Wisconsin Alternative Response Evaluation

Outcome Report

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Executive Summary

In 2010, the Wisconsin State Legislature approved a pilot initiative to implement Alternative Response (AR) in Child Protective Service (CPS) agencies in Wisconsin. The implementation of AR in Wisconsin has been primarily focused on creating flexibility during the Initial Assessment (IA) and adhering to standards for ensuring child safety.

Between 2010 and 2016, the Wisconsin Department of Children and Families (DCF) piloted the implementation of the AR pathway in 22 county CPS agencies. In 2016, DCF contracted with the Institute for Child and Family Well-Being at the University of Wisconsin-Milwaukee to conduct an evaluation of the pilot. The two-year evaluation included process and outcome components.

The interim report summarized the results from the process evaluation using a variety of qualitative and quantitative data collected between October 2016 and September 2017.

This outcome report focuses on four other major areas of inquiry: (1) pathway assignment and reassignment, (2) child safety, (3) family engagement, and (4) client experience with services. Highlights from each area are described below.

Highlights

PATHWAY ASSIGNMENT & REASSIGNMENT

In practice, pathway assignment followed state policy guidance related to the AR pilot implementation (Wisconsin DCF, 2010). Cases with allegations of sexual abuse were over 13 times more likely to be assigned to the TR pathway compared to cases with other types of maltreatment allegations. Reports screened in with no Present or Impending Danger Threats identified at Access were eleven times more likely to be assigned to the AR pathway compared to cases with Present or Impending Danger Threats.

Findings from a multilevel analysis also suggest that pathway assignment is influenced by supervisors. **Variation in individual supervisor decision-making contributes more to the differences in pathway assignment than variation among county CPS agencies**.

We also examined if county-level patterns in pathway assignment changed over time. **Results suggest that assignment to the AR pathway increased in the first three years of AR implementation**. Initial estimates also suggest that after the third year of implementation, assignment to the AR pathway may stabilize or even decrease. However, interpretation of this finding is limited by the fact that many counties had not reached three years of implementation during the timeframe represented in the sample.

Factors related to child safety (sexual abuse allegation, medically fragile child characteristic, Present or Impending Danger Threats) are also strongly associated with reassignment to the TR pathway. Conversely, only two indicators—the allegation descriptors 'unable to locate child' and 'caregiver alcohol abuse'—were associated with increased likelihood of reassigned to the AR pathway. It is important to note, though, that both of these allegation descriptors were extremely rare. Specifically, 'unable to locate child' was identified in only 20 IAs (less than 0.001% of total sample). **A sexual abuse allegation was found to *reduce* the odds of case being reassigned from the TR pathway to the AR pathway.**

According to county CPS staff, one potential reason some cases switch from the AR to TR pathway was that the agency determined that a substantiation decision was needed for that case. However, the analysis of IA records showed that the proportion of cases that were substantiated in the reassignment sample (AR pathway to TR pathway) was lower than in the sample of cases that were assigned and remained in the TR pathway throughout the IA. **These results suggest that substantiation was not a major catalyst for reassignment from the AR pathway to the TR pathway.**

County-level analyses reveal that on average, counties with *lower* proportions of cases initially assigned to the AR pathway at the start of the IA have *higher* proportions of cases reassigned from the AR pathway to the TR pathway by the conclusion of the IA. There were no county-level associations between the proportion of cases assigned to the AR pathway at the start of the IA and proportion of cases reassigned from the TR pathway to the AR pathway. **Taken together, these findings suggest some counties initially assign more cases to the AR pathway, whereas other counties may take a more gradual approach to assigning and reassigning to the AR pathway.**

CHILD SAFETY

It is important to note when interpreting child safety findings, a screened-in Access report is required to initiate an IA.

This evaluation assessed the following safety outcomes:

- The likelihood that a child will experience at least one subsequent IA within 24 months after his or her first IA.
- The likelihood that a child will experience a subsequent IA within 24 months that had Present or Impending Danger Threats identified at Access.
- The likelihood that a child is determined unsafe at the completion of his or her anchor IA.
- The likelihood that a child is determined unsafe at the completion of a subsequent IA.

The analysis compares cases in AR pilot counties to (1) similar cases in non-AR counties and (2) cases in AR pilot counties prior to the implementation of AR.

Overall, findings suggest that AR implementation and assignment to the AR pathway have little effect on safety outcomes for children, although the implementation of AR may be associated with a change in the approach to safety determinations at the close of an IA that increased the likelihood of unsafe findings regardless of pathway.

AR implementation is not associated with increased risk of *subsequent IAs* up to two years after the first IA, regardless of pathway assignment. This outcome is the broadest measure of future child safety available for this evaluation.

Findings also suggest that compared to similar children in non-AR counties, **children on cases assigned to the AR pathway may be slightly less likely to have a *subsequent screened-in Access report where Present or Impending Danger Threats are identified and a subsequent IA is initiated.*** Additionally, **compared to similar children in non-AR counties, children on cases** assigned to the TR pathway are at no greater odds to have a subsequent screened-in Access report where Present or Impending Danger Threats are identified and a subsequent IA is initiated.

Results suggest **children on cases assigned to the AR pathway were *less* likely to be determined unsafe at the conclusion of the IA compared to similar children in non-AR counties; whereas children on cases assigned to the TR pathway were more likely to be determined unsafe at the conclusion of the IA than similar children in non-AR counties.** Notably, regardless of pathway assignment, the implementation of AR increased the likelihood of an unsafe determination at the conclusion of the IA by 64% in pilot counties when compared to the likelihood of unsafe determinations before AR implementation. Results suggest that the increase in unsafe determinations after AR implementation was driven by a relatively high proportion of cases with unsafe child determinations in the TR pathway post-implementation. Prior to AR implementation, 9.6% of cases had an unsafe finding at the conclusion of IA. After AR implementation, 6.3% of cases in the AR pathway and 21.7% of cases in the TR pathway had an unsafe determination at the conclusion of the IA, suggesting that **the threshold for child safety determinations may have changed to preference a conservative decision of "unsafe findings" because of (or simultaneously to) the implementation of AR.**

We also looked at the likelihood of unsafe determinations in a subsequent IA. The proportion of children on cases assigned to the AR pathway who were determined unsafe at the close of a subsequent IA is smaller than the proportion of children on cases assigned to the TR pathway. However, the proportion of children determined unsafe in a future IA in either pathway is higher relative to similar children in non-AR counties. Moreover, the proportion of subsequent unsafe determinations increased slightly after the implementation of AR in pilot counties. Although statistically significant, the effect sizes of these outcomes are considered negligible.

In sum, findings suggest that the implementation of AR does not increase the likelihood of a child having subsequent IAs. Nor does AR implementation change the proportion of subsequent IAs with identified danger threats. There is, however, some evidence to suggest that AR implementation is associated with a small but significantly higher proportion of subsequent IAs that result in a determination of unsafe, regardless of pathway assignment. When examining this association by pathway assignment, the finding is most associated with children whose case was originally assigned to the TR pathway. Additional analyses may be needed to understand if agency decision-making related to AR implementation may increase the proportion of determinations of unsafe.

FAMILY ENGAGEMENT

Survey results indicate that compared to families in the TR pathway, families in the AR pathway indicate higher rates of satisfaction with and engagement in CPS. Moreover, families in the AR pathway indicated a greater understanding of the CPS process and their rights. Families in the AR pathway also reported being more involved in case decision-making compared to families in the TR pathway.

SERVICE EXPERIENCE

The family survey also asked respondents to identify the types of services they needed, were referred to, and received. According to respondents, families were most in need of counseling and mental health services, financial assistance for rent and utilities, parenting education and support, food and clothing resources, and transportation assistance. **Families in the AR pathway were more likely to receive a referral for a needed service, but families in the TR pathway were more likely to receive a service after a referral was made.**

Report Organization

This report begins with a Project Overview section that provides a description of Wisconsin's AR pilot project and a summary of the process and outcome evaluation activities.

Next, findings from the outcome evaluation are presented in four sections: (1) pathway assignment and reassignment, (2) child safety, (3) family engagement, and (4) client experience with services. Each section contains subsections describing the primary research questions, effective sample, measures, analysis plan and results. Each section concludes with a brief discussion of key findings, organized by research question.

In this report, the term *case* refers to a primary Child Protective Services Access Report that was screened-in for an IA using either the traditional response (TR) or alternative response (AR) pathway. County names are not reported in findings—instead a unique letter was assigned to each county throughout the report.

Descriptions of Common Statistical Terms

Statistics used in this report and Appendices are described below.

Term	Description
Cramer's V	Cramer's V is a measure of effect for binary or other categorical outcomes. Effect sizes are important because large sample sizes will result in statistically significant differences that may not be practically significant. We use conventions set forth for social science data (Ferguson, 2009): Recommended minimum effect size (RMPE) = 0.2; Medium effect = 0.5; Large effect= 0.8 Cramer's V is used in the analysis of safety outcomes and reported in Appendix B.
Effect Size	Effect size indices are used to quantify the magnitude of a phenomena. They are important metrics in large samples because results may find statistically significant differences that may not be practically significant. Cramer's V, odds ratios (ORs), and R^2 values are effect sizes used in this report. Definitions for each effect size presented in this table provide rules of thumb for interpreting the recommended minimum effect size representing a practically significant effect (RMPE, Ferguson, 2009), medium, and large effect sizes. In this report, we use the term "negligible" to describe those effect sizes that are less than the threshold for small effects.
Interclass Correlation Coefficient (ICC)	The ICC is useful to understand whether high-order units, such as supervisors or counties need to be considered when understanding what predicts an outcome. We apply a rule of thumb commonly cited in multilevel modeling in social research, where ICCs greater or equal to 0.05 indicate meaningful clustering effects (Cook et al., 1997). For example, if the ICC for supervisors was found to be 0.05, we would interpret that to mean that supervisors contribute approximately 5% of the variance for a given outcome.
Odds Ratios (ORs)	An odds ratio describes the relationship between a variable and the chances (odds) that a binary outcome will occur. In this report, we use ORs as a metric for logistic regression.

Term	Description
	If OR > 1, the variable is associated with greater odds that the outcome will occur (e.g., if being female is associated with OR = 2, that means that the outcome is twice as likely to occur in women than men). If OR = 1, the variable does not affect the odds that the outcome will occur. If OR < 1, the variable is associated with lower odds that the outcome will occur (e.g., female OR = 0.75 would mean that the outcome is 25% less likely to occur in females, compared to men). In a logistic regression, the OR for each indicator has a reference point. When the indicator is categorical (female/male, yes/no, African American/Latino/American Indian/Other/White), the model will always identify a reference group. Continuous variables will use the mean value, which we have transformed to mean-centered in the regression analysis (mean = 0), to ease interpretation. Odds ratios are interpreted as the change in odds with a one-unit change in the independent variable. Thus, the underlying scale of independent variables will influence the scale and interpretation of the ORs. For instance, a one-unit change in mother's age (range from 16 to 48), will likely generate small ORs compared to a one-unit change in a binary variable like child gender (0 = female, 1 = male). When both the independent and outcome variables are binary, odds ratios can be used as an index of effect size. We use conventions set forth for social science data (Ferguson, 2009): OR < 1.00 OR > 1.00 RMPE effect: OR = 0.50 OR = 2.00 Moderate effect: OR = 0.33 OR = 3.00 Large effect: OR = 0.25 OR = 4.00 Note that the sample size and prevalence of the condition in the sample will influence the confidence in interpreting the ORs as effect sizes. For example, if an event occurs in less than 10% of the population, the OR effect size thresholds listed above are likely to overestimate the effect.
Confidence Intervals (CI 95%)	Confidence intervals provides the upper and lower range of likely values for a given parameter, accounting for errors in the observed sample. Thus, an OR CI 95% of 1.5 to 2.0 means that with 95% certainty, the true OR is between 1.5 and 2.0. If the lower OR CI < 1 and the upper OR CI > 1, the OR is considered not statistically significant.
Probability value (*p*)	The probability that the result of a statistical hypothesis test is significantly different than the null hypothesis. We employ the conventional standard of $\alpha = 0.05$, meaning that the result would have occurred at most 5% of the time by chance. Thus $p \leq 0.05$ indicates a statistically significant difference between groups. When working with very large samples, such as the administrative records in this report, even small differences can be statistically significant, which is why effect sizes including odds ratios, Cramer's V, and R^2 may be better metrics than probability values to determine if the difference among groups or the predictive power of an indicator is practically meaningful.

Term	Description
R^2	Expressed as a percent in regression models, this statistic represents the amount of variance in the outcome that is explained by the variables in the statistical model. Because error terms for models with binary outcomes can only be estimated, Nagelkerke pseudo-R^2 value is used. In the Child Safety and Appendix B, two R^2 values are reported: *R^2 group* shows how much of the variance in a given safety outcome is explained by group membership (e.g., AR pathway, TR pathway, non-AR County). *R^2 full* shows how much of the variance in a given safety outcome is explained when group membership and all covariates are included in the regression model. R^2 can be an index of effect size. We use conventions set forth for social science data (Ferguson, 2009): RMPE = 4%; Medium effect = 25%; Large effect= 64%

Project Overview

Wisconsin's AR Pilot Project

In 2010, a pilot project to implement Alternative Response (AR) began in select counties. Counties were selected through an application process that included an assessment of agency readiness for AR implementation. The implementation of the pilot was designed to be iterative in nature and included 22 counties in five different phases:

- Phase I began in June 2010 and included Eau Claire, La Crosse, Marathon, and Pierce counties.
- Phase II began in January 2012 and included Barron, Chippewa, Dodge, Douglas, Langlade, Sauk, Waushara, and Winnebago counties.
- Phase III began in December 2012 in Calumet, Green Lake, and Jefferson counties.
- Phase IV began in June 2015 in Brown, Fond du Lac, Outagamie, and Waupaca counties.
- Phase V began in June 2016 in Manitowoc, Menominee[1], and Racine counties.

Counties in Phase IV and V received increased implementation support from the Department of Children and Families (DCF) prior to the launch and during early implementation. Additional technical assistance and training from outside experts, contracted by DCF, also began in 2015 and was provided to all AR pilot counties. In 2016, AR training components became integrated into Wisconsin's Child Welfare Professional Development System (WCWPDS) to ensure consistent training for IA staff in AR counties.

Data Collection & Evaluation Activities

Table 1 summarizes the key data collection and evaluation activities. The Interim Evaluation Report provides more details about the instruments, analyses, and results from the process evaluation data collection activities.

Table 1: Summary of process and outcome evaluation activities	
Process Evaluation	
DOCUMENT REVIEW Jan 2017	Phase IV and V AR counties provided the evaluation team with county policy and practice documents. The materials were used to identify similarities and differences in AR practice across counties and to provide county-specific context for interpreting other qualitative and quantitative findings. The document review instructions and protocol were provided in *Appendix B-4* of the Interim Report.
SITE VISITS Feb 2017	The evaluation team conducted site visits to Phase IV and V agencies. Seventy-six staff from the six counties participated in interviews or focus groups including 5 agency directors, 16 supervisors and managers, and 55 Access, IA, and Ongoing staff. From these interviews and focus groups, we gathered qualitative data about factors that may have helped or hindered AR adoption; the extent to which having a two-pathway

[1] No data from Menominee County were included in the Alternative Response evaluation.

	system supports the larger goals of safety, permanency, and well-being; and, if and how AR changes the level or quality of family engagement. The focus group protocol was provided in *Appendix B-5* of the Interim Report.
IMPLEMENTATION ASSESSMENT Jan 2017 (Time 1) Jan 2018 (Time 2)	The implementation assessment was designed to explore key components needed to implement AR in Wisconsin's county child welfare agencies, identify similarities and differences in the implementation process across agencies, and describe how implementation developed over time. The implementation assessment was adapted from an instrument developed by Armstrong et al. (2014). Staff from Phase IV and V pilot counties were asked to rate their progress in eleven implementation components, using two scales: the degree to which the component was important (the priority scale), and the degree to which it was operational (the installation scale). The implementation assessment protocol was provided in the *Appendix B-1* of the Interim Report.
CPS STAFF SURVEY Jun-Sep 2017	The CPS staff survey was disseminated electronically to 1,833 Access, IA, and Ongoing workers and supervisors in all 72 Wisconsin counties. It included questions about education, mental health, burnout, culture/climate, and job satisfaction. Staff from AR counties answered additional questions that addressed staff perception of and satisfaction with AR. The overall response rate was 52% (N = 954). The response rate was higher in AR counties than in non-AR counties, most likely due to their ongoing participation in the larger evaluation (N = 256; 60%). The survey instrument is provided in *Appendix B-2* of the Interim Report.
COMMUNITY PARTNER SURVEY Jun-Sep 2017	This survey was sent to key representatives from law enforcement, court systems, schools, and other public and nonprofit agencies as identified by CPS personnel in AR counties. Out of the 271 community professionals in the recruitment sample, 154, or 57%, completed the survey. Participants included representatives from law enforcement (N = 29), the court system (N = 11), the school system (N = 49), non-profit service providers (N = 34), and other agencies (N = 31). The survey instrument is provided in *Appendix B-3* of the Interim Report.
Outcome Evaluation	
SECONDARY DATA ANALYSIS OF eWiSACWIS RECORDS Jul 2018	Data analysts from DCF provided the evaluation team with administrative records from Wisconsin's statewide automated child welfare information system (eWiSACWIS). The files contained child- and case-level detail for Access reports that were screened-out and screened-in. The screened-in records also included additional data collected during the IA for cases assigned to the AR pathway and TR pathway in 71 Wisconsin counties. The sample included Access reports from July 1, 2011 to July 31, 2018. More detail about the sample construction and analysis plans are described in the method sections below.
WISCONSIN FAMILY SERVICES SURVEY Sep 1 2018 – Aug 30 2018	The Wisconsin Family Services Survey (WFSS) was developed to gather information not otherwise obtained from CPS administrative records. Eligible participants were identified through administrative records and included the reference person for cases assigned to the AR pathway and one or more alleged maltreaters for cases assigned to the TR pathway. The survey included questions about respondents' experiences with CPS, health, mental health, and child and adult adversity. Eligible caregivers received a survey packet from their IA worker. Evaluation team members followed up with non-respondents by telephone. Survey participants

	received a $25 gift card. The effective sample includes 1,073 caregivers involved in alleged child maltreatment cases from 20 AR counties and 5 non-AR counties (AR cases = 562; TR cases in AR county = 325; TR cases in non-AR county = 186). The response rate was slightly under 18% of all eligible cases during the 12-month collection period. The primary reason for nonresponse was no or bad contact information. Approximately 7% of eligible participants declined to participate. The survey instrument is provided in *Appendix A* of the Outcome Report.

Administrative records were obtained from the Wisconsin Department of Children and Families pursuant to a data sharing agreement. The evaluation was conducted with approval from the Institutional Review Board at the University of Wisconsin, Milwaukee (IRB#: 17.144).

I. Pathway Assignment & Reassignment

In Wisconsin, reports about child maltreatment allegations are received and screened by Access workers. When an Access report is screened in, the identification of Present and/or Impending Danger Threats is used to determine the response time for making the initial face-to-face contact with the family, per Wisconsin's CPS Standards. Three guidelines and standards are referenced in this report: CPS Access and Initial Assessment Standards (Wisconsin DCF, May 2017); CPS AR Pilot Program Addendum to CPS Services, Access, and IA Standards (Wisconsin DCF, September 2010); Child Protective Services Safety Intervention Standards (Wisconsin DCF, July 2016).

Danger Threats at Access

Present Danger Threat refers to an immediate, significant, and clearly observable family condition that is occurring or "in the process" of occurring at the point of contact with the family and will likely result in severe harm to a child. In cases where Present Danger Threats to child safety are identified at Access, IA workers are required to make contact with the alleged child victim and/or parent(s) the same day in order to further assess child safety and take protective action, if necessary.

Impending Danger Threat refers to a foreseeable state of danger in which family behaviors, attitudes, motives, emotions, and/or situations pose a threat, which may not be currently active but can be anticipated to have severe effects on a child at any time in the near future and requires safety intervention. In cases where *Impending Danger Threats to child safety* are identified at Access, contact with the alleged child victim and/or parents(s) must be made within 24 to 48 hours in order to further assess child safety and take protective action, if necessary.

When an Access report has *no identified Present or Impending Danger Threats* identified, initial face-to-face contact with the alleged child victim and/or parent(s) must occur within five business days.

