



Health Care Utilization Among Young Adults with Health First Colorado Insurance Coverage after Foster Care Emancipation

James Kaferly, Carter Sevick, Musheng Alishahi, Rebecca Orsi, Patrick Hosokawa, Susan Mathieu, R. Mark Gritz,

Brief #24 August 2022

Key Findings

- A greater percentage of youth who emancipated from foster care were enrolled in Health
 First Colorado during the 12 months after emancipation compared to the 12 months after
 the reference month for their peers. Three months after the emancipation/reference month
 a similar percentage of members were still enrolled (approximately 97%); however, by the
 end of the fourth quarter about 92% of young adults who emancipated were still enrolled
 while about 86% of peers were enrolled.
- Patterns of health care utilization varied among young adults by foster care emancipation status; those who emancipated were more likely than their peers to use services prior to the emancipation/reference month and less likely afterwards. Two-thirds of young adults who emancipated and one-half of their peers utilized health care services prior to the emancipation/reference month. Following the emancipation/reference month, overall utilization for young adults who emancipated reduced by more than one-third (66.0% to 38.5%) while utilization reduced by only one-tenth (49.7% to 44.4%) among their peers.
 - The declines for the young adults who emancipated were driven by a 30% reduction in primary care (average of 0.35 visits per month to 0.21), 55% reduction in behavioral health services (average of 0.42 visits per month to 0.19) and a 57% decrease in pharmacy claims (average of 1.04 to 0.45). There was, however, a slight increase 9% in use of emergency department services (0.11 to 0.12 average visits per month).
 - The declines for the peer cohort were driven by the same three services: 10% for primary care (0.29 to 0.26), 35% for behavioral health (0.23 to 0.15), and 11% for pharmacy (0.54 to 0.48).
- The timing of the decline in service use also varied. Reductions for foster care youth primarily occurred during the two quarters prior to emancipation and the quarter after, while their peers experienced a steadier decline across the two years.

~92% of emancipators

were still enrolled after emancipation at the end of the fourth quarter while about 82% of peers were enrolled





Overview

Health First Colorado (Colorado's Medicaid program) provided health insurance coverage for approximately 20,000 children currently in or with prior experience of being in foster care during an average month in 2020.¹

A review of existing studies indicates that foster care experience has been associated with poor health outcomes and up to 80% of youth have a physical or mental health condition while in foster care. ^{2,3} The nearly 300 young adults who emancipate from foster care in Colorado, annually, could be vulnerable to health disparities and unmet health needs, as a previous study in Missouri suggested that few connect with adult health care services following emancipation. ⁴ In addition, a study from lowa, Wisconsin, and Illinois suggested that young adults who emancipate report few supports during this transition, identifying a critical gap in health care delivery for this population. ⁵

A better understanding of health care utilization and cost among this population is needed to inform policy, practice, and transition interventions. The Farley Health Policy Center at the University of Colorado School of Medicine, in collaboration with the Colorado Departments of Health Care Policy and Financing (HCPF) and Human Services (CDHS), analyzed health care utilization and cost trends among two contrasting cohorts of young adults.

- The first was a cohort of young adults who emancipated out of foster care between January 2014 and December 2021, referred to below as the "emancipation cohort" or "young adults who have emancipated."
- The second cohort was a matched group of Medicaid-eligible young adults with similar demographic characteristics and participation in Health First Colorado, which are referred to below as the "peer cohort" or "peers."

Results from the analysis of health care utilization are presented in this brief and the cost analysis results are presented in a companion brief.

Introduction

In 2020, 1,695 Colorado adolescents, aged 15 years or older, were in foster care. Improving adolescents' transition to adult health care services, especially among adolescents in foster care, is a national priority. Achieving this goal among adolescents in foster care can be challenging due to unmet health needs, discontinuous health care services and mistrust of systems among this population, as documented in studies of foster care youth in California, Illinois, New York, and Texas. Addressing these challenges will require cross-system collaboration between state Medicaid and child welfare agencies. The CDHS and county agencies (Colorado's child welfare system) aim to achieve permanency for every child in foster care through either reunification with their families of origin or residence with other permanent caregivers. Despite this goal, some children do not achieve permanency by the time they emancipate from, or "age out" of, foster care.

