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Understanding Health Risks for Adolescents in Protective Custody

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Understanding Health Risks for Adolescents in Protective Custody

In the United States, children enter child welfare protective custody when concerns about child maltreatment (ie, physical abuse, sexual abuse, emotional abuse, neglect) elevate to the point that the child is determined to be at imminent risk of harm.¹⁻³ In those instances, the state becomes the legal custodian of the child, and the child is typically removed from the physical custody of the parent or guardian and placed with a licensed nonrelative caregiver (ie, foster care), with a relative (ie, kinship care), in congregate care (ie, group homes, residential treatment), or in semi-independent or independent living programs (IL) where they reside in an apartment with or without a roommate. In 2016 there were more than 430,000 children in protective custody.⁴ The majority of these children resided in foster care (49%) or kinship care (32%). A smaller subset were placed in congregate care (12%) or IL (2%); these placement types occur more frequently for adolescents than for younger children. The purpose of this study is to describe the health status of adolescents in protective custody, including rates of mental health concerns, chronic medical concerns, and health risk behaviors (eg, substance use, sexual risk) prior to emancipation.

The health of children in protective custody is a common concern in the US because studies have frequently demonstrated increased health concerns among children at the time they enter protective custody compared to children not in protective custody.⁵⁻¹¹ This includes an increase in acute health concerns (eg, injury, infections),¹²⁻¹⁴ an increase in chronic health concerns (eg, neurologic abnormalities, asthma),^{13,15} and an increase in mental and behavioral health concerns (eg, developmental delays, psychiatric disorders).^{12,13,16,17} The majority of studies have evaluated the health of all children entering custody.^{8,12,13,16} Less attention has been paid to the ages of children being evaluated, despite known differences in the frequency of acute and chronic conditions across ages 0 to 18 years. Among studies examining differences in the rates of detection of health concerns by age, younger children are more likely to experience concerns related to elevated lead, upper respiratory infections, chronic conditions, and developmental delays.^{12-14,18,19} In contrast, older youth are more likely to experience mental health concerns, sexually transmitted infections, unintended pregnancy, and substance use concerns.^{13,14,20-22}

Evidence of increased health concerns when children enter custody have informed policies and best-practice guidelines²³ requiring health evaluations at the time of entry into custody,^{7,24-26} with the assumption that

diagnosing health concerns early will ensure interventions are provided and health will improve.^{27,28} This has also informed the establishment of clinical services specifically for youth in custody.²⁹⁻³⁴ However, tracking health during the time that youth are in protective custody is challenging, primarily because dates of entry into custody and exit from custody are frequently not included in the electronic health record and children in custody receive healthcare services from a variety of sources, including primary care, urgent and emergency care, and health departments.³⁵ Placement instability and multiple episodes in custody also frequently lead to changes in healthcare providers. As a result, health records for children in protective custody are often spread across multiple healthcare systems and are unavailable for health researchers to understand child health needs.^{36,37} To address these barriers, researchers have leveraged billings data for Medicaid, the federally funded health insurance program that provides payment for healthcare services. Those findings have demonstrated that healthcare costs for children in protective custody are up to 6 times higher than for children not in protective custody.^{5,6,20} Costs are primarily associated with behavioral and mental health service provision,^{6,20,38-40} therapeutic interventions,⁵ and emergency department utilization.^{41,42} Primary and preventive care also appears to be more frequently utilized by children in protective custody compared to the general population.⁴³ Together, these findings point to an increased health burden for children when they enter custody and while they are in custody, with some variation in health needs by age. However, billings data is both biased⁴⁴ and limited in that it cannot speak to the health status of the children it reflects, and it is difficult to determine the medical concerns (eg, chronic conditions, chief complaints) underlying the diagnostic codes billed to the insurance provider.⁴⁵ The electronic health records of children in protective custody, when they are available, often offer a more detailed and nuanced account of children's health.

While the primary focus of research related to the health of children in protective custody has been at the time of entry into custody, two additional lines of inquiry have examined the health status of children once they exit protective custody. The first has compared the health of children reunified with family members to children who were not reunified and remained in protective custody. Those studies suggest that the mental health of children who remain in protective custody is improved compared to children reunified,^{46,47} and that mental health service engagement declines following reunification,⁴⁸ which would suggest that children are experiencing health benefits by being in custody.

The second program of research has compared the health of adults who emancipated from protective custody to data on adolescents and young adults never in custody.⁴⁹⁻⁵² Those studies consistently indicate that the poor health documented for children in protective custody persists well into adulthood; young adults who emancipate from protective custody report poorer health, lower quality of life, and increased health risk behaviors compared to young adults in the general population.^{50,53-55} This includes increased mental health conditions, substance use, sexually transmitted infections, unintended pregnancy, and HIV diagnosis. Young people who emancipate from foster care also experience significant morbidity related to incarceration (30% by age 21⁵⁶), homelessness (24% by age 24⁵⁷), substance use (25% by age 26⁵⁰), and psychiatric illness (up to 30%⁵⁰) with an estimated cost of nearly \$5.7 billion for each cohort who emancipates from foster care annually.⁵⁸ Differences persist even when socioeconomic status is taken into account.⁵⁵ Thus, there is divergent evidence as to whether the health of children improves while they are in protective custody. Several factors could be contributing to these discordant findings, including the source of reporting (ie, self-report vs. parent report), age range (ie, children vs. adolescents), permanency outcome (ie, reunification vs. emancipation), length of time in custody, and placement experiences. Given the evidence that adolescents have more health problems following emancipation and some unique health concerns compared to younger youth in custody, it is particularly important to understand the health needs of young people in custody who are at risk for emancipation. The current gap in knowledge about health status for this age-group is problematic. Understanding rates of mental health concerns, chronic medical conditions, and health risk behaviors for adolescents *while they remain in protective custody* would inform the delivery of prevention and intervention efforts to curtail poor health outcomes.

