

# Understanding Payment Barriers To Improve Child Support Compliance

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June 2013

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## **I. Abstract**

The Research Unit of the Orange County Department of Child Support Services (CSS), located in Santa Ana California produced a multivariate examination of the number and type of barriers that prevent Non-Custodial Parents (NCPs) from making consistent child support payments. The caseload analysis is based on child support payments for 772 child support cases from Orange County's caseload of approximately 79,000 cases. The study determined the major barriers associated with low payment compliance. In order of influence, the top 10 predictors are: 1) NCP Monthly Gross Income; 2) Education level of the NCP; 3) NCP Age at First Becoming a Parent; 4) Ratio of Order to Wage; 5) Criminal History; 6) Visits Per Month; 7) Number of Children; 8) Substance Abuse History; 9) Currently on Probation/Parole; and 10) Language. NCPs predicted to yield low compliance are associated with multiple barriers. Predictive analytics is used to predict future compliance based on these barriers and can lead to effective policy decisions by setting appropriate orders for NCPs with barriers. In this study, setting appropriate orders effectively improves compliance for NCPs with barriers. Furthermore, knowing the barriers associated with future compliance can guide the child support agency to partner with vital community organizations through a family-centered services approach. This approach is expected to be highly effective at improving the income of NCPs (and support compliance) when they are connected to appropriate resources. This research also acts as a springboard for future research in developing and promoting future programs to improve child support outcomes for the NCPs with barriers and to measure their effectiveness.

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## II. Introduction

In Federal Fiscal Year 2011, the United States child support program served 15.8 million families and collected and distributed \$27 billion in payments (Office of Child Support Enforcement [OCSE], 2011a<sup>1</sup>). The program served 17.3 million children.

OCSE has made consistent efforts to improve collections year over year through innovative strategies, best practices and collaboration with child support offices within other states. As a result, child support Distributed Collections in the United States increased 9.8 percent or \$2.4 billion from FFY 2007 to FFY 2011.

OCSE outlined a three tier strategy approach for all states to continuously improve future child support performance (Turetsky, 2013<sup>2</sup>). These strategies represent a roadmap for states to follow:

1. **Focus on the fundamentals.** Make sure computer systems, new hire reporting and income withholding (e-IWO) are working well.
2. **Identify the performance problem.** Identify the reason for irregular support payments, intervene early and set appropriate obligations.
3. **Expand access to services.** Partner with other programs and redirect resources to address barriers to nonpayment through family-centered services.

This article examines tier two and three above: identify reasons for irregular support payments, early intervention, setting appropriate obligations, and partner with other programs to address barriers to nonpayment through family-centered services including collaborations with other government and community organizations.

Previous research on the impact of setting appropriate orders to increase child support compliance and payments examined child support order amounts in relation to the NCPs income (Formoso, 2003<sup>3</sup>). Results demonstrate that arrears growth will occur if the ratio of order amount to the NCPs gross wages (ROTW) exceed 20 percent. Further research found that compliance (percent of current support collected as a proportion of current support due) and payment consistency will decline if the ROTW is greater than 19 percent (Takayesu and Eldred, 2011<sup>4</sup>). Furthermore, setting orders based on fictional (presumed income) and not actual income will most likely yield \$0 in total payments for the next 12 months from order establishment.

To establish appropriate orders, it is necessary to understand the number and types of barriers that prevents NCPs from making consistent child support payments. For example, do NCPs with low

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<sup>1</sup> U.S. Office of Child Support Enforcement. (2011a). FY 2011 Preliminary Report." Washington D.C. Retrieved from <http://www.acf.hhs.gov/programs/css/resource/fy2011-preliminary-report>.

<sup>2</sup> Turetsky, V. (2013). "Three Tiers: A roadmap of strategies to improve program performance." Child Support Report, Vol. 35. No 3 March 2013. Retrieved from <http://www.acf.hhs.gov/programs/css/resource/march-2013-child-support-report>.