A prior Farley Health Policy Center brief found overall rates of behavioral and chronic health conditions were 1.5 to 3-fold higher among Colorado's foster care population compared to rates for children covered by Health First Colorado without foster care experience. The report found conditions accumulated by age; nearly 70% of Colorado adolescents in foster care have a diagnosed behavioral health condition. Young adults who emancipate from foster care are vulnerable to increased health disparities and unmet health needs as few youth in a study from Missouri connected with health care services when they emancipated from foster care and transitioned to adult health care. A better understanding of health care utilization and costs among young adults who emancipate from foster care is needed to inform policy and practice, as well as the design and implementation of transition interventions to support these young adults in attaining and maintaining self-sufficiency.

To help fill this gap in our understanding, this brief examines health care utilization trends of young adults that emancipated from foster care and a peer cohort over a 25-month period; we analyze the 12 months before and after an individual-specific emancipation or reference month. We identified 1,658 young adults who emancipated from foster care, were enrolled in Health First Colorado, and matched with a peer between January 2014 and December 2021. Of these young adults, 1,611 emancipated before February 2021 and had at least 12 months of Health First Colorado enrollment information after their month of emancipation. For this analysis, we included 1,658 emancipated youth 17 years of age or older, who exited foster care with one of three mutually exclusive reasons as recorded in the child welfare data system (Trails): (1) emancipated; (2) living with another (non-parental) relative; and, (3) runaway. Emancipated youth were matched to youth enrolled in Health First Colorado with similar characteristics who, according to the child welfare data system, never experienced involvement in foster care or the child welfare system. A more detailed description of the matching criteria and other study design features is provided as an appendix.

This brief examines two research questions:

- 1 To what extent do youth emancipating from foster care enroll in Health First Colorado in the 12 months after emancipation and how do these experiences compare to a peer cohort?
- 2 To what extent do youth emancipating from foster care who were enrolled in Health First Colorado utilize any health care, primary care, emergency department, behavioral health, and pharmacy services in the 12 months before and after emancipation and how do these experiences compare to a peer cohort?

Research Questions and Findings

1 To what extent do youth emancipating from foster care enroll in Health First Colorado in the 12 months after emancipation and how do these experiences compare to a peer cohort?

The implementation of the Patient Protection and Affordable Care Act (ACA) in January 2014, through its expansion of Medicaid and its provision for dependents to retain coverage until age 26, substantially altered Medicaid coverage for young adults and particularly youth emancipating from foster care. 12 Colorado expanded Health First Colorado, extending eligibility to adults with Modified Adjusted Gross Income (MAGI) up to 133% of the Federal Poverty Level (FPL) and for emancipated foster care youth until they reached their 26th birthday as long as they maintain residency in Colorado.

Among both cohorts, Health First Colorado enrollment declined in each of the four quarters following the emancipation/reference month (Figure 1). With the exception of the first three months, a higher percentage of young adults who emancipated remained enrolled compared to their peers and their decline was more gradual. By the end of the fourth quarter following the emancipation/reference month, nearly 92% of young adults who emancipated were still enrolled compared to 86% of peers. This is consistent with previous research examining Medicaid enrollment among young adults who emancipated.^{5,13,14} Among our post-ACA emancipator and peer cohorts, Health First Colorado enrollment 12 months after emancipation was slightly higher for women compared to men for the emancipator cohort and very similar for women and men in the peer cohort (Figure 2).

The analyses of health care utilization reported in the next section includes only months in which the young adults were enrolled in Health First Colorado with claims paid fee-for-service and not enrolled in one of the physical health managed care plans. As such, it is important to remember that there are different reasons for disenrollment between the two cohorts. Whereas disenrollment for young adults who emancipated was likely due to moving out of Colorado or voluntarily foregoing coverage, there are a number of eligibility factors that could result in members of the peer cohort no longer being eligible for Health First Colorado coverage. While this 6 percentage point differential in Health First Colorado enrollment between the emancipator and peer cohorts by the end of the fourth quarter lessens the direct comparability, analyses that included members no longer enrolled as a category had the same patterns as reported below.

