



JIM CASEY  
YOUTH  
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INITIATIVE

# the Adolescent Brain

new research  
and its implications  
for young people  
transitioning  
from foster care

The Adolescent Brain: New Research and Its Implications for Young People Transitioning From Foster Care

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The Jim Casey Youth Opportunities Initiative's mission is to ensure that the young people who leave foster care are able to make successful transitions to adulthood. The Initiative promotes practices in three key areas: youth voice, community partnerships, and the creation of a range of opportunities for young people. It works in partnership with communities and states across the country to integrate these practices into the core work of state child welfare agencies and other strategic allies.

Jim Casey Youth Opportunities Initiative

222 South Central, Suite 305

St. Louis, MO 63105

Phone: 314-863-7000

Fax: 314-863-7003

[www.jimcaseyyouth.org](http://www.jimcaseyyouth.org)

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# **The Adolescent Brain: New Research and Its Implications for Young People Transitioning From Foster Care**

## **Contents**

Executive Summary	1
Introduction	7
Older Youth and Young Adults in Foster Care	8
The Emerging Knowledge Base: A Foundation for Developmentally Appropriate Practice	13
Recommendations	32
Questions for the Field	37
Glossary	39
Bibliography	40



“It’s not that foster care tells what you can’t do. It’s that nobody ever tells you what you *can* do.”

—Lynn Twigg, age 28

# The Adolescent Brain: New Research and Its Implications for Young People Transitioning From Foster Care

## EXECUTIVE SUMMARY

### Introduction

Many disciplines have contributed to the knowledge base regarding what enables young people in foster care to succeed. Now, neuroscience has added critical data to that base by revealing that in adolescence, the brain experiences a period of major development comparable to that of early childhood.

Among the implications of the new data is this: **Adolescents must take on distinct developmental tasks in order to move through emerging adulthood and become healthy, connected, and productive adults—and young people in foster care often lack the supports needed to complete these tasks.**

Unlike younger children in foster care, for whom safety and protection are the greatest need, older youth are in the process of developing greater autonomy and practicing adult roles and responsibilities. It is during adolescence and early adulthood that we develop a personal sense of identity, establish emotional and psychological independence, establish adult vocational goals, learn to manage sexuality and sexual identity, adopt a personal value system, and develop increased impulse control and behavioral maturity. Chemical changes in the brain that prime adolescents for risk-taking present rich opportunities for them to learn from experience and mistakes and, with adult support, gain greater self-regulation, coping, and resiliency skills.

By the age of 25, young people need to be “connected,” that is, “embedded in networks—families, friends, and communities—that provide guidance, support, and help, both financial and otherwise, when they face the crises that are an inevitable part of the transition” to adulthood.<sup>1</sup> It is by being connected that young people find love and acceptance for who they are, what they have experienced, and who they can become as caring adults. Becoming connected by 25 is especially important for older youth and young adults in foster care, because as a result of their life experiences, they are often disconnected from supportive networks. Family and caring adults are essential social capital for young people, and so the field of child welfare must make building social relationships and networks a priority in all services intended to promote permanency and prepare young people for adulthood.

Science also has contributed to a more in-depth understanding of the impact of trauma on the developing brain. Positive youth development services, opportunities, and supports are essential in counteracting the effects of trauma to promote healthy brain and social development in adolescence. In addition, research on complex trauma and ambiguous loss reveal the critical need for effective trauma-informed and trauma-specific practices in addressing the identity and grief-related issues that older youth and young adults in foster care are likely to experience. The concepts of resiliency and neuroplasticity provide a foundation for developing trauma-informed child welfare practice and trauma-specific mental health services and supports for young people in foster care.

1 Wald, M. & Martinez, T. (2003), p.2

“If you don’t have anybody that believes in you, how do you believe in yourself? That’s one of the biggest things that foster youth deal with: nobody cares if they succeed, so they think, ‘well, why do I care if I succeed?’, which is sad.”

—Mike Peno, age 22

The emerging science of adolescent brain development has deepened the understanding of adolescent capabilities and behaviors. Neuroscience has made clear that the brain is not “done” by age 6 as was previously believed. Instead, the adolescent brain continues to develop, providing a window of opportunity similar to that which is open in early childhood. Adolescence is a period of “use it or lose it” in brain development. Young people’s experiences during this period play a critical role in shaping their futures as adults. They can build and practice resiliency and develop knowledge and skills that will positively serve them throughout adulthood.

## Recommendations

### 1. TAKE A POSITIVE YOUTH DEVELOPMENT APPROACH TO ALL OPPORTUNITIES FOR YOUNG PEOPLE IN FOSTER CARE

Positive youth development is not merely a good practice but instead is a neurological imperative. Positive youth development is especially critical for young people in care who may be experiencing developmental delays as a result of trauma and loss. Adolescence is a period of “use it or lose it” in brain development: When young people are actively engaged in positive relationships and opportunities to contribute, create, and lead, they “use it” to develop their skills to become successful adults. It is through the formation of internal and external assets—including family and community—that young people thrive. Multiple positive relationships are essential in supporting them in achieving their unique aspirations. The chemistry of the adolescent brain is what often causes young people to seek new excitement through increasingly risky behaviors.

Young people need positive youth development opportunities so that they can engage in healthy risk taking via constructive, meaningful activities.

### Implementing this Recommendation

- Use a positive youth development approach for all young people in foster care, including those who may be experiencing developmental delays due to trauma and loss.
- Focus on the development of internal and external assets so that youth thrive.
- Continually provide young people with opportunities to connect with their families and communities.
- Intentionally create opportunities for involvement in extracurricular and community groups. Such activities ensure that young people spend time with multiple caring adults.
- Provide young people with the information, skills, and supports they need to drive the direction of their own lives. Help them see the results of their choices and actions.
- Frequently discuss with young people their strengths, interests, talents, goals, and aspirations. Help them clarify their goals and aspirations.
- Provide young people with the resources to pursue a passion that may lead to a sense of purpose in their lives. Examples of resources might include materials such as musical instruments or art supplies, the means to attend events related to their interests, or the opportunity to take classes that will help them develop their skills.

“We need a safe program/environment where youth are challenged to step up and take their future into their hands, but also with the assurance that there will be adults cheering them on and making themselves available to help when needed.”

—Eddy Vanderkwaak, age 20

## 2. PROVIDE “INTERDEPENDENT” LIVING SERVICES THAT CONNECT YOUNG PEOPLE WITH FAMILY AND CARING ADULTS

Science has shown that diverse social relationships and networks—the essence of social capital—are crucial to healthy development and functioning. They act as protective factors that build young people’s knowledge, skills, and confidence and aid in the successful transition to adulthood, resiliency, and recovery from trauma. It is imperative that all systems interacting with older youth in foster care help them to create social capital through relationships with family (including siblings), other caring adults, the neighborhood and community, and peers. Although independent living services produce some benefits by imparting knowledge and certain skills, they have not been effective in supporting young people in building and sustaining social capital. Young people in foster care must experience “interdependent living” so that they gain the knowledge, practical skills, and social capital that will support them into adulthood.

### Implementing this Recommendation

- Connect young people in foster care with family members—parents, siblings, members of the extended family—and other caring adults. Such efforts should be ongoing and should begin as early as possible. Provide support to help these relationships become lifelong and perhaps legal.
- Give young people opportunities to develop relational competencies—the skills they need to form and maintain healthy relationships. Assist them in building social relationships and networks.
- Make all possible efforts to keep young people in one community where they can establish

connections. A wide range of adults, such as mentors or teachers, can provide young people with a sense of rootedness. These individuals also act as role models, providing opportunities to develop adult skills and relationships.

- Minimize barriers to normal relationships. Efforts might involve providing transportation to events or making it easier in other ways for young people to have a part-time job, spend time with friends, date, and participate in a range of social and faith-based events.
- Place young people in family-based settings where social, educational, and employment activities are supported as normal adolescent behaviors. Do not use congregate care settings. By their nature, these are not conducive to supporting youth in engaging activities that help them “practice” for adulthood, or to helping young people build social capital.

## 3. ENGAGE YOUNG PEOPLE IN THEIR OWN PLANNING AND DECISIONMAKING

Providing young people with opportunities for healing and corrective relationship experiences helps to “rewire” adolescents’ brains for effective decisionmaking as adults. Youth engagement in planning and decisionmaking is widely known as best practice in meeting the needs of young people in foster care. Combining these two approaches by engaging young people in their own transition plans makes the most of a period of profound brain development. The resulting plan is more effective because it has the endorsement of the young person, and the planning process has provided a safe opportunity for the young person to practice adult roles alongside others on the team and, at times, learn from mistakes of judgement.

“I like guiding. I understand I may not have the best knowledge, but it is my life. I will be an independent adult. The decisions being made affect me for a lifetime.”

—Samanthya Amann, age 20

### Implementing this Recommendation

- Use strength-based planning processes that are directed by the young people themselves. Promote young people’s active engagement in all discussions and decisionmaking. Encourage young people to lead meetings whenever possible.
- Create partnerships between young people and adults. These partnerships should be with adults who can model self-determination and healthy decisionmaking.
- Recognize the importance of healthy risk-taking by giving young people the chance to make their own decisions, even when it is not what adults agree upon.
- Understand that the adolescent brain is wired for risk and that child welfare practices designed to eliminate all risk are not developmentally appropriate for emerging adults. Re-assess policies and practices based on this understanding.
- Place young people in family-based settings—as opposed to group care—to provide environments for healthy risk taking and learning.

## 4. BE TRAUMA-INFORMED TO PROMOTE HEALING AND EMOTIONAL SECURITY

Adolescence is as critical a phase of human brain development as the early years of childhood. Just as early maltreatment and subsequent trauma can negatively impact brain development, positive experiences during adolescence can strengthen healthy neural connections and promote learning. Science has shown that even when a young person has experienced complex trauma, neuroplasticity

makes the brain capable of overcoming trauma and gaining resiliency in the face of risk. While child welfare staff and others working with young people in foster care do not need to be trauma specialists, they do need to engage in trauma-informed practice—that is, they need to understand the impact of young people’s experiences with trauma and ambiguous loss on their brain development and provide supports and opportunities to reverse that impact.

### Implementing this Recommendation

- Ensure that child welfare and other service systems’ staff are trauma-informed. They should:
  - Have core knowledge about trauma and its impact on child and youth development
  - Recognize that youth can be re-traumatized by the systems and services designed to help them
  - Create safe, comfortable and welcoming environments for young people
- Distribute information about trauma, complex trauma, ambiguous loss, neuroplasticity and resilience throughout child welfare agencies and care provider networks. Staff do not need to be trauma intervention specialists, but they do need to be able to assess and appropriately refer young people in their care. New information increases staff understanding about the importance of meeting the developmental needs of older youth in foster care.
- Create opportunities for young people to make sense of their life histories and current experiences. Acknowledge the impact of

“Staying in foster care is the last thing that youth in care who have had a bad experience want to hear. What if we package this different?”

—Sixto Cancel, age 19

ambiguous loss and its accompanying grief. Addressing such losses helps minimize negative impacts on identity development and relationship-building.

- Review current assessment tools to ensure that they reflect the new and emerging knowledge base about trauma and adolescent brain development. Revise these tools as needed or develop new tools.
- Promote positive and permanent family relationships that meet the young person’s needs for support and guidance. Support family members so that they are trauma-informed, understanding young people’s needs and behaviors.
- Develop trauma-specific services that can address the full range of needs presented by young people who have experienced complex trauma.
- Refer young people in need of trauma-specific interventions to skilled and caring clinicians.
- Establish peer support groups to help young people work through their experiences with ambiguous loss and develop a positive identity. Such groups can also serve as a form of social capital for young people in foster care.

