Multiple Service Systems Use Among Illinois Families

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Policy research that benefits children, families, and their communities

Outline

- Setting for the research
- The population of at-risk children and their families
- The Integrated Database on Child and Family Progams in Illinois
- Identifying multi-system families
- Patterns of system involvement
- Barriers and potentials integrating data

Chapin Hall at the University of Chicago

- Organization that was brought to the University in order to have an impact on the well-being of children through better research and analysis

- Over the past 30 years, we have built relationships with policymakers in order to achieve that goal through conducting research that meets the needs of the public sector

- Known for our work with government social program administrative data, we employ a full range of methods and address many issues of children, families and their neighborhoods

Identifying children at-risk of bad things happening to them *at scale*

- We know which subgroups of families are at highest risk of their children experiencing "adverse childhood experiences". They are characterized by a combination:

  - ***Chronically unemployed parents***

  - ***Very low socioeconomic status***

  - ***Long-term welfare program participants***

  - ***Single-parent families***

  - ***Mothers who had their first child as an adolescent***

  - Families without grandparents living with them

  - Alcohol, drug use, mental illness

  - Inadequate parenting skills, family breakdown, parental stress and mental illness, domestic violence, and parental history of maltreatment during childhood.

  - Community-level low socioeconomic status, living in an impoverished community, family size, and sibling spacing

Chicago Pre-k

Chicago Public Schools

Chicago Head Start

CPD arrest data

Cook County Juvenile Court

Juvenile Incarceration

Adult Incarceration

UI Wage Records

UI Benefits Records

WIA

Chapin Hall IDB

Foster Care

Child Maltreatment Investigations

Medicaid Providers

Medicaid Claims

Medicaid Eligible Population

SSI/AABD

TANF

SNAP (Food Stamps)

Child Care Subsidies

Child Care Licensing

TANF Work Programs

Integrated Database on Child and Family Programs in Illinois
Data spans the period from 1977-2014, but mostly from 1990 forward

Survey vs. Administrative data
Adapted from Wallgren and Wallgren (2007)

	Advantages	Disadvantages
Surveys based on data collection: sample surveys and censuses	**Can choose which questions to ask across multiple domains** Can be up-to-date (depending on how big of an effort it is)	**Some respondents ..** **… do not understand the question** **… have forgotten how it was** **… do not respond (nonresponse)** **… respond carelessly** Burden on respondents can be high **Expensive** Low quality for estimates for small study domains (for sample surveys)
Register-based Surveys **(administrative data and other non-traditional datasets)**	No further burden on the respondent for the statistics Low costs **Almost complete coverage of population** Complete coverage of time **Respondents answer carefully to important administrative questions** Good possibilities for reporting for small areas, regional statistics and longitudinal studies **Link records across datasets to take advantage of the relatively small amount of high quality data in each data source**	Cannot ask questions Dependent on the administrative system's population, object and variable definitions The reporting of administrative data can be slow; the time between the reference period and when data are available for statistical purposes can be long Changes in the administrative systems make comparisons difficult Variables that are less important for administrative work can be of lower quality

Rationale for MSF analysis

- A small number of families in Illinois use a large portion of the State's service resources—meaning the expensive and intensive health, human service, and corrections programs.

- If the State could develop a deeper understanding of the circumstances in which these families live, their histories, their geographic location, and their trajectories, along with what services they have used, the State could provide more adequate and efficient services.

High-cost services

- Mental health service, paid through Medicaid
- Substance abuse treatment, paid through Medicaid
- Adult incarceration
- Juvenile incarceration
- Foster care

