Attachment 3

Research Agenda

Child Welfare

Department of Human Services

Authored by:

Paul Bellatty, Director of Research and Implementation

Kirsten Kolb, Strategic Initiatives Policy Advisor

Sponsored by:

Marilyn Jones, Director of Child Welfare

DHS | Oregon Department of Human Services

Table of Contents

Overview …… Page 2

Estimating Probability of Safety …… Page 5

- Dynamic Safety …… Page 7
- Simulations …… Page 7

Capacity and Service Matching …… Page 8

- Capacity …… Page 8
- Service Matching …… Page 10
- Effects on Placement Matching …… Page 10

Caseload and Workload …… Page 11

- Staff allocation …… Page 15
- Staff allocation with RMS …… Page 16

Recruitment and Retention of Caseworkers and Supervisors …… Page 16

Recruitment and Retention of Caretakers …… Page 18

Appendix …… Page 19

- Community Engagement …… Page 19
- Child Safety Across the Continuum of Care …… Page 19
- Youth Centered Approach …… Page 20
- Program Evaluation …… Page 21
- Ethnic and Racial Disparities …… Page 21

Proposed Child Welfare Research Agenda

(October 2017)

The Oregon Child Welfare system is impacted by numerous external and internal factors that affect casework practice and child/family outcomes. Providing objective information to caseworkers when making important decisions, assuring appropriate beds are available for all foster children/youth, identifying the proper caseloads, recruiting and retaining the best caseworkers, and recruiting and retaining the best child welfare caretakers are all important. Research can provide information that identifies solutions to these issues.

All state child welfare agencies struggle with numerous issues. Many states do not have the data, analytic capability, or the ability to implement research – Oregon does. Although research is not a panacea, research can provide crucial information to those making important decisions. Below is a list of research topics and associated methodologies available to Oregon's child welfare system. These five research topics are intended to relieve the pressure on the foster care system, begin to place child/youth in their best placement, recognize the optimal caseload and quantify the negative effects of overworked caseworkers, and focus recruitment and/or retention efforts to alleviate Oregon's caseworker and caretaker crisis.

The research agenda should provide tools to make informed decisions. The tools that quantify safety are not prescriptive tools that make decisions – the tools provide information that enhance professional discretion. No research tool will ever replace the most important resource in the child welfare system – caseworkers and managers serving Oregon's children and families. Most tools are associated with an outcome. This implies most caseworker efforts should be intended for a particular purpose – to maximize safety, minimize maltreatment, improve the likelihood of reunification, minimize the number of moves within substitute care, and promote positive child/youth outcomes.

The implementation of research based tools, creates a data-informed child welfare system. Although data-informed will not prevent maltreatment, ensure every child is in the right bed for the right amount of time, and assure every adoption is successful; a data-informed system provides objective information to decision-makers to improve outcomes for children and families.

Child Welfare Research Agenda

Safety along Case Life	Capacity and Service Matching	Caseload and Workload
Safety along the life of a case	Bed Need / Capacity	Quantifying workload and caseload
Dynamic Safety	Service matching	Complexity of caseload and time
Simulations—meaningful safety plans	Buffer beds in substitute care	Optimum caseloads at current caseworker allocation
Alignment of child behavior with foster parent skill	Program Evaluation	Staff allocation across districts
Ethnic and Racial Disparities	Gaps in service	

Recruitment/Retention	Community Engagement	Other
Employee / Caseworker / Supervisor	Serving youth within home communities	Feeder System: Child safety across DHS program areas
Foster Parent	Reporting of incidents	Feeder System: Child safety across other agencies
	Identified safety and probability of subsequent maltreatment	Youth centered approach: Tier 2
		Program Evaluation

Updated 10/19/2017

Estimating Probability of Safety

The likelihood of an event is routinely estimated in many disciplines. In the medical community, age, cholesterol, blood pressure, smoking status, and gender are used to estimate the probability someone will have a heart attack in the next decade. If your estimate exceeds 10%, you become a candidate for numerous prescriptions. In the auto insurance world, age, number of driving citations, and number of accidents are used to determine the cost of the premium – that cost is directly associated with the likelihood someone is involved with an accident. In the marketing world, previous purchases, income, and time on different websites are used to identify the probability you will purchase another item – those items "pop-up" on your next e-shopping trip.

There are many important decisions child welfare workers make during the life of a case. In an effort to maintain safety for a child, knowing the likelihood of maltreatment could influence a decision. Much like a cholesterol level may influence your diet or influence your decision to take cholesterol-lowering medication, the likelihood of child safety may influence caseworker decisions.

Equations provide estimates by identifying the outcomes of similar situations with similar families. Although statistically very similar, there may be unique attributes of some families that influence safety estimates and increase safety which are not included in the equation; conversely, there may be other family characteristics that decrease the likelihood a child will remain safe. The equations provide the average estimates for similar families – child welfare staff working with the families must weigh other factors not included in the equations.

Generating child safety equations is an easy task if data exist and are reliable. Child safety can be quantified along the life of a case and the schematic below identifies potential decisions which may benefit from safety estimates. After the safety equations are identified in the schematic below, the narrative describes "dynamic safety" and the use of "simulations." Dynamic safety is a more complex analysis that provides "real-time" estimates of safety along the case life. Dynamic safety would replace the traditional estimates generated by less complex analyses. Simulations allow those assessing families to recognize change in child safety attributable to likely scenarios – completion of alcohol/drug treatment, recent arrest, recent employment, and other important events.

There are some frequently asked questions about quantifying safety including the three below:

1. Can we accurately quantify the likelihood of child safety with a particular family?
2. Are the data sufficiently reliable to accurately estimate safety?
3. What should be included in the "safety" equations and what are the other considerations when developing equations?