## 5. EXTEND DEVELOPMENTALLY APPROPRIATE FOSTER CARE TO AGE 21

For all young people, including older youth and young adults in foster care, the process of becoming an adult is an extended one, lasting into the mid-twenties or even later. The brain continues to mature throughout this developmental period. Foster care for young people ages 18 to 21 must be quite different than foster care for younger children.

For these older youth, foster care is a voluntary service that addresses age-specific developmental needs: completing high school and beginning post-secondary education, securing employment, assuming leadership in the community, and forging healthy and nurturing connections with family and/or other caring adults. For older youth in foster care who have not yet achieved permanent family relationships through reunification, adoption or guardianship, the goal of achieving committed and enduring relationships is increasingly urgent. Without these vital assets, they face the possibility of leaving foster care disconnected from social relationships and networks that are important to their ongoing well-being.

### Implementing this Recommendation

- Allow young people to remain in foster care until age 21. Use this time to maximize progress toward adult roles and responsibilities in ways that are safe, healthy, and productive.
- Use extended foster care to focus on self-determination and resilience. Ensure that young people can skillfully navigate major life transitions, not simply the one from adolescence to adulthood.
- Focus extensively on helping young people find and engage with family. Support young people in creating or re-establishing lasting family relationships and other connections that they will need as adults.
- Provide young people with opportunities to practice decisionmaking and other aspects of adult roles. Allow them to learn from mistakes and experience while providing the “home base” that parents typically provide for their non-foster care peers.



# The Adolescent Brain: New Research and Its Implications for Young People Transitioning From Foster Care

## Introduction

All adolescents in foster care need, but do not generally receive, services that help them form committed family relationships, build an identity, and prepare for adult roles and responsibilities. Today’s child welfare systems generally use assessment and service delivery approaches that have been developed for very young or school-age children. Though developmentally appropriate for younger children, these approaches are typically applied to all young people in foster care, including teens and young adults whose developmental status and needs are substantially different. However, an emerging knowledge base offers the potential to develop new approaches that support older youth in foster care to become healthy, connected, productive young adults.

Over the past decade, there has been dramatic growth in the knowledge about adolescent brain and social development. We now know that youth do not move directly from adolescence to full-fledged adulthood, but instead move toward full adulthood through an interim period often

“Just knowing that brain development does not stop is an enhanced opportunity to overcome negative experiences. This new information not only identifies that traditional thought that youth are stuck at this place and doomed for failure but also outlines what we need to do to turn these traumatic experiences around and rewire the brain and help these youth be successful, regardless of what happened to them. By doing that we are ... establishing connections, connecting foster youth with resources in the community. It’s more than just a person or one thing that happens, it’s a continuum.”

—Josh Grubb, age 19

referred to as *emerging adulthood*. This knowledge can inform child welfare practices, producing substantial benefits for young people themselves and for society as a whole.

By the age of 25, young people need to be “connected,” that is, “embedded in networks—families, friends, and communities—that provide guidance, support, and help, both financial and otherwise, when they face the crises that are an inevitable part of the transition” to adulthood.<sup>2</sup> For older youth and young adults in foster care, being connected by 25 may be particularly challenging because they have often experienced disconnections from supportive networks that are readily available for their non-foster care peers. Family and caring adults are essential social capital for young people, and so the field of child welfare must make building social relationships and networks a priority in all services intended to promote permanency and prepare young people for adulthood.

The emerging science of adolescent brain development has deepened our understanding of adolescent capabilities and behaviors. Neuroscience has made clear that the brain is not “done” by the age of three years as previously believed. Instead, adolescence provides a powerful window of developmental opportunity—similar to the process in early childhood—as the adolescent brain

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2 Wald & Martinez, 2003, p. 2.

“We need a relational culture of optimism where the norm is to view hardships as learning opportunities. A constant reminder of that will help create a culture of optimism which will increase resilience, hope, and stability.”

—Beamer Aston, age 24

continues to develop.<sup>3</sup> Young people’s experiences during this period play a critical role in shaping their futures as adults. In particular, adolescence is a period of “use it or lose it” in brain development, opening up possibilities to build and practice resilience. During this period, young people can develop knowledge and skills that will positively serve them throughout adulthood. Opportunities for healthy brain and social development throughout adolescence and early adulthood are essential.

Science also has contributed to a more in-depth understanding of the impact of trauma on the developing brain. In the clinical realm, the past decades have seen the development of the key concepts of *complex trauma* and *ambiguous loss*. We now know that in order to be effective, practice and interventions must be trauma-informed if they are to address the identity- and grief-related issues that older youth and young adults in foster care are likely to experience.

In this paper, we examine this new knowledge base with a particular focus on the neuroscientific findings about adolescent brain development. We consider the implications for developmentally appropriate child welfare practice with young people in foster care, taking into account their experiences of trauma and loss. We first describe the characteristics and needs of the older youth and young adults who comprise a significant portion of the foster care population. Second, we discuss the specific aspects of the developmental knowledge base that relate to this older foster care population. Third, we provide recommendations that can guide child welfare agencies and others in serving older youth and young adults in foster care in ways that

3 Giedd, 2010.

are specifically tailored to their developmental status and needs. Finally, we pose questions for the child welfare field that are designed to promote critical conversations about developing, implementing, and evaluating developmentally appropriate practices for young people in foster care.

## Older Youth and Young Adults in Foster Care

Older youth and young adults represent a significant portion of the US foster care population. They have developmental needs and experiences that differ in important ways from those of younger children.

### THE NUMBERS

Approximately one-quarter (24 percent) of all people who enter foster care are age 14 and older.<sup>4</sup> The majority of these are either 15 or 16 years of age, and most young people who are in foster care at age 16 entered foster care as either 15 or 16 year olds.<sup>5</sup> Youth in care who are age 14 and older remain in foster care at least twice as long as the total foster care population, on average.<sup>6</sup>

The majority of young people ages 14 and older who leave foster care leave at age 18. When these young people leave, they are on their own. It is startling to consider that since FY 2002, more than 200,000 young people who left foster care were “emancipated,” that is, they left care without a legally sanctioned permanent family relationship to offer guidance and support as they made the transition

4 US Department of Health and Human Services, 2011a.

5 Wulczyn, 2009.

6 US Department of Health and Human Services, 2011a.

into adulthood.<sup>7</sup> Chapin Hall’s Midwest Evaluation of former foster youth (all of whom had aged out of foster care) at ages 23 and 24 found that almost half of these young adults experienced precarious economic conditions, including not having enough money to pay rent or utilities. Forty-two percent of the young men reported having been arrested and 23 percent reported being convicted of a crime. Two-thirds of the young women reported having been pregnant since leaving foster care.<sup>8</sup>

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Since FY 2002, more than 200,000 young people who left foster care were “emancipated,” that is, they left care without a legally sanctioned permanent family relationship to offer guidance and support as they made the gradual transition into adulthood.

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“Aging out” is most common among those who enter care as older youth. Eighty percent of youth who age out of care entered at age 10 or older; about half were 15 years of age or older.<sup>9</sup> An equally

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7 US Department of Health and Human Services, 2011a.  
8 Courtney, Dworsky, Lee, & Raap, 2010.  
9 Wulczyn, 2009.

“We as youth tend to base how much we can trust and love others on who has hurt and left us. We lock ourselves in a room and make it difficult for others to come in.”

—Eddy Vanderkwaak, age 20

troubling trend relates to those young people who have been freed for adoption. As they get older, these individuals are less likely to achieve permanency through adoption and are more likely to exit on their own.<sup>10</sup> Those who are most at risk of aging out are African Americans, males, and those with behavioral problems and special needs.<sup>11</sup>

### THE CHARACTERISTICS AND EXPERIENCES OF OLDER YOUTH AND YOUNG ADULTS IN FOSTER CARE

*Reasons for Entry into Care.* Young people often enter foster care with complex histories and family relationships. Like younger children, adolescents may experience chronic physical abuse<sup>12</sup> and neglect,<sup>13</sup> with long-term consequences for their health and well-being. In fact, the majority of young people in care come from families that experience the chronic stresses associated with persistent poverty. These families also experience discrimination and disparate outcomes related to

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10 Wulczyn, 2009.  
11 Maza, 2008.  
12 Farber & Joseph, 2002.  
13 Clark, Thatcher & Maisto, 2004.

Older children and youth in recent years have come to comprise an increasingly larger proportion of the foster care population in the United States. Their needs differ in significant ways from those of younger children for whom permanency has long been a primary goal. . . Older youth in foster care may be launched into adulthood directly from their placements with foster families, in group homes, or in institutional settings. Like all youth, they need a variety of preparatory training and experiential learning opportunities to transition successfully to adulthood. For youth in foster care, these transitioning experiences and learning opportunities are particularly vital.

—Kerman, Freundlich & Maluccio, 2009, p. 4

race, and histories of mental illness and drug and alcohol use. Not surprisingly, they have difficulty advocating for their children's needs. In short, both the families and communities of these adolescents have been unable to provide the consistent nurturing and emotional support that young people need to thrive.<sup>14</sup> A Washington State study found that many young people in the foster care system carry at least some emotional or behavioral consequences of their maltreatment and of their parents' inability to resolve the conditions that led to placement.<sup>15</sup>

*Race and Ethnicity.* In terms of race and ethnicity, the older youth population in foster care is quite similar to the younger foster care population. Both age groups reflect an over-representation of people of color. In FY 2010, 58 percent of young people in care were from minority backgrounds: 29 percent African American, 21 percent Hispanic, 2 percent American Indian/Alaskan Native, 1 percent Asian, and 5 percent of two or more races.<sup>16</sup> Research makes clear that youth of color experience different outcomes than their white counterparts.<sup>17</sup> In particular, young people of color are more likely to be removed from their families. They receive fewer vital services, have lower levels of financial support, and remain in care for longer periods of time. They are also less likely to be reunified with their parents.<sup>18</sup>

*Sexual Orientation.* Although the number of young people in foster care who are lesbian, gay, bisexual, transgender, or questioning (LGBTQ) is not known

precisely, some estimate that between 4 percent and 10 percent of youth in foster care are LGBTQ.<sup>19</sup> Others believe that the actual percentage may be higher.<sup>20</sup> Many LGBTQ youth experience verbal harassment and abuse while in foster care, and many run away from their foster care placements because of hostility toward their sexual orientation or gender identity.<sup>21</sup> This population has unique developmental needs, including aspects of their identity development.<sup>22</sup> There is growing understanding that more attention must be paid to the experiences and needs of these young people.

