizes the Poverty Center to receive confidential information obtained from the DCFS Statewide Automated Child Welfare Information System (SACWIS). It allows us to match child welfare records to other records maintained by the Poverty Center in the CHILD system for the purpose of better understanding of the childhood experiences of children in Cuyahoga County and informing practice and policy.

For this study, we used information on the 111,808 children that had contact with the child welfare system at some point between 1992 and 2014 and were in the same birth cohorts as the youth with the first delinquency petition. The demographics of the child welfare cohort were presented in *Table C.6.* Almost equal proportions of females and males were represented in the child welfare cohort. The majority of youth were African American (54.4%), followed by White, non-Hispanic (32.1%) and Hispanic (3.4%).

Table C.6

Characteristics of Child Welfare Cohort (N=111,808)—Cuyahoga County

Variable	n	(%)
Gender		
Female	53,907	(48.2%)
Male	55,594	(49.7%)
Unknown	2,307	(2.1%)
Race/Ethnicity		
White	35,879	(32.1%)
African American	60,859	(54.4%)
Hispanic	3,799	(3.4%)
Other	1,882	(1.7%)
Missing	9,389	(8.4%)

Linking juvenile justice and child welfare data. Children's records from the Cuyahoga County Juvenile Court and Children and Family Services were first standardized in preparation for linkage. A third-party SAS macro, LinkPro, performs deterministic and probabilistic matching to determine whether the new records match those already in the system. Matching variables include the child's and mother's names, birth dates, social security numbers, family address, child's race and gender. Non-matched records are manually reviewed and either matched or appended to CHILD as new individuals. Continuous evaluation of these methods guarantees that the linkages are at acceptable levels of reliability and completeness (See the link for details: http://povertycenter.case.edu/wpcontent/uploads/2015/04/ChildTechPaper10.21.15.pdf).

New York City

Analysis of linked administrative data for New York City was completed by the Center for Innovation through Data Intelligence (CIDI). Founded in 2011, CIDI is a research and policy center located in the Office of the Mayor of the City of New York. CIDI reports directly to the Deputy Mayor for Health and Human Services. CIDI collaborates with all Health and Human Service agencies (e.g., Children's Services and Homeless Services) as well as other City agencies (e.g., New York City Housing Authority and Department of Education) to identify areas of service need in the City and to promote citywide policy change to improve the quality of services to all residents of the City of New York. The vision of CIDI is to make data come alive to inspire change.

As an analytic office, the research agenda of CIDI is formulated by the Deputy Mayor for Health and Human Services as well as all Commissioners of City agencies providing data to CIDI. CIDI's Transfer Protocol allows City agencies to share agency data with CIDI in a timely manner upon approval of a project. To ensure the effectiveness of CIDI research results, all projects undertaken by CIDI have a working group with representatives from all data-sharing agencies to help with the design and analysis of the project. In this way, CIDI maintains the

integrity of the shared data while providing actionable intelligence to the City of New York and other partners. CIDI received approval for this study from its Institutional Review Board (IRB00008913).

Application of the Study Design in New York City

Juvenile justice data. CIDI used data from the New York City Department of Probation and the Law Department for this study (see *Table C.7*). Probation data was used to identify youth with an intake at Probation between 2010 through 2014. CIDI has a Transfer Protocol in place that includes the Department of Probation. Through this protocol, CIDI is required to submit a project description to the Department of Probation's lawyers for approval, but it does not require a separate legal agreement (e.g., an MOU) for each project. This allows CIDI to expedite projects while maintaining the appropriate agency-specific guidelines.

Table C.7

Linked Administrative Data Sources for New York City

Dataset	Data Provider	Years
Child Welfare	New York City Administration for Children's Services	1996-2014
Juvenile Justice	Department of Probation via New York City Law Department	2013-2014

In New York City, the Department of Probation conducts intakes for youth who are arrested; this grants the Department of Probation the option to "adjust" the case and not refer it to the Law Department who would file the petition. The Law Department also has the option to not proceed with a case. Cases that are not adjusted or dismissed by the Law Department have a petition filed. In New York City, individuals who commit a crime under the age of 16 proceed to juvenile court; individuals who are over the age of 16 are tried as adults and are not included in our sample. A small number of individuals under the age of 16 who commit serious crimes are also tried as adults and are not included in our sample.

The Department of Probation interacts with many more arrested youth than those who actually have a petition filed for them in court. Therefore, the Department of Probation matched their data to data from the Law Department to ascertain which youth had their first petition filed in the years of interest. CIDI's data agreement does not cover data from the Law Department and therefore, data could not be directly obtained from them. Due to data system changes in 2012, only data in 2013 and 2014 was available for matching. For 2013-2014, about 60-65% of the Law Department's cases matched to cases in the Department of Probation. Additionally, the Law Department was not able to provide records for sealed cases to the Department of Probation to match. Therefore, the sample in New York City was modified to be youth with their first petition between 2013 and 2014 (i.e., does not include dismissed cases or others that were sealed). This excludes 2,754 youth who had a sealed case in 2013 and 2014 with no subsequent unsealed cases. It also means that youth in our sample may have had a sealed case prior to the unsealed case that is included here. *Table C.8* summarizes the demographics of the first petition cohort sample identified in New York City. As shown in *Table C.8*, the majority of youth were male,

African American, and on average, 15 years old at the time of the petition. Recidivism was not measured due to data quality issues.

