CHILD PROTECTIVE SERVICE INVOLVEMENT AMONG CHILDREN BORN TO MOTHERS IN FOSTER CARE
AN EXAMINATION OF CHILD PROTECTIVE SERVICE INVOLVEMENT AMONG CHILDREN BORN TO MOTHERS IN FOSTER CARE

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JOURNAL CITATION


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PROJECT OVERVIEW

The Children’s Data Network (CDN) is a university, agency, and community collaborative focused on the integration and application of data to inform programs and policies for children and their families. The CDN receives essential infrastructure funding from First 5 LA, the Conrad N. Hilton Foundation, and the Heising-Simons Foundation, additional project support from the Reissa Foundation and the Annie E. Casey Foundation, and operates in partnership with the California Child Welfare Indicators Project at UC Berkeley.
BACKGROUND
This study identified children born to mothers in foster care and documented Child Protective Service (CPS) involvement among children.

PURPOSE
This study was the first to develop multi-dimensional class profiles of two-generation CPS involvement among mother-child units.

DATA AND ANALYSES
Probabilistically linked birth and CPS records from California (2009-2012) were used to identify all mothers in foster care on or after conception. Children were followed prospectively using linked records to identify CPS involvement occurring during the first three years of life. Differences between reported and unreported children were examined using χ2 tests. Latent Class Analysis (LCA) identified classes of children born to mothers in care who were at increased risk of CPS involvement. Model fit was assessed, and for each class, the relationship to the distal outcome (i.e., a maltreatment report by age three), was examined.

FINDINGS AND IMPLICATIONS
Findings indicate that 53% of children born to mothers in care were reported to CPS. The proportion of children reported to CPS for maltreatment declined over time, from 63% of children born to mothers in foster care in 2009, to 46% in 2012. The LCA documented three distinct classes of mother-child units with varying risk of report. More than one third of children in Class 1 and nearly 70% of children in Class 3 were reported. This study documents that mothers’ experiences in care and mental health conditions vary widely, underscoring the importance of providing services that fit the needs of units.

SUMMARY
BACKGROUND
THE RATE OF TEEN BIRTHS HAS DROPPED OVER THE PAST QUARTER CENTURY AND STANDS AT A HISTORIC LOW,¹ YET A DISPROPORTIONATE NUMBER OF YOUTH IN FOSTER CARE STILL BECOME PARENTS DURING THEIR TEEN YEARS.

A study of California birth rates found that among females in foster care at age 17, 19.0% had given birth at least once before age 19 and 35.2% had given birth before age 21.³ As a result, many youths in foster care are transitioning from adolescence into adulthood when they are also becoming parents and ageing out of care,⁴ placing stress on both the
mother and child. Importantly, early motherhood is also associated with an increased risk of next generation child abuse maltreatment and child protection involvement.

The stress of early parenthood is compounded by the difficulties youth in care face. Older youth in care are at risk of “ageing-out,” a term used when youth exit because they reach the legal age limit for placement, at a time when a sizeable proportion may become parents. Historically, the age limit had been 18, but many states including California have increased opportunities for youth to remain in care as non-minor dependents, through age 21 (AB 212, Ch. 459, 2011). Analyses on mothers in care and their children are timely given these policy changes.

The number of births to youths in care was not documented by states prior to 2016 (S. 794, Ch. 425, 2015; P.L. 113–183, 2014), and little was known about child outcomes until recently. Dworsky found that among those who gave birth in Illinois while in care, 39% of children were investigated, 17% were substantiated as victims, and 11% were placed in out of home care by age five. These findings highlight the importance of improving knowledge of two-generation CPS involvement.

The present investigation identifies subpopulations of mother-child dyads that may vary in their risk of a maltreatment report to Child Protective Services (CPS) during the first three years of life based on factors recorded at birth. In California, children born to mothers in care are not reported due to the mother’s placement in care. This study used Latent Class Analysis (LCA) to examine how risk factors cluster among mother-child dyads in care.