*Placement Settings.* Nationally, 15 percent of all young people in foster care are placed in congregate care settings—in either group homes or institutions.<sup>23</sup> Older individuals are more likely to be placed in congregate care: in FY 2009, 27 percent of young people ages 11 to 15 and 36 percent of young people ages 16 to 18 were in congregate care.<sup>24</sup> Studies of specific communities show even higher percentages of adolescents in congregate care settings. For example, one study of adolescents in foster care in a Midwestern state found that 42 percent lived in a setting such as a group home.<sup>25</sup> In another state's assessment of its services to adolescents in foster care, it was noted that 58 percent of the young people in the sample were in congregate care settings.<sup>26</sup> Nationally, more than 61,000 young people in care lived in congregate care settings

14 Burgess & Borowsky, 2010; Curtis & Alexander, 2010; Schneiderman, et al., 2010.

15 Berliner & Fine, 2001.

16 US Department of Health and Human Services, 2011a.

17 Center for the Study of Social Policy, 2010; General Accounting Office, 2007.

18 Hill, 2006.

19 Conklin, 2007; National Center for Lesbian Rights, 2010.

20 National Center for Lesbian Rights, 2010.

21 Desetta, 2003; Mallon, 1998.

22 Wilber, Ryan, & Marksamer, 2006.

23 US Department of Health and Human Services, 2011a.

24 Annie E. Casey Foundation, 2011.

25 Raghavan & McMillen, 2008.

26 Eisenbud & Kelly, 2006.

in FY 2010.<sup>27</sup> Not surprisingly, in such settings, opportunities to rebuild or build enduring relationships with family and caring adults are generally limited.<sup>28</sup>

*Emotional, Behavioral, and Developmental Needs.* Research documents the significant emotional, behavioral, and developmental needs of young people in foster care. One study found that up to 80 percent of young people in foster care have significant mental health issues.<sup>29</sup> A national study by the Urban Institute found that youth in foster care have higher levels of emotional and behavioral problems than their peers who are not in foster care and more often have physical, learning and mental health conditions that impact their psychosocial functioning.<sup>30</sup> Additional studies in several states and a nationally representative survey, the National Survey of Child and Adolescent Well Being, have found that between one-half and three-fourths of young people entering foster care exhibit behavioral or social competency problems that warrant mental health care.<sup>31</sup>

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In FY 2010, more than 61,000 young people in care lived in congregate care settings, where opportunities to rebuild or build enduring family relationships are generally limited, placing them at further risk of aging out without a family.

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Research also indicates that young adults in foster care are more likely to be treated with psychiatric medications. One study found that young people

in foster care are sixteen times more likely to receive psychiatric diagnoses and eight times more likely than their non-foster care peers to take psychotropic medications.<sup>32</sup> Further studies have found that children and youth in the child welfare system are at high risk of being treated aggressively with psychotropic drugs.<sup>33</sup>

Young people who remain in foster care longer than one year are also more likely to have multiple moves and relationship disruptions. Such instability has emotional and behavioral consequences. One study found that these youth are likely to experience poor school performance, drop out of school, rely on public assistance following their discharge from care, and have physical and mental health issues.<sup>34</sup> A Washington state study found that while some young people in long-term foster care had positive foster care experiences, others had significant developmental, emotional, and behavioral problems and had impaired functioning at home, at school, in the community, or in relationships with others.<sup>35</sup>

*Permanency and Aging Out Outcomes.* Research on permanency outcomes for older youth in foster care is limited, but it is known that they are less likely than younger children to be reunited with their families.<sup>36</sup> They are also less likely to have adoption as their permanency goal, or to be adopted.<sup>37</sup> For example, in FY 2010, only 3 percent of the 107,011 young people waiting to be adopted were ages 14 and older, and only 7

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27 US Department of Health and Human Services, 2011a.

28 Avery & Freundlich, 2005.

29 Dore, 2005.

30 Kortenkamp & Macomber, 2002.

31 Burns, et al, 2004; Leslie, et al, 2004.

32 Racusin, et al, 2005.

33 Landsverk, Garland & Leslie, 2002.

34 McDonald, 1996.

35 Berliner & Fine, 2001.

36 Wertheimer, 2002.

37 Wertheimer, 2002.

percent of those adopted from foster care in FY 2009 were in that age group.<sup>38</sup>

Lacking the opportunity to reunite with their families or to be adopted, these young people are more likely to age out of foster care. Studies consistently document poor outcomes for young people who age out. As a group, these individuals leave care without supports from their families or other caring adults. They also lack community connections. Studies document that they are more likely than their non-foster care peers to be involved with the criminal justice system, to have low educational attainment, to become pregnant, to experience homelessness, and to lack health insurance.<sup>39</sup> Additionally, young people who leave foster care at age 18 are, as adults, more likely to be unemployed or underemployed, to require long-term government support, and to experience life-long difficulties.<sup>40</sup> African American youth who age out of foster care fare even more poorly economically than their white counterparts.<sup>41</sup>

Young people with physical, mental health, and developmental disabilities may do especially poorly.

38 US Department of Health and Human Services, 2011a.

39 Kerman, Freundlich, & Maluccio, 2009.

40 National Governors' Association, 2010.

41 Goerge, et al., 2002; Dworsky & Courtney, 2000.

California researchers have estimated that about 15 percent of youth in foster care in that state have a serious physical or mental disability. These disabilities seriously impact these youth, who must meet the challenges of a mental or physical disability with virtually no assistance. At the same time, they must negotiate the housing, employment, and education challenges faced by all those who age out.<sup>42</sup> The state of Virginia has estimated that almost one-fifth (17 percent) of youth in foster care who are age 16 and older have been diagnosed with at least one disability—the most common condition being emotional disturbance. These young people are more likely to have a goal of Another Planned Permanent Living Arrangement (APPLA) and less likely to have a goal of “return to own home” than youth without disabilities.<sup>43</sup>

Additionally, recent research indicates that independent living programs have not been as successful as hoped in preparing young people for adulthood. A study by Courtney and colleagues (2008) examined a range of outcomes for young people participating in a life skills training program. The researchers found few impacts on any of the assessed outcomes in the areas of

42 John Burton Foundation, 2008.

43 Virginia Department of Social Services, 2009.

Ongoing positive family connections are protective factors against a range of health risk behaviors. Although the nature of relationships is changing, the continuity of family connections and a secure emotional base is crucial for the positive development of young people. Adolescents are moving towards becoming independent physically, emotionally and cognitively, and yet they are still growing. Young people still require stability in a home environment and a secure emotional base from which to explore and experience the world. This also provides them with somewhere to come back to for reassurance, support, and unconditional love in tough times.

—Howe, et al., 1999, p. 18.

housing, delinquency, pregnancy or receipt of documentation and accounts.

Given the realities of the large and growing population of older youth in foster care, the documented poor outcomes for youth who age out, and the limited effectiveness of current independent living programs, it is essential that we take a fresh look at the current child welfare service system. How can emerging neuroscientific knowledge inform a new, developmentally appropriate approach to serving these young people? What have we learned about the adolescent brain, social development, and emerging adulthood that can provide the foundation for a new, more effective service system?

## The Emerging Knowledge Base: A Foundation for Developmentally Appropriate Practice

An expanding knowledge base over the past decade has contributed to a deeper understanding of how to serve older youth and young adults in foster care in developmentally appropriate ways. Equipped with this knowledge, child welfare agencies and others can ensure that these young people are connected by 25 and can take into account their experiences of trauma and loss by, first and foremost, recognizing that the transition from adolescence to adulthood takes place through the interim phase of *emerging adulthood*.

### Key Terms

*Ambiguous loss:* A loss in which there is no verification of death, no certainty that the person will come back, or no assurance that the person will return to the way she or he used to be. This form of loss lacks clear boundaries and has no clear ending. There are often no culturally or societally recognized rituals for grieving or even for acknowledging the loss.

*Complex trauma:* The dual problem of exposure to multiple traumatic events and the impact of this exposure on immediate and long-term development. For young adults in foster care, traumatic events might include poverty, neglect, physical and sexual abuse, separation from and loss of family, or multiple moves and relationship disruptions.

*Emerging adulthood:* A developmental period during which a young person moves gradually from adolescence toward independence. This concept recognizes that a young person does not achieve independence at a pre-determined age.

*Resilience:* The ability to overcome adverse conditions and to function normally in the face of risk.

*Social capital:* Social networks and relationships; a bonding between similar people and a bridging between diverse people; fundamentally, the value of social networks and interactions.

*A more extensive glossary is at the end of this report.*

“It’s kind of like ‘sink or swim.’ If you don’t learn how to swim quick enough, you drown and there are no lifeguards around.”

—Nicole Byers, age 21

Child welfare agencies can support young people in foster care by:

- Acknowledging family and caring adults as essential *social capital* for young people as they gradually transition to adulthood
- Focusing on relationships and networks when providing all services to promote permanency and prepare young people for adulthood
- Developing youth- and family-engagement practices that are informed by the emerging science of adolescent brain development
- Understanding the impact of trauma on the developing brain—in particular, the concepts of *resilience* and *neuroplasticity*, which must inform trauma-specific mental health services and supports
- Recognizing the essential role of *positive youth development* in supporting healthy brain and social development
- Taking a *youth development* approach to developing services and creating opportunities for young people

#### FROM ADOLESCENCE TO ADULTHOOD: CONNECTED BY 25

Age 25 marks the convergence of full brain development, the completion of college and other postsecondary education, connections to employment, the pursuit of continuing education, the establishment of life partners and parenting roles, and other pursuits.<sup>44</sup> The concept of being

44 Wald & Martinez, 2003.

connected by 25 recognizes the complex technological, socio-economic, and political world that today’s young people face. In particular, it may now take longer than in the past for even well-supported young people to launch into successful adulthood.

Young adults who are connected by 25 have acquired the skills they need to participate in the labor force, establish their own households, and develop positive social networks.<sup>45</sup> Being connected to supportive relationships and social networks allows young people to love who they are, accept what they have experienced, and envision who they can become as productive young adults. Six interrelated factors have been identified as instrumental in achieving this goal: family supports, education and training opportunities, employment as a link to career paths, opportunities to contribute to one’s community, adequate health and mental health supports, and a web of supportive relationships that give meaning to life.<sup>46</sup>

It has become increasingly clear that successful transitions to adulthood flow from stability and continuity. Stability and continuity support the young adult’s ability to establish healthy relationships, including family of origin and emerging romantic relationships. They also help young people function at a high level of reading and financial literacy, manage family and work responsibilities in the 21<sup>st</sup> century’s technological society, and contribute to others’ well-being in neighborhoods and communities.<sup>47</sup>

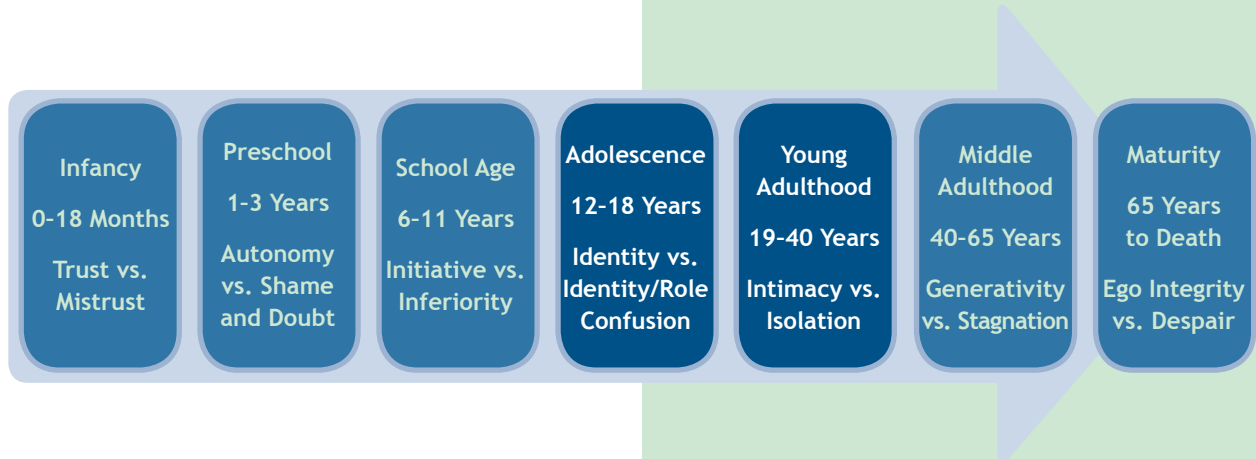
45 Wald & Martinez, 2003.