Table C.8

Characteristics of Juvenile Justice Cohort (n=1,272)—New York City

Variable	n or M	(% or SD)
Gender		
Female	279	(21.9%)
Male	993	(78.1%)
Race/ethnicity		
White	249	(19.6%)
African American	878	(69.0%)
Hispanic	84	(6.6%)
Other	53	(4.2%)
Missing	8	(0.6%)
Age at first petition	14.7	(0.99)

Child welfare data. Data on child welfare involvement was obtained in partnership with the New York City Administration for Children's Services (ACS). Data included indicated investigations, service case openings and closings, and foster care.[24] Individuals were included if they would have been the same ages as those in the 1st petition cohort between 2013 and 2014. This included individuals with birth years 1996 to 2003. It should be noted that this population includes youth who were involved in child welfare at any point. Therefore, many of these youth may have had involvement in early childhood, but not after that; it includes, for example, youth who were adopted in early childhood. This population is also dependent on the specific cases that are included in the juvenile justice cohort. Although the majority of cases had birth years of 1997 to 2002, a few outliers had birth years in 1996 and 2003. Because these birth years were a possibility for the juvenile justice cohort, they were included in the child welfare cohort, but this may inflate the size of the child welfare cohort. Additionally, New York City was only able to include juvenile justice data from two years instead of five years as the other sites (2013-2014 versus 2010-2014) which limits the time frame for which our birth cohort could be matched to a juvenile justice case. For example, someone born in 1998 who committed a crime at the age of 15 (in 2013) would match to our juvenile justice data, but if he committed a crime at the age of 14 (in 2012), he would not match to the juvenile justice data and would not be identified as dually involved. This also means that child welfare cases were not filtered out if they had earlier petitions as they were in the other sites. Case data from 1996 through 2014 was included.

[24] CIDI was also able to obtain substantiated investigation data at the family-level for children who were in a household where there was an investigation, but the child was not the subject of the investigation. These investigations were not included in the analyses to be consistent with other sites.

In New York City, ACS also oversees justice programs through its Close to Home initiative and diversion programs. Because of this, individuals may have a service case opened for involvement in a justice program, rather than a child welfare program. To filter out these justice case openings, CIDI filtered known residential justice placements included in the foster care data by matching case openings by child ID and date proximity. Additional filtering was done to remove justice prevention programs that are also run by ACS and may appear in the child welfare data.

Table C.9 displays the characteristics of the child welfare cohort used for this study. Youth in this cohort were pretty evenly distributed between males and females and were children of color—either Hispanic or African American.

Table C.9

Characteristics of Child Welfare Cohort (n=174,822)—New York City

Variable	N	%
Gender		
Female	84,910	(48.6%)
Male	88,933	(50.9%)
Unknown	979	(0.6%)
Race/ethnicity		
White	11,527	(6.6%)
African American	68,025	(38.9%)
Hispanic	68,497	(39.2%)
Other	7,444	(4.3%)
Missing	19,345	(11.1%)

Linking juvenile justice and child welfare data. Probation data and child welfare data were matched on name and date of birth using SAS Link King which uses deterministic and probabilistic algorithms to determine if records are likely to belong to the same person. Because of the limitations of the justice data, youth who are listed as child welfare only may have previous justice involvement that was not able to be matched to probation data, including earlier years of data and petitions that were dismissed.

Appendix D
Summary of Results across Dual System Pathways for First Juvenile Justice Petition Cohort

Table D.1

Demographic and System Characteristics across Dual System Pathways—Cook County

	Dual Contact: Child Welfare Pathway (N=4,491)	Dual Contact: Juvenile Justice Pathway (N=117)	Dually Involved: Child Welfare Pathway (N=604)	Dually Involved: Child Welfare Pathway + Historical CW Case (N=565)	Dually Involved: Juvenile Justice Pathway (N=142)	Dually Involved: Juvenile Justice Pathway + Historical CW Case (N=429)
Gender						
Female	20.2%	31.6%	21.2%	27.3%	16.9%	33.8%
Male	79.8%	68.4%	78.8%	72.7%	83.1%	66.2%
Race/Ethnicity						
African American	77.8%	77.8%	93.1%	83.5%	69.0%	75.8%
Hispanic	14.0%	14.5%	3.8%	7.8%	17.6%	13.8%
White	7.1%	5.1%	2.7%	6.0%	13.4%	9.6%
Other	1.2%	2.6%	0.5%	2.7%	0.0%	0.9%
Age at first JJ petition	15.4	14.6	15.4	15.3	14.9	14.8
Age at first CW investigation (mean)	5.4	15.5	5.6	4.1	15.3	6.2
Age at last CW investigation (mean)	8.8	15.6	9.7	11.9	15.4	14.5
Charge Type						
Person	47.6%	63.3%	46.4%	53.3%	55.6%	51.5%
Property	27.5%	23.1%	32.3%	27.6%	30.3%	29.8%
Drug	11.2%	6.0%	10.3%	7.1%	4.2%	7.7%
Public order	13.0%	7.7%	10.6%	10.4%	9.9%	10.7%
Other	0.8%	0.0%	0.5%	1.6%	0.0%	0.2%
Number of prior arrests (mean)*	1.8	1.3	1.7	1.7	1.3	1.5
Pre-adjudication detention	21.0%	18.0%	27.2%	28.7%	48.6%	41.3%

**Arrest data is limited to arrests in Chicago.*

Table D.2

Demographic and System Characteristics across Dual System Pathways—Cuyahoga County

