Perinatal Substance Abuse: The Impact of Reporting Infants to Child Protective Services

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ABSTRACT. Objective. The purposes of this study were to follow the judicial placement of newborns with positive toxicology screening results and to determine how long such infants remained in foster care, separated from their mothers or other relatives, and the length of court dependency. We also determined the mothers’ compliance with court orders, the availability and use of rehabilitative services, factors used by the court to determine the final disposition, and the eventual placement of the infants.

Methods. The cohort sample consisted of all infants from San Mateo County (CA) born at Stanford University Hospital during a 2-year period whose urine tests in the well-baby nursery were positive for illicit substances. Fifty-three newborns were identified, and their medical records and court documents were matched and reviewed from birth until termination of judicial review (or 5 years). Data were summarized and analyzed by logistic regressions to identify predictors of specific outcomes.

Results. All 53 infants had normal physical examinations and uneventful hospital courses. Their ethnic distribution, with 68% being African-American and 7% being Hispanic, differed from the rest of the nursery population, which was predominantly Hispanic. Twenty-six (46%) of the 53 infants were returned to their mothers within 1 week of birth; 39 (76%) of the infants were reunited with some relative within the first month of life. At 12 months of age, 10 infants (19%) remained in foster care; however, none remained in foster care beyond 18 months. The length of time infants were dependents of the court ranged from 1 month to 5 years; 70% of the cases were “closed” between 6 and 30 months of life. Nine (17%) were dependents of the court for >36 months. Final placement of the infants was 35 (66%) reunited with at least one parent, 9 (17%) in long-term guardianship relationships with other relatives, and 9 (17%) adopted. All of the mothers were ordered to complete a drug rehabilitation program; 24 mothers (44%) fully complied and had repeatedly drug-free urine tests; 2 others (4%) had drug-free urine tests after incomplete participation in drug rehabilitation. Twenty-two (42%) of the mothers never complied with drug rehabilitation. Subsequent drug use was evident in less than half of the mothers during the period of study. Only one mother was reported for child abuse. Characteristics that most strongly predicted failure in family reunification were a history of failed drug rehabilitation, previous involvement of Child Protective Services, or previous removal of a child because of substance abuse.

Conclusion. Identifying and reporting newborns exposed to maternal substance abuse during pregnancy can be associated with beneficial changes in the environment of the infants and successful rehabilitation of many mothers. The use of judicial supervision, rehabilitative and supportive services, and long-term involvement of social services without criminal prosecution are key to successful outcome. This study supports the policy and recommendation of the American Academy of Pediatrics and should lessen health professionals’ concerns about negative effects of reporting these patients to Child Protective Services.

ABBREVIATIONS. SIDS, sudden infant death syndrome; CPS, Child Protective Services; CPR, cardiopulmonary resuscitation.
drug traffickers.\textsuperscript{45} A more therapeutic model holds that a diagnosis of child neglect is intended to lead to the provision of rehabilitative services to further the best interests of the child.\textsuperscript{45,47–49} The American Academy of Pediatrics considers unethical the practice of performing drug screening for the primary purpose of detecting illegal use.\textsuperscript{50} The medical literature has not ignored the controversial legal ramifications of criminal prosecution of new parents.\textsuperscript{45,49–54} Studies conducted to examine which infants are most likely to be placed in foster care show that the race and age of the mother are significant factors.\textsuperscript{1} However, to our knowledge, no study has been conducted to assess the long-term consequences for the infants or their mothers resulting from newborn drug screening results being reported to judicial authorities. Many questions need answering: Are adequate resources to assist the families provided? Are effective rehabilitative services available and are they used by the mothers? Do the infants return to their mothers or languish in foster care for long periods of time? For how long do the courts retain legal custody and control of the infant? What are the factors that lead to termination of court involvement? In short, does the reporting of these children really benefit either the infant or the mother? Answering these questions through large studies will be difficult because of complex interactions among the medical, legal, and social systems. Moreover, because of the lifestyles accompanying illicit activity and substance abuse, the study population is diverse and difficult to follow prospectively.

The purpose of this study was to examine what happened to mothers and infants in one county in Northern California after the infants’ positive toxicology screening results were reported to county authorities. This report presents descriptive information intended to begin the process of answering the questions presented above. It is based on a retrospective and concurrent review of medical and social service agency records, following a group of drug-exposed newborns for 5 years.

