



THE UNSEEN COSTS OF FOSTER CARE: A Social Return on Investment Study

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William Nielsen, MPA

Timothy Roman, MBA

Ecotone Analytics GBC





Amelia Franck Meyer

Letter from Alia CEO: Dr. Amelia Franck Meyer

The staff and board of Alia are incredibly grateful to the Moxie Foundation for their support of this compelling and decisive analysis. From existing research and years of practice wisdom, we know that youth who spend time in out-of-home care suffer life-long predictive harm and untold consequences from the trauma of being separated from their families.

*We wondered about the costs of our current way of work, which the evidence indicates produces less than desirable outcomes for the youth served and asked ourselves, “**What is the social return – what are we actually getting – from the *\$29.9 billion annual public investment in foster care?**” With the support of the Moxie Foundation and the research rigor of Ecotone Analytics, we explored the costs of foster care and the resulting return on investment.*

*Through discussion with the Ecotone analysts, we determined that two scenarios should be examined: 1) the cost of doing foster care when it’s done “well” and 2) the cost of doing foster care when it’s done in a more “typical” way. The results are astounding, but not surprising, and have critical implications. **The Ecotone report illustrates that the more resources we spend performing services in the traditional way, the greater the negative return on investment.***

***Remember this: these “outcomes” are not just numbers.** They are representative of real girls and boys, fathers and mothers, teenagers, and communities who have been traumatized by the costly services and interventions intended to protect them.*

Our hope is that by supporting the publication of this Ecotone report, the Moxie Foundation’s commitment to foster care redesign will drive a new way of work.

Amelia Franck Meyer
Alia Founder and CEO



Letter from research study sponsor: Moxie Foundation

As a passionate champions for the wellness of children and families, the opportunity to work with Alia since its inception has been a grand leap into making a real difference. Not a modest difference. Not a nibbling around the edges difference. A true, build-it-from-the-ground-up difference.

*The Moxie Foundation is proud to help shine a light on one of the toughest dirty little secrets we face as a society: the way we care for children and families at risk makes the problem exponentially worse, not better. This study reveals what those of us on the ground know in our bones: **The cost of our child welfare system is too high and the return is too low. It drains our talent, it drains our treasure, and worst of all, it drains the life-blood of our citizens.** Moxie stands with Alia to demand and create a new way forward.*

* https://www.childtrends.org/wp-content/uploads/2018/12/TitleIVESFY2016_ChildTrends_December2018.pdf

*"We often use externalities to argue for regulation, taxes or subsidies. Rarely, however do we find a situation in which well-intentioned individuals and organizations create situations that make both individuals and society worse off after regulation. When first examining the findings, and assuming that the analysis is reasonably accurate (and while it makes some assumptions it appears plausible and directionally correct); you have to ask yourself, "how can this be true? Is it possible we'd be better off doing nothing?" Whether it is a result of some sort of bizarre tragedy of the commons among policy makers or societal guilt to do something even if it is wrong seems to have led us as a society into irrational behavior. **To me the report is a call to arms to fundamentally reinvent the system.**"*

– Doug Lynch,
University of Southern California

"This report carefully considers the important topic of the social cost of foster care. The clearly presented results are stark, thought-provoking, and will add great substance to conversations about the full cost and broad consequences of foster care."

– Jennifer Miller Haight, Policy Fellow,
Chapin Hall Center for Children

"Foster care is a devastating intervention that erodes the social fabric tethering children to their family members. In the process of breaking sacred bonds, this intervention does additional harm by taking away every known relationship and routine that orients a child to one's life. Investing in alternatives to foster care that keep children safe, while strengthening connections to family, is a sincere commitment to wellbeing. Let this be a rallying cry to reinvent the way we care for the children and families in our community."

– Janée Harvey, Bureau Chief of Child Welfare and Community Services,
Iowa Department of Human Services

"This report identifies huge social and economic costs associated with a child entering and being maintained in our foster care system. It seems clear to me that we are scrambling down-stream to try and remove kids from the river while we continue to throw them in up top. We cannot continue to do things the same way and expect different results. We need radical change that breaks the current cycle and focuses efforts on strengthening the wellbeing of children and families, preventing them from entering the foster care system at all."

– Dr. Laurel N. Bidwell, Assistant Professor
St. Catherine University Department of Social Work

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Executive Summary

In both cases, the long term outcomes are negative and include outcome costs to both the child and to the public of reduced well-being.

Scenario 1 Assumptions	Scenario 2 Assumptions
1 year in foster care	Total time in care of 4 years
Permanency achieved and no re-entry	Permanency not achieved - child ages out
Reunified in 12 months	Child re-enters foster care
No “treatment” foster care needed	No “treatment” foster care needed
No recurrence of maltreatment	Assume 2 caseworkers over time in care
	Highly overburdened caseworkers

To address the complexity of the foster care system, Ecotone has mapped the long-term outcomes for youth in two scenarios:

Scenario 1 involves a child with a **typical, “successful” foster care experience** in terms of time in care, treatment, permanency achieved following care, and so on. Scenario 2 involves a child with a **poor experience (but not worst case scenario)**, having spent a longer time in care, suffering repeated placements and multiple caseworkers, and eventually aging out of care.

Given available data, the child of **Scenario 2** has **considerably worse long term monetized outcomes** (-\$624,943.90 relative to general population) than that of the child in **Scenario 1** (-\$119,068.97 relative to general population).

The resulting Social Return on Investment (SROI) for each child is: Scenario 1: **-\$3.64** and Scenario 2: **-\$9.55**. This implies that for every \$1 dollar spent on child 1, the resulting future value created is approximately **-\$3.64**. (In essence, **investment in foster care has multiplied the future long term negative outcomes far beyond those occurring in the general population.**)

Impact Value Map

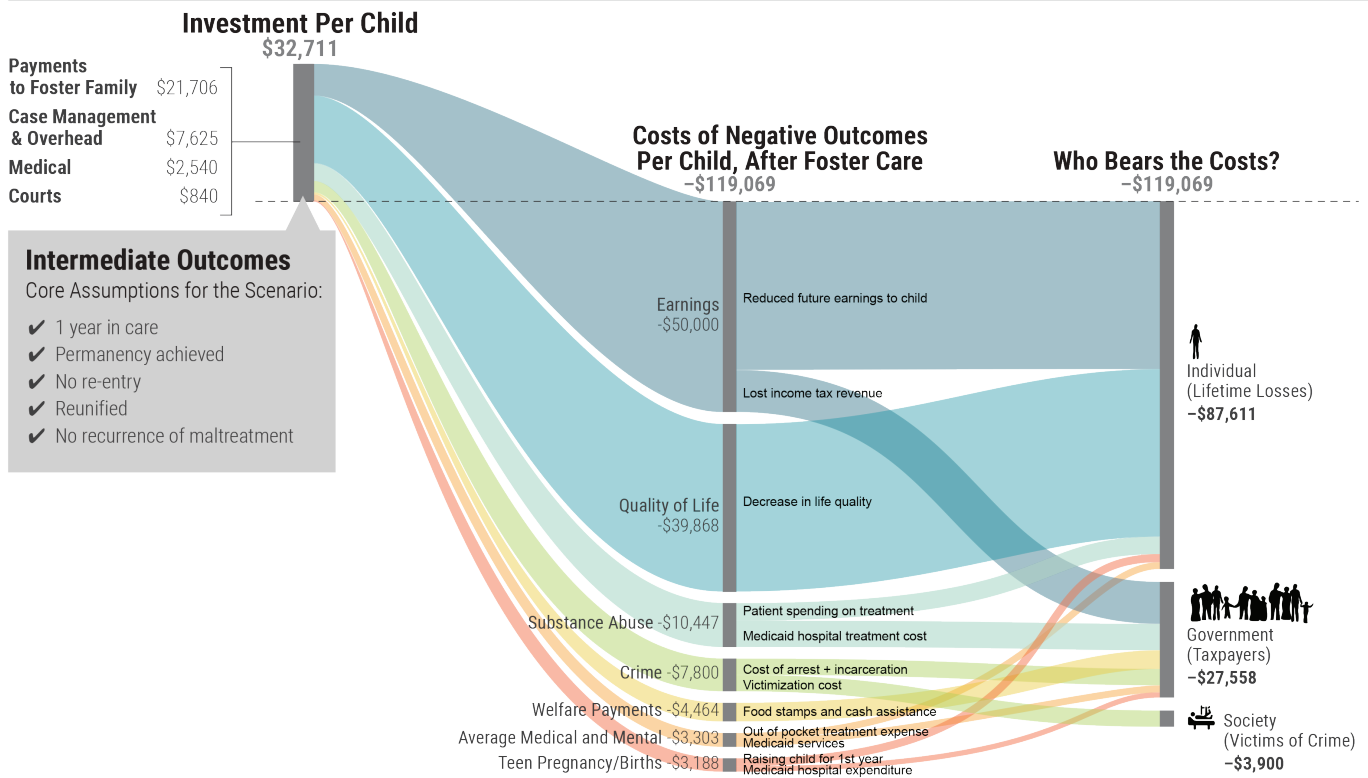
This diagram highlights the value the organization creates, and to whom those benefits accrued.