	Dual-Contact: Child Welfare Pathway (N=3,782)	**Dual Contact: Juvenile Justice Pathway (N=73)**	**Dually Involved: Child Welfare Pathway (N=138)**	**Dually Involved: CW Pathway + Historical CW Case (N=1,572)**	**Dually Involved: Juvenile Justice Pathway (N=94)**	**Dually Involved: JJ Pathway + Historical CW Case (N=1,051)**
Gender						
Female	30.0%	34.3%	39.9%	44.5%	37.2%	41.3%
Male	69.9%	65.8%	59.4%	55.4%	62.8%	58.7%
Unknown	0.0%	0.0%	0.7%	0.1%	-	-
Race/Ethnicity						
White	20.4%	34.3%	27.5%	22.1%	34.0%	19.3%
African American	74.5%	61.6%	64.5%	73.1%	60.6%	76.0%
Hispanic	3.1%	1.4%	4.3%	2.7%	3.2%	2.9%
Others	1.7%	2.7%	2.2%	2.0%	2.1%	1.7%
Unknown	0.3%	0.0%	1.4%	0.1%	-	-
Age at first JJ petition	15.7 (in year)	14.5 (in year)	15.1 (in year)	15.0 (in year)	15.1 (in year)	15.0 (in year)
Age at first CW investigation	5.8 (in year)	15.3 (in year)	15.0 (in year)	5.1 (in year)	15.4 (in year)	5.3 (in year)
Age at last CW investigation	8.7 (in year)	15.5 (in year)	15.5 (in year)	13.8 (in year)	15.6 (in year)	13.9 (in year)
Type of most serious offense charge						
Person	33.3%	27.5%	50.5%	46.2%	45.2%	44.3%
Property	37.5%	35.3%	30.0%	31.6%	34.6%	33.0%
Public order	23.0%	29.4%	15.8%	18.5%	13.8%	18.2%
Other (Drug, Liquor, other)	6.3%	7.9%	3.7%	3.8%	6.5%	4.5%
Pre-adjudication detention	37.2%	21.9%	54.3%	57.4%	60.6%	62.6%

Table D.3

Demographic and System Characteristics across Dual System Pathways—New York City

	Dual-Contact: Child Welfare Pathway (N=437)	**Dual Contact: Juvenile Justice Pathway (N=41)**	**Dually Involved: Child Welfare Pathway (N=74)**	**Dually Involved: CW Pathway + Historical CW Case (N=237)**	**Dually Involved: Juvenile Justice Pathway (N=35)**	**Dually Involved: JJ Pathway + Historical CW Case (N=70)**
Gender						
Female	19.0%	26.8%	33.8%	32.5%	20.0%	30.0%
Male	81.0%	73.2%	66.2%	67.5%	80.0%	70.0%
Unknown	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Race/Ethnicity						
White	15.3%	39.0%	20.3%	22.8%	17.1%	22.9%
African American	76.2%	51.2%	66.2%	70.0%	65.7%	64.3%
Hispanic	5.7%	9.8%	8.1%	4.2%	8.6%	10.0%
Others	2.8%	0.0%	4.1%	2.5%	8.6%	2.9%
Unknown	0.0%	0.0%	1.3%	0.4%	0.0%	0.0%
Age at first JJ petition	14.7 (in year)	15.0 (in year)	14.7 (in year)	14.7 (in year)	14.7 (in year)	14.6 (in year)
Age at first CW investigation	7.2 (in year)	16.0 (in year)	13.9 (in year)	8.5 (in year)	15.3 (in year)	8.1 (in year)
Age at last CW investigation	9.9 (in year)	16.0 (in year)	14.5 (in year)	13.0 (in year)	15.4 (in year)	12.9 (in year)
Type of most serious offense charge						
Property offenses	23.6%	31.7%	33.8%	35.9%	22.9%	30.0%
Public Order offenses	8.2%	4.9%	10.8%	5.9%	17.1%	8.6%
Offenses against persons	63.8%	61.0%	52.7%	52.7%	54.3%	55.7%
Other offenses	3.4%	2.4%	2.7%	4.2%	5.7%	4.3%
Pre-adjudication detention	N/A	N/A	N/A	N/A	N/A	N/A

Table D.4

Child Welfare Contact across Dual Involvement Pathway Groups—Cook County

	Dual Contact: Child Welfare Pathway (N=4,491)	**Dual Contact: Juvenile Justice Pathway (N=117)**	**Dually Involved: Child Welfare Pathway (N=604)**	**Dually Involved: Child Welfare Pathway + Historical CW (N=565)**	**Dually Involved: Juvenile Justice Pathway (N=142)**	**Dually Involved: Juvenile Justice Pathway + Historical CW Case (N=429)**
Average number of investigations	2.5 per child	1.3 per child	2.9 per child	5.8 per child	1.2 per child	4.6 per child
Outcome of investigations						
Substantiated	21.4%	22.5%	32.4%	28.2%	18.0%	18.3%
Unfounded	76.4%	71.8%	65.8%	69.4%	76.6%	80.2%
Unknown	2.2%	5.6%	1.8%	2.4%	5.4%	1.6%
Type of outcome for first/last investigation						
Substantiated	26.4% /18.4%	17.1% / 18.0%	36.6%/18.2%	41.6%/25.0%	14.8%/14.8%	30.5%/13.5%
Unfounded	64.3% / 72.2%	53.9% / 53.0%	26.8%/44.2%	51.2%/68.9%	53.5%/54.2%	66.2%/83.0%
Unknown	1.8% / 1.8%	6.0% / 6.0%	0.0%/1.0%	2.7%/1.6%	3.5%/2.8%	1.2%/1.4%
No data	7.6% / 7.6%	23.1% / 23.1%	37.0%/37.0%	4.6%/4.6%	28.2%/28.2%	2.1%/2.1%
Type of allegation for first/last investigation						
Sexual abuse	5.3% / 7.5%	5.3% / 3.4%	4.3% / 6.6%	5.8%/11.9%	7.0%/7.8%	5.1%/8.4%
Physical abuse	35.7% / 35.7%	40.2% / 41.0%	31.0%/29.0%	37.0%/33.8%	33.1%/31.7%	42.2%/37.8%
Neglect	51.2% / 48.9%	31.6% / 32.5%	28.2%/27.7%	52.4%/49.6%	31.7%/32.4%	50.6%/51.5%
No data	7.6% / 7.6%	23.1% / 23.1%	37.0%/37.0%	4.6%/4.6%	28.2%/28.2%	2.1%/2.1%