Children born to mothers in foster care were identified using linked, administrative data. The proportion of CPS reports during the first three years of life was documented among children born between 2009 and 2012. Research has documented the variety of experiences among parents in care. This study is the first to examine this population of mother-child units in foster care and identify subgroups. The aim of identifying subgroups is to develop targeted services and nuanced policies.

Using probabilistically linked birth and CPS records from California, this study examined all pregnant and parenting mothers in care and the children’s CPS involvement. Birth records between 2009 and 2012 were used to identify all births to a mother who was under age 21. Birth records were then subset into two files for linkage to CPS records: one for the mothers and a second for the children. The first file linkage was used to identify all mothers who were in foster care on or after the estimated date of conception. The second file linkage was used...
to prospectively document the CPS involvement of children in the chosen birth cohorts. Open sourced probabilistic linkage software was used to develop record pairs, which were then clerically reviewed based on the match probability score. Additionally, 45 record pairs were randomly selected for case narrative review and for all 45 reviewed records, the accuracy of the linkage was verified.

**LINKAGE 1: ALL PREGNANT AND PARENTING MOTHERS IN CARE**

**LINKAGE 2: BABY’S CPS INVOLVEMENT**

**VARIABLES**

The distal outcome was defined as a report for alleged abuse or neglect during the first three years of life (yes, no). The proportion of children with CPS involvement was examined across birth cohorts and included CPS reports, substantiations, and removals. Demographic, child welfare case characteristics, and birth indicators were examined. The full list of variables can be seen in Table 1.

**VARIABLE SELECTION**

Descriptive statistics were used to characterize mothers in care and define factors for inclusion in the LCA. Differences between reported and unreported children were examined using $\chi^2$
Between 2009 and 2012, there were 2,094 pregnant or parenting mothers in foster care who gave birth for the first time. Births declined during this time period, from 543 in 2009 to 497 in 2012. The demographic makeup of the mothers can be seen in Figure 1.

**FINDINGS**

**FIGURE 1. DEMOGRAPHIC CHARACTERISTICS OF FIRST OFFSPRING BORN TO MOTHERS BETWEEN 2009 AND 2012 WHO WERE PREGNANT OR PARENTING WHILE IN FOSTER CARE**

- **Race/Ethnicity**: 51.7% Latina, 24.9% Black, 14.4% White, 9.0% Other
- **Maternal Age at Birth**: 64.6% Minor, 35.4% Nonminor
- **Paternity**: 58.8% Established, 41.2% Missing
- **Mental Health Diagnosis**: 66.0% None, 34.0% Present
- **Runaway History**: 50.7% Present, 49.3% None
- **Sexual Abuse**: 64.4% Yes, 35.6% No

Tests. Race/ethnicity was run as a post-hoc analysis so that stratifications across classes could be examined. The LCA was used to identify subgroups of children born to mothers based on risk of CPS involvement. Variables that were highly related to one another were not included in the same model. The final LCA model included maternal age at birth, paternity, mental health condition, and time in care / placement stability.

**LCA MODEL FIT**

Model fit was assessed using the Bayesian Information Criterion, entropy, and likelihood ratio tests. The fit of a one-class model was examined and the number of latent classes was increased until there was no benefit to adding more classes. After deciding on the number of latent classes, the relationship between the distal outcome was examined as it related to the constellation of characteristics. In LCA, the distal outcome provides information about how the subgroup characteristics relate to the outcome.27
As shown in Figure 2, next generation CPS involvement decreased over time. A $\chi^2$ test for trends showed the declines were statistically significant over time ($p<.01$). Among reported children, 40% were first reported when the mother was in a foster care placement while 60% of children were reported after the mother had exited.

![Figure 2. Proportion of babies with CPS involvement by age three](image)

All characteristics were significantly associated ($p<.05$) with the risk a child was reported during the first three years of life, with the exception of race / ethnicity. Factors that were associated with a lower risk of two generation CPS involvement included being older at the time of birth, and having established paternity. Risk factors included a documented maternal mental illness and a history of running away. Mothers who recently entered care had the greatest proportion of children who were reported.