Social Return on Investment

Total ROI	\$1 → -\$3.64*	Government	\$1 → -\$0.84*
Individual	\$1 → -\$2.68*	Society	\$1 → -\$0.12*

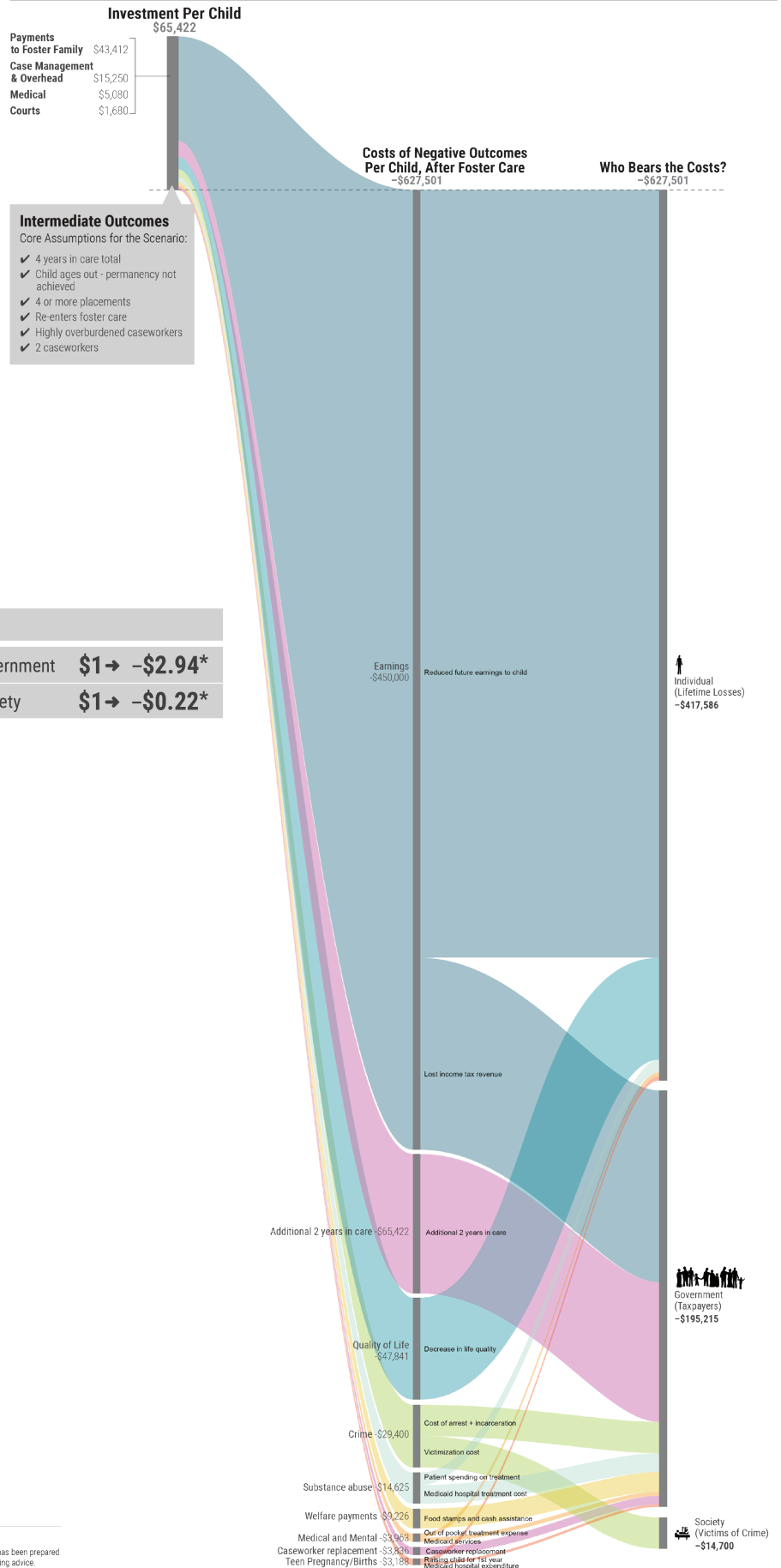
*All "returns" are long-term negative outcomes

Child 1: "Best Case" Scenario



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Child 2: "Worst Case" Scenario



Impact Value Map

This diagram highlights the value the organization creates, and to whom those benefits accrued.

Social Return on Investment

Total ROI	\$1 → -\$9.55*	Government	\$1 → -\$2.94*
Individual	\$1 → -\$6.38*	Society	\$1 → -\$0.22*

*All "returns" are long-term negative outcomes

RESEARCH QUESTION: What is the monetary cost of administering children in foster care and what is the return on that investment?

Findings:

- 1) Studies of the foster care system are **often limited in their data quality** and methodological approach.
- 2) The foster care system is notable for its complexity and its place in the greater ecosystem of family and social relationships, child welfare/development, and government intervention. This complexity limits the abilities of evaluators/researchers to monetize a variety of intermediate and long-term outcomes associated with foster care, in some cases forcing a reliance on outcome likelihoods associated with abuse and neglect rather than just foster care. As a result, **this analysis should be considered a first step in the assessment of the social returns on the foster care system which will continue to be added to and refined.**
- 3) To address the system's complexity, **Ecotone has taken a unique approach** and mapped the long-term outcomes for two scenarios: two children with two different experiences in foster care and the results this experience has on their lives. **Where possible and in alignment with Ecotone's value for methodological rigor, long term outcomes have been monetized based on their likelihood to occur.** In some cases, this has not been feasible in which case the various outcomes are noted. As a result, it is believed that current dollar values are conservative estimates of the greater impact the foster care system has on the lives of children involved as well as those people connected to the child.
- 4) Scenario 1 involves a child with **a typical, "successful" foster care experience** in terms of time in care, treatment, permanency achieved following care, and so on. Scenario 2 involves a child with **a poor experience (but not worst case scenario)**, having spent a longer time in care, suffering repeated placements and multiple caseworkers, and eventually aging out of care.
- 5) Given available data, the child of **Scenario 2 has considerably worse long term monetized outcomes (-\$624,943.90 relative to general population)** than that of the child in **Scenario 1 (-\$119,068.97 relative to general population)**. In both cases, the long term outcomes are negative and include outcome costs to both the child and to the public of reduced well-being. Further, in Scenario 2, of an assumed total of 4 years in care, the last two years are assumed to be negative outcomes *themselves* rather than upfront costs, given the assumption that those years in care would not have occurred in an otherwise well-functioning system with caseworkers who are not overburdened, etc.
- 6) The resulting Social Return on Investment (SROI) for each child is: Scenario 1: **-\$3.64** and Scenario 2: **-\$9.55**. This implies that for every \$1 dollar spent on child 1, the resulting future value created is approximately **-\$3.64**. (In essence, **investment in foster care has multiplied the future long term negative outcomes far beyond those occurring in the general population.**)
- 7) The difficulty in this and similar calculations is the attribution; that is, the extent to which the negative outcome is directly attributed to the foster care system and not to the other aspects of the child's life, that (for example), lead to their removal from their home in the first place. A few studies have begun to address this, by differentiating the outcomes of children who were placed in foster care versus those who were not, but suffered similar levels of maltreatment in the home although here too the validity of study results can be questionable.

System Recommendations:

The primary system recommendation precedes the foster care experience itself, and is simply avoiding removal of the child from their home in the first place. If the child does end up being removed, then it is important to achieve and maintain certain system conditions to reduce the recurrence of Scenario 2, keeping more children closer to the Scenario 1 experience. This will reduce public spending on providing foster care as well as improve the long term outcomes for children, a win-win scenario. System conditions to be achieved, in addition to the overarching goal of child safety, include:

- » Minimizing time to permanency
- » Minimizing the number of placements while in care
- » Reducing caseworker caseload to nationally recognized standards

Strategic Recommendations to Alia:

- » Promote high quality data collection and longitudinal studies wherever possible
- » Discussion of these findings as a method for turning the conversation to foster care alternatives, particularly UnSystem-like approaches
- » Attract additional funders with this readily absorbable visual detailing the severe negative long term outcomes of foster care and its social costs
- » Leverage the Sustainable Development Goals identified here which align with Alia's work to further support the case for funding Alia specifically

INTRODUCTION

The foster care system, and more broadly child welfare in the U.S., is a complex and diverse system with wide ranging factors influencing a child's well-being, their placement in out-of-home care, and the resulting life outcomes. In recent years, the number of children in foster care has grown, now reaching approximately 670,000 children in 2016 (point in time count as of 9/30/16). Given its scale, there is regular discussion regarding the efficacy of foster care and the extent to which it, as an intervention, achieves its goal of helping children who live in unstable and possibly dangerous home environments. Similarly, there is the question of at what cost this result is achieved and if this public spending could be more efficiently and effectively utilized to create more benefit for these children.

