

DHS/OEDA Research

2019 - 2020 Research Agenda



Office of Reporting, Research, Analytics and Implementation





ORRAI in DHS

Promotes exceptional and equitable service by embracing opportunity for growth and providing innovation, resources, and support to staff and agency.

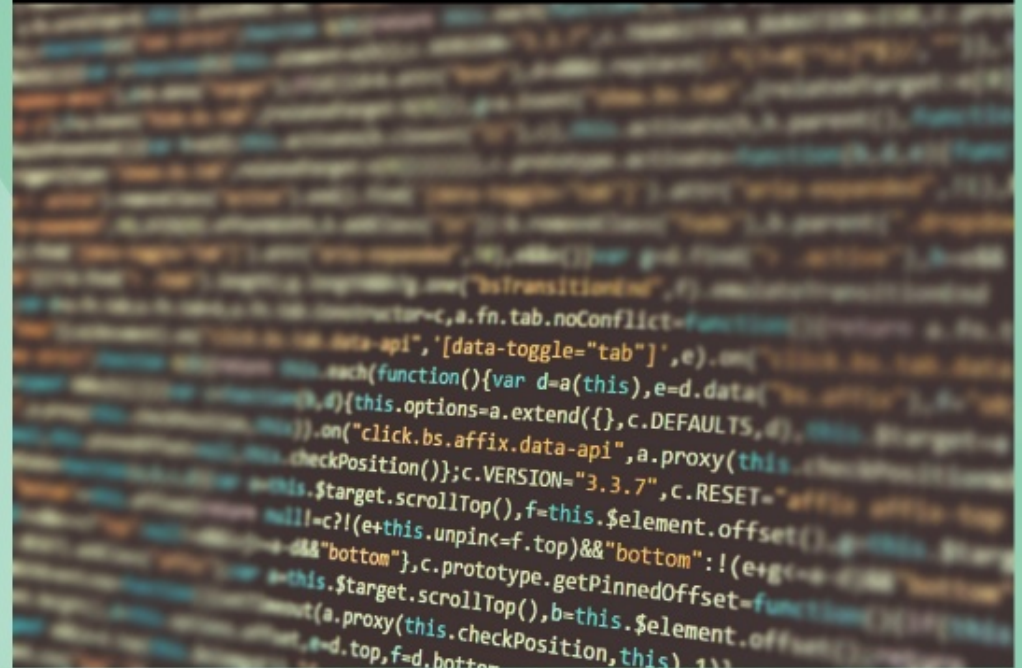
**DHS
Research**

**Research
Highlights**

**Current
Projects**

- Collaborate in the development of research agendas for each DHS program area
- Develop research-based tools to help inform decisions for both policy and field operations
- Support the development of data-informed decision-making in each DHS program area
- Evaluate program effectiveness and service matching
- Enhance cross-system data sharing and collection to improve service delivery across the continuum of each service delivery area