METHODS
Policies and Drug Testing
In the well-baby nursery of Stanford University Hospital, a urine toxicology screen was performed on all newborns whose mothers met one or more of the following criteria: drug use in the previous year, no prenatal care or a few prenatal visits with many missed appointments, unexpected delivery of an infant outside the hospital, or abruptio placentae. Urine was analyzed by gas chromatography and mass spectrometry. Each infant whose urine tested positive for an illegal substance was reported immediately to the county social services department and placed in protective custody of the court, which meant that the infant could not leave the hospital without court approval. At the time of this study, such infants were discharged routinely from the hospital to foster care while assessment of their home and family was undertaken by social workers from the Child Protective Services (CPS). A court hearing (initial detention hearing) was required within 1 week of hospital discharge to determine the longer-term placement and custody of the infant and to stipulate orders for the parents. Every 3 months thereafter, follow-up hearings were scheduled to review the parents’ progress and compliance and to make additional determinations regarding custody of the infants.

Physical custody and legal control of the infant are two distinct and somewhat independent parameters. Although physical custody could be awarded to a mother, her infant might remain a dependent of the court, ensuring that county agencies could monitor the infant’s health and safety and the mother’s activity and rehabilitative efforts. Provision of preventive and rehabilitative services was a policy requirement of the county; the current emphasis of child welfare services is on keeping the family intact. Cases could be closed and court involvement terminated at any of the review hearings, but a final determination of custody and placement was required before 18 months of age. The length of time the infants were dependents of the court was determined by the judicial review of each mother’s compliance with court orders and by reports from social service workers regarding her progress and stability and the safety of the infant’s environment.

Subjects
The subjects were drawn from the infants on the teaching service of the well-baby nursery at Stanford University Hospital. This service comprised all newborns who do not have a private pediatrician on the hospital medical staff. All newborns who had positive urine toxicology screening results during a 2-year period were identified. The medical records of those with addresses in San Mateo County (CA) were reviewed and matched by name and date of birth with records in the county’s Department of Social Service. Data from the medical records included the mother’s age, race, marital status, and prenatal history, as well as the infant’s physical examination, neonatal course, laboratory results, length of hospitalization, and discharge plans. The county social service records included the findings and results of the judicial hearings and all reports by case workers. These data included information about the mother (eg, previous social history, reasons for detaining the infant, compliance with previous court orders, services used, and housing and employment arrangements) and the infant (placement and custody status before and after each hearing, services received, and reasons for closing the case). Developmental status of the infant was not documented regularly and therefore was not included in data collection. This information from the medical and social service records was coded and entered into computerized databases, identified by number codes only. Access to the data was granted after successfully petitioning the court for each case. Because the study consisted of data review and because the court had legal custody of the children while their cases were active, consent for access to the records was not requested from individual parents or foster parents. The study protocol was reviewed and approved by the Institutional Review Board at Stanford University.

The people using the teaching service of the well-baby nursery represented a diverse population: 75% were Hispanic, 15% were non-Hispanic Caucasians, 8% were African-American, and 2% were Asian or South Pacific Islanders. Most were enrolled in or eligible for Medicaid.

Statistical Analysis
The JMP and SAS statistical programs were used to perform univariate and multivariate analyses. Exploratory data analysis was undertaken using \( \chi^2 \) tests for categorical variables and logistic regression to assess several independent variables as predictors of eventual placement of the infants and the duration of court custody.

RESULTS
There were 2420 infants on the teaching service of the nursery during the 2-year period of subject enrollment. A total of 540 infants underwent urine toxicology screening; 112 infants from three counties tested positive, with 65 from San Mateo County. The medical and social service records were matched and complete data retrieved for 53 infants from San Mateo County. Considering the maternal age, parity, indications for urine testing, clinical findings, and the drugs identified, there were no characteristics distinguishing the 12 incomplete or unmatched sets of records from this county. During the enrollment period, two other infants were discharged from the
well-baby nursery to foster care. They had no documented drug exposure, and they were not part of this study.

Cocaine was the principal drug identified, being present in 47 infants. Opiates were identified in 5, amphetamines in 2, and other drugs in 4. Five infants had more than one drug identified.

During the period subjects were entered into this study, four other infants were also discharged from the well-baby nursery to foster homes. They were not included in this study because their needs for social services were not related to substance abuse.