This analysis was initiated to establish an understanding of the cost of administering a child in foster care as well as monetizing the likelihood of the resulting long term outcomes for that child, given their experience in foster care. The resulting values then allow for calculating a Social Return on Investment, an estimate of the value generated as a result of each dollar of public spending that goes towards putting a child in the foster care system.

THEORY OF CHANGE

The following table shows the foster care system's theory of change, mapping the planned inputs, activities, and outputs for the system and importantly, from there, describing the outcomes for children from having participated in the foster care system. These outcomes can be distinguished by whether they were intended or not, and whether they were intermediate outcomes (i.e. achieved directly from use of the foster care system) or long-term outcomes (i.e. those achieved indirectly from use of foster care system but extend from the intermediate outcomes achieved). Last are the impacts directly attributed to foster care – those noted here are generalized based on the outcomes previously noted however direct attribution to foster care is a difficult process that few experimental studies have begun to pursue. This analysis is focused on monetizing the probability of long term outcomes when possible and reasonable to do so.

Theory of Change: Government Funded Child Protective Services of Foster Care (Child Centric View)							
Inputs / Investment	Activities & Outputs	Intended Intermediate Outcomes	Unintended Intermediate Outcomes	Intended Long Term Outcomes	Unintended Long Term Outcomes	Intended Impacts	Unintended Impacts
Children in unstable homes, often with risk of abuse/neglect	300,000 social workers for children and adolescents	Placement in Safe Homes - 95%-99% of cases (Children's Bureau 2016)	Recurrence of maltreatment at home - about 5.5% of the time (Children's Bureau 2016)	Stable living situation	Reduced Quality Life - nearly all kids suffer from this to some extent		
\$9 billion per year in public spending	670,000 Foster Kids in 2016 - An experience of about 5% of kids (O'Hare 2008)	Placement Stability	Behavioral issues - externalizing and internalizing	Safe and Healthy home, avoided premature death/ unwarranted suffering	Reduced earnings - Up to \$18,000 per year less when aging out of care (Courtney et al. 2011)	Child pursues a life as any other child would	Child faces internal and external turmoil resulting in potentially irreparable harm to well-being
Caseworker Salary - Avg \$42,000 per year	Caseworker investigations	Reunification - achieved in less than 12 months, 66% of the time (Children's Bureau 2016)	Maltreatment in foster care - <1% (Children's Bureau 2016)	Attachment to biological parents if possible	Increased criminal activity - often 50% or more above general population (Courtney et al. 2011)		
Court Costs	Caseworker administrative tasks	Permanency - achieved on exit for 89% of kids	Relational Disruption		Increased use of welfare		
Additional administration costs	Caseworker child and family visits	Physical and Mental Health Needs addressed appropriately - 83% and 66% of cases (CSFR 2016)	Non-conformance with National Standards - Nearly all states are at least in partial non-conformance with CFSR standards		Increased substance abuse - a 25%+ rate of substance abuse above the general population (Courtney et al. 2011)		
Medical Cost					Increased medical and mental health issues		
Maintenance payments							

KEY PERFORMANCE INDICATORS (i.e. Intermediate Outcomes)

The following performance indicators can be used to guide the relative success of the foster care system.

- » Child is Safe – this is maximized through in-home investigation and services, as well as safety of placements if put in foster care
- » Number and rate of home removals – reduce rate of removals
- » Median Number of placements – this should be minimized
- » Median Caseworker caseload (23 current average, 15 is recommended maximum – APHSA, 2005) – presently is very high and should be reduced
- » Median Length of stay in Foster Care before achieving permanency (median length has declined from 20.5 months in 1998 to 12.7 months in 2016 – Children’s Bureau, AFCARS Report) – this should be further minimized.

These KPIs were chosen due to the many other indicators which directly feed into these or are closely correlated, making those chosen representative of many other successes or failures within the foster care system.

SCENARIOS: ASSUMPTIONS AND KEY FINDINGS

Scenario 1 Assumptions	Scenario 2 Assumptions
1 year in foster care	Total time in care of 4 years
Permanency achieved and no re-entry	Permanency not achieved - child ages out
Reunified in 12 months	Child re-enters foster care
No “treatment” foster care needed	No “treatment” foster care needed
No recurrence of maltreatment	Assume 2 caseworkers over time in care
	Highly overburdened caseworkers

This analysis developed two separate scenarios detailing two experiences a child may have within foster care and the resulting long term outcomes from those two experiences. The decision to develop two scenarios was a result of the wide ranging experiences a child can experience and the need to convey the difference in outcomes. The first scenario being a relatively limited foster care experience followed by permanency, while the other is a prolonged foster care experience, eventually leading to aging out (i.e. reaching an age at which the child is no longer a ward of the state, generally at age 18 or 21). In both scenarios, no “treatment” foster care is included (i.e. foster care for those with significant emotional, behavioral, or medical special needs).

Beyond these explicit assumptions used to value the long term outcomes of foster care, there are several others which are relevant but do not directly effect our SROI calculations. This is not to say they could not be included in the future when more and better data is available to support the ability to monetize results. For example, in Scenario 1 other assumptions that add to the story of the child’s experience include: having physical, mental and behavioral health needs appropriately served; having 2 or fewer placements; and so on. Similarly, in Scenario 2, additional assumptions that could be incorporated include: having 4 or more placements; a recurrence of maltreatment upon temporary reunification; not having physical, mental and behavioral needs appropriately served; and so on.

Investment Size/Foster Care System Cost Estimate:

Foster Care System Costs per Child per year (2018 dollars)	Cost	Source
Medical	\$2,540	Barth et al., 2006 (Adjusted to 2018 \$)
Courts	\$840	Barth et al., 2006 (Adjusted to 2018\$)
Administrative (including caseworker salary)	\$7,625	Gill, 2011; Barth et al., 2006 (Adjusted to 2018 \$)
Maintenance (payments to foster family)	\$21,706	Gill, 2011 (Adjusted to 2018 \$)
Total System Cost	\$32,711	

In both scenarios, up-front costs are derived from an estimate of the system costs of one year in foster care including government expenditure on the child's medical needs, court costs, maintenance costs to the foster family, and the administrative costs of the agency overseeing the child's removal and placement, including the approximate caseworker salary per child. More refined cost estimates can be developed for specific contexts using the cost calculator method proposed by Holmes et al. (2013).

Long Term Outcome Cost Estimates:

To assess the outcomes of foster care, we focus on long term outcomes which more readily allow for monetization. Intermediate outcomes which are generally tracked by the government such as number of placements, placement stability, reunification, time in care, and so on, must be linked to some cost being accrued for monetization to occur. This is not to say the knowledge of these intermediate outcomes is not important, indeed it is these outcomes which the foster care system has the greatest control over and are the KPIs which we note as being most valuable to track and improve upon. Still, our final selection of outcomes to be monetized (for their likelihood of occurring) is based on available evidence of sufficient rigor and quality from multiple sources. However, this is still a subject deserving of improved longitudinal studies. Our estimates should be viewed as a preliminary assessment which will be added to and refined as future research studies are published. There are many directions an assessment such as this could go and we hope this analysis serves to spark discussion and identify gaps in knowledge (which are often glaring). A more detailed explanation of our methods can be found in the later section titled 'Discussion on Methodology and Data Quality'.

The seven long term outcomes utilized in both scenarios are shown in the table below along with their respective marginal cost, that is, the outcome cost per child given the likelihood of that cost occurring. These marginal costs, in the case of the foster care system, represent the return on investment, although here all returns are negative and not positive as we may have come to expect from the term.