While age is likely a critical mechanism for distinguishing among youth in protective custody at risk for particular health concerns,^{59,60} additional characteristics and experiences are also at play. Specifically, research among youth in protective custody has demonstrated differences in healthcare use and health needs for boys and girls.^{61,62} For example, boys are more likely to receive inpatient and outpatient psychiatric services.^{59,63} Further, minority youth have historically received fewer services than their white non-Hispanic peers in foster care.^{59,64-66} Maltreatment history has also been linked to health concerns,¹⁷ with developmental delay more common for neglected youth and mental health concerns and health risk behaviors more prominent among youth

experiencing physical or sexual abuse.⁶⁵⁻⁶⁹ Neglect is also associated with an increase in the total number of health concerns identified at the time of placement.¹³ Finally, experiences in child welfare, including placement type, number of placement changes, and length of time in custody also impact health outcomes.^{41,66,70-76}

To address current gaps in knowledge of the health status of adolescents in protective custody, this study leveraged linked electronic health records and child welfare administrative records for 351 foster youth ages 15 and older to identify rates of mental health concerns, chronic medical concerns, and health risk behaviors (eg, substance use, sexual risk) prior to emancipation. Factors placing adolescents at risk for health concerns were also examined, including demographic characteristics (eg, gender, age, race and ethnicity), maltreatment history (ie, primary reason for removal), and child welfare characteristics (eg, length of time in custody, placement type, placement stability). It was hypothesized that health concerns would vary by gender, age, and maltreatment type. Further, it was expected that longer lengths of time in custody, placement instability, and placement in congregate or IL settings would be associated with poorer health.

METHODS

Participants

This research aims to describe the mental health conditions, chronic medical conditions, and health risk behaviors of adolescents in protective custody and predictors of risk. All 351 participants in this study were adolescents in protective custody of Hamilton County, Ohio, between April 2015 and December 2015, inclusive. All participants were in child welfare protective custody for at least 12 months. Participants included 175 males and 176 females between the ages of 15 and 21.

Procedures

Data from this sample were extracted from electronic health records (EHR) at Cincinnati Children's Hospital Medical Center (CCHMC) and linked to data extracted from the State Automated Child Welfare Information System (SACWIS). Data from EHR were extracted for all healthcare encounters between July 1, 2012, and December 31, 2015. EHR data included encounter location (eg, emergency department, adolescent medicine clinic), encounter type (eg, sick-visit, annual physical), diagnoses (eg, mental health, chronic medical conditions), and past medical history for each encounter at CCHMC.

Study data were extracted from SACWIS and EHR systems by trained informatics experts familiar with each system. A data-sharing agreement and institutional review board approval were in place to cover these activities. SACWIS and EHR data were linked by use of shared identifiers in both data systems (eg, name, date of birth, address history).

Measures

Mental health conditions were coded from chief complaints and diagnosis fields at each health care encounter and included depression, anxiety, ADHD, post-traumatic stress disorder, and behavior disorders. All mental health conditions were classified based on categories from the Diagnostic Statistical Manual of Mental Disorders V (DSM-V).

Chronic medical conditions were coded from EHR data and included allergies, abnormal body mass index (BMI), diabetes, and asthma. Coding was based on chief complaints, diagnosis, and past medical history. Medical conditions were considered chronic if they were expected to last for 12 months or longer and increased the need for medical oversight or healthcare use, consistent with the definition used by the Maternal and Child Health Bureau.⁷⁷

Health risk behaviors were defined as substance use and sexual risk behaviors. Substance use included alcohol, tobacco, marijuana, and illicit substances extracted from chief complaints, laboratory screenings, and self-report clinical measures. Sexual risk behaviors included unintended pregnancy, lack of contraception, and sexually transmitted infections (suspected and confirmed) extracted from chief complaints and laboratory screenings.

Maltreatment history included primary reason for removal coded as dependency = 0, neglect = 1, parental substance use = 2, emotional abuse = 3, physical abuse = 4, sexual abuse = 5, and child behavior problems = 6. This information was provided by the child welfare agency. Child welfare characteristics were also provided by the child welfare agency and included length of time in custody, placement type (ie, Certified Approved Relative or Nonrelative family-type placements = 0, Group Home or Residential congregate care = 1 or Independent Living = 2), placement stability as measured by the number of placement changes, and lifetime episodes in custody. Demographic characteristics included in the study were gender, age, and racial or ethnic minority status, coded from SACWIS and the EHR.

Analytic Plan

Once variables were coded, univariate and bivariate statistics were examined for all predictors and outcome variables in STATA 14.0. Frequencies of health concerns were examined by type of mental health condition, chronic medical condition, and health risk behavior. To inform model development, patterns of categorical predictors with each health outcome were examined using chi square analyses, while continuous predictors and each health outcome were examined using t-tests. Multivariate logistic regression was conducted to examine associations among multiple predictors and the presence of each health outcome.

RESULTS

Descriptive statistics for all study variables are provided in Table 1. The sample was primarily African American (68.4%) or white non-Hispanic (27.3%). Approximately half of the sample was female (50.1%) and all youth were between the ages of 15 and 21 (M age = 18.3; SD = 1.3). Most foster youth were in custody for dependency (42.6%) or child behavior problems (21.1%). Foster youth spent an average of 51.7 months in protective custody, with between 1 and 4 lifetime episodes in custody. Adolescents were living in IL (44.5%), family-style placement (37.5%), or congregate care (18.0%).

A complete description of health concerns and their frequencies is provided in Table 2. Almost half (41.6%) of foster youth in this sample had a mental health condition, with depression (24.5%) and behavior disorders (eg, oppositional defiant disorder; 22.2%) most common. Other mental health conditions included ADHD (10.5%), trauma and stressor-related disorders (7.7%), and neurodevelopmental disorders (6.2%).

A similar proportion of adolescents (41.3%) experienced a chronic medical condition, primarily allergies (11.1%) or weight-related concerns, such as obesity (10.8%). Other chronic medical conditions included vision and hearing problems (9.4%), asthma (5.4%), and neurological problems (5.4%).

Health risk behaviors were identified for 56.7% of youth, with 39.6% of adolescents using substances and 37.0% engaging in risky sexual behaviors; 20.0% experienced both types of health risk behaviors. The most common substances used were tobacco (29.6%), marijuana (27.3%), and alcohol (14.5%). The most common risky sexual behaviors were inconsistent condom use (18.5%), sexual debut before age 16 (18.5%), and experiencing an unintended pregnancy (23.3% of females).