46 Altschuler, Stangler, Berkley, & Burton, 2009.

47 Altschuler, Stangler, Berkley, & Burton, 2009.

**Figure 1.** The Stages of Human Growth and Development: The Traditional Framework

Source: Erikson, (1950, 1977)



### **A DEEPER LOOK: THE CONCEPT OF EMERGING ADULTHOOD**

Adolescence and young adulthood have traditionally been viewed as stages that fall roughly in the middle of the human growth and development process. The stages of human development have been described by Erik Erikson and others (see Figure 1). In each stage, growth is expected to build on the developmental tasks mastered in the previous stage and to take place across multiple dimensions: cognitive/intellectual, social, emotional, behavioral, physical, and spiritual. Adolescence and young adulthood are

no exception. When stressful events or traumatic experiences occur, children, youth, and adults may temporarily regress to an earlier developmental stage or accomplishment.

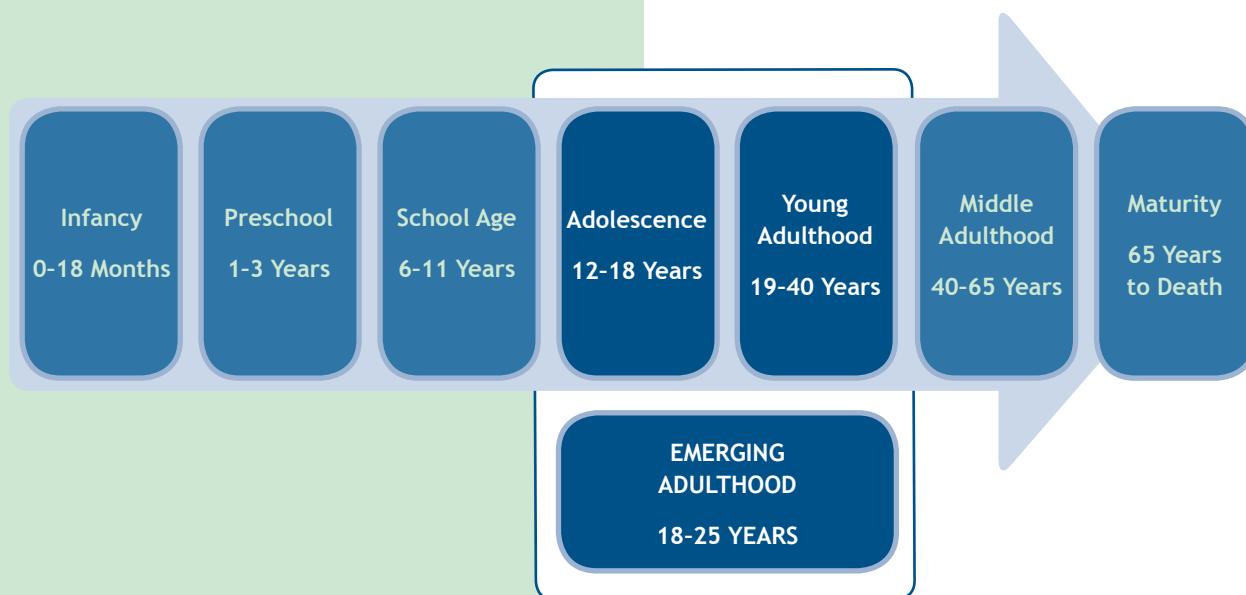
Over the past decade, there has been increasing recognition that young people do not move seamlessly from adolescence at age 18 to young adulthood at age 19, as the traditional model might suggest. Contemporary realities undermine the belief that young people become full-fledged adults in their late teens. As a result, support has grown for the concept of emerging adulthood, a period during which a young person moves toward

For today's young people, the road to adulthood is a long one. . . . From their late teens to their late twenties, they explore the possibilities available to them in love and work, and move gradually toward making enduring choices. Such freedom to explore different options is exciting and this period is a time of high hopes and big dreams. However, it is also a time of anxiety and uncertainty because the lives of young people are so unsettled, and many of them have no idea where their explorations will lead.

—Arnett, 2007, p. 3

**Figure 2.** The Stages of Human Growth and Development: Refining the Stages of Adolescence and Young Adulthood

Source: Arnett, 2007



independence rather than achieving it at a pre-determined age.<sup>48</sup> (see Figure 2).

*Emerging adulthood* describes the gradual transition that young people make to adulthood. This process is marked by gradual independence from family in the areas of residence, employment, education, finances, romance, and parenting.<sup>49</sup> At the same time, the goal of “independence” has increasingly been replaced with the goal of “interdependence.”<sup>50</sup> The concept of interdependence has two components. First, it refers to the ability of young people to depend upon others in areas in which

they may lack the full capacity to function on their own. The goal is for young people to be able to reach out and count on others for support when they do not yet have sufficient skill, energy, confidence, and/or time to manage their own tasks and experiences..<sup>51</sup> Second, interdependence allows young adults who have developed skills and confidence to connect with others. Community members and family who share the young person’s experiences, history, and culture can provide them with an ongoing sense of connectedness. Interdependent relationships are sustained over time and are based on the natural bonds that young people see as important.

48 Arnett, 2007.

49 Avery, 2009; Cohen, Kasen, Chen, Hartmark, & Gordon, 2003.

50 Antle, Johnson, & Barbee, 2009; Propp, Ortega, & NewHeart, 2003.

51 Propp, Ortega & NewHeart, 2003.

Adolescents generally are expected to achieve a range of specific tasks as they transition from adolescence to adulthood (see text box). The major developmental tasks of adolescence are to create a stable and secure identity and begin the process of becoming a complete and productive adult.<sup>52</sup> As the understanding of the complex transition from adolescence to adulthood has deepened, there continues to be general consensus about these developmental tasks—coupled with an

52 Archer & Waterman, 1994; Harris, 1988; Steinberg & Morris, 2001.

understanding that they now take longer to achieve. With all these complex tasks to master, researchers theorize that the consolidation of adult status likely occurs not at 18 or 21, but closer to age 30.<sup>53</sup>

Emerging adulthood has important implications for child welfare practice and programming. Young people in foster care do not automatically transition to adulthood when discharged at age 18 or older. Like all youth, they are on a gradual developmental trajectory from adolescence to full-

53 Cohen, et al., 2003.

## Tasks Required to Make the “Normal” Transition from Adolescence to Adulthood

Source: Labouvie-Vief, 2006.

The adolescent is expected to:

- ✓ Adjust to a new physical sense of self
- ✓ Adjust to new intellectual abilities
- ✓ Meet increased cognitive demands at school
- ✓ Expand verbal skills
- ✓ Develop a personal sense of identity
- ✓ Consolidate the capacity to control impulses, calibrate risks and rewards, regulate emotions, project the self into the future, and think strategically
- ✓ Establish adult vocational goals
- ✓ Gain emotional and psychological independence from parents
- ✓ Develop stable and productive peer relationships
- ✓ Learn to manage sexuality and a sexual identity
- ✓ Adopt a personal value system
- ✓ Develop increased impulse control and behavioral maturity

“Enduring and committed family relationships are essential components in a balanced person. Without positive relationships, you lack the support and energy you need on your journey to realizing your full potential.”

—Beamer Aston, 24

fledged adulthood that likely will not be achieved until at least age 25 or 26. As emerging adults with complex histories—histories often involving trauma and loss—they may need even greater support from family and community to complete the developmental tasks of this transitional phase.

### EMERGING ADULTHOOD AND FAMILY AS SOCIAL CAPITAL

The concept of *social capital* refers to social networks and social relationships. It can be thought of as a bonding between similar people and a bridging between diverse people.<sup>54</sup> Coleman describes social capital as the value that is created by investing in relationships with others through processes of trust and reciprocity.<sup>55</sup> Dekker and Uslaner state that social capital is fundamentally about how people interact with each other.<sup>56</sup> There are three recognized dimensions of social capital: (1) the *quantity* of an individual’s social relationships; (2) the *quality* of those relationships, including the nature of the interactions, shared activities, and affect; and (3) the *value* of the

resources that partners in social relationships can potentially make available to one another.<sup>57</sup>

For young people, social capital plays a significant role in three types of communities: (1) the family; (2) school; and (3) extracurricular groups, including religious communities, clubs and sports, and informal communities of friends.<sup>58</sup> It is within these communities that young people meet and associate with the most important people in their lives. They learn what is expected of them and what to expect from others, particularly adults. They also learn positive or negative lessons about the role of the individual in society.

Successful development over the years of emerging adulthood has been tied specifically to the young person’s relationships with his or her family.<sup>59</sup> The family serves as both a physical and an emotional base of operations as the young person explores the new roles of adulthood. As a physical base, parents provide a home, money, and other material support. As an emotional base, parents and extended family provide guidance,

54 Adler & Kwon, 2002; Dekker & Uslaner 2001; Uslaner, 2001.

55 Coleman, 1988, 1990.

56 Dekker & Uslander, 2001.

57 Astone, et al., 1999.

58 Henderson & Berla, 1994; Putman, 2000.

59 Arnett & Tanner, 2006; Cooney & Kurtz, 1996.

It is widely acknowledged that, despite years of effort at reform, most child welfare systems are doing a poor job of protecting children, especially adolescents who come into these systems. Recent federal legislation seeks to address some of these deficiencies, especially with respect to youth exiting foster care.

... Most programs help only a portion of emancipating youth and for relatively short periods after they turn eighteen. In contrast, most youth who are not in the child welfare system have substantial support from their families as they make the transition to adulthood; this support continues until youth are in their mid to late twenties. Foster youth need support for at least as long a period.

—Wald & Martinez, 2003, p. 23

wisdom, and community connections.<sup>60</sup> Parents' support for their children's healthy separation and individuation process and their adolescents' progress are predictors both of adolescent adjustment and of the ability to gain self-sufficiency as an adult.<sup>61</sup> It is therefore important to consider the role of family as social capital, especially in light of research that shows that over one-half of all young people spend time in a single-parent family.<sup>62</sup>

Family relationships and support influence the psychological development of emerging adults. They not only affect the young person's ability to develop healthy interpersonal skills, but also their capacity to form intimate relationships.<sup>63</sup> Family social capital plays a key role in educational attainment.<sup>64</sup> And students' perceptions of their own social capital have a direct effect on their academic self-concept and grades.<sup>65</sup>

Avery's work on social capital for youth in foster care focuses on the social support that parents or

other significant adults provide to promote their children's success in life.<sup>66</sup> She found that the most secure, longest-lasting, and strongest social capital for young people aging out of foster care is a permanent nuclear and extended family. Additionally, her study, as well as others, verified what many child welfare professionals already knew: young people in foster care maintain strong hopes for connection to their families of origin,<sup>67</sup> and many who age out return to live with their biological families.<sup>68</sup>

For young people in foster care, all aspects of social capital are critical—including planning for the future with one's birth family, making connections with siblings, and linking with supportive community members such as coaches and tutors. The urgency of achieving permanency for young people in foster care greatly intensifies as they approach adulthood. They will face significant challenges if they age out of foster care without a permanent connection with at least one caring adult.<sup>69</sup> Through permanency planning, child

60 Avery & Freundlich, 2009.

61 Allen & Hauser, 1996; Bell, Allen, Hauser, & O'Connor, 1996.

62 Demuth & Brown, 2004.

63 Masten, Obradovic, & Burt, 2006; Scharf, Maysseless, & Kivenson-Baron, 2004.

64 Sandefur, Meier, & Hernandez, 1999.

65 Etcheverry, Clifton & Roberts, 2001.

66 Avery, 2009.

67 Petr, 2008.

68 McCoy, McMillen, & Spitznagel, 2008.

69 Walters, et al, 2010.

The term *family social capital* represents the norms, social networks, and relationships between adults and children that are valuable for children while they are growing up. Thus, an important feature of family social capital is that it is invested in relationships that emerge through interpersonal interaction.