Data Sources

Human Services

Food Stamp and TANF recipients1989-2008

Children and Family Services

Child abuse and neglect reports and Foster care records 1977-2008

Healthcare and Family Services

Medicaid paid claims from 1994-2008

Corrections

Adult and juvenile admissions and exits from 1990-2008

Chapin Hall Multi-service dataset
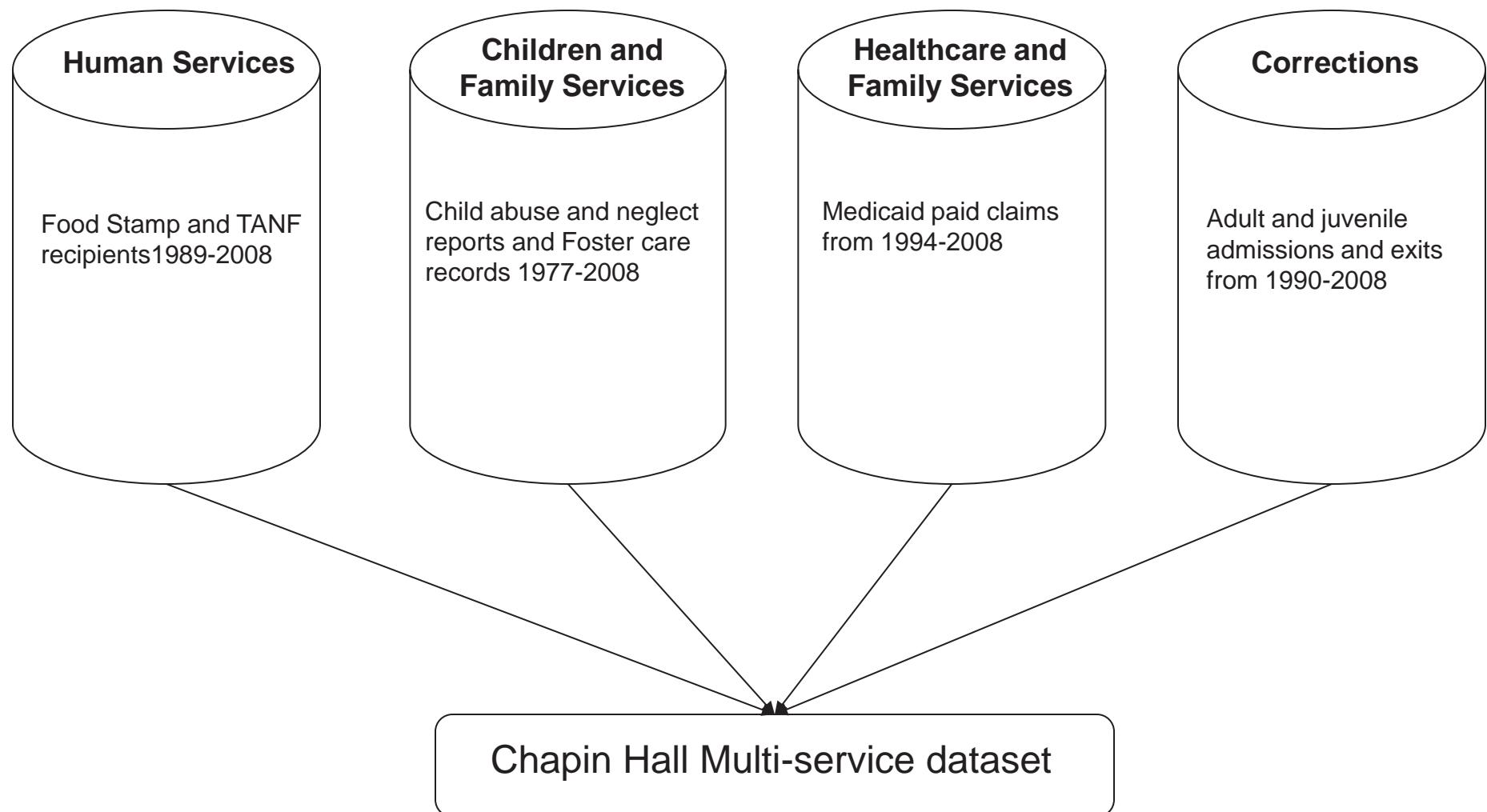
Preparing Administrative Data

The process of making administrative data suitable for research use includes three important steps:

- De-duplication
  - Identify records within a data set that belong to the same individual
- Record-linkage
  - Identify and link individuals across data sets
  - Employ probabilistic record-linkage
- Identify relationships among individuals

Definitions