Figure 1: Percentage of Emancipator and Peer Cohorts Enrolled in Health First Colorado at 3, 6, 9 and 12 Months post-Emancipation/Reference Month

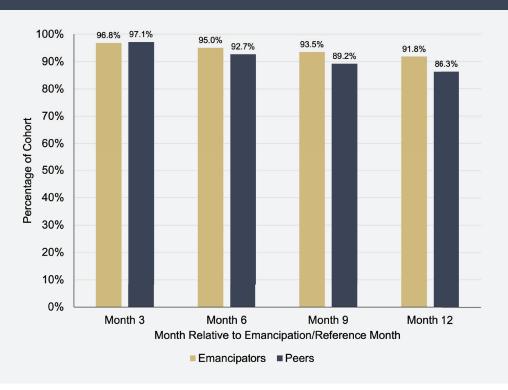
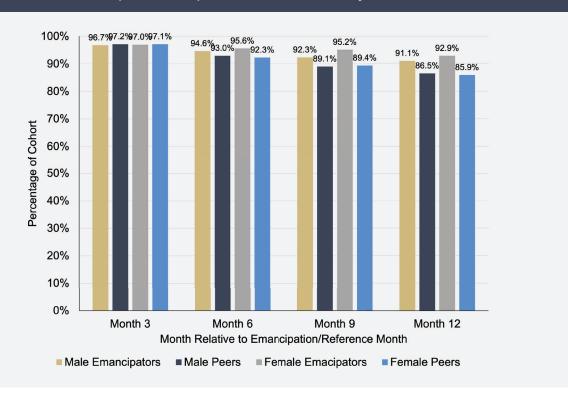


Figure 2: Percentage of Emancipator and Peer Cohorts Enrolled in Health First Colorado at 3, 6, 9, and 12 Months post-Emancipation/Reference Month by Sex



To what extent do youth emancipating from foster care who were enrolled in Health First Colorado utilize any health care, primary care, emergency department, behavioral health, and pharmacy services in the 12 months before and after emancipation and how do these experiences compare to a peer cohort?

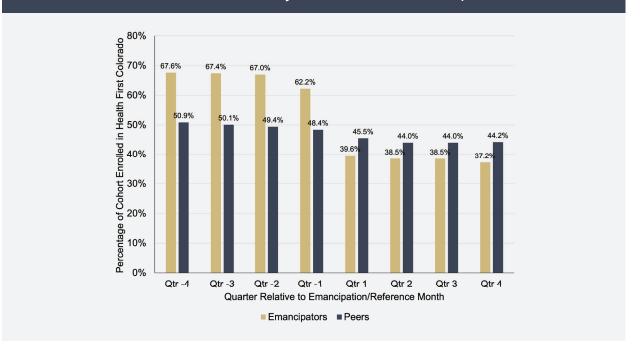
ANY FEE-FOR-SERVICE (FFS) OR CAPITATED BEHAVIORAL HEALTH CARE SERVICES

Figure 3 presents the average percentage of the emancipator and peer cohorts that utilized any fee-forservice (FFS) or capitated behavioral health (BH) service in a month for the four quarters before and the four quarters after the emancipation/reference month. While our matching process ensured that each emancipator was matched to a peer with the same Health First Colorado coverage in the 12 months prior to the emancipation/reference month, overall health care utilization differed between the emancipator and matched peer cohorts over this period. Prior to the emancipation/reference month, two-thirds of young adults who emancipated and one-half of their peers utilized at least one health care service, on average, in a month. However, this pattern notably changes following the emancipation/reference month with the average utilization rate for young adults who emancipated dropping more than one-third (66.0% to 38.3%) while the average utilization rate reduced by one-tenth for their peers (49.7% to 44.2%).

Also, the quarter over quarter declines differ. For young adults who emancipated the reductions started between the second and first quarters prior to the emancipation month followed by a steep decline in the quarter following the emancipation month. In contrast, for the peer cohort there was a less dramatic and more steady decline over the four quarters before the reference month that continues in the following four quarters followed with a more noticeable decline around the reference month. Overall, this finding among peers is consistent with prior research that identified reduced utilization among young adults compared to adolescents for a general population.¹⁵

Applying standard statistical tests for the difference between the emancipator and peer cohorts showed a significant difference in every quarter before and after the emancipation/reference month. In addition, for the young adults who emancipate, there is a statistically significant difference in the rates of utilizing any health care service in the four quarters after the emancipation month compared to the four quarters before even after accounting for the underlying trend in these rates for the peer cohort over the eight quarters.