Sometimes an IA supervisor will grant extensions to the response time, although a screened-in Access report must be responded to within five days. For the purposes of this report, the assigned response time is used as a proxy for the identification of danger threats at Access.

In AR counties, when an Access report is screened in, the Access worker and supervisor assign the report to either the AR or TR pathway. State policy states that assignment to TR pathway is appropriate if the allegations are serious in nature, the assessment will likely result in collaboration with law enforcement, juvenile or criminal court action, or substantial abuse or neglect has or is likely to occur. In most cases, however, counties have discretion to assign a report to either pathway. The first set of research questions examine the characteristics of cases assigned to the AR and TR pathways. In addition, as part of the process evaluation (see Interim Report), qualitative data from some counties indicated that they believed assignment to the AR

pathway increased during the early phases of AR implementation. This outcome analysis examined the question of pathway assignment over time empirically.

Research Questions for Pathway Assignment

1a. What child and case characteristics influence the decision to assign a case to the AR pathway?
1b. Is AR pathway assignment more likely in certain counties and/or with certain supervisors?
1c. Is the likelihood of assignment to the AR pathway associated with the length of time a county has implemented the AR pilot?

In Wisconsin, cases in either pathway can be reassigned to the other pathway during the IA. For instance, reassignment from the AR pathway to the TR pathway may occur after new danger threats are identified during the assessment. Likewise, sometimes workers and supervisors may determine that a case previously assigned to the TR pathway may be more appropriate for the AR pathway. Supervisors approve pathway reassignments. The second set of research questions in this section examine the predictors of pathway reassignment during the IA.

Research Questions for Pathway Reassignment

1d. What child and case characteristics influence the decision to reassign a case to a different pathway?
1e. Is pathway reassignment more likely in certain counties and/or with certain supervisors?
1f. Is the likelihood of pathway reassignment associated with the length of time the county has implemented the AR pilot?
1g. Are cases reassigned to the TR pathway because substantiation is appropriate? In other words, are cases that switch from the AR pathway to the TR pathway more likely to be substantiated than cases that were assigned and remained in the TR pathway?

Methods

SAMPLE

To address questions of pathway assignment and reassignment, we conducted secondary data analyses using eWiSACWIS administrative data records from 21 AR counties since July 2011. However, only Access reports that were screened in and assessed after the county began implementing AR were included in this analysis. The data were restructured so one record contained information about a specific Access report associated with an IA for one child. The sample was restricted to include only screened-in primary CPS Access reports. This yielded 61,349 records, including 40,184 unique children and 23,870 unique cases.

MEASURES

The measures used for these analyses include child characteristics, case characteristics, and county and supervisor information.

The analyses included five child characteristics: *child age* at report, *child gender, child race/ethnicity*[2], an indicator of whether the child was considered *medically fragile*, the child's *living arrangement* (with biological mother only, in a joint household with at least one biological parent, or other), and the total *number of children* identified in the Access report/IA match.

Case information that was gathered during the receipt of an Access report and prior to making a pathway decision was also included in the analyses. Specifically, we included the number of *prior screened-in* and *screened-out Access reports*, *threats to child safety identified on the Access report* (Present Danger, Impending Danger, or no danger threats identified), *reporter type* (law enforcement, school personnel, etc.), the alleged maltreater's relationship with child (biological parent, other relative, etc.), *allegation type* (emotional damage and abuse, neglect, physical abuse, and sexual abuse), as well as 27 allegation descriptors. We excluded allegation types and descriptors that were indicated in less than 100 records. During the initial data exploration stage, we discovered that a sexual abuse allegation was strongly correlated with assignment to the TR pathway, which suggests Access workers are practicing with fidelity to standards. To improve model fit, we excluded the allegation descriptors that were unique to sexual abuse allegations from the random forest models (described below) because their association with assignment to the TR pathway overpowered all other relationships. Note that the structure of the final data file allowed information about multiple maltreaters and multiple allegations per record/child.

County and *supervisor ids* were unique identification variables that were used to address research questions 1b, 1c, 1e, and 1f, which examine the influence of supervisors and county-level effects on pathway assignment decisions.

For the analysis of pathway reassignment, the covariates were a subset of indicators included in the assignment analyses: child race, prior Access reports, threats to child safety identified on the Access report (Present Danger, Impending Danger, or no danger threats identified), allegation type, reports from law enforcement and allegation descriptors that relate to caregiver substance misuse and neglect. These indicators were previously identified by qualitative data from site visits and by state partners as most likely to influence reassignment. For instance, we learned that some cases may switch from the AR pathway to the TR pathway when possible unborn child abuse is identified during the IA. CPS staff also describe other times, such as when a caregiver is receptive to treatment for substance misuse, that a case assigned to the TR pathway may be reassigned to the AR pathway during the IA.

ANALYSIS PLAN

Assignment

1a. Assignment: Child and Case Characteristics. Prevalence and mean scores were calculated to describe the sample, and t-tests were used to assess significant differences between cases assigned to the AR and TR pathways. In this section "AR" and "TR" refers to the initial pathway assignment at Access.

[2] Race/ethnicity combines the original *ethnicity* and *primary race* variables reported in eWiSACWIS into a single, mutually exclusive variable comprised of the categories of Hispanic and non-Hispanic American Indian, African American, White, and other race. Where all children identified as ethnically Hispanic would belong to the Hispanic category regardless of their primary race.

To identify child- and county-level predictors of pathway assignment, we reduced the large number of potential predictors by constructing a random forest model. Random forests are machine learning models that can be used to identify important predictors of an outcome in large, complex datasets (Stroble, Malley, & Tutz, 2009). The approach builds many decision trees using different combinations of predictors. Estimates from each decision tree are then aggregated and used to rank each potential predictor by importance—that is, how much a variable contributes to predicting pathway assignment.

Guided by this statistic, we selected a smaller set of predictors to test in a two-level logistic regression model, which also accounted for county-level cluster effects. The coefficients reported in the final logistic regression model are presented as odds ratios (ORs). For this analysis, the ORs would be interpreted as the odds of a case with a certain characteristic being assigned to the AR pathway, compared to cases that do not share that characteristic, holding all other characteristics constant.

1b. Assignment: Variation by County and Supervisor. We calculated a three-level regression model to assess the amount of variation in pathway assignment that is attributable to counties and supervisors, where cases are nested in supervisors who are nested in counties. Because pathway assignment is a binary outcome (i.e., nonlinear) an estimate of the interclass correlation coefficient (ICC) was calculated using a constant (Guo & Zhao, 2000). The ICC is useful to understand whether high-order units (i.e., cluster variables), such as supervisors or counties, need to be considered when understanding what predicts an outcome. We apply a rule of thumb commonly cited in multilevel modeling in social research, where ICCs greater or equal to 0.05 indicate meaningful clustering effects (Cook et al., 1997). For example, if the ICC for supervisors was found to be 0.05, we would interpret that to mean that supervisors contribute approximately 5% of the variance for pathway assignment. To enhance interpretation, a graph displaying the average rate of assignment by county is also presented (*Figure A*).

1c. Assignment: Variation Over Time. We also assessed whether pathway assignment changed over time using trend plots. The proportion of cases assigned to the AR pathway were aggregated into three-month periods. The intent of this trend analysis is simply to describe the general assignment patterns aggregated by county to examine how these patterns change over time. To determine the extent to which this pattern may vary by time, a logistic regression analysis was run for each AR pilot county. The models included significant case and child characteristics, as identified in **Analysis 1a**.

Reassignment

We hypothesized that variables associated with switching from the TR pathway to the AR pathway may be different than variables associated with switching from the AR pathway to the TR pathway. Therefore, the sample was split to analyze pathway changes among cases assigned to the TR pathway and to the AR pathway separately.

1d. Reassignment: Child and Case Characteristics. Similar to the assignment analyses, reassignment analyses included two-level logistic regression models for both samples. The models included county as a higher-order cluster variable. Final models presented in the report only include significant predictors of reassignment.

1e. Reassignment: Variation by County and Supervisors. Also similar to the previous analyses, supervisor and county-level effects were estimated using a three-level model, where

cases were nested in supervisors who were nested in counties. The ICC was used to assess the proportion of variation in pathway reassignment that was attributable to specific supervisors and counties. To enhance interpretation, bar graphs present the average rate of reassignment by counties for AR and TR pathways.

1f. Reassignment: Variation Over Time. Similar to 1c, we conducted both a descriptive trend plot analysis of the proportion of cases reassigned to either the AR pathway or TR pathway over time and a logistic regression analysis to test the influence of time since implementation on pathway assignment in individual IAs, while controlling for factors found significant in 1d.

1g. Reassignment: Substantiation. During qualitative data collection for the process evaluation, county CPS professionals hypothesized that some cases may transfer to the TR pathway because the agency decided to make a substantiation determination instead. We conducted group difference tests (t-tests) to assess whether the rate of substantiation decisions in cases originally assigned to the TR pathway were significantly different than cases that switched from the AR pathway to the TR pathway.

Random forest modeling was conducted in R, using the "RandomForest" package. Logistic regression was performed in Mplus. Records with missing covariate information were not included in the random forest analyses (random forest N = 60,371, final regression model N = 61,349).

Results

SAMPLE DESCRIPTION

Table 2 compares cases initially assigned to the AR pathway to cases initially assigned to the TR pathway from July 1, 2011 to July 30, 2018.[3] County data is only included in analyses after the county began implementing AR. Because of the large sample size, the analyses are overpowered. That is, statistically significant differences between AR and TR samples are detected for many indicators that are not practically significant. However, some potentially meaningful differences exist between cases assigned to the AR pathway and TR pathway in terms of characteristics that relate to child safety. Specifically, cases in the AR pathway have a lower proportion of prior Access reports compared to cases in the TR pathway (AR = 77.4%; TR = 80.3%). Moreover, most cases in the AR pathway (90.6%) have no Present Danger Threats identified at Access, compared to less than half of cases in the TR pathway (49.9%). In addition, a smaller proportion of cases assigned to the AR pathway include reports from law enforcement (AR = 18.4%; TR = 26.8%), as well as fewer sexual abuse allegations (AR = 2.4%; TR = 17.9%). Table 2 does not include information on allegation descriptors which were included in the multivariate analyses for pathway assignment and reassignment.

Fewer cases are initially assigned at Access to the AR pathway (28,317; 46.2%), compared to the TR pathway (33,032; 53.8%) but a larger proportion of cases switch from the TR pathway to the AR pathway (14.4%) than switch from the AR pathway to the TR pathway (11.7%). By the close of the IA, the proportions of cases in the AR (48.5%) and TR (51.5%) pathways are more balanced. Additional analyses on pathway reassignment are presented in the *Pathway Reassignment* section.

[3] A similar table was presented in the Interim Report (Table 2), but only included cases from July-November 2017.

Table 2: Comparison between cases initially assigned to AR and TR pathways

	AR pathway % or M(SD)	TR pathway % or M(SD)
N in initial pathway assignment	28,317	33,032
% in initial pathway assignment	46.2%	53.8%
Child characteristics	**% or M(SD)**	**% or M(SD)**
Age of child	6.6 (4.6)	6.9 (4.8)
% Male	52.1	48.3
% Medically fragile	0.4	0.5
Living arrangement		
% Single mother[2]	42.6	40.7
% Joint household, at least one parent[3]	42.8	42.4
% Other	14.6	16.9
Child race/ethnicity		
% American Indian	4.8	5.7
% African American	12.4	14.4
% Hispanic	7.3	8.6
% Other or missing	9.2	7.5
% White	66.3	63.9
Number of children in family	2.2 (1.4)	2.2[ns] (1.4)
Safety		
% Any prior Access reports	77.4	80.3
Number of prior screened-out Access reports	3.1 (4.9)	3.6 (5.7)
Number of prior screened-in Access reports	2.4 (3.4)	2.9 (4.0)
Threats to child safety identified on Access report		
% Present Danger	1.7	32.1
% Impending Danger	7.7	19.9
% No identified danger	90.6	49.9
Allegation details		
Child relationship to alleged maltreater[1]		
% Biological Parent	82.2	78.0
% Other	19.1	33.4
Reporter Type		
% Law enforcement	18.4	26.8
% Social worker	9.8	11.2
% Parent	7.9	6.6
% School staff	19.6	15.2
% Medical professional	4.6	3.9
% Other	39.8	36.2
Allegation[1]		
% Neglect	73.9	63.6
% Physical Abuse	25.5	25.3
% Sexual Abuse	2.3	17.9
% Emotional damage or abuse	3.7	2.6

Table 2: Comparison between cases initially assigned to AR and TR pathways

	AR pathway % or M(SD)	TR pathway % or M(SD)
IA Outcome		
%TR switched to AR	NA	14.4
%AR switched to TR	11.7	NA
N at close of IA	29,753	31,596
% at close of IA	48.5%	51.5%

[1] Not mutually exclusive; NS = No significant difference between pathways. M = Mean; SD = Standard deviation. NA = Not applicable

PATHWAY ASSIGNMENT: CHILD AND CASE PREDICTORS

The final random forest model included 2,000 trees with 10 variables tested at each node split. *Table 3* lists the 15 most important variables identified in the random forest model. Importance is determined by the amount of accuracy of prediction lost if the variable was removed from the model. Three child characteristics were identified as important: number of children in the family, whether the child was white, and the child's living arrangement. Danger threats identified in the Access report and number of prior screened-out and screened-in Access reports served as proxies of child safety and are some of the most important predictors of pathway assignment. Notably, sexual abuse is the only type of allegation that was identified as important: this is probably because almost all cases with sexual abuse allegations are assigned to the TR pathway per state policy guidance (Wisconsin, DCF, 2010, p. 6), whereas cases with other allegation types are represented in both pathways. There are also specific allegation descriptors that influence pathway assignment, including lack of supervision, and exposure to elements or environmental hazards.

Table 3: Most important predictors of pathway assignment

- Identified Danger Threats
- Number of children in family
- Number of prior screened-out Access reports
- Sexual abuse allegation
- Number of screened-in Access reports
- Lack of supervision (allegation descriptor)
- Child lives with a single mother
- Report by "other" (e.g., someone other than medical staff, school personnel, parent of victim, social worker, or law enforcement)
- Other injuries (allegation descriptor)
- Exposure to elements or environmental hazards (allegation descriptor)
- White child victim
- Lack of necessary care (allegation descriptor)
- Threatened abuse or neglect (allegation descriptor)
- Child lives in a joint household with at least one biological parent
- Report by school staff

Interpretation note: Listed by order of importance. The result from the random forest analysis does not indicate *how* these variables are associated with pathway assignment. That is, some may be strongly associated with assignment to the TR pathway while others may be important predictors to AR pathway assignment.

As the interpretation note (Table 3) describes, the random forest model does not indicate *how* a given variable is related to the likelihood of assignment to either pathway. The direction of the relationship is addressed in the next analyses step, where logistic regression models are constructed using predictors identified as important in the random forest model.

Because both prior screened-out and screened-in Access reports were important in the random forest model, we combined them into a single variable, *any prior Access report*.

Table 4 presents the results from the final logistic regression model for pathway assignment. Three child characteristics had statistically significant associations with pathway assignment, although some had relatively small odds ratios. Cases involving white, non-Hispanic children had a 7% greater chance (OR 1.07) of being assigned to the AR pathway compared to cases involving children of other races and ethnicities. Access reports involving higher numbers of children (OR = 0.95) and children who lived apart from their biological mother (OR = 0.80) were associated with a higher likelihood of being assigned to the TR pathway. **Despite being statistically significant, none of the child characteristics had a meaningful effect on assignment**.

Table 4: Logistic regression predicting AR pathway assignment

	Odds Ratio	95% C.I. Lower	Upper
Child characteristics			
White child	1.07	1.01	1.12
Number of children	0.95	0.92	0.98
Child does not live with a biological parent	0.80	0.75	0.86
Case characteristics			
No danger threats identified at Access	**11.85[L]**	**9.15**	**15.33**
Lack of supervision (allegation descriptor)	1.58	1.37	1.82
Prior Access report	0.77	0.73	0.82
Reported by law enforcement	0.75	0.65	.873
Sexual abuse (allegation type)	**0.08[L]**	**0.06**	**0.10**

Note: All effects listed above are statistically significant ($p < 0.05$). S, M, L = small, medium, large effect sizes respectively (Ferguson, 2009). ORs without a superscript indicate a statistically significant, but negligible effect on AR pathway assignment.

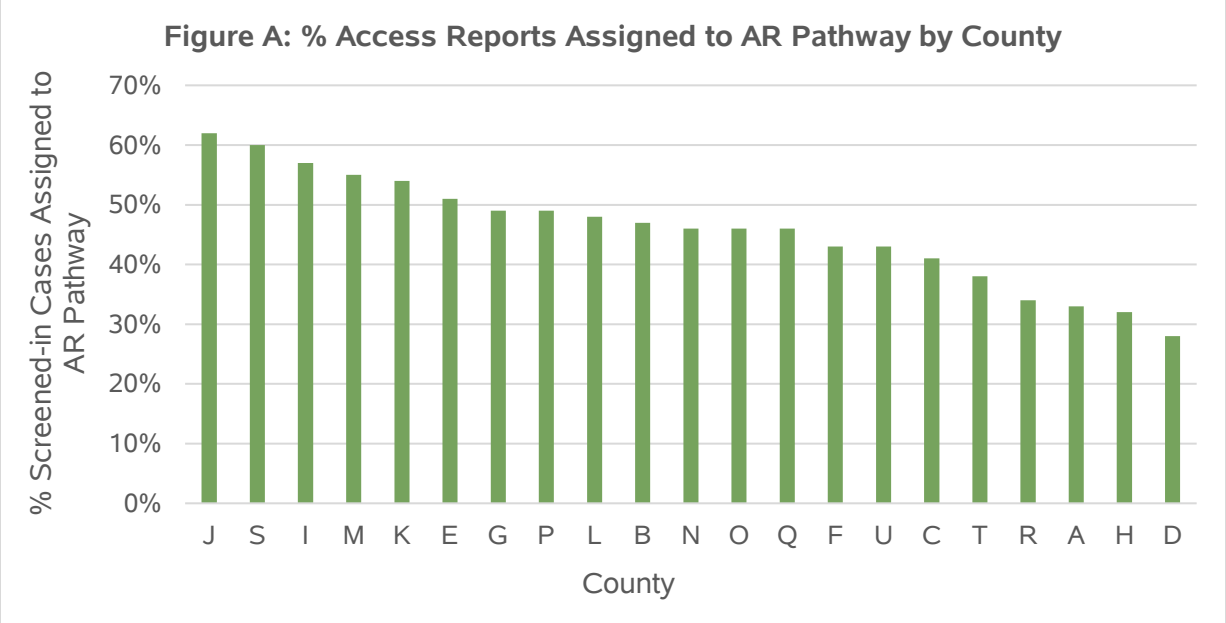
Although the previous findings have negligible effect sizes, the DCF requested the evaluation team to conduct further analysis to explore possible explanations for the finding that White, non-Hispanic children are more likely to be assigned to AR. The results of those analyses are not included in this report, but there were no notable county or case characteristics that appeared to be driving this association. In addition, because the odds ratio and effect size are so small, it is likely this finding does not represent significant bias in practice, but rather may be due to an unmeasured characteristic of county practice or caseload.