Definition of a "family"

- Individuals who were "linked" through the membership in Food Stamps or TANF cases, or were involved in a DCFS case
- 90% of these families had 10 or fewer members

Definition of a "problem"

- An instance of mental health service, substance abuse treatment, adult incarceration, juvenile incarceration, or foster care placement.

Definition of a "Multi-system Family"

- A family whose members had at least two different types of problems (e.g. adult incarceration and substance abuse)

Costs

- Total per unit foster care, Medicaid, adult and juvenile incarceration dollars

# The 80/20 rule (the Pareto Principle)
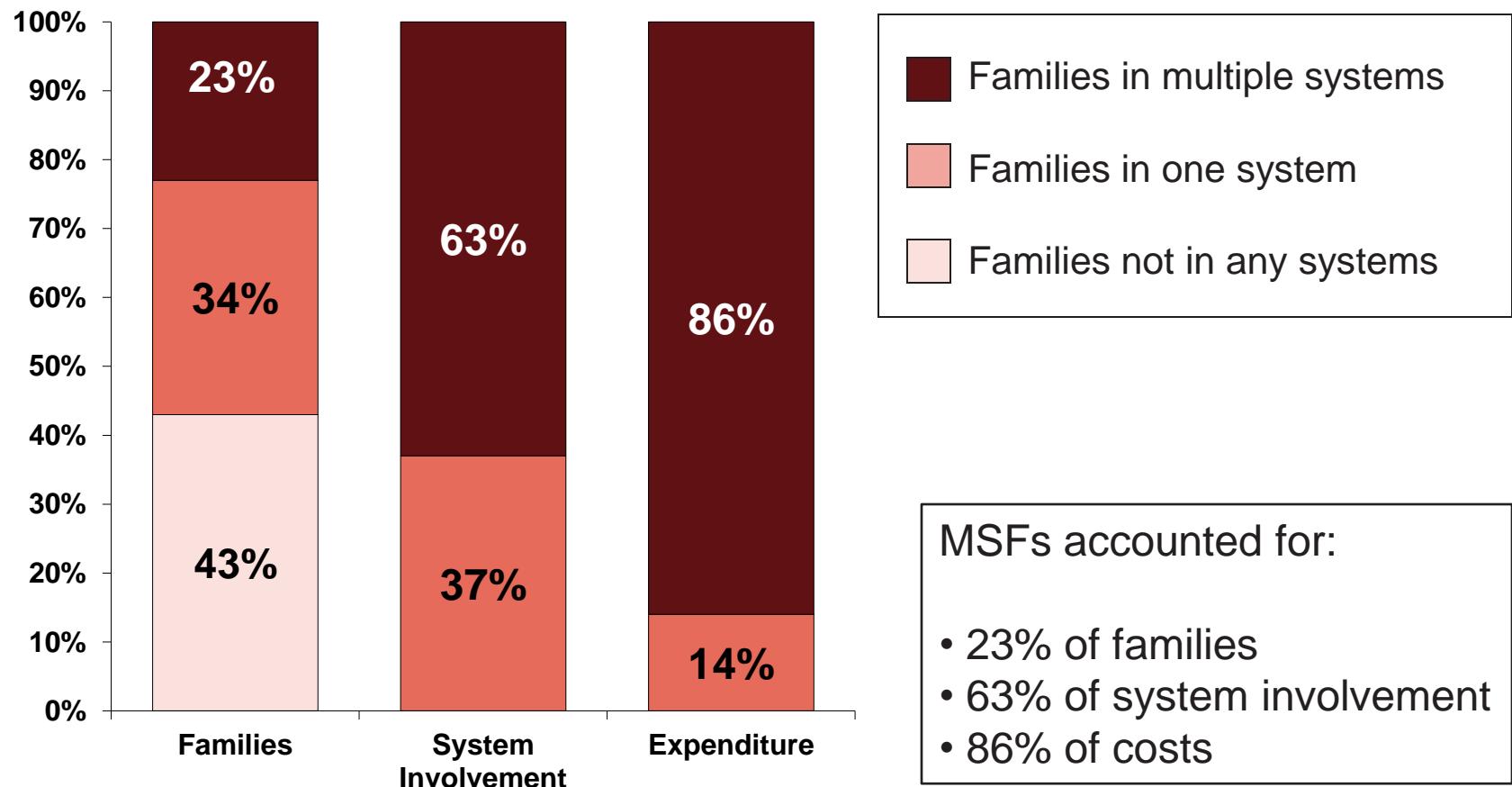
Legend:
- Families in multiple systems
- Families in one system
- Families not in any systems