Between birth and age three, 52.6% of children were reported to CPS ($n=1,102$). Almost all children reported were investigated ($992$ of $1,102$). Over half of reported children experienced a first report within five months of birth. By age three, one quarter (25.8%) of children had been substantiated as victims of maltreatment, and one in five (18.8%) had been removed and placed in foster care.

As shown in Figure 2, next generation CPS involvement decreased over time. A $\chi^2$ test for trends showed the declines were statistically significant over time ($p<.01$). Among reported children, 40% were first reported when the mother was in a foster care placement while 60% of children were reported after the mother had exited.

**FIGURE 2. PROPORTION OF BABIES WITH CPS INVOLVEMENT BY AGE THREE**
As displayed in Figure 3, class membership probabilities of this 3-class solution show that 30.1% of mother-child units fell into Class 1 (n=631), 46.6% in Class 2 (n=976), and 23.3% in Class 3 (n=487). Demographic and child welfare characteristics significantly differed across classes and were used to assign descriptive labels to each class to assist with interpretation.

**FIGURE 3. CONSTELLATION OF RISK FACTORS ACROSS CLASSES**

**CLASS 1 – LOWEST RISK**

- **Nonminor Mothers with Stable Placements**
  - 30% of population (N=631)
  - 0% minor
  - 19% missing paternity
  - 34% mental health diagnosis
  - ≤1 year in care
  - >1 year and 1-2 placements
  - >1 year and 3+ placements

**CLASS 2 – MEDIUM RISK**

- **Minor with Short Placements**
  - 47% of population (N=976)
  - 36% probability of report
  - 88% minor
  - 45% missing paternity
  - 13% mental health diagnosis
  - ≤1 year in care
  - >1 year and 1-2 placements
  - >1 year and 3+ placements

**CLASS 3 – HIGHEST RISK**

- **Mothers with Unstable Placements and Mental Health Conditions**
  - 23% of population (N=487)
  - 68% probability of report
  - 78% minor
  - 58% missing paternity
  - 98% mental health diagnosis
  - ≤1 year in care
  - >1 year and 1-2 placements
  - >1 year and 3+ placements
Class 1 was labeled “Non-minor mothers with stable placements.” None of the mothers were minors at the time of birth, the large majority had paternity established at birth, one third had a mental health condition, and nearly half had been in care for more than a year with fewer than three placements. Class 2 was the largest and labeled “Minor mothers with short placements.” Almost nine in ten mothers in this group were minor mothers at the time of birth. Less than half had paternity established and few had a mental health condition (13.2%). Nearly 40% had been in placement for less than a year. The highest risk group, Class 3, was termed “Mothers with unstable placements and mental health conditions.” More than three-fourths of mothers were minors and 58% did not have paternity established. Nearly all had mental health conditions. All of these mothers were in care for more than a year and 71% had experienced more than three placements.

Post-hoc analyses documented notable differences across class probabilities by race / ethnicity, sexual abuse history, experiences running away from care, and mother’s placement at the child’s first report, as displayed in Table 2. Hispanic mothers were concentrated in Class 2, which was also the class with the youngest mothers. Mothers who were white were fairly evenly distributed, but the highest proportion fell into Class 3. Mothers who were black were concentrated in Class 3, the class with unstable placements and a higher risk of mental health conditions. Maternal sexual abuse allegation was most common among mothers in class Class 3. Likewise, Class 3 mothers had the highest proportion of mothers who had run away from care; the risk of running away increased across classes.

Using a second LCA, the distal outcome (i.e. a CPS report by age three) was incorporated and the association between class membership and risk of two-generation CPS involvement was assessed. Class 1 (Non-minor mothers with stable placements) had the lowest proportion of children reported to CPS by age three (36%). Meanwhile, in Classes 2 (Minor mothers with short placements) and 3 (Mothers with unstable placements and mental health conditions), more than half of children were reported by age three (55% and 68%, respectively).