The odds of being assigned to the AR pathway is nearly 12 times (OR = 11.85, large effect size) greater when a case has no identified danger threat at Access compared to cases with Present or Impending Danger Threats identified at Access. Access reports containing a "lack of supervision" allegation descriptor were more than one-and-a-half times more likely to be assigned to the AR pathway than other Access reports without this allegation descriptor (OR = 1.58, negligible effect). Conversely, compared to cases with no prior Access reports, cases with prior Access reports had a lower chance of being assigned to the AR pathway (OR = 0.77, negligible effect). Compared to cases involving other reporters, cases reported by law enforcement also had lower odds of being assigned to the AR pathway (OR = 0.75, negligible

effect). **Not surprisingly, Access reports with a sexual abuse allegation had very low odds of being assigned to the AR pathway (OR = 0.08, large effect). By calculating the reciprocal of this odds ratio, we find that Access reports with a sexual abuse allegation are 13.16 times more likely to be assigned to the TR pathway.[4]**

PATHWAY ASSIGNMENT: VARIATION BY COUNTY AND SUPERVISOR

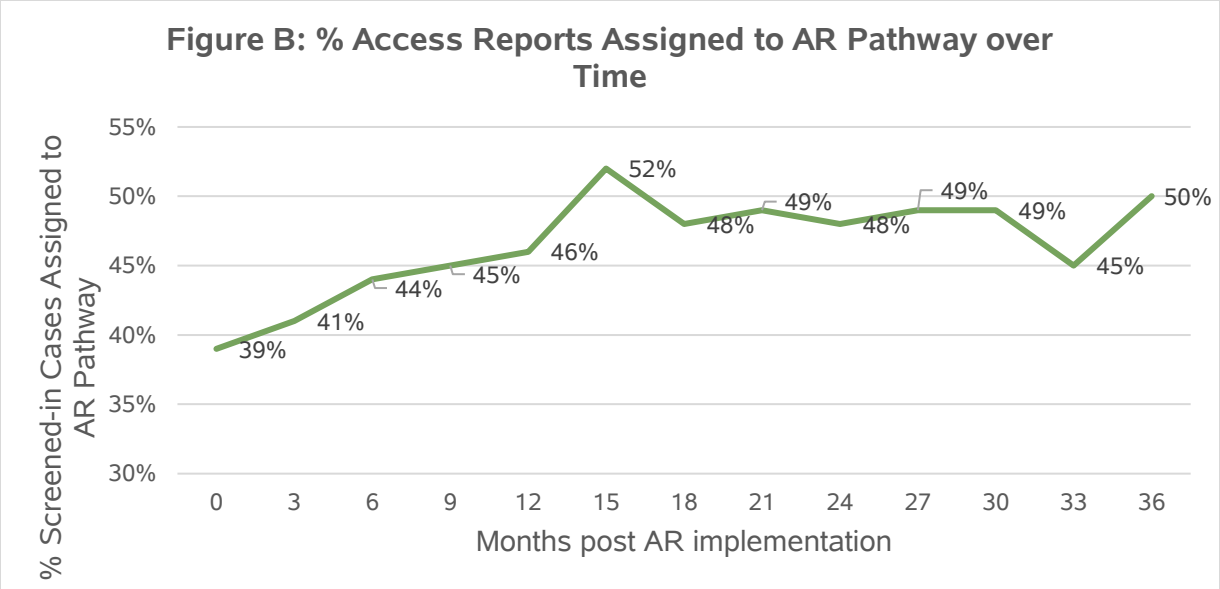
Multilevel modeling indicated that nearly 6% (ICC = 0.059) of the differences in pathway assignment is attributed to differences in supervisors, with another 3% (ICC = 0.029) attributed to differences in counties. **Taken together, these cluster effects indicate that the likelihood of a case being assigned to the AR pathway is influenced by supervisor decision-making and, to a lesser extent, variation between counties**. *Figure A* below presents the proportion of screened-in Access reports that are assigned to the AR pathway by county (range = 28% to 62%).



PATHWAY ASSIGNMENT: VARIATION OVER TIME

We tested whether the large variation in pathway assignment seen in Figure A was associated with the length of time a county had implemented AR. *Figure B* presents the proportion of screened-in Access reports that are assigned to the AR pathway since AR implementation began. Time is anchored on implementation date, not calendar date. That is, "Month 3" will be earlier for early AR pilot cohorts than for later AR pilot cohorts. The trend line in the figure shows assignment to AR increased steadily over the first 12-months of implementation, and then leveled out. Although not displayed in the figure, data from counties in AR Cohorts 1 and 2 (i.e., counties that have been implementing the AR pilot longest), had average assignment rates that ranged between 45%-50% in the third through fifth years of implementation.

[4] Sexual abuse allegation OR = 0.076, Reciprocal = 1/0.076 = 13.16.



The prevalence rates described above represent averages based on the whole sample and may mask county-specific trends. To assess the extent to which time since AR implementation influenced assignment pathways in each county, logistic regression analyses were conducted for each county's sample of IAs. A variable representing the number of months between AR implementation and the Access report date were included in the models. These analyses indicate that there is a great deal of variation among counties. *Table 5* below presents the effect of time since implementation on assignment by county.

Table 5: The Influence of time since AR implementation by county

	County	OR	Cohort	Size
Counties where *time since AR implementation* is significantly associated with **a higher likelihood** of assignment to the AR pathway	R	1.06	5	4
	S	1.03	5	3
	H	1.01	4	4
	M	1.01	2	4
	L	1.01	2	1
	O	1.01	2	3
	T	1.01	4	3
	P	1.01	1	3
	N	1.00	1	3
Counties where *time since AR implementation* ***has no association with the likelihood*** of assignment to the AR pathway	I	1.01	4	2
	D	1.00	3	1
	F	1.00	3	3
	U	1.00	1	2
	G	1.00	2	2
Counties where *time since AR implementation* is significantly associated with a ***lower likelihood*** of assignment to the AR pathway	C	1.00	1	3
	K	1.00	2	1
	B	0.99	2	2
	Q	0.99	4	4

	E	0.98	2	2
	J	0.97	3	2
	A	0.96	2	2

Note: Some ORs do not go in continuous order, because they are grouped by significance. For example, County "I" has an OR of 1.01 but it has a great deal of variation in it, which means we cannot reject the null hypothesis that the OR is significantly different than 1.

Results presented in *Table 6* indicate that there is a great deal of variation by county in the extent to which time since implementation may influence pathway assignment. One notable finding is that cohort membership is associated with the effect of time on pathway assignment. **That is, earlier cohorts tend to have the likelihood of AR assignment decrease over time, whereas in later cohorts, longer time since AR implementation is associated with higher chances of assignment to the AR pathway ($r = 0.46$, $p = .04$).** As newer cohorts spend more time in implementation, we may see that the AR pathway assignment rate stabilizes or decreases as well.

REASSIGNMENT: CHILD AND CASE CHARACTERISTICS

Next, the evaluation examined the extent to which child and case characteristics may predict pathway reassignment. The predictors included in the assessment are a subset of indicators from the assignment analyses: child race, prior Access reports, threats to child safety identified on the Access report (Present Danger, Impending Danger, or no danger threats identified), allegation type, reports from law enforcement and allegation descriptors that relate to caregiver substance misuse and neglect. Logistic regression models were used to identify the strongest predictors of reassignment to the AR pathway and reassignment to the TR pathway.

Table 6: Logistic regression predicting reassignment from TR to AR pathway

	Odds Ratio	95% C.I. Lower	Upper
Child characteristics			
White child	1.21	1.09	1.34
Medically fragile child	0.52	0.36	0.75
Case characteristics			
Unable to locate (allegation descriptor)	**3.18[m]**	**1.20**	**8.42**
Caregiver alcohol abuse (allegation descriptor)	**2.14[s]**	**1.31**	**3.51**
Prior Access report	0.83	0.77	0.90
Report made by law enforcement	0.82	0.72	0.93
Physical abuse (allegation type)	0.73	0.64	0.84
Exposure to elements or env. hazards (alleg descriptor)	0.72	0.63	0.86
Sexual abuse (allegation type)	**0.21[m]**	**0.16**	**0.28**

Note: All effects listed above are statistically significant ($p < 0.05$). S, M, L = small, medium, large effect sizes respectively for Cohen's D. ORs without a superscript indicate a statistically significant, but negligible effect on AR pathway assignment. C.I. = Confidence interval.

Table 6 presents the significant predictors that may influence whether an IA originally assigned to the TR pathway is reassigned to the AR pathway by the end of the IA. Allegation descriptors, unable to locate (OR = 3.18, medium effect) and caregiver alcohol abuse (OR = 2.14, small effect) have the highest odds of switching from the TR pathway to the AR pathway, although less than one percent of cases have either descriptor. Cases with white children (OR = 1.21) are

also associated with a greater likelihood of reassignment to the AR pathway, although the effect size is negligible. Cases in the TR pathway are less likely to be reassigned to the AR pathway if they have a prior Access report (OR = 0.83), a report by law enforcement (OR = 0.82), an allegation descriptor of exposure to elements or environmental hazards (OR = 0.74), an allegation of physical abuse (OR = 0.73), a medically fragile child (OR = 0.52), or an allegation of sexual abuse (OR = 0.21, medium effect). **In sum, by using effect sizes as a threshold for meaningful findings, IAs originally assigned to the TR pathway are more likely to be reassigned to the AR pathway if they include the allegation descriptors unable to locate child or caregiver alcohol abuse—although, these were very rare events. In addition, IAs in the TR pathway that include sexual abuse allegations are less likely to be reassigned to the AR pathway.**

Table 7 presents the odds ratios and confidence intervals for predictors associated with reassignment from the AR pathway to the TR pathway. Cases with sexual abuse allegations (OR = 3.02, medium effect), medically fragile children (OR = 2.66, small effect), Present or Impending Danger Threats identified on the Access report (OR = 2.12, small effect), American Indian children (OR = 1.39, negligible effect), prior Access reports (OR = 1.39, negligible effect), an allegation of unborn child abuse (OR = 1.39, negligible effect), and an allegation descriptor of threats of abuse or neglect (OR = 1.26) are more likely to be reassigned from the AR to TR pathway. There were no child or case characteristics that were significantly associated with a lower likelihood of switching pathways. In other words, while some variables made reassignment from the AR to TR pathway more likely, no variables made reassignment to the TR pathway less likely. **Only three predictors-- sexual abuse allegations, Present or Impending Danger Threats, and medically fragile child descriptor—were found to have meaningful effects on reassignment from the AR to TR pathway.**

The DCF requested that the evaluation team conduct further analysis in order to understand the findings that American Indian children are more likely to switch from AR to TR, and White children are more likely to switch from TR to AR. The results are not included in this report, but similar to the pathway assignment analysis, no case characteristics were noticeable as potential explanations of this finding. However, when examining this relationship for each individual county, a few counties have significantly higher likelihoods of switching American Indian children from AR to TR, while most counties show no association between American Indian children and pathway switching. Thus, the statewide finding that American Indian children are more likely to switch from AR to TR may be reflective of practice in a few counties. This information is helpful for identifying areas in which county implementation and practice may vary and for identifying where future supports and training may be needed.

Table 7: Logistic regression predicting reassignment from AR to TR pathway

	Odds Ratio	95% C.I. Lower	95% C.I. Upper
Child characteristics			
Medically fragile child	**2.66[s]**	**2.06**	**3.42**
American Indian child	1.39	1.18	1.63
Case characteristics			
Sexual abuse	**3.02[m]**	**2.40**	**3.79**
Danger threats identified at Access	**2.11[s]**	**1.78**	**2.49**

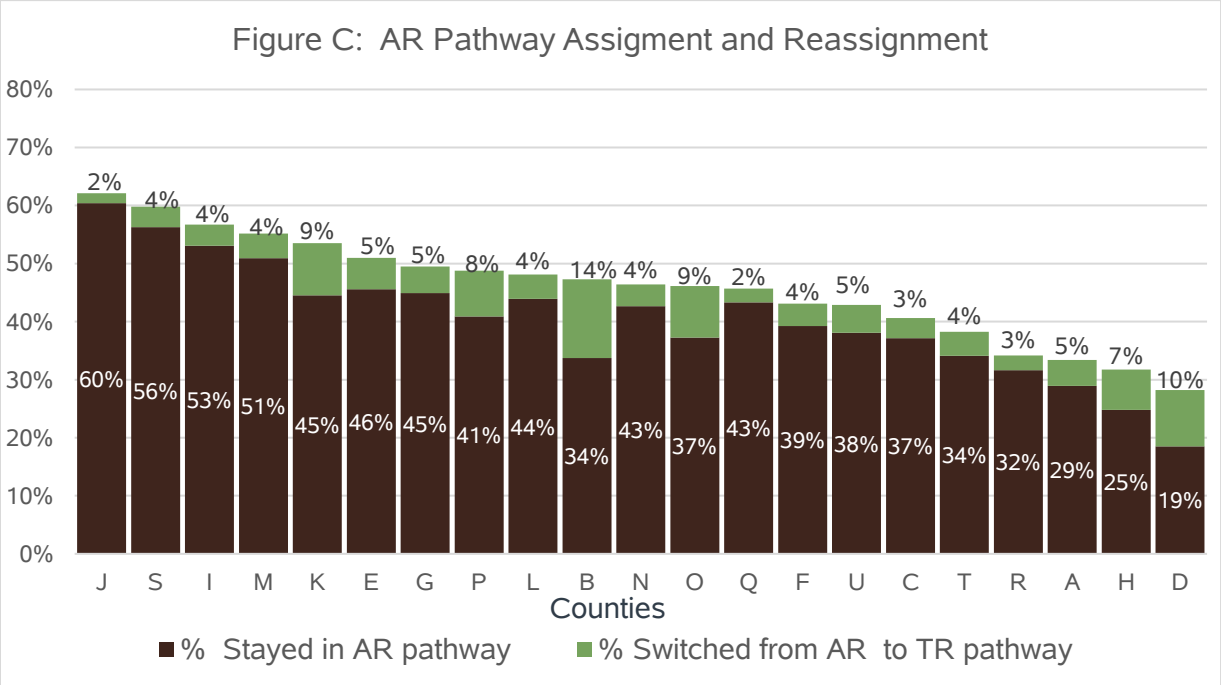
Prior Access report	1.39	1.29	1.49
Unborn child abuse (allegation type)	1.39	1.12	1.73
Threatened abuse and neglect (allegation descriptor)	1.26	1.05	1.52

Note: All effects listed above are statistically significant ($p < 0.05$). Superscripts S, M, L = small, medium, large effect sizes respectively (Ferguson, 2009). ORs without a superscript indicate a statistically significant, but negligible effect on AR pathway assignment.

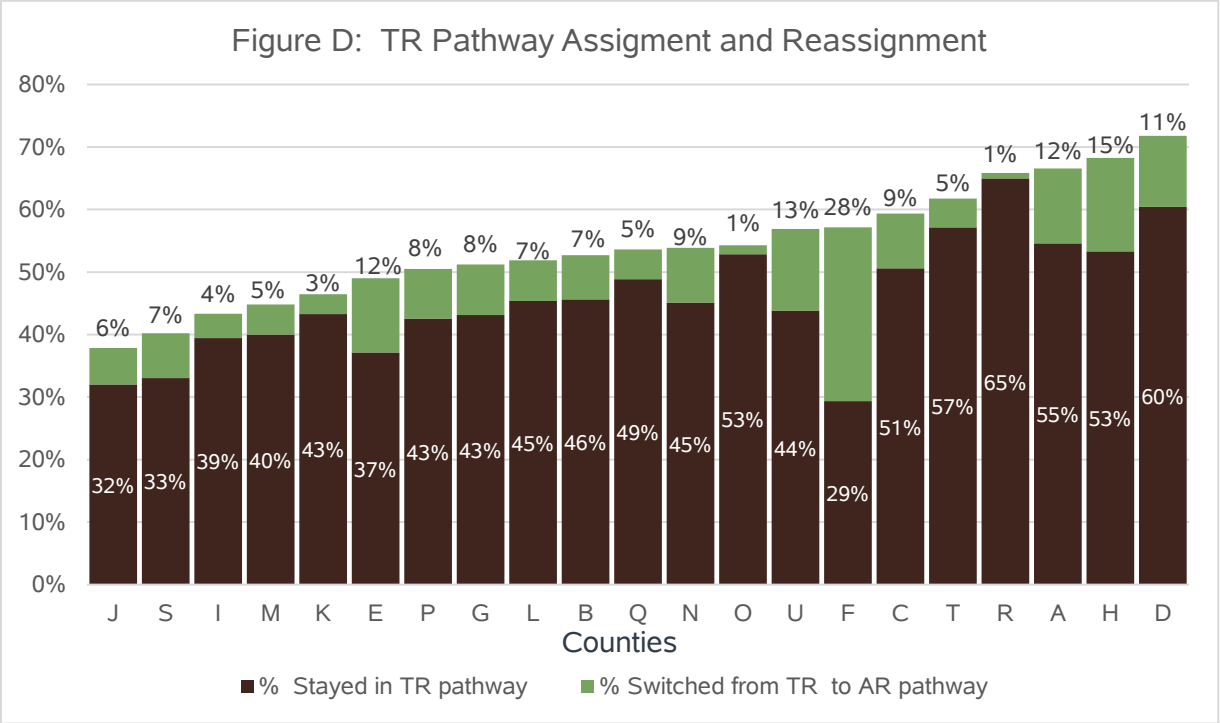
REASSIGNMENT: VARIATION BY COUNTY AND SUPERVISOR

We calculated three-level regression models for both types of reassignment to assess the amount of variation in reassignment that is attributable to counties and supervisors. For cases that switch from the AR to TR pathway, differences in supervisors accounted for about 4.7% of the difference in reassignment while counties contributed an additional 3.3% of the difference. For cases that switched from the TR to AR pathway, supervisors accounted for roughly 5.2% of the variation in reassignment decisions, and counties contributed approximately 6.6% of the variation. **In sum, supervisors and counties influence the likelihood of a case switching pathways, although these higher-order effects are highest for cases assigned to the TR pathway that are reassigned to the AR pathway.**

To visualize this variation, *Figures C* and *D* show bar graphs with the prevalence of pathway assignment and reassignment by county. The total height of the bars in *Figure C* represent the total proportion of IAs that were assigned to the AR pathway. The brown section represents the proportion of total IAs assigned to the AR pathway at the beginning of IA that were still in the AR pathway at the close of IA. The green section represents the proportion of total IAs that were initially assigned to the AR pathway that later were reassigned to the TR pathway. The reassignment rate from the AR pathway to the TR pathway ranges from 2% to 14% across counties. **<u>Higher</u> county rates of AR pathway assignment are significantly associated with <u>lower</u> rates of cases reassigned to the TR pathway ($r = -0.50$, $p = 0.02$).**



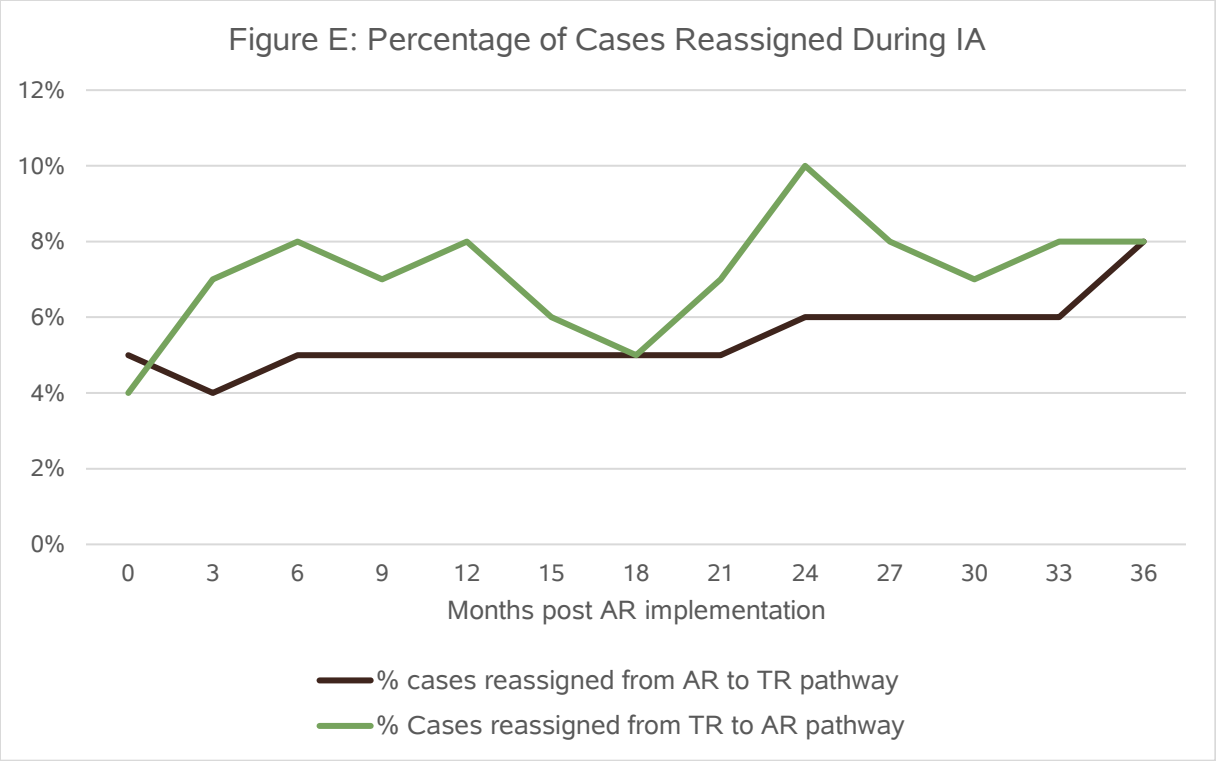
The TR pathway to AR pathway reassignment rates (*Figure D*) range from 1% to 28%. Results indicated no correlation between county rates of initial assignment to the TR pathway and reassignment to the AR pathway ($r = 0.07$, $p = 0.75$). Using data aggregated by county, **bivariate correlations indicate no association between reassignment to either pathway and the county's size or cohort membership.**



REASSIGNMENT: VARIATION OVER TIME

We also examined the extent to which reassignment rates changed over time. *Figure E* presents the proportion of cases reassigned from their original pathway over time. Similar to the assignment time analysis (*Figure B*), time is anchored on implementation date, not calendar date. Results suggest that reassignment from the AR to TR pathway increases slightly over time (average AR-to-TR reassignment Year 1 = 4.8%; Year 2 = 5.3%; Year 3 = 6.5%). The trend line for cases switching from the TR to AR pathway has more variation (average TR-to-AR reassignment Year 1 = 7.5%; Year 2 = 7.0%; Year 3 = 7.8%).