Chart data:

Category	Families not in any systems	Families in one system	Families in multiple systems
Families	43%	34%	23%
System Involvement	—	37%	63%
Expenditure	—	14%	86%

MSFs accounted for:

- 23% of families
- 63% of system involvement
- 86% of costs

Identifying Multi-system Families

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Family composition

82% of families had 2-10 members*

*Percentages do not total 100% due to rounding error
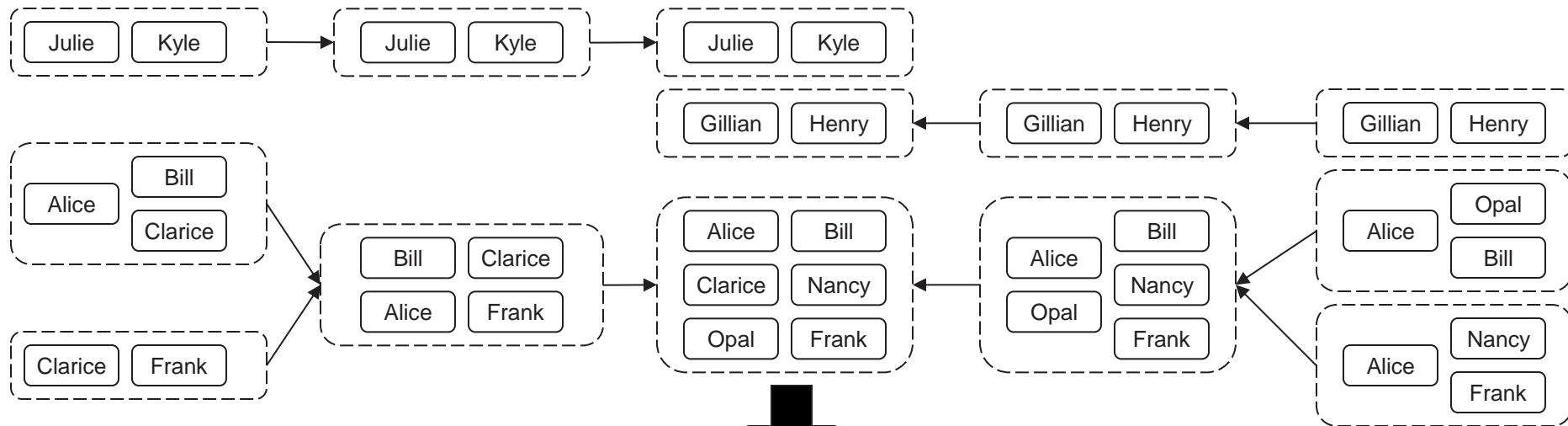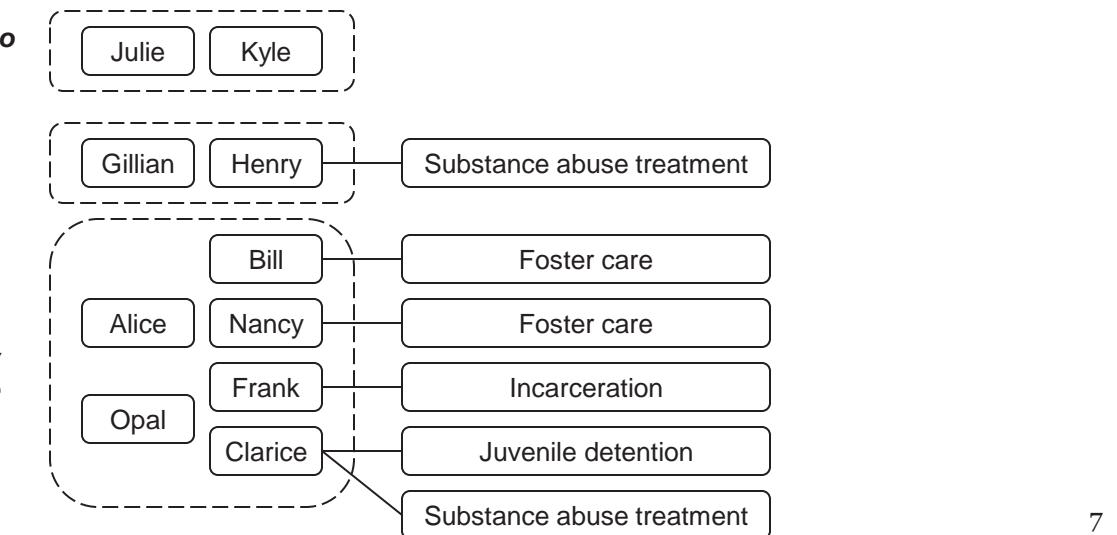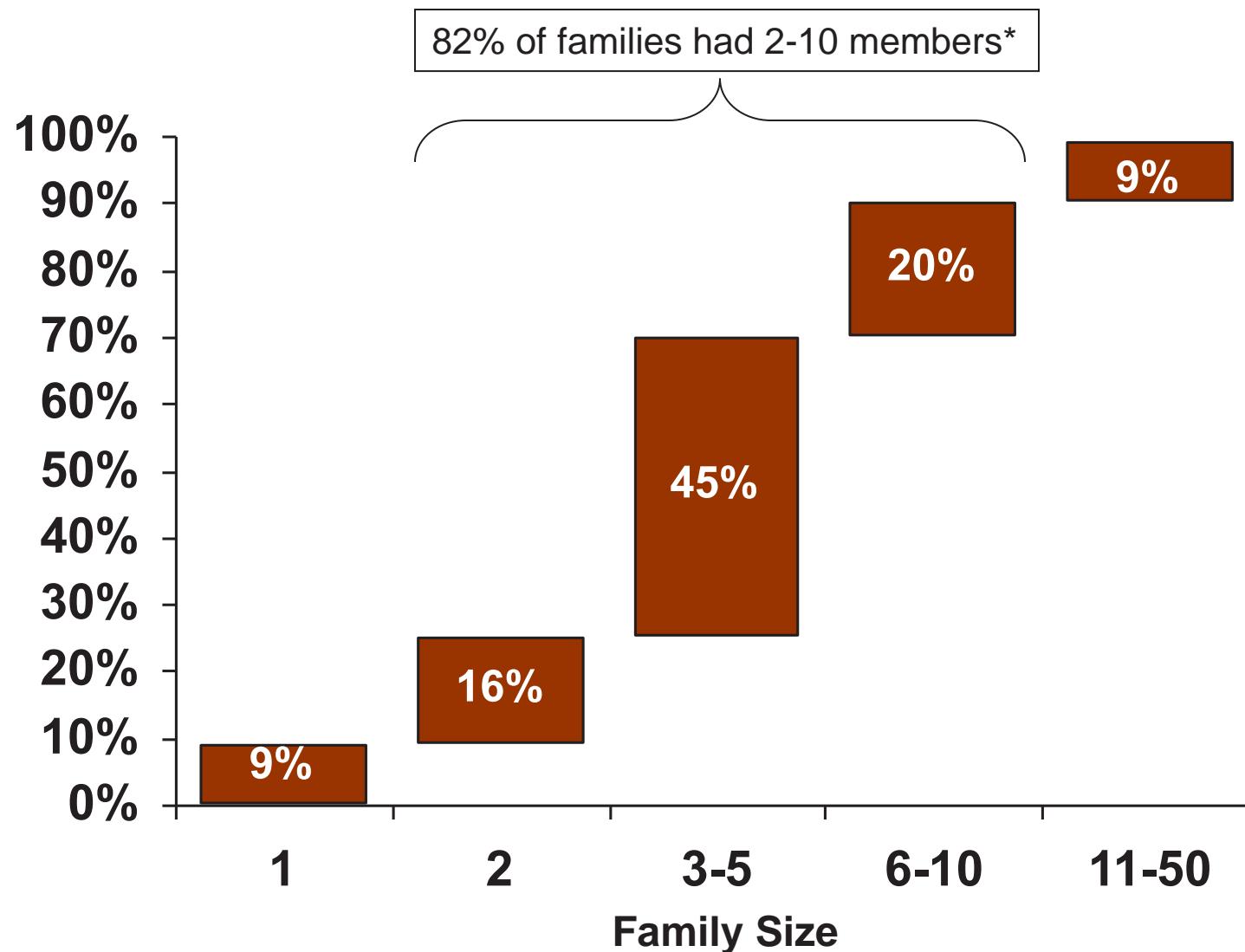
Multi-Problem Families as a percent of all households by county