In bivariate analyses, race, placement type, and length of time in custody were associated with having a mental health condition, such that

mental health conditions were more likely in white youth (χ^2 (349) = 5.66, $p = .02$), youth in congregate placement settings (χ^2 (337) = 7.147, $p = .03$), and youth with longer lengths of time in custody (t (249) = 3.40, $p < .01$). More episodes in custody was associated with having a chronic medical condition (t (218) = 2.11, $p = .04$). Gender, age, and placement type were associated with exhibiting health risk behaviors, such that health risk behaviors were more likely in females (χ^2 (349) = 5.84, $p = .02$), older youth (t (249) = -2.03, $p = .04$), and youth in congregate placement settings (χ^2 (349) = 16.69, $p < .01$).

Results for the multivariate logistic regression models are provided in Table 3. Informed by bivariate analyses, all models included gender, minority status, age, placement type, length of time in custody, and number of custody episodes as predictors. Estimates for the model predicting mental health conditions indicated that the odds of having a mental health condition were significantly higher for those with longer stays in protective custody. Age, minority status, number of episodes in custody, and the number of placements were not predictive of a mental health condition. The odds of having a chronic medical condition were higher for those with more custody episodes. Age, minority status, length of time in custody, and number of placements were not significantly predictive of a chronic medical condition. Finally, the odds of exhibiting health risk behaviors (ie, substance use, sexual risk behavior) were higher for females and those in independent living placements. Age, minority status, length of time in custody, and number of custody episodes were not significantly predictive of exhibiting health risk behaviors.

DISCUSSION

The purposes of this study were to describe the health status of adolescents in protective custody who were approaching emancipation from child welfare, and to examine predictors of mental health conditions, chronic medical conditions, and health risk behaviors. Importantly, all adolescents in this sample were in protective custody for at least 12 months, with a mean time in custody of 51.7 months – or slightly more than 4 years. Thus, these findings reflect the health status of young people who have spent an extended period in custody and are preparing to emancipate. The results of this study indicate that adolescents in protective custody who are approaching emancipation are at increased risk for mental health conditions, chronic medical conditions, and health risk behaviors *before they emancipate*. Further, while gender, minority status, age, placement type, length of time in custody, and number of

custody episodes are all associated with health risks, only gender, placement type, length of time in custody, and number of custody episodes were significant predictors of health outcomes in multivariate analyses. This indicates that females, those in non-family placement settings, and those in custody for longer periods and over multiple episodes are at greatest risk for health concerns. These findings point to a general need for coordinated services to address mental health and acute and chronic medical concerns for adolescents in protective custody, with particular attention to young women, youth in congregate care and IL, and youth who have been in the system the longest.

In many ways, the health concerns identified for youth in this study who were in protective custody are similar to those identified for youth who had already emancipated.^{50-52,55,78} The Midwest Study results indicated that approximately 23.2% of emancipated adults received or wanted to receive treatment for a mental health condition, 11.7% experienced a chronic medical condition, 25% engaged in substance use, and 33% experienced a sexually transmitted infection in early adulthood. The measures used for the Midwest Study are not perfectly aligned with the measures available in the EHR; however, this study's findings suggest that the rates reported among adults likely reflect patterns of behavior and health needs established earlier in adolescence.

While understanding who is at greatest risk generally is important, it is also critical to distinguish among types of health concerns. In this study, 42% of youth experienced a mental health condition, with depression, behavior disorders, and ADHD most common. This is consistent with other studies suggesting a prevalence of mental health conditions between 37% and 43%,^{17,21} with depression, behavior disorders, and ADHD occurring most frequently.¹⁷ Surprisingly, the rate of trauma and stressor-related conditions was low in this sample, at 8%. While a rate of 8% was also reported by McMillen and colleagues,¹⁷ it is inconsistent with other studies^{79,80} and may indicate a failure to diagnose trauma and post-traumatic stress disorder in this sample. Thus, rates of mental health conditions may be underestimated for this sample. Interestingly, longer lengths of time in custody was the only significant predictor increasing risk for mental health conditions in multivariate analyses where age, number of placement changes, and other demographic variables were included. There are two potential reasons for this relationship: (1) it could be that adolescents in custody longer have more opportunity to have their mental health conditions diagnosed and treated; and (2) it could be that when children spend extended periods in custody, their mental health suffers, resulting in increased mental health concerns. Future studies examining

the onset of symptoms and time to diagnoses for youth in custody may aid in probing these mechanisms. Regardless, this suggests that as adolescents remain in custody, additional mental health services and supports are warranted.^{52,54} Unfortunately these are often the very youth who opt out of participating in mental health services,^{52,66} making them the hardest to reach. In the absence of consistent mental health care while in custody and following emancipation,^{52,65,66} the risk for longer-term deficits in education, employment, and other poor social outcomes is high.^{49,50,55} For that reason it is critical to address mental health conditions and ensure that evidence-based approaches to treatment are available for these youth before they emancipate. Programs to bridge mental health treatment from adolescence to adulthood^{52,81-85} may also aid in improving mental health outcomes for this population of young people.

Chronic medical conditions were observed for 41% of youth before emancipation, similar to rates found in other studies of children entering protective custody¹¹ and children in protective custody for 1 year or longer.¹⁹ The most common conditions detected in this study were allergies (11%), weight-related concerns (11%), and vision and hearing problems (9%). While distinct from other studies of protective custody youth, where asthma and respiratory conditions were most prevalent,¹⁹ the rate of allergies detected in this study is still lower than national prevalence estimates in the US,⁸⁶ likely indicating that allergies are not always captured in the EHR data extracted for this study. The findings about weight-related concerns in this study are consistent with previous studies reporting that weight concerns are observed in between 8% and 38% of individuals with a history of protective custody.^{16,87} This study's finding that hearing and vision problems were a frequent concern is also consistent with previous studies of foster youth, with our rates lower than those previously reported.¹² Chronic medical conditions (eg, obesity, asthma) do frequently require increased surveillance.⁸⁸ While previous studies have indicated higher healthcare utilization among youth in protective custody, they have not demonstrated a match between type of healthcare utilization and underlying health needs (ie, a youth with diabetes seeing an endocrinologist on a regular basis vs. having many emergency department visits and admissions for poor glucose control). Additional research is warranted to evaluate whether there is a disconnect between chronic medical condition and medical services received, in order to identify whether better alignment between healthcare utilization and health needs would improve overall health for these youth.