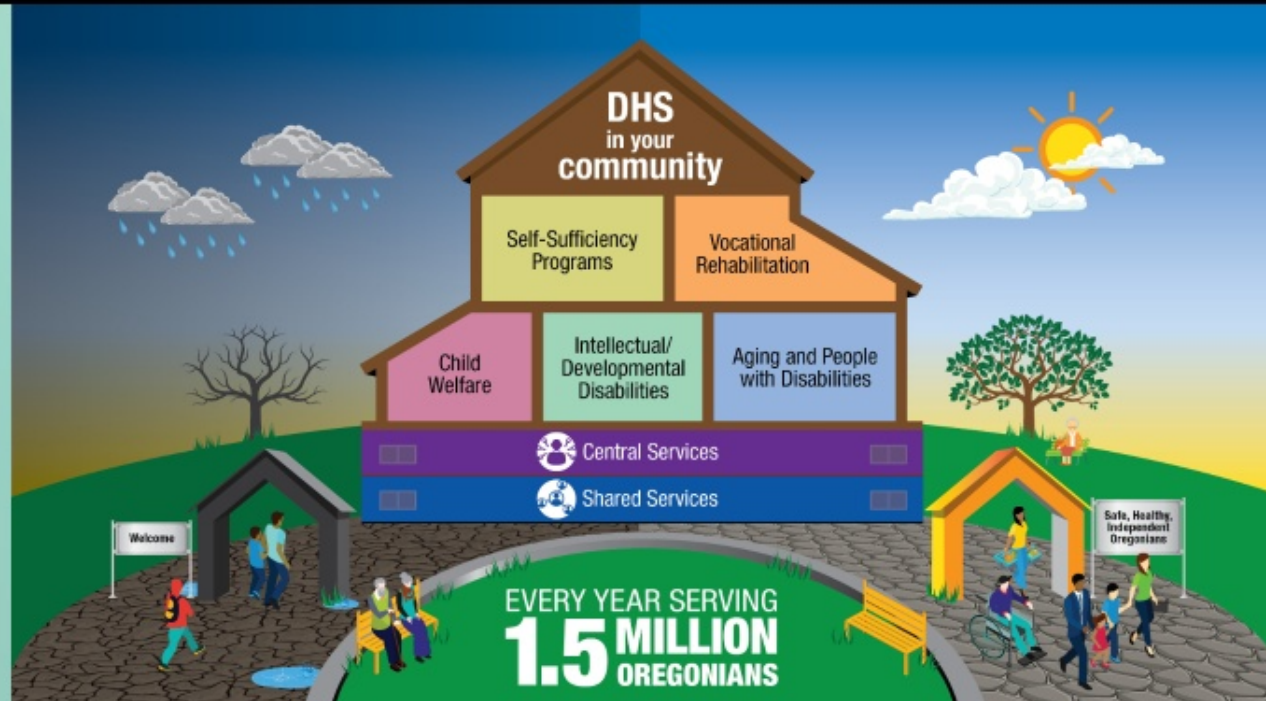
Research and Analytics



Research Portfolio - At a Glance

PROG	PROJ#	PROJECT NAME	STATUS	PRIORITY	19-Apr	19-May	19-Jun	19-Jul	19-Aug	19-Sep	19-Oct	19-Nov	19-Dec	20-Jan	20-Feb
CW	0.0	CW Agenda Creation	COMPLETE	MAINTENANCE											
CW	1.0	SAFETY ALONG THE LIFE OF A CASE													
CW	1.1	Safety at Screening	IMPLEMENTATION	MAINTENANCE											
CW	1.2	Safety at Reunification	ACTIVE	PRIORITY											
CW	1.3	Dynamic Risk	ACTIVE	PRIORITY											
CW	1.4	Hotline Call Volume	COMPLETE	MAINTENANCE											
CW	1.5	Risk of Severe Maltreatment	ACTIVE	PRIORITY											
CW	1.6	Safety at CPS Investigation	NOT STARTED	LOW PRIORITY											
CW	1.7	Risk Along the Continuum	Anticipate 2020	LOW PRIORITY											
CW	2.0	Capacity and Placement													
CW	2.1	Capacity	ACTIVE	PRIORITY											
CW	2.2	Placement Matching	NOT STARTED	LOW PRIORITY											
CW	2.3	Typology	CLOSED	CLOSED											
CW	2.4	Effects of Poor Alignment	ACTIVE	PRIORITY											
CW	2.5	Temporary Lodging	COMPLETE	MAINTENANCE											
CW	2.6	Effects of Foster Care Placement	NOT STARTED	LOW PRIORITY											
DHS	3.0	Workload and Caseload													
CW	3.1	Workload Model - RMS	ACTIVE	PRIORITY											
APD	3.1	Workload Model - RMS	ACTIVE	PRIORITY											
SSP	3.1	Workload Model - RMS	ACTIVE	PRIORITY											
DD	3.1	Workload Model - RMS	ACTIVE	PRIORITY											
CW	3.2	Caseload Model	ACTIVE	PRIORITY											
CW	4.0	Staff Recruitment and Retention													
CW	4.1	Engagement Survey	ACTIVE	PRIORITY											
CW	4.2	MAPS RMS	ACTIVE	PRIORITY											
CW	4.3	CWEP Evaluation	CLOSED	CLOSED											
CW	4.4	Caseworker Effectiveness	NOT STARTED	LOW PRIORITY											