—Israel, Beaulieu, & Hartless, 2001, p. 45

welfare agencies can work to ensure that youth have families who can offer continuity of relationships, consistent parenting, and an opportunity to establish life-long family relationships.<sup>70</sup>

### EMERGING ADULTHOOD IN THE CONTEXT OF ADOLESCENT BRAIN DEVELOPMENT

Over the past decade, a growing body of research has documented what parents have long suspected: an adolescent’s brain is not yet an adult brain. Emerging scientific evidence shows that adolescence and young adulthood are periods of gradual and continuing brain development. This development begins in puberty and continues through the mid-20s.<sup>71</sup> Neuroscience also makes clear that support during this cognitive, social, and emotional development process can lead to healthy and constructive adulthood.<sup>72</sup> Adolescence is a time of both increased vulnerability and opportunity, when “exposure to a variety of influences [has] chances of lasting positive effects.”<sup>73</sup> The periods of adolescence and emerging adulthood therefore provide rich opportunities to support young people.

70 Maluccio & Fein, 1993.

71 Giedd, 1999.

72 Weinberger, Elvegag & Giedd, 2005.

73 Minden, 2004, p. 4.

Developmentally, adolescence is as critical as the first few years of life.<sup>74</sup> Opportunity, investment, and education are essential during this unique period so that young people can develop knowledge, skills, and confidence to carry throughout their lives.<sup>75</sup> As neuroscience has enriched the understanding of adolescent brain development, a number of key lessons have emerged that significantly inform developmentally appropriate child welfare services for young adults:

*Gradual development of the prefrontal cortex.* The brain’s frontal lobes—especially the prefrontal cortex, which governs reasoning, decisionmaking, judgment, and impulse control—are the last parts to reach full development.

Beginning in puberty, the frontal lobes undergo dramatic changes,<sup>76</sup> which become increasingly evident throughout adolescence. Adolescents and young adults begin to rely less on the limbic system—the emotional center of the brain—in making decisions and more on the frontal lobes, the seat of judgment and impulse control.<sup>77</sup>

74 Walters, et al., 2010.

75 Walters, et al., 2010.

76 Giedd, 1999.

77 McNamee, 2006.

Neuroscience, the scientific study of the biology of the brain, has made great strides over the past decade in revealing that remarkable changes occur in the brain during the second decade of life. Contrary to long-held ideas that the brain was mostly grown-up—“fully cooked”—by the end of childhood, it is now clear that adolescence is a time of profound brain growth and change. In fact, the brain of an early adolescent in comparison to that of a late adolescent differs measurably in anatomy, biochemistry, and physiology.

—Weinberger, Elvegag, & Giedd, 2005, p. 1.

*Shifting levels of dopamine.* The level of dopamine produced by the brain shifts during adolescence.<sup>78</sup> Dopamine is a chemical that links action to pleasure, and its redistribution can raise the

threshold of stimulus that is needed to feel pleasure. As a result, adolescents may no longer find activities that they previously enjoyed, such as family, neighborhood friends, or school time, exciting. They may seek new excitement

.....  
78 Spear, 2010.

## Key Neuroscience Terms

*Cerebral cortex:* The outer layer of the brain, which plays a key role in memory, attention, perceptual awareness, thought, language, and consciousness.

*Dopamine:* A chemical in the brain that affects concentration, memory, problem solving, and mental associations between action and pleasure.

*Gray matter:* The brownish-gray matter in the brain that is associated with intelligence and intellect. This type of brain tissue is composed primarily of cell bodies, along with their dendrites. White matter, by contrast, is made from nerve fibers. The purpose of gray matter is to pass along sensory input, gathering information from the sensory organs and other gray matter cells, and ensuring that it gets where it needs to go. The speed of communication is determined by the white matter. Gray and white matter are considered to be the central processing unit of the brain.

*Limbic system:* The part of the brain associated with processing and managing emotion and motivation.

*Myelination:* A process that strengthens neurons, speeding up communication between cells.

*Neurobiology:* The scientific study of the biology of the human brain.

*Neuroplasticity:* The ability of the brain to alter its structure in response to experience; the process by which the brain forms new neural pathways, removes old ones, and alters the strength of existing connections.

*Prefrontal cortex:* The part of the brain that governs a person's executive functions. These include reasoning, impulse control and advanced thought. The prefrontal cortex is the last part of the human brain to mature.

*Pruning:* A process in the brain through which unused or underused synapses are eliminated.

*Synapses:* The point of connection between two nerve cells.

*A more extensive glossary is at the end of this report.*

through increasingly risky behaviors.<sup>79</sup> Changes in dopamine, combined with other chemical and physical changes, help explain the challenges that adolescents often have in controlling impulses, maintaining successful social relationships, and engaging in long-term planning. They may also explain challenges in controlling emotional responses and maintaining self-discipline in education and employment activities. However, these challenges also present rich opportunities for youth to learn from experience. With adult support, young people can learn skills of self-regulation, coping, and resilience. Risk taking also has benefits. A willingness to take risks allows young people to explore adult behavior and privileges. It also helps young people achieve the normal developmental tasks of adolescence and emerging adulthood as they master increasing levels of challenge.<sup>80</sup>

*Pruning and myelination.* During adolescence, the gray matter of the brain begins to thin as the links between neurons that transmit and receive information—the synapses—undergo a pruning process. As in early childhood, unused synapses are pruned away while synapses that are used frequently become stronger.<sup>81</sup> This is known as a “use it or lose it” process. During adolescence, as many as 30,000 synapses may be lost per second over the entire cerebral cortex.<sup>82</sup> As unused synapses are pruned away, a process called myelination strengthens neurons, improving the connectivity between them and speeding up communication between cells. Pruning and myelination can have important long-term

79 Spear, 2010.

80 Spear, 2000

81 Sowell, 2001.

82 Rakic, Bourgeois, & Goldman-Rakic, 1994.

consequences as the parts of the brain that are used frequently are strengthened and the parts that are used less often weaken and die off.<sup>83</sup>

As Figure 3 shows, gray brain matter volume, after increasing at earlier ages, begins to thin starting around puberty. This change correlates with advancing cognitive abilities. Scientists believe this process reflects greater organization of the brain as it prunes redundant connections and enhances transmission of brain messages.<sup>84</sup>

*Gender Differences.* Science also has deepened our understanding of the differences in brain development between girls and boys. Researchers at the National Institutes for Science (NIS) have found that the most profound difference between girls and boys is not in any brain structure *per se*, but rather in the sequence and tempo of development of the various brain regions.<sup>85</sup> Among the key NIS findings is that girls reach the halfway point in brain development just before 11 years of age, whereas boys do so just before age 15. The study also concluded that a young woman reaches full maturity in terms of brain development between 21 and 22 years of age, whereas a young man does not reach this point until nearly 30 (see Figure 4).<sup>86</sup> These findings inform developmentally appropriate child welfare practice in gender-specific ways.

83 Sowell, 2001.

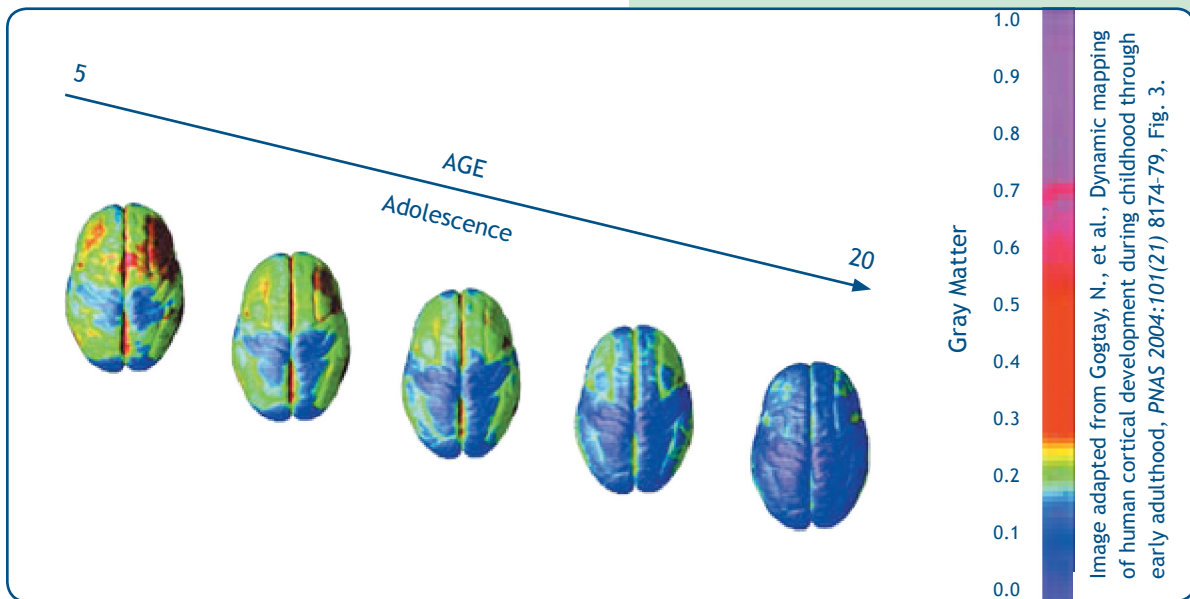
84 Society for Neuroscience, 2011.

85 Lenroot, et al., 2007.

86 Lenroot, et al., 2007.

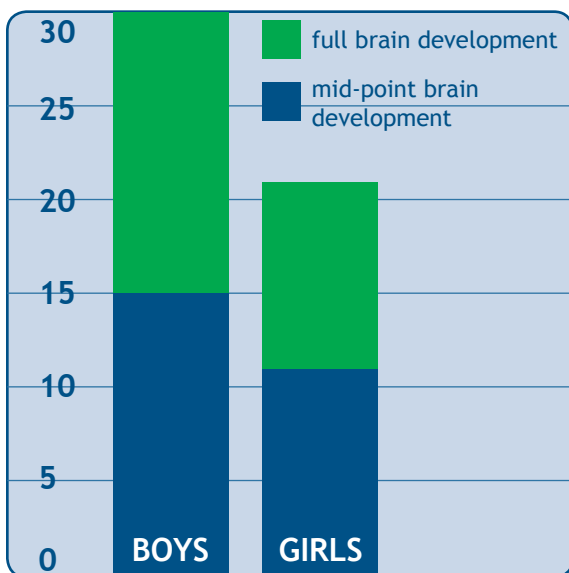
**Figure 3. Maturation of the Adolescent Brain**  
(MRI Images)

Source: Society for Neuroscience, 2011



**Figure 4. Brain Development in Boys and Girls**

Source: Lenroot, et al., 2007



## THE IMPACT OF TRAUMA ON CHILD AND ADOLESCENT DEVELOPMENT

Child and adolescent development first happen in the context of relationships with parents, siblings, and extended family members. Later, development expands to include adults and peers outside the family. Not surprisingly, consistently nurturing and supportive parenting relationships support positive child and adolescent development. Attachment refers to the close interpersonal connections that young children form with primary caregivers—psychological connections that permit them to have significance to each other. Bonding refers to the close interpersonal connections that adults, especially primary caregivers, form with the children in their care.<sup>87</sup> A nurturing early relationship forms the basis for secure attachment (for the child) and reciprocal bonding (for the parent).<sup>88</sup>

As Erikson and others have pointed out, it is through consistent and supportive parent, sibling, and community relationships that children and youth grow and thrive.<sup>89</sup> Through such relationships, children master the developmental tasks that support a sense of trust and self-confidence. They are able to develop a conscience, become productive in school, and socialize positively with peers. In short, supportive relationships help children form a healthy and solid identity.