Figure 3: Percentage of Emancipated and Peer Cohorts Enrolled in Health First Colorado with FFS or BH Services Utilization in a Month by Quarter Relative to Emancipation/Reference Month



^{*}Denotes a statistically significant difference between the two groups with a p-value < 0.05.

farleyhealthpolicycenter.org

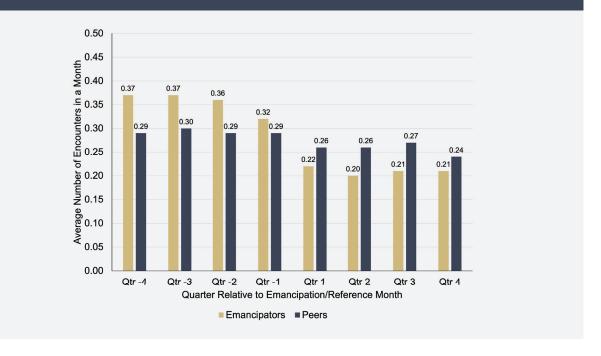
The substantial reduction in utilization of any health care service in the 12 months following emancipation relative to the minor reduction for the peer cohort raises the question of which health care services are driving this decline. To address this, we analyzed utilization of primary care, emergency department, behavioral health, and pharmacy services for young adults who emancipate and for their peers. Figures 4 through 8 look at the average per member per month (PMPM) utilization of these services in the four quarters before and after emancipation/reference month.

PRIMARY CARE SERVICES

Comprehensive primary care provides integrated, accessible health care services, developed in partnership with the individual patient. Access to comprehensive primary care services has been associated with positive health outcomes and lower costs. 16-18 Past research documented higher primary care utilization among children in foster care; 19-22 however, these investigations did not examine trends among young adults who emancipated. Among young adults enrolled in Health First Colorado, we found distinct trends in the PMPM number of primary care encounters between the two cohorts (Figure 4). Among young adults who emancipate, there was a modest decline in the PMPM average number of primary care encounters in the quarter before emancipation relative to the previous three quarters. However, there was a substantial decrease of approximately one-third in the four quarters after emancipation from 0.32-0.37 encounters to 0.20-0.22 encounters per month. In contrast, for the matched peer cohort there was only a modest decline from about 0.29 encounters before the reference month to 0.26 encounters after the reference month. This suggests that the majority of the decline in utilization of primary care services among young adults who emancipate was related to factors other than just adolescent-to-adult health care transitions.

There are statistically significant differences in the PMPM number of primary care visits in seven of the eight quarters comparing young adults who emancipate to their peers. In addition, after accounting for the general trend over these eight guarters in the PMPM number of primary care visits of the peer cohort, there is a statistically significant difference in the number of primary care visits for the emancipation cohort comparing the four quarters before and after the emancipation month.

Figure 4: Average Number of Primary Care Encounters in a Month for Emancipated and Matched Peer Cohorts Enrolled in Health First Colorado by Quarter Relative to **Emancipation/Reference Month**



^{*}Denotes a statistically significant difference between the two groups with a p-value < 0.05