Table D.5

Child Welfare Contact across Dual Involvement Pathway Groups—Cuyahoga County

	Dual Contact: Child Welfare Pathway (N=3,782)	**Dual Contact: Juvenile Justice Pathway (N=73)**	**Dually Involved: Child Welfare Pathway (N=138)**	**Dually Involved: CW Pathway + Historical CW Case (N=1,572)**	**Dually Involved: Juvenile Justice Pathway (N=94)**	**Dually Involved: JJ Pathway + Historical CW Case (N=1,051)**
Total number of investigations	2.3 per child	1.2 per child	1.3 per child	4.2 per child	1.3 per child	4.1 per child
Outcome of investigations						
Investigations only	6.3%	5.5%	0.7%	0.1%	5.3%	0.3%
Prevention services only	50.4%	79.5%	81.2%	32.4%	81.9%	36.6%
Substantiated	43.3%	15.1%	18.1%	67.5%	12.8%	63.1%
Type of outcome for first and last						
Investigations only	17.0%/23.2%	11.4%/14.3%	4.2%/9.5%	19.1%/6.4%	15.5%/20.7%	20.8%/13.3%
Prevention services only	33.5%/59.8%	57.1%/65.7%	69.5%/72.6%	42.1%/61.3%	63.8%/58.6%	41.9%/63.6%
Substantiated	49.5%/17.2%	31.4%/20.0%	26.3%/17.9%	38.7%/32.3%	20.7%/20.7%	37.3%/23.2%
Type of allegation for first and last						
Neglect	66.3%/ 62.2%	42.9%/48.6%	50.5%/49.5%	67.5%/57.9%	44.8%/50.0%	71.2%/59.0%
Physical abuse	25.4%/30.2%	45.7%/45.7%	32.6%/34.7%	25.2%/31.7%	43.1%/37.9%	22.4%/31.5%
Sexual abuse	8.3%/7.6%	11.4%/5.7%	16.8%/15.8%	7.2%/10.3%	12.1%/12.1%	6.3%/9.4%

Table D.6

Child Welfare Contact across Dual Involvement Pathway Groups—New York City

	Dual-Contact: Child Welfare Pathway (N=437)	**Dual Contact: Juvenile Justice Pathway (N=41)**	**Dually Involved: Child Welfare Pathway (N=74)**	**Dually Involved: CW Pathway + Historical CW Case (N=237)**	**Dually Involved: Juvenile Justice Pathway (N=35)**	**Dually Involved: JJ Pathway + Historical CW Case (N=70)**
Total number of substantiated investigations	2.1 per child	1.1 per child	1.5 per child	3.4 per child	1.1 per child	3.4 per child
Outcome of investigations*						
Substantiated	100%	100%	100%	100%	100%	100%
Type of outcome for first/last investigation*						
Substantiated	100%/100%	100%/100%	100%/100%	100%/100%	100%/100%	100%/100%

**Due to legal constraints New York City only included substantiated investigations.*

Table D.7

Child Welfare Experiences across Dual Involvement Pathway Groups—Cook County

	Dual Contact: Child Welfare Pathway (N=4,491)	**Dual Contact: Juvenile Justice Pathway (N=117)**	**Dually Involved: Child Welfare Pathway (N=604)**	**Dually Involved: Child Welfare Pathway + Historical CW (N=565)**	**Dually Involved: Juvenile Justice Pathway (N=142)**	**Dually Involved: Juvenile Justice Pathway + Historical CW (N=429)**
Length of time spent in CW (months)	13.0	3.5	167.7	120.7	5.7	21.7
Ever placed	9.5%	7.7%	52.3%	81.8%	20.4%	29.4%
Average number of placements	3.4	4.7	5.5	8.9	3.7	5.5
Permanency outcome						
Adoption	9.2%	0.0%	50.3%	17.1%	0.0%	2.4%
Reunification	74.4%	11.1%	5.03%	11.7%	27.6%	36.5%
Other permanency	5.6%	0.0%	17.6%	16.7%	0.0%	6.4%
Emancipation from system	0.0%	0.0%	2.2%	4.8%	0.0%	1.6%
Case still open	4.5%	77.8%	15.7%	28.6%	41.4%	31.8%
Other	5.9%	11.1%	8.2%	19.1%	27.6%	17.5%
Missing	0.5%	0.0%	1.0%	2.2%	3.4%	4.0%

Table D.8

Child Welfare Experiences across Dual Involvement Pathway Groups—Cuyahoga County

	Dual Contact: Child Welfare Pathway (N=3,782)	**Dual Contact: Juvenile Justice Pathway (N=73)**	**Dually Involved: Child Welfare Pathway (N=138)**	**Dually Involved: CW Pathway + Historical CW Case (N=1,572)**	**Dually Involved: Juvenile Justice Pathway (N=94)**	**Dually Involved: JJ Pathway + Historical CW Case (N=1,051)**
Length of time spent in CW	20.2 months	5.5 months (small n=2)	19.7 months	69.2 months	6.0 months	52.7 months
Placements						
Ever placed	16.2%	3.2%	21.7%	48.0%	7.4%	37.9%
Number of placements	2.4 per child	1.0 per child	4.2 per child	5.2 per child	3.4 per child	3.9 per child
Permanency outcome[1]						
Adoption	17.1%	-	12.5%	6.0%	-	8.8%
Reunification	43.1%	100.0%	7.7%	29.2%	12.5%	33.0%
Other permanency with family	24.6%	0.0%	6.7%	12.6%	0.0%	16.8%
Emancipation from system	1.8%	0.0%	51.0%	18.7%	29.2%	14.4%
Case still open	0.4%	0.0%	21.1%	30.1%	58.3%	21.7%
Other	13.1%	0.0%	1.0%	3.5%	0.0%	5.3%