<sup>3</sup> Formoso, C. (2003) Determining the Composition and Collectability of Child Support Arrearages, Volume 1. The Longitudinal Analysis." Retrieved from <http://www.dshs.wa.gov/pdf/esa/dcs/reports/cvol1prn.pdf>.

<sup>4</sup> Takayesu, M.I. & Eldred, S.C. (2011). "How Do Child Support Orders Affect Payments and Compliance." Orange County Department of Child Support Services. Retrieved from <http://www.csdaca.org/archive.aspx>.

education pay consistently if their orders are set above 19 percent of their income? Will NCPs with criminal history have higher compliance if orders are set appropriately? It is imperative there be an understanding of what amount to set an order for it to be appropriate for NCPs with barriers to produce the maximum payments possible.

### **III. Research on Appropriate Orders**

Setting appropriate orders increases payment consistency and compliance, if orders are set primarily based on actual income rather than presumed income. Takayesu and Eldred (2011) examined 102,232 child support cases extracted from California's child support enforcement automation system (CSE) and analyzed the guideline data used to establish the order. This data includes a variety of factors for its income-shares-model guideline calculation, such as each party's income (gross and net), state and federal income tax impacts, and the number of children supported. Typically, income in the guideline calculation is part of the formula to determine child support order amounts.

Research findings from this study indicate that compliance and payment consistency decline if monthly child support order amounts are set above 19 percent of the NCPs gross monthly income. This finding was true regardless of differences in NCP income, type of government assistance, county size, custodial parent's income, number of children and other factors. In addition, a sizeable percentage of these cases (19.5 percent) had orders based on presumed or fictional income. Under California law, if there is no known income history, courts set support as if the NCP was working full-time (40 hours/week) at the state minimum wage (\$8.00), for a monthly income of \$1,387 per month. The research found that these 'fictional income' cases had lower compliance levels, higher rates of inconsistent payments and lower payments per child when compared to cases with actual reported income.

In other research, Formoso (2003) identified in the state of Washington, arrearage growth occurs when a NCPs child support order is more than 20 percent of a NCPs gross monthly earnings. As a result of his findings, the state of Washington recommended the use of a data-driven casework arrears stratification protocol to reduce arrears growth (Formoso and Liu, 2010<sup>5</sup>). Specifically, the 20 percent threshold provides useful baseline information for setting appropriate orders.

### **IV. Research on Child Support Barriers**

The child support program in the United States is a critical public program and represents an important source of income for poor families, lifting a million people from poverty. Child support represents substantial income for both poor and deeply poor families. For instance, for families that receive child support, child support represents 40 percent of income for poor custodial families, and 63 percent of income for families that are deeply poor. Child support income is instrumental in alleviating poverty (Sorensen, 2010<sup>6</sup>).

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<sup>5</sup> Formoso, C. & Liu, Q. (2010). "Arrears Stratification in Washington State Developing Operational Protocols in a Data Mining Environment." Management Accountability & Performance Statistics Office. Economic Services Administration. Washington State Department of Social and Health Services.

<sup>6</sup> Sorensen, E. (2010). "Child Support Plays an Increasingly Important Role for Poor Custodial Families." Washington DC: Urban Institute.

Knowing that child support income provides critically needed income for poor families, it is important to understand the barriers that prevent NCPs from paying child support. Previous research has noted barriers such as fatherhood at an early age, low education, incarceration, and lack of health insurance as characteristic of NCPs who pay little or no child support (Sorensen and Oliver, 2002<sup>7</sup>; Lippold and Sorensen, 2011<sup>8</sup>). Formoso (2003) found significant barriers to collections as reasons for arrears growth and non-payment of child support. These barriers include the prevalence of multiple cases, parents on public assistance, intermittent employment, mental illness, substance abuse problems, and incarceration. Primus and Daugirdas (2000<sup>9</sup>) identified relationship barriers such as conflict over visitation and NCPs concern the CP is spending money unwisely as obstacles to child support payments.