Monetized Long Term Outcomes

	Scenario 1 Marginal Cost	Scenario 2 Marginal Cost
Quality of Life	\$39,867	\$47,841
Crime	\$7,800	\$29,400
Lifetime Earnings (Present Value)	\$50,000*	\$450,000*
Substance abuse treatment	\$10,446	\$14,625
Teen Pregnancy	\$3,188	\$3,188
Welfare payments	\$4,464	\$9,225
Medical and Mental Care	\$3,302	\$3,963

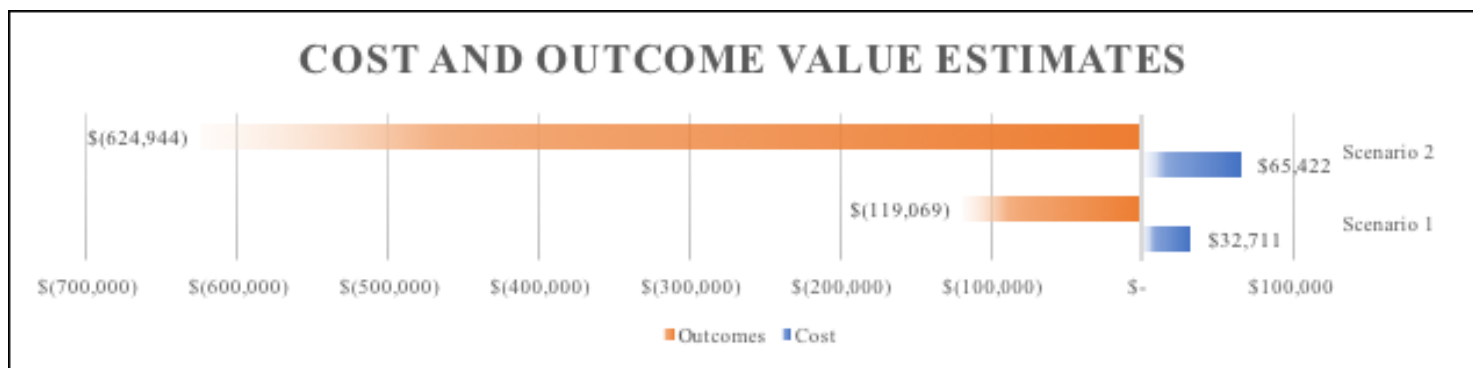
*Many of the non-monetized outcomes and even the day to day effects of the other monetized outcomes feed into earnings, thereby seemingly magnifying the change to that particular outcome variable. The large jump is, in effect, capturing a change in many outcomes simultaneously.

There are an additional two outcomes unique to Scenario 2. These are, for this scenario, the result of the foster care system not functioning as it should, in this case the caseworkers being highly overburdened (APHS 2005) which has become the norm, and the negative results this has on a child's placement stability and time in care. Thus, these two additional outcomes are the additional 2 years in care (given our assumption of four years in care total), as well as the replacement costs for finding new caseworkers for the child (as the previous ones experience burnout and secondary trauma from handling too many cases simultaneously). Indeed, the national average for caseload is 23 cases per caseworker, while the nationally recognized maximum recommended caseload is 15 (APHS 2005). These two outcomes are, unlike others used in both scenarios, intermediate outcomes, which we can use in this instance due to the direct costs occurring from each of them.

Additional Monetized Outcomes unique to Scenario 2:

	Scenario 2 Marginal Cost
Additional Care of 2 years	\$65,422
Caseworker Replacement	\$1,279

The summation of all of these monetized outcomes leads to a total present value of -\$119,069 for the child in Scenario 1, and -\$624,944 for the child in Scenario 2. The chart below shows a visual comparison of the scale of costs and scale of outcomes for the two scenarios side by side.



Long Term Outcome Costs Aggregated:

If we extrapolate these numbers to the foster care system in the U.S. as a whole, the numbers become increasingly daunting. For example, O'Hare (2008) notes that 5% of children born in 1990 experienced foster care by the time they were 15. Using this same figure, assuming it is still a relevant estimate, we can estimate there are approximately 4 million fourteen year olds in the U.S. today (children born in 2004), and thus, 200,000 of them have had a foster care experience (U.S. Census, Population Estimates 2016). This means there is a total future social cost attributed to all those children born in 2004 of approximately \$23.8 billion assuming they have an average (in this case Scenario 1) experience. This does not include the direct government expenditures to put these children in foster care in the first place and this only includes those children born in a single year.

A more recent study however (Putnam-Hornstein et al. 2014), which focused solely on California, found that 1 in 7 children had an experience with Child Protective Services by the age of 5. While this scenario differs from the additional step of entering foster care, if we take this 1 in 7 ratio as an updated national average, that would raise the additional future social cost accrued each year to approximately \$68 billion. This is well over double that of the estimate based on O'Hare's study (2008).

A darker image appears when looking at those youth who age out of foster care each year. It is estimated that approximately 28,000 youth age out each year in the U.S. (Courtney et al. 2011), which means that a further \$17.5 billion is generated in future social costs each year, accruing costs to the youth themselves as well as to the government. If we extend those results from Scenario 2 to approximate future social costs of all children who have 3 or more placements in care, the results get worse. Approximately, 220,000 children in care (as of 2016 measurement) have three or more placements, many of whom spend more than a year in care as well and as a result are tracked multiple years through the Child Welfare Outcomes report data, with their outcomes steadily getting worse. This results in about 220,000 children who currently have future negative cost outcomes of \$624,944 each, equating to \$137.5 billion in future social costs shared by the child and the government.

A recent analysis on the economic effects of child abuse was put out by Safe and Sound (2017) in partnership with the Haas School of Business (UC-Berkeley) and the San Francisco Child Abuse Prevention Center. It takes a similar approach to the analysis described here. While their focus was on child abuse rather than foster care, many of the same resources were used in developing total outcome cost estimates. Their report also focused exclusively on the San Francisco Bay Area (and the areas corresponding high cost of living) but tabulate total economic cost of approximately \$300 million per year for the Bay Area from substantiated cases of child abuse, a value that certainly aligns with the type of numbers established here. However, they go a step further and estimate \$2 billion per year for the Bay Area for all reported cases of child abuse, which can certainly put into perspective the great scale of the issue and how much of that value could be attributed to children in foster care.

Non-monetized outcomes:

Non-monetized Foster Care Outcomes	
Positive Outcomes	Negative Outcomes
Avoided premature Death	Attachment Disorders (Harden, 2004; Troutman, 2011)
Avoided future suffering	Reduced Emotion Regulation (Healey and Fisher, 2011)
	Poor School Adjustment (Healey and Fisher, 2011)
	Depression (Casey Family Programs, 2005)
	PTSD (Casey Family Programs, 2005)
	Homelessness (Casey Family Programs, 2005)
	Reduced brain development and Cognitive difficulties (Harden 2004; Child Welfare Information Gateway)
	Placement disruptions (Harden, 2004)
	Behavior Problems including externalizing and internalizing issues (Lawrence 2006; Child Welfare Information Gateway)

While several outcomes are monetized for each scenario, there are many others that are recognized and have been studied. However, there is often considerable difficulty in monetizing these outcomes. Further, many outcomes are interconnected, and thus monetizing one leads to risk of double counting the impact when monetizing other outcomes as well. This is a difficult aspect to the study of a soft system such as this, as many outcomes can feed into others. For example, academic achievement can be a leading indicator of future earnings and so it may be more appropriate to focus on valuing future earnings. Similarly, reduced ability to regulate emotion can lead to increased direct mental health costs, another potentially monetizeable outcome. However, recognizing where causality exists can still be an issue in these types of situations.

There are other outcomes we have not included here beyond those we monetized or listed as non-monetized. For example, unemployment collected, which will certainly impact the negative long term outcome cost to the government, are left out due to the difficulty in differentiating the scale of the cost and differentiating the cost between the two scenarios. Instead, we have kept the monetized values to reduced lifetime earnings. Additionally, future research may work to include Quality Adjusted Life Years (QALY) estimates to assess changes beyond those included here and/or to consider impacts on life expectancy of children who experienced foster care.

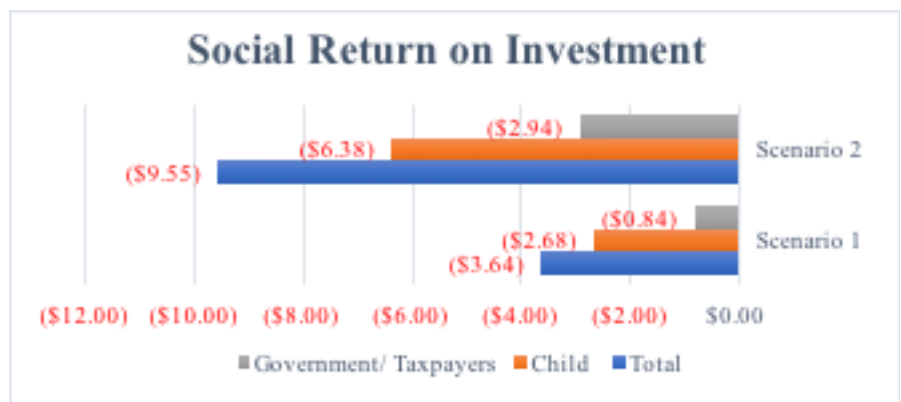
SOCIAL RETURN ON INVESTMENT

The table below shows the total SROI for each scenario as well as that attributed to each major stakeholder, the child who experienced foster care, and the government/taxpayers who fund the child's placement in foster care. A third stakeholder for whom outcomes were monetized were the victim(s) of crimes committed by the foster child, either while in foster care or as an adult. However, the SROI for the victim is very small and given the nature of being a victim, the value is negative. As a result, it will not be a part of this discussion, but should be acknowledged.