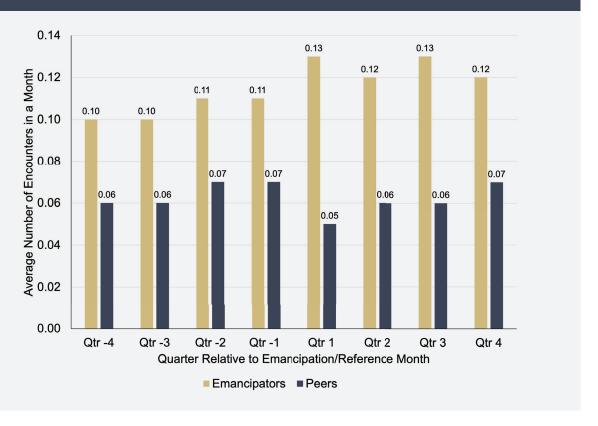
farleyhealthpolicycenter.org

EMERGENCY DEPARTMENT (ED) SERVICES

Findings reported in the published literature also suggest that many children in foster care rely on ED services for their health care. ^{5,23,24} Our prior analysis of children and youth around their time of initial entry into foster care identified higher ED utilization among Health First Colorado members that first entered foster care between the ages of 13 and 17 but did not include youth over 17 years of age. ²⁵ The higher use of ED services among youth in foster care is also present in our emancipator cohort relative to the matched peer cohort in the year before emancipation. Figure 5 presents the average PMPM number of ED encounters by emancipation status for the four quarters before and after the month of emancipation or the reference month for our two cohorts. As shown in this figure, in the four quarters before the emancipation/reference month, young adults who emancipate had, on average, 0.10 to 0.11 visits to the ED in a month compared to 0.06 to 0.07 visits to the ED in a month for their peers. This difference increased slightly in the four quarters after the emancipation/reference month as the PMPM number of ED visits for young adults who emancipate increases to 0.12-0.13 visits per month compared to their peers that continue to average 0.06 ED visits per month. This suggests there is a slightly greater reliance on ED care among young adults who emancipate after exiting foster care but no corresponding increase for peers.

As shown in Figure 5, there are statistically significant differences in the PMPM number of ED encounters comparing the two cohorts in all of the eight quarters. As was the case for the PMPM for number of primary care visits, after accounting for the general trend over these eight quarters in the PMPM number of ED encounters of the peer cohort, there is a statistically significant difference in the PMPM number of ED encounters for the emancipation cohort comparing the four quarters before and after the emancipation month.

Figure 5: Average Number of Emergency Department Encounters in a Month for Emancipated and Matched Peer Cohorts Enrolled in Health First Colorado by Quarter Relative to Emancipation/Reference Month



^{*}Denotes a statistically significant difference between the two groups with a p-value < 0.05



BEHAVIORAL HEALTH CARE SERVICES

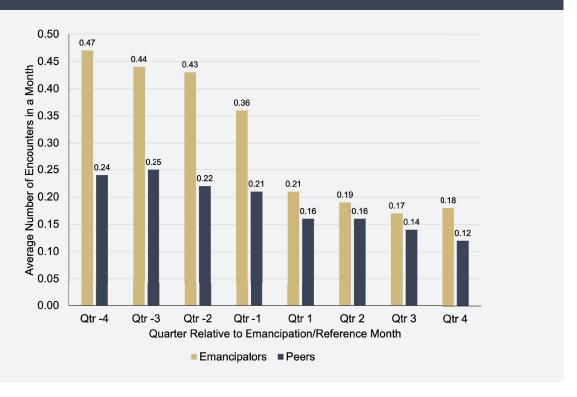
Behavioral health services are critical for adolescents and young adults because peak incidences of substance use disorders and many mental health disorders appear during these developmental periods.²⁶ However, findings in the literature suggest use of behavioral health services reduces by half among young adults who used these services between the ages of 16 and 19.27 Supporting continued access to behavioral health services for all young adults is a priority, but one of particular importance for those emancipating from foster care. Prior studies conducted in other states have estimated that half of all children in foster care have been diagnosed with a behavioral health condition.²⁸ Moreover, prevalence of these conditions is greater among adolescents in foster care; nearly 70% of Colorado adolescents in foster care were diagnosed with a behavioral health condition 11,29 and over 78% of the emancipator cohort were identified as having a behavioral health complexity according to the Pediatric Medical Complexity Algorithm (PMCA) (Appendix Table 1).

Nationally, adolescents in foster care are estimated to utilize behavioral health services at a rate four times higher than other adolescents with Medicaid coverage.²¹ Even when using medical complexity as a matching criteria to control for differences in the foster care population and all other Health First Colorado enrollees, emancipated youth used behavioral health services almost twice as often as the peers cohort. Figure 6 presents the average PMPM number of capitated behavioral health encounters for the four quarters before and after the emancipation/reference month for the young adults who emancipate and their peers.