Legend:
- 1.1% - 2.8%
- 2.9% - 4.6%
- 4.7% - 6.4%
- 6.5% - 8.1%

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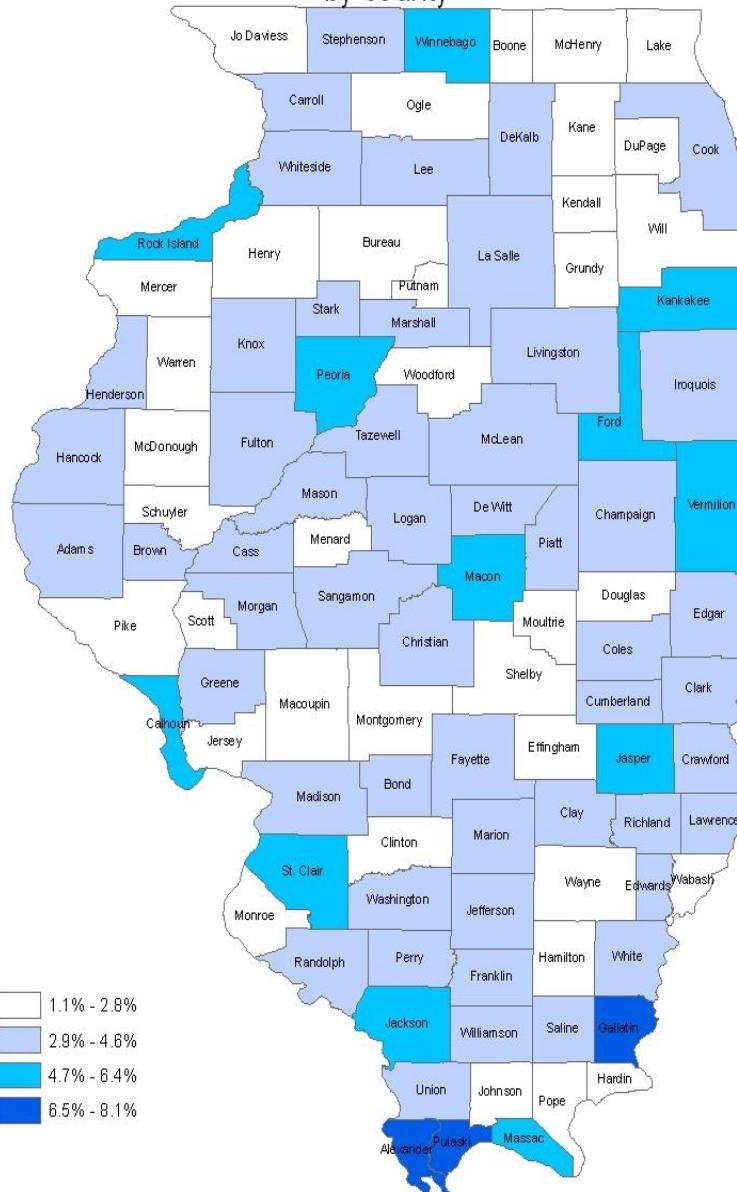
Multi-Problem Families as a Percent of Study Population in Chicago

Legend:
- 11.1% - 18%
- 18.1% - 25%
- 25.1% - 32%
- 32.1% - 39.1%
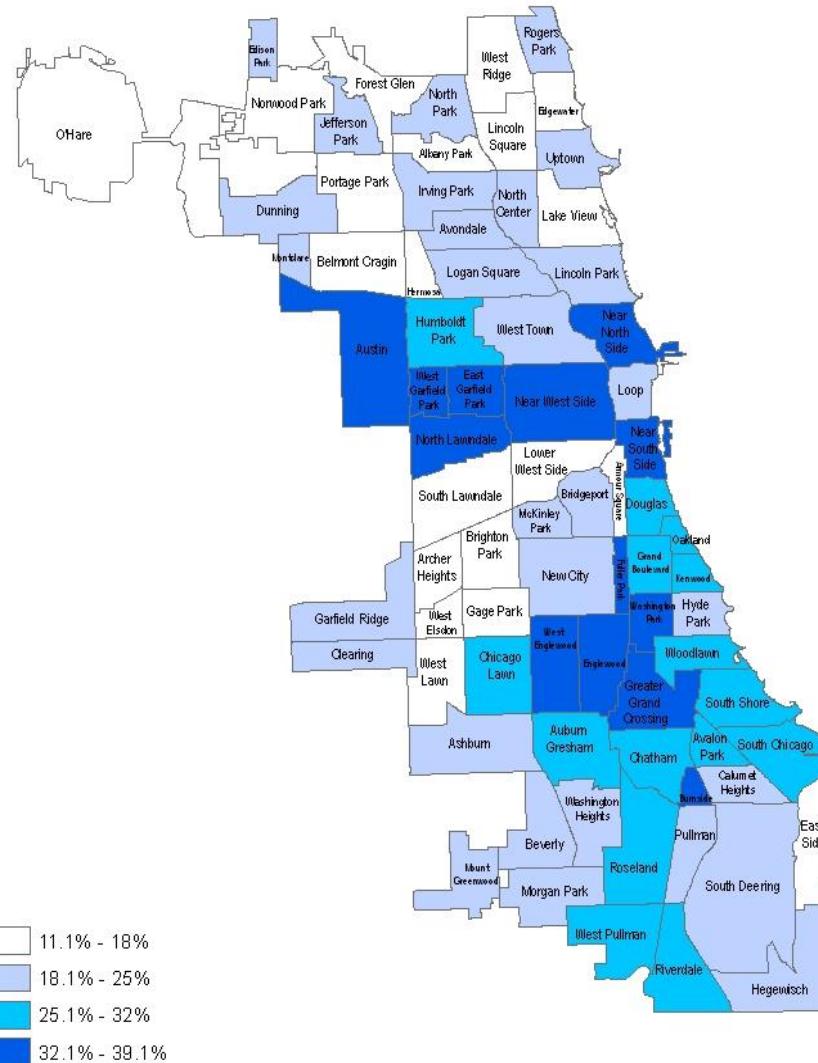
Children (0-17) in Multi-Problem Families as a Percent of all Children by Census Tract, 2008