Subject Characteristics

Demographic and clinical characteristics of the subject population are shown in Table 1. The age of the mothers was distributed normally around a mean of 26 years. This is similar to the age distribution of other mothers using this perinatal center. However, their ethnic distribution did not reflect the general population of the teaching service of this nursery (described previously): almost two thirds of the subjects were African-American and a minority were Hispanic, Caucasian, or Asian. A large majority of the mothers had previous pregnancies and were not married. Most had previous abortions. Social service files frequently revealed previous incarceration (18 mothers), involvement of CPS before this pregnancy (19 mothers), previous placement of children in foster care (16 mothers), and attempted drug rehabilitation (16 mothers). Several mothers had two or three of these characteristics.

All of the infants had normal physical examinations, with about one in three described as jittery. Five (9%) were slightly premature, but mature and well enough to remain in the level 1 nursery; the others were full-term and of normal weight. No behavioral or physical characteristics specific to substance abuse were recorded.

Initial Disposition

All 53 infants were dependents of the court when discharged from the hospital. A total of 50 (94%) of the infants went from the hospital directly to foster homes, 2 (4%) were entrusted to relatives, and 1 infant went home with the mother. Less than 1 week after her infant’s discharge from the hospital, each mother attended a detention/dispositional hearing (Table 2).

Duration of Foster Care and Subsequent Separation From Parent

The length of time the infants were separated from their mothers and in foster care is illustrated in Fig 1. For a majority, foster care placement lasted <1 week; 26 (46%) of the infants were returned to their mothers, and 5 (9%) were placed with relatives as a result of the initial disposition/detention hearing. Eight others (15%) were returned to a parent later in the first month of life. One of those placed initially with relatives also returned to a parent within the first month. Thus, within 1 month of birth, 74% (39/53) had been reunited with relatives or parents; 66% (35/53) were with a parent, and 8% (4/53) were with relatives.

Of the 14 (26%) who remained in nonrelative foster care for >1 month, 3 were united eventually with relatives (after 2 to 10 months of foster care) and 5 were returned to a parent (2 in the second and third months, 2 as a result of the 6-month hearing, and 1 after 18 months). Thirteen infants in this study (25%) were never reunited with their parents; only 6 (11%) were never reunited with relatives.

No infant was placed for adoption in the first 6 months of life. Yet no infant was in foster care >18 months without being in the process of being adopted. Of the 26 infants who were returned to their parents in the first month of life, 7 (27%) eventually reentered the foster care system because of continued drug use by the mother. At 12 months of age, 10 infants (19%) remained in foster care. All of the others had been returned to relatives or parents, or they had been placed in long-term guardian relationships or adopted. Most infants who were successfully reunited with their mothers did so in the early postpartum period. The median time spent in

TABLE 1. Characteristics of the Mothers and Infants

<table>
<thead>
<tr>
<th></th>
<th>Mean Value or Percentage</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mothers</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>25.75</td>
<td>17–38</td>
</tr>
<tr>
<td>White (%)</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Hispanic (%)</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>African American (%)</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>Asian (%)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Medicaid (%)</td>
<td>94</td>
<td></td>
</tr>
<tr>
<td>Single (%)</td>
<td>75</td>
<td></td>
</tr>
<tr>
<td>Married (%)</td>
<td>13</td>
<td></td>
</tr>
<tr>
<td>Separated (%)</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Divorced (%)</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>Gravida</td>
<td>3.96</td>
<td>0–9</td>
</tr>
<tr>
<td>Parity (live births)</td>
<td>1.45</td>
<td>0–8</td>
</tr>
<tr>
<td><strong>History</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No abortion (%)</td>
<td>29</td>
<td></td>
</tr>
<tr>
<td>1 Abortion (%)</td>
<td>35</td>
<td></td>
</tr>
<tr>
<td>&gt;1 Abortion (%)</td>
<td>39</td>
<td>1–9</td>
</tr>
<tr>
<td>Incarceration (%)</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>CPS* (%)</td>
<td>36</td>
<td></td>
</tr>
<tr>
<td>Previous removal of child (%)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Drug rehabilitation attempt (%)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td><strong>Infants</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weight, g</td>
<td>2956.4</td>
<td>2211–3856</td>
</tr>
<tr>
<td>Gestational age, weeks</td>
<td>39</td>
<td>36–41</td>
</tr>
<tr>
<td>Fussy/jittery (%)</td>
<td>30</td>
<td></td>
</tr>
<tr>
<td>Respiratory symptoms (%)</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

* CPS indicates previous involvement with Child Protective Service.