However, the prevalence rates described above and depicted in *Figure E* do not account for other variables. We constructed two-level logistic regression models that included other indicators of reassignment as described in Tables 6 and 7. The new models included time as measured in months since AR implementation. **Results indicate no significant effect of time on reassignment from the AR to TR pathway ($p = 0.28$), and only a marginal significant effect of reassignment from the TR to AR pathway ($p = 0.10$).**



REASSIGNMENT: SUBSTANTIATION

County CPS staff suggested that one common reason to reassign a case from the AR pathway to the TR pathway was to make a substantiation determination. Overall, about a quarter (25.9%) of cases assigned to the TR pathway in AR pilot counties are substantiated. In contrast to the initial hypothesis, results suggest that cases that were reassigned from the AR pathway to the TR pathway were substantiated about 24.4% of the time whereas other cases assigned to the TR pathway from the start had a slightly higher rate of substantiation (26.09%, $p = 0.04$). **Thus, evidence from administrative data suggests that the decision to substantiate a case is not a common reason to reassign IAs from the AR to the TR pathway.**

Assignment & Reassignment Summary

1a. What child and case characteristics influence the decision to assign a case to the AR pathway?

Through a multistep process, which combined machine learning approaches with multilevel logistic regression models, we identified a small set of child and case characteristics that significantly influenced pathway assignment decisions. IAs were significantly more likely to be assigned to the AR pathway if it involved: No Present or Impending Danger Threats; no sexual abuse allegations; no reports by law enforcement; no children with prior Access reports; the allegation descriptor "lack of supervision"; White children; fewer children; and children living with their biological mother. **However, significance was largely influenced by sample size. By assessing minimal range for practical significance, we found results consistent with policy guidance around pathway assignment:**

- **None of the child characteristics had a meaningful effect on assignment.**

- **Cases with no danger threats identified at Access were nearly 12 times more likely to be assigned to the AR pathway.**
- **Access reports with a sexual abuse allegation are just over 13 times more likely to be assigned to the TR pathway.**

1b. Is AR pathway assignment more likely in certain counties and/or with certain supervisors?

The proportion of IA cases assigned to the AR pathway is 46.2%, but this proportion varies across counties from 28% to 62%. We assess the influence of counties and supervisors by analyzing the amount of variance they contribute in a multi-level regression model. **Results suggest that supervisors contribute to about 6% of the differences in pathway assignment (considered a meaningful influence), whereas county level variation is much less (3%).**

1c. Is the likelihood of assignment to the AR pathway associated with the length of time a county has implemented the AR pilot?

Descriptive trend analysis suggests that assignment to the AR pathway increases during the early years of implementation and then levels out or even declines slightly after the third year of implementation. However, county-specific multivariate regression analysis found that changes in the likelihood of pathway assignment varies by county. Moreover, we found a statistically significant relationship between pathway assignment trends over time and AR Cohort membership. Specifically, counties in earlier AR pilot cohorts tend to have the likelihood of AR assignment decrease over time, whereas in later cohorts, longer time since AR implementation is associated with higher chances of assignment to the AR pathway. Results are complicated by the fact that the later cohorts had only implemented AR for 24 months at the time of analysis. **These findings support results from the descriptive analysis that suggest AR pathway assignment may peak by the third year in most counties, and level off or even decrease in later years of implementation. To confirm this pattern, additional analyses may need to be conducted after more counties have implemented AR for three or more years.**

1d. What child and case characteristics influence the decision to reassign a case to a different pathway?

We used an approach similar to the process used to identify predictors of pathway assignment in order to identify predictors of reassignment to either the AR or TR pathways. Like the assignment analyses, logistic regression results found sets of significant associations, but most of these indicators had relatively small odds ratios. By using effect sizes as a threshold for meaningful findings, **IAs in the TR pathway are more likely to be reassigned to the AR pathway if allegations of sexual abuse are not present and the allegation descriptors unable to locate child and caregiver alcohol abuse are present.** Although, it is important to note that the allegation descriptor 'unable to locate child' occurs in a very small number of cases. **IAs in the AR pathway are more likely to be reassigned to the TR pathway when there are medically fragile child characteristics, allegations of sexual abuse, and Present or Impending Danger Threats**.

Similar to the analyses for assignment, it may be easier to empirically predict factors that are associated with reassignment to the TR pathway than to predict factors associated with reassignment to the AR pathway. This supports qualitative findings from the Interim Report that describe staff in some counties noting that factors such as the family's cooperation and

willingness to engage with IA workers in case planning may influence pathway assignment and reassignment to the AR pathway—characteristics that are not captured in administrative data. Moreover, the strong relationships found between reassignment to the TR pathway and indicators such as sexual abuse allegations and medical fragility may indicate that some information about child safety may not be known at the time of pathway assignment. Keeping the option to reassign cases, in either direction, throughout the IA appears to be an important component of AR implementation.

1e. Is pathway reassignment more likely in certain counties and/or with certain supervisors?

For cases that switch from the AR to TR pathways, differences in supervisors accounted for about 4.7% of the difference in reassignment, while counties contributed an additional 3.3% of the difference. For cases that switched from the TR to AR pathway, supervisors accounted for roughly 5.2% of the variation in reassignment decisions, and counties contributed approximately 6.6% of the variation. **The finding that supervisors and counties seem to have more influence on the decision to switch from the TR to AR pathway than AR to TR pathway may indicate that switching to the AR pathway is a decision that is often less clear than switching from AR to TR, and therefore is more susceptible to supervisor discretion and variation.** In contrast, cases may switch from the AR to the TR pathway when information is gathered during the IA that requires a traditional response (e.g., sexual abuse).

We found that a significant negative association between county-level rates of assignments to the AR pathway and switching from the AR to the TR pathway. In other words, **the counties that are most reluctant to assign IAs to the AR pathway initially are also the counties that are likely to switch a case from the AR to the TR pathway during the IA.** The fact that some counties may be more conservative in pathway assignment decisions is supported by data gathered during interviews and focus groups (and reported in detail in the Interim report). Staff in some AR counties described their pathway assignment to "default" to the TR pathway, whereas staff in other AR counties used the phrase, "Why not AR?" to describe their assignment decision-making.

1f. Is the likelihood of pathway reassignment associated with the length of time the county has implemented the AR pilot?

Although descriptive trend analysis suggested a modest increase in reassignment from the AR to TR pathway over time since implementation, multivariate logistic regression models did not find a statistically significant association between time and reassignment from the AR to TR pathway. Moreover, neither the descriptive trend analysis nor the regression models found any association between time since implementation and reassignment from the TR to AR pathway. **In sum, empirical evidence does not suggest a relationship between pathway reassignment and the amount of time a county has implemented AR.**

1g. Are cases reassigned to the TR pathway because substantiation is appropriate? In other words, are cases that switch from the AR pathway to the TR pathway more likely to be substantiated than cases that were assigned and remained in the TR pathway?

Results indicate that contrary to expectations, cases reassigned from the AR to TR pathway were substantiated at slightly lower rates than cases that remained in the TR pathway from start to

close of the IA. However, the difference in substantiation rates between reassigned cases and other cases is quite small, and so data from administrative records suggest that **the decision to substantiate a case is not a major factor in deciding to reassign from the AR to the TR pathway**.

II. Child Safety

In both cases assigned to the AR pathway and TR pathway, CPS's primary role is "assuring children are safe and protected" (Wisconsin DCF, September 2010, p. 6). Therefore, children in AR pilot counties should experience comparable safety outcomes to children with similar family and case characteristics in non-AR counties, regardless of pathway assignment. This evaluation used two approaches to assess child safety. First, we compared safety outcomes of children in AR pilot counties to similar children in non-AR counties. Second, we compared safety outcomes in AR pilot counties before and after AR implementation. Safety outcomes include (1) any subsequent IA within 24 months after the first IA; (2) a subsequent IA with Present or Impending Danger Threats identified at Access, and safety assessments during the first or subsequent IA that results in an unsafe determination at the completion of an IA.

Danger Threats at Access

Present Danger Threat refers to an immediate, significant, and clearly observable family condition that is occurring or "in the process" of occurring at the point of contact with the family and will likely result in severe harm to a child. In cases where Present Danger Threats to child safety are identified at Access, IA workers are required to make contact with the alleged child victim and/or parent(s) the same day in order to further assess child safety and take protective action, if necessary.

Impending Danger Threat refers to a foreseeable state of danger in which family behaviors, attitudes, motives, emotions, and/or situations pose a threat, which may not be currently active but can be anticipated to have severe effects on a child at any time in the near future and requires safety intervention. In cases where *Impending Danger Threats to child safety* are identified at Access, contact with the alleged child victim and/or parents(s) must be made within 24 to 48 hours in order to further assess child safety and take protective action, if necessary.

When an Access report has *no identified Present or Impending Danger Threats* identified, initial face-to-face contact with the alleged child victim and/or parent(s) must occur within five business days.

Sometimes an IA supervisor will grant extensions to the response time, although a screened-in Access report must be responded to within five days. For the purposes of this report, the assigned response time is used as a proxy for the identification of danger threats at Access.

Safety Determinations at the Completion of IA

During the IA, workers must assess safety by considering the extent of maltreatment, the circumstances surrounding the maltreatment, child functioning, adult functioning, and parenting and disciplinary practices.

An unsafe finding refers to the presence of Present or Impending Danger to a child and insufficient parent or caregiver protective capacities to assure that a child is protected.

Research Questions for Child Safety

It is important to note when interpreting the child safety findings, a screened-in Access report is required to initiate an IA.

To what extent is completing an IA in the AR (or TR) pathway associated with a child having…

2a. At least one subsequent IA within 24 months after his or her first IA?

2b. At least one subsequent IA within 24 months that had Present or Impending Danger Threats identified at Access?

2c. A determination of unsafe at the completion of his or her first IA?

2d. A determination of unsafe at the completion of a subsequent IA?

Methods

Four group comparisons were conducted on each of the four research questions listed above:

Matched AR: Children with IAs completed in the AR pathway were compared to similar children in non-AR counties (i.e., did not participate in the pilot).

Matched TR: Children with IAs completed in the TR pathway were compared to similar children in non-AR counties.

Pre/Post AR pilot: Children with IAs that were screened in before county AR implementation began were compared to children with IAs that were screened in after county AR implementation began.

***Unmatched totals*:** Children with IAs that were screened in after AR implementation began are compared to all children in non-AR counties. These results are not reported in the text but can be found in *Appendix B*.

Note that Milwaukee County was not included in these analyses because the county had its own AR pilot project that was discontinued, thus reducing its validity as a non-AR county.

SAMPLE

Similar to the assignment/reassignment analysis in Section I, the data were restructured so one record contained information about a specific Access report and a specific case for one child. The sample was restricted to include only Access reports that were screened in as a primary child abuse and neglect case.

Specific datasets were constructed for comparisons between different groups:

> **(1) Matched AR** and **(2) Matched TR:** IAs from non-AR counties were matched to both AR and TR samples. Matching procedures found similar children using 51 variables that were identified as important from the random forest model used in the assignment analyses or significant from the re-assignment regression models as described in the Measures section found on page 11. Propensity score matching was performed using the nearest neighbor, logit approach in the MatchIt package of R version 3.3.1. The matching program cannot handle missing data, so the samples were limited to cases with no missing data.
>
> Records of 29,174 children on cases in the AR pathway group were matched with an equal number of records from children from non-AR counties (Total sample = 58,348).
>
> Similarly, records of 31,124 children on cases in the TR pathway group were matched with an equal number of records from children who were served by non-AR counties (Total sample = 62,248).
>
> **(3) Pre/Post AR pilot:** Records from 61,278[5] children served in either the AR or TR pathway after the AR pilot was implemented were merged with 29,224 records from AR pilot counties that were screened in prior to AR implementation (Total sample = 90,502).
>
> **(4) Unmatched totals**: The 61,278 records from children served in AR and TR pathways were merged with 108,170 records from children in 49 non-AR counties (Total sample = 169,448).

Subsequent IA Analyses. In addition, when examining outcomes of subsequent IAs (RQ 2a, b, d), the sample was restructured so a child had a single record and each record contained information about all IAs for that child from July 2011 to July 30, 2018. The earliest IA was considered the index IA. We excluded children whose earliest IA occurred prior to the start of sampling frame.[6] Duration variables were constructed to calculate the length of time between the first IA and any subsequent IAs. (Matched AR N = 45,706; Matched TR N = 46,885; Pre/Post AR county N = 54,865; Unmatched totals = 102,344).

The samples for subsequent IAs were further reduced because data for these longitudinal analyses were right-censored by time. That is, the sampling frame stopped July 30, 2018 and so first-time Access reports occurring near the end of data collection would not have the chance for re-reports. For example, the samples used for outcome at 24 months only include IAs that took place prior to August 1, 2016, whereas samples for subsequent IA at 3 months include IAs that took place prior to April 1, 2018.

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[5] This total is slightly less than the original 61,349 sample because it did not include cases that were open prior to AR implementation and closed after AR implementation.

[6] As indicated by a value greater than 0 for a "previous screened-in report" in the earliest IA record.

MEASURES

Subsequent IAs: We examined the likelihood of the child having three types of subsequent IAs at seven time points: before the first IA was completed,[7] and before 3, 6, 9, 12, 18, and 24 months after the first IA was completed. These time points were cumulative, where the 24-month time point reflects the proportion of child victims with at least one recurrence that occurred up to 24 months past the completion of the first IA. The safety outcome *Any subsequent IA* indicates whether a child was involved in any subsequent IA. *Subsequent IA with Present or Impending Danger Threat* indicates whether a child was involved in any subsequent IA that had a Present or Impending Danger Threat identified at the time of the Access report.

Child unsafe at completion of IA indicates that the child was determined unsafe at the completion of the first IA. Cases assigned to both the TR and AR pathways receive a safety determination at the conclusion of the IA.

Child unsafe at completion of subsequent IA indicates if a child was involved in any subsequent IA that resulted in a safety determination of "child not safe" at the completion of the subsequent IA.

Multivariate logistic regression analyses included a subset of covariates previously described in the assignment section: *child age*, *child gender, child race/ethnicity*, *medically fragile*, *living arrangement*, and *number of children, any prior Access reports*, *threat to child safety*, and *allegation types*. *Group* is a categorical indicator that varies by the four comparisons described in the *Sample* section above:

(1) Matched AR comparison group names = AR pathway/Non-AR county

(2) Matched TR group names= TR pathway/Non-AR county

(3) Pre/post pilot group names= Pre AR/Post AR

(4) Unmatched totals group names = AR county/ Non-AR county

ANALYSIS PLAN

Each of the four research questions described above has a binary outcome (e.g., subsequent IA, child unsafe, etc.). For each question of interest, the prevalence of the safety outcome was calculated and a multivariate logistic regression was used to compare between two groups of children (e.g., AR pathway vs. matched non-AR county).

The result tables report the %, Cramer's V associated with the %; the odds ratios and CIs, and the R^2 value for group membership only (R^2 group) and the R^2 for the total model with the covariates (R^2 full). Comparing the two R^2 values helps to interpret the contribution of group membership (e.g., AR pathway vs. children in matched sample in non-AR counties) to safety outcomes. Guidelines for interpreting these statistics are presented in *Descriptions of Common Statistical Terms* (p. 4). The ORs for the covariates are not reported.

Complete results from the safety outcomes, including for the unmatched totals comparison and all time points for the subsequent IA (during IA, 3, 6, 9, 12, 18, and 24 months) are presented in a series of tables in *Appendix B*.

[7] Subsequent IAs that were opened within 7 days of the initial IA were excluded from the sample.

Results

SUBSEQUENT IAS

We examined the association between AR and TR pathway membership in a child's first IA and any subsequent IA up to 24 months after the first IA was completed. In addition, we assessed the association between pathway membership and a subsequent IA with a Present or Impending Danger Threat identified on the associated Access report.

Any Subsequent Assessment: Table 8 presents prevalence rates and adjusted odds ratios that represent the likelihood that children will experience a subsequent IA by 24 months after the first IA was completed. TR pathway and AR post-pilot samples had significantly lower rates of subsequent IAs compared to matched and pre-pilot samples, although the effect size was very small (TR pathway = 24.05%, non-AR county = 26.04%; Post-AR = 25.00%, Pre-AR = 27.39%, $p < 0.01$). Children on cases in the AR pathway also had slightly lower rates of subsequent IAs compared to their matched sample from non-AR counties, but the difference was not statistically significant. Similarly, group membership in the multivariate models did not significantly improve model fit over the null model (pseudo $R^2 < 0.01$ for group membership in matched and pre/post regression models). Neither the univariate prevalence nor the multivariate logistic regression yielded results that reached a meaningful effect size for any comparison.

An unexpected finding was that children on cases in both the AR pathway and their matched non-AR county group had *higher* rates of subsequent IAs than children on cases in the TR pathway and their matched group. A post hoc analysis confirmed that these differences were significant although the effect size was negligible.[8] This finding is somewhat counterintuitive, given that families in the AR pathway and similar families in non-AR counties seem likely to have less risk factors than families in the TR pathway and their matched sample. One possible explanation is that families in the TR pathway and their non-AR counterparts may be more likely to receive ongoing services, which prolongs their CPS involvement and thus reduces their chances for a subsequent IA. Moreover, children on cases in the TR pathway and matched children in non-AR counties may be more likely than children on cases in the AR pathway to be removed from their family of origin, and so less likely to have subsequent CPS referrals.

Subsequent IA with a Present or Impending Danger Threat identified at Access. Table 9 and *Figures H-J* present prevalence rates and adjusted odds ratios for the likelihood that a child will have a subsequent IA with a Present or Impending Danger Threat at Access identified within 24 months of the first IA. Findings suggest that by 24 months, both children on cases in the AR pathway and those in the post-AR pilot sample overall had lower likelihoods of having a subsequent IA with Present or Impending Danger Threats identified on the associated Access report than their comparison groups (AR pathway = 10.27%, non-AR county = 11.57% $p < 0.01$, OR = 0.89; Post-AR = 10.36%, Pre-AR = 13.28% $p < 0.01$, OR = 0.75%). The effect sizes, however are small for the comparisons and group membership in the multivariate model did not significantly improve model fit over the null model (pseudo $R^2 = 0.01$ for group membership in all multivariate regression models).

[8] Results not presented in table. AR pathway + matched non-AR county = 27.33%; TR pathway + matched non-AR county = 25.20%, p <0.01, Cramer's V = 0.02.