Chicago Communiy Area
N/A
0%
1% - 23%
24% - 40%
41% - 60%
61% +
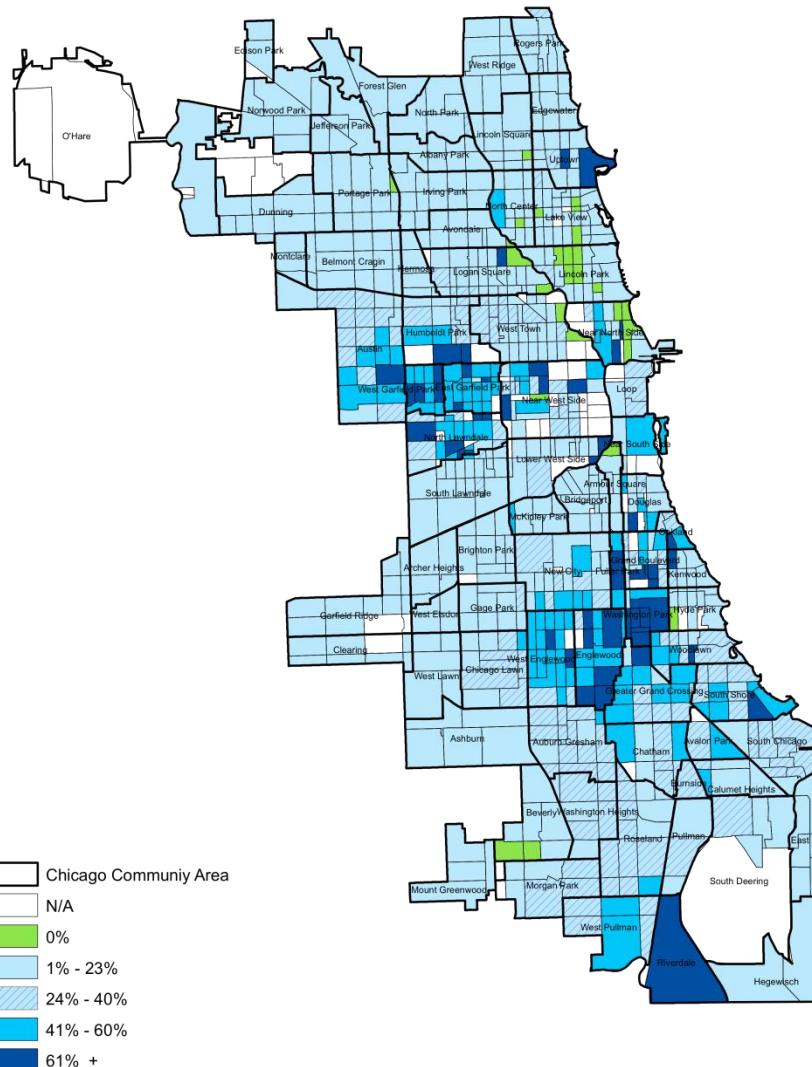
Mental health service was the most common problem
(Total number of problems=465,036)*

Number of Families with Each Problem

Problem	Value
Mental Health	220,878
Foster Care	106,784
Substance Abuse	72,161
Adult Incarceration	56,649
Juvenile Incarceration	8,564
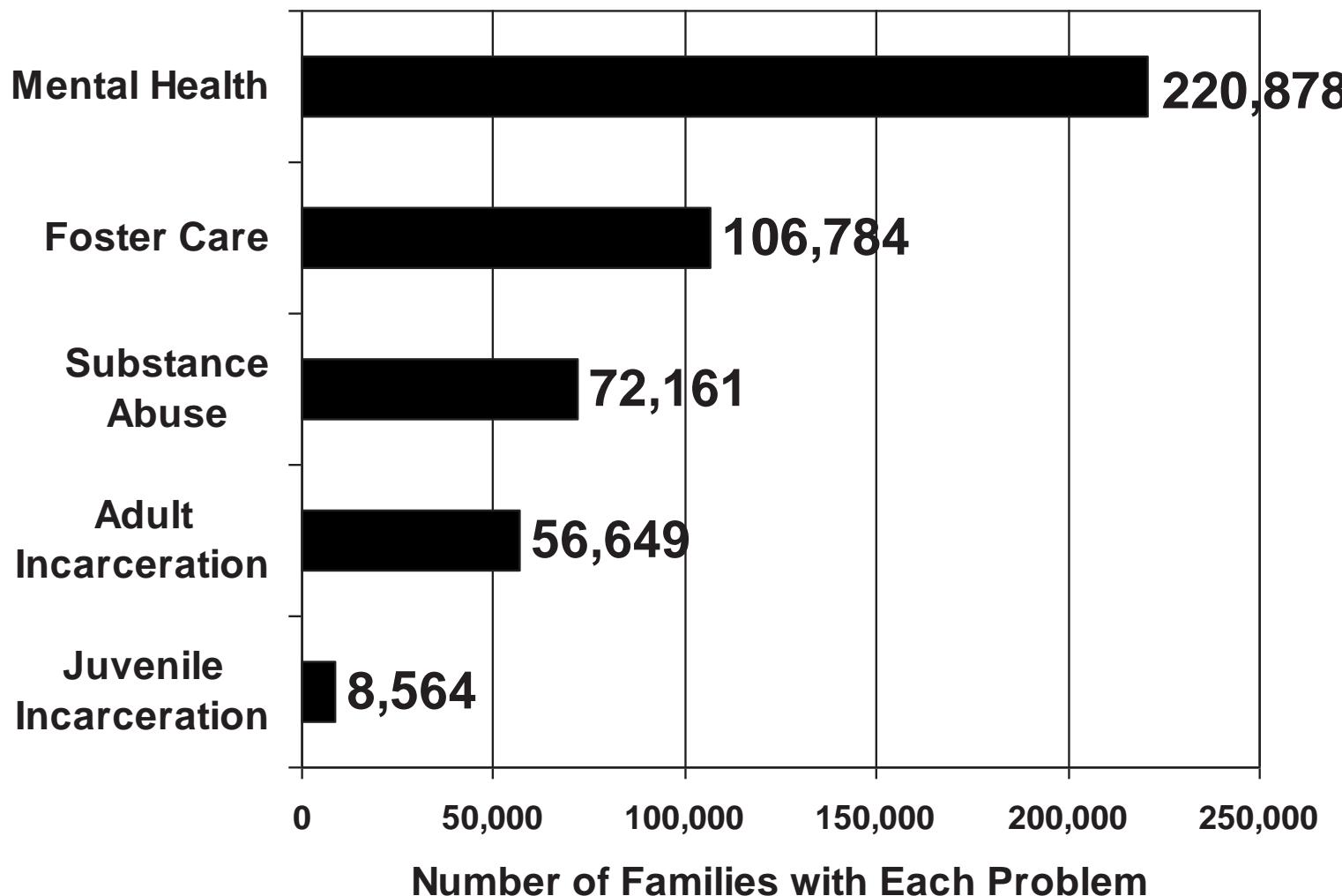
*The total number of problems (465,036) exceeds the total number of families with problems (285,722) because some families have multiple problems.