TABLE 2. Duration of Services Provided to Infants and Separation From Relatives (Days)

<table>
<thead>
<tr>
<th>Service</th>
<th>Median</th>
<th>Mean</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Initial hospitalization</td>
<td>3</td>
<td>3</td>
<td>1–12</td>
</tr>
<tr>
<td>Time to first hearing</td>
<td>5</td>
<td>3.5</td>
<td>1–28*</td>
</tr>
<tr>
<td>Court dependence</td>
<td>411</td>
<td>633</td>
<td>30–2488</td>
</tr>
<tr>
<td>Separation from any relative</td>
<td>6</td>
<td>44</td>
<td>2–547</td>
</tr>
<tr>
<td>Separation from any parent</td>
<td>6</td>
<td>43</td>
<td>2–547</td>
</tr>
</tbody>
</table>

* All hearings were initiated within 7 days of discharge from the hospital. Four continued for as long as 28 days.
foster care for infants who returned to their parents was only 6 days.

**Duration of Dependent-of-the-Court Status**

The duration of dependent-of-the-court status ranged from 30 days to >6 years, but most (28 infants, 53%) were dependents of the court for 6 to 36 months (Fig 2). The median length of time for court dependency was slightly >13 months (Table 2). Although 4 infants (8%) had their cases closed and their dependency status terminated in the first 4 months and 9 cases (17%) were closed after the first 6-month review hearing, the most common time for termination of dependency status was at the 12-month review hearing (16 infants, 30%). Nine infants (17%) were dependents of the court for >36 months; all 9 had been placed before 1 year of age into long-term guardianship relationships that were reviewed periodically by the court.

**Justification for Closing the Cases and Terminating Court Dependency**

The reasons for terminating dependency status were listed in court records. For infants who were...
returned to their parents, the most common reasons were “establishment of a stable home” (30 infants, 57%), “repeatedly negative drug tests” (26 infants, 49%), and “no need for further investigation” (24 infants, 45%). Seventeen cases (32%) became “inactive” when the infant was adopted or was placed in permanent guardianship. Seven cases (13%) were closed when the infant moved to another jurisdiction within the same state; 3 (6%) moved out of state; 2 (4%) were lost to court follow-up.

**Eventual Custody Determination**

The eventual custody determination for the infants is shown in Table 3. When court involvement and active case management by social services were terminated, 35 infants in this study (66%) had been placed permanently in the custody of a biological parent (31 in the mother’s custody, 4 with the father). Five (9%) had been placed permanently in the custody of relatives other than parents; 9 (17%) had been adopted, some by relatives.

Table 3 also lists the place of residence of the person with legal custody of the child at the time the case was closed. A total of 16 (30%), including those adopted by nonrelatives, were residing in a two-parent home. Fourteen (26%) lived with one biological parent; 20 (38%), including some who were with their mother, resided in the home of relatives.

**Services Rendered and Compliance With Orders**

The most frequent court orders stipulated at the initial hearing are listed in Table 4. Virtually all of the mothers were ordered to complete drug rehabilitation and education programs and to provide urine for drug testing during random visits by public health nurses. The county provided rehabilitation programs; in 3 cases (6%), residential treatment was specified. Six months after leaving the hospital, 15 mothers (28%) had complied with the order for drug rehabilitation and 12 (22%) had produced drug-free urine on random tests. At the time of termination of court dependency, however, 24 mothers (44%) both had complied fully with the rehabilitation program and had consistently “clean” urine test results. Two other mothers (4%) had repeatedly drug-free urine test results despite not completing the rehabilitation program. In these 26 cases, the child was eventually placed in custody and control of at least one biological parent. Twenty-one other mothers (42%) never complied with drug rehabilitation; 17 (81%) of these mothers never regained custody of their infants. Seventeen mothers had random urine tests demonstrating continued drug use; only 1 of these women regained full custody of her infant. Of all orders given to the mothers, complying with drug rehabilitation and having negative urine drug test results were the orders linked most closely with regaining custody of the infant.

**Subsequent Maternal Problems**

After the initial hearing, subsequent problems were recorded for 23 (43%) of the mothers while the infant was still a dependent of the court. These problems, which invariably interfered with reunification efforts, included documented return to habitual drug use (17 mothers), being incarcerated (4 mothers), giving birth to another infant with positive urine drug screening results (5 mothers), and being reported for child abuse (1 mother).