Table D.9

Child Welfare Experiences across Dual Involvement Pathway Groups—New York City

	Dual-Contact: Child Welfare Pathway (N=437)	**Dual Contact: Juvenile Justice Pathway (N=41)**	**Dually Involved: Child Welfare Pathway (N=74)**	**Dually Involved: CW Pathway + Historical CW Case (N=237)**	**Dually Involved: Juvenile Justice Pathway (N=35)**	**Dually Involved: JJ Pathway + Historical CW Case (N=70)**
Length of time spent in CW	24.4	4.9	14.1	56.7	5.7	39.1
Placements						
Ever placed	22.4%	24.4%	16.2%	53.2%	17.1%	41.4%
Number of placements	3.5 per child	2.9 per child	4.0 per child	6.6 per child	4.0 per child	2.8 per child
Discharge reason						
Adoption	9.2%	0.0%	0.0%	2.4%	0.0%	0.0%
Emancipation from system	1.0%	0.0%	0.0%	1.6%	0.0%	0.0%
Reunification	69.4%	40.0%	75.0%	54.8%	50.0%	72.4%
Other permanency with family	13.3%	0.0%	8.3%	6.4%	16.7%	3.5%
Still in care	6.1%	60.0%	16.7%	33.3%	33.3%	17.2%
Other	1.0%	0.0%	0.0%	1.6%	0.0%	6.9%

Table D.10

Juvenile Justice Outcomes and Recidivism across Dual Involvement Pathway Groups—Cook County

	Dual Contact: Child Welfare Pathway (N=4,491)	**Dual Contact: Juvenile Justice Pathway (N=117)**	**Dually Involved: Child Welfare Pathway (N=604)**	**Dually Involved: Child Welfare Pathway + Historical CW (N=565)**	**Dually Involved: Juvenile Justice Pathway (N=142)**	**Dually Involved: Juvenile Justice Pathway + Historical CW (N=429)**
Type of Disposition						
Adjudicated delinquent – probation	25.2%	6.0%	28.3%	22.7%	53.5%	45.7%
Adjudicated delinquent – supervision	18.9%	14.5%	21.2%	18.6%	28.9%	29.4%
Adjudicated delinquent – sentenced to Illinois Department of Juvenile Justice (IDJJ)	0.7%	2.6%	1.0%	2.0%	2.1%	1.6%
State's Attorney's Office (SAO) Diversion Program	0.9%	0.9%	1.3%	1.1%	1.4%	1.4%
Not delinquent	54.4%	76.1%	48.2%	55.8%	14.1%	21.9%
Average Length b/t Petition Filing and Disposition Date (months)	3.1	1.8	3.7	3.5	6.8	6.5
Recidivism (in 6 months) – new arrest	43.6%	39.2%	41.7%	48.4%	39.1%	48.6%
Recidivism (in 6 months) – new delinquency petition	24.3%	23.1%	27.0%	25.5%	21.1%	31.9%
Recidivism (in 1 year) – new arrest	57.2%	51.6%	57.2%	60.4%	54.1%	57.3%
Recidivism (in 1 year) – new delinquency petition	32.2%	32.4%	37.3%	35.0%	31.7%	43.4%

Table D.11

Juvenile Justice Outcomes and Recidivism across Dual Involvement Pathway Groups—Cuyahoga County

	Dual Contact: Child Welfare Pathway (N=3,782)	**Dual Contact: Juvenile Justice Pathway (N=73)**	**Dually Involved: Child Welfare Pathway (N=138)**	**Dually Involved: CW Pathway + Historical CW Case (N=1,572)**	**Dually Involved: Juvenile Justice Pathway (N=94)**	**Dually Involved: JJ Pathway + Historical CW Case (N=1,051)**
Type of Disposition[1]						
Probation	4.4%	3.9%	4.4%	3.5%	3.2%	2.5%
Supervision	9.4%	17.6%	8.1%	9.7%	8.3%	7.7%
Placement	0.6%	-	-	0.6%	0.9%	0.8%
Commitment (ODYS[2])	2.1%	-	1.3%	2.3%	1.8%	2.3%
Bindover	0.3%	-	-	0.1%	-	0.1%
Refer to other case	13.3%	11.8%	18.2%	19.0%	16.1%	17.8%
Dismissed	25.9%	28.4%	21.5%	17.2%	21.2%	19.5%
Fines	9.7%	7.8%	11.8%	10.2%	17.1%	11.3%
Other/unknown	34.4%	30.4%	34.7%	37.3%	31.3%	38.1%
Time in the juvenile justice system[3]	11.7 months	5.8 months	13.2 months	17.1 months	17.2 months	21.9 months
Recidivism (in 1 year)	30.8%	15.1%	30.4%	42.9%	29.8%	43.5%

[1] Type of disposition was measured using all delinquency cases between 2010 and 2014. [2] ODYS: Ohio Department of Youth Services. [3] Time in system is based on disposition date.