SROI	Total	Child	Government/ Taxpayers
Scenario 1	-\$3.64	-\$2.68	-\$0.84
Scenario 2	-\$9.55	-\$6.38	-\$2.94

To interpret the table and chart, the SROI states that for every \$1 invested in a single child's foster care experience, under the given set of assumptions for that scenario, the corresponding dollar value resulted as what society got in return for that dollar invested. In this case, the return is negative in total as well as for each stakeholder. In Scenario 1, for every \$1 dollar spent on a child's foster care, the return, or better put, the future cost to society is -\$3.64. For every dollar spent in care, this leads to an additional \$0.84 in tax dollars being spent on the child later in life. And every dollar spent in care, effectively takes \$2.68 from the child (in present value terms). And that's the better of the two scenarios.

Under Scenario 2, the total return to society is -\$9.59 per dollar spent on the child, with an additional \$2.98 in tax dollars spent on the child in the future and a cost to the child of \$6.38. In both scenarios we note the returns to the child are significantly worse than to the government, although the government's is still negative. However, what this means is that the child's returns are 2-3 times worse than the government's and the cost to the child only gets worse as the foster care system's results do not meet nationally recognized standards and goals. This places the greatest burden on the children themselves, the one individual in this whole system who was forced into this system often through no fault of their own.



Also to be recognized are the indirect payers of foster care outcomes. These payers accrue effects but are not included in this analysis. These stakeholders include:

- » Child's biological parents and family
- » Foster Family
- » Caseworker
- » Next Generation (i.e. foster child's children)

Inclusion of the monetized impacts on these stakeholders could drastically increase the negative outcome costs attributed to the foster care system.

Sensitivity to estimated long term outcome sizes:

To quickly see how much a change in outcome costs affect the SROI, we've tested each scenario with a 15% increase and decrease. The results are still strongly negative in all cases. The tables included in Attachment A provide an expanded sensitivity analysis, including how upfront system costs affect the resulting SROI.

SROI	15% increase	15% decrease
Scenario 1	-\$4.19	-\$3.09
Scenario 2	-\$10.99	-\$8.12

TAKEAWAYS AND STRATEGY RECOMMENDATIONS

- 1) This analysis has made clear the negative long term outcomes associated with children who have one of two foster care experiences. And as stated by Dr. Christopher Wildeman of Cornell University regarding taking kids from their homes: *"There's no consistent evidence that removing kids is, on average, beneficial, and there's substantial evidence that it does harm,"* (as quoted in NY Times, June 22, 2018).
- 2) As a result, the primary recommendation from this analysis is to avoid removal of the child from their home while maintaining the child's safety. Doyle (2007) notes that when comparing children who were maltreated but remained in their home to those children who were similarly maltreated but removed from their home, the long term outcomes are significantly worse for those children who were removed. This is further supported given the tendency for worsening outcomes for children who stay in foster care longer and end up aging out, as shown in Scenarios 1 and 2 of this analysis.
- 3) If removal does occur, it is important to establish expectations for what should be achieved from foster care. McDonald et al. question "Is it sufficient that the care doesn't damage children more than they have already been damaged by the events that led to the breakup of their family? Should we rate the foster care as successful if it produces long term outcomes equal to those of adults in a comparable group in the general population?" Based on our analysis, achieving an SROI of \$0 is unlikely to say the least.
- 4) This analysis has begun to show the potentially large role of caseworkers in helping children achieve the intermediate and eventually long term outcomes they deserve. Too often caseworkers are overburdened with high caseloads, long hours, demanding travel schedules, and eventually face issues of secondary trauma and burnout leading to high turnover rates relative to other public workers and major costs to taxpayers.
- 5) Given the importance of supporting the caseworker and the already recognized child welfare outcomes of minimizing time to permanency and minimizing the number of placements, better long term outcomes will be achieved for the child through the pursuit of improving these indicators. This will bring more children towards results such as that in Scenario 1.

6) Beyond managing the direct intermediate outcomes of foster care (e.g. placement stability, time to permanency, caseworker caseload) there are various opportunities to reduce the scale of the negative outcomes associated with foster care. Most notably, given its role as the leading driver of negative outcome costs is the child's future earnings and productivity. Various support systems have taken note of the importance of this outcome and begun implementing programs to support better access to appropriate education programs such as vocational technical schools, access to job trainings and apprenticeships, among others. This will help support access to stable, higher paying jobs, accessible entry level jobs as a teenager and young adult, and thereby significantly reduce the loss of future earnings which could have profound impacts on other areas of the child's life as well.

Strategic recommendations for Alia:

While the previous paragraphs represent recommendations for the system as a whole, this analysis can also have strategic implications for Alia itself. In particular, we see opportunity via:

- » Discussion of these findings as a method for turning the conversation to foster care alternatives, particularly Alia's UnSystem.
- » Attract additional funders with this readily absorbable visual detailing the severe negative outcomes of foster care and its social costs
- » Leverage the Sustainable Development Goals identified here which align with Alia's work to further support the case for funding Alia specifically.
- » Promote high quality data collection and longitudinal studies wherever possible.

DISCUSSION ON METHODOLOGY & DATA QUALITY

As noted previously, data quality is a common issue for this subject. Longitudinal studies are limited both in their prevalence and quality and as a result provide few sturdy reference points for this analysis and limit cost benefit analysis more generally. As a result, we have taken an approach which is set up to be readily built out as data quality increases and expert discussion reveals opportunity for refinement. Based on our literature review, this is an innovative approach that serves as a preliminary take on the foster care system.

Various studies were referenced in establishing effect sizes and outcome costs for this project. Not all were used directly, but were used to inform the appropriateness of those used and make estimates where necessary to better align with the scenarios. Throughout our estimates, use of Washington State Institute for Public Policy's (WSIPP) meta-analyses were important to the development of effect sizes (the extent to which an outcome, such as committing a crime, was connected to foster care, or more commonly given the data, to abuse and neglect). Some effect sizes (such as that for substance abuse) are informed estimates based on multiple sources.

Many effects and outcome cost estimates are more closely tied to occurrence of abuse and neglect or maltreatment in general rather than being tied to foster care itself. For some cost effects then, we assume that those children in foster care in most cases suffered at least one instance of maltreatment and as a result will show average outcomes in line with the larger population of children experiencing maltreatment. This creates a benchmark for the child in Scenario 1 who has an average and as planned foster care experience.

Similarly, effect sizes and outcome cost estimates for the child in Scenario 2 are derived from multiple studies, in particular, longitudinal data on children who have aged out of foster care and were surveyed every 2-3 years until reaching the age of 26.

Description of Long Term Outcomes Monetized:

The following is a brief description of each long term outcome measured and what it includes. The calculation of some of these, particularly in Scenario 1 are dependent on effect sizes (i.e. the likelihood of the outcome occurring) noted for instances of abuse and neglect, not foster care, although we have used them as a proxy for a child who would likely find themselves put in foster care. Others are calculated based on effect sizes documented between foster care youth who age out compared to the general population or triangulated based on a series of estimates referenced. See the tables below for sources of costs and effect sizes as well as whether they are calculated from foster care or from abuse and neglect.

- » Quality of life: Includes intangible losses such as pain, suffering, fear, and reduced quality of life from injury. Scenario 2 has a 20% increase given greater number of instances of maltreatment, but likely reduced impact on quality of life.
- » Crime: Costs include combined juvenile + adult arrests, judicial processing, incarceration and probation.
- » Substance Abuse: Realized cost of one treatment – treatment, hospital charge, and emergency charge (but does not include cost of the habit itself).
- » Medical and Mental Health: All future medical care and mental health care costs accrued by the child over their lifetime in present value (PV).
- » Welfare payments: Includes average monthly cash assistance and food stamps over a median time used of 24 months.
- » Lifetime Earnings: Calculations are based on the present value (PV) of 40 years of work, with a discount rate at 2.5% (the same percentage used by WSIPP in their NPV calculations).
- » Teen pregnancy: Includes cost of hospital maternal care and 1 year of child care.
- » Caseworker turnover and replacement cost: Given annual turnover of 30%, and that 50% of this turnover is preventable (APHSA 2005) and attributed to overburdened workers it is expected the child will have at least 2 caseworkers. Also based on Caseworker FTE (2018\$) of \$42k and a cost of replacement documented at 70% of salary and an average caseload of 23 cases (APHSA 2005).
- » 2 years of additional foster care system: Costs given the assumption that the child would not spend more than 2 years in care if the system functioned as it was supposed to. However, given this assumption for this scenario, due to overburdened caseworkers and caseworker turnover, children end up staying in foster care longer than they would have otherwise.