Of note, only episodes of custody were significantly predictive of having a chronic medical condition in multivariate analyses. This may

reflect that children with chronic medical conditions are at increased risk of entering protective custody.¹⁹ However, medical neglect as a primary reason for removal was not observed in this sample, suggesting that there may be a more complex set of circumstances contributing to youth with chronic medical conditions re-entering protective custody. Regardless of reason, these findings suggest that a robust proportion of teens approaching emancipation require additional medical oversight and may benefit from healthcare coordination as they transition from protective custody to independence and between pediatric and adult healthcare systems.⁸⁹⁻⁹¹ Reports from emancipated young people indicate that this is absent, suggesting a critical gap in our healthcare delivery for this population.^{50,51,55}

Descriptive statistics also indicate that the majority of adolescents (56.7%) are engaging in health risk behaviors, with equal numbers of youth engaging in substance use and risky sexual behaviors. One in 5 youth reported engaging in both substance use and sexual risk taking. This is consistent with previous studies indicating that health risk behaviors are higher for adolescents in or emancipated from protective custody than the general population,^{22,50,92,93} contributing to higher rates of unintended pregnancy,⁹⁴ early transitions to parenting,⁹⁵ more frequent sexually transmitted infection diagnoses,^{51,78} and increased substance use and addiction⁹⁶ around the time young people emancipate from protective custody. Importantly, this study's findings suggest that health risk behaviors do not appear following emancipation; rather, they are consistently occurring *while youth are still in protective custody*. While extending foster care to age 21 or beyond is important for maintaining services and keeping youth connected to resources,⁹⁷⁻¹⁰¹ it is likely not enough to curtail the health risk behaviors observed in adulthood. Studies examining approaches to decreasing health risk behaviors during adolescence and while youth are still in custody will be critical for addressing these concerns. Importantly, substance use and risky sexual behaviors are linked not only to other health concerns^{102,103} but also to academic performance,¹⁰⁴ employment,¹⁰⁵ criminal behavior,¹⁰⁶ and homelessness.¹⁰⁷ By addressing health risk behaviors in adolescence and before emancipation, poor health and social problems may also be minimized in the transition to adulthood.

Multivariate analyses indicate that women are most likely to engage in health risk behaviors. This is counter to the literature suggesting that young men are more likely to engage in substance use and risky sexual behaviors in the general population^{108,109} and in studies of emancipated youth.⁵⁰ However, among youth in protective custody, young women are

frequently identified at greater risk,⁶¹ consistent with the findings in this study. Women are also more likely to seek healthcare services,¹¹⁰ and therefore it may be that there was more opportunity to capture health risk behaviors in the medical records of the young women in this study. Studies examining health risk behaviors among youth approaching emancipation that do not rely exclusively on the EHR are needed to tease out this gender difference. If it is the case that young women in protective custody are at higher risk, their more frequent engagement with the healthcare system could be leveraged to offer interventions to prevent or reduce this health burden.

These findings also suggested that those in non-family-style settings are more likely to experience health risk behaviors. Given that risk behaviors can contribute to adolescents being disrupted from family-style settings^{111,112} and placed in congregate care, this is not surprising. However, it remains unclear whether health risk behaviors increase once youth are placed in IL or congregate care; this is an important area for future research. Whether placement type is providing increased opportunity for health risk behaviors or is merely associated with increased health risk behaviors, discussions with youth in these placement settings about their substance use and risky sexual behaviors is warranted. Given that young people with a history of protective custody involvement report limited access to contraception or reproductive health care^{113,114} and that rates of substance use are higher for youth in protective custody compared to youth in the community,⁹⁶ services addressing these areas of health *while youth are still in custody* are critical. In the absence of evidence to disentangle the timing of health risk behaviors and placement settings, it is likely equally important to address these health risk behaviors while adolescents are still in family-style settings to curtail the onset of substance use and risky sexual behaviors and possibly also improve placement stability.

Together, these findings make an important contribution to the emerging literature addressing health risks for adolescents in protective custody. Specifically, findings suggest that adolescents approaching emancipation from protective custody already have high rates of mental health conditions, chronic medical conditions, and health risk behaviors. Further, youth with longer lengths of time in custody, more custody episodes, non-family-style placements, and young women are at particular risk. In light of known morbidities experienced by young people in the years following emancipation from foster care--including 30% facing incarceration⁵⁶, 24% experiencing homelessness⁵⁷, 25% using illicit substances⁵⁰, and nearly one third being diagnosed with psychiatric

illness⁵⁰--intervention to support young people while they are still in custody is clearly warranted.

While these findings point to important opportunities for intervention during a critical window in the lifespan of young people, they should be interpreted within the context of several limitations. First, limited information from the child welfare record, related to demographics and child custody, were available. Additional details related to multiple investigations for maltreatment and types of maltreatment beyond reason for removal, for example, were not provided by the child welfare agency and may be relevant for identifying subsets of youth at risk. Second, the sample was drawn from a single child welfare agency and healthcare system. While all youth between ages 15 and 21 who were in custody for at least 12 months were included, some of the findings for this study may not generalize to other communities. Replicating these findings in other regions will be an important next step. Finally, these analyses reflect associations among demographic and child welfare characteristics and health risks, and this study cannot speak to the cause of health concerns in this sample. By describing these associations, this study takes a necessary first step in understanding causal mechanisms of health risks. Future studies examining causal mechanisms by accounting for a more complex set of predictors and covariates assessed longitudinally will be important to understand health risks for adolescents emancipating from protective custody.

Despite these limitations, this study points to a high burden of mental health conditions, chronic medical conditions, and health risk behaviors among young people in protective custody who are approaching emancipation. In light of this, there is a critical need to identify, address, and ensure resources for adolescents preparing to emancipate from protective custody. Supports and resources that address mental health conditions, chronic medical conditions, and health risk behaviors should be delivered *prior to emancipation* while providers and caseworkers have the opportunity and resources available to meet the needs of these vulnerable young people. Without services to address mental health, chronic conditions, and health risk behaviors while youth are still in custody, and bridge services to support youth as they transition out of custody, it will be impossible to ensure the well-being of young people following emancipation.

