SUSTAINED PERMANENCY PROJECT

OUTCOME EVALUATION BRIEF

BACKGROUND

The child welfare system is charged with achieving permanency both timely and without reentry. While Colorado continues to meet the federal goal of achieving permanency within 12 months, the state struggles with children/youth reentering out-of-home (OOH) care after an initial OOH care episode. The federal goal is for less than 8.3% of children/youth to reenter OOH care. The table below reflects Colorado's performance from State Fiscal Years (SFY) 2013-2017.

Table 1: *Colorado Reentry Rates SFY13-17*

Outcome	SFY 13	SFY 14	SFY 15	SFY 16	SFY 17
% of all children reentering OOH care within 12 months	19.4%	20.3%	19.5%	18.8%	19.2%

Beyond meeting the federal goal, children/youth do best when raised in a stable family setting, and preventing multiple placements increases safety, permanency, and well-being. To improve practice, the Division of Child Welfare (DCW) partnered with county human service departments, Casey Family Programs, National Implementation Research Network (NIRN), and Eckerd Connects to launch the Sustained Permanency Project (SPP). The objective of this project was to utilize implementation science to design a practice model to lessen the likelihood of reentry. The practice model consisted of predictive analytics, a service array, and coaching to improve the success of sustained permanency.

METHODS

Treatment cases were taken from Adams, Pueblo and Weld counties. Candidates for comparison cases were eligible from all counties in Colorado. Data were pulled regarding each child/youth's reentry into the child welfare system as of the time of the analysis.

Three comparisons were conducted: (1) treatment cases in Pueblo, Weld and Adams counties were compared to comparison cases in Mesa, Jefferson, and Arapahoe counties; (2) treatment cases in Pueblo, Weld and Adams counties were compared to comparison cases in Pueblo, Weld and Adams counties; and (3) treatment cases in Pueblo, Weld and Adams counties were compared to comparison cases from all counties in Colorado.

For all comparisons, treatment and comparison groups were matched using propensity score stratification. A logistic regression propensity score model was generated using stepwise selection and results were stratified and weighted accordingly. Variables used in the selection process are shown in Table 2, the most influential variable was the reentry probability scores used to identify eligible children/youth for the SPP intervention.

Table 2: *Variables Used for Propensity Score Stratification*

Case Characteristics	Demographics	Risk Factors
Length of stay	Race	Housing Access
Program Area	Age	Sexual Abuse
Caseworker Count		Physical Abuse
Reentry Probability • Model Score • Model Used		Drug Abuse • Child • Caregiver
Referral Count		Alcohol Abuse • Child • Caregiver

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RESULTS

As displayed in Figure 1, all three comparisons found a statistically significant higher probability of reentry for treatment group participants than for comparison group participants. The vertical bars (with 95% confidence intervals) represent reentry rates for the matched comparison group and the points with error bars (with 95% confidence intervals) indicate estimated treatment group reentry rates. Specifically, treatment county cases (35.8%) had higher reentry rates than comparison county cases (14.0%); treatment cases in the pilot counties (37.6%) had higher reentry rates than comparison cases in the pilot counties (18.8%); and treatment county cases (37.6%) had higher reentry rates than cases from all counties in Colorado (17.7%).

Discrepancies also were found between the predicted rate of reentry according to the probability model used for SPP assignment and the observed rate of reentry, particularly in treatment group counties. Predicted and observed reentry rates are shown in Tables 3 and 4, respectively for treatment and comparison cases in the pilot counties.