Consistent with the overall decline in utilization of health care services by young adults who emancipate shown in Figure 3, Figure 6 shows a substantial decline in the number of capitated behavioral health encounters for the young adults who emancipate from an average of 0.42 in the four quarters before the month of emancipation to 0.19 average number of encounters in the four quarters after emancipation. The declines occur primarily in the six to three months before the emancipation month and most notably in the three months following the emancipation month. This finding is consistent with prior studies that documented declines in utilization of behavioral health services following emancipation. 430 In comparison, the average PMPM number of behavioral health encounters for the peer cohort only decreased from an average of 0.23 encounters in the four guarters before the reference month to 0.15 encounters in the four guarters after. Again, these findings suggest additional factors beyond the adolescent-to-adult health care transition drive this substantial reduction in the utilization of behavioral health services among young adults who emancipate.

Testing the differences for the emancipator cohort before and after the emancipation month indicates that the decline in PMPM behavioral health encounters is highly significant (p<0.001). There are statistically significant differences in the PMPM number of behavioral health encounters in all four of the guarters before the emancipation/reference month comparing the two cohorts. However, with the significant reduction in behavioral health encounters for young adults who emancipate, the first three of the four quarters after the emancipation/reference month the differences are not statistically significant.

Figure 6: Average Number of Capitated Behavioral Health Encounters in a Month for Emancipated and Matched Peer Cohorts Enrolled in Health First Colorado by Quarter Relative to Emancipation/Reference Month



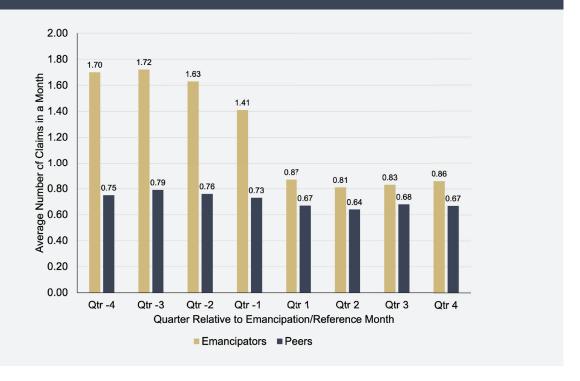
^{*}Denotes a statistically significant difference between the two groups with a p-value < 0.05

PHARMACY SERVICES

National data from the U.S. Department of Health and Human Services' Substance Abuse and Mental Health Services Administration (SAMHSA) indicate that children and youth in foster care have higher prescription drug expenses compared to children and youth not in foster care. ¹⁹ The disproportionate use of psychotropic medications contributes to greater Medicaid pharmacy expenditures for this population; children and youth in foster care are up to 4.5 times more likely to be treated with a psychotropic medication³¹ and to have multiple current psychotropic prescriptions than children and youth not in foster care. ³² Other studies have documented a decrease in pharmacotherapy use following emancipation³² and nearly two-thirds of young adults who emancipated discontinued previously prescribed medications immediately after emancipation from foster care.⁴

Our analysis of the PMPM number of pharmacy claims is consistent with reduced pharmacy utilization identified in the prior literature. Figure 7 shows the average PMPM number of pharmacy claims in the four quarters before and after the emancipation/reference month for our emancipator and peer cohorts. Young adults who emancipate averaged 1.68 pharmacy claims per month over the first three of the four quarters before emancipating that dropped slightly to 1.41 claims in the quarter before emancipation and then dropped significantly (p<0.001) to 0.87 or fewer claims in the four quarters after emancipation. In contrast, the PMPM number of pharmacy claims for the matched peer cohort was less than half of the number for the emancipator cohort before the reference month and declined only slightly from about 0.76 claims in a month to 0.66 claims per month after the reference month. As shown in Figure 7, the PMPM number of pharmacy claims is statistically significantly different in all 8 quarters comparing young adults who emancipate to peers.