References

1. Hornor G. Children in foster care: what forensic nurses need to know. *J Forensic Nurs.* 2014;10(3):160-167.
2. Simms MD. Foster children and the foster care system, part I: history and legal structure. *Curr Probl Pediatr.* 1991;21(7):297-321.
3. Murray KO, Gesiriech S. A brief legislative history of the child welfare system. Philadelphia, PA: Pew Commission on Children in Foster Care; 2004.
4. US Department of Health and Human Services. The AFCARS Report No. 24 – Preliminary FY 2016 Estimates as of October 20, 2017. 2017.
5. Takayama JI, Bergman AB, Connell FA. Children in foster care in the state of Washington. Health care utilization and expenditures. *JAMA.* 1994;271(23):1850-1855.
6. Harman JS, Childs GE, Kelleher KJ. Mental health care utilization and expenditures by children in foster care. *Arch Pediatr Adolesc Med.* 2000;154(11):1114-1117.
7. Simms MD, Dubowitz H, Szilagyi MA. Health care needs of children in the foster care system. *Pediatrics.* 2000;106(suppl 3):909-918.
8. Hansen RL, Mawjee FL, Barton K, Metcalf MB, Joye NR. Comparing the health status of low-income children in and out of foster care. *Child Welfare.* 2004;83(4):367-380.
9. Beal SJ, Greiner MV. Children in nonparental care: health and social risks. *Pediatr Res.* 2015;79(1-2):184.
10. Jee SH, Simms MD. Health and well-being of children in foster care placement. *Pediatr Rev.* 2006;27(1):34-36.
11. Stein RE, Hurlburt MS, Heneghan AM, et al. Chronic conditions among children investigated by child welfare: a national sample. *Pediatrics.* 2013;131(3):455-462.
12. Chernoff R, Combs-Orme T, Risley-Curtiss C, Heisler A. Assessing the health status of children entering foster care. *Pediatrics.* 1994;93(4):594-601.
13. Takayama JI, Wolfe E, Coulter KP. Relationship between reason for placement and medical findings among children in foster care. *Pediatrics.* 1998;101(2):201-207.
14. Greiner MV, Beal SJ, Nause K, Staat MA, Dexheimer JW, Scribano PV. Laboratory screening for children entering foster care. *Pediatrics.* 2017;140(6):e20163778.
15. Halfon N, Mendonca A, Berkowitz G. Health status of children in foster care. The experience of the Center for the Vulnerable Child. *Arch Pediatr Adolesc Med.* 1995;149(4):386-392.
16. Hochstadt NJ, Jaudes PK, Zimo DA, Schachter J. The medical and psychosocial needs of children entering foster care. *Child Abuse Negl.* 1987;11(1):53-62.
17. McMillen JC, Zima BT, Scott LD Jr, et al. Prevalence of psychiatric disorders among older youths in the foster care system. *J Am Acad Child Adolesc Psychiatry.* 2005;44(1):88-95.
18. Horwitz SM, Simms MD, Farrington R. Impact of developmental problems on young children's exits from foster care. *J Dev Behav Pediatr.* 1994;15(2):105-110.
19. Jee SH, Barth RP, Szilagyi MA, Szilagyi PG, Aida M, Davis MM. Factors associated with chronic conditions among children in foster care. *J Health Care Poor Underserved.* 2006;17(2):328-341.

20. Halfon N, Berkowitz G, Klee L. Mental health service utilization by children in foster care in California. *Pediatrics*. 1992;89(6, pt 2):1238-1244.
21. Heneghan A, Stein RE, Hurlburt MS, et al. Mental health problems in teens investigated by US child welfare agencies. *J Adolesc Health*. 2013;52(5):634-640.
22. James S, Montgomery SB, Leslie LK, Zhang J. Sexual risk behaviors among youth in the child welfare system. *Children Youth Serv Rev*. 2009;31(9):990-1000.
23. American Academy of Pediatrics. Healthy Foster Care America website. 2018.
24. American Academy of Pediatrics. Committee on Early Childhood, Adoption and Dependent Care. Developmental issues for young children in foster care. *Pediatrics*. 2000;106(5):1145-1150.
25. Leslie LK, Hurlburt MS, Landsverk J, Rolls JA, Wood PA, Kelleher KJ. Comprehensive assessments for children entering foster care: a national perspective. *Pediatrics*. 2003;112(1, pt 1):134-142.
26. Jaudes KP, Champagne V, Harden A, Masterson J, Bilaver LA. Expanded medical home model works for children in foster care. *Child Welfare*. 2012;91(1):9-33.
27. Bergman AB. The shame of foster care health services. *Arch Pediatr Adolesc Med*. 2000;154(11):1080-1081.
28. Jee SH, Tonniges T, Szilagyi MA. Foster care issues in general pediatrics. *Curr Opin Pediatr*. 2008;20(6):724-728.
29. Simms MD. The foster care clinic: a community program to identify treatment needs of children in foster care. *J Dev Behav Pediatr*. 1989;10(3):121-128.
30. Szilagyi M. The pediatrician and the child in foster care. *Pediatr Rev*. 1998;19(2):39-50.
31. Horwitz SM, Owens P, Simms MD. Specialized assessments for children in foster care. *Pediatrics*. 2000;106(1, pt 1):59-66.
32. Bean A, Gamino L, Pierce P, Shropshire D, Wallace K. Health care for children in foster care. *J Okla State Med Assoc*. 2004;97(9):360-363.
33. Risley-Curtiss C, Stites B. Improving healthcare for children entering foster care. *Child Welfare*. 2007;86(4):123-144.
34. Greiner MV, Beal SJ. Developing a health care system for children in foster care. *Health Promot Pract*. 2018;19(4):621-628.
35. Mekonnen R, Noonan K, Rubin D. Achieving better health care outcomes for children in foster care. *Pediatr Clin North Am*. 2009;56(2):405-415.
36. Pasztor EM, Hollinger DS, Inkelas M, Halfon N. Health and mental health services for children in foster care: the central role of foster parents. *Child Welfare*. 2006;85(1):33-57.
37. Greiner MV, Ross J, Brown CM, Beal SJ, Sherman SN. Foster caregivers' perspectives on the medical challenges of children placed in their care: implications for pediatricians caring for children in foster care. *Clin Pediatr (Phila)*. 2015;54(9):853-861.
38. Halfon N, Berkowitz G, Klee L. Children in foster care in California: an examination of Medicaid reimbursed health services utilization. *Pediatrics*. 1992;89(6, pt 2):1230-1237.
39. dosReis S, Zito JM, Safer DJ, Soeken KL. Mental health services for youths in foster care and disabled youths. *Am J Public Health*. 2001;91(7):1094-1099.