**Predicting Eventual Disposition**

Exploratory data analysis was performed to investigate whether family reunification success could be predicted by specific maternal characteristics suggested by previous literature and comments in the judicial records. Initially, a series of $\chi^2$ tests was performed to examine differences among three groups of infants: those whose reunion with a parent occurred in the first week after leaving the hospital; those who reunited >1 week after discharge; and those who never reunited with a parent. The results of this exploration are shown in Table 5. The 22 mothers who were reunited with their infants within 7 days of leaving the hospital were slightly older but had fewer pregnancies and fewer living children than the others. However these characteristics did not differentiate this group statistically. However,

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**TABLE 3.** Eventual Custody Arrangements for the Infants

<table>
<thead>
<tr>
<th>Place of Residence</th>
<th>Person Awarded Permanent Custody</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mother</td>
<td>Father</td>
</tr>
<tr>
<td>Home with two parents</td>
<td>12</td>
<td>—</td>
</tr>
<tr>
<td>Home with one parent</td>
<td>12</td>
<td>2</td>
</tr>
<tr>
<td>Home of relatives</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Home of unrelated</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>—</td>
</tr>
<tr>
<td>Total</td>
<td>31</td>
<td>4</td>
</tr>
</tbody>
</table>

* For parents who were granted custody of the child.

**TABLE 4.** Requirements and Court-Ordered Services for the Mothers

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Mothers Ordered to Comply</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drug rehabilitation program</td>
<td>53 (100)</td>
</tr>
<tr>
<td>Random urine drug testing</td>
<td>52 (98)</td>
</tr>
<tr>
<td>Public health nurse visits</td>
<td>46 (87)</td>
</tr>
<tr>
<td>Cardiopulmonary resuscitation course</td>
<td>42 (79)</td>
</tr>
<tr>
<td>Cooperation with social services</td>
<td>6 (43)</td>
</tr>
<tr>
<td>Keeping infant’s medical appointments*</td>
<td>35 (66)</td>
</tr>
<tr>
<td>Psychological counseling</td>
<td>21 (40)</td>
</tr>
<tr>
<td>Parenting education</td>
<td>13 (25)</td>
</tr>
</tbody>
</table>

* For parents who were granted custody of the child.
the “early reunion” mothers were significantly less likely to have had a child removed from the home or any previous contact with CPS, or to have had a history of failed attempts at drug rehabilitation. They were more likely to have had at least some prenatal care and to live in their own homes or in the homes of relatives. Mothers who lived with the father of the infant also regained custody earlier. All of these characteristics were noted in court assessments of the home environment.

In contrast, mothers who never regained custody of their infants were more likely to be African-American, to have had a history of previous involvement with CPS, or to have had a child removed from the home previously. They were also more likely to have failed drug rehabilitation.

Logistic regressions were used to explore these data further, using the maternal characteristics that appeared significant by χ² tests. Although the model as a whole did not exhibit statistical significance, two characteristics that were related strongly to infants never returning to a parent were the mother’s previous involvement with CPS and the mother having previously lost custody of a child. The odds ratio for a mother with previous CPS involvement never having her infant returned to her was 3.4.

Maternal failure at previous rehabilitative attempts and the absence of a father capable of helping were the two variables related strongly to not reuniting in the first week after hospital discharge, but they did not distinguish between late reunification and nonreunification. Five of the 16 mothers who had failed rehabilitation previously eventually did succeed this time and regained full custody of the infant involved in this study. An additional characteristic, the amount of prenatal care received, was related linearly to the timing of the infant’s return to the mother, with more prenatal care being associated with early return of the infant.

**Impact of Policy on Living Situation of Infants and Mothers**

In all but one case, the investigation initiated by the reporting of the infant’s urine toxicology test results led to identification of significant dysfunction in the mother’s living situation. In the families in which the infant was returned to the mother at the earliest hearing, these dysfunctions were not considered physically dangerous to the welfare of the infant. Whether such identification can lead to productive intervention was one of the initial questions this study attempted to address.

Twenty-four (45%) of the mothers completed a drug rehabilitation program and produced negative urine drug screening results for a prolonged period, as a consequence of court orders. Twenty-four mothers (45%) were unable to comply with the orders to complete a rehabilitation program, some because they never got involved in a program, others because they tried and failed, and a few because they moved. Fourteen of the 22 mothers ordered to undergo psychiatric treatment or counseling complied. Twenty-one (40%) of the mothers eventually established housing considered by the courts to be stable. In 26 cases (49%), services offered were used fully by the mothers. In 6 cases (11%), the mothers partially used services available, and in 9 additional cases (17%), only the children received benefits of services.