Safety throughout a Child Welfare Case Life

Screening	Assessment	Placement / Services	Case Planning	Permanency
Probability of maltreatment: use at screening*	Safety after a substantiated allegation*	Probability of safety with child-caretaker alignment	Probability of safety upon return to home*	Safety in adoptive home
Probability of subsequent referral	Perpetrator risk of child maltreatment	Probability of high number of movements	• Probability of safety to returning child*	Probability of successful adoption
		Probability of long out-of-home stays	• Probability of safety to other child(ren) when child returns home*	
		Probability of running away	Probability of returning home	

*Probability of safety analyses are coupled with probability of severe maltreatment outcome

1.) Can we accurately quantify the likelihood of child safety with a particular family? Actuarial equations that estimate child safety have been generated for Oregon's child welfare agency. Safety after a substantiated allegation when the child remained at home has been estimated; individual safety can range from 0-100%. The likelihood of child safety after returning home has also been estimated. These equations have good predictive accuracy but require validation for numerous client populations. Without validation for minority populations, the safety equations could exacerbate ethnic racial disparity issues that often impact the social service system.

2.) Are the data sufficiently reliable to accurately estimate safety? Relying exclusively on child welfare data to estimate safety has drawbacks. Probability of abuse/neglect is influenced by many non-child welfare factors. Although child welfare involvement requires a reported allegation before offering services, two identical neglect allegations might have substantially different probability of safety. Both cases may involve unclean homes and numerous children. The first case may only involve cleanliness and many children. In the second case, the mother may have frequent contact with law enforcement, mandated to attend alcohol and drug treatment, and history of abuse as a child. Looking at the child welfare data, these cases are nearly identical; looking at other agency data, the probability of safety to the children in the second case is substantially lower. Including other agency data in the equations may

improve predictive accuracy particularly for first time referrals. Accurately estimating safety should provide focus on the families with the greatest need. Focus on families with the low probability of safety does not imply cases should result in substitute care placements. Many families with safety concerns are best served in-home and not in substitute care. Although probability of maltreatment and programming are likely pairs, the risk of severe maltreatment should always be coupled with child safety. These statistical equations can help provide the necessary focus to devote the right time to the right case. In addition, these statistical equations can also be "adjusted" to recognize the associated risk of false positives and false negatives.

3.) What should be included in the "safety" equations and what are the other considerations when developing equations? Accurately identifying the probability of safety or risk of abuse/neglect is complex. Most equations include historical data which is considered static (i.e. cannot be changed). The safety equations are dominated by static variables since history is the best indicator of the future. Although some equations may include dynamic factors which can change frequently, few dynamic factors are involved with safety equations. Caseworkers assessing the likelihood of safety do not need to consider static factors included in the equations or factors highly correlated with factors in the risk equation. Rather caseworkers should consider the dynamic factors (e.g. prosocial friends, attitude, and behavior) and variables not included in the safety equation (e.g. completed treatment, living with parents who can provide needed respite, etc.).

Dynamic safety: Safety is influenced by family characteristics, protective factors, programming, and external factors. If these factors are included in the safety equations, the estimate should be dynamic – on any given day, the likelihood of a child being safe should reflect everything included in the data system. Although researchers prefer to use "cohorts" to assess the likelihood of a particular event, knowing the likelihood of safety every day is more useful than analyses using a particular event (i.e. day child leaves foster care). Dynamic safety provides accurate estimates and is not tied to a particular cohort-related event.

Simulations: Child safety is the first priority in child welfare cases. Many cases are fluid – parental figures change, boyfriends/girlfriends are arrested, parent finds employment, etc. Currently, our system qualitatively assesses safety based upon existing family characteristics or circumstances. Often this assessment occurs after an event such as parental figure returning to the home with a history of

violence or abuse. Allowing caseworkers to recognize the effects of case changes allows the caseworker to proactively manage a case. Knowing the involvement of a specific family member dramatically reduces safety may influence the conversation with a child's parent or caretaker. Additionally, knowing completion of treatment improves safety dramatically may also influence the conversation. Having the ability to quantify safety attributable to changes in the family dynamics could influence case outcomes. Simulated effects can be recognized with traditional safety equations or dynamic safety equations.

Additionally, there are other ancillary benefits of estimating safety including:

- Estimating program effectiveness
- Identifying if thresholds for removal and thresholds for returning home contain racial bias.
- Quantifying county differences in thresholds for responding to allegations, removing children from the home, and reunifying families.
- Estimating "community engagement" by looking at risk thresholds for first referrals

Capacity and Service Matching

Capacity: Oregon's child welfare system is continuously making efforts to right size the capacity of care for child safety. Children/youth placements in Oregon have been dictated by bed availability with limited recognition of child needs and provider capability. Knowing how many placements are needed within substitute care (i.e. foster care, kinship care, residential, proctor, psychiatric care, etc.) and which children/youth should get what type of service will help improve outcomes. The placement capacity research would estimate the number of service level placements needed to optimally serve the substitute care population.

There are many placement options available to caseworkers – in-home care, in-home care coupled with in-home services, foster care, kinship foster care, professional foster care, therapeutic foster care, residential treatment, and psychiatric residential treatment. The child/youth needs should influence the placement and reflect the level of care provided by the placement. One methodology of quantifying placement need would be to use caseworkers/supervisors to identify the ideal placement options for randomly selected children/youth. The two step process first ranks the randomly selected group from the highest need to the lowest need; the second step uses caseworkers and supervisors to identify the placement options best suited for each selected child/youth. Using caseworkers/supervisors to determine placement need creates the data-informed culture and a better

understanding of the research. This methodology is labor intensive and encourages caseworker/supervisor involvement with research and the decision process.