Table 8: Any Subsequent IA within 24 months

		Prevalence				Multivariate Logistic Regression			
Comparison	Group	N	%	*p*	Cramer's V	Odds Ratio	OR CIs	R^2 Group	R^2 Full
Matched AR	AR pathway	10606	26.91	0.20	< 0.01	0.97	(0.91, 1.03)	< 1%	**6%** [S]
	Non-AR county	13729	27.66						
Matched TR	TR pathway	10001	24.05	< 0.01	0.02	0.94	(0.89, 1.00)	< 1%	**7%** [S]
	Non-AR county	13689	26.04						
Pre/Post pilot	Pre AR	19368	27.39	< 0.01	0.03	0.86	(0.82, 0.90)	< 1%	**8%**[S]
	Post AR	21097	25.00						

Figure F: AR Match

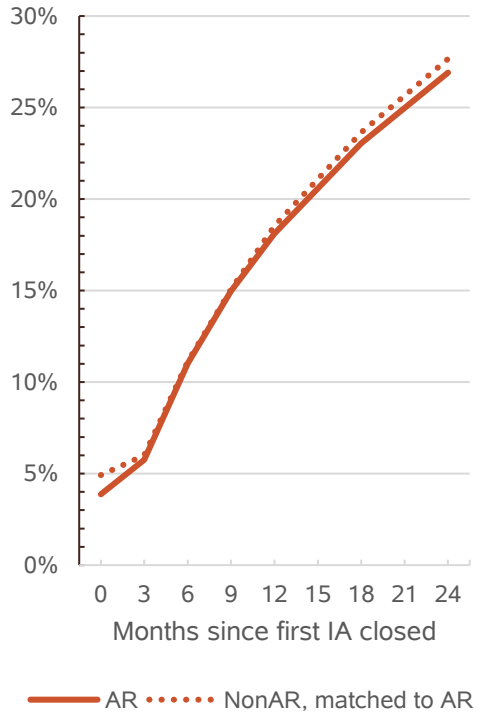


Figure G: TR Match

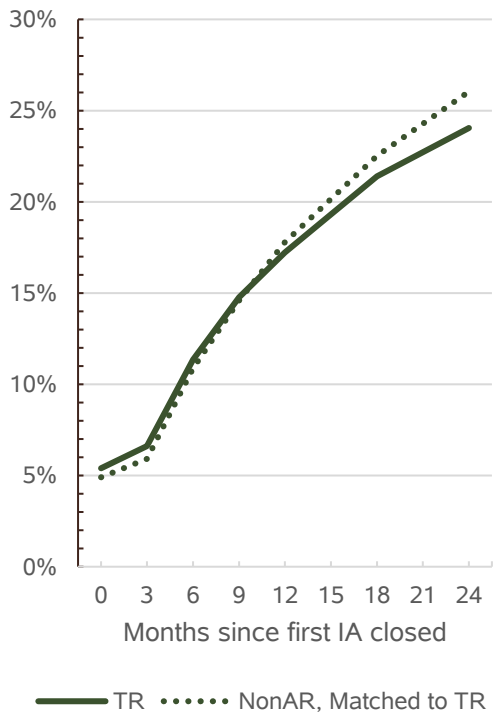
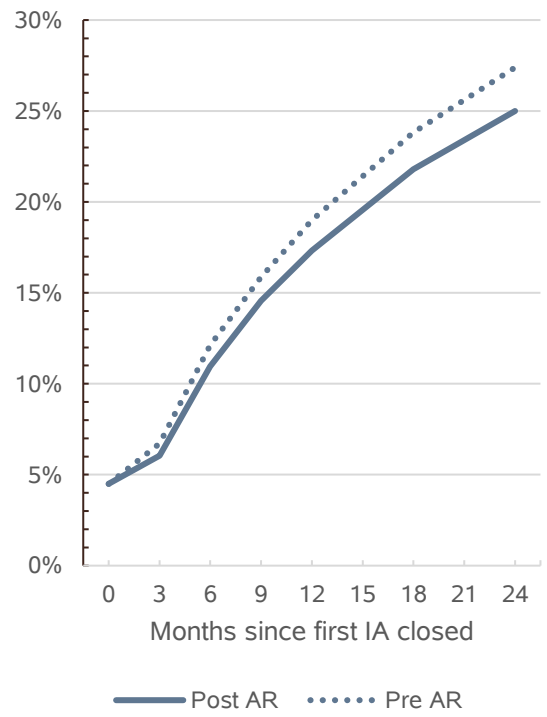


Figure H: Pre/Post AR Pilot



See *Descriptions of Common Statistical Terms* (p. 4) for details about interpreting statistics. Superscripts S, M, L, = small, medium, large effect sizes for Cramer's V and R^2.

Table 9: Subsequent IA within 24 months with Present or Impending Danger Threats identified at Access

		Prevalence				Multivariate Logistic Regression			
Comparison	Group	N	%	*p*	Cramer's V	Odds Ratio	OR CIs	R^2 Group	R^2 Full
Matched AR	AR pathway	10606	10.27	< 0.01	0.02	0.88	(0.81, 0.95)	< 1%	**6%** [S]
	Non-AR county	13729	11.57						
Matched TR	TR pathway	10001	11.02	0.19	< 0.01	1.00	(0.92, 1.09)	< 1%	**6%** [S]
	Non-AR county	13689	11.57						
Pre/Post pilot	Pre AR	19368	13.28	< 0.01	0.05	0.75	(0.71, 0.80)	< 1%	**7%** [S]
	Post AR	21097	10.36						

Figure I: AR Match

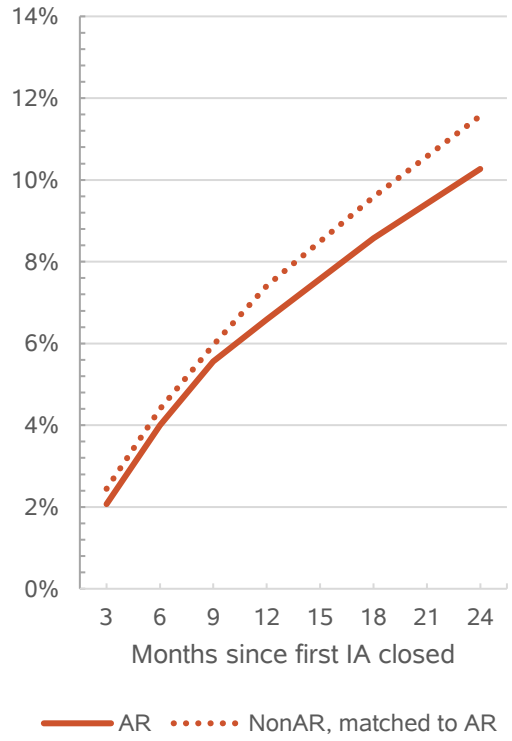


Figure J: TR Match

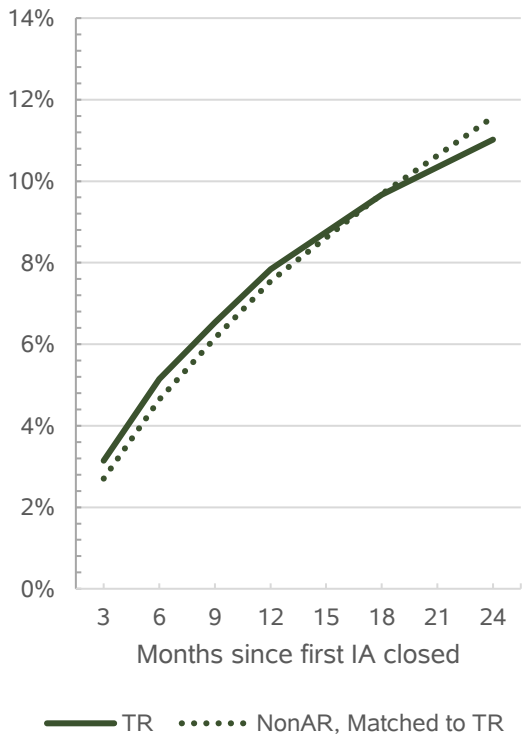
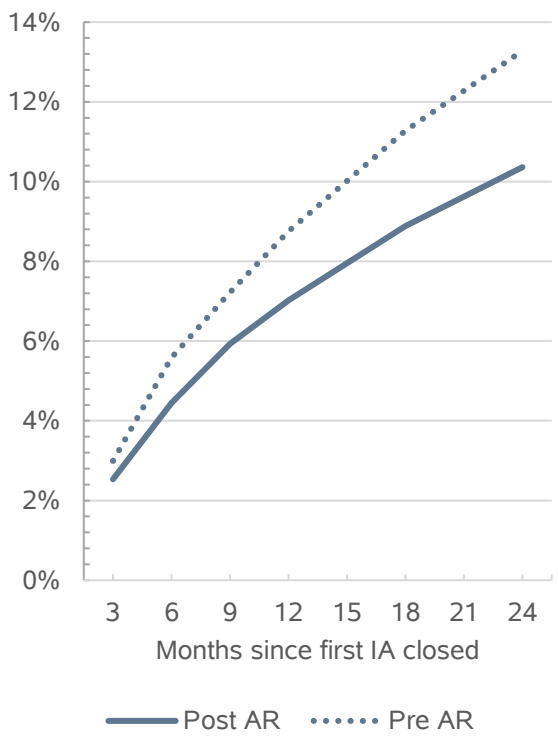


Figure K: Pre/Post AR Pilot



See *Descriptions of Common Statistical Terms* (p. 4) for details about interpreting statistics. Superscripts S, M, L, = small, medium, large effect sizes for Cramer's V and R^2.

SAFETY DETERMINATION

We also examined the association between AR and TR pathway membership and the determination of unsafe child at the close of the IA and any subsequent IA up to 24 months after the first IA was completed.

Child unsafe at completion of IA (Table 10, Figure L). Compared to matched children in non-AR counties, children on cases assigned to the AR pathway were less likely to have an unsafe determination at the completion of the IA both in the univariate prevalence (AR pathway = 6.30%; Non-AR county = 9.35%, $p < 0.01$) and multivariate logistic regression (OR = 0.63). In contrast, a slightly larger proportion of children on cases in the TR pathway were assessed as unsafe at the conclusion of the IA, compared to matched children in non-AR counties (TR = 17.08%; Non-AR county = 9.35%, $p < 0.01$, OR = 1.66). Compared to similar children who were on Access reports screened-in prior to AR implementation, children served post-AR were 1.56 times more likely to be assessed as unsafe at the conclusion of the IA. Similar to previous results, however, the influence of group membership was negligible in terms of effect sizes (Cramer's V ≤ 0.09; ORs > 0.05 and < 2.0; R^2 Group ≤ 0.01 or less for all comparisons).

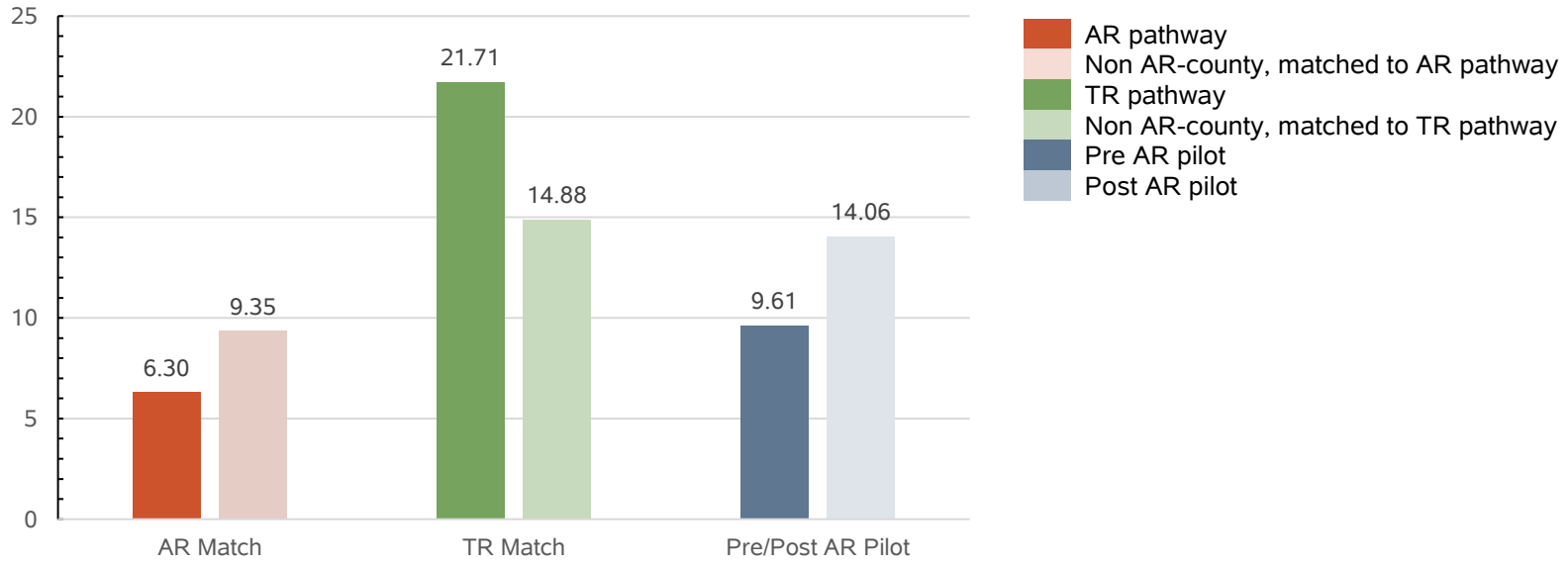
Child unsafe at completion of subsequent IA within 24 months (Table 11, Figures M-O). We assessed safety determinations made at the end of subsequent IAs. These analyses revealed a consistent trend: Regardless of pathway, AR implementation was associated with a statistically significant, but practically negligible increase in unsafe determinations.

Both sets of analyses of child safety suggest that the implementation of AR may correspond with an increase in unsafe determinations at the end of the IA period. Results pertaining to danger threats identified at Access did not follow a similar pattern which suggests that changes in *agency decision-making* related to the safety assessment at the end of IAs—and *not an increase in the presence of danger threats in families* —may be driving this pattern. However, this possible explanation cannot be tested empirically with the data available. Although these findings show some of the largest differences in comparisons, the effect sizes still do not indicate that AR implementation has a practically significant effect on safety determinations.

Table 10: Determination of child unsafe at completion of IA

		Prevalence				Multivariate Logistic Regression			
Comparison	Group	N	%	*p*	Cramer's V	Odds Ratio	OR CIs	R^2 Group	R^2 Full
Matched AR	AR pathway	29,174	6.30	< 0.01	0.06	0.63	(0.60, 0.68)	< 1%	**6%** ^{s}
	Non-AR county	29,174	9.35						
Matched TR	TR pathway	31,124	21.71	< 0.01	< 0.09	1.63	(1.57, 1.69)	< 1%	**6%** ^{s}
	Non-AR county	31,124	14.88						
Pre/Post pilot	Pre AR	29,224	9.61	< 0.01	0.06	1.56	(1.47, 1.64)	< 1%	**7%** ^{s}
	Post AR	61,278	14.06						

Figure L: Children Determined Unsafe at Completion of IA



See *Descriptions of Common Statistical Terms* (p. 4) for details about interpreting statistics. Superscripts S, M, L, = small, medium, large effect sizes for Cramer's V and R^2.

Table 11: Determination of child unsafe at completion of subsequent IA within 24 months

Comparison	Group	Prevalence N	Prevalence %	*p*	Cramer's V	Multivariate Logistic Regression Odds Ratio	OR CIs	R^2 Group	R^2 Full
Matched AR	AR pathway	10,606	6.70	< 0.01	0.03	1.18	(1.06, 1.31)	< 1%	**7%** ^{s}
	Non-AR county	13729	5.76						
Matched TR	TR pathway	10001	7.19	< 0.01	0.03	1.45	(1.26, 1.66)	< 1%	**7%** ^{s}
	Non-AR county	13689	5.74						
Pre/Post pilot	Pre AR	19368	5.28	< 0.01	0.05	1.27	(1.16, 1.38)	< 1%	**8%** ^{s}
	Post AR	21097	6.80						

Figure M: AR Match

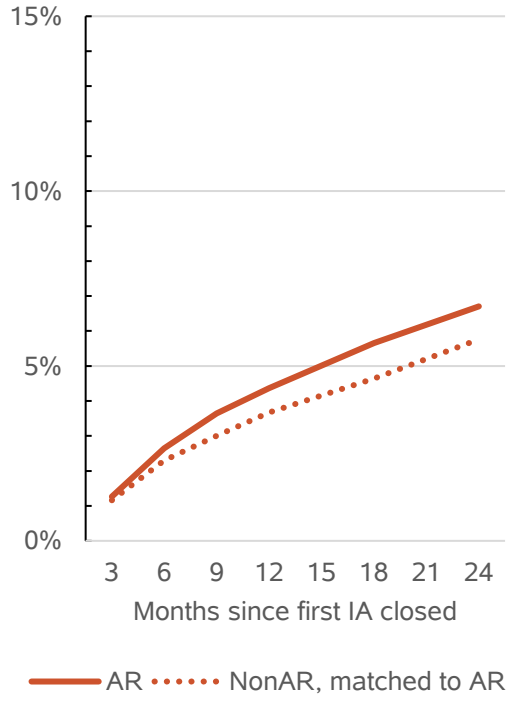


Figure N: TR Match

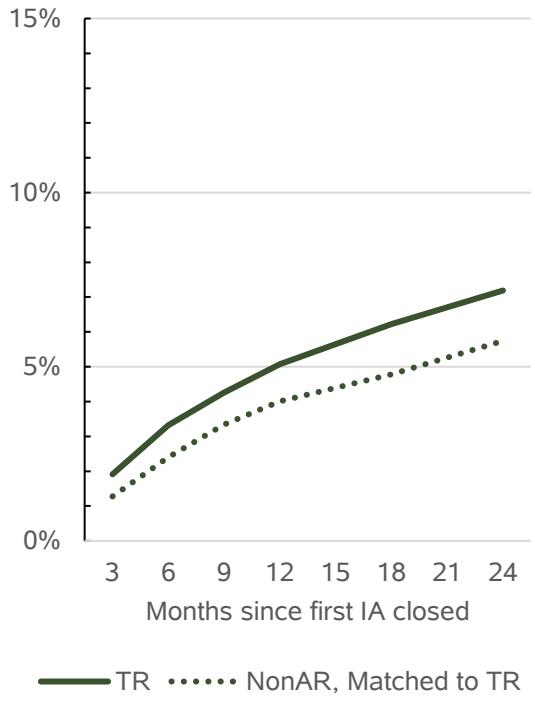
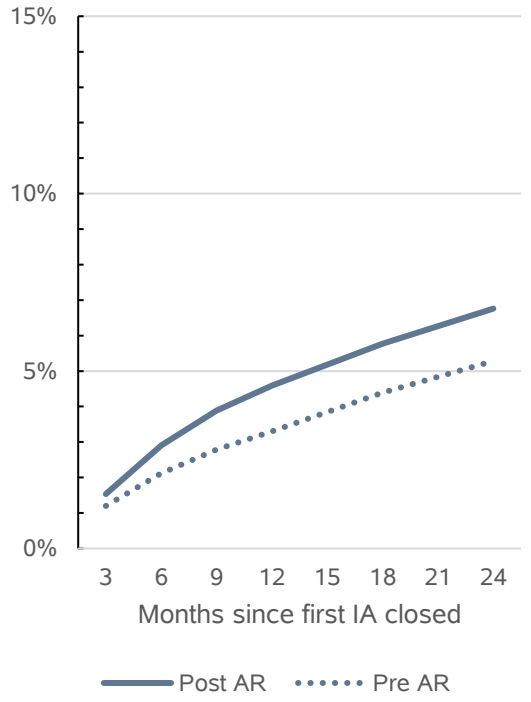


Figure O: Pre/Post AR Pilot



See *Descriptions of Common Statistical Terms* (p. 4) for details about interpreting statistics. Superscripts S, M, L, = small, medium, large effect sizes for Cramer's V and R^2.

Child Safety Summary

2a. To what extent is completing an IA in the AR (or TR) pathway associated with a child having at least one subsequent IA within 24 months after his or her first IA?

Within 24 months of their first IA, a quarter of children will experience one or more subsequent IAs. **AR implementation has little to no effect on the likelihood of a child receiving a subsequent IA, regardless of pathway assignment.**

2b. To what extent is completing an IA in the AR (or TR) pathway associated with a child having at least one subsequent IA within 24 months that indicates a Present or Impending Danger Threat at Access?