Mental health services

Families with one or more problems

23% — Did not receive mental health service

77% — Received mental health service
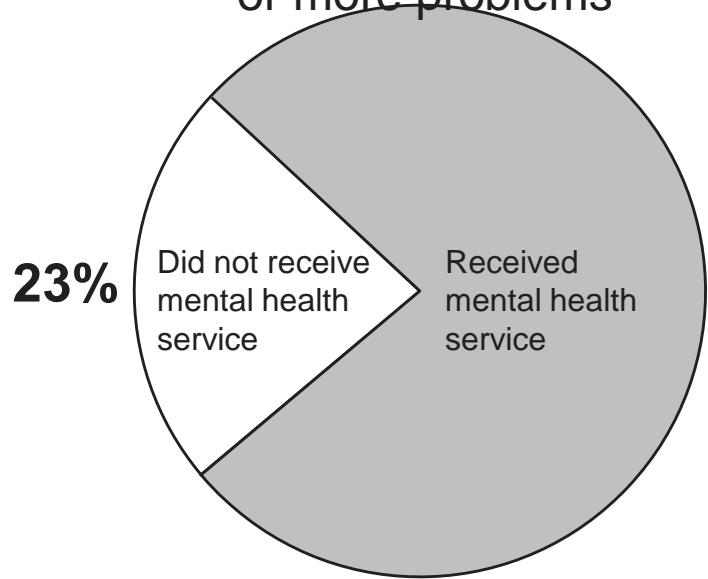
100% = 285,722 families

Families with multiple problems

Did not receive mental health service — 6%

Received mental health service — 94%
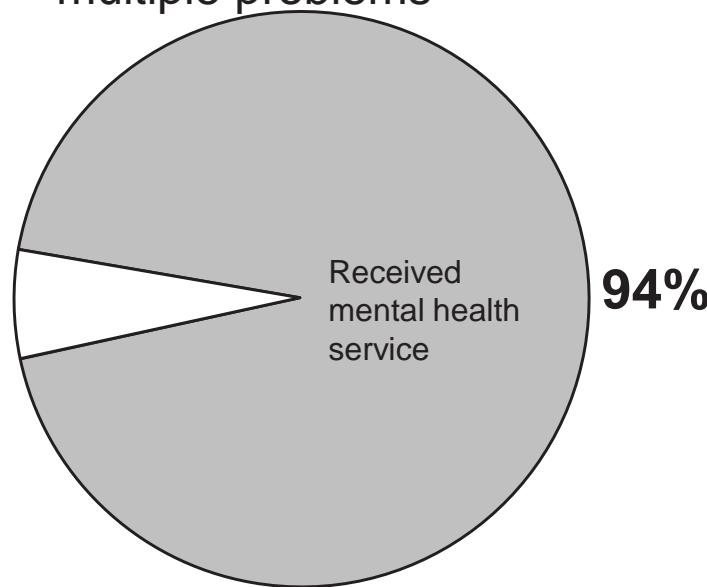
100% = 114,355 families

54% of families receiving any mental health service received both inpatient and outpatient services.

42% of families receiving any substance abuse treatment received both inpatient and outpatient services.

Incarceration and substance abuse treatment

System	All Families with System involvement			
	Families in One System	Families in Multiple Systems	Total Number of Families	Percent of Families in this System only
Adult incarceration	8,406	48,243	56,649	**15%**
Juvenile incarceration	366	8,198	8,564	**4%**
Mental health	113,321	107,557	220,878	51%
Substance abuse	3,675	68,468	72,161	**5%**
Foster care	45,599	61,185	106,784	43%

Child abuse and neglect

73% of MSFs had an abuse or neglect finding (83,944)

41% of Multi-system Families had both abuse or neglect findings and an instance of violent injury (46,444)

49% of MSFs had an instance of violent injury (55,471)
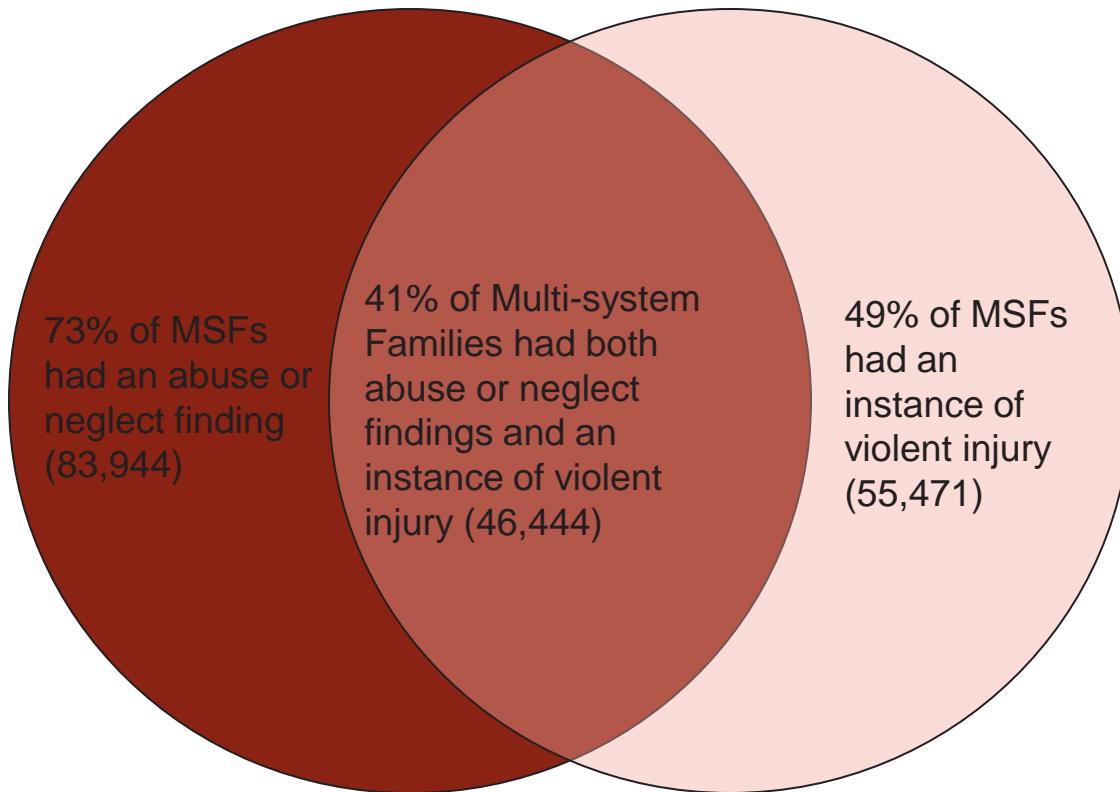
Violent injury incidents correspond to Medicaid paid claims for CCS codes for injury due to violence and those ICD-9 codes that were found to be highly indicative of abuse, neglect or violence.