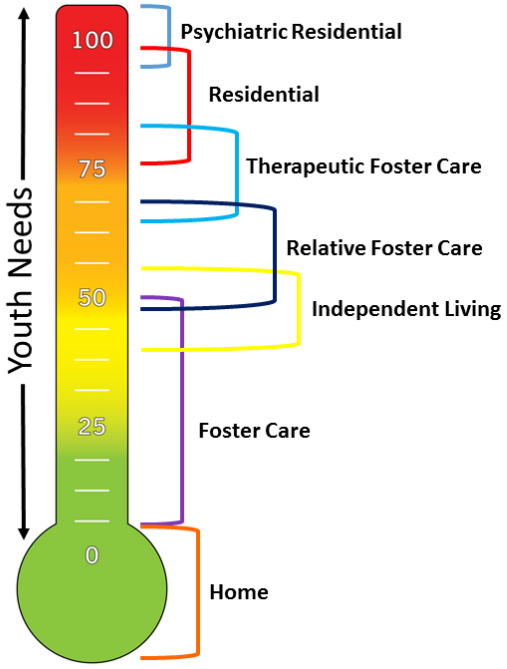
A second method matches children/youth with a placement by statistically recognizing the best outcomes of similar individuals placed in various service level options. The best process would combine the two methodologies – first allow caseworkers/supervisors to identify the ideal placement options followed by the researchers identifying and quantifying optimal outcomes based upon ideal placement. The differences in the results could identify new opportunities and could refine estimates of capacity to create an optimal continuum of care.

Quantifying bed need (part 1):

- Random selection of youth
- Rank based upon need
- Identify best placement

Quantifying bed need (part 2):

- Statistically identify placement based upon outcomes of previous youth
- Quantify outcomes based upon alignment of placement



After the randomly selected group of placements are reviewed by caseworkers/supervisors to identify the optimal placement options, administrative data should be linked to data available at placement. If the administrative data are sufficiently associated with the ranking determined by caseworkers/supervisors, new children/youth entering the substitute care system can be associated with particular placement types. The process of coupling caseworker/supervisor suggestions with administrative data allows new children/youth to be identified within a specific range of placement types. Future changes in the administrative data will recognize the changing child/youth population and also recognize the changing needs of the substitute care system. If administrative data and ranking by

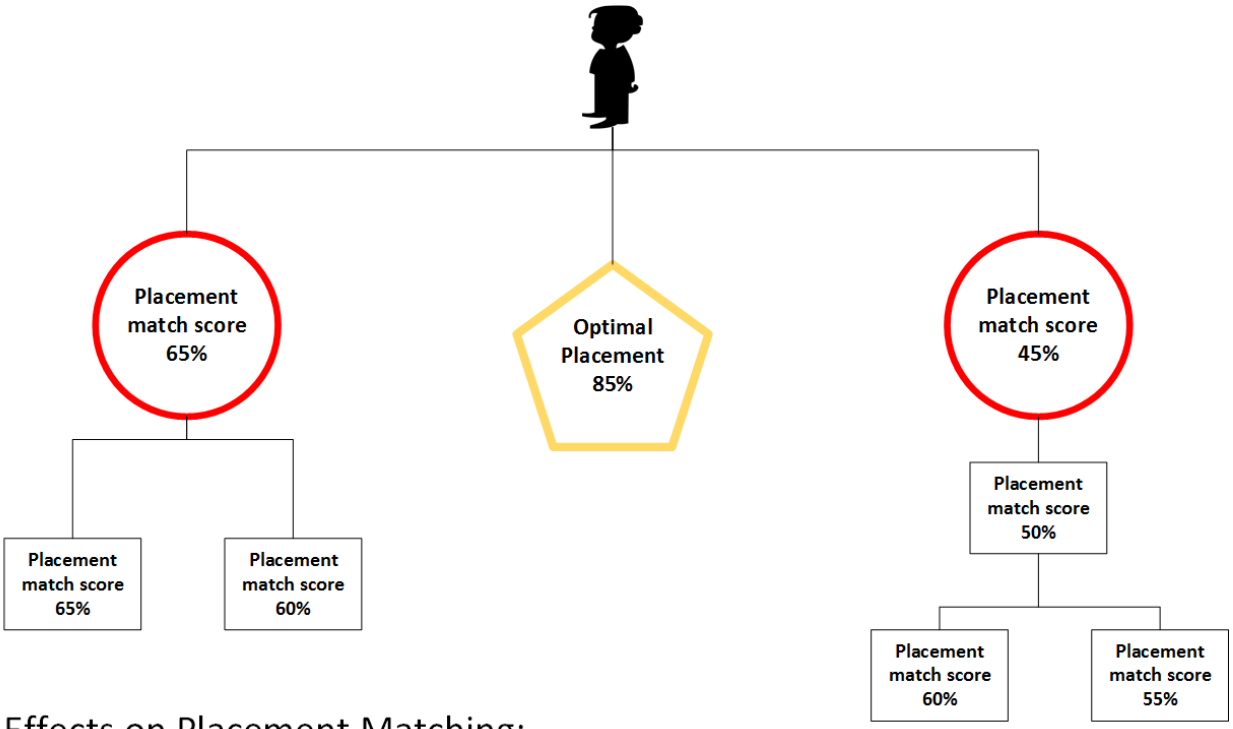
caseworkers/supervisors are highly correlated, researchers can identify seasonal fluctuations and quantify the "buffer" needs to assure every child has access to their optimal placement during periods of high substitute care use.