Within 24 months of their first IA, more than 1 in 10 children will experience a subsequent screened-in Access report with an identified Present or Impending Danger Threat. The AR reference groups consistently had lower proportions of subsequent IAs with danger threats identified on the Access report compared to non-AR counties or pre-implementation counties. Nevertheless, **the negligible effect sizes suggest that AR implementation has little to no practical effect on the likelihood of a child having a subsequent IA with a Present or Impending Danger Threat identified on the associated Access report.**

2c. To what extent is completing an IA in the AR (or TR) pathway associated with a child having an unsafe determination at the completion of an IA?

IAs in the AR pathway generally have a lower prevalence of children determined unsafe at completion than IAs in the TR pathway, which aligns with expectations that families in the AR pathway generally have a lower likelihood of demonstrating danger threats than families in the TR pathway. However, results also indicate that **the total prevalence of unsafe determinations at the conclusion of the IA increased in AR counties after AR implementation (as seen in results from the pre/post AR pilot comparison) although effect sizes were considered negligible for all comparisons.**

2d. To what extent is completing an IA in the AR (or TR) pathway associated with a child having an unsafe determination at the completion of a subsequent IA?

Results indicate that compared to similar children in non-AR and pre-AR samples, children with IAs in AR counties have a statistically higher likelihood of experiencing future IAs that end in a determination of child unsafe regardless of pathway. Similar to other safety analyses, none of these differences were considered practically significant, suggesting that **AR implementation has a negligible effect on child safety determination at the completion of a subsequent IA.**

Notably, as suggested in the result sections, the implementation of AR corresponds with an increase in the determination of child unsafe at the end of the IA. Results about danger threats identified at Access did not follow a similar pattern which suggests that changes in *agency decision-making* related to safety assessment at the end of IAs—and *not an increase in the presence of danger threats in families* —may be driving this pattern. However, this possible explanation cannot be tested empirically with the data available. **Although these findings show some of the largest differences in comparisons, the effect sizes still do not indicate that AR implementation has a practically significant effect on safety determinations.**

III. Family Engagement

We examine five outcomes related to family engagement: (1) client perception and attitudes of their CPS experience; (2) the frequency of client contact with IA workers; (3) client involvement in case planning decisions; (4) clients understanding of their rights during the IA and; (5) client understanding of the IA process.

Research Questions for Family Engagement

3a. To what degree are families engaged during the IA, as defined by the five outcomes related to family engagement?

3b. To what extent do family engagement outcomes differ among the three groups of clients (AR clients, TR clients in AR county, and TR clients in non-AR county)?

Methods

SAMPLE

Data came from the Wisconsin Family Services Survey (WFSS), a survey of caregivers involved in alleged child maltreatment cases from 20 AR counties and 5 non-AR counties (AR cases = 562; TR cases in AR county = 325; TR cases in non-AR county = 186). Survey data from the WFSS were matched to eWiSACWIS data to obtain specific case information, such as pathway assignment and the date of the most recent and completed IA.

MEASURES

CPS experience was measured using a 7-item scale ($\alpha = 0.78$) asking caregivers to indicate how much they agree with statements such as "My CPS social worker and I respected each other" and "I felt like CPS was out to get me." These items measure general attitudes and perceptions about a client's CPS experience and were adapted from an instrument already in the field for CPS clients (Yatchmenoff, 2005). Scores range from 1 to 5, with higher scores representing more positive CPS experiences.

The survey also captured several single-item measures related to CPS engagement, including *Frequency of meeting*, *understanding of the CPS process,* the extent to which participants were *informed of rights*, and the degree to which they were *involved in case decision-making*. These measures were informed by themes raised in the interviews and focus groups conducted with CPS staff from seven AR counties.

ANALYSIS PLAN

Descriptive statistics were calculated for the prevalence and means of key family engagement measures. Prevalence rates for CPS experience and engagement outcomes were conducted and t-tests were calculated to assess statistically significant differences. All analyses were conducted in SPSS 24.

Table 11: Family survey sample description

	Total N = 1,073	AR pathway N = 562	TR pathway N = 325	Non-AR County N = 186
Mean Age	34.7 (9.3)	33.8 (8.4)	36.2 (10.3)*	34.6 (9.7)
% Female	86.5	95.2	74.2*	80.2*
% Race/Ethnicity				
Non-Hispanic White	71.6	72.1	68.2	74.6
Black/African-American	9.3	8.0	10.8	11.6
Hispanic	7.8	8.9	7.7	4.6
American Indian	3.6	2.8	5.9*	2.3
Asian or Pacific Islander	1.1	1.6	0.3	0.6
Other	6.6	6.6	7.1	6.4
% Relationship to child				
Biological parent	91.4	92.3	88.5	93.6
Grandparent	2.9	2.3	3.7	2.9
Other relative	3.2	3.4	4.0	1.2
Non-relative	2.5	2.0	3.7	2.3
Mean Number of children	2.9 (1.8)	2.8 (1.5)	2.9 (1.8)	2.8 (2.4)

Note: * $p < 0.05$

RESULTS

Table 11 describes the participants who responded to the WFSS. The majority of the sample consisted of respondents from AR counties and specifically, from respondents with cases in the AR pathway. Compared to the respondents from the TR pathway, respondents from the AR pathway were significantly younger (Mean age: AR = 33.8; TR = 36.3, $p < 0.01$) and more likely to be female (Female: AR = 95.2%; TR = 74.2%, $p < 0.01$). No significant racial/ethnic differences were found between groups of respondents: nearly three-quarters (71.6%) of the sample was white, 9.5% African American, and 7.8% Hispanic. The majority of respondents were the biological parent of the child(ren) identified as the alleged victim on the IA.

Table 12 presents information about family engagement outcomes. Caregivers with cases in the AR pathway reported more positive CPS experiences than caregivers in the TR pathway or in non-AR counties. The average CPS experience score for respondents in the AR pathway was 3.7, compared to 3.4 for respondents in the TR pathway ($p < .001$). Moreover, AR respondents rated five out of the seven CPS experience items significantly higher than either TR or non-AR county respondents. The largest difference among the respondent groups was for the item, "*It was hard for me to work with my CPS social worker.*" (AR mean = 4.1; TR and non-AR county respondents = 3.6, $p < .001$).

Nearly three-quarters of caregivers in the AR pathway reported a high degree of understanding about the CPS process (70.4%) and involvement in case decision making (70.9%), whereas only about half of respondents from the TR pathway and non-AR counties reported high degrees of understanding (TR = 52.9, $p < 0.01$; non-AR = 52.9%, $p < 0.01$) and involvement (TR = 55.7, $p < 0.01$; non-AR = 54.7%, $p < 0.01$). . Compared to TR and non-AR county respondents, on

average AR respondents also reported to be more informed of their rights (AR = 61.8%; TR = 43.3%, $p < 0.01$; non-AR = 42.7%, $p < 0.01$). There were no clear patterns or statistically significant differences among groups regarding the frequency of meeting.

Table 12: Family engagement outcomes

	Total	AR pathway	TR pathway	Non-AR County
Mean (SD) CPS Experience (range 1-5)[1]	3.5 (0.8)	3.7 (0.7)	3.4 (0.8)**	3.4 (0.8)**
Our family was fine before CPS got involved.	2.3 (1.2)	2.3 (1.1)	2.3 (1.2)	2.1 (1.1)*
It was hard for me to work with my CPS social worker.	3.9 (1.1)	4.1 (1.0)	3.7 (1.3)**	3.6 (1.2)**
Anything I said CPS turned it around to make me look bad.	3.9 (1.1)	4.1 (1.0)	3.7 (1.3)**	3.7 (1.2)**
There was a good reason why CPS was involved with my family.	3.0 (1.3)	2.9 (1.3)	2.9 (1.3)	3.0 (1.3)
My CPS social worker and I respected each other.	4.2 (0.9)	4.3 (0.8)	4.0 (1.0)**	4.0 (1.0)**
I felt like I could trust CPS to be fair and to see my side of things.	3.8 (1.1)	3.9 (1.0)	3.5 (1.2)**	3.7 (1.1)*
I felt like CPS was out to get me.	3.9 (1.1)	4.0 (1.0)	3.7 (1.2)***	3.6 (1.2)**
% Frequency of Meeting				
0 to 3 times	71.2	70.5	69.2	75.6
4 or more times	28.8	29.5	30.8	24.4
% Understanding of CPS Process				
Very much	62.4	70.4	52.9**	52.9**
Somewhat	30.1	24.6	35.9**	38.2**
Not at all	7.5	5.0	11.1**	8.8
% Informed of Rights				
Very informed	52.9	61.8	43.3**	42.7**
Somewhat informed	27.5	24.6	32.1*	30.4
Not at all informed	19.5	13.6	24.6**	26.9**
% Involved in Decision-Making				
Very involved	63.6	70.9	55.7**	54.7**
Somewhat involved	23.8	20.3	25.3	31.2**
Not at all involved	12.7	8.8	19.0**	14.1*

Note: [1] Higher score = More positive experience, some items reversed coded. Categories may not add to 100% due to rounding. * $p < .05$, ** $p < .01$, (Compared to AR)

Respondents were also given the opportunity to provide additional comments about their CPS experience as part of the survey. Qualitative data from caregivers on cases in the AR pathway align with the quantitative results above. A common, positive theme from respondents in the AR pathway was that CPS workers were helpful and respectful. Select comments from AR respondents are reported in box below

Comments from families in the AR Pathway

I love that they are so willing to help the family with the needs. They don't just say, 'Well, we don't care.' They actually help.

It was no problem and they explained everything, and I understood why we did everything. She was there to help.

She was very respectful and understanding but remained professional and informative; I felt very comfortable talking to her and explaining what was going on in our life.

One thing I noticed was she was good at was—CPS has stigma—killing that stigma right away and making things comfortable.

Source: Wisconsin Family Services Survey

FAMILY ENGAGEMENT SUMMARY

3a. To what degree are families engaged during the IA, as defined by the five outcomes related to family engagement?

Family members consistently reported across comparison groups that **the most positively rated item in terms of CPS experience was the mutual respect between the family member and the IA worker.** Most families reported meeting with their IA workers less than four times (71.2%). Pathway assignment was associated with differences in engagement as discussed below.

3b. To what extent do family engagement outcomes differ among the three groups of clients (AR clients, TR clients in AR county, and TR clients in non-AR county)?

Compared to respondents in the TR pathway and respondents from non-AR counties, respondents from the AR pathway significantly differed from TR pathway and non-AR county respondents in the following ways:

- More positive ratings of their CPS experiences,
- Better understanding of the CPS process,
- More often reported being very informed of their rights
- Higher levels of involvement in the IA

These findings are supported by previous evaluations that have also reported family engagement to be higher among families assigned to the AR pathway compared to families assigned to the TR pathway, although this theme is not a universal finding. For example, an evaluation of AR initiatives in three states found mixed results related to client engagement, with AR parents in one state reporting significantly higher levels of satisfaction with caseworkers, but no significant differences in the other states (QIC, 2014).

IV. Client Experience with Services

In addition to family engagement outcomes, the WFSS captured respondents' perception of services. Service data are not captured through state level administrative data, and so we were limited to examining service experience through family report. Asking clients directly about their service experience allowed us to examine the relationship between perceived need, referrals, and services received.

Research Questions for Client Service Experience

The following research questions examine differences in caregiver service experience among families with three **case types**: cases in the AR pathway in pilot counties, cases in the TR pathway in pilot counties, and cases in counties not participating in the AR pilot (i.e., non-AR counties).

As reported by caregivers…

4a. What are the most commonly needed, referred to and received services?

4b. What proportion of needed services result in a referral? Is the likelihood of a referral for needed services influenced by case type or service category?

4c. What proportion of referrals result in service receipt? Is the likelihood of service receipt influenced by case type, service category, or perceived need of service?

Methods

SAMPLE

Data came from the Wisconsin Family Services Survey (WFSS), described on page 36.

MEASURES

Respondents were asked about their experiences with 16 categories of services, such as alcohol or drug services (AODA), counseling or mental health, financial assistance with rent and utilities, parenting education and support. The items were modified from a similar instrument used to assess CPS services (QIC, 2014, Appendix B). The original version asked about service receipt. The measure was modified for the WFSS to also ask whether participants felt they needed a service and whether participants were referred to a service by an IA worker during the IA. Items for each service category were dummy coded for need, referral, and receipt of services, which resulted in 48 dichotomous indicators. We also constructed several summed indicators for each respondent: *total number of needed services*, *total number of referred services*, *total number of needed services that resulted in a referral*, *total number of received services*, and *total number of referrals that resulted in received services*.

ANALYSIS PLAN

Descriptive statistics were calculated to assess the overall prevalence of each service needed, referred, and received, as well as for the three case types. Differences among case types were assessed using a t-test. Logistic regression models were used to estimate the likelihood of needed service receiving a referral and the likelihood of a referral resulting in service receipt. Case type, service categories, and service need were included as covariates in the regression models. All analyses were conducted in SPSS 24.

Results

MOST NEEDED, REFERRED, AND RECEIVED SERVICES

Table 13 presents information on service need. For brevity, referral and service receipt prevalence tables are not included in this report, although the primary findings are reported in the text. Overall, counseling or mental health was the most needed, referred, and received service. Financial assistance for rent and utilities, parenting education and support, food and clothing, other transportation assistance, and alcohol or drug services were also frequently reported by respondents as needed, referred, and received services.

Table 13: Service need reported by caregivers

	Total	AR pathway	TR pathway	Non-AR County
Counseling or mental health	32.7	31.7	36.6	28.6
Financial assistance for rent and utilities	20.0	19.5	21.4	18.3
Parenting education and support	18.6	20.1	18.4	13.0*
Food and clothing	15.3	16.4	14.0	13.6
Other transportation assistance	13.9	14.5	14.3	10.1
Alcohol or drug services	12.0	9.0	16.7**	13.1
Legal services	9.9	10.9	10.4	6.0
Other health care or dental care	9.3	9.5	10.2	7.7
Child care	9.1	8.3	8.8	10.7
Baby supplies	9.0	10.8	7.5	6.5
Financial assistance for car repairs	8.6	7.3	10.8	7.7
Domestic violence services	7.6	7.3	7.9	8.3
Job placement services	7.0	7.1	8.4	5.3
Adult continuing education or vocational training	6.3	6.3	5.9	7.7
Emergency shelter	4.1	4.3	4.3	3.0
Family planning, or prenatal health services	3.7	4.7	3.1	1.2*

* $p < .05$, ** $p < .01$, Compared to cases in the AR pathway

The proportion of caregivers in the TR pathway reporting a need for alcohol and drug services was nearly twice that of caregivers in the AR pathway (AR = 9.0% TR = 16.7%; $p < 0.01$). A similar pattern was found in terms of service receipt: 17.1% of caregivers in the TR pathway reported receiving alcohol and drug service receipt compared to 10.1% of caregivers in the AR pathway ($p < 0.01$). Respondents in non-AR counties reported less need for parenting education

and family planning services, compared to respondents in the AR pathway ($p < 0.05$). There were no statistically significant differences in service referrals between respondents in AR and TR pathways.

NOTE: The remaining service analyses focus on the top six needed services: counseling or mental health, financial assistance, parenting education, food and clothing, other transportation assistance, and alcohol and other drugs.

PROPORTION OF NEEDED SERVICES RESULTING IN REFERRAL

Nearly three-quarters (73.5%) of the top six needed services resulted in a referral (*Table 14*). Caregivers in the AR pathway had a higher rate of referrals for a needed service (76.3%) compared to caregivers in the TR pathway (67.3%, $p < .05$). Respondents in the AR pathway also reported higher percentages of receiving a referral for needed counseling or mental health services (AR = 80.8%, TR = 66.0%, $p < .01$), parenting education services (AR = 85.0%, TR = 70.9%, $p < .05$), and food and clothing services (AR = 76.3%, TR = 67.3% $p < .05$).

Table 14: Proportion of needed services that resulted in a referral from IA worker

	Total	AR pathway	TR pathway	Non-AR County
Counseling or mental health	75.9	80.8	66.0**	78.4
Financial assistance for rent and utilities	43.9	45.5	40.6	44.4
Parenting education and support	82.0	85.0	70.9*	95.2
Food and clothing	59.1	65.0	46.5*	66.7
Other transportation assistance	63.4	65.3	59.5	81.3
Alcohol or drug services	81.1	80.6	82.1	76.5
Total % of top 6 needed services resulting in referral	73.5	76.3	67.3*	78.4

* $p < .05$, ** $p < .01$, Compared to cases in the AR pathway

PROPORTION OF REFERRALS RESULTING IN SERVICE RECEIPT

In contrast, as shown in *Table 15*, respondents in the TR pathway had higher proportions of service uptake for referrals compared to participants in the AR pathway (AR = 73.7%, TR = 83.0%, $p < 0.05$). No statistically significant group differences were found for referral uptake for specific types of services.

Table 15: Proportion of referral from IA worker that resulted in service receipt

	Total	AR pathway	TR pathway	Non-AR county
Counseling or mental health	74.9	72.4	83.3	66.7
Parenting education and support	70.7	69.3	76.6	68.0
Alcohol or drug services	70.8	62.7	80.0	76.5
Food and clothing	79.0	77.6	83.3	75.0

Table 15: Proportion of referral from IA worker that resulted in service receipt

Financial assistance for rent and utilities	62.5	55.1	72.4	71.4
Other transportation assistance	81.9	86.5	76.9	75.0
Average % of Top Six Referred Services Resulting in Receipt	75.8	73.7	83.0*	68.5

* $p < .05$, ** $p < .01$, Compared to cases in the AR pathway

LIKELIHOOD OF SERVICE REFERRALS AND RECEIPT OF SERVICE.

Table 16 presents the results of two logistic regression models used to explore the extent to which case type, service type, and perceived need are associated with the likelihood to be referred to or receive a service.

Compared to respondents in the AR pathway, respondents in the TR pathway had a significantly lower chance of receiving a referral (OR = 0.60, $p < 0.01$). Respondents in the TR pathway reported greater odds of receiving needed alcohol or drug services than other types of services.

Table 16: Odds of receipt of referral and service

	Received Referral OR	Received Service OR
Case Type[1]		
TR pathway	0.60**	1.61*
Non-AR County	1.27	0.95
Referral Type[2]		
Mental health	0.71	1.07
Rent and utilities	0.18**	0.54
Food and clothing	0.33**	1.37
Transportation	0.43**	1.58
Parenting education	1.04	0.85
Needed Service	--	9.38**
Nagelkerke R^2	0.13	0.13

[1] Reference is AR pathway; [2] Reference is alcohol or other drug services; * $p < 0.05$; ** $p < 0.01$

Supporting the findings from the prevalence tables described above, respondents in the TR pathway were over one-and-a-half times more likely to receive services as a result of a referral from an IA worker compared to respondents in the AR pathway (OR = 1.61; $p < .05$). There was no significant difference between the likelihood of obtaining alcohol or drug services, compared to other service types. By far, the strongest predictor for obtaining services from a referral was whether the respondent felt that the service was needed. Caregivers who reported needing the service had more than nine times the odds of following up on a referral compared to those who did not indicate that the referral was needed (OR = 9.38, $p < .001$).

Client Service Summary

4a. What are the most commonly needed, referred to and received services?

The most commonly needed services, as reported by caregivers involved in an IA were:

- **Counseling or mental health (33%)**
- **Financial assistance for rent and utilities (20%)**
- **Parenting education and support (19%)**
- **Food and clothing (15%)**

- **Transportation assistance (14%)**
- **Alcohol or drug services (12%)**

These ratings comport with workers feedback during qualitative interviews. Only one significant difference in service need by case type emerged: **The proportion of caregivers in the TR pathway reporting a need for alcohol and drug services was nearly twice that of caregivers in the AR pathway.** Notably the need for AODA services is likely underreported given the stigma associated with it and that respondents may have feared further CPS or law enforcement involvement if they disclosed this need. The same six services rank highest in terms of referral and service receipt, although there are minor differences in order of the six service categories.

4b. What proportion of needed services resulted in a referral? Is the likelihood of a referral for needed services influenced by case type or service category?

Overall, respondents reported receiving referrals from IA workers for three-quarters of services they reported needing. (Note this analysis was limited to the six most common needed services as listed in 4a.)