This study was the first to develop multi-dimensional class profiles of two-generation CPS involvement among mother-child units. This work is timely given the growing interest in research on national policies related to parents in care and children. Federal law allows states to extend foster care services to age 21, a time when many youths become pregnant. This policy change provides an opportunity to engage parents with supports and services during the early parenting period that may improve two-generation outcomes. This study highlighted four key findings that are relevant to policy, practice, and research.
There is an early and concentrated risk of CPS involvement among children born to mothers in foster care. The present investigation found 53% of children born to mothers in care were reported by age three, a proportion higher than the state’s general population of three-year-old children (10%). The findings suggest children born to mothers in care are a uniquely vulnerable population.

Findings call attention to the variability of the population and the dissimilar service needs that exist for mothers and children. More than a third of children in Class 1 were reported and nearly 70% in Class 3 were reported. These findings indicate that the characteristics of classes are qualitatively distinct, as their services should be.

The heightened risks for children born to the youngest mothers stood out. The large majority of mothers in the two higher risk classes were minors, with nearly 40% being aged 16 or younger at birth. This underscores the importance of finding supportive, stable, and long-term placements for young mothers.

Mothers in Class 3 with unstable placement histories likely need significant supportive resources to address comorbid issues (i.e. mental health conditions and past sexual abuse trauma). The treatment and service interventions should reflect these identifiable needs and the LCA demonstrated the need to develop distinct services.

Not only are the characteristics of the mother-child dyads distinct, but information collected in birth and child welfare records was related to child outcomes across all classes. The mother’s history of running away from care was associated with an increased risk of a child’s CPS report. A stable placement history was an indication of better outcomes and aligns with research that suggests that youth who spend longer periods in care may accumulate benefits over time in comparison to youth with shorter stays. The current study also provides further evidence that a sexual abuse history is prevalent among mothers in care; specifically, 68% had a past allegation of sexual abuse.

Although still high, the proportion of children who were reported to CPS for maltreatment has declined over time. Although a statistically significant trend, the period was relatively short; for that reason, caution should be exercised when drawing conclusion. While two-generation rates of CPS involvement decreased, the proportion of mothers remaining in care at older ages increased. That said, the decline in child CPS reports remained significant even after restricting the sample to minor mothers. Recent policies aimed at supporting parents in care may be related to the shrinking proportion of child reports over time in California, such as Whole Family Foster Homes, where children live with their parents in supportive placements whenever possible.
CITATIONS


**TABLE 1. DEMOGRAPHIC CHARACTERISTICS OF FIRST OFFSPRING BORN TO MOTHERS BETWEEN 2009 AND 2012 WHO WERE PREGNANT OR PARENTING WHILE IN FOSTER CARE**

<table>
<thead>
<tr>
<th>Maternal Race/Ethnicity</th>
<th>All mother-child dyads (N=2,094)</th>
<th>Offspring reported in the first 3 years of life (N=1,102)</th>
<th>χ²</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>col %</td>
<td>n</td>
<td>row %</td>
<td>p-value</td>
</tr>
<tr>
<td>White</td>
<td>14.4</td>
<td>164</td>
<td>54.3</td>
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</tr>
<tr>
<td>Black</td>
<td>24.9</td>
<td>287</td>
<td>55.1</td>
<td>p=0.109</td>
</tr>
<tr>
<td>Hispanic</td>
<td>51.7</td>
<td>543</td>
<td>50.1</td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>9.0</td>
<td>108</td>
<td>57.5</td>
<td></td>
</tr>
<tr>
<td>Maternal Age at Birth</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Minor</td>
<td>64.6</td>
<td>783</td>
<td>57.9</td>
<td>p&lt; .001</td>
</tr>
<tr>
<td>Nonminor</td>
<td>35.4</td>
<td>319</td>
<td>43.1</td>
<td></td>
</tr>
<tr>
<td>Paternity</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Established</td>
<td>58.8</td>
<td>615</td>
<td>49.9</td>
<td>p=.003</td>
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<tr>
<td>Missing</td>
<td>41.2</td>
<td>487</td>
<td>56.5</td>
<td></td>
</tr>
<tr>
<td>Mental Health Condition</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>66.0</td>
<td>694</td>
<td>50.2</td>
<td>p=.002</td>
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<tr>
<td>Present</td>
<td>34.0</td>
<td>408</td>
<td>57.3</td>
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<tr>
<td>Runaway History</td>
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<td></td>
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<td></td>
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<tr>
<td>None</td>
<td>49.3</td>
<td>485</td>
<td>47.0</td>
<td>p&lt; .001</td>
</tr>
<tr>
<td>Present</td>
<td>50.7</td>
<td>617</td>
<td>58.1</td>
<td></td>
</tr>
<tr>
<td>Time in Care/Placement</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stability</td>
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<td></td>
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</tr>
<tr>
<td>&lt;=1 year</td>
<td>36.0</td>
<td>255</td>
<td>56.5</td>
<td>p&lt; .001</td>
</tr>
<tr>
<td>&gt;1 year and 1-2 placements</td>
<td>36.7</td>
<td>262</td>
<td>51.5</td>
<td></td>
</tr>
<tr>
<td>&gt;1 year and 3+ placements</td>
<td>27.3</td>
<td>585</td>
<td>51.6</td>
<td></td>
</tr>
<tr>
<td>Sexual Abuse Allegation</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No</td>
<td>35.6</td>
<td>355</td>
<td>47.7</td>
<td>p&lt; .001</td>
</tr>
<tr>
<td>Yes</td>
<td>64.4</td>
<td>747</td>
<td>55.4</td>
<td></td>
</tr>
</tbody>
</table>