When family and community supports are inconsistent, neglectful, or abusive, child and adolescent development can be negatively

87 Fahlberg, 1991.

88 Fahlberg, 1991.

89 Erikson, 1950; Erikson, 1977; Hughes, 2006.

impacted. Recent research allows us to recognize the conditions that influence whether young people get off to a promising or worrisome start. In particular, understanding the impact of inconsistent or traumatic experiences, complex trauma, and ambiguous losses on brain development can allow child welfare agencies to implement more effective services for young people.

### Trauma and Early Brain Development

Early family and community relationships are now recognized as crucial to young people's successful transitions to adulthood. The first three years of life are particularly critical and sensitive periods of brain development. It is during this period of early development that a child is expected to develop gross motor, fine motor, language, cognitive, and social skills.<sup>90</sup>

The brain's task for the first three years is to establish and reinforce connections among neurons. During this period, the number of connections among neurons—synapses—increases; in fact, the brain creates more synapses than it needs. Frequently used synapses become a permanent part of the brain; the synapses that are not often used are eliminated. This synaptic pruning explains why experience plays such an important role in wiring a young child's brain. Children who have many positive social and learning opportunities lay down synaptic networks that allow for continuing growth and development.<sup>91</sup> Essentially, they form a permanent neurological foundation for mastering the key developmental tasks of childhood and adolescence.

90 Boyse, 2010.

91 Gable, 2004.

“I wish someone would have told me what I am and what I am capable of.”

—Jen Ligali, age 24

However, when a child experiences unpredictability, chronic neglect, physical abuse, or sexual abuse early in life—sometimes called “toxic stress”<sup>92</sup>—there are profound immediate and long-term effects on brain development. Toxic stress affects the brain circuits that integrate the creation of meaning, the regulation of emotion, the organization of memory, and the capacity for interpersonal communication and empathy. These brain circuits are also responsible for social perception. As a result, interpersonal experiences, neurobiological development, and a foundation for functioning later in life go hand in hand.

Maltreatment impacts a child’s developing brain in the areas of social, psychological, and cognitive development, and these effects persist throughout the entire life span. The ability to regulate emotions and become emotionally attuned with others—tasks that adolescents are normatively expected to achieve—is related to the impact of nurturing or non-nurturing early experiences and the development of specific regions of the brain.<sup>93</sup>

In particular, studies show that trauma can disrupt and slow brain development. Young people who have experienced early emotional or

physical trauma may suffer from delays in brain maturation,<sup>94</sup> leaving them “behind” in brain development during adolescence. Because trauma impacts the child’s sense of self, others, and the world, these neurological delays affect emotional, social, and behavioral development. Early trauma therefore has a significant impact on future adaptation, affecting the individual’s ability to self-regulate and to relate to others.<sup>95</sup>

Adolescents who have experienced early trauma—for example, through neglect, physical or sexual abuse, separation from family and community, or multiple moves and relationship disruptions in foster care—may find it difficult to trust that adults will be there for them. Their brains have been “wired” to expect a non-supportive environment or sudden, arbitrary moves. During adolescence, young people also may react to earlier traumatic events. The adolescent’s understanding of early trauma may change or deepen, and the trauma may be experienced anew. It is not uncommon for early childhood traumas to be reactivated during this period, leading to the reemergence of problems that were thought to have been resolved earlier.<sup>96</sup>

92 Middlebrooks & Audage, 2008.

93 National Child Traumatic Stress Network, 2003.

94 McNamee, 2006.

95 Smith, 2011.

96 Becker, et al., 2003.

Stress during childhood, including maltreatment, may trigger the expression of genes that might otherwise have remained dormant. Negative experiences of abuse or neglect induce a cascade of chemical and hormonal changes in the brain that impede development and integration of various brain systems. Conversely, positive experiences and parent nurturing can strengthen healthy neural connections and promote learning.

— Stien & Kendall (2004).

“I was always in survival mode.”

—Oscar Delgado, age 19

### Complex Trauma

For young people in foster care, the term “complex trauma” has come to describe the dual problem of exposure to multiple traumatic events and the impact of this exposure on immediate and long-term outcomes.<sup>97</sup> For this population, common traumatic events include poverty, abuse or neglect, separation from and loss of family, multiple moves, and relationship disruptions. Studies show that complex trauma typically interferes with the formation of a secure attachment between a young person and caregiver—the primary source of safety and stability in a young person’s life.<sup>98</sup>

Over the long term, children and adolescents exposed to complex trauma are at high risk for ongoing physical and social difficulties. These young people often show an increased susceptibility to stress, an inability to regulate emotions without outside support, excessive help-seeking and dependency, and social isolation and disengagement.<sup>99</sup> Research bears out the strong relationship between trauma and emotional and behavioral challenges<sup>100</sup> and underscores the importance of adults being attuned to young people’s experiences of trauma and loss. While the

97 Cook, et al., 2007.

98 Cook, et al., 2005.

99 Cook, et al., 2007.

100 Prather & Golder, 2009; Song, Singer, & Anglin, 1998.

neurological effects of trauma are serious, trauma-informed services and supports can help youth heal and move forward successfully.

### Ambiguous Losses

In the 1970s, Pauline Boss defined an ambiguous loss as different from the loss normally associated with death. When there is an ambiguous loss, there is no verification of death, yet there is no certainty that the person will come back or return to the way she or he used to be.<sup>101</sup> Ambiguous losses have no clear boundaries and no clear ending. Often, there is no culturally or societally recognized ritual for grieving or even acknowledging what has been lost.<sup>102</sup>

In her 2008 study, Gina Samuels found that the many ambiguous losses embedded in the foster care experience produced relational consequences.<sup>103</sup> The loss of physical contact with parents and siblings, combined with multiple changes in placement and relationship disruptions, bring recurring ambiguities for young people. They cannot feel certain about what has happened to them, do not know who can be counted on for support, are unable to determine whether it is appropriate to move on, and have difficulty

101 Boss, 1999.

102 Boss, 2004.

103 Samuels, 2008.

Adolescence is a time of enormous opportunity and of enormous risk. And how the teens spend their time seems to be particularly crucial. If the “use it or lose it” principle holds true, then the activities of the teen may help guide the hard-wiring, actual physical connections in their brain.

—Dr. Jay Giedd, National Institute of Mental Health

knowing where they belong. When young people remain in foster care and do not return home, they report ambiguity around their family memberships. Even when they are adopted, the boundaries around the families they construct for themselves remain unclear.<sup>104</sup>

### Resilience and Brain Rewiring/Neuroplasticity

Although early childhood is a critical time for brain development, early trauma can be offset by later life experiences.<sup>105</sup> Research indicates that brain development is not complete by the age of three years, as was previously believed.<sup>106</sup> Because of the plasticity of the brain, neural connections can be rewired when the individual has the benefit of corrective experiences and relationships.<sup>107</sup> As a result, young people who have experienced abuse, neglect, or separation from family in early childhood can develop resilience when supported by safe, nurturing, and caring adults.<sup>108</sup> They can learn to thrive when provided with positive new learning experiences and developmental opportunities.<sup>109</sup>

Science provides important information on resilience and on the neuroplasticity of the brain—

104 Samuels, 2008.  
105 Etts, 2008.  
106 Giedd, 2010.  
107 van der Kolk 2006.  
108 Reed, 2006.  
109 Reed, 2006; Giedd, 2010.

information that is essential for child welfare practice with young adults who have experienced trauma and loss.

### Resilience

Resilience has been defined as the ability to overcome adverse conditions and to function normatively in the face of risk.<sup>110</sup> Resilience should be viewed as the outcome of an interactive process that takes into account the presence of risk factors, the level of risk exposure, and the strength of protective factors and adaptation.<sup>111</sup> Children and youth who are resilient handle stressful situations with effective coping skills.<sup>112</sup>

A number of internal assets or personal characteristics appear to promote resilience. These include social competence, a strong self-image, and a sense of purpose.<sup>113</sup> Studies also have identified resilience-promoting protective factors in the child's or youth's environment. One key protective factor is a caring, supportive relationship with at least one person.<sup>114</sup> In the context of growth and development, a single nurturing relationship has been found to make a major difference in a child's life.<sup>115</sup>

110 Jenson & Fraser, 2011; Luthar, Cicchetti, & Becker, 2000.  
111 Fraser, 2004.  
112 Jenkins & Keating, 1998.  
113 Benard, 1991.  
114 Masten & Reed, 2002.  
115 Newman & Blackburn, 2002; Reed, 2006; Berliner & Benard, 1995.

A qualitative synthesis of over 100 resiliency-related studies revealed that resilient children tend to have the following factors, all of which are related to social connection: good social skills and support from mentors or peers; a close connection to family; and a caring relationship with a caregiver. The [benefit of] connectedness . . . also shows up in the growing body of research on adolescents.

—Compas, Hinden, & Gerhardt (1995).

## Rewiring the Brain After Trauma: Neuroplasticity

Traditionally, the human brain had been seen as relatively hardwired and fixed.<sup>116</sup> However, new neurobiological findings show that effects of trauma—physical abuse, sexual abuse, or neglect—are not necessarily permanent. Neuroscience demonstrates that the brain is constantly forming new neural pathways, removing old ones, and altering the strength of existing connections. Neuroplasticity refers to the ability of the brain to alter its structure in response to experience.<sup>117</sup> Emerging science indicates that the window for psychobiological change does not close by age 3, upending the former deterministic view. Although the most rapid period of brain growth occurs during early childhood, the brain continues to change throughout adolescence and adulthood.<sup>118</sup>

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Science makes clear that rewiring of the brain is supported by healthy relationships with a caring adult.<sup>119</sup> It is also promoted by programs and services that provide young people with opportunities to learn through experience. In this way, they can develop skills and abilities

116 Garland & Howard, 2009.

117 Garland & Howard, 2009.

118 Gunnar, Herrera, & Hostinar, 2010; Mustard, 2010; Schwartz & Begley, 2003.

119 Chamberlain, 2008; van der Kolk, 2006.

that they can carry throughout their lives.<sup>120</sup>

Connection to caring, supportive adults has been found to exert a powerful impact in supporting the brain's altering of itself in healthy ways.<sup>121</sup>

Positive experiences that contradict a traumatized child's negative expectations are likewise critical to helping the brain to readjust itself.<sup>122</sup> The Guideposts for Success for Youth identify a five-element framework for creating this kind of positive change: (1) school-based preparatory experiences, (2) career preparation and work-based learning experiences, (3) youth development and leadership, (4) connecting activities, and (5) family involvement and supports.<sup>123</sup>

## Trauma-Informed Child Welfare Practice

The life histories of young people in foster care underscore the importance of trauma-informed child welfare practice. Such practice is characterized by the presence of basic knowledge about trauma and its impact on human development. Similarly, trauma-informed services are delivered in a way that acknowledges the role that neglect, loss, relationship disruptions, abuse, and violence play in the lives of many young people and families.<sup>124</sup>

Effective trauma-informed services recognize that youth can be re-traumatized by the systems and services designed to help them. Staff providing trauma-informed services refer young people to trauma-specific treatment in the community when needed. They also form collaborative relationships with youth, parents, and caregivers

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120 Walters, et al., 2010; van der Kolk, 2006.