Multi-system Families: Future directions

Potential research area	Benefit
Geography	• Identifying unique characteristics of MSFs in specific places
Recent problems	• Discovering the problems that may have the greatest impact on the current state of the family
Individual vs. family problems	• Revealing whether single individuals account for multiple problems within a family or whether several family members encounter problems
Magnitude of problems	• Delineating between families that have had few service spells versus families with multiple service spells. • Estimating the cost of providing state services to multi-problem families.
Additional family characteristics	• Problems: Asthma and chronic conditions • Assets: Employment and education
Trajectories	• Conduct longitudinal analysis to determine when these families become MSF

Good news first

- States and cities are developing their administrative data sources faster than ever
- They are even using the data for many different purposes
- And they are making the data public, so that data entrepreneurs are creating apps that inform the public and policymakers
- There are a number of federal initiatives that are promoting the development of administrative data

Examples

- Given the national effort to improve our competitiveness, a focus of the federal government has been in education and workforce development.
- In June 2012, the U.S. Department of Education (ED) awarded new Statewide Longitudinal Data Systems (SLDS) grants (started in 2005) and the U.S. Department of Labor (DOL) awarded new Workforce Data Quality Initiatives (WDQI) grants (started in 2011).
- Eight states received their first SLDS grants (Delaware, Oklahoma, New Jersey, South Dakota, Vermont, West Virginia, Puerto Rico, and the U.S. Virgin Islands).
- Three states (Hawaii, New Jersey, and Rhode Island) have new SLDS grants focused on workforce linkages and WDQI grants.
- Of course, the Longitudinal Employer-Household Dynamics (LEHD) program is the premier example of linking data to provide greater intelligence around employment.

http://www.dataqualitycampaign.org/files/2012%20SLDS%20and %20WDQI%20grants.pdf

However …

- It's happening to different degrees in different cities, counties, and states.
- There is a wide variation in who has access to the data that is being created and the quality of the data that is being built.
- It's also taking many years to develop these efforts in states and cities
- Best practices have not been disseminated to a sufficient extent
- States often rely on large corporate vendors, who will only go so far, and government agencies don't have the skilled staff necessary to take full advantage of the efforts

Silos

Special interests want us to believe that problems can be addressed one-by-one

But everyone knows that:

- Early nutrition and good parenting is associated with learning
- Learning is associated with getting a job
- A parent having a job is associated with child well-being
- Lack of school success is associated with criminal behavior

This is why "integration" or breaking down the silos is necessary in order to make policy and develop programs to improve the well-being of individuals and families.

It all starts with the local public sector

30 years ago, when there was less data, most public sector agencies had handfuls of analysts

Now, we're lucky if there is one per agency

Increasing focus on compliance, but that's not all that new

At the same time, the federal government is requiring evidence-based practice and evaluation in many areas of social programs, which is a major challenge, given the lack of research expertise in these agencies

Obstacles for local government getting help

Data sharing agreements
- More complicated as identity theft became more prevalent
- More complicated as FERPA, HIPPA, CFR 42 ...
- More complicated as leaders and their lawyers viewed information as power and that data sharing could lead to negative media

Contracts
- Certainly the easiest way to work with government, even though Universities are generally concerned that they limit academic freedom

Evaluations
- It's hard to justify using state tax dollars, so the few evaluations that are done are federally funded.

"Good luck getting the data sharing agreement through our lawyers...."

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Connecting academics and government

It's often the case that politics matter the most—policy and facts come second

There is not enough human capital in government to link to the researchers who can help

- Can they provide enough data?
- Can they deal with the legal problems in order to share the data?

Skepticism about the data

Most social scientists would rightly recommend the city make decisions based on evidence developed from high quality research. To them, that usually means data that they themselves collected or at least had a big hand in collecting data OR the data is blessed by the discipline AND a research design that fits the research question at hand.

The end

- There are real barriers that lead to data not flowing to those that need it
- The nature of these barriers vary from sector to sector and place to place, but there are common themes
- These barriers can be addressed and the federal government has to learn how to learn from those places that have had success
- Incentives have to be put into place for all jurisdictions to use their data to get smarter about what they are doing –
- Reviewing all federal research projects so that they are effectively using administrative data