Note. The χ² was used to assess the pairwise differences between children who were reported and those who were not reported by covariates. The resulting p-values are reported.
### TABLE 2. CONSTELLATION OF RISK FACTORS ACROSS CLASSES

3 Classes: Membership and Item Response Probabilities

<table>
<thead>
<tr>
<th>Class Name</th>
<th>Class Membership Probabilities</th>
<th>Distal Outcome</th>
<th>Item Response Probabilities</th>
<th>Post-Hoc Analyses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Class 1 (lowest risk): Nonminor mothers with stable placements</td>
<td>631 (0.301)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Class 2 (medium risk): Minor with short placements</td>
<td>976 (0.466)</td>
<td>CPS report: 0.36</td>
<td>Maternal age at birth (minor, nonminor)</td>
<td></td>
</tr>
<tr>
<td>Class 3 (highest risk): Mothers with unstable placements and mental health conditions</td>
<td>487 (0.233)</td>
<td></td>
<td>Paternity (established, missing)</td>
<td></td>
</tr>
</tbody>
</table>

#### Distal Outcome

<table>
<thead>
<tr>
<th>CPS report</th>
<th>0.36</th>
<th>0.55</th>
<th>0.68</th>
</tr>
</thead>
</table>

#### Item Response Probabilities

- **Maternal age at birth (minor, nonminor)**
  - Minor: 0.00
  - Nonminor: 0.88
  - Overall: 0.78
- **Paternity (established, missing)**
  - Established: 0.19
  - Missing: 0.45
  - Overall: 0.58
- **Mental health condition (none, present)**
  - None: 0.34
  - Present: 0.13
  - Overall: 0.98
- **Time in care/placement stability**
  - <=1 year: 0.00
  - >1 year and 1-2 placements: 0.48
  - >1 year and 3+ placements: 0.53
  - Overall: 0.71

#### Post-Hoc Analyses

- **Maternal race/ethnicity**
  - White: 0.15
  - Black: 0.19
  - Hispanic: 0.57
  - Other: 0.09
  - Overall: 0.45
- **Sexual abuse allegation (no, yes)**
  - No: 0.54
  - Yes: 0.60
  - Overall: 0.68
- **Runaway history (none, present)**
  - None: 0.43
  - Present: 0.30
  - Overall: 0.82

Note. All probabilities may not sum to 1.00 due to rounding. The level of risk refers to the likelihood of a child CPS report. The class membership probabilities show the proportion of individuals falling into each class. The distal outcome was run in a second LCA and reflects the proportion of youth in the class who were reported in three years. Item response probabilities present the distribution of individuals within each covariate level in a given class.