40. Rubin DM, Alessandrini EA, Feudtner C, Mandell DS, Localio AR, Hadley T. Placement stability and mental health costs for children in foster care. *Pediatrics*. 2004;113(5):1336-1341.
41. Rubin DM, Alessandrini EA, Feudtner C, Localio AR, Hadley T. Placement changes and emergency department visits in the first year of foster care. *Pediatrics*. 2004;114(3):e354-e360.
42. Jee SH, Antonucci TC, Aida M, Szilagyi MA, Szilagyi PG. Emergency department utilization by children in foster care. *Ambul Pediatr*. 2005;5(2):102-106.
43. Landers G, Snyder A, Zhou M. Comparing preventive visits of children in foster care with other children in Medicaid. *J Health Care Poor Underserved*. 2013;24(2):802-812.
44. Rubin DM, Pati S, Luan X, Alessandrini EA. A sampling bias in identifying children in foster care using Medicaid data. *Ambul Pediatr*. 2005;5(3):185-190.
45. Bright RA, Avorn J, Everitt DE. Medicaid data as a resource for epidemiologic studies: strengths and limitations. *J Clin Epidemiol*. 1989;42(10):937-945.
46. Taussig HN, Clyman RB, Landsverk J. Children who return home from foster care: a 6-year prospective study of behavioral health outcomes in adolescence. *Pediatrics*. 2001;108(1):E10.
47. Lau AS, Litrownik AJ, Newton RR, Landsverk J. Going home: the complex effects of reunification on internalizing problems among children in foster care. *J Abnorm Child Psychol*. 2003;31(4):345-358.
48. Becker M, Jordan N, Larsen R. Behavioral health service use and costs among children in foster care. *Child Welfare*. 2006;85(3):633-647.
49. Zlotnick C, Tam TW, Soman LA. Life course outcomes on mental and physical health: the impact of foster care on adulthood. *Am J Public Health*. 2012;102(3):534-540.
50. Courtney ME, Dworsky A, Brown A, Cary C, Love K, Vorhies V. *Midwest Evaluation of the Adult Functioning of Former Foster Youth: Outcomes at Age 26*. Chicago, IL: Chapin Hall at the University of Chicago; 2011.
51. Dworsky A, Ahrens K, Courtney M. Health insurance coverage and use of family planning services among current and former foster youth: implications of the health care reform law. *J Health Polit Policy Law*. 2013;38(2):421-439.
52. Dworsky A, Courtney M. Addressing the mental health service needs of foster youth during the transition to adulthood: how big is the problem and what can states do? *J Adolesc Health*. 2009;44(1):1-2.
53. Reilly T. Transition from care: status and outcomes of youth who age out of foster care. *Child Welfare*. 2003;82(6):727-746.
54. Council on Foster Care, Adoption, and Kinship Care, and Committee on Early Childhood of the American Academy of Pediatrics. Health care of youth aging out of foster care. *Pediatrics*. 2012;130(6):1170-1173.
55. Ahrens KR, Garrison MM, Courtney ME. Health outcomes in young adults from foster care and economically diverse backgrounds. *Pediatrics*. 2014;134(6):1067-1074.
56. Courtney ME, Dworsky A, Cusick GR, Havlicek J, Perez A, Keller T. *Midwest Evaluation of the Adult Functioning of Former Foster Youth: Outcomes at Age 21*. Chicago, IL: Chapin Hall at the University of Chicago; 2007.
57. Courtney ME, Dworsky A, Lee JS, Raap M. *Midwest Evaluation of the Adult Functioning of Former Foster Youth: Outcomes at Ages 23 and 24*. Chicago, IL: Chapin Hall at the University of Chicago; 2010.

58. *Cost Avoidance: Bolstering the Economic Case for Investing in Youth Aging Out of Foster Care*. St. Louis, MO: Jim Casey Youth Opportunities Initiative; 2009.
59. Leslie LK, Landsverk J, Ezzet-Lofstrom R, Tschann JM, Slymen DJ, Garland AF. Children in foster care: factors influencing outpatient mental health service use. *Child Abuse Negl*. 2000;24(4):465-476.
60. Taussig HN. Risk behaviors in maltreated youth placed in foster care: a longitudinal study of protective and vulnerability factors. *Child Abuse Negl*. 2002;26(11):1179-1199.
61. Dowdell EB, Cavanaugh DJ, Burgess AW, Prentky RA. Girls in foster care: a vulnerable and high-risk group. *MCN Am J Matern Child Nurs*. 2009;34(3):172-178.
62. Kools S, Paul SM, Jones R, Monasterio E, Norbeck J. Health profiles of adolescents in foster care. *J Pediatr Nurs*. 2013;28(3):213-222.
63. Stein E, Evans B, Mazumdar R, Rae-Grant N. The mental health of children in foster care: a comparison with community and clinical samples. *Can J Psychiatry*. 1996;41(6):385-391.
64. Garland AF, Hough RL, Landsverk JA, et al. Racial and ethnic variations in mental health care utilization among children in foster care. *Children's Services: Social Policy, Research, and Practice*. 2000;3(3):133-146.
65. Leslie LK, Hurlburt MS, Landsverk J, Barth R, Slymen DJ. Outpatient mental health services for children in foster care: a national perspective. *Child Abuse Negl*. 2004;28(6):699-714.
66. McMillen JC, Scott LD, Zima BT, Ollie MT, Munson MR, Spitznagel E. Use of mental health services among older youths in foster care. *Psychiatr Serv*. 2004;55(7):811-817.
67. Garland AF, Landsverk JL, Hough RL, Ellis-MacLeod E. Type of maltreatment as a predictor of mental health service use for children in foster care. *Child Abuse Negl*. 1996;20(8):675-688.
68. Dubner AE, Motta RW. Sexually and physically abused foster care children and posttraumatic stress disorder. *J Consult Clin Psychol*. 1999;67(3):367-373.
69. Edmond T, Auslander W, Elze DE, McMillen C, Thompson R. Differences between sexually abused and non-sexually abused adolescent girls in foster care. *J Child Sex Abuse*. 2002;11(4):73-99.
70. Newton RR, Litrownik AJ, Landsverk JA. Children and youth in foster care: disentangling the relationship between problem behaviors and number of placements. *Child Abuse Negl*. 2000;24(10):1363-1374.
71. Carpenter SC, Clyman RB, Davidson AJ, Steiner JF. The association of foster care or kinship care with adolescent sexual behavior and first pregnancy. *Pediatrics*. 2001;108(3):E46.
72. Breland-Noble AM, Elbogen EB, Farmer EM, Dubs MS, Wagner HR, Burns BJ. Use of psychotropic medications by youths in therapeutic foster care and group homes. *Psychiatr Serv*. 2004;55(6):706-708.
73. James S, Landsverk J, Slymen DJ, Leslie LK. Predictors of outpatient mental health service use--the role of foster care placement change. *Mental Health Serv Res*. 2004;6(3):127-141.
74. Rubin DM, O'Reilly AL, Luan X, Localio AR. The impact of placement stability on behavioral well-being for children in foster care. *Pediatrics*. 2007;119(2):336-344.
75. Farruggia SP, Sorkin DH. Health risks for older US adolescents in foster care: the significance of important others' health behaviours on youths' health and health behaviours. *Child Care Health Dev*. 2009;35(3):340-348.