Scenario 1	Cost Source	Effect Size Source ¹
Quality of Life	Miller et al. (2001). Figure adjusted to 2018 \$. Specific to children who suffered abuse and neglect.	N/A – Attributed to all instances of abuse and neglect
Crime	Fang et al. (2012). Figure adjusted to 2018 \$. Covers crime of all types, both juvenile and adult, for children who suffered maltreatment.	N/A – Attributed to all instances of abuse and neglect
Lifetime Earnings (Present Value)	Doyle (2007) – compares kids in foster care to those who were maltreated but not in foster care. The Maltreated kids were shown to be worse off than the general population but not in as substantial a manner. As a result, this estimate for Child 1 will be used as appropriate as compared to the general population. This also aligns with findings of Currie and Widom, 2010 and their assessment of children who experience abuse and neglect.	N/A – Attributed to all instances of abuse and neglect
Teen Pregnancy	WSIPP (2017), cost of hospital maternal care and 1 year of child care.	Doyle (2007)- a total percentage for sample size is used minus population average for mothers under 18. Figure is very similar to that of aged out youth given that at this point the aging out has not yet occurred.
Welfare payments	WSIPP (2017). Includes Cash assistance + Food Stamps average per month multiplied by the median months on food stamps from U.S. Census (2015). It is specific to children who suffered abuse and neglect.	Estimated to be half that of the aged out population given relative earnings performance between the two scenarios and the understanding that improved earnings will lead to reduced dependence on welfare assistance.
Medical and Mental Health	Miller et al. (2001). Figure adjusted to 2018 \$.	N/A – Attributed to all instances of abuse and neglect
Substance Abuse	WSIPP (2017). Specific to children who suffered abuse and neglect and includes one treatment.	Estimated based on averages of Alcohol, Tobacco, and Illicit drug use from WSIPP (2017), Courtney et al. (2011), and National Institute on Drug Abuse (2015).

¹ See outcome calculation tables in Attachment A for monetized outcomes and effect sizes.

Scenario 2	Cost Source	Effect Size Source
Quality of Life	Miller et al. 2001. Figure adjusted to 2018 \$. Specific to abuse and neglect, adjusted up 20% from Scenario 1 given increased instances of maltreatment.	N/A – attributed to all instances of abuse and neglect
Crime	Better Futures MN SROI (2017) which calculated total social cost of 1 felony. More serious crime is assumed for Child 2 than Child 1 to account for greater occurrence of arrests and incarceration noted in Courtney et al. (2011) relative to Fang (2012) and to align with violent crime effect size used.	Widom and Maxfield, (2001). Increased likelihood of violent crime for children who suffered abuse and neglect. Also informed by Courtney et al. (2011) which showed criminal justice involvement to be much higher than general population.
Lifetime Earnings (Present Value)	Courtney et al. (2011) and U.S. Census (2012). Assume earnings gap between aged out population and general population stays constant although may increase with time.	N/A – cost source is based on comparison of aged out foster youth to general population
Teen Pregnancy	WSIPP (2017), cost of hospital maternal care and 1 year of child care.	Courtney et al. (2009), includes females with at least one child by age 19. For foster care youth who aged out relative to general population.
Welfare Payments	WSIPP (2017) Cash assistance + Food Stamps average per month multiplied by the median months on food stamps from U.S. Census (2015).	Courtney et al. (2009). For foster care youth who aged out relative to general population.
Medical and Mental Health	Miller et al. (2001). Adjusted to 2018 \$. Specific to abuse and neglect, although adjusted up 20% from Scenario 1 given increased instances of maltreatment likely occurring for Child 2.	N/A – attributed to all instances of abuse and neglect
Substance Abuse	WSIPP (2017). Specific to children who suffered abuse and neglect and includes one treatment.	Estimated based on averages of Alcohol, Tobacco, and Illicit drug use from WSIPP (2017), Courtney et al. (2011), and National Institute on Drug Abuse (2015)
Additional 2 years of care	Estimated annual cost of care from upfront system cost estimates, now multiplied by 2.	N/A
Cost of caseworker replacement	Caseworker FTE = \$42,000 from Nittoli (2003), adjusted to 2018 \$. Cost of replacement of 70% annual salary from APHSA (2005). Divided across average caseload of 23.	N/A

Explanation of Long Term Outcomes used and how cost estimates were developed:

As can be seen from these outcome cost components, there is room for more outcomes to be included. As noted previously, these are initial estimates from which to build upon. Several long term outcomes are monetized for each scenario. While there is risk of overlap in the impact being counted, we have included those costs that are likely distinct from each other. For example, while former foster children have higher rates of substance abuse, we do not estimate the direct costs of this abuse on their day to day life and instead only include the costs of a round of hospital treatment. We take this approach as the estimate of day to day costs of substance abuse would overlap with that individual's income earnings as well, and so we rely on the income earnings (which also are the largest outcome cost) to capture these other aspects of substance abuse, teen pregnancy, criminal activity, and so on. Thus, we can avoid double counting the negative outcomes by focusing on the most direct costs where ever possible.

FUTURE RESEARCH NEEDS + PROPOSED NEXT STEPS

It will be important to work towards an increased quality of longitudinal studies. Many of the highest quality studies were done over a decade ago. Given technological capabilities today, tracking foster care experiences and life outcomes post-care should be an increasingly feasible undertaking. Children, young adults, and adults with previous foster care experience could be reached more easily via an app whereby the former foster care children could share information quickly.

There is a need to develop studies and assessments of the benefits (if any) from the foster care experience. The establishment of foster care assumes it will lead to benefits of some kind, in particular, child protection – helping the child avoid future incidents of maltreatment and suffering.

“While criticisms of foster care abound, research to help us understand the potential benefits...is scant.”
(Johnson-Reid & Barth, 2000)

To complement this analysis would be an analysis of foster care alternatives, particularly family support services to keep the child in their home, and how they compare to long term outcomes from current foster care experiences. This is especially necessary given the reliance on data from kids who suffered abuse and neglect (without regard for their removal from their homes). By including an additional scenario with a child who suffers similar types of maltreatment but remains in their home there will be a strong point of comparison, which strengthens the argument regarding the negative outcomes being affiliated with the foster care experience.

“Immediately following placement, children in foster care exhibited an increase in behavior problems. [Also,] the increase in problematic behavior following departure from foster care significantly exceeded change in behavior problems among those reared by maltreating parental figures. [Therefore,] internalizing behavior problems among children exiting unfamiliar foster care significantly exceeded those of children exiting familiar care, also exceeding those of the maltreated home-reared group and adequately cared for children.” (Lawrence 2006)

With these research recommendations will come an improved recognition of mediating variables – those variables that directly lead to the negative long term outcomes. This is similar to our selection of the KPI's previously discussed however in this case rather than look at KPIs in general, the focus would be on strengthening linkages between intermediate and long term outcomes so as to monetize the intermediate outcome by back tracking from the already valued long term outcomes. It will also be important to strengthen the understanding of the extent the various outcomes are interconnected so as to avoid double counting.

ATTACHMENT A – CALCULATIONS

Sensitivity Analysis

The following tables show how the SROI could change with changes in the estimated upfront system costs and outcome costs per child.