Child support payment barriers are addressed in the context of understanding the reasons for nonpayment of child support, and for the most part, point to the need to examine the reasons for unemployment or inconsistent employment. Barriers that prevent consistent employment include health limitations, limited education, limited work experience, and lack of English skills. Generally, policy reforms have expressed the need to increase child support for poor NCPs with these barriers by addressing the need for income support programs, employment services and job training programs (Sorensen and Oliver, 2002; Lippold and Sorensen, 2011).

With regards to setting appropriate orders, previous research shows NCPs that are poor pay a higher percentage of their income towards child support compared to NCPs that are not poor. For example, Sorensen and Oliver (2002) found that one quarter of the poor NCPs paying child support spent 50 percent of their income on child support while only 2 percent of non-poor fathers spent that same percentage. Often the requirement to pay a high percentage leads to high arrears debt that never gets paid and is primarily responsible for the substantial amount of arrears owed and its growth (Sorensen, Sousa, and Schaner 2007<sup>10</sup>). Formoso (2003) noted that NCPs with more barriers are expected to pay a larger portion of their income towards child support. For example, at 20 percent ROTW, the number of barriers has little effect on arrearage growth. When ROTW is higher than 40 percent, the number of barriers increases to four or more per NCP. NCPs with the most problematic lives, as indicated by the number of barriers and lowest incomes, are expected to pay an impossibly large portion of their income towards child support.

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<sup>7</sup> Sorensen, E. & Oliver, H. (2002). "Policy Reforms are Needed to Increase Child Support from Poor Fathers." Washington DC: Urban Institute.

<sup>8</sup> Lippold, K & Sorensen, E. (2011). "Strengthening Families Through Stronger Fathers: Final Impact Report for the Pilot Employment Programs." Washington DC: Urban Institute.

<sup>9</sup> Primus, W. & Daugirdas, K. (2000). "Improving Child Well-Being by Focusing on Low-Income Noncustodial Parents in Maryland." Baltimore, Maryland: The Abell Foundation.

<sup>10</sup> Sorensen, E. Sousa, L., & Schaner, S (2007). "Assessing Child Support Arrears in Nine Large States and the Nation." Washington DC: Urban Institute.

## **V. Current Study**

The goal of this study is to examine and understand the number and type of barriers that lead to low compliance and to affectively address policy implications exploring successful programs that deal with these issues. Questions addressed in this study are:

- 1) What are the barriers that lead to low compliance?
- 2) What are the NCP characteristics that predict compliance?
- 3) Will setting appropriate orders for NCPs with payment barriers lead to higher compliance?
- 4) What is the role of family-centered services to improve child support payments for NCPs with barriers?

## **VI. What are the barriers that lead to low compliance?**

CSS identified barriers that lead to low compliance through a survey study that assessed NCP barriers to paying child support. This survey instrument asked the NCP questions related to his/her education level, employment, criminal history, etc. Questions were also asked regarding his/her reasons for not making consistent child support payments. These questions included dealing with the relationship of the other parent (i.e. other parent decides how to spend money), perception that orders are too high, visitation, and motivation factors.

CSS randomly surveyed 4,923 NCPs out of a caseload of approximately 79,000 cases in Orange County as of Federal Fiscal Year 2011. 772 NCPs responded to the survey for a response rate of 15.7 percent. The completed survey responses were matched with California's Child Support Enforcement System (CSE) to extract child support due and paid amounts, and other demographic information from October 2010 to September 2011.

The primary independent variables included the barriers assessed based on the questionnaire assessment. With the exception of NCP Monthly Income, ROTW, and age of the NCP when first becoming a parent (NCP Age at First Born), the values described in Table 1 represent the answers from the questionnaire. The ROTW, NCP Monthly Income, and the NCP Age At First Born were derived from CSE. ROTW was calculated as the monthly child support order amount divided by the monthly gross wages. For example, if a NCP is obligated to pay \$100 per month for one child, but has a gross monthly income of \$1,387, then the ROTW is calculated as \$100 divided by \$1,387 or 7.2 percent. High ROTW indicates a heavy financial burden for the NCP, and as a result may have lower compliance in payment of current support resulting in arrears growth. The list of independent variables along with their values to assess its impact on compliance are listed in Table 1.

**Table 1: Independent Variables**

Variable Name	Values
<b>Income and Barriers</b>	
<b>Income of NCP</b>	Income per month ranging from \$0 to \$90,000 per month
<b>Education Level</b>	College Degree, Some College, High School Diploma/GED, Did Not Complete High School
<b>Currently Employed</b>	Yes or No
<b>Currently on Public Assistance</b>	Yes or No
<b>History of Substance Abuse</b>	Yes or No
<b>Criminal History</b>	Never Convicted, Misdemeanor, Felony
<b>Currently On Probation/Parole</b>	Yes or No
<b>Relationship Variables</b>	
<b>Other Parent Limits Visitation</b>	Yes or No
<b>Child Support Order is Too High</b>	Yes or No
<b>Support Child(ren) From Other Relationships</b>	Yes or No
<b>Visitation Variables</b>	
<b>Visitation Days Per Month</b>	0, 1-5, 6-10, 11-15-16-20, 21-25, 26-30
<b>Conflict With Other Parent Limits Visitation</b>	Yes or No
<b>Physical Disability Limits Visitation</b>	Yes or No
<b>Distance Limits Visitation</b>	Yes or No
<b>Child Support Order</b>	
<b>Ratio of Order Amount To Wage</b>	Ratio Ranging From 0-100%
<b>Demographic Variables</b>	
<b>NCP Age At First Becoming A Parent</b>	Numeric Value with Range from 14 to 55 years of age
<b>Language of NCP</b>	English, Spanish, Vietnamese, Other
<b>Number of Children</b>	Numeric value ranging from 1 to 7 children

Compliance was the dependent measure defined as the percentage of current support collections distributed each month divided by the current support due per month for up to 12 months. This measure evaluates the financial well-being of children regarding basic living and medical needs. Generally, high percentage of compliance means the NCP is compliant with the existing child support obligation ordered and pays as ordered. Low percentage means the NCP is not in compliance with an existing order and pays less than ordered. Compliance for each case was determined for a full 12-month period. For example, if a NCP was ordered to pay \$100 per month in child support for 12 months, and paid the full \$100 each month, the compliance equals 100 percent (\$1,200 current support paid divided by \$1,200 current support due).

To identify the barriers that are the best predictors towards lower compliance, CSS utilized a predictive analytic approach using a Gradient Boosting (Friedman, 2001<sup>11</sup>) algorithmic model. CSS used SAS® Enterprise Miner 7.1. software to develop the model. Gradient Boosting approach was used to produce a predictive model based on multivariate data. The model produced a predicted compliance value for each NCP based on the combination of independent variables used to establish the model. Gradient

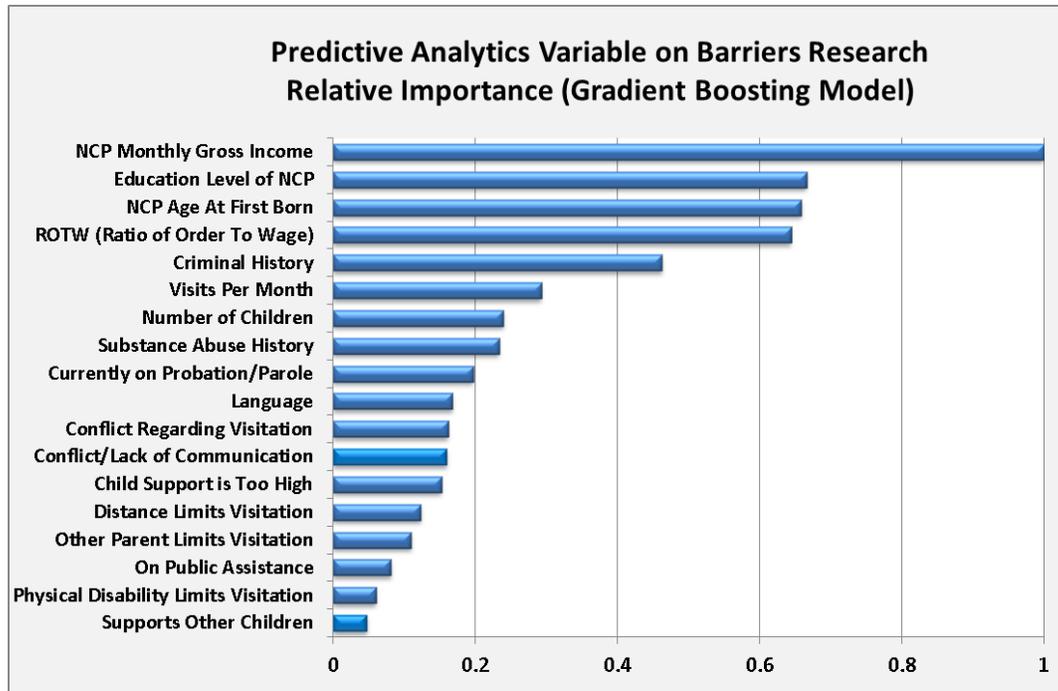
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<sup>11</sup> Friedman, Jerome H “Greedy Function Approximation: A Gradient Boosting Machine.” 2001. The Annals of Statistics 29: 1189-1232.

Boosting is an attractive algorithm to analyze child support data because it can be applied to classification or regression problems from a variety of response distributions (Gaussian, Bernoulli, Poisson, and Laplace). Gradient Boosting also models complex interactions simply and provides interpretable results.

The statistical output of the Gradient Boosting algorithmic model is interpretable and displays the relative importance of the most influential predictors. Since these measures are relative, a value of 1.0 was assigned to the most influential predictor and the others were scaled accordingly. This model was used to assess the overall influence of predictors from all of the independent variables used.

**Figure 1: Model Predictors\***



\*The Average Squared Error for this model was .085833

- Based on the Gradient Boosting algorithmic model in predicting compliance, the most influential predictor is the NCPs monthly gross income (1.0). Relative to income, the next most influential predictor was Education Level of the NCP (.66) and closely followed by the NCP Age At First Born (.65) and ROTW (.64). Education Level of the NCP (.66), NCP Age At First Born (.65) and ROTW (.64) are clustered close together. The next most influential variable is Criminal History (.46) which is highly influential in comparison to Visits Per Month (.29) and all the other variables that follow.

- It is important to note the top 10 predictors (from NCP Income to Language) represent primarily social economic barriers of the NCP. With the exception of being on public assistance, the other predictors can represent a perceived opinion. For example, the NCP may perceive that the child support order is too high, but based on the data, may not be the best predictor to compliance. These types of predictors have less of an influence compared to social economic barriers.

Understanding the relative importance of these barriers is important in developing child support policy to address reasons for non-payment and to arrive at solutions that improve payments. For example, knowing that education is a major barrier in comparison to other barriers, do social programs encourage education by providing incentives to new NCPs to complete high school? Knowing that ROTW is about as influential as Education Level, will setting appropriate orders for NCPs without a high school education help encourage NCPs to obtain an education, which can eventually lead to long-term, consistent payments?

## **VII. What are the NCP characteristics that predict compliance?**

In addition to knowing the relative importance of compliance predictors, the Research Unit attempted to summarize the characteristics (using descriptive statistics) of NCPs based on their predicted compliance ranging from very low to high. For example, do characteristics such as low education, criminal history and low income associate with NCPs that have low predicted compliance? Do characteristics such as possessing a college degree, having no criminal history and making high income associate with NCPs that yield high compliance? What are the multiple characteristics associated with predicting low compliance? Is low compliance associated with NCPs with multiple barriers?

In order to identify the characteristics that make up high vs. low compliance, the data was split into four equal groups based on the first, second, third, and fourth quartile of the distribution of predicted compliance values. These compliance values were identified as Very Low (0-25%), Low (25-50%) Medium (50-75%), and High Compliance (75% +). The compliance characteristics by quartile are represented in Table 2:

**Table 2: Predicted Compliance Characteristics**

	Very Low (n=317) (0-25%)	Low (n=206) (25-50%)	Medium (n=172) (50-75%)	High (n=77) (75-100%)
Average Predicted Compliance	16.0%	34.5%	66.4%	78.2%
Average Actual Compliance	14.2%	35.0%	66.3%	82.6%
Monthly Income (Median)	\$631	\$1,433	\$3,502	\$4,619
Did Not Complete High School	35.0%	31.1%	22.7%	14.3%
Average NCP Age At First Born	25.4	25.9	27.7	27.8
ROTW (Ratio of Order To Wage)	45.2%	27.3%	15.1%	9.3%
Criminal History	72.6%	25.7%	34.3%	9.1%
Average Visits Per Month	4.6	3.7	6.6	2.4
Cases With 2+ Children	43.9%	25.7%	35.5%	14.3%
History of Substance Abuse	31.9%	23.8%	12.8%	5.2%
On Probation/Parole	21.8%	8.7%	2.3%	0%
Language (English Is Not Primary Language)	24.9%	32.5%	27.3%	19.5%
On Public Assistance	25.9%	25.2%	9.9%	11.7%
Unemployed	64.0%	48.5%	26.7%	16.9%
Average Number of Barriers	3.3	2.5	1.9	1.5

Table 2 identifies NCP characteristics of predicted compliance ranging from very low to high. The variations in compliance in this table are strikingly clear. In examining each predicted compliance category, those with very low to low predicted compliance have significant barriers. NCPs that are predicted to have very low (n=317) to low predicted compliance (n=206) make up 68 percent of the 772 respondents, which is a substantial percentage of the study sample.

- Characteristics of NCPs with predicted very low to low compliance are: NCPs with lower income; primarily did not complete high school; are first time parents at a young age; have criminal history; low visitation; two or more children; have a history of substance abuse; are on probation/parole; have English as a second language; are on public assistance; are unemployed; and have a greater number of barriers.
- Characteristics of NCPs with predicted medium to high compliance include, but not limited to, cases with higher income, higher education and less criminal history.
- Although NCPs with predicted very low to low compliance have significant barriers and low median gross income, these NCPs are expected to pay a large percentage of their gross income towards child support (27 percent and above) compared to NCPs with medium to high compliance (15.1 percent or less).

## VIII. Will setting appropriate orders for NCPs with payment barriers lead towards higher compliance?

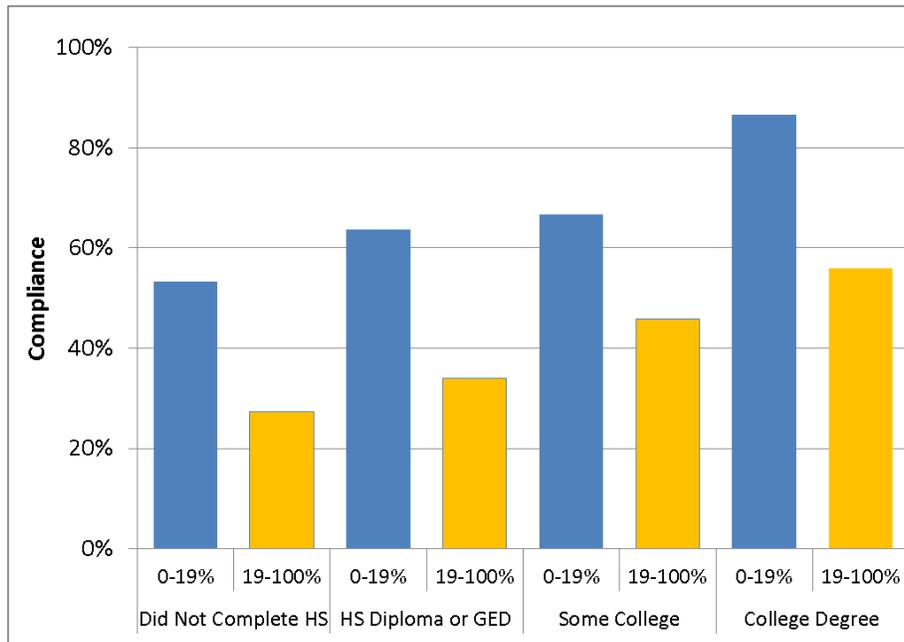
For this discussion, setting appropriate orders based on the ROTW was assessed by the examination of the Education Level of the NCP.

### 1. Education Level of the NCP

This study demonstrates that the ROTW and the NCP barriers are good predictors of future compliance. However, is it possible to achieve higher compliance with an appropriate order even though the NCP has low education?

Figure 2 below reports the actual compliance level based on the NCPs Education Level, and whether the order was set between 0-19 percent of the NCPs gross income or 19 percent or greater. Table 3 describes the number of cases. For all Education Levels including NCPs not completing high school, orders between 0-19 percent report higher compliance levels compared to orders 19 percent or greater.

**Figure 2: Compliance by ROTW and Education (N=714)\***



**Table 3: Number of Cases by ROTW and Education**

ROTW	Did Not Complete High School	High School Diploma or GED	Some College	College Degree
0-19%	90	118	88	47
19-100%	111	125	98	37

*\*Excludes 58 cases with missing income data.*

The importance of setting appropriate orders based on Education Level becomes important to increase the total dollars received by the family over the child's life. NCP's with less than a high school diploma or equivalency certificate earn significantly less than a person with a diploma. Based on expected compliance rates and earnings for both groups, data suggests that steering the parent into completion of a diploma or certificate could result in the family receiving up to 43 percent more support over the child's minority. Data also shows that a lower arrearage balance is built, and the parent can pay off the arrears in a much shorter time.

The following is a recent example of how awareness of barriers can impact a case as applied by an Orange County commissioner. In one particular hearing, the court learned a 20 year old NCP did not complete high school and that the NCP was in the process of attaining a General Education Diploma. The court ordered a \$50 order per month for one year. At the end of the year, the order would increase to \$200 per month. The court set the \$50 order to begin the following month rather than when the motion was filed to prevent the case starting arrears. In addition, the NCP was ordered to visit a One-Stop Center, which is a program to assist the NCP in locating a place of employment.

On a broad scale, reliable compliance predictors based on Education Levels can assist family-centered services programs to make decisions about how much ancillary support is needed for a parent to be successful. Does the social program encourage education by providing incentives to new NCPs to complete high school? Each jurisdiction must make its own choices regarding these questions; however, with predictive research-supported data, programs can make educated decisions about how limited social program resources are deployed.

In addition to education, CSS examined the other top barriers including NCP Age at First Born and Criminal History. For each of these barriers, orders set between 0-19 percent yielded higher compliance values compared to orders set 19 percent or higher. There are social policy implications related to setting appropriate orders for NCPs with criminal history. This is to be addressed in future research.

#### **IX. What is the role of family-centered services to improve child support payments for NCPs with barriers?**

The child support program works well when parents have steady income through regular employment. In the child support caseload in the United States, 75 percent of parents have steady income. However, for the 25 percent of parents without steady income that have no or low reported earnings, collecting child support income can be difficult. Uncollected child support from this population constitutes 70 percent of the unpaid child support debt with low or no reported earnings (Office of Child Support Enforcement [OCSE], 2011b<sup>12</sup>).

OCSE is currently undertaking a family-centered services approach to improve child support outcomes that can be effective in improving the collections for parents without steady income (Office of Child Support Enforcement [OCSE], 2011b). Today, child support programs are engaged in a variety of innovative strategies and projects that engage partnerships with a variety of organizations. These

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<sup>12</sup> U.S. Office of Child Support Enforcement. (2011b). "Family-Centered Innovations Improve Child Support Outcomes." (Fact Sheet No. 1). Promoting Child Well-Being & Family Self-Sufficiency. Washington, D.C. Retrieved from <http://www.acf.hhs.gov/programs/css/resource/family-centered-innovations-improve-child-support-outcomes>.

strategies include outreach, referral and case management strategies that engage with organizations such as fatherhood, workforce and reentry programs.

The child support program is in regular contact with low-income NCPs, and is uniquely positioned to link these NCPs to these services. Child support programs also have the ability through engagement with the NCP and through data analysis to identify the underlying reasons for non-payment of child support. Child support–led programs engaged with other organizations have demonstrated a high level of success in improving child support collections for low-income NCPs (Office of Child Support Enforcement [OCSE], 2012<sup>13</sup>).

For example, child support programs are actively involved in 28 states and the District of Columbia in 38 work-oriented programs for NCPs (Office of Child Support Enforcement [OCSE], 2011c). Court-ordered programs, voluntary programs and transitional job programs have all shown success in improving child support collections. These programs served NCPs with low-income who are primarily unemployed and have major barriers that prevent them from paying child support. New York’s Strengthening Families Through Stronger Father Initiative has proven to be highly successful in increasing both income and child support payments for low-income NCPs with multiple employment barriers such as limited education and criminal records (Lippold and Sorensen , 2011).

This study used predictive analytics to identify the type and number of payment barriers, and has predicted compliance for these NCPs with one or a combination of these barriers. Child support programs armed with this knowledge can provide early intervention opportunities to establish appropriate orders, and refer these NCPs to overcome these barriers.

In November 2012, the Orange County Department of Child Support Services opened their Community Resource Center (CRC) designed to carry out OCSE’s Family-Centered Services Initiative of 2011. The CRC is a one-stop center that includes customer interviews, family law facilitation, genetic testing, forms workshops, orientation workshops, modification workshops, and provides customers with access to community resources throughout the county. Customers using the CRC can access information regarding a variety of services such as food banks, clothing, health services, child care, employment, domestic violence, legal services, tax preparation resources, shelters, educational resources, and veteran’s services. Since opening, the CRC has served over 4,700 customers in its first eight months and the number of customers receiving services expected to increase going forward.

Future objectives of analyzing child support payment barriers to predict compliance are to use predictive analytics to increase the effectiveness of the CRC and in setting appropriate orders. Knowing the number and type of payment barriers of each NCP can assist staff in setting appropriate orders, increasing the probability of payment and better servicing NCPs with barriers. Orange County Research Unit plans to evaluate the effectiveness of the CRC in improving child support collections in the future. It is anticipated NCPs using the CRC will demonstrate higher payment compliance and payment consistency after being serviced in the program.

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<sup>13</sup> U.S. Office of Child Support Enforcement. (2012). “Improving Child Support Outcomes through Employment Programs.” (Fact Sheet No. 11). Promoting Child Well-Being & Family Self-Sufficiency. Washington, D.C. Retrieved from <http://www.acf.hhs.gov/programs/css/resource/improving-child-support-outcomes-through-employment-programs>.

## **X. Conclusion**

This study demonstrates that the use of predictive analytics to predict compliance can identify the type and number of major barriers that prevents NCPs from making consistent child support payments. NCPs with barriers are associated with lower compliance compared to NCPs with little or no barriers. NCPs with major barriers have the least ability to pay and have the most problematic lives. These NCPs are expected to pay an impossibly large portion of their income towards child support. Knowing these facts can guide policy and child support agencies to: 1) set appropriate orders to assure consistency of payments for NCPs with barriers, and 2) use this knowledge to properly refer these NCPs to receive appropriate assistance through family-centered services. It is a combination of these efforts that can lead to higher incomes and consistent child support payments.