76. Kim HK, Pears KC, Leve LD, Chamberlain PC, Smith DK. Intervention effects on health-risking sexual behavior among girls in foster care: the role of placement disruption and tobacco and marijuana use. *J Child Adolesc Subst Abuse*. 2013;22(5):370-387.
77. The Child and Adolescent Health Measurement Initiative. Children with Special Health Care Needs (CSHCN) Screener. <http://www.cahmi.org/projects/children-with-special-health-care-needs-screener/> Accessed December 13, 2018.
78. Ahrens KR, Richardson LP, Courtney ME, McCarty C, Simoni J, Katon W. Laboratory-diagnosed sexually transmitted infections in former foster youth compared with peers. *Pediatrics*. 2010;126(1):e97-e103.
79. Greeson JK, Briggs EC, Kisiel CL, et al. Complex trauma and mental health in children and adolescents placed in foster care: findings from the National Child Traumatic Stress Network. *Child Welfare*. 2011;90(6):91-108.
80. Salazar AM, Keller TE, Gowen LK, Courtney ME. Trauma exposure and PTSD among older adolescents in foster care. *Soc Psychiatry Psychiatr Epidemiol*. 2013;48(4):545-551.
81. Christian CW, Schwarz DF. Child maltreatment and the transition to adult-based medical and mental health care. *Pediatrics*. 2011;127(1):139-145.
82. MacLeod KB, Brownlie EB. Mental health and transitions from adolescence to emerging adulthood: developmental and diversity considerations. *Can J Community Ment Health*. 2014;33(1):77-86.
83. Murcott WJ. Transitions between child and adult mental health services: service design, philosophy and meaning at uncertain times. *J Psychiatr Ment Health Nurs*. 2014.
84. Paul M, Ford T, Kramer T, Islam Z, Harley K, Singh SP. Transfers and transitions between child and adult mental health services. *Br J Psychiatry*. 2013;202(54):S36-S40.
85. Paul M, Street C, Wheeler N, Singh SP. Transition to adult services for young people with mental health needs: a systematic review. *Clin Child Psychol Psychiatry*. 2015;20(3):436-457.
86. Centers for Disease Control and Prevention. Allergies and Hay Fever. <https://www.cdc.gov/nchs/fastats/allergies.htm> Accessed December 13, 2018
87. Barth RP. On their own: the experiences of youth after foster care. *Child Adolesc Soc Work J*. 1990;7(5):419-440.
88. Norris SL, Glasgow RE, Engelgau MM, Os'Connor PJ, McCulloch D. Chronic disease management. *Dis Manage Health Outcomes*. 2003;11(8):477-488.
89. American Academy of Pediatrics; American Academy of Family Physicians; American College of Physicians-American Society of Internal Medicine. A consensus statement on health care transitions for young adults with special health care needs. *Pediatrics*. 2002;110(6, pt 2):1304-1306.
90. Betz CL, Lobo ML, Nehring WM, Bui K. Voices not heard: a systematic review of adolescents' and emerging adults' perspectives of health care transition. *Nurs Outlook*. 2013;61(5):311-336.
91. Bloom SR, Kuhlthau K, Van Cleave J, Knapp AA, Newacheck P, Perrin JM. Health care transition for youth with special health care needs. *J Adolesc Health*. 2012;51(3):213-219.
92. Vaughn MG, Ollie MT, McMillen JC, Scott L Jr, Munson M. Substance use and abuse among older youth in foster care. *Addict Behav*. 2007;32(9):1929-1935.