121 van der Kolk, 2006.

122 van der Kolk, 2006.

123 National Collaborative on Workforce and Disability for Youth, 2009.

124 Harris & Fallot, 2001.

### The Nine Essential Elements of Trauma-Informed Child Welfare Practice

- Maximize the young person’s sense of safety
- Assist young people in reducing overwhelming emotions
- Help young people make new meaning of their trauma history and current experiences
- Address the impact of trauma and subsequent changes on the young person’s behavior, development and relationships
- Coordinate services with other agencies
- Utilize comprehensive assessments of the young person’s trauma experience and their impact on development and behavior to guide services
- Support and promote positive and stable relationships in the life of the young person
- Provide support and guidance to the young person’s family and caregivers
- Manage professional and personal stress

Source: The National Child Traumatic Stress Network (2008).

to offset traumatic experiences, and they create safe, comfortable, and welcoming environments for youth.<sup>125</sup> The National Child Traumatic Stress Network has developed nine “Essential Elements” for trauma-informed child welfare practice, which provide the foundation for helping young people build healthy relationships and connections (see text box on page 29).

#### Trauma-Specific Interventions

The case for trauma-specific interventions for young people in foster care is greatly strengthened by our new understanding of brain development. The impact of trauma on early brain development,

the role of complex trauma and ambiguous loss, and the powerful possibilities for rewiring the brain must all be taken into account in order to develop effective services for young people in foster care. In developing services, it is important to understand the ways that trauma can affect a young person both internally and externally, manifesting in both emotions and behavior. Emotionally, young people may experience grief when they lose something familiar, including home, parents, siblings, extended family, neighborhood and school friends, and even favorite objects and toys. Table 1 connects emotional and behavioral responses to trauma and lists the types of grief-related reactions that traumatized young people who are placed in out-of-home care may experience.

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125 Health Federation of Philadelphia, 2008.

**Table 1.** Responses to Trauma and Grief Related to Foster Care Placement

<b>Behavioral Responses to Trauma</b>		<b>Grief-Related Responses</b>
<b>Internalized Behaviors</b>	<b>Externalized Behaviors</b>	
Depression	Hostility	Feelings of: Shock Denial/isolation Guilt/shame Anger Bargaining Depression and despair Eventual adjustment and acceptance
Hopelessness	Anger	
Anxiety	Aggression	
Fear	Control battles	
Insecurity	Frustration	
Somatic complaints	Lack of self-awareness	
Attachment concerns	Over-compensation	
Delayed conscience development	Indiscriminate affections	
	Poor eye contact	
	Non-age appropriate behaviors	
	Sexualized behaviors	

Sources: Bayless, 1990; Kubler-Ross, 1969.

Research has consistently shown that the presence of developmental supports and opportunities (protective factors) provide a better indicator of whether youth will grow up to become successful, well-adjusted adults than does the presence or absence of risk factors (i.e. poverty, drug-use, etc.). By providing youth with caring relationships, high expectations, and opportunities for meaningful participation, we meet the fundamental developmental needs that must be fulfilled if children and youth are to become happy and successful. As these needs are met, youth develop the strengths (developmental outcomes) that will benefit them throughout their lives.

—California Healthy Kids Survey, 2011

As science has deepened our understanding of trauma-specific interventions in changing neurobiology,<sup>126</sup> evidence is mounting to support a number of specific interventions for childhood and adolescent trauma. They include psychotherapeutic methods, eye-movement desensitization and reprocessing (EMDR), and touch therapy.<sup>127</sup> These interventions capitalize on the ability of the child’s and the adolescent’s brain to grow and to repair “faulty connections” caused by the trauma. They can be provided by clinicians with specific training and expertise located in health care and other community settings.

126 Blaustein & Kinniburgh, 2007; Stolbach, 2007.

127 Stien & Kendall, 2003.

## POSITIVE YOUTH DEVELOPMENT

*Positive youth development* focuses on providing young people with information, skills, and supports so that they can be fully involved partners in their own planning and decisionmaking. It also involves young people in advocacy. These experiences help them gain the benefits that accrue from seeing the results of their own actions.

Science has begun to document the outcomes of positive youth development programs, demonstrating that positive youth development is more than a useful practice—it is a neurological imperative. Young people who are surrounded by a variety of development opportunities with adults encounter less risk and transition successfully into

### A Young Person’s Perspective on the Foster Care Experience

#### Haley Graupner, Nebraska Foster Youth Council Member

Written during a Youth Leadership Board meeting with Child Welfare Leaders to review Out-of-Home Care Reform (1/29/2011)

Foster care wears on child like a full-time job, family and credit card bills wear on an adult. Each day, it takes a piece of us that will take months, maybe years, to replace. You may think that the rehabilitation of a foster child’s soul only needs some super glue, a roll of duct tape, and a few Band-Aids to cover the scars, then wow, it’s good as new. But the only true solution is not to cover wounds, but to let the hands and hearts of a supportive relationship heal them. A supportive relationship, especially after aging out, [carries] us until we have recovered from a long journey through the system. [That person can] teach us, help us, give us the encouragement to keep moving forward, and, most importantly, forgive our mistakes without the price of handing us off to someone else. Every youth needs that one person or one family to rehabilitate a foster child’s soul. Each supportive relationship means something different to each youth. If you only do one thing for each youth, I feel it should be to find that one supportive person for them. By doing this you can give a youth a whole new world, which is more than anyone could ask for.

“We need a safe program/environment where youth are challenged to step up and take their future into their hands, but also with the assurance that there will be adults cheering them on and making themselves available to help when needed.”

—Eddy Vanderkwaak, age 20

adulthood at higher rates.<sup>128</sup> Studies also suggest that positive youth development programs can contribute to the academic success of young people.<sup>129</sup>

Positive youth development encourages the formation of internal and external assets so that young people can thrive. Adolescents and emerging adults must not only have a disciplined and productive sense of self, but must also have the developmental capacity to reach for the relationships that family and community offer. Young people need multiple positive interactions as a means to uncover, recognize, and be supported in pursuing their own unique aspirations. Family and community members can interact with young people through teaching and role modeling and guide them towards competence. Making these connections therefore is essential as young people learn to navigate life’s challenges in terms of possibility rather than risk.<sup>130</sup>

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128 Alberts, Chase, Naudeau, Phelps, & Lerner, 2006; Bandy & Moore, 2009; Eccles & Gootman, 2002; Lerner, 2004; Pittman, Irby, & Ferber, 2001; Pittman, 1999; Roth & Brooks-Gunn, 2000.

129 Search Institute, 2003.

130 Benson, 2008; Nakkula, 2006; Schneider-Munoz, 2011; Damon, 2008.

When positive youth development is integrated into child welfare policy and practice, adults work with young people to develop caring relationships with family members and others. Involving youth in their own case planning creates an opening for clinical work related to loss, grief, and trauma. Positive youth development involves clearly communicating high expectations across all life domains and providing young people with opportunities to participate meaningfully in their own planning and decisionmaking.

Positive youth development also identifies young people as experts on themselves and their families. It trusts them to be the best resource for identifying caring adults in their lives. Finally, it offers young people the opportunity to participate in broader issues impacting others and their communities.

## Recommendations

- 1 Take a positive youth development approach to all opportunities for young people in foster care
- 2 Provide “interdependent” living services that connect young people with family and caring adults
- 3 Engage young people in their own planning and decisionmaking
- 4 Be trauma-informed to promote healing and emotional security
- 5 Extend developmentally appropriate foster care to age 21

## Recommendations

The goal for young people with foster care experiences, like all other youth, is to be successfully connected by 25. They must have planned opportunities to develop knowledge, skills, and the supportive family and community relationships necessary for success as adults. Historically, child welfare services have unevenly met the developmental needs of younger children and generally have not addressed the unique developmental needs of older youth. However, developmentally appropriate practice is needed for children and young people of all ages.

Given the emerging knowledge base about the brain's continuing development throughout adolescence and early adulthood, it is clear that a different set of child welfare approaches, services, supports, and programming is needed to engage and serve young adults in foster care. This new developmental approach must recognize the concept of emerging adulthood and be designed to support overall youth development. In sum, it must provide these young people with the array of relationships, knowledge, and skills they need to successfully transition to full adulthood.

The following recommendations describe how to put in place essential elements of developmentally appropriate practice when working with older youth and young adults in foster care.

### 1. TAKE A POSITIVE YOUTH DEVELOPMENT APPROACH TO ALL OPPORTUNITIES FOR YOUNG PEOPLE IN FOSTER CARE

Positive youth development is not merely a good practice but is a neurological imperative. Positive youth development is especially critical for young people in care who may be experiencing

“If you don't have anybody that believes in you, how do you believe in yourself? That's one of the biggest thing that foster youth deal with—nobody cares if they succeed, so they think, ‘Well, why do I care if I succeed?,’ which is sad.”

—Mike Peno, 22

developmental delays as a result of trauma and loss. Adolescence is a period of “use it or lose it” in brain development: When young people are actively engaged in positive relationships and opportunities to contribute, create, and lead, they “use it” to develop their skills to become successful adults. If these supports are not present, they may “lose” opportunities for healthy brain development that can prepare them for their adult years. It is through the formation of internal and external assets—including family and community—that young people thrive. Multiple positive relationships are essential in supporting them in achieving their unique aspirations. The chemistry of the adolescent brain is what often causes young people to seek new excitement through increasingly risky behaviors. Young people need positive youth development opportunities so that they can engage in healthy risk taking via constructive, meaningful activities.

### Implementing this Recommendation

- Use a positive youth development approach for all young people in foster care, including those who may be experiencing developmental delays due to trauma and loss.
- Focus on the development of internal and external assets so that young people thrive.
- Continually provide young people with opportunities to connect with their families and communities.
- Intentionally create opportunities for involvement in extracurricular and community groups. Such activities ensure that young people spend time with multiple caring adults.
- Provide young people with the information, skills, and supports they need to drive the

“I like guiding. I understand I may not have the best knowledge, but it is my life. I will be an independent adult. The decisions being made affect me for a lifetime.”

—Samanthya Amann, age 20

direction of their own lives. Help them see the results of their choices and actions.

- Frequently discuss with young people their strengths, interests, talents, goals, and aspirations. Help them clarify their goals and aspirations.
- Provide young people with the resources to pursue a passion that may lead to a sense of purpose in their lives. Examples of resources might include materials such as musical instruments or art supplies, the means to attend events related to their interests, or the opportunity to take classes that will help them develop their skills.

## **2. PROVIDE “INTERDEPENDENT” LIVING SERVICES THAT CONNECT YOUNG PEOPLE WITH FAMILY AND CARING ADULTS**

Science has shown that diverse social relationships and networks—the essence of social capital—are crucial to healthy development and functioning. They act as protective factors that build young people’s knowledge, skills, and confidence and aid in the successful transition to adulthood, resilience, and recovery from trauma. It is imperative that all systems interacting with older youth in foster care help them to create social capital through relationships with family (including siblings), other caring adults, the neighborhood and community, and peers. Although independent living services produce some benefits by imparting knowledge and certain skills, they have not been effective in supporting young people in building and sustaining social capital. Young people in foster care must experience “interdependent living” so that they gain the knowledge, practical skills, and social capital that will support them into adulthood.