**DISCUSSION**

For the general pediatrician, reporting infants who have experienced fetal drug exposure is not particularly controversial if the act of reporting leads to remedial and beneficial action, because the traditional role of the physician is that of provider of therapy. However, if there are no beneficial outcomes of reporting these situations, the practice cannot be condoned. The findings of this study support the idea that identifying and reporting maternal substance abuse during pregnancy can be associated with beneficial changes in the environment of the infants and successful rehabilitation of the mother when the reporting process is accompanied by judicial investigation, provision of rehabilitative and supportive services, and long-term involvement of the courts or social services without criminal prosecution. This is entirely consistent with and would

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**TABLE 5.** Maternal Characteristics Grouped by Duration of Infant’s Separation From Mother

<table>
<thead>
<tr>
<th>Maternal Characteristic</th>
<th>Early Return (n=22)</th>
<th>Late Return (n=13)</th>
<th>Never Returned (n=18)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (mean ± SD)</td>
<td>25.9 ± 5.1</td>
<td>27.1 ± 7.2</td>
<td>24.6 ± 4.2</td>
</tr>
<tr>
<td>Gravity (mean ± SD)</td>
<td>3.7 ± 1.4</td>
<td>4.3 ± 1.2</td>
<td>4.0 ± 1.9</td>
</tr>
<tr>
<td>No. of living children (mean ± SD)</td>
<td>1.2 ± 0.9</td>
<td>1.7 ± 1.7</td>
<td>1.4 ± 0.8</td>
</tr>
<tr>
<td>No. of abortions</td>
<td>1.5 ± 1.3</td>
<td>1.6 ± 1.5</td>
<td>1.4 ± 1.5</td>
</tr>
<tr>
<td>Any prenatal care (%)</td>
<td>72</td>
<td>61</td>
<td>38</td>
</tr>
<tr>
<td>Polydrug use (%)</td>
<td>9</td>
<td>30</td>
<td>33</td>
</tr>
<tr>
<td>Lives with relatives or in own home (%)</td>
<td>65</td>
<td>23</td>
<td>33</td>
</tr>
<tr>
<td>White (%)</td>
<td>31</td>
<td>30</td>
<td>5</td>
</tr>
<tr>
<td>African-American (%)</td>
<td>59</td>
<td>61</td>
<td>83</td>
</tr>
<tr>
<td>History of CPS (%)</td>
<td>14</td>
<td>38</td>
<td>67</td>
</tr>
<tr>
<td>History of child removal (%)</td>
<td>5</td>
<td>38</td>
<td>56</td>
</tr>
<tr>
<td>History of rehabilitational failure (%)</td>
<td>5</td>
<td>54</td>
<td>44</td>
</tr>
<tr>
<td>History of incarceration (%)</td>
<td>23</td>
<td>54</td>
<td>39</td>
</tr>
<tr>
<td>Father able to help (%)</td>
<td>73</td>
<td>8</td>
<td>39</td>
</tr>
</tbody>
</table>

* Difference among groups significant at the P < .05 level.
** Difference among groups significant at the P < .01 level.
support the recent recommendations of the American Academy of Pediatrics.\textsuperscript{55}

However, the sample size of this study was small, and the subjects were drawn from patients who were in the nursery reserved for “well babies.” The study involved a subset of patients in that nursery who do not have a private pediatrician on the hospital’s medical staff. During the period of subject enrollment, no drug screenings were performed on the infants cared for by private pediatricians in this nursery, suggesting that no other drug-exposure referrals to CPS from the well-baby nursery occurred. The subjects were identified by selective screening based on identified risk factors. If universal screening had been used or if other screening methods had been used (e.g., meconium or hair), it is possible that the sample size would have been larger or different. Such universal screening is not endorsed by the American Academy of Pediatrics.\textsuperscript{55}

Whether the results of this study are capable of being generalized to other communities or larger populations is unclear. This study was performed in a county offering progressive services. Although dominated by suburban living, San Mateo County has pockets of poverty, crowding, and drug use more characteristic of inner cities. For example, the finding that only one of the infants was involved in reported child abuse is in marked contrast with other reports.\textsuperscript{53,56} Whether such differences are related to the subjects or the policies was not addressed by this study. Nevertheless, the beneficial changes in the life and environment observed in half of the mothers and most of the infants can serve as an endorsement of the policies of reporting these patients, involving services, and maintaining legal custody as a tool for monitoring and coercing progress and reform. This study did not address directly the question of whether the assessments leading to the “initial” disposition could occur before the mother or infant is discharged from the hospital and thus obviate the 1 week of foster care experienced by so many of the study subjects. Another issue worthy of mention is the use of court outcome as a predictor of staying off of drugs in the long term. Because the data were collected from social service files, no information about the use of drugs after the cases were closed was available unless the mother reconnected with social service agencies.