Table D.12

Juvenile Justice Outcomes and Recidivism across Dual Involvement Pathway Groups—New York City

	Dual-Contact: Child Welfare Pathway (N=437)	**Dual Contact: Juvenile Justice Pathway (N=41)**	**Dually Involved: Child Welfare Pathway (N=74)**	**Dually Involved: CW Pathway + Historical CW Case (N=237)**	**Dually Involved: Juvenile Justice Pathway (N=35)**	**Dually Involved: JJ Pathway + Historical CW Case (N=70)**
Type of Disposition						
Adjournment in Contemplation of Dismissal (ACD)	2.3%	0.0%	2.7%	1.3%	8.6%	5.7%
Alternative to placement (ATP)*	22.4%	14.6%	17.6%	26.2%	20.0%	25.7%
Conditional discharge (CD)	3.9%	0.0%	1.4%	7.2%	0.0%	5.7%
Level 1 (probation – least intensive)	18.8%	17.1%	12.2%	16.0%	22.9%	11.4%
Level 2 (probation)	19.2%	24.4%	28.4%	19.8%	25.7%	20.0%
Level 3 (probation – most intensive)	18.3%	26.8%	18.9%	14.4%	8.6%	20.0%
Juvenile justice residential placement	15.1%	17.1%	18.9%	15.2%	14.3%	11.4%
Time in the juvenile justice system**	6.8 months	6.5 months	6.5 months	6.8 months	7.2 months	9.0 months
Recidivism*** (in 1 year)	N/A	N/A	N/A	N/A	N/A	N/A

*In ATP programs, the juvenile delinquent remains home and receives intensive community-based services

**Time is from probation intake date through the disposition date. It does not include the time in the disposition (e.g., probation, ATP, placement, etc.)

***Only current petition data were available, so recidivism was not measured in New York City.

More information about community-based interventions (ATP, Probation, ACD, and CD) can be found here: http://www.nyc.gov/html/prob/downloads/pdf/reinvisioning_juvenile_justice_report_revised.pdf

Appendix E

Description of Linked Administrative Data Sources for First Arrest Cohort Analysis

Analysis of linked administrative data for Chicago, Illinois was completed by Chapin Hall, an independent policy research center at the University of Chicago focused on providing public and private decision-makers with rigorous data analysis and achievable solutions to support them in improving the lives of society's most vulnerable children. Chapin Hall partners with policymakers, practitioners, and philanthropists at the forefront of research and policy development by applying a unique blend of scientific research, real world experience, and policy expertise to construct actionable information, practical tools, and, ultimately, positive change for children, youth, and families. Established in 1985, Chapin Hall's areas of research include child and adolescent development; child maltreatment prevention; child welfare systems; community change; economic supports for families; home visiting and early childhood initiatives; runaway and unaccompanied homeless youth; schools, school systems, out-of-school time; and youth crime and justice.

The Chapin Hall Integrated Database on Children's Services (IDB) is a series of linked data files that provide researchers with the ability to study individuals, and in some cases families, receiving a broad array of publicly funded services in Illinois.[25] This data is maintained by a consistent group of researchers and programmers at Chapin Hall, and the component datasets are processed and stored in database systems. The following populations are included in the current iteration of the IDB: children and adults involved with child protection or child welfare services, individuals receiving TANF and/or SNAP benefits, juveniles referred to the Cook County Circuit Court for delinquency, incarcerated juveniles and adults, individuals arrested in Chicago, children and parents receiving child care subsidies, students enrolled in the Chicago Public Schools, and young children enrolled in publicly funded early childhood programming in Chicago. The link files allow researchers to identify the same individuals, and in some cases families, across the systems, facilitating research that considers children and families in their broader context.

Chapin Hall researchers used datasets from three Illinois agencies – the Circuit Court of Cook County, the Illinois Department of Children and Family Services (DCFS), and the Chicago Police Department (see *Table E.1*). Chapin Hall has data sharing agreements with all of the agencies, and IRB approval through the University of Chicago IRB.

[25] Data used in this report was provided by and belongs to the Cook County Juvenile Probation and Court Services Department and the Chicago Police Department. Any further use of this data must be approved by Cook County Juvenile Probation and Court Services and the Chicago Police Department. Points of view or opinions contained within this document are those of the authors and do not necessarily represent the official position or policies of the Cook County Juvenile Probation and Court Services Department or the Chicago Police Department.

Table E.1

Linked Administrative Data Sources for Cook County

Dataset	Data Provider	Years
Juvenile Enterprise Management System (JEMS)	Cook County Juvenile Probation and Court Services	2010-2017
Child Abuse and Neglect Tracking System (CANTS)	Illinois Department of Child and Family Services (DCFS)	1992-2017
Child and Youth Centered Information System (CYCIS)	Illinois Department of Child and Family Services (DCFS)	1992-2017
Chicago Police Department Arrest Data	Chicago Police Department (CPD)	1991-2017

Description of Juvenile Justice Data

Chapin Hall used data from the Chicago Police Department (CPD) and the Circuit Court of Cook County Juvenile Justice Division to look at involvement in the juvenile justice system for this study (see *Table E.1*). The CPD arrest data includes information on all arrests in the City of Chicago from 1999 through 2017. The Circuit Court JEMS data contains a series of tables maintained by the court's Juvenile Probation and Court Services Department to track information about youth with a court petition and to monitor any services ordered by the court to help rehabilitate the minor. In Illinois, between January 1, 2010 and December 31, 2013 youth under age 16-, and 17-year-olds with only a misdemeanor offense, were under the jurisdiction of the juvenile court. Seventeen year olds who had committed a felony offense were sent to adult court. Effective January 1, 2014 the definition of a delinquent minor was changed to include 17-year-olds charged with felony offenses.

The core study population for the arrest cohort included youth under age 17 with a first arrest between 2010 and 2014. The population was further restricted to youth born before 2001 in order to follow their juvenile justice involvement through age 17. The petition cohort included youth with a juvenile court delinquency petition between 2010 and 2014. For comparison with the arrest cohort, we further restricted the cohort to youth living in Chicago at the time of their first petition and born before 2001.

