Multi-System Families in Illinois

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Measuring Incarceration in Household Surveys

Chapin Hall at the University of Chicago
Policy research that benefits children, families, and their communities
The Multi-System Family Study

- Overview and highlights
- Approach
- Findings
- Future directions
Overview

Study rationale

- A small number of families in Illinois use a large portion of the State’s service resources.
- If the State could understand where these families are and what services they are using, the State could provide more adequate and efficient services.

Major problems identified for study

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

We are probably underestimating the statistics because we are not including all services, only the costliest.
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
Highlights of Findings

- **23 percent** of the study population were Multi-system Families (MSFs)
- MSFs accounted for **63 percent** of the total number of problems
- The MSFs accounted for **86 percent** of the dollars spent on all of the families in the study population
Multi-Problem Families Account for a Large Proportion of the Problems and Expenditures

- **Study Population Families**: 43% Families with no problems, 34% Families with one problem, 23% Families with multiple problems
- **Problems**: 37% Families with one problem, 63% Families with multiple problems
- **Dollars**: 14% Families with no problems, 86% Families with multiple problems

Legend:
- Families with multiple problems
- Families with one problem
- Families with no problems
Chapin Hall linked separate program data across Illinois departments

- **Human Services**
  - Food Stamp and TANF recipients 1989-2008

- **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
Criminal and Juvenile Justice Data

- Departments of Corrections and Juvenile Justice
  - Adult and Juvenile
  - 1991-present
  - Individual-level

- State Police
  - Arrest
  - Adult and Juvenile
  - 1991-present
  - Individual-level
Cook County Juvenile Court

Delinquency
1990-present
Hearing-level Events
Individual-level

Chicago Police Department

Arrests and Incidents
1995-present
Only Homicide Incidents are “well” identified
Identifying Multi-system Families

Case Creation Steps
1. Select cases by criteria
2. Link individuals within agencies
3. Link cases across agencies
4. Link service records to families

Family with no problems
- Julie
- Kyle

Family with one problem
- Gillian
- Henry

Multi-system family (family with 4 unique problems)
- Bill
- Alice
- Nancy
- Opal
- Clarice

Approach

DHS: Cases with women age 18-45 who received food stamps in 2007-2008
- Alice
- Bill
- Clarice
- Frank
- Julie
- Kyle

DHS Supercases: Cases with members in common merged
- Alice
- Bill
- Clarice
- Frank
- Julie
- Kyle

DHS-DCFS Families
- Gillian
- Henry
- Alice
- Bill
- Clarice
- Nancy
- Opal
- Frank

DCFS Supercases: Cases with members in common merged
- Alice
- Bill
- Clarice
- Frank
- Gillian
- Henry
- Alice
- Bill
- Opal
- Frank

DCFS: All cases
- Alice
- Bill
- Clarice
- Frank

Family with one problem
- Julie
- Kyle

Family with no problems
- Gillian
- Henry

Multi-system family (family with 4 unique problems)
- Bill
- Alice
- Nancy
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Substance abuse treatment
- Foster care
- Incarceration
- Juvenile detention
- Substance abuse treatment
Not all agency records were linked to families

<table>
<thead>
<tr>
<th>Service</th>
<th>Agency records in final dataset</th>
<th>Excluded records</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foster care</td>
<td>100%</td>
<td>None</td>
</tr>
<tr>
<td>Mental health</td>
<td>47%</td>
<td>▪ Individuals who could not be linked to a 2007-2008 female Food Stamp household member age 18-45 or DCFS case.</td>
</tr>
<tr>
<td>Substance abuse</td>
<td>53%</td>
<td></td>
</tr>
<tr>
<td>Adult incarceration</td>
<td>33%</td>
<td></td>
</tr>
<tr>
<td>Juvenile incarceration</td>
<td>47%</td>
<td></td>
</tr>
</tbody>
</table>

The smallest proportion of records included is that of adult incarceration where the population is predominantly male.

We can improve upon this with other data, namely birth certificates and child support enforcement data.
Mental health service was the most common problem
(Total number of problems=465,036)*

*The total number of problems (465,036) exceeds the total number of families with problems (285,722) because some families have multiple problems.
Incarceration, substance abuse treatment, and foster care were also common in Multi-system Families

<table>
<thead>
<tr>
<th>Problem</th>
<th>All families (502,165)</th>
<th>Families with one problem (171,368)</th>
<th>Families with multiple problems (114,355)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percent of All Families*</td>
<td>Number</td>
</tr>
<tr>
<td>Adult incarceration</td>
<td>56,649</td>
<td>11%</td>
<td>8,406</td>
</tr>
<tr>
<td>Juvenile incarceration</td>
<td>8,564</td>
<td>2%</td>
<td>366</td>
</tr>
<tr>
<td>Mental health</td>
<td>220,878</td>
<td>44%</td>
<td>113,321</td>
</tr>
<tr>
<td>Substance abuse</td>
<td>72,161</td>
<td>14%</td>
<td>3,675</td>
</tr>
<tr>
<td>Foster care</td>
<td>106,784</td>
<td>21%</td>
<td>45,599</td>
</tr>
</tbody>
</table>

*The percentages in the “Percent of All Families” column do not total 100% because families with no problems are not included.

**The percentages in the “Percent of Families with Multiple Problems” columns do not total 100% because families with multiple problems are counted once for each problem they have.
81 percent of Multi-system Families had abuse and neglect or intentional injuries

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: Potential future directions

<table>
<thead>
<tr>
<th>Potential research area</th>
<th>Benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Geography</td>
<td>• Identifying unique characteristics of MSFs in specific places</td>
</tr>
<tr>
<td>Recent problems</td>
<td>• Discovering the problems that may have the greatest impact on the current state of the family</td>
</tr>
<tr>
<td>Individual vs. family problems</td>
<td>• Revealing whether single individuals account for multiple problems within a family or whether several family members encounter problems</td>
</tr>
</tbody>
</table>
| 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 |