## **Implementing this Recommendation**

- Connect young people in foster care with family members—parents, siblings, members of the extended family—and other caring adults. Such efforts should be ongoing and should begin as early as possible. Provide support to help these relationships become lifelong and perhaps legal.
- Give young people opportunities to develop relational competencies—the skills they need to form and maintain healthy relationships. Assist them in building social relationships and networks.
- Make all possible efforts to keep young people in one community where they can establish connections. A wide range of adults, such as mentors or teachers, can provide young people with a sense of rootedness. These individuals also act as role models, providing opportunities to develop adult skills and relationships.
- Minimize barriers to normal relationships. Efforts might involve providing transportation to events or making it easier in other ways for young people to have a part-time job, spend time with friends, date, and participate in a range of social and faith-based events.
- Place young people in family-based settings where social, educational, and employment activities are supported as normal adolescent behaviors. Do not use congregate care settings. By their nature, these are not conducive to supporting youth in engaging activities that help them “practice” for adulthood, or to helping young people build social capital.

### 3. ENGAGE YOUNG PEOPLE IN THEIR OWN PLANNING AND DECISIONMAKING

Providing young people with opportunities for healing and corrective relationship experiences helps to “rewire” adolescents’ brains for effective decisionmaking as adults. And youth engagement in planning and decisionmaking is widely known as best practice in meeting the needs of young people in foster care. Combining these two approaches by engaging young people in their own transition plans makes the most of a period of profound brain development. The resulting plan is more effective because it has the endorsement of the young person, and the planning process has provided a safe opportunity for the young person to learn from mistakes of judgment and practice adult roles alongside others on the team.

#### Implementing this Recommendation

- Use strength-based planning processes that are directed by the young people themselves. Promote young people’s active engagement in all discussions and decisionmaking. Encourage young people to lead meetings whenever possible.
- Create partnerships between young people and adults. These partnerships should be with adults who can model self-determination and healthy decisionmaking.
- Recognize the importance of healthy risk-taking by giving young people the chance to make their own decisions, even when it is not what adults agree upon.
- Understand that the adolescent brain is wired for risk and that child welfare practices designed to eliminate all risk are not developmentally appropriate for emerging

“Some helpful things adults did to help me make sense of some of the things in my past was: first to acknowledge that it happened and that I didn’t have to do it alone. I was encouraged not to own the ‘label’ but to keep going and to not let it be a hindrance or roadblock.”

—Former Foster Youth, age 20

adults. Re-assess policies and practices based on this understanding.

- Place young people in family-based settings—as opposed to group care—to provide environments for healthy risk taking and learning.

### 4. BE TRAUMA-INFORMED TO PROMOTE HEALING AND EMOTIONAL SECURITY

Adolescence is as critical a phase of human brain development as the early years of childhood. Early maltreatment and subsequent trauma can negatively impact brain development, but positive experiences during adolescence can strengthen healthy neural connections and promote learning. Science has shown that even when a young person has experienced complex trauma, neuroplasticity makes the brain capable of overcoming trauma and gaining resilience in the face of risk. Although child welfare staff and others working with young people in foster care do not need to be trauma specialists, they do need to engage in trauma-informed practice—that is, they need to understand the impact of young people’s earlier experiences with trauma and ambiguous loss on their current functioning and provide supports and opportunities to promote healthy recovery and brain development.

#### Implementing this Recommendation

- Ensure that child welfare and other service systems’ staff are trauma-informed. They should:
  - Have core knowledge about trauma and its impact on child and youth development
  - Recognize that youth can be re-traumatized by the systems and services designed to help them

“Staying in foster care is the last thing that youth in care who have had a bad experience want to hear. What if we package this different?”

—Sixto Cancel, age 19

- Create safe, comfortable and welcoming environments for young people
- Distribute information about trauma, complex trauma, ambiguous loss, neuroplasticity and resilience throughout child welfare agencies and care provider networks. Staff do not need to be trauma intervention specialists, but they do need to be able to assess and appropriately refer young people in their care. New information increases staff understanding about the importance of meeting the developmental needs of older youth in foster care.
- Create opportunities for young people to make sense of their life histories and current experiences. Acknowledge the impact of ambiguous loss and its accompanying grief. Addressing such losses helps minimize negative impacts on identity development and relationship-building.
- Review current assessment tools to ensure that they reflect the new and emerging knowledge base about trauma and adolescent brain development. Revise these tools as needed or develop new tools.
- Promote positive and permanent family relationships that meet the young person’s needs for support and guidance. Support family members so that they are trauma-informed, understanding young people’s needs and behaviors.
- Develop trauma-specific services that can address the full range of needs presented by young people who have experienced complex trauma.

- Refer young people in need of trauma-specific interventions to skilled and caring clinicians.
- Establish peer support groups to help young people work through their experiences with ambiguous loss and develop a positive identity. Such groups can also serve as a form of social capital for young people in foster care.

## 5. EXTEND DEVELOPMENTALLY APPROPRIATE FOSTER CARE TO AGE 21

For all young people, including older youth and young adults in foster care, the process of becoming an adult is an extended one, lasting into the mid-twenties or even later. The brain continues to mature throughout this developmental period. Foster care for young people ages 18 to 21 must be quite different than foster care for younger children. For these older youth, foster care is a voluntary service that addresses age-specific developmental needs: completing high school and beginning post-secondary education, securing employment, assuming leadership in the community, and forging healthy and nurturing connections with family and/or other caring adults. For older youth in foster care who have not yet achieved permanent family relationships through reunification, adoption or guardianship, the goal of achieving committed and enduring relationships is increasingly urgent. Without these vital assets, they face the possibility of leaving foster care disconnected from social relationships and networks that are important to their ongoing well-being.

### Implementing this Recommendation

- Allow young people to remain in foster care until age 21. Use this time to maximize progress toward adult roles and responsibilities in ways that are safe, healthy, and productive.
- Use extended foster care to focus on self-determination and resilience. Ensure that young people can skillfully navigate major life transitions, not simply the one from adolescence to adulthood.
- Focus extensively on helping young people find and engage with family. Support young people in creating or re-establishing lasting family relationships and other connections that they will need as adults.
- Provide young people with opportunities to practice decisionmaking and other aspects of adult roles. Allow them to learn from mistakes and experience while providing the “home base” that parents typically provide for their non-foster care peers.

## Questions for the Field

The rapidly expanding knowledge base on emerging adulthood, adolescent brain development, the impact of trauma, and positive youth development provides a strong foundation for the creation of a new, developmentally appropriate type of child welfare practice with young people in foster care. It also presents questions that we must work to answer in several key areas:

- *Reframing Foster Care for Youth Ages 18 to 21.* How can child welfare systems best make the philosophical and programmatic shifts needed to provide foster care for young people ages 18 through 21? How can these systems meet young people’s unique developmental needs for both autonomy and family supports and connections? How can they balance the normative risk taking of adolescence with the agency’s mandate to protect?
- *Developing Trauma-Informed and Trauma-Specific Expertise.* How do we ensure that child welfare systems provide trauma-informed services at the front line of practice? How do we strengthen the skills of child welfare staff in minimizing the trauma youth experience in foster care (such as through multiple placement changes)? How can we help child welfare staff gain trauma-informed knowledge and skills in working with all youth as well as special

groups of youth (LGBTQ youth, youth with disabilities, and youth of color) who may have specific needs? How do we help staff identify young people who need trauma-specific clinical interventions? How do we build community resources that can provide evidence-based, trauma-specific interventions? What are some “best approaches” to providing quality, evidence-based services that address the trauma? How can such services build resilience and optimize the benefits of the “use it or lose it” principle?

- *Assessing the Impact of Psychotropic Medication on Brain Development.* What effect do anti-psychotic, anti-depression, and other drugs have on brain development for the large

number of young people in foster care who are prescribed these medications? How do these medications affect the rich opportunities for neurological development that adolescence provides for these young people?

- *Fully Incorporating the New Knowledge Base into Practice.* This paper describes the significant emerging knowledge base that impacts how youth in foster care are served, and it discusses the implications of this knowledge for developmentally appropriate practice with these youth. How can the field of child welfare take full advantage of this information and actively incorporate it into practice?

#### **For More Information About . . .**

##### **Adolescent Brain Development:**

PBS Frontline. Inside the Teenage Brain: Adolescent Brains Are a Work In Progress. Available at: <http://www.pbs.org/wgbh/pages/frontline/shows/teenbrain/work/adolescent.html>Emerging

##### **Adulthood:**

Arnett, P. (2007). Emerging adulthood. Available at: [http://www.jeffreyarnett.com/EmerAdul\\_Chap1.pdf](http://www.jeffreyarnett.com/EmerAdul_Chap1.pdf)

##### **Resilience in Adolescents:**

Guttman, L.M., Brown, J. Akerman, R. & Obolenskaya, P. (2010). Change in well being from childhood to adolescence: Risk and resilience. Available at: <http://www.learningbenefits.net/Publications/ResReps/ResRep34.pdf>

##### **Social Capital:**

Stone, W. & Hughes, J. (2001). Social capital: Linking family and community? Available at: <http://www.aifs.gov.au/institute/pubs/papers/stone5.html>

## Glossary

*Ambiguous loss:* A form of loss in which there is no verification of death, no certainty that the person will come back, or no assurance that the person will return to the way she or he used to be. This form of loss is characterized by having no clear boundaries, no clear ending, and often no culturally or societally- recognized rituals for grieving or even acknowledging what has been lost.

*Cerebral cortex:* The outer layer of the brain that plays a key role in memory, attention, perceptual awareness, thought, language, and consciousness.

*Complex trauma:* The dual problem of exposure to multiple traumatic event and the impact of this exposure on immediate and long-term outcomes. For young people in foster care, examples of traumatic events may include poverty, neglect, physical and sexual abuse, separation from and loss of family, multiple moves, and relationship disruptions.

*Dopamine:* A chemical in the brain that affects concentration, memory, problem-solving, and mental associations between action and pleasure.

*Emerging adulthood:* A developmental period during which a young person moves gradually from adolescence toward independence, rather than achieving adulthood at a pre-determined age.

*Gray matter:* The brownish-gray matter in the brain that is associated with intelligence and intellect. This type of brain tissue is composed primarily of cell bodies, along with their dendrites. White matter, by contrast, is made from nerve fibers. The purpose of gray matter is to pass along sensory input, gathering information from the sensory

organs and other gray matter cells and ensuring that it gets where it needs to go. The speed of communication is determined by the white matter, so one could think of the gray and white matter as the central processing unit of the brain.

*Limbic system:* The part of the brain associated with processing and managing emotion and motivation. *Myelination:* A process that strengthens neurons, improving the connectivity between them and speeding up communication between cells.

*Neurobiology:* The scientific study of the biology of the human brain.

*Neuroplasticity:* The ability of the brain to alter its structure in response to experience; the process by which the brain forms new neural pathways, removes old ones, and alters the strength of existing connections.

*Prefrontal cortex:* The part of the brain that governs a person's executive functions of reasoning, impulse control, and advanced thought; the last part of the human brain to mature.

*Pruning:* A process in the brain through which unused or underused synapses are eliminated.

*Resilience:* The ability to overcome adverse conditions and to function normatively in the face of risk.

*Social capital:* The value that is created by investing in relationships with others. Social capital reflects bonding between similar people and bridging between diverse people, with norms of trust and reciprocity.

*Synapse:* The point of connection between two nerve cells.

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JIM CASEY

**YOUTH**

OPPORTUNITIES  
INITIATIVE

222 South Central, Suite 305

St. Louis, MO 63105

Phone: 314-863-7000

Fax: 314-863-7003

[www.jimcaseyyouth.org](http://www.jimcaseyyouth.org)