Scenario 1: SROI Estimate **-\$3.64**

SROI Sensitivity -50%		Percent Change in Outcome Cost										
		-40%	-30%	-20%	-10%	0%	10%	20%	30%	40%	50%	
Percent change in System Cost	-50%	-3.64	-4.37	-5.10	-5.82	-6.55	-7.28	-8.01	-8.74	-9.46	-10.19	-10.92
	-40%	-3.03	-3.64	-4.25	-4.85	-5.46	-6.07	-6.67	-7.28	-7.89	-8.49	-9.10
	-30%	-2.60	-3.12	-3.64	-4.16	-4.68	-5.20	-5.72	-6.24	-6.76	-7.28	-7.80
	-20%	-2.28	-2.73	-3.19	-3.64	-4.10	-4.55	-5.01	-5.46	-5.92	-6.37	-6.83
	-10%	-2.02	-2.43	-2.83	-3.24	-3.64	-4.04	-4.45	-4.85	-5.26	-5.66	-6.07
	0%	-1.82	-2.18	-2.55	-2.91	-3.28	-3.64	-4.00	-4.37	-4.73	-5.10	-5.46
	10%	-1.65	-1.99	-2.32	-2.65	-2.98	-3.31	-3.64	-3.97	-4.30	-4.63	-4.96
	20%	-1.52	-1.82	-2.12	-2.43	-2.73	-3.03	-3.34	-3.64	-3.94	-4.25	-4.55
	30%	-1.40	-1.68	-1.96	-2.24	-2.52	-2.80	-3.08	-3.36	-3.64	-3.92	-4.20
	40%	-1.30	-1.56	-1.82	-2.08	-2.34	-2.60	-2.86	-3.12	-3.38	-3.64	-3.90
	50%	-1.21	-1.46	-1.70	-1.94	-2.18	-2.43	-2.67	-2.91	-3.15	-3.40	-3.64

Scenario 2: SROI Estimate **-\$9.55**

SROI Sensitivity -50%		Percent Change in Outcome Cost										
		-40%	-30%	-20%	-10%	0%	10%	20%	30%	40%	50%	
Percent Change in System Cost	-50%	-9.55	-11.46	-13.37	-15.28	-17.19	-19.11	-21.02	-22.93	-24.84	-26.75	-28.66
	-40%	-7.96	-9.55	-11.14	-12.74	-14.33	-15.92	-17.51	-19.11	-20.70	-22.29	-23.88
	-30%	-6.82	-8.19	-9.55	-10.92	-12.28	-13.65	-15.01	-16.38	-17.74	-19.11	-20.47
	-20%	-5.97	-7.16	-8.36	-9.55	-10.75	-11.94	-13.13	-14.33	-15.52	-16.72	-17.91
	-10%	-5.31	-6.37	-7.43	-8.49	-9.55	-10.61	-11.68	-12.74	-13.80	-14.86	-15.92
	0%	-4.78	-5.73	-6.69	-7.64	-8.60	-9.55	-10.51	-11.46	-12.42	-13.37	-14.33
	10%	-4.34	-5.21	-6.08	-6.95	-7.82	-8.68	-9.55	-10.42	-11.29	-12.16	-13.03
	20%	-3.98	-4.78	-5.57	-6.37	-7.16	-7.96	-8.76	-9.55	-10.35	-11.14	-11.94
	30%	-3.67	-4.41	-5.14	-5.88	-6.61	-7.35	-8.08	-8.82	-9.55	-10.29	-11.02
	40%	-3.41	-4.09	-4.78	-5.46	-6.14	-6.82	-7.51	-8.19	-8.87	-9.55	-10.23
	50%	-3.18	-3.82	-4.46	-5.09	-5.73	-6.37	-7.01	-7.64	-8.28	-8.92	-9.55

Outcome Calculation Tables:

Scenario 1 Outcomes	Cost	Effect size	Marginal Cost
Quality of Life	\$39,867.74	1	\$39,867.74
Crime	\$7,800	1	\$7,800
Lifetime Earnings (NPV)	\$2,000 per year	<i>NPV (40 years, 2.5%)</i>	\$50,000
Teen Pregnancy	\$10,351	0.308	\$3,188.11
Welfare payments	\$620 x 24 months	0.3	\$4,464.00
Avg. Medical and Mental (NPV)	\$3,302.62	1	\$3,302.62
Substance abuse	\$41,786	0.25	\$10,446.50
Total Outcomes Cost			\$119,068.97

Scenario 2 Outcomes	Cost	Effect size	Marginal Cost
Quality of Life	\$39,867.74	1.2	\$47,841.29
Crime	\$98,000	0.3	\$29,400
Lifetime Earnings (NPV)	\$18,000 per year	<i>NPV (40 years, 2.5%)</i>	\$450,000
Teen pregnancy	\$10,351	0.308	\$3,188.11
Welfare payments	\$620 x 24 months	0.62	\$9,225.60
Avg. Medical and Mental (NPV)	\$3,302.62	1.2	\$3,963.14
Substance abuse	\$41,786	0.35	\$14,625.10
2 years additional care	\$65,422	1	\$65,422
Caseworker replacement cost per child	\$42,013 *70% replacement cost = \$29,409	0.04	\$1,278.66
Total Outcomes Cost			\$624,943.90

ATTACHMENT B – LEVELS OF EVIDENCE + BIBLIOGRAPHY

Levels of Evidence of Causality (1 is highest, 7 is lowest)	
1	Evidence from a systematic review or meta-analysis of all relevant RCTs (randomized controlled trial) or evidence-based clinical practice guidelines based on systematic reviews of RCTs or three or more RCTs of good quality that have similar results.
2	Evidence obtained from at least one well-designed RCT (e.g. large multi-site RCT).
3	Evidence obtained from well-designed controlled trials without randomization (i.e. quasi-experimental).
4	Evidence from well-designed case-control or cohort studies.
5	Evidence from systematic reviews of descriptive and qualitative studies (meta-synthesis).
6	Evidence from a single descriptive or qualitative study.
7	Evidence from the opinion of authorities and/or reports of expert committees.

Level of Evidence	Study	Relevant Finding
Level 1 Evidence	Ecotone Analytics. (2017). Better Futures Minnesota – Social Return on Investment.	Outcomes Cost
	Lee, Stephanie; Aos, Steve; and Marna Miller. (2008). <i>Evidence-based programs to prevent children from entering and remaining in the child welfare system: Benefits and costs for Washington</i> . Olympia: Washington State Institute for Public Policy, Document No. 08-07-3901.	Long-term Outcome Effect Size + Outcomes Cost
	McDonald, Thomas; Reva Allen, Alex Westerfelt, and Irving Piliavin. <i>Assessing the Long Term Impacts of Foster Care: A Research Synthesis</i> . Institute for Research on Poverty Special Report. https://www.irp.wisc.edu/publications/focus/pdfs/foc142g.pdf	Reference for Long-term Outcomes and Effects
	Washington State Institute for Public Policy (WSIPP). (December 2017). <i>Benefit-cost technical documentation</i> . Olympia, WA.	Long-term Outcome Effect Size + Outcomes Cost
	Winokur M, Holtan A, Batchelder KE. Kinship care for the safety, permanency, and well-being of children removed from the home for maltreatment. <i>Cochrane Database of Systematic Reviews</i> 2014, Issue 1. Art. No.: CD006546. DOI: 10.1002/14651858.CD006546.pub3.	Reference for Outcomes Cost
Level 2 Evidence	Healey, C. & Fisher, P. Children in Foster Care and the Development of Favorable Outcomes. <i>Child Youth Serv Rev</i> . 2011 October; 33(10): 1822–1830. Doi:10.1016/j.childyouth.2011.05.007.	Non-monetized outcome
Level 3 Evidence	Doyle, J. <i>Child Protection and Child Outcomes: Measuring the Effects of Foster Care</i> . The American Economic Review. Pp 1584-1610. 2007.	Long term Outcome Effect Sizes
Level 4 Evidence	Barth, R.; Kwon Lee, C.; Wildfire, J.; Guo, S. (2006). A Comparison of the Governmental Costs of Long-term Foster Care and Adoption. <i>Social Services Review</i> 2006, pp. 128-157. University of Chicago.	Input Costs
	Courtney, M., Dworsky, A., Lee, J., & Raap, M. (2009) <i>Midwest evaluation of the adult functioning of former foster youth: Outcomes at age 23 and 24</i> . Chicago: Chapin Hall at the University of Chicago.	Long-term Outcome Effect Size + Outcomes Cost
	Courtney, M., Dworsky, A., Brown, A., Cary, C., Love, K., & Vorhies, V. (2011). <i>Midwest evaluation of the adult functioning of former foster youth: Outcomes at age 26</i> . Chicago, IL: Chapin Hall at the University of Chicago.	Long-term Outcome Effect Size + Outcomes Cost
	Currie, J. and Widom, C.S. Long Term Consequences of Child Abuse and Neglect on Adult Economic Well-being. <i>Child Maltreatment</i> . 2010 May; 15(2): 111–120.	Long-term Outcomes Cost
	Fang, Xiangming; Brown, Derek S.; Florence, Curtis S.; Mercy, James A. Economic Burden of Child Maltreatment in the United States and Implications for Prevention. <i>Child Abuse and Neglect</i> . Vol. 36 (2). Pp 156-165. February 2012.	Reference for Long-term Outcomes and Effects
	Johnson-Reid, M. & Barth, R. <i>From Placement to Prison: The Path to Adolescent Incarceration from Child Welfare Supervised Foster or Group Care</i> . <i>Children and Youth Services Review</i> , Vol 22. No. 7, pp 493-516, 2000.	Long-term Outcome Effect Size + General Reference
	Karoly, L., Kilburn, M., Cannon, J.; Early Childhood Interventions: Proven Results, Future Promise; RAND Corporation; 2005.	Reference for Long-term Outcomes and Effects
	Lawrence, C.; Carlson, E.; and Egeland, B. (2006). The impact of foster care on development. <i>Development and Psychopathology</i> 18 (2006), 57–76. Cambridge University Press.	Reference for Long-term Outcomes; Non-monetized outcome
	Pecora, P.; Kessler, R.; Williams, J.; O'Brien, K.; Downs, A.; English, D.; White, J.; Hiripi, E.; White, C.; Wiggins, T.; and Holmes, K. (2005). <i>Improving Family Foster Care: Findings from the Northwest Foster Care Alumni Study</i> . The Foster Care Alumni Studies. Casey Family Programs; Seattle, WA.	Reference for Long-term Outcomes and Effects
	Taussig, Heather N.; Clyman, Robert B.; and Landsverk, John. Children Who Return Home From Foster Care: A 6-Year Prospective Study of Behavioral Health Outcomes in Adolescence. <i>Pediatrics</i> . Vol. 108 No. 1. July 2001.	Reference for Long-term Outcomes and Effects
	Widom, Cathy; Maxfield, Michael. (2001). An Update on the “Cycle of Violence”. <i>Research in Brief</i> , National Institute of Justice.	Long-term Outcome Effect Size
	Zill, N. (May 2011). <i>Better Prospects, Lower Cost: The Case for Increasing Foster Care Adoption</i> . <i>Adoption Advocate</i> , No. 35. National Council for Adoption; Alexandria, VA.	Input Costs