Service matching: There are many children and families who receive a particular program or service associated with a successful outcome; however, there are other children and families receiving the same program or service who are not successful. Recognizing the types of children/families who benefit from a program is useful to increase safety, minimize maltreatment and maximize reunification. For every program, family/child profiles with successful outcomes can be compared to the same profile associated with unsuccessful outcomes. As new families become involved with the child welfare system, their characteristics can be compared to families with successful outcomes for a particular service/program. If the new family is very similar to the profile of successful families, the likelihood of success is high. The new family and their characteristics can be compared to all programs with success profiles to recognize the best service/program options for a particular outcome. Some programs might be more successful with older youth, some more successful with neglectful families, some with alcohol and drug issues, and some with other factors. Although this simplified explanation identifies the population best served by particular programs, equations for each program identify the relative effectiveness of each program for a particular family. As an example, if the system has a dozen residential treatment programs, there would be 12 equations that include the variables that differentiate success from non-success for each program. When a new child/youth is being considered for residential placement, there will be 12 estimates – one for each program. The programs with the higher estimates of success have traditionally done well with similar children/youth. Although these estimates should not dictate the placement, the information should be used in conjunction with other information to inform placement decisions.

The same service matching can be used when evaluating prospective foster homes. Although data are generally not sufficient to generate equations for a particular foster home (i.e. number served is not sufficient to generate an accurate equation), the level of experience, the type of youth previously served, and other factors can be used to identify the type of foster home that produce the best outcomes for every child/youth.

Effects on placement matching: Service matching can use existing programs to more effectively serve child/youth populations. Recognizing the best placement for each child and family will generate the best results with the current array of services/programs. Researchers can recognize the placement

effectiveness pre- and post-implementation of service matching and can quantify the benefits derived from service matching. The same methodology can also quantify the effect of a system poorly aligned with child or family needs. If the optimal placement is not available (with an 85% success rate) and the second placement choice has a lower success rate (i.e. 65%), the 20% reduction in success is directly associated with placement availability. When many children do not have access to the ideal placement, the alignment between bed need and bed availability is not optimal. Quantifying the effects of poor alignment between placement need and placement availability is possible. The schematic below recognizes how placement choice and outcomes are related.



Effects on Placement Matching:

1. Length of stay
2. Reunification with family
3. Probability of higher level of care
5. Probability of further system involvement (i.e juvenile justice)
6. Costs to serve child and family

Caseload and Workload

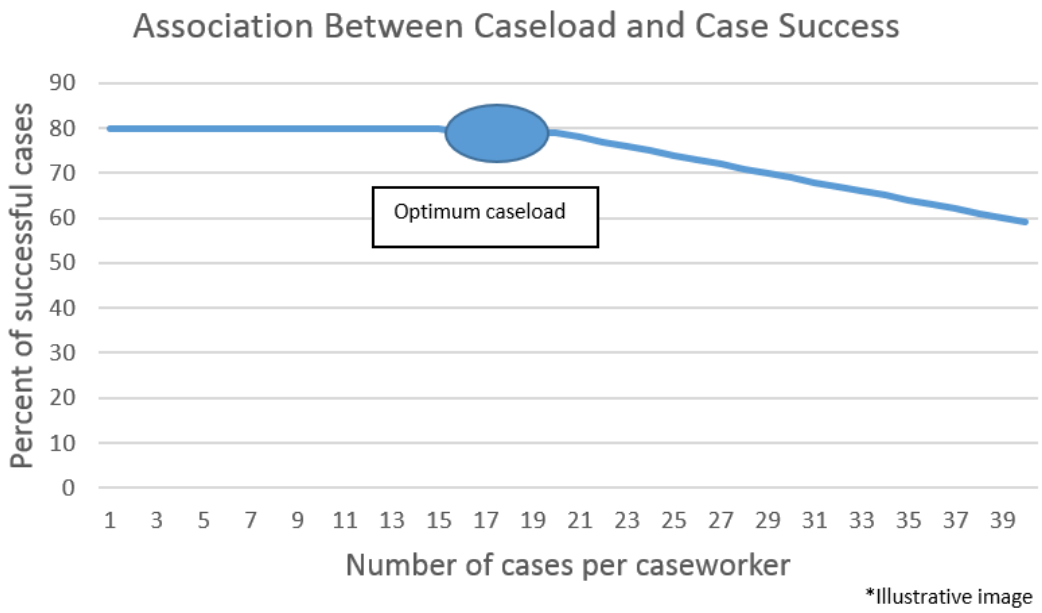
To further ensure child safety and improve outcomes for children and families, there is a need to optimize caseworker caseloads and workload. Caseload and workload are two different concepts but both relate to child and family outcomes. Proper caseloads allow caseworkers to provide family support

and meet the business obligations of their cases. When caseloads are excessive, time with the family or completion of business suffers; eventually family outcomes will also suffer. If caseloads are too small, extra time devoted to family visits and meeting the business obligations will not generate better outcomes.

Workload studies recognize time devoted to different tasks and allows equity of work among caseworkers. In theory, all caseworkers should work 40 hours per week and maximize the family outcomes – some will spend more time in court, some will spend more time driving, and some will spend more time with families. From a system perspective, the perfect number of casework staff with equitable workloads should provide the desired outcomes for the families and the agency.

The narrative below describes how optimum caseloads can be estimated, describes how workload equity can be estimated, provides a solution to achieving optimum caseloads without adding casework staff, and describes staffing allocation. Staffing allocation is a research-based system that creates workload equity among branch offices by having the right number of staff in each branch office.

What are the proper caseloads? Case outcomes are related to caseloads. The best case outcomes are achieved when the optimum amount of caseworker time is devoted to each case. If more than optimal time is devoted to a case, the outcome will not be improved. If the caseworker cannot devote adequate time to a family, the case outcome will suffer. The question is "What is the optimal caseload where caseworkers can devote the right amount of time to each case?" The following graph helps recognize the optimum caseload. (Note: These are NOT actual numbers – it is an illustration depicting the association between caseload and case outcomes.)