Tables E.2 summarizes the demographics of youth that had a first arrest in Chicago, Illinois between 2010 and 2014. The majority of youth were male, African American, and on average, 15 years old at the time of the arrest.

Table E.2

Characteristics of the First Arrest Cohort (N= 24,047)—Chicago, IL

Variable	n or Mean	% / SD
Gender		
Female	7,362	30.6%
Male	16,685	69.4%
Race/Ethnicity		
White	1,250	5.2%
African American	17,169	71.4%
Hispanic	5,461	22.7%
Other	167	0.7%
Age at First Arrest	14.7	1.2

Description of Child Welfare Data

Data on Child Welfare involvement was obtained through an agreement with the Illinois Department of Child and Family Services (DCFS). DCFS, the state child welfare agency in Illinois, maintains several information systems which track the children and households to which it provides services and the providers with which it contracts. The Statewide Automated Child Welfare Information System (SACWIS) is used to record all allegations of abuse or neglect, investigation dates, and outcomes of the investigation. The Child and Youth Centered Information System (CYCIS) tracks children in foster care and records all placement types and movements within the foster care system. Chapin Hall receives extracts from these databases on an ongoing basis.

For this study, child welfare involvement would include any youth that had contact with the child welfare system as recorded in either of the above databases at some point between 1992 and 2014. Specifically, any record of a child receiving child welfare services and all investigations of abuse or neglect whether the allegation was substantiated or not was included. If a child only had an investigation with no services, then their duration in child protective services is only one day – the date of finding. We chose this definition because we have all investigation and child welfare case information available to us. We know the exact dates of when contact with the Department occurred. This allows us to calculate the most precise contact with the child protective services system. Our child welfare cohort includes youth in the same birth cohorts as the youth with the first delinquency petition (born between 1993 and 2000) and who resided in Chicago at the time of their last child welfare contact. Residency for our child welfare cohort was restricted to Chicago as we only have arrest data for the City of Chicago. Juvenile justice involvement of any youth in our child welfare cohort who moved out of the county after their child welfare involvement is likely underreported. *Table E.3* summarizes the demographics of the child welfare cohort used in this study.

Table E.3

Characteristics of the Child Welfare Cohort (N=116,902)—Chicago, IL

Variable	n or M	% or SD
Gender		
Female	59,769	(51.1%)
Male	56,203	(48.1%)
Unknown	930	(0.8%)
Race/Ethnicity		
White	18,430	(15.8%)
African American	72,317	(61.9%)
Hispanic	21,961	(18.8%)
Other	4,194	(3.6%)
Age at first investigation	6.5	5.0

Linking Juvenile Justice and Child Welfare Data

Chapin Hall used probabilistic record linkage and BigMatch software to link individual children's records from the Court, DCFS, and CPD. Each data source file was unduplicated first to identify duplicate records for the same individual in the same data system. The resulting files included all sets of personally identifying information in the original file (which may include variation in the spelling or content of certain fields), but records representing the same person have the same Chapin Hall-assigned unique identifier CHMSID). Matching variables include name, birth dates, race, sex, social security numbers, identification record (IR) number (finger print ID), and central booking number. All identifying information was excluded from the analytic files.

Appendix F:
Summary of Results across Dual System Pathways for First Arrest Cohort

.

Table F.1

Demographic and System Characteristics across Dual System Pathways—Chicago, IL

	Arrest/CW Not Concurrent: Child Welfare Pathway	Arrest/CW Not Concurrent: Juvenile Justice Pathway	Arrest/CW Concurrent: Child Welfare Pathway	Arrest/CW Concurrent: Child Welfare Pathway + Historical CW	Arrest/CW Concurrent: Juvenile Justice Pathway	Arrest/CW Concurrent: Juvenile Justice Pathway + Historical CW
	(N=7,033)	(N=690)	(N=981)	(N=691)	(N=3)	(N=2)
Gender						
Female	34.61%	35.80%	32.21%	34.88%	66.67%	0%
Male	65.39%	64.20%	67.79%	65.12%	33.33%	100%
Unknown						
Race/Ethnicity						
White	3.61%	5.07%	2.75%	5.64%	0%	0%
African American	79.56%	73.62%	92.05%	83.36%	100%	100%
Hispanic	16.59%	21.01%	4.89%	10.85%	0%	0%
Others	0.24%	0.29%	0.31%	0.14%	0%	0%
Average age at first arrest (in years)	14.6	14.0	14.9	14.7	13.3	13.0
Most serious charge at first arrest						
Violent/person	34.54%	38.80%	34.59%	40.61%	66.67%	0%
Property	25.60%	25.82%	26.63%	25.87%	33.33%	50.00%
Public order	28.84%	24.11%	28.78%	23.12%	0%	50.00%
Drug	10.48%	11.13%	9.39%	7.80%	0%	0%

Table F.1 (Continued)

Demographic and System Characteristics across Dual System Pathways—Chicago, IL

	Arrest/CW Not Concurrent: Child Welfare Pathway	**Arrest/CW Not Concurrent: Juvenile Justice Pathway**	**Arrest/CW Concurrent: Child Welfare Pathway**	**Arrest/CW Concurrent: Child Welfare Pathway + Historical CW**	**Arrest/CW Concurrent: Juvenile Justice Pathway**	**Arrest/CW Concurrent: Juvenile Justice Pathway + Historical CW**
Detained	(N=7,033)	(N=690)	(N=981)	(N=691)	(N=3)	(N=2)
Referred to court	40.01%	37.37%	40.00%	42.05%	33.33%	0%
Formal station adjustment	9.00%	10.41%	8.88%	8.38%	33.33%	0%
Informal station adjustment or released	41.88%	40.80%	39.90%	34.39%	0%	50.00%
Missing	3.13%	3.28%	2.86%	4.91%	0%	0%
1-year recidivism: new arrest	40.79%	43.80%	47.01%	51.58%	0%	50.00%
6-month recidivism: new arrest	25.76%	27.53%	31.43%	47.94%	0%	0%
Mean number of arrests	5.0	6.0	5.4	5.4	1.5	2