The mothers of this study did not have the same demographic characteristics as those of the nursery as a whole. As mentioned in the text, these women were predominantly African-American, often with complicated obstetric histories. This finding is consistent with a study of the epidemiology of drug use in pregnancy throughout the entire state of California, suggesting that this group of subjects may represent larger populations.

The finding that certain maternal characteristics predicted failure of the mother to regain custody of the infant suggests that an individualized approach to the placement of children from the hospital is practical. However, the sample size in this study was small, and the description of certain maternal characteristics as being predictive resulted from exploratory analysis of the data, not true hypothesis testing. Although 53 subjects were included in the logistic model, this was not a random sample of a large population, and this analysis served best simply to describe the data. Firm conclusions about which maternal characteristics are most useful in determining policy must await additional investigation of larger sample groups. The number of mothers who eventually underwent rehabilitation and regained custody of their children even after months of noncompliance and continued drug use suggests that early decisions leading to permanent out-of-home placement might be improper. Even a few mothers carrying all the predictors for failure succeeded in breaking out of their dysfunctional lifestyles.

The one infant who eventually experienced abuse was an atypical case throughout many months of court dependency. The mother of this infant was the only mother in this study who had her child returned to her despite failing to comply with drug rehabilitation and urine testing. Although she was monitored by the courts for 18 months, it was felt she had developed a stable relationship with her child, and the caseworker argued for the return of her child despite her lack of compliance with court orders. If this case serves as an example, it suggests that the close monitoring and strict demand for compliance with court orders that the other mothers experienced were appropriate and beneficial to the children.

Other findings in this study show the impact of court-ordered long-term monitoring of the mothers’ progress and compliance. Seventeen of the mothers who underwent random testing of their urine were found to have a continuing problem with drugs. Only one of these mothers regained full custody of her child. Clearly, a monitoring system was in place and was truly being used in the disposition process. However, some court orders, e.g., keeping all medical appointments, appeared to be not as critical in the decision to return a child to the mother. In addition, some orders appeared to be used more as a test of mother’s compliance rather than truly having a rehabilitative function. For example, all the mothers in this study were ordered to participate in a class to learn cardiopulmonary resuscitation (CPR). This order was said to be based on literature suggesting that cocaine-exposed infants might be at increased risk for SIDS in the first few months of life.\textsuperscript{35–40} However, if a mother had not received CPR training by the time of the 6- and 12-month review hearing, long after the theoretic risk of SIDS, she would still be ordered to undertake CPR training. This suggests a need for more communication between the court and health care providers in establishing guidelines for intervention and therapy. In addition, the impact of placement decisions on the child’s development and behavior was never monitored or formally addressed. Issues such as discontinuity of care and the impact of kinship care versus foster care may have a significant impact on the children, but data specific to these issues were not available.

One finding that does not appear in group data but was apparent to those involved in reviewing each chart is that in a few cases, the threat of losing her
child through adoption and the finality of the decisions of the 18-month hearing were critical in motivating the mother to finally enter and complete drug rehabilitation.

This study did not address the question of what happens to infants exposed to drugs in utero but not detected or reported by the nursery. A number of women had the same characteristics as these mothers but were never reported to CPS because the infant’s urine drug test result was negative. A future study should address questions about these infants. How many eventually came to the attention of CPS because of other issues? How many suffered abuse or neglect in the meantime? Could this group serve as a control population in assessing the effectiveness of the reporting and rehabilitation process? Until such a study is performed, we are left with only the descriptive study presented here. However, this study does begin to answer the questions presented initially and serves to reduce the skepticism that had been voiced by practitioners who felt that nothing productive was being accomplished or that a more punitive approach would be the only effective route to help the infants.

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Perinatal Substance Abuse: The Impact of Reporting Infants to Child Protective Services
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