The vertical axis recognizes the percentage of cases with successful outcomes (e.g. percentage of children returned home, percentage of children not maltreated, etc.). The horizontal axis recognizes the caseloads of individual caseworkers on a given day. The case outcomes would be recognized for cases in the months after the caseloads were estimated. The best outcomes would be achieved with lower caseloads but eventually the horizontal line will slope down when time constraints prevent timely involvement of the caseworker. If the relationship between caseload and family outcome is sloped (without the flat portion on the left side of the graph), average caseloads are too high for all caseworkers. These graphic representations must be developed for each unique type of casework (e.g. Protective Service, Permanency, etc.).

The simple relationship between caseload and case outcome recognizes the optimum caseload for the average case worker with the average cases. In addition to recognizing the optimal caseload, this relationship can also quantify the effects of excessive caseloads -- additional children maltreated, additional time to permanency, etc. The analysis can also identify if some caseloads are too small and may identify if too much family contact has a detrimental effect on case outcomes.

Since cases do not require the same effort/time, are there ways to acknowledge case differences and estimate workload? Some cases require more time to assess, provide support, and successfully achieve the desired outcome. If case characteristics (i.e. type of maltreatment, parent characteristics, child characteristics, type of care, number of siblings, time since foster care entrance or time to adoption,

etc.) are associated with more caseworker time/effort, researchers can quantify the time required to serve different families. A "random moment survey" can associate particular cases with caseworker time. If neglect cases require twice the time as cases with an allegation of physical abuse, a caseworker with 15 neglect cases would be equivalent to another caseworker serving 30 cases associated with physical abuse. In addition to using time to equate caseloads for all caseworkers, there are alternative approaches that could be used to achieve equity. For example, caseloads could recognize cumulative caseload safety. Caseworkers working with families of low probability of safety would have fewer cases but total safety among all caseworkers would be similar. Caseloads, workloads, and other measures of equity could be developed to balance the caseworker efforts to achieve similar outcomes for all families.

Creating optimum caseloads without increasing the number of caseworkers: The association between caseload and case outcome may suggest additional caseworkers are necessary to generate the best outcomes. An alternative solution is to prioritize cases with low probability of safety (severe maltreatment) to high probability of safety (disobedient or truant youth). If caseload exceeds the ability to generate the best results, prioritizing cases and eliminating service to particular populations might be a realistic solution. In reality, this prioritization occurs today. If many allegations are received by the hotline, the less serious cases are triaged. If a similar situation arises on the second day, the referrals with the highest safety estimates are also triaged. Eventually routinely triaged cases will lowest probability of safety to highest probability of safety, and knowing the optimal caseloads, will allow child welfare to recognize the client populations reasonably served by child welfare. Caseworkers with high caseloads will have undesirable effects on family/child outcomes and the effects of high caseloads can be quantified. Furthermore, researchers can quantify the effectiveness of casework staff serving youth and families with high probability of safety. If caseworkers cannot effectively change the outcomes of high safety populations, alternative services/programs might be considered.

Staff allocation: Staff allocation systems identify the appropriate number of caseworkers per branch to serve the same client populations throughout the state. Staff allocation does not change the total number of staff serving families but rather provides equity among offices. The most obvious inequities are recognized with protective service workers. Branches with inadequate protective service workers cannot respond to the same allegations – although all branches will respond to the most egregious allegations, some branches may not have the ability to respond to cases with minimal safety concerns or may not have the ability to respond on all days.

Staff allocation systems result in movement of casework staff among branch offices. The process of losing staff in a branch office and the associated inability to serve a certain client populations is difficult. Although the allocation system can identify the movement of staff among branch offices, the pace of implementation is usually determined by administrators or the Director. Since the movement of caseworkers among branches is generally accomplished through attrition, the process is slow. Although the slow pace is difficult for offices struggling to adequately serve children and families served elsewhere, the community expectations have acclimated to the service level in each community – those community expectations should be managed locally before, during, and after the movement of staff.

The slow movement of staff among branch offices is advantageous when changes in client populations and differences in client populations are small among communities. Although staff allocation systems can rely on slow implementation to provide equity among branch offices when change is slow, communities expanding quickly often need staff quickly. A crude forecasting system might be necessary when referrals and populations are increasing dramatically.

Combining staff allocation with Random Moment Surveys (RMS): The allocation of staff allows similar service levels throughout the state. The RMS quantifies the time allotted to different child and family safety concerns and characteristics – physical abuse cases versus neglect cases, high safety cases versus low safety cases, and older youth versus younger children. The RMS can also quantify the time allotted to particular tasks – driving, time in court, and time with families. If face-to-face contact is determined to be the most important metric to assess the agency's effectiveness, the RMS and staff allocation systems can be combined to assure a particular level of family contact is maintained in each branch office.