Level 5 Evidence	Child Welfare Information Gateway. (July 2013). Long Term Consequences of Child Abuse and Neglect. Children's Bureau: Washington, DC.	Reference for Long-term Outcomes and Effects
	Harden, Brenda Jones. Safety and Stability for Foster Children: A Developmental Perspective. <i>The Future of Children</i> ; Winter 2004; 14, 1; ProQuest Psychology Journals.	Non-monetized outcome
	Nittoli, J. M. (2003). The unsolved challenge of system reform: The condition of the frontline human services workforce. Annie E. Casey Foundation (AECF); Baltimore, MD.	Input Costs
	Salsberg, Edward; Quigley, Leo; Mehfood, Nicholas; Acquaviva, Kimberley; Wyche, Karen; Sliwa, Shari. (October 2017). Profile of the Social Work Workforce. The George Washington University Health Workforce Institute.	Input Costs
	Safe and Sound. (2017). The Economics of Child Abuse: A Study of San Francisco. San Francisco Child Abuse Prevention Center and Haas School of Business, University of California – Berkeley. https://safeandsound.org/wp-content/uploads/2017/09/economicsofabuse_report_sfcapc1.pdf	Reference for Long-Term Outcome Costs
	Social Work Policy Institute. (2010). High Caseloads: How do they Impact Delivery of Health and Human Services. Research to Practice Brief. The National Association of Social Workers Foundation.	Input Costs
	Troutman, B. (2011). The effects of foster care placement on young children's mental health: Risks and opportunities. www.icmentalhealth.org .	Reference for Long-term Outcomes; Non-monetized outcome
Level 6 Evidence	American Public Human Services Association (APHSA). (February 2005). Report from the 2004 Child Welfare Workforce Survey: State Agency Findings. APHSA; Washington, D.C.	Input Costs
	Children's Bureau. (2016). Child Welfare Outcomes Report Data. Administration for Children and Families.	Intermediate Outcomes
	Child and Family Services Reviews. (2016). Round 3 Findings: 2015-2016. Children's Bureau, Administration for Children and Families.	Intermediate Outcomes
	Child Trends Data Bank. (December 2015). Foster Care – Indicators of Child and Youth Well-being. https://www.childtrends.org/indicators/foster-care	Intermediate Outcomes
	Holmes, L., et al., Cost calculator methods for estimating casework time in child welfare services: A promising approach for use in implementation of evidence based practices and other service innovations, Children and Youth Services Review (2013), http://dx.doi.org/10.1016/j.childyouth.2013.10.003	Reference for Input Costs
	Miller, T; Fisher, D; Cohen, M. <i>Costs of Juvenile Violence: Policy Implications</i> . PEDIATRICS Vol. 107 No. 1, January 2001	Long-term Outcomes Cost
	National Institute on Drug Abuse; National Institutes of Health; U.S. Department of Health and Human Services. (2015). https://www.drugabuse.gov/publications/drugfacts/nationwide-trends	Reference for Long-term Outcomes
	Office of Juvenile Justice and Delinquency Prevention. OJJDP Statistical Briefing Book. Online. Available: http://www.ojjdp.gov/ojstatbb/crime/JAR_Display.asp?ID=qa05200 . December 06, 2017.	Reference for Long-term Outcomes
	O'Hare, Dr. William P. (2008). Data on Children in Foster Care from the Census Bureau. Working Paper. Kids Count, A Project of the Annie E. Casey Foundation.	Reference for Long-term Outcomes
Level 7 Evidence	Putnam-Hornstein, E; Mitchell, M; Hammond, I. (2014). A Birth Cohort Study of Involvement with Child Protective Services before Age 5. Children's Data Network, University of Southern California. http://www.datanetwork.org/wp-content/uploads/2017/01/CDNCalifornia.pdf	Long-term Outcome Aggregation
	U.S. Census Bureau. (2015). https://www.census.gov/newsroom/press-releases/2015/cb15-97.html	Long-term Outcomes Cost
	Haight, Jennifer Miller. Policy Fellow, Chapin Hall at the University of Chicago. Email Interview. October 2, 2018.	General Feedback
Level 7 Evidence	Milner, Jerry, D.S.W. Associate Commissioner of Children's Bureau. Email Interview. June 19, 2018.	Input Costs + General Feedback
	Wildeman, Christopher. As cited in: <i>Family Separation: It's a problem for U.S. Citizens, Too</i> . Sheila Dewan. New York Times. June 22, 2018. https://www.nytimes.com/2018/06/22/us/family-separation-americans-prison-jail.html	Reference for Long-term Outcomes

ATTACHMENT C – DEFINITIONS/GLOSSARY

Discount rate	The annual decay of the value of a dollar in the future relative to a dollar today. Much like an interest rate, but to understand the present value of future dollars.
Effect Size	The change in the likelihood of a cost occurring
External data	Data not gathered by the program being evaluated
Input Cost	The upfront expenditure spent to generate the outputs and outcomes of a program
Levels of Evidence of Causality	Level 1 = greatest level of evidence that there is a causal relationship between variables, Level 7 = lowest level of evidence that there is a causal relationship between variables
Marginal Cost	The effect size * the outcome cost. The average change in cost accrued.
Intermediate Outcome	The resulting change occurring DIRECTLY from the program's inputs and activities
Logic Model	A visual illustration of how a program will work to generate a change. Can also be referred to as a Theory of Change.
Long Term Outcome	The resulting change occurring INDIRECTLY from the program's inputs and activities, a continuation of the program's intermediate outcomes.
Monetizeable/ Monetization	Valuing in currency a previously unvalued domain
Outcome Benefits	The total benefit from an event occurring
Outcome Costs	The total cost from an event occurring
Present Value (PV)	An annuitized benefit or cost (depending on the outcome) valued in the present day given an assumed time period and discount (interest) rate
Net Present Value (NPV)	An annuitized benefit AND cost summation, valued in the present day given an assumed time period and discount rate
ROI	Return on Investment. A standard financial metric to measure financial gains as a result of a financial investment. $(\text{Total Financial Return})/(\text{Investment})=\text{ROI}$
SROI	Social Return on Investment. An adaptation of the financial metric to measure social gains as a result of a financial investment, doing so by placing financial value on the social gains identified. $(\text{Social} + \text{Financial} + \text{Environmental Benefits})/(\text{Investment})=\text{SROI}$
Theory of Change	The planned pathway for how change is generated. Also referred to as a Logic Model.
Trumping Rules	Selecting certain outcomes over others when they are interlinked to avoid double counting
WSIPP	Washington State Institute for Public Policy: a leading national resource on cost-benefit analysis of social programs

The data tell a clear story: we are hemorrhaging money on a system that produces abysmal results. So please, share this report widely and with urgency.

If you have questions about the technical findings, contact www.ecotone-partners.com.

To be part of designing a new way of work in foster care, contact www.aliainnovations.org.

For inspiration and information on the Moxie Foundation, visit www.moxiefoundation.org.