Figure 7: Average Number of Pharmacy Claims in a Month for Emancipated and Matched Peer Cohorts Enrolled in Health First Colorado by Quarter Relative to Emancipation/Reference Month



^{*}Denotes a statistically significant difference between the two groups with a p-value < 0.05

Implications for Policy, Practice and Research

The analysis results comparing trends in health care service utilization of young adults emancipating from foster care to trends for a matched peer cohort suggested that these young adults encountered additional challenges in transitioning from being in foster care to being emancipated adults. It is possible that the emancipator cohort had more physical and behavioral health complexities despite comparing them to peers that have a physical or behavioral complexity. However, the differences in utilization trends, particularly during the time period immediately prior to and just after their emancipation/reference month suggest that young adults who emancipate encountered additional challenges beyond the transition from adolescents to adulthood.

Transitions from pediatric to adult health care offer opportunities and challenges to promote health and well-being for all young adults. ¹⁵ Emancipation from foster care presents a unique opportunity to improve the health and well-being of young adults that have experienced significant disruptions, and in many instances trauma, in their childhood and/or adolescence. Emancipation is a foreseeable event for some young adults in foster care and, all too often, guidance and support in navigating their own health care is overlooked during the transition to independence. Early and continued support from health care and child welfare providers can improve transitions to adult health care, ³³ however, evidence in the literature suggests that the majority of youth do not receive such assistance. ³⁴

While evidence-based interventions for successful transitions are limited, 8,35 addressing this gap is critical for the approximately 300 Colorado young adults who emancipate from foster care annually. Overall, there is a paucity of research engaging emancipators as experts who can inform interventions to narrow disparities. The Colorado Departments of Health Care Policy & Financing and Human Services have successfully utilized broad stakeholder engagement methods in enhancing the state's behavioral health system. A similar stakeholder engagement process could improve the health and well-being of current and former foster care populations. Continued partnership with adolescents in foster care, with those who emancipate, and their communities would inform additional strategies to establish trust, address barriers, understand their health care priorities, and develop interventions for successful transitions to adult health care.

Colorado has a foundation of programs to build on to improve the health and well-being of young adults leaving foster care. For example, affordable housing is a major challenge and one of the more important social determinants of health,³⁴ and the Colorado Pathways to Success program helps secure stable and affordable housing for youth with foster care experience. Another example is the John H. Chafee Program for Successful Transition to Adulthood Program (Chafee program) which provides federal funds to the State of Colorado for educational assistance, career training, and preventative health efforts. Chafee programs are available in more than half (33) of Colorado's counties. With the potential for increased federal funding, consideration could be given to expanding Chafee programs to help meet demand, which currently exceeds program capacity.38 Finally, two legislative mandates have strengthened resources for young adults emancipating from foster care. In 2018, Colorado enacted HB18-1319 to access federal funds Under Title IV-E of the Social Security Act to be used for youth-oriented services (education, employment, financial management, housing, mental health services and substance use prevention) for former foster care youth. In addition to these existing programs, the Colorado Legislature passed and Governor Polis signed the Foster Youth in Transition Program (House Bill 21-1094) in 2021 to offer broader service options, including support in enrolling in Health First Colorado, to young former foster care adults aged 18 to 21 years of age. Finally, it will be important to evaluate these and any additional interventions to assess what works in improving the health and well-being of former foster care youth.

Appendix: Study Design and Data Sources

This observational study used child welfare and Medicaid administrative data, including fee-for-service claims and capitated behavioral health encounters. The population of interest for this analysis was all youth who emancipated from foster care in Colorado between January 2014 and June 2021. Using the state's child welfare data system, Trails, we identified 2,057 young adults in Colorado aged 17 or older at the time of leaving foster care with one of three stated reasons: (1) emancipated; (2) living with another (non-parental) relative; and, (3) runaway. To analyze the health care cost and utilization for the youth emancipating from foster care we looked for these 2,057 individuals in the Medicaid administrative data. We identified 1,944 individuals that were enrolled in Health First Colorado in the month they emancipated from foster care. To ensure we had at least one month of data after emancipation, we excluded 220 individuals who we could not determine if they were enrolled in Health First Colorado in the month after emancipation, leaving 1,724 young adults who emancipated.