Respondents from the AR pathway were 1.66 times more likely to receive a referral than respondents from the TR pathway. This trend was seen in the prevalence rates (Table 14) where respondents from the AR pathway had higher referral rates in every service type except referrals for help with alcohol and other drugs. The only significantly different prevalence rates, however, were for:

- Mental health and counseling (AR pathway = 80.8%; TR pathway = 66.0%)
- Parenting education and support (AR pathway = 85.0%; TR pathway = 70.9%)
- Food and clothing (AR pathway = 65.0%; TR pathway = 46.5%)

4c. What proportion of referrals result in service receipt? Is the likelihood of service receipt influenced by case type, service category, or perceived need of service?

Similar to the results related to referral receipt discussed in 4b, approximately three-quarters of respondents who received a referral reported that they ultimately received these services. Compared to respondents from the AR pathway, TR pathway respondents were significantly more likely to report service receipt from a referral. This is despite the fact that TR pathway respondents were *less* likely to receive a referral in the first place (see 4b). **The higher prevalence of service receipt among respondents from the TR pathway was consistent across the six service types, although the differences were not statically significant.** The factor with the greatest influence on whether a referral resulted in successful uptake of services, however, was whether the respondent had indicated that service type as a specific need.

In sum, the responses from the WFSS related to service need and uptake support findings from previous evaluations that suggest that families in the TR pathway are more likely to receive substance abuse services compared to families in the AR pathway. Client perceptions of service priorities correspond with results from the CPS staff survey (see Interim Report). Notably, both CPS staff and caregivers endorse alcohol and drug services and mental health counseling as top service priorities. CPS staff also reported that these services are often in greatest need of improvement.

Although families in the AR pathway reported receiving more referrals for needed services than families in the TR pathway, their referrals were less likely to result in service receipt. More exploration may be warranted to understand the differential uptake in services between families in the AR pathway and TR pathway. One possible explanation is that families in the TR pathway may be viewed as priority clients and have an easier time accessing services, particularly if they have or will likely have a substantiation finding or court involvement. Additionally, it is possible that compared to families in the AR pathway, families in the TR pathway feel a greater imperative to access services to avoid further CPS involvement.

Conclusion

Findings must be interpreted with the following caveats. First, the empirical data from administrative records are likely over-powered, which means that many differences that may not be practically meaningful are statistically different. Second, findings in the assignment, reassignment and child safety sections reflect the decision-making by supervisors and within counties. In other words, some of the variation we see may reflect differences in agency decision making and documentation versus child outcomes. Third, the results reported about family engagement and service receipt were obtained through a (WFSS) survey of family caregivers. These data are self-reported by caregivers, which could result in under reporting of negative behaviors and outcomes such as the need for alcohol or mental health services. These data also reflect the experiences of caregivers willing to participate in surveys, and thus may be vulnerable to selection bias. In other words, caregivers who responded to the survey may be different than non-respondents in unmeasurable ways that could bias the results. Finally, the respondents of the WFSS in the TR pathway were identified as alleged maltreaters, while there is no such designation in the AR pathway. We recruited primary caregivers who had IAs in the AR pathway, who may not have been referenced in the initial report.

Despite these limitations, the evaluation resulted in several important contributions. Results suggest that pathway assignment and reassignment decisions are primarily driven by case characteristics that align with DCF policy guidance. Moreover, AR implementation does not compromise child safety during the current IA and does not increase the likelihood for a subsequent screened-in Access report by 24 months. Children in the AR pathway are also less likely to have subsequent cases with Present or Impending Danger Threats compared to matched or pre-implementation samples. Although the overall proportion and adjusted odds for a child to experience any type of subsequent screened-in Access reports was lower after AR implementation, the proportion of these subsequent Access reports that were determined to be unsafe at the end of IA was higher in AR counties after implementation compared to other samples. More analyses may be needed to understand if agency-decision making related to AR implementation or a contemporaneous initiative (i.e., advanced safety training) may influence the likelihood of a case receiving a disposition of “child unsafe.” That is, further study is needed to determine if AR implementation results in more children that are objectively less safe in subsequent cases, or if implementation results in changes to staff decision making that impacts disposition outcomes. Considering the finding that cases in the AR pathway are less likely to have Present or Impending Danger Threats identified on a subsequent Access report that results in an IA, the finding that they are more likely to have an unsafe disposition *at the close* of a

subsequent IA may suggest that differences in agency-decision making after implementation may contribute to the variation.

Findings also indicate that caregivers involved in cases in the AR pathway are more engaged in their case plans and have a more positive CPS experience than cases in the TR pathway. However, service uptake from referrals given during the IA may be more successful for clients in the TR pathway than the AR pathway. More analyses may be needed to determine if this is because families in the TR pathway have more access to limited services or if families in the TR pathway are motivated because of possible substantiation or court involvement if they do not appear compliant.

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Appendix A:
The Wisconsin Family Services Survey

You are eligible to participate in the *Wisconsin Family Services Survey.* This survey is part of an evaluation to understand more about families involved in child protective services (CPS). The information you provide will be used to help improve CPS in Wisconsin.

All of your answers will be kept strictly confidential. We will not share your information with CPS or anyone else. You will receive one $25 gift card for completing the survey.

To complete the survey by mail, return this survey, including your signed consent form, to us using the enclosed business reply envelope. You can expect to receive your $25 gift card within two weeks of mailing the survey.

To complete the survey by phone, or if you have questions, call the survey lab at the Institute for Child and Family Well-Being at the University of Wisconsin–Milwaukee at: **1-844-471-0069**

We may contact you by phone soon to make sure you received the survey and to answer any questions you may have. At that time, we can also complete the survey with you.

Thank you for your help!

IRB Protocol Number: **17.144**

IRB Approval date: **July 26, 2017**

University of Wisconsin-Milwaukee (UWM)

Consent to Participate in an Evaluation Project

Project Title: The Wisconsin Family Services Survey

Persons Responsible for Evaluation: Colleen Janczewski (Principal Investigator); Joshua Mersky (Co-Investigator); Madeline McAteer (Project Manager).

Project Description: You are being asked to participate in an evaluation research project. The Family Services Survey aims to learn information that can help improve services for children and families who are involved in child protective services (CPS) in Wisconsin. We expect that over 1,000 families will participate in this project.

If you agree to participate, you will be asked to complete a survey about you and your family's well-being as well as about your recent experience with CPS. This survey will take 30-35 minutes to complete. We may also contact you in 12 months to complete a brief follow-up survey about your family's well-being. You can choose to complete these surveys by mail or over the phone. The information you share will help us improve the way Wisconsin CPS agencies work with families.

Risks / Benefits: We anticipate there are no likely risks to participating in this project. Violations of confidentiality are unlikely, but they are a threat that we take seriously. Your records will be protected, and your personal information will not be included in project reports or other communication with outside sources. All of our staff members have completed training on the protection of human subjects in research, and they are expected to be professional and respect your rights and privacy. If you have concerns about sending personal information through the mail, we would be happy to complete the survey with you by telephone. Please call 1-844-471-0069.

Because you will be asked some sensitive questions, you could experience discomfort. You can skip any question you do not feel comfortable answering. Your participation is voluntary, and you may withdraw at any time. You can also stop taking the survey at any point. If you experience discomfort and need support or assistance, you are encouraged to dial 211 or 1-800-422-4453 (Childhelp) to reach a crisis counselor or referral service that can help you in your local area.

After completing this survey, you will receive a $25 Walmart gift card for your time. The information you provide also may benefit child protective services as well as other children and families in the future.

Confidentiality: Information we collect is completely confidential and no individual will be identified with his/her information, with the exception of if you disclose reportable acts of child abuse and neglect. Under Wisconsin law, if you inform us about incidents of neglect or physical, sexual, and emotional abuse, as university employees, we must report this information to child protective services or law enforcement.

The information you provide may be used for educational purposes (such as professional presentations or publications). It will not be presented in a form that includes your name or any other information that would identify you directly.

A paper copy of your survey answers will be kept in a locked file in a secure office at UWM. The information will also be entered electronically into a database. For additional privacy, we will store your name and contact

information in a separate and secure file. Evaluation staff at UWM will store all digital data on an encrypted, mapped storage system until one year after study completion, at which time the information will be destroyed.

Access to the information will be limited to persons responsible for the evaluation, listed above, and project staff who work directly under their supervision. However, the Institutional Review Board at UW-Milwaukee or appropriate federal agencies like the Office for Human Research Protections may review project records to confirm that the data has been handled properly throughout this evaluation process.

Voluntary Participation: You are a voluntary participant in this project. You may choose not to take part, or if you decide to take part, you can change your mind later and withdraw at any time. You are free to skip any items in the survey. Your participation decision will not change any present or future relationships with child protective services. There are no known alternatives available to participating in this evaluation other than not taking part.

Who do I contact for questions about the evaluation? For more information about the project, contact Madeline McAteer, the Project Manager, at 414-229-2403 or mcateerm@uwm.edu. You may also contact Dr. Colleen Janczewski, the Principal Investigator, at 414-229-6733 or janczew2@uwm.edu.

Who do I contact for questions about my rights or complaints towards my treatment as an evaluation participant? Contact the UWM IRB at 414-229-3173 or irbinfo@uwm.edu.

Participant's Consent to Participate in the Evaluation: To voluntarily agree to take part in this evaluation, you must be 18 years of age or older. By signing the consent form, you are consenting to voluntarily participate in this evaluation project.

_____

Printed Name of Subject/Legally Authorized Representative

_____ _____

Signature of Subject/Legally Authorized Representative Date

First, we have some general questions about you and your family.

1. What is your date of birth?

☐☐ / ☐☐ / ☐☐☐☐
Month Day Year

2. How would you describe your race? You may select one or more of the following racial groups.

☐ American Indian
☐ Asian or Pacific Islander
☐ Black or African American
☐ Hispanic or Latino
☐ White
☐ Other (Please specify):_____

3. How would you describe your gender?

O Female O Male O Other

4. You are listed as a contact person for a family who has recently been involved in a child protective service case (CPS) in Wisconsin. What is your relationship to the child involved in this case?

O Biological parent
O Grandparent
O Other relative: _____
O Non-relative: _____

5. How many biological children do you have? (If you are pregnant, do not count current pregnancy).

☐☐ Biological children

6. What is your *youngest* child's date of birth?

☐☐ / ☐☐ / ☐☐☐☐
Month Day Year

7. What is your *oldest* child's date of birth?

☐☐ / ☐☐ / ☐☐☐☐
Month Day Year

8. Who currently lives with you? Please choose all that apply.

- ☐ Spouse or partner
- ☐ Biological children
- ☐ Non-biological children
- ☐ Parents or extended family
- ☐ My spouse's or partner's parents or extended family
- ☐ Other(s), such as a roommate
- ☐ No one. I live alone

9. What is your current employment status?

- O Employed full-time (35 or more hours per week)
- O Employed part-time (Less than 35 hours per week)
- O Not employed, looking for a job
- O Not employed, not looking for a job
- O Retired
- O Disabled, unable to work

10. Are you currently in school? This includes high school or college.

O Yes O No

11. What is the highest level of education you have completed?

- O Less than high school
- O Some high school
- O High school diploma or GED
- O Some college credit, no degree
- O Associate's (2 year) college degree
- O Bachelor's (4 year) college degree or higher

The following section asks about your recent experience with child protective services (CPS).

Thinking about how you feel right now about your recent involvement in CPS, please indicate how much you agree with the following statements.

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree	Does not apply to me
12. Our family was fine before CPS got involved.	○	○	○	○	○	○
13. It was hard for me to work with my CPS social worker.*	○	○	○	○	○	○
14. CPS manipulated things I said to make me look bad.	○	○	○	○	○	○
15. There was a good reason why CPS was involved with my family.	○	○	○	○	○	○
16. My CPS social worker* and I respected each other.	○	○	○	○	○	○
17. I felt like I could trust CPS to be fair and to see my side of things.	○	○	○	○	○	○
18. I felt like CPS was out to get me.	○	○	○	○	○	○

**CPS social worker, also called a caseworker, is the staff person at the CPS agency who worked most closely with your family.*

19. During your contact with CPS, how many times did you or other members of your family meet with your social worker?

- O We never met
- O Once
- O 2 to 3 times
- O 4 to 5 times
- O More than 5 times

20. During your contact with CPS, to what extent did you understand the CPS process?

- O Very much
- O Somewhat
- O Not at all

21. During your contact with CPS, to what extent were you informed of your rights? For example, if your social worker asked you to do something did you know whether it was voluntary or required?

- O Very informed
- O Somewhat informed
- O Not at all informed

22. During your contact with CPS, how involved were you in the decisions that were made concerning you and your family?

- O Very involved
- O Somewhat involved
- O Not at all involved

23. The following is a list of supports many families need. From the list below, please indicate (1) if you needed help in this area, (2) if your CPS worker gave you a referral for a service in this area, and (3) if you received the service.

	Did you need help in this area?		Did your CPS worker give you a referral for services?		Did you receive services in this area?	
	Yes	No	Yes	No	Yes	No
Alcohol or drug services	○	○	○	○	○	○
Counseling or mental health	○	○	○	○	○	○
Family planning, birth control, or prenatal health services	○	○	○	○	○	○
Other health care or dental care	○	○	○	○	○	○
Financial assistance for rent and utilities	○	○	○	○	○	○
Emergency shelter	○	○	○	○	○	○
Financial assistance for car repairs	○	○	○	○	○	○
Other transportation assistance (such as bus vouchers etc.)	○	○	○	○	○	○
Food and clothing	○	○	○	○	○	○
Baby supplies	○	○	○	○	○	○
Child care	○	○	○	○	○	○
Adult continuing education or vocational training	○	○	○	○	○	○

	Did you need help in this area?		Did your CPS worker give you a referral for services?		Did you receive services in this area?	
	Yes	No	Yes	No	Yes	No
Job placement services	O	O	O	O	O	O
Legal services	O	O	O	O	O	O
Domestic violence services	O	O	O	O	O	O
Parenting education and support	O	O	O	O	O	O

24. Is there anything else we should know about your experience with CPS?

The next questions relate to your physical and mental health.

25. In general, would you say your health is:

- O Excellent
- O Very good
- O Good
- O Fair
- O Poor

26. In general, would you say your quality of life is:

- O Excellent
- O Very good
- O Good
- O Fair
- O Poor

27. *<u>In the past seven days,</u>* how would you rate your pain on average?

0 1 2 3 4 5 6 7 8 9 10

No pain Moderate pain Worst possible pain

***Over the last two weeks*, how often have you been bothered by the following problems?**

	Not at all	Several days	More than half the days	Nearly every day
28. Feeling nervous, anxious, or on edge.	○	○	○	○
29. Not being able to stop or control worrying.	○	○	○	○
30. Worrying too much about different things.	○	○	○	○
31. Trouble relaxing.	○	○	○	○
32. Being so restless that it is hard to sit still.	○	○	○	○
33. Becoming easily annoyed or irritable.	○	○	○	○
34. Feeling afraid as if something awful might happen.	○	○	○	○

***In the past 7 days*…**

	Never	Rarely	Some-times	Often	Always
35. I felt worthless.	○	○	○	○	○
36. I felt helpless.	○	○	○	○	○
37. I felt depressed.	○	○	○	○	○
38. I felt hopeless.	○	○	○	○	○

In your lifetime have you ever had any experience that was so frightening, horrible or upsetting that, *in the past month*, you…

	Yes	No
39. Have had nightmares about it or thought about it when you did not want to?	○	○
40. Tried hard not to think about it or went out of your way to avoid situations that reminded you of it?	○	○
41. Were constantly on guard, watchful, or easily startled?	○	○
42. Felt numb or detached from others, activities, or your surroundings?	○	○

Thinking over the *past 4 weeks,* for each statement below indicate how often you felt angry?

	None or almost none of the time	A little of the time	Some of the time	Most of the time	All or almost all of the time
43. I found myself getting angry at people or situations.	○	○	○	○	○
44. When I got angry, I got really mad.	○	○	○	○	○
45. When I got angry, I stayed angry.	○	○	○	○	○
46. When I got angry at someone I wanted to hit them.	○	○	○	○	○
47. My anger prevented me from getting along with people as well as I'd have liked to.	○	○	○	○	○

To what extent do you agree with the following statements?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly disagree
48. I have something important to contribute to society.	○	○	○	○	○
49. I belong to a community (like a social group or my neighborhood).	○	○	○	○	○
50. People are basically good.	○	○	○	○	○
51. I am good at managing the responsibilities of my daily life.	○	○	○	○	○
52. My life has a sense of direction or meaning to it.	○	○	○	○	○

All of the following questions refer to the time ***before you were 18 years of age*.**

Now, looking back before you were 18 years of age…

	Never	Rarely	Some-times	Often	Very often	Don't know
53. As a child, how often did your family experience serious financial problems?	○	○	○	○	○	○
54. How often were you homeless when you were growing up?	○	○	○	○	○	○
55. How often did a parent or adult in your home ever swear at you, insult you, or put you down?	○	○	○	○	○	○
56. How often were you bullied or severely teased by other children or adolescents?	○	○	○	○	○	○
57. Before age 18, how often was there an adult in your household who tried hard to make sure your basic needs were met? *By "basic needs" we mean food, shelter, clothing, and medical care*.	○	○	○	○	○	○
58. How often was there an adult in your household who made you feel safe and protected?	○	○	○	○	○	○

	Never	Once	More than once	Don't know
59. Before age 18, how often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way? *Do not include spanking.*	○	○	○	○
60. How often did your parents or adults in your home ever slap, hit, beat, kick, or physically hurt each other?	○	○	○	○
61. How often did an adult, or anyone at least 5 years older than you, touch you sexually, try to make you touch them sexually, or force you to have sex?	○	○	○	○

	Yes	No	Don't know
62. Did you live with anyone who was depressed, mentally ill, or suicidal?	○	○	○
63. Did you live with anyone who was a problem drinker or alcoholic?	○	○	○
64. Did you live with anyone who used illegal street drugs or who abused prescription medications?	○	○	○
65. Did you live with anyone who served time or was sentenced to serve time in a prison, jail or other correctional facility?	○	○	○
66. Were your parents separated or divorced?	○	○	○
67. Was either one of your parents absent from your life for a long period of time? *Do not include absence due to death of parent.*	○	○	○
68. Before age 18, did you experience the death of a parent, caregiver, or sibling?	○	○	○
69. Before age 18, were you ever the victim of a violent crime?	○	○	○

The next questions are about events that may have occurred ***after you became an adult*.**

All of the following questions refer to the time *since you turned 18.*

	Never	Once	More than once
70. How often has a romantic partner or spouse ever slapped, hit, beat, kicked, or physically hurt you?	○	○	○
71. How often has a romantic partner or spouse ever screamed at you or threatened you with harm?	○	○	○
72. Since you turned 18, how often has anyone forced you to have sexual activities?	○	○	○

	Yes	No
73. Since you turned 18, have you ever been the victim of a violent crime like a robbery or assault? *This refers to any violent act by someone other than a spouse, partner, or household family member*.	○	○
74. Since you turned 18, have you ever been the victim of a non-violent crime such as theft?	○	○

The following questions refer to the time *since you turned 18.*

	Yes	No
75. Has a spouse, partner, or someone you have lived with been in prison or jail?	○	○
76. Has a spouse, partner or someone you have lived with been a problem drinker or alcoholic?	○	○
77. Has a spouse, partner, or someone you have lived with used illegal street drugs or abused prescription medications?	○	○
78. Has a spouse, partner, or someone you have lived with been depressed, mentally ill, or suicidal?	○	○

Since you turned 18 years of age…

	Never	Rarely	Some-times	Often	Very Often
79. How often have you been homeless*?	○	○	○	○	○
80. How often do you feel that you have been discriminated against?	○	○	○	○	○
81. How often have you experienced serious financial problems?	○	○	○	○	○

** "Homeless" means having to stay somewhere like a transitional housing program, a shelter, a hotel/motel paid by a voucher, someone else's home, a car or other vehicle, an abandoned building, anywhere outside, or anywhere else not meant for people to live.*

The following questions are about your home life and social environment.

How often is each of the following kinds of support available to you if you need it?

	None of the time	A little of the time	Some of the time	Most of the time	All of the time
82. Someone to help with daily chores if you were sick.	○	○	○	○	○
83. Someone to turn to for suggestions about how to deal with a personal problem.	○	○	○	○	○
84. Someone to do something enjoyable with.	○	○	○	○	○
85. Someone to love and make you feel wanted.	○	○	○	○	○

Participant Contact Information

Return this survey with your signed consent form using the reply envelope. You can expect to receive your $25 gift card within two weeks of mailing the survey.