Recruitment and Retention of Caseworkers and Supervisors

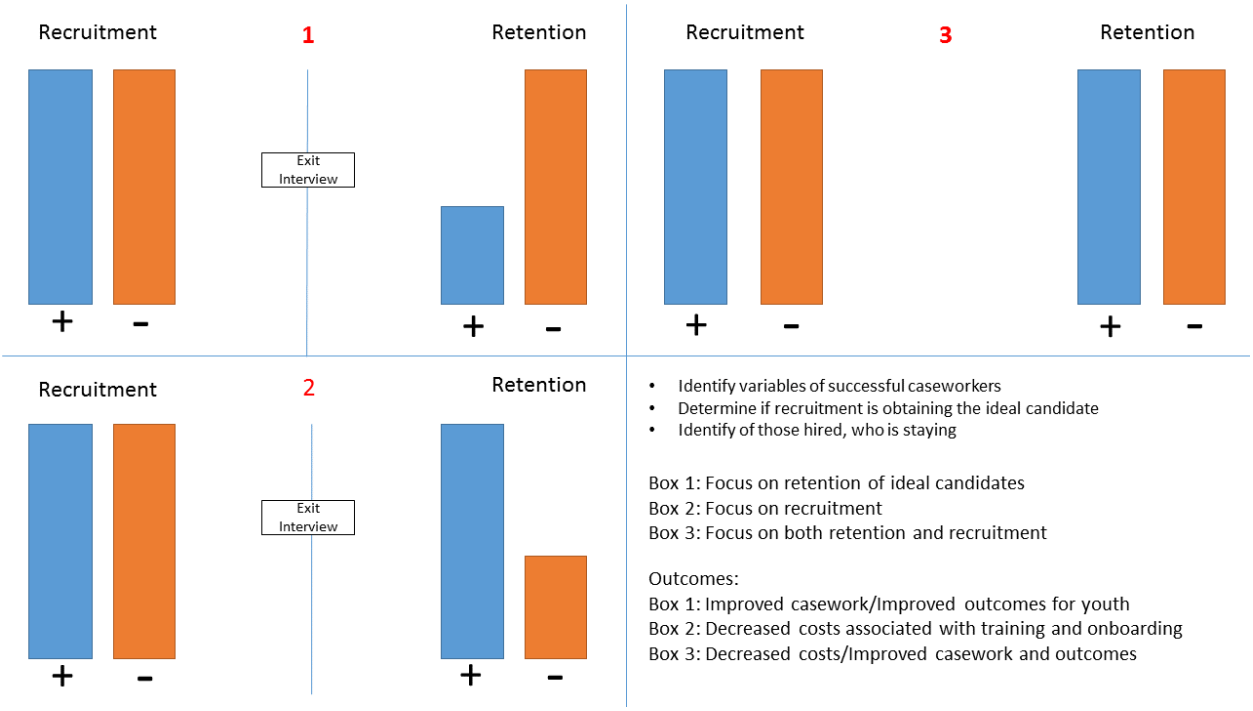
Research shows many states have a hard time hiring and keeping enough staff in child welfare. In Oregon, the number of caseworkers leaving their jobs is high, with many leaving after a year or two. This leaves few experienced caseworkers in the agency. When caseworkers leave the agency, current caseworkers must take on more casework making it difficult to spend time with children and families. The high turnover rate with casework and supervisory positions could be attributable to recruiting the wrong individuals or could be attributable to factors associated with retention (e.g. workload, lack of support, etc.). Is the real issue recruitment or retention? Where should we look for the best staff?

No one excels at everything. Those with highly technical skills tend to be less comfortable with social events; those with well-developed social skills are less likely to generate computer code. There are some social workers who are well suited for social work and others who are less suited for social work. District managers and supervisors can identify the staff that are well suited for casework and identify those less suited for casework. The ideal caseworkers might have particular attributes that differ from attributes of those who may struggle with being a caseworker. If research suggests there are differences between those with inherent caseworker skills and those with fewer inherent casework abilities, concentrating recruitment efforts on populations with a greater likelihood of being successful would be useful.

Focusing the recruiting efforts on populations most likely to succeed may improve the likelihood someone will remain a caseworker. Although there might be a natural tendency for the best casework staff to remain as caseworkers, retention could become an issue if the best casework staff move to other professions which rely on similar personal and professional attributes.

If the best leave, retention is an issue. If the best stay, recruitment should be the focus. If the differences between groups are negligible (i.e. best and worse hires are similar, and those staying and those leaving are similar), both recruitment and retention should have equal focus. Recognizing the best new staff and recognizing the characteristics of those resigning from child welfare will identify the best approach to maintaining an effective workforce. This research should be coupled with exit interviews of those resigning. If the best new casework staff are also those most likely to resign within the first two years, exit interviews should identify why those staff are leaving. The research should identify the reasons why staff with optimal caseworker characteristics are opting for other professions – knowing the reasons why these staff are leaving can focus the retention efforts on those factors most associated with resignations.

Identifying the global recruitment and retention issues can focus efforts on specific issues impacting on the child welfare workforce. Essentially research is conducted to identify the most important issues. Although research can identify the most important issues, research can also support the resolution of known issues including ethnic/racial disparity. The disproportionate number of minority children in the child welfare system can be segmented into areas along the casework continuum where issues are most apparent. Identifying where in the continuum the issues are most problematic is the first step to resolving the issues. This information coupled with other research tools allow researchers to isolate the issues with the largest impact on the disproportionate number of minority children in the child welfare system.



To summarize, newly hired caseworkers with identified attributes will be identified and compared to those who will struggle to become effective caseworkers. A profile of desired caseworkers will be developed. This information will focus recruitment efforts on applicant populations best suited for casework. This information will be coupled with exit interviews of those resigning. The profile of staff with desired caseworker skills can be applied to those resigning to determine if the effective or ineffective staff are resigning. Similarly, caseworker applicants can be identified on a scale of 0-100; the scale would recognize the similarities of applicants to the profile of optimal caseworkers. If staff cite "inadequate support" as the reason for resignation, Random Moment Surveys can identify the best options to improve time allotted to supervisor-caseworker conversations.

Recruitment and Retention of Substitute Care Caretakers

An average of 7,600 children are in foster care on a daily basis. DHS has not been able to find and keep enough caregivers for all of these children. This means caseworkers sometimes place kids in homes that are not the best match and that foster families sometimes get kids before they're ready.