Research in DHS Programs







Aging and People with Disabilities Research Agenda

Estimating Future Need of Social Service Supports

Probability of Maltreatment

- Individual
- Provider

Community

Self-Sufficiency
Programs

Vol
Reha

Community

Self Sufficiency Research Agenda

Program Effectiveness and Service Matching

Social Determinants Associated with Poverty

Community Engagement

Vo
Reh



Child Welfare Research Agenda

Safety Along the Life of a Case

Capacity, Placement, and Service Matching

Workload and Caseload

Staff Retention and Recruitment

Foster Parent Retention and Recruitment

Service Effectiveness

Reducing Disparities Across the System

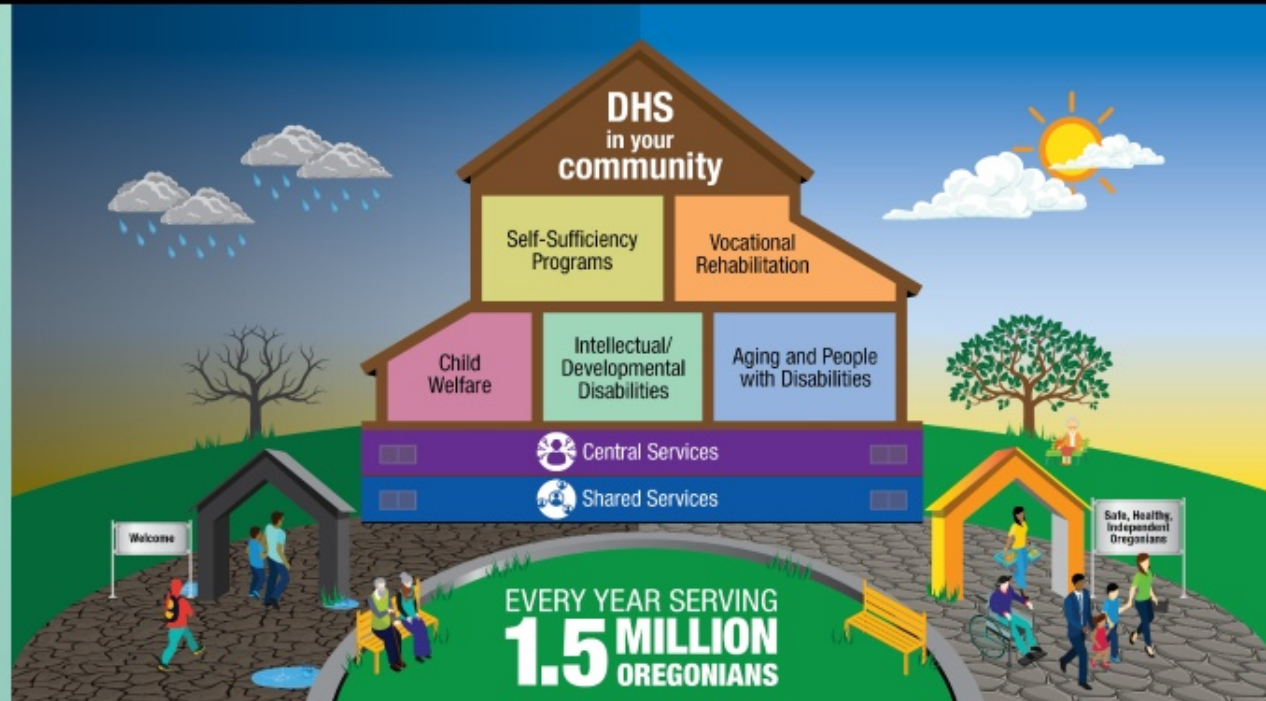
Risk of Severe Maltreatment

Inter
Devel
Dis



Ca

Research in DHS Programs



Current Projects

Screening Tool



Capacity and Service Matching



Pay for Performance



Screening Tool

- Oregon is unique in using a tool for identifying safety risks in screening calls coming into the hotline
- Oregon's system responds to 40% of the lowest risk allegations and 60% of the highest risk allegations - creating little variability in assignment
- These data indicate that our current practice underestimates high risk allegations and overestimates low risk allegations



Screening Tool

Screening Tool



% New Placement (in 2yrs)

	Score	# in Level	% in Level	% Actually Assigned	...of those Assigned	...of those closed	Overall	Relative Risk
<div> <div>Low</div> <div>High</div> </div>	4	4,329	3%	67%	62%	40%	55%	+8 x
	3	30,310	21%	55%	20%	11%	16%	+2 x
	2	88,043	61%	47%	4%	2%	3%	-2 x
	1	21,650	15%	34%	1%	0.4%	0.6%	-12 x
	Overall	144,332	100%	47%	10%	4%	7%	

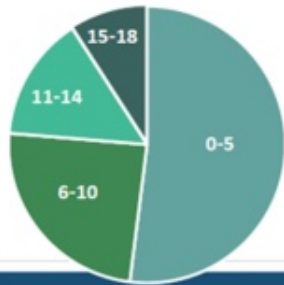
Capacity

- Identifies the ideal system size to appropriately serve the current population based upon child physical, mental, and behavioral health needs
- Preliminary results indicate an increase in family foster care specifically in the following areas:
 - High-needs behavior supports
 - Rapid access to mental health and crisis support
 - Children with developmental disabilities
- Preliminary results indicate a potential decrease in the need for behavioral residential placement if behavior and crisis services were readily available in family foster care

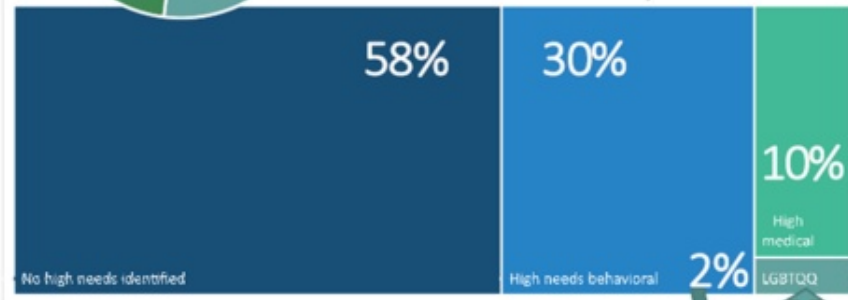


A look at the *overall sample*

(n=1000)



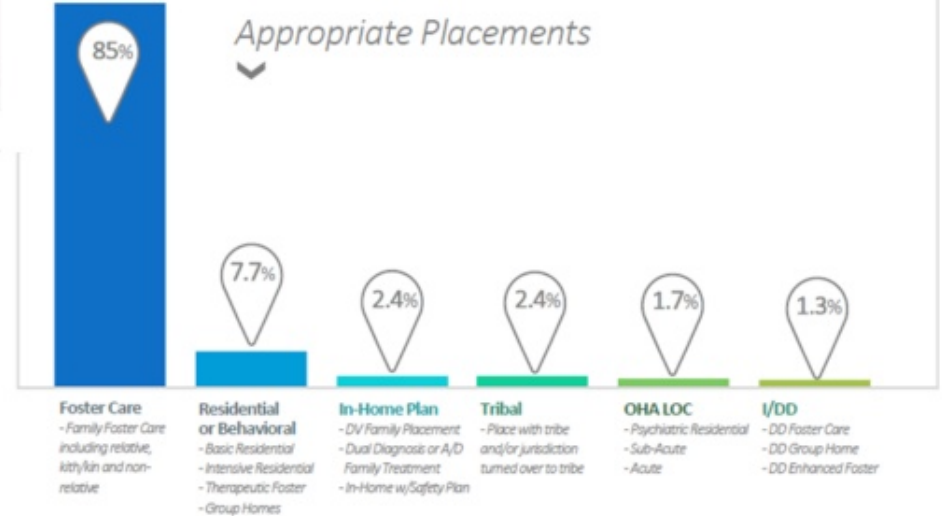
Age Groups
Specific Needs



Capacity and Service Matching



Appropriate Placements



Pay for Performance

- An approach where rewards or incentives are provided to programs that serve families at greatest risk and can demonstrate effectiveness by diverting families from adverse outcomes.
- Uses research to identify the number of clients diverted from entering or further penetrating the social service system.
- The cost savings for state agencies associated with successfully diverting families will be calculated with a portion of these savings being provided to the program.
- Creates data-informed contracting while improving outcomes





Risk of the
cohort is 10%

Serves 100 People



90 of those served are likely to
get a job without intervention

$100 - 90 = 10$ **People unlikely to get the job without the service**

The Program will only be paid for the success if more than 90 of the clients achieve the outcome. Provides incentives for programs to serve people that are unlikely to succeed without assistance

Research Highlights



- Fairness/Bias Correction:
Reducing disproportionality
- Longitudinal Dataset:
Identifying service pathways
- Risk of Severe Maltreatment:
Identifying those at greatest risk for
fatality or severe maltreatment

DHS/OEDA Research

2019 - 2020 Research Agenda





Fairness

Disproportionality and Bias
Adjustments

Problem

Solution

Problem

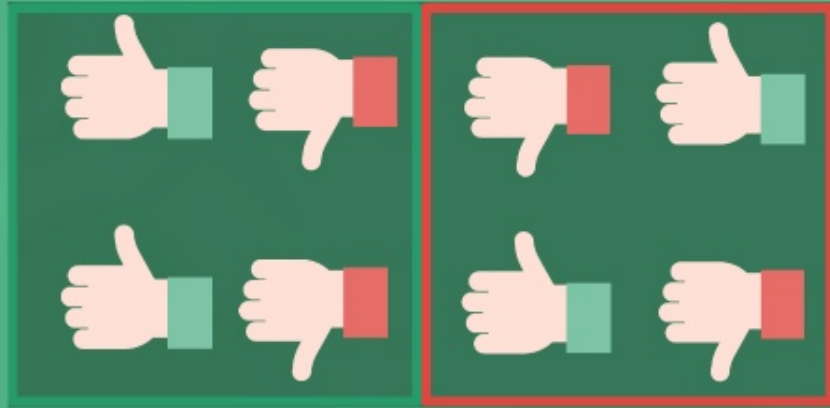
The cumulative effects of bias in multiple systems creates disproportionality in social service systems.

Decision-makers use historical data containing bias to make decisions.

Concerns have been voiced in using this existing data in predictive analytics, generating risk/safety estimates, thereby perpetuating disproportionality.

Oregon's current work includes a fairness correction procedure to reduce the race- and ethnicity-based disproportionality in misidentified risk.

Error Rate Balance



- Minimize bias when using administrative data to estimate risk/safety
- Balancing false positive rates with false negative rates
- Fairness estimates will be applied to all risk/safety equations along the child welfare continuum as well as other risk modeling tools in DHS
- Each minority group will have their own research agenda that reflects where disproportionality increases along their child welfare continuum

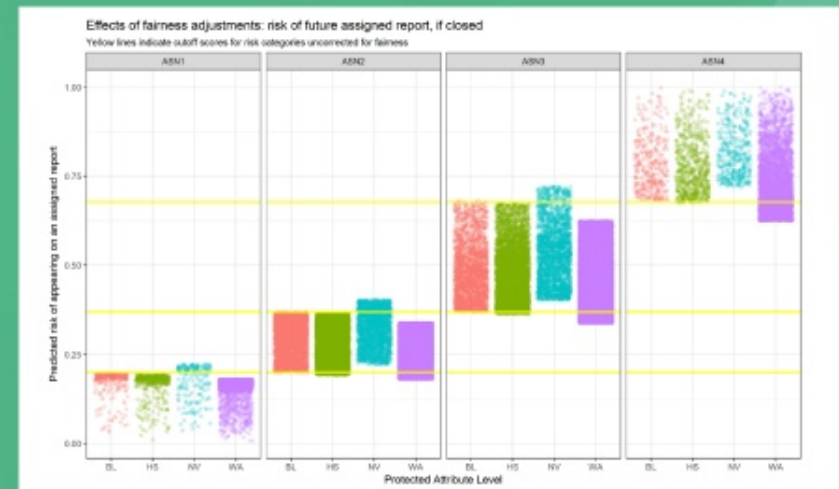


Fairness in Action

Project: *Safety at Screening Tool*

Methodology:

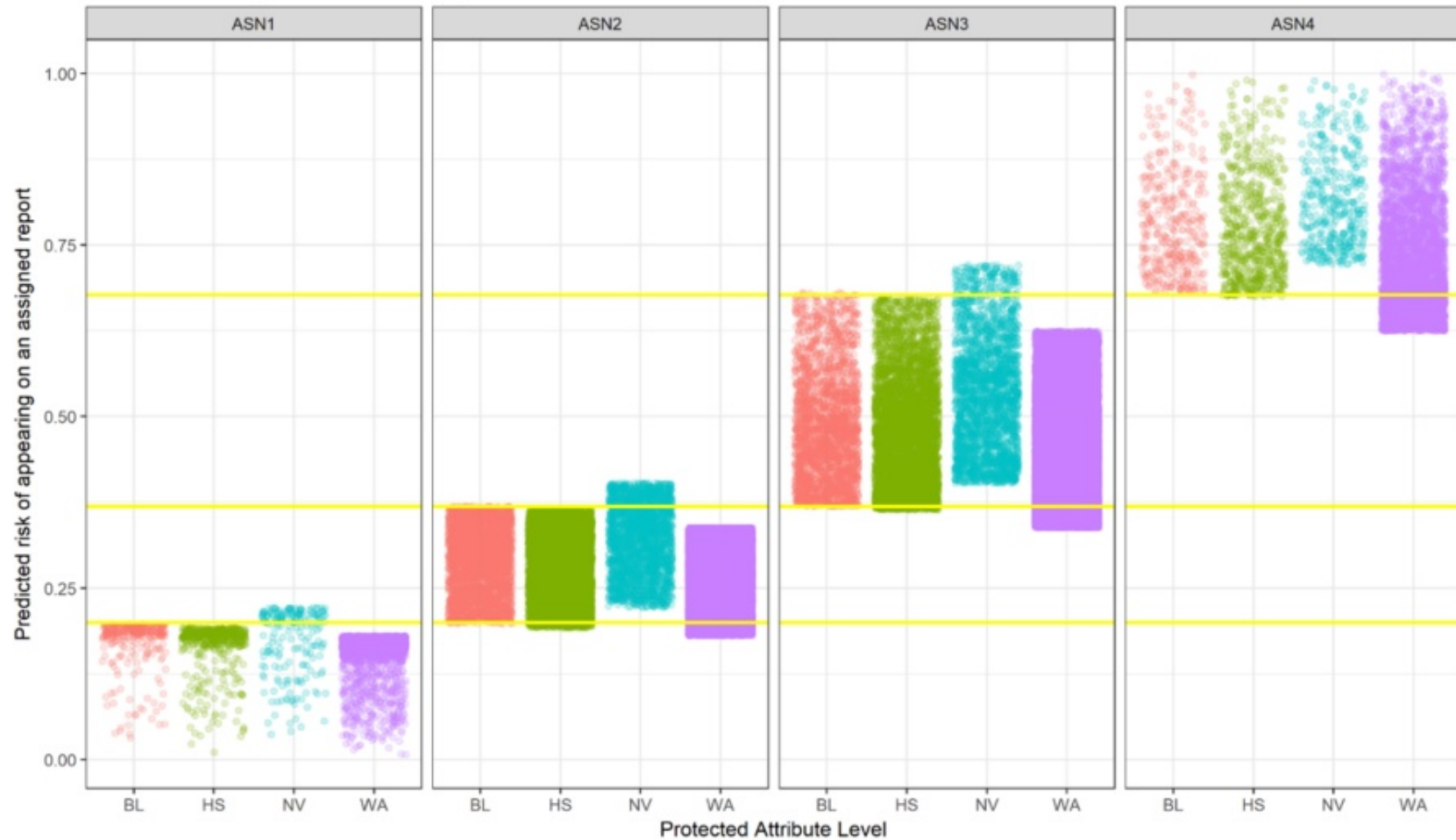
- Balancing the false negatives and false positive at each threshold amongst the four identified protected attributes*
- Applied to all protected attributes and to then adjust thresholds
- Automated into the scores presented to the screener for decision-making



* Protected Attribute: race based protected attribute

Effects of fairness adjustments: risk of future assigned report, if closed

Yellow lines indicate cutoff scores for risk categories uncorrected for fairness



DHS/OEDA Research

2019 - 2020 Research Agenda



Longitudinal Data-set


Understanding the social determinants associated with negative family outcomes allows experts to design programs to divert clients or reduce length of stay.



Advantages

Approach

Advantages



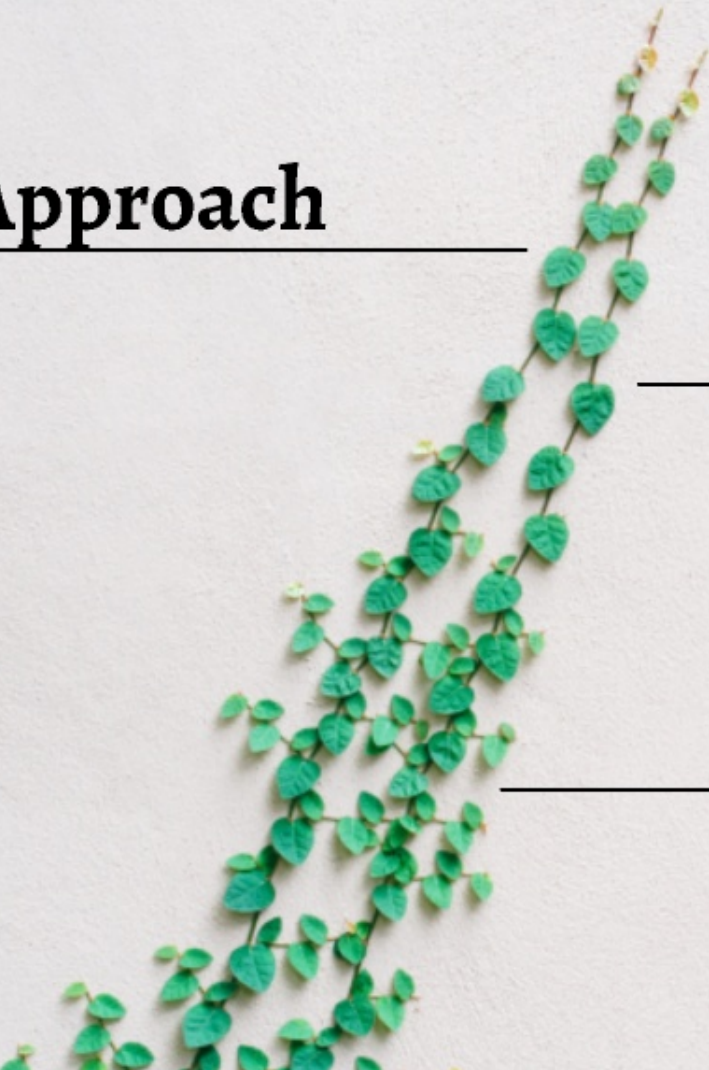
Outcomes result from many lifespan events and a person's movement toward and outcome can generally be predicted before the outcome occurs

Identifying where the negative trajectory diverts from the positive trajectory also recognizes when services should be offered

Social service, education, and criminal justice data are available to identify factors associated with both positive and negative child/family outcomes.

Designing services, quantifying their effectiveness, and assuring service matching algorithms are used should make the service delivery system more efficient and effective

Approach

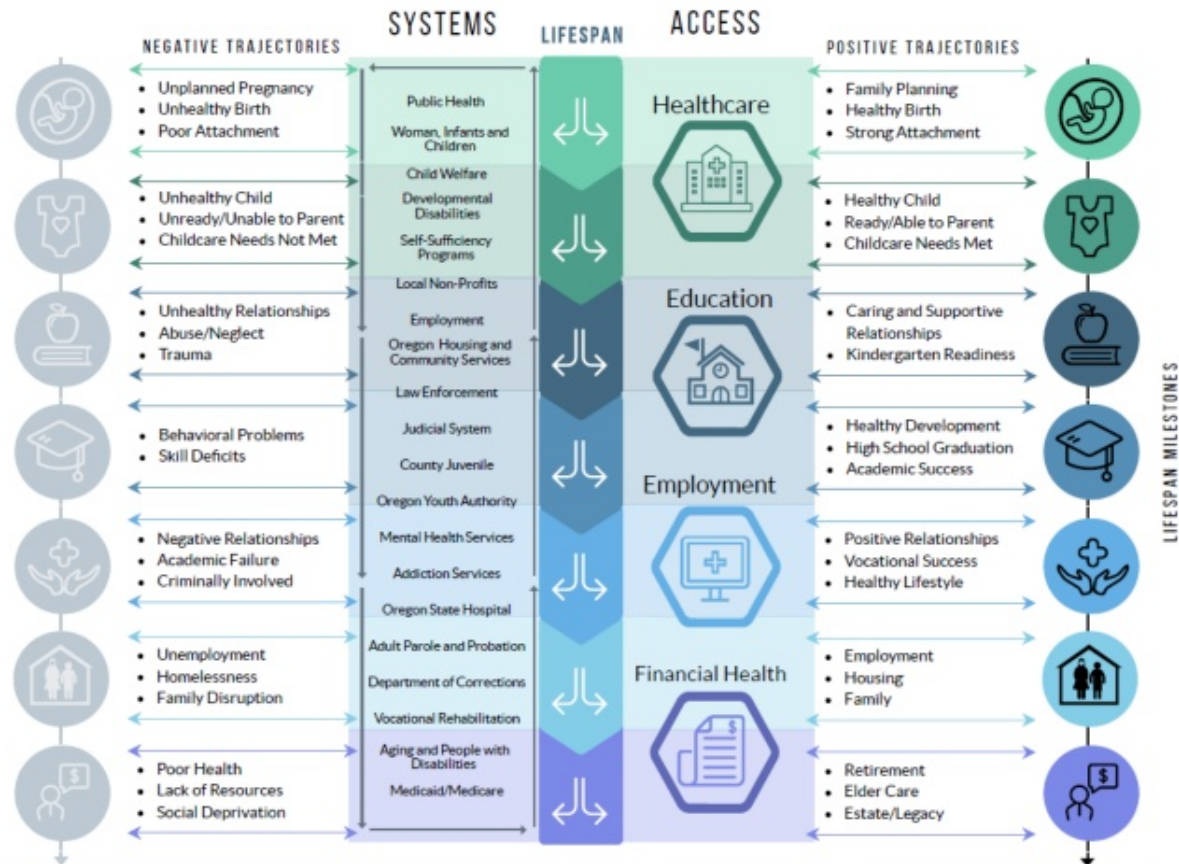


Differentiate two groups before the negative outcome occurs

Move "upstream" until the two groups cannot be accurately and meaningfully differentiated - this is where the two trajectories begin to separate

LONGITUDINAL DATASET

Understanding the social determinants associated with positive and negative family outcomes



Geospatial Mapping

Identifying location of service need to support prevention efforts



DHS/OEDA Research

2019 - 2020 Research Agenda




Preventing Severe Child Maltreatment and Fatalities

- Preventing child fatalities resulting from abuse/neglect can be difficult.
 - Fatalities are rare events and researchers have difficulty identifying the factors associated with increased risk.
- About half the child maltreatment related fatalities do not have prior child welfare involvement.
 - Child Protective Service experts suggest most physical abuse fatalities are predictable if the living situation were known to law enforcement, child welfare, or other local groups.
- Can statistical algorithms can be developed using historical data to identify current and future families with the greatest potential for severe abuse/ maltreatment or child fatalities?

Objective

Data

Implementation

- 
- ✓ **Reduce the number of child fatalities and children severely abused/maltreated by violent caretakers**
 - ✓ **Identify the individual family or caretaker characteristics associated with increased risk**

Data Considerations

- Child Welfare/TANF/SNAP
- Department of Corrections
- Medical
- Geospatial
- Local Data



Implementation

* Community Partnership

- Local law enforcement
- Nonprofit organizations
- Adult Parole and Probation
- Child Welfare
- Service Providers



DHS/OEDA Research

2019 - 2020 Research Agenda



Research Implementation

Implementation works through collaboration and consensus-building to inform, plan, implement, and evaluate research for all program areas. It is a sequential process which includes a collaborative workgroup model, training development, pilots, statewide training, follow up and technical assistance.

**Research
Implementation**

**Journey to
Implementation**

RiSE

Research Implementation



The goal of the ORRAI Research Implementation team is to ensure that DHS data, research, and analytics:

- Strengthen decision-making and outcome and metric tracking;
- Inform policies, procedures and operational models;
- Are conducted collaboratively through partnerships with DHS leadership, staff from all levels, experts, and other key stakeholders;
- Are well-communicated throughout the DHS community;
- Are well-implemented through training and technical assistance to staff;
- Are supported and sustainable through evaluation and designated resources when applicable.

Research Implementation

A BASIC MAP TO DESCRIBE THE STEPS AND PROCESS
FROM RESEARCH FINDINGS TO MAINTENANCE



Implementation in Action-Simulation #1

Implementation in Action-Simulation #1

Target child (age 3)Mother (age 37)Father (39)
12-30-2017

Caller is concerned of Physical Abuse: Head injuries by Father to Target Child. Evening of 12/25, Father dropped Target Child on his head, Target Child looked stunned and as if he had stopped breathing. He did some basic awareness questions with Target Child, "Can you see me and can you walk and talk." Mother asked him what your plan is. Father plan is to put him to bed. Target Child seems fine, eyes are not dilated. Father and Target Child were playing. Father was sitting with his legs crossed with his back to the sofa, Target Child would stand on Father's lap and be "blasted off" up and over Father and usually landed softly on the sofa. After 10-15 times, Target Child hit the sofa wrong and this injury happened. Father stated, "he only gets hurt when he is with me." Target Child stated, "him and daddy were playing and daddy dropped him on his head and he really, really hurt, he felt like he couldn't get his breath." He didn't cry because it hurt too much. Mother called urgent care in the morning because Target Child's neck hurt and "does not feel like himself." Target Child got in for an appointment and x-rays were taken. Doctor stated that he has a strained neck: on the upper right side of his neck there are abnormalities. Whole skull was in the ex-ray, only got 2 of 3 images. Mother took Target Child to the chiropractor that he has been seeing since he was born and the chiropractor added "concussion" to the diagnosis because they stated with that pain and the way he was dropped near the ear, there is not a way that there is not a concussion. Target Child states that his back hurts on right lower side, above hip bone and below ribs. Target Child also reports "pressure on neck." Mother gave Target Child ibuprofen "as needed" for that. She gave two doses of seven milligrams. Caller states that "Target Child has been behaving in ways that is consistent with a concussion: super moody, super tired and no appetite." There are concerns of alcohol with Father, he used to "self-medicate" with alcohol. Target Child states that "daddy has whiskey on his desk" but it is unknown why he knows this, he could have just read the label on the bottle. Target Child reads and writes and is learning French for "fun", he does algebra for fun, Target Child is cognitively at 8 or 9 years old. Target Child is either at home with his mother or with Maternal grandparents who live 10 houses down the street.

HISTORY for Mother CAS for Physical Abuse: No Indicators/Injuries Observed by Father to Target Child 4/15/15 CAS allegation Target Child, age 1, returned from a visit with his father, with a small abrasion on his forehead. Father reported that Target Child had tripped and fallen. As the child is a resident of Washington State, the matter will be assigned to Washington State DSHS for field assessment

Screening Information

Case Name: TEST, CASE Screener: SCHROEDER, KRISTY M. Response Time: Within 24 hours Report Type: CPS
 Date/Time Score Created: 11/20/2018 02:01 PM Date/Time Report Received: 11/20/2018 01:39 PM Report ID: 3098782

Screening Probability Score

Abuse Types	Children in Screening	DOB	Age	Gender	Relation	Probability Score	Lower Probability		Higher Probability	
							1	2	3	4
Neglect	Target Child	01/01/20XX	3	M	Child - Biological	Placement Score				
						Assignment Score				

Probability Score	Lower Probability		Higher Probability	
	1	2	3	4
Placement Score: 2				
Assignment Score: 2				

☒ I have reviewed the Probability Scores.

Close

Simulation #2

Target child (age 10), Sibling 1 (age 8), Sibling 2 (age 7), Sibling 3 (age 4) and Sibling 4 (age 3). Mother (age 31) Grandmother (aged 52)
09-27-2017






Target child disclosed there are "unsafe things" that are happening at his mother's house, that involve her new boyfriend. Target child says he does not feel safe going to his mom's house because boyfriend is there. Target child disclosed that he doesn't feel safe when he is at his mom's house because her boyfriend lives there. He said mom's boyfriend has a pocket knife that he throws at the wall. Target child denied ever being threatened with the knife, but is fearful of mom's boyfriend. Caller advised target child does not live with his mother, but lives with his grandmother. They live in the same trailer park as the mother, but several spaces over from the mother. Target child comes and goes from his grandmother's house to his mom's house on a frequent basis. Also living in the home with target child is his great-grandmother. Caller spoke with the great-grandmother about what target child had reported. It is unknown what steps the grandmother and great-grandmother will take, as target child lives with them, not the mother. Child Welfare History Mother 7/7/17 - pending assessment. This report involves 9 year old target child. Target child is disclosing his mother "whips him with a belt for discipline." Child is currently living outside of the home with his grandmother. Child also reported being hit on the arm with a spoon and the spoon broke 5/30/17 - Staffed with Supervisor. Police Department Officer and Detective went out on this at 8:34am on 5/30/17. They spoke to all parties involved and the child stated to police he was playing under the table and his mother accidentally hit him with the chair while she was cleaning. The grandmother after the police had left took the child to a neighbor and told the neighbor a different story this was done at 9:17am on 5/30/17, who then called in to report the incident to DHS. The reporter did not identify themselves. This happened less than 45 minutes part from the time the police arrived until the second report came in to screening. The police had already made contact with the child and grandmother did not like the answer she was given so she went and told a different source. Due to the child stating he was not abused and it was an accident and not done on purpose this assessment is being closed with no allegation of abuse or neglect. Police report is in ORKids.


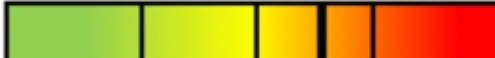
Grandmother 11/30/09 - Closed at screening - RP reported that dad was drinking heavily, pushed mom to the floor and aunt called 911. Dad was arrested for DV, harassment and is currently being deported. 7/3/09 - UNFOUNDED for domestic violence. Mom and dad got into a verbal argument. The children were sleeping in their bedroom. Mother has no information in Ecourts Grandmother was not located in Ecourts unfounded, 1 CAS

Screening Information

Case Name: TEST, CASE Screener: SCHROEDER, KRISTY M. Response Time: Within 24 hours Report Type: CPS
 Date/Time Score Created: 11/20/2018 02:01 PM Date/Time Report Received: 11/20/2018 01:39 PM Report ID: 3098782

Screening Probability Score

Abuse Types	Children in Screening	DOB	Age	Gender	Relation	Probability Score	Lower Probability		Higher Probability	
							1	2	3	4
Physical Abuse	TEST, CHILD	03/03/2003	15	F	Child - Biological	Placement Score				
						Assignment Score				
TOH: Domestic Violence	TOH: Domestic Violence	06/02/2008	7	F	Child - Biological	Placement Score				
						Assignment Score				
TOH: Domestic	TOH: Domestic Violence	06/02/2008	7	F	Child - Biological	Placement Score				

Probability Score	Lower Probability		Higher Probability	
	1	2	3	4
Placement Score: 2				
Assignment Score: 2				

☒ I have reviewed the Probability Scores.



**What and
Why**

**The
Elements**

WHAT IS RISE ?



- A positive, intentional, and inclusive organizational culture of Oregon's Department of Human Services
- Aimed to build a better DHS through the collective commitment of employees, leadership, stakeholders, and clients
- Name (*not an acronym!*) and brand developed by a work group made up of representatives from all five program areas, central services, and shared services

WHY RISE ?

- Belief in an inclusive culture that is rooted in the agency's mission and cultivated by our employees
- All individuals deserve to feel safe, valued, supported, strengthened and engaged in their personal growth and the agency's growth
- Creating environments and interactions that honors individual and collective experience and knowledge transforms DHS to RiSE to be better tomorrow than we are today

The Five Elements



DHS/OEDA Research

2019 - 2020 Research Agenda