93. Leslie LK, James S, Monn A, Kauten MC, Zhang J, Aarons G. Health-risk behaviors in young adolescents in the child welfare system. *J Adolesc Health*. 2010;47(1):26-34.
94. Boonstra HD. Teen pregnancy among young women in foster care: a primer. *Guttmacher Policy Review*. 2011;14(2):8-19.
95. Svoboda DV, Shaw TV, Barth RP, Bright CL. Pregnancy and parenting among youth in foster care: a review. *Child Youth Serv Rev*. 2012;34(5):867-875.
96. Aarons GA, Monn AR, Hazen AL, et al. Substance involvement among youths in child welfare: the role of common and unique risk factors. *Am J Orthopsychiatry*. 2008;78(3):340-349.
97. Burley M, Lee S. *Extending Foster Care to Age 21: Measuring Costs and Benefits in Washington State*. Olympia, WA: Washington State Institute for Public Policy; 2010. Document No. 10-01-3902.
98. Dworsky A, Courtney M. *Does Extending Foster Care Beyond Age 18 Promote Postsecondary Educational Attainment?* Chicago, IL: Chapin Hall at University of Chicago; 2010.
99. Lee JS, Courtney ME, Tajima E. Extended foster care support during the transition to adulthood: effect on the risk of arrest. *Child Youth Serv Rev*. 2014;42:34-42.
100. Peters CM, Dworsky A, Courtney ME, Pollack H. *Extending Foster Care to Age 21: Weighing the Costs to Government Against the Benefits to Youth*. Chicago, IL: Chapin Hall at the University of Chicago; 2009.
101. Wieland L, Nelson JL. Aging out of foster care: how extended foster care for youth eighteen to twenty-one has fostered independence. *William Mitchell Law Rev*. 2014;40(3):11.
102. Centers for Disease Control and Prevention. Integrated prevention services for HIV infection, viral hepatitis, sexually transmitted diseases, and tuberculosis for persons who use drugs illicitly: summary guidance from CDC and the U.S. Department of Health and Human Services. *MMWR*. 2012;61(RR-5):1-40.
103. Bennett DL, Bauman A. Adolescent mental health and risky sexual behaviour: young people need health care that covers psychological, sexual, and social areas. *BMJ*. 2000;321(7256):251.
104. Busch V, Loyen A, Lodder M, Schrijvers AJ, van Yperen TA, de Leeuw JR. The effects of adolescent health-related behavior on academic performance: a systematic review of the longitudinal evidence. *Rev Educ Res*. 2014;84(2):245-274.
105. Williams DR, Priest N, Anderson NB. Understanding associations among race, socioeconomic status, and health: patterns and prospects. *Health Psychol*. 2016;35(4):407-411.
106. Galea S, Vlahov D. Social determinants and the health of drug users: socioeconomic status, homelessness, and incarceration. *Public Health Rep*. 2002;117(suppl 1):S135-S145.
107. Heerde JA, Scholes-Balog KE, Hemphill SA. Associations between youth homelessness, sexual offenses, sexual victimization, and sexual risk behaviors: a systematic literature review. *Arch Sex Behav*. 2015;44(1):181-212.
108. Kuhn C. Emergence of sex differences in the development of substance use and abuse during adolescence. *Pharmacol Ther*. 2015;153:55-78.
109. Twenge JM, Sherman RA, Wells BE. Changes in American adults' sexual behavior and attitudes, 1972–2012. *Arch Sex Behav*. 2015;44(8):2273-2285.

110. Bertakis KD, Azari R, Helms LJ, Callahan EJ, Robbins JA. Gender differences in the utilization of health care services. *J Fam Pract.* 2000;49(2):147-152.
111. James S. Why do foster care placements disrupt? An investigation of reasons for placement change in foster care. *Soc Serv Rev.* 2004;78(4):601-627.
112. Aarons GA, James S, Monn AR, Raghavan R, Wells RS, Leslie LK. Behavior problems and placement change in a national child welfare sample: a prospective study. *J Am Acad Child Adolesc Psychiatry.* 2010;49(1):70-80.
113. Winter VR, Brandon-Friedman RA, Ely GE. Sexual health behaviors and outcomes among current and former foster youth: a review of the literature. *Child Youth Serv Rev.* 2016;64:1-14.
114. Bruce JS. Sexual and reproductive health policies for foster youth in California: a qualitative study of child welfare professionals' experiences and perceptions of policies. *Child Youth Serv Rev.* 2016;61:184-200.

Table 1*Descriptive Statistics for 351 Adolescents in Protective Custody*

Variable	M (SD) or %	N
Age	18.35 (1.34)	351
Gender, male	49.9	175
White, non-Hispanic	26.5	93
No. of custody episodes	1.52 (.80)	220
No. of placements	7.03 (5.59)	251
Length of time in custody (mo)	51.70 (41.51)	251
Placement type		
Family-style	37.5	127
Congregate care	18.0	61
Independent living	44.5	151
Mental health condition	40.2	141
Chronic medical condition	41.3	145
Health risk behaviors	56.7	199
Sexual risk behaviors	37.0	130
Substance use	39.6	139
Both risk behaviors	20.0	70

Table 2.*Frequency of Health Concerns for Children in Protective Custody by Type*

Condition	%	N
Chronic medical conditions		
Allergy	11.1	39
Weight-related concerns	10.8	38
Vision and hearing	9.4	33
Asthma	5.4	19
Neurology	5.4	19
Cardiology	4.8	17
Endocrine	4.3	15
Gastroenterology	2.3	8
Orthopedics	2.0	7
Renal	1.4	5
Gynecology	1.1	4
Hematology	0.9	3
Oncology	0.6	2
Pulmonary	0.6	2
Mental health conditions		
Depression	24.5	86
Disruptive behavior disorders	22.2	78
Mood disorders	15.8	55
ADHD	10.5	37
Trauma and stressor-related disorders	9.6	34
Neurodevelopmental disorders	6.3	22
Adjustment disorders	6.0	21
Bipolar disorders	4.8	17
Psychotic disorders	4.8	15
Anxiety	2.6	9
Dissociative disorders	2.3	8
Personality disorders	0.3	1
Sexual risk behaviors		
Inconsistent condom use	18.5	65
Age of sexual debut < 16 y	18.5	65
Pregnancy	11.7	41
Sexual partners in 6 mo > 2	4.8	17
Sexually transmitted infections	8.3	29
Chlamydia	4.6	16
Gonorrhea	4.3	15

Table 2 (cont)	%	N
Trichomoniasis	3.1	11
Herpes simplex virus	0.9	3
HIV	0	0
Substance use	40.7	143
Tobacco	29.6	104
Marijuana	27.4	96
Alcohol	14.5	51
Opiates	0.6	2
Cocaine	0.6	2
Amphetamines	0.6	2
Hallucinogens	0.6	2
Inhalants	0.3	1

Table 3.

Unstandardized Logistic Regression Results for Models Predicting Mental Health Conditions, Chronic Medical Conditions, and Health Risk Behaviors

Variable	Mental Health Condition		Chronic Medical Condition		Health Risk Behaviors	
	B	SE	B	SE	B	SE
Intercept	2.54	2.50	-.26	2.33	.28	2.44
Gender	.35	.29	.12	.28	.87**	.30
Age	-.11	.14	.03	.13	-.05	.14
Minority status	-.46	.35	-.11	.34	.29	.36
Placement type	.06	.19	.14	.18	.69**	.19
Length of stay (y)	-.11*	.05	-.05	.05	-.06	.05
No. of custody episodes	-.30	.19	-.38*	.19	-.17	.19

*p < .05; **p < .01