The transition from adolescence to young adulthood and the changeover from pediatric to adult health care has been associated with changes in health care cost and utilization for all youth and to help distinguish trends for emancipating foster care youth from these general trends we identified a matched set of Health First Colorado members who we determined were not in foster care using the Trails data. To develop a set of matched individuals that are similar to our young adults who emancipated, we matched members using six member characteristics: (1) sex; (2) age, defined as no more than 6 months younger or older than the emancipated cohort member; (3) socio-economic status as measured by income relative to the federal poverty level; (4) the same months of Health First Colorado enrollment in the 12 months before the month of emancipation, the month of emancipation and the month after emancipation; (5) the presence of a physical health complexity as measured by the Pediatric Medical Complexity Algorithm (PMCA); and (6) the presence of a behavioral health complexity as measured by the PMCA. We were unable to match 60 young adults who emancipated to a matched peer using these six matching criteria. Finally, to provide at least 12 months of Health First Colorado enrollment and claims, the analysis reported above includes 1,658 youth who emancipated and 1,658 matched peers with an emancipation/reference month before February 2021.

Table 1 presents the characteristics of the matched youth who emancipated and peers included in the analysis.

Table 1: Characteristics of Emancipated and Matched Peer Cohorts

	Matched Comparison	Emancipated
	N=1658	N=1658
	(%)	(%)
Age		
17 - 18	63.3	63.6
19	20.8	20.6
20	11.6	10.4
21+	4.2	5.4
Sex		
Female	41.1	41.1
Race and Ethnicity*		
American Indian/Alaskan Native; Asian; Native Hawaiian/Other Pacific Islander	3.1	2.1
White/Caucasian	41.6	41.5
Hispanic/Latino	32.7	19.4
Other People of Color	5.2	6.7
Other Unknown Race	5.6	7.8
Not Provided	6.8	10.6
Income Relative to Federal Poverty Level		
Up to 40%	65.9	65.9
41-100%	30.8	30.8
100%+	3.4	3.4
Medical Chronicity		
Non-Chronic, no BH	15.3	15.3
Non-Chronic, with BH	33.1	33.1
Chronic, no BH	6.4	6.4
Chronic, with BH	45.2	45.2

*Race/Ethnicity Definitions

American Indian/Alaska Native - Non-Hispanic, Non-multiracial, American Indian/Alaska Native

Asian - Non-Hispanic, Non-multiracial, Asian

Black/African American - Non-Hispanic, Non-multiracial, Black/African American

Native Hawaiian/Other Pacific Islander - Non-Hispanic, Non-multiracial, Native Hawaiian/Other Pacific Islander

White/Caucasian - Non-Hispanic, Non-multiracial, White/Caucasian

Hispanic/Latino - Hispanic, also includes members who selected "White/Caucasian" and/or "Other/ Unknown" in addition to the "Hispanic/Latino" option

Other People of Color - Multiracial; or Hispanic, American Indian/Alaska Native; or Hispanic, Asian; or Hispanic, Black/African American; or Hispanic, Native Hawaiian/Other Pacific Islander

Other Unknown Race - Non-Hispanic, Other unknown race, with or without White/Caucasian

Not Provided - Race and Ethnicity not provided or not available

farleyhealthpolicycenter.org

References

- Colorado Department of Health Care Policy and Financing. FY 2020-21 Medical Premiums Expenditure and Caseload Report. 1/26/22, Accessed January 26, 2022, https://spl.cde.state.co.us/artemis/hcpserials/hcp123internet/ hcp123202101internet.pdf
- 2. Halfon N, Mendonca A, Berkowitz G. Health status of children in foster care. The experience of the Center for the Vulnerable Child. *Archives of pediatrics & adolescent medicine*. Apr 1995;149(4):386-92.
- Engler AD, Sarpong KO, Van Horne BS, Greeley CS, Keefe RJ. A Systematic Review of Mental Health Disorders of Children in Foster Care. Trauma Violence Abuse. Jul 20 2020:1524838020941197. doi:10.1177/1524838020941197
- 4. McMillen JC, Raghavan R. Pediatric to adult mental health service use of young people leaving the foster care system. *J Adolesc Health*. Jan 2009;44(1):7-13. doi:10.1016/j.jadohealth.2008.04.015
- Courtney ME, Dworsky A, Ruth G, Havlicek J, Perez A, Keller T. Midwest evaluation of the adult functioning of former foster youth: outcomes at age 21. 2007. http://archives.pdx.edu/ds