Please provide your contact information below to ensure accurate delivery of your gift card. We also may contact you in the future to ask if you would like to participate in another survey.

First Name:_____ Last Name: _____

Street Address: _____

City: _____ State: _____ Zipcode: _____

Primary Phone: (_____)_____-_____ Email: _____

Is it ok to text you at the number above? □ Yes □ No

Please provide contact information for a relative or someone else who always knows how to get in touch with you.

First Name:_____ Last Name: _____

Street Address: _____

City: _____ State: _____ Zipcode: _____

Primary Phone: (_____)_____-_____ Email: _____

Thank you for your participation!

Appendix B:
Child Safety Outcomes: Detailed Tables

Table interpretation notes:

Odds ratios are adjusted for child age, child gender, child race/ethnicity, medically fragile, living arrangement, number of children, any prior reports, threat to child safety, and allegation types. R^2 Group indicates the ratio of variance explained by group membership (e.g., Pre AR vs Post AR). R^2 Full indicates the ratio of variance explained by group membership plus all other covariates.

Effect sizes are described below. Superscript S, M, L = Small, medium, and Large effect sizes of Cramer's V, ORs, or R^2

Descriptions of Statistical Terms Used in Appendix B

Term	Description
Cramer's V	Cramer's V is a measure of effect for binary or other categorical outcomes. Effect sizes are important because large sample sizes will result in statistically significant differences that may not be practically significant. We use conventions set forth for social science data (Ferguson, 2009): Recommended minimum effect size (RMPE) = 0.2; Medium effect = 0.5; Large effect= 0.8 Cramer's V is used in the analysis of safety outcomes and reported in Appendix B.
Effect Size:	Effect size indices are used to quantify the magnitude of a phenomena. They are important metrics in large samples because results may find statistically significant differences that may not be practically significant. Cramer's V, odds ratios (ORs), and R^2 values are effect sizes used in this report. Definitions for each effect size presented in this table provide rules of thumb for interpreting the recommended minimum effect size representing a practically significant effect (RMPE, Ferguson, 2009), medium, and large effect sizes. In this report, we use the term "negligible" to describe those effect sizes that are less than the threshold for small effects. Notably, because of the applied nature of this evaluation, there could potentially be effects of interest that do not reach the threshold commonly used for identifying meaningful effects. For example, the evaluation has shared several supplemental post hoc analyses considering the effect of race/ethnicity on assignment and reassignment.
Odds Ratios (ORs)	An odds ratio describes the relationship between a variable and the chances (odds) that a binary outcome will occur. In this report, we use ORs as a metric for logistic regression. If OR > 1, the variable is associated with greater odds that the outcome will occur (e.g., OR = 2 would mean that the outcome is twice as likely to occur, compared to the reference group). If OR = 1, the variable does not affect the odds that the outcome will occur. If OR < 1, the variable is associated with lower odds that the outcome will occur (e.g., OR = 0.75 would mean that the outcome is 25% less likely to occur, compared to the reference group). Odds ratios are interpreted as the change in odds with a one-unit change in the independent variable. Thus, the underlying scale of independent variables

will influence the scale and interpretation of the ORs. For instance, a one-unit change mother's age (range from 16 to 48), will likely generate small ORs compared to a one-unit change in a binary variable like child gender (0=female 1= male).

When both the independent and outcome variables are binary, odds ratios can be used as an index of effect size. We use conventions set forth for social science data (Ferguson, 2009):

	OR < 1.00	OR > 1.00
RMPE effect:	OR = 0.50	OR = 2.00
Moderate effect:	OR = 0.33	OR = 3.00
Large effect:	OR = 0.25	OR = 4.00

Note that the sample size and prevalence of the condition in the sample will influence the confidence in interpreting the ORs as effect sizes. For example, if an event occurs in less than 10% of the population, the OR effect size thresholds listed above may need to be increased.

Confidence Intervals (CI 95%)

Confidence intervals provides the upper and lower range of likely values for a given parameter, accounting for errors in the observed sample. Thus, an OR CI 95% of 1.5 to 2.0 means that with 95% certainty, the true OR is between 1.5 and 2.0. If the lower OR CI < 1 and the upper OR CI < 1, the OR is considered not significantly significant.

Probability value (*p*)

The probability that the results of a statistical hypothesis test are significantly different than the null hypothesis. We employ the conventional standard of $\alpha = 0.05$, meaning that the result would have occurred at most 5% of the time by chance. Thus $p \leq 0.05$ indicates a significant difference between groups. When working with very large samples, such as the administrative records in this report, even small differences can be statistically significant, which is why effect sizes including odds ratios, Cramer's V, and R^2 can help understand if the difference is meaningful.

R^2

Expressed as a percent, in regression models this statistic represents the amount of variance in the outcome that is explained by the variables in the statistical model. Because error terms for models with binary outcomes can only be estimated, Naglekerke pseudo-R^2 value is used.

In the Child Safety Outcome Section and Appendix B, two R^2 values are reported:
R^2 group shows how much of the variance in a given safety outcome is explained by group membership (AR, TR, TR in non-AR County).
R^2 full shows how much of the variance in a given safety outcome is explained when group membership and all covariates are included in the regression model.

R^2 can be an index of effect size. We use conventions set forth for social science data (Ferguson, 2009):

RMPE = 4%;
Medium effect = 25%;
Large effect= 64%

Any Subsequent Initial Assessment at 24 months

AR Pathway / Matched Sample Comparison

	AR Pathway		Non-AR County								
	N	%	N	%	*p*	Cramer's V	Effect size	OR	OR CIs	R^2 Group	R^2 Full
During IA	16984	3.87%	17238	4.92%	< 0.01	0.03	Negligible	0.78	(0.70, 0.87)	< 0.01	0.03
3 months	16516	5.75%	17055	5.99%	0.35	< 0.01	Negligible	0.96	(0.88,1.05)	< 0.01	0.03
6 months	15530	11.02%	16501	11.12%	0.78	< 0.01	Negligible	0.93	(0.79, 0.99)	< 0.01	0.03
9 months	14660	14.97%	16136	15.06%	0.83	< 0.01	Negligible	0.99	(0.93, 1.06)	< 0.01	0.04
12 months	13848	18.12%	15650	18.54%	0.36	< 0.01	Negligible	0.97	(0.92, 1.03)	< 0.01	0.04
18 months	12302	23.04%	14667	23.64%	0.25	< 0.01	Negligible	0.96	(0.91, 1.02)	< 0.01	**0.05** [s]
24 months	10606	26.91%	13729	27.66%	0.20	< 0.01	Negligible	0.97	(0.91, 1.03)	< 0.01	**0.06** [s]

TR Pathway / Matched Sample Comparison

	TR Pathway		Non-AR County								
	N	%	N	%	*p*	Cramer's V	Effect size	OR	OR CIs	R^2 Group	R^2 Full
During IA	15862	5.40%	17322	4.90%	0.04	0.01	Negligible	1.15	(1.04, 1.27)	< 0.01	0.04
3 months	15592	6.61%	17099	5.91%	0.01	0.01	Negligible	1.16	(1.06, 1.27)	< 0.01	0.03
6 months	14838	11.35%	16498	10.88%	0.19	< 0.01	Negligible	1.08	(1.01, 1.16)	< 0.01	0.04
9 months	14081	14.77%	16097	14.59%	0.62	< 0.01	Negligible	1.03	(0.96, 1.10)	< 0.01	**0.05** [s]
12 months	13353	17.23%	15616	17.78%	0.23	< 0.01	Negligible	1.00	(0.94, 1.06)	< 0.01	**0.05** [s]
18 months	11750	21.40%	14630	22.52%	0.03	0.01	Negligible	0.97	(0.92, 1.03)	< 0.01	**0.06** [s]
24 months	10001	24.05%	13689	26.04%	< 0.01	0.02	Negligible	0.94	(0.89, 1.00)	< 0.01	**0.07** [s]

Pre/Post AR Implementation Comparison

	Pre AR Pilot		Post AR Pilot								
	N	%	N	%	*p*	Cramer's V	Effect size	OR	OR CIs	R^2 Group	R^2 Full
During IA	19368	4.49%	33705	4.50%	0.98	0.00	Negligible	0.99	(0.91, 1.08)	< 0.01	0.03
3 months	19368	6.72%	32935	6.05%	< 0.01	0.01	Negligible	0.88	(0.81, 0.94)	< 0.01	0.03
6 months	19368	12.12%	31139	10.96%	< 0.01	0.02	Negligible	0.87	(0.82, 0.92	< 0.01	0.05
9 months	19368	15.86%	29458	14.56%	< 0.01	0.02	Negligible	0.89	(0.84, 0.94)	< 0.01	0.05
12 months	19368	19.01%	27862	17.33%	< 0.01	0.02	Negligible	0.87	(0.83, 0.92)	< 0.01	0.06
18 months	19368	23.81%	24619	21.79%	< 0.01	0.02	Negligible	0.87	(0.83, 0.91)	< 0.01	0.07
24 months	19368	27.39%	21097	25.00%	< 0.01	0.03	Negligible	0.86	(0.82, 0.90)	< 0.01	0.08

Unmatched Comparison

	AR County		Non-AR County								
	N	%	N	%	*p*	Cramer's V	Effect size	OR	OR CIs	R^2 Group	R^2 Full
During IA	38430	4.74%	63914	4.74%	1	0.00	Negligible	1.00	(0.94, 1.06)	< 0.01	0.03
3 months	37581	6.42%	63912	5.82%	< 0.01	0.01	Negligible	1.11	(1.05, 1.17)	< 0.01	0.02
6 months	35628	11.63%	61371	10.72%	< 0.01	0.01	Negligible	1.09	(1.05, 1.14)	< 0.01	0.03
9 months	33777	15.46%	59897	14.38%	< 0.01	0.02	Negligible	1.09	(1.05, 1.13)	< 0.01	0.04
12 months	31942	18.51%	58188	17.46%	< 0.01	0.01	Negligible	1.07	(1.03, 1.11)	< 0.01	0.04
18 months	28203	23.17%	54687	22.15%	< 0.01	0.01	Negligible	1.06	(1.02, 1.10)	< 0.01	**0.05** [s]
24 months	24125	26.50%	51244	25.70%	0.02	0.02	Negligible	1.05	(1.01, 1.09)	< 0.01	**0.06** [s]

Subsequent IA with Present or Impending Danger Threat

AR Pathway / Matched Sample Comparison

	AR Pathway		Non-AR County								
	N	%	N	%	*p*	Cramer's V	Effect size	OR	OR CIs	R^2 Group	R^2 Full
3 months	16516	2.07%	17055	2.45%	0.02	0.01	Negligible	0.85	(0.73, 0.97)	< 0.01	0.03
6 months	15530	4.01%	16501	4.40%	0.08	0.01	Negligible	0.91	(0.81, 1.01)	< 0.01	0.04
9 months	14660	5.56%	16136	5.96%	0.14	< 0.01	Negligible	0.91	(0.84, 0.98)	< 0.01	0.04
12 months	13848	6.59%	15650	7.41%	< 0.01	< 0.01	Negligible	0.88	(0.81, 0.97)	< 0.01	**0.05** [s]
18 months	12302	8.58%	14667	9.58%	< 0.01	0.02	Negligible	0.88	(0.81, 0.96)	< 0.01	**0.05** [s]
24 months	10606	10.27%	13729	11.57%	< 0.01	0.02	Negligible	0.88	(0.81, 0.95)	< 0.01	**0.06** [s]

TR Pathway / Matched Sample Comparison

	TR Pathway		Non-AR County								
	N	%	N	%	*p*	Cramer's V	Effect size	OR	OR CIs	R^2 Group	R^2 Full
3 months	15592	3.14%	17099	2.70%	< 0.01	0.01	Negligible	1.21	(1.06, 1.37)	< 0.01	0.04
6 months	14838	5.14%	16498	4.64%	0.04	0.01	Negligible	1.15	(1.04, 1.28)	< 0.01	**0.05** [s]
9 months	14081	6.53%	16097	6.15%	0.17	< 0.01	Negligible	1.10	(1.01, 1.21)	< 0.01	**0.05** [s]
12 months	13353	7.84%	15616	7.54%	0.35	< 0.01	Negligible	1.08	(0.99, 1.18)	< 0.01	**0.05** [s]
18 months	11750	9.67%	14630	9.69%	0.96	< 0.01	Negligible	1.04	(0.96, 1.13)	< 0.01	**0.06** [s]
24 months	10001	11.02%	13689	11.57%	0.19	< 0.01	Negligible	1.00	(0.92, 1.09)	< 0.01	**0.06** [s]

Pre/Post AR Implementation Comparison

	Pre AR Pilot		Post AR Pilot								
	N	%	N	%	*p*	Cramer's V	Effect size	OR	OR CIs	R^2 Group	R^2 Full
3 months	19368	2.99%	32935	2.53%	< 0.01	0.01	Negligible	0.83	(0.74, 0.93)	< 0.01	0.04
6 months	19368	5.58%	31139	4.44%	< 0.01	0.03	Negligible	0.78	(0.71, 0.84)	< 0.01	**0.05** [s]
9 months	19368	7.22%	29458	5.93%	< 0.01	0.03	Negligible	0.81	(0.75, 0.87)	< 0.01	**0.06** [s]
12 months	19368	8.75%	27862	7.02%	< 0.01	0.03	Negligible	0.78	(0.73, 0.84)	< 0.01	**0.06** [s]
18 months	19368	11.28%	24619	8.88%	< 0.01	0.04	Negligible	0.76	(.0.71, 0.81)	< 0.01	**0.07** [s]
24 months	19368	13.28%	21097	10.36%	< 0.01	0.05	Negligible	0.75	(0.71, 0.80)	< 0.01	**0.07** [s]

Unmatched Comparison

	AR County		Non-AR County								
	N	%	N	%	*p*	Cramer's V	Effect size	OR	OR CIs	R^2 Group	R^2 Full
3 months	37,581	2.71%	63,912	2.38%	< 0.01	0.01	Negligible	1.15	(1.06, 1.25)	< 0.01	0.03
6 months	35,628	4.76%	61,371	4.33%	< 0.01	0.01	Negligible	1.11	(1.04, 1.19)	< 0.01	0.04
9 months	33,777	6.42%	59,897	5.79%	< 0.01	0.01	Negligible	1.12	(1.06, 1.19)	< 0.01	0.04
12 months	31,942	7.61%	58,188	7.13%	< 0.01	0.01	Negligible	1.08	(1.02, 1.14)	< 0.01	0.04
18 months	28,203	9.26%	54,687	9.68%	0.05	0.05	Negligible	1.06	(1.01, 1.11)	< 0.01	**0.05** [s]
24 months	24,125	11.06%	51,244	11.26%	0.43	< 0.01	Negligible	1.03	(0.98, 1.09)	< 0.01	**0.06** [s]

Determination of Child Unsafe at Completion of Initial Assessment

Comparison	Group	N	%	*p*	Cramer's V	OR	OR CIs	R^2 Group	R^2 Full
Matched AR	AR pathway	29,174	6.30%	<0.01	0.06	0.63	(0.60, 0.68)	0.01	**0.12**
	Non-AR county	29,174	9.35%						
Matched TR	TR pathway	15,862	17.08%	<0.01	0.09	1.66	(1.55, 1.77)	0.01	**0.13**
	Non-AR county	17,322	11.50%						
Pre/Post AR pilot	Pre AR	29,224	9.61%	<0.01	0.06	1.56	(1.47, 1.64)	0.01	**0.17**
	Post AR	61,278	14.06%						
Unmatched totals	AR county	61,278	14.06%	<0.01	0.04	1.25	(1.22, 1.30)	<0.01	**0.16**
	Non-AR county	108,170	11.47%						

Determination of Child Unsafe at Completion of Subsequent Initial Assessment

AR Pathway / Matched Sample Comparison

	AR Pathway		Non-AR County								
	N	%	N	%	*p*	Cramer's V	Effect size	OR	OR CIs	R^2 Group	R^2 Full
3 months	16516	1.27%	17055	1.16%	0.40	< 0.01	Negligible	1.10	(0.91, 1.34)	< 0.01	**0.07** [s]
6 months	15530	2.65%	16501	2.30%	0.047	0.01	Negligible	1.16	(1.01, 1.34)	< 0.01	**0.06** [s]
9 months	14660	3.64%	16136	3.00%	< 0.01	0.02	Negligible	1.22	(1.08, 1.39)	< 0.01	**0.06** [s]
12 months	13848	4.37%	15650	3.67%	< 0.01	0.02	Negligible	1.20	(1.07, 1.35)	< 0.01	**0.06** [s]
18 months	12302	5.66%	14667	4.64%	< 0.01	0.02	Negligible	1.23	(1.11, 1.38)	< 0.01	**0.07** [s]
24 months	10606	6.70%	13729	5.76%	< 0.01	0.02	Negligible	1.18	(1.06, 1.31)	< 0.01	**0.07** [s]

TR Pathway / Matched Sample Comparison

	TR Pathway		Non-AR County								
	N	%	N	%	*p*	Cramer's V	Effect size	OR	OR CIs	R^2 Group	R^2 Full
3 months	15592	1.91%	17099	1.27%	< 0.01	0.02	Negligible	1.55	(1.30, 1.86)	< 0.01	**0.06** [s]
6 months	14838	3.32%	16498	2.40%	< 0.01	0.03	Negligible	1.45	(1.26, 1.66)	< 0.01	**0.06** [s]
9 months	14081	4.26%	16097	3.34%	< 0.01	0.02	Negligible	1.33	(1.19, 1.50)	< 0.01	**0.07** [s]
12 months	13353	5.07%	15616	4.01%	< 0.01	0.03	Negligible	1.34	(1.20, 1.50)	< 0.01	**0.07** [s]
18 months	11750	6.22%	14630	4.78%	< 0.01	0.03	Negligible	1.39	(1.25, 1.55)	< 0.01	**0.07** [s]
24 months	10001	7.19%	13689	5.74%	< 0.01	0.03	Negligible	1.36	(1.23, 1.52)	< 0.01	**0.07** [s]

Pre/Post AR Implementation Comparison

	Pre AR Pilot		Post AR Pilot								
	N	%	N	%	*p*	Cramer's V	Effect size	OR	OR CIs	R^2 Group	R^2 Full
3 months	19368	1.20%	32935	1.53%	<0.01	0.01	Negligible	1.25	(1.06, 1.46)	< 0.01	**0.05** [s]
6 months	19368	2.12%	31139	2.90%	<0.01	0.02	Negligible	1.32	(1.17, 1.48)	< 0.01	**0.06** [s]
9 months	19368	2.78%	29458	3.88%	<0.01	0.03	Negligible	1.37	(1.23, 1.52)	< 0.01	**0.07** [s]
12 months	19368	3.30%	27862	4.59%	<0.01	0.03	Negligible	1.36	(1.34, 1.50)	< 0.01	**0.07** [s]
18 months	19368	4.39%	24619	5.77%	<0.01	0.03	Negligible	1.29	(1.18, 1.41)	< 0.01	**0.07** [s]
24 months	19368	5.28%	21097	6.80%	<0.01	0.03	Negligible	1.27	(1.16, 1.38)	< 0.01	**0.08** [s]

Unmatched Comparison

	AR County		Non-AR County							R^2	R^2
	N	%	N	%	*p*	Cramer's V	Effect size	OR	OR CIs	Group	Full
3 months	37,581	1.60%	63,912	1.15%	< 0.01	0.02	Negligible	1.39	(1.24, 1.55)	< 0.01	**0.05** [s]
6 months	35,628	3.02%	61,371	2.17%	< 0.01	0.03	Negligible	1.39	(1.28, 1.51)	< 0.01	**0.05** [s]
9 months	33,777	4.09%	59,897	2.92%	< 0.01	0.03	Negligible	1.42	(1.42, 1.53)	< 0.01	**0.06** [s]
12 months	31,942	4.82%	58,188	3.52%	< 0.01	0.03	Negligible	1.39	(1.29, 1.48)	< 0.01	**0.06** [s]
18 months	28,203	6.08%	54,687	4.36%	< 0.01	0.04	Negligible	1.42	(1.33, 1.51)	< 0.01	**0.06** [s]
24 months	24,125	7.11%	51,244	5.25%	< 0.01	0.04	Negligible	1.39	(1.30, 1.48)	< 0.01	**0.06** [s]