The previous project discussed research associated with recruitment and retention of caseworkers; the recruitment and retention of substitute care caretakers is similar to that methodology. The same methodology could be used to identify the best approach to increasing the number of foster homes available for the child welfare system. Focusing efforts on the approach with the greatest impact would be best (i.e. recruit, retain, or both). Secondly, the exit interviews can identify why foster parents terminate their involvement with the child welfare system. The knowledge gained through exit interviews may enable researchers to estimate the annual attrition rates. Foster parents may leave the system due to successful adoption, retirement from being a foster parent, or reasons associated with the agency. Leaving for reasons associated with the agency will allow the system to adapt and retain foster families.

This research can identify where the agency should focus. This research and the service/capacity research can identify the system-wide resource needs of the child welfare continuum. The service/capacity research should also allow the child/youth needs to be aligned with providers experience and skill. Implementation of these research projects should also reduce the abuse in substitute care. As the most experienced and skilled foster parents serve the higher needs youth, less maltreatment should occur in substitute care. A poor alignment between child/youth needs and substitute care skill/experience will decrease child safety and increase substitute care placements; a poor alignment may also have low need children/youth placed in our most experienced and skilled foster homes.

Appendix – Other Suggested Research Topics

Community Engagement: DHS and child welfare is an organization created to serve the public. Building a healthy relationship between child welfare and our communities improves outcomes for children and families. Community partnerships are crucial for local child welfare systems to be most effective. Community engagement should be reflected by the community's ability to serve children and families with few safety concerns in the community and should be reflected by the safety of children when returned to the community.

If local child welfare districts and the community have a poor working relationship, constituents will not report maltreatment until the situation is severe or maltreatment is confirmed. If community engagement is working, the threshold for contacting child welfare will generally be lower. When community engagement is strong, the child welfare offices will rely on the community to support children at home. Children with few or minimal safety concerns can be maintained in the community because the caseworkers can rely on the community for family support. The average safety at removal for first referral, the average safety for children remaining at home, and the average safety when a child returns home are all indicators of community engagement. The latter two measures must be coupled with actual maltreatment to differentiate successful community engagement from resource constraints and/or substandard casework practice. Successful engagement allows higher risk situations to exist without higher rates of subsequent maltreatment.

The measures of safety coupled with safety in the community can be a proxy for community engagement. Similarly, the proportion of children/youth not returned to foster care can be a proxy for successful community engagement; the risk of returning to foster care must be recognized to identify county/communities with good community engagement.

Successful community engagement can exist when maltreatment occurs. If the expected maltreatment is substantially lower than what would be expected (considering child characteristics, parental characteristics, history, and current context), the influence of the community can be recognized. These average safety measures coupled with the expected measures can be an indicator of community engagement.

Child safety across the continuum of care: There is a continuum of care across the child welfare system that begins with a reported allegation of maltreatment and ends with a myriad of choices. Some cases

move through permanency and adoption while others are closed after an allegation is determined to be unfounded. Along the continuum, child safety can be estimated. Likelihood of maltreatment can be estimated even before an allegation has received (i.e. using data from other agencies), while the child remains in the community, is in substitute care, and in an adoptive home. If the child remains with the family, safety is often determined by parental characteristics, parental situations, child behavior, lifestyles, and random events that influence families. Identifying child safety at crucial decision points is important. Expanding the outcomes for children and youth in the child welfare continuum will recognize how child welfare decisions influence other outcomes. Moves in foster care influence school changes – changing schools during the school year is a risk factor for subsequent juvenile justice involvement. Having risk/safety for multiple outcomes at crucial decision points along the child welfare continuum is the first step to recognizing the shared responsibility for the social service and education systems in Oregon. Developing similar tools along the continuum for other agencies will help identify the partnering groups who influence child welfare outcomes. Although this requires an extensive research and implementation effort, transforming the siloed social service system into a cohesive group of services/programs can help families achieve better outcomes. In reality, many agencies serve the Oregonians with the greatest needs; coordinating of efforts can only improve the service delivery system and the child/family outcomes.

Elementary school teachers can differentiate children who will succeed later in life from children who will become involved with the correctional system. If Oregon has substantial data, and if teachers can forecast future behavior, researchers should be able to identify the families with greatest needs in each Oregon community. Identifying the families and providing early intervention services may divert some children from the correctional system. Research methodologies are available to identify when programming should be available to prevent a negative outcome. Research methodologies exist to quantify the effectiveness of prevention services. And the data and the research methodologies exist to identify the families of greatest need. The foundation for creating an effective prevention system for multiple agencies exists in Oregon today.

Develop a common philosophical youth-centered approach with partners and families: If caseworker actions and the research are tied to outcomes, the conversation along the child welfare continuum should be youth-centered. There are approximately 30 different residential programs that serve OYA youth. The research tools allow the practitioners, providers, and residential programs to identify the best programs for each youth. The individualized youth estimates associate an outcome with similar

individuals who have been served by that program. The identification of the best programs should concentrate the conversation on the differences among success rates for the best programs. Knowing the youth, the best programs, and the differences in success rates among the best programs should allow caseworkers and families to discuss the contextual variables not included in the equations. Proximity to home, need to complete high school, and need to complete treatment are not included in the equations but should be a consideration when discussing the best programs. The conversations should consider contextual variables not included in the equations and should consider differences among the best program choices for multiple outcomes.

Program evaluation: There are numerous options for quantifying the effectiveness of child welfare programs. A common quasi-experimental design matches identical twins – one of the twins received a program and the second twin did not get the service/program. The identical twins are matched using variables associated with the outcome. Frequently age and child/family characteristics would be the variables of interest and the outcome might be subsequent abuse/neglect. If you compare the subsequent abuse/neglect rate for families provided a service (e.g. parenting) with the "identical" group of families who did not receive the service, the difference in the abuse/neglect rate reflects the effectiveness of the program. If the matching occurs with the important variables influencing subsequent maltreatment, the comparison should recognize the effectiveness of a program. This evaluation system can also recognize the comparative effects of different programs – serving a child at home with extensive programming versus placing a child in foster care for five years.