Table F.2

Child Welfare Contact across Dual Involvement Pathway Groups—Chicago, IL

	Arrest/CW Not Concurrent: Child Welfare Pathway	**Arrest/CW Not Concurrent: Juvenile Justice Pathway**	**Arrest/CW Concurrent: Child Welfare Pathway**	**Arrest/CW Concurrent: Child Welfare Pathway + Historical CW**	**Arrest/CW Concurrent: Juvenile Justice Pathway**	**Arrest/CW Concurrent: Juvenile Justice Pathway + Historical CW**
	(N=7,033)	(N=690)	(N=981)	(N=691)	(N=3)	(N=2)
Average age at first CW investigation (in years)	6.8	15.6	8.1	6.4	14.83	10.0
Average age at last CW investigation (in years)	9.6	16.0	11.4	12.8	15.28	16.5
Average number of investigations	2.2	1.6	2.3	4.9	1.7	4.5
% of Investigations substantiated	26.0%	24.0%	31.4%	36.8%	40.0%	50.0%
Type of outcome for first/last investigation						
Substantiated	26.2% / 18.3%	22.8% / 22.1%	27.5% / 16.4%	52.5% / 29.9%	66.67% / 33.33%	50.0% / 0%
Unfounded	57.2%/65.5%	60.9% / 61.6%	28.6% / 39.7%	41.0% / 63.6%	33.33% /66.67%	50.0% / 100%
No data	16.2%/16.2%	16.3% / 16.3%	43.9% / 43.9%	6.5% / 6.5%		
Type of allegation for first/last investigation						
Sexual abuse	16.6% / 14.3%	11.3% / 11.4%	15.5% / 11.6%	18.8% / 15.6%	0%/ 0%	0% / 0%
Physical abuse	22.4% / 25.9%	39.7% / 39.8%	16.1% / 18.2%	23.8% / 30.1%	0%/ 33.33%	50.0% / 50.0%
Neglect	39.2% / 41.2%	32.8% / 32.5%	17.6% / 23.7%	40.2% / 47.3%	100%/66.67%	0% / 0%
No data	16.2% / 16.2%	16.3% / 16.3%	43.9% / 43.9%	6.5% / 6.5%	0%/ 0%	0% / 0%

Table F.3

Child Welfare Experiences across Dual Involvement Pathway Groups —Chicago, IL

	Arrest/CW Not Concurrent: Child Welfare Pathway	**Arrest/CW Not Concurrent: Juvenile Justice Pathway**	**Arrest/CW Concurrent: Child Welfare Pathway**	**Arrest/CW Concurrent: Child Welfare Pathway + Historical CW**	**Arrest/CW Concurrent: Juvenile Justice Pathway**	**Arrest/CW Concurrent: Juvenile Justice Pathway + Historical CW**
	(N=7,033)	(N=690)	(N=981)	(N=691)	(N=3)	(N=2)
Length of time spent in child welfare (months)	13.3	7.8	173.9	131.0	31.7	37.0
Ever placed	10.79%	16.09%	54.33%	80.61%	66.67%	50.00%
Average number of placements	4.4	7.3	5.7	11.3	3	7
Permanency outcome						
Adoption	6.46%	0.00%	46.72%	12.21%	0.00%	0.00%
Reunification	62.58%	15.32%	3.56%	11.49%	50.00%	100%
Other permanency with family	6.32%	2.7%	17.82%	12.75%	0.00%	0.00%
Emancipation from system	11.86%	39.64%	21.39%	46.86%	0.00%	0.00%
Case still open	9.22%	38.74%	9.76%	14.00%	50.00%	0.00%
Other	3.56%	3.6%	0.75%	2.69%	0.00%	0.00%

Table F.4

Juvenile Court Outcomes and Recidivism across Dual Involvement Pathway Groups—Chicago, IL

	Arrest/CW Not Concurrent: Child Welfare Pathway	**Arrest/CW Not Concurrent: Juvenile Justice Pathway**	**Arrest/CW Concurrent: Child Welfare Pathway**	**Arrest/CW Concurrent: Child Welfare Pathway + Historical CW**	**Arrest/CW Concurrent: Juvenile Justice Pathway**	**Arrest/CW Concurrent: Juvenile Justice Pathway + Historical CW**
	(N=7,033)	(N=690)	(N=981)	(N=691)	(N=3)	(N=2)
Delinquency petition filed ever	40.13%	51.30%	43.53%	51.23%	0.00%	50.00%
Type of disposition – first petition						
Probation or supervision	51.38%	58.19%	51.29%	50.85%		0.00%
Sentenced to Illinois Department of Juvenile Justice (IDJJ)	3.54%	1.69%	4.45%	4.24%		0.00%
State's Attorney's Office (SAO) diversion program	0.85%	0.28%	0.70%	0.56%		0.00%
Dismissed/not delinquent	44.22%	39.83%	43.56%	44.35%		100%
Recidivism (in 1 year) new delinquency petition	40.22%	42.66%	41.45%	47.17%		0.00%
Recidivism (in 6 months) new delinquency petition	29.70%	32.20%	28.34%	35.59%		0.00%