Figure 1: *Results for Reentry Outcome Comparisons*

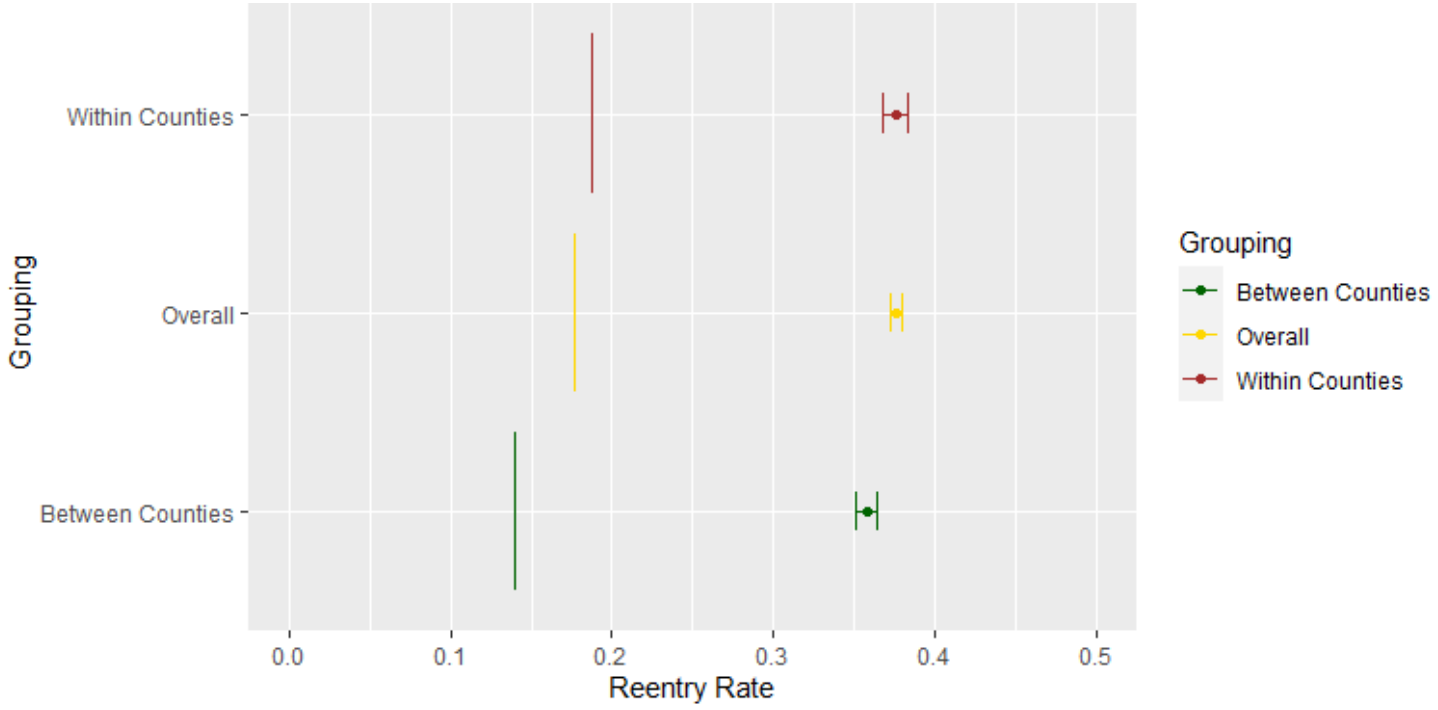

Table 3: *Predicted vs Observed Reentry Rates for Treatment Group Cases in Pilot Counties*

County	Predicted Reentry Rate	Observed Reentry Rate
Adams	18.1%	56.0%
Pueblo	22.6%	41.4%
Weld	27.2%	27.6%

Table 4: *Predicted vs Observed Reentry Rates for Comparison Group Cases in Pilot Counties*

County	Predicted Reentry Rate	Observed Reentry Rate
Adams	14.1%	5.8%
Pueblo	15.7%	36.1%
Weld	16.5%	9.1%

INTERPRETATIONS

The probability model substantially underestimated reentry rates for Pueblo and Adams county in the treatment group and for Pueblo in the comparison group, while overestimating the reentry rates for the comparison group in Adams and Weld counties. There are several possible explanations, but each has a limited explanatory ability on its own. Possible explanations are as follows:

1. The SPP intervention substantially increased rates of reentry among participants. However, this would not account for the higher than predicted reentry rate for Pueblo County's comparison group.
2. Cases selected by the pilot counties for treatment differed in ways that the probability model did not account for. However, this would not explain the accuracy of predictions for the treatment group in Weld County.
3. Practice and/or external events changed, reducing the model's predictive power. However, this again would not account for the relative accuracy of predictions in Weld county.

The most likely explanation is a combination of all the listed possibilities. A better understanding of the probability model and the reasons for the observed disparities in reentry rates is necessary because it plays an integral role in the match upon which this analysis is based and for the SPP intervention in general. Thus, exploring factors in the observed discrepancies is an important step moving forward.

IMPLICATIONS

Although the findings from the SPP evaluation do not support continuing predictive analytics plus coaching in its current form, there are several implications for future practice to lessen the likelihood of reentry for children/youth in Colorado. For example, caseworkers from the pilot counties were effective in identifying children/youth at high risk for reentry. This practice wisdom can be further explored to enhance the predictive power of the reentry algorithm. The evaluation did not isolate the impact of the case review and coaching components of the model, but all indications are that caseworkers and supervisors believed that it was a promising practice that better served families. Thus, these practice elements should be further studied to determine their place in reentry prevention.

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