Quantifying the effectiveness of programs can be useful. Despite the importance of quantifying the effectiveness of programs, the effectiveness estimates recognize the client population served in the past. More useful information would be the effectiveness of the same program after service matching was used. Statistical simulations can quantify the effectiveness of programs as though service matching had been used for all programs. This information recognizes the maximum effectiveness of the current system with the current client population. Although the optimal effectiveness cannot be achieved unless numerous beds are vacant, effectiveness of a system can be improved by better aligning the array of programs with child/youth/family need.

Ethnic and Racial Disparities: Disproportionate minority involvement is well documented in the child welfare system. The child welfare system can exacerbate ethnic and racial disparities if their programs are not equally or more effective with minority populations. Quantifying the effectiveness of programs

for different ethnic groups, identifying the best programs for minorities, and ensuring adequate programs beds are available to minorities can temper disproportionality after being served by the child welfare system. The research methodologies necessary to improve programming to minorities are described below.

What is the effectiveness of programs serving ethnic minorities? By using a research methodology of "propensity matching" the system identifies control groups for each program and service.
Each treatment minority youth would be matched with a demographically identical "twin" who does not receive treatment but is the same ethnic minority. The matching variables include youth characteristics known to be statistically associated with the outcome (i.e. probability of maltreatment).

Current academic evaluations typically require years of service and additional time to quantify program effectiveness. Automating the evaluation system and providing feedback to each program is crucial to improving the existing system. Quantifying program effectiveness cannot tolerate years of service before determining a program is ineffective and requires support and technical assistance to improve outcomes. This matching process provides immediate results for both programs and those funding the program. In addition, the propensity matching system allows program effectiveness to be quantified for every program; program effectiveness requires time after treatment but does not require a finite period (e.g. 3 years).

Do some minority populations demonstrate improved outcomes with some programs? Can we identify the best program for each minority youth? For every minority youth being considered today, there are many similar minority youth who were previously served. Knowing how these similar minority youth did with each program will identify the best program for new youth. Researchers can estimate the success rates for each new youth referred to each program by developing equations. Identifying the best program for each new minority youth is simplified using these equations. If success rates differ dramatically among programs for minority youth, "service matching" may improve minority youth outcomes with little investment.

Can we identify the best treatment programs for each minority population? Quantifying the effectiveness of programs will generally identify the best programs for each minority population. If program effectiveness estimates are available, most administrators would enlarge the best programs and eliminate the least effective programs. Although logical, the effectiveness of the program could be

low if the wrong youth are referred. To insure the best programs are identified despite using data where the wrong youth population is referred, a different methodology was developed.

Some research methods are best explained through example. For this example, we will have 1000 minority youth being served by 10 residential programs each with 100 beds. All 1000 youth are awaiting placement in the 1000 beds within the 10 residential treatment facilities. An equation has been generated for each program; that equation quantifies the likely success for each new minority youth. We randomly select one of the 1000 youth awaiting placement and consider each of the 10 residential programs. We have estimates of success for this minority youth for each of the 10 programs; we place the first randomly selected youth with their "best" residential program. You randomly select a second youth from the 999 remaining minority youth and place that individual with their "best" program. The first and second randomly selected youth may be placed with the same residential program if they have similar characteristics and similar histories. If the youth are very different, each will likely be placed with a different residential program. As you continue to randomly select youth and place each with their program that has historically done well serving similar youth populations, eventually one residential program will fill their 100 beds. This program is your best residential program for minority youth. Eventually the second program reaches capacity, then the third program, and so on. Youth selected late will not be placed with the "best" program but will be placed with the "best available" residential program. The difference between the "best" placement for each minority youth and the best available bed recognizes the lack of congruence between minority youth needs and services available. When this methodology is repeated 1000 times, a ranking of programs can be determined.

If the best treatment bed is not available for a minority client, can we quantify the effects of being served by a less desirable program? Minority youth accessing their "best" program will have more successful outcomes than individuals who cannot access their best program. When the best program is filled, the next best available program is used. The difference between the two programs can be quantified. For example, if a youth's success rate for their best program for a client is 75% and success rate for the next best available program is 50%, the likelihood of success for this youth is 25 percentage points lower if the best program has no available beds. When the difference is summed for every minority that is not placed in the optimal program, the decreased success attributable to availability can be quantified. This decreased success rate recognizes the misalignment between the types of beds offered by the programs and the actual beds needed for youth. This misalignment between beds

provided and beds needed should decrease over time. Although the optimum system will perfectly align the types of beds with client need, achieving that optimum will be difficult. Despite difficulty achieving perfect alignment, agencies should quantify differences and modify contracts to better serve the minority client population. Agency metrics that estimate performance should include the difference between the current state and the ideal state. The "ideal" state would reflect the perfect alignment between beds provided by the agency and the beds needed by the minority youth. The metric would identify changes necessary to better align programs' strengths with youths' needs.

Can we identify the minority populations not well served with existing services? The methodology described above identifies the best program for each minority population. Minority youth entering the child welfare system will have some programs with proven success rates for similar youth. In addition to some very good programs, incoming minority youth will have some programs with lower success rates serving similar youth. Although most incoming minority youth will have a mix of "best" and "worse" programs, some minority youth will have less than optimal success estimates from existing programs. These youth cannot benefit from the existing group of programs. Identifying the group of minority youth not adequately served with existing resources is the first step toward developing a new program that fills an existing service gap. Profiling youth with low success rates should allow treatment experts to develop new programs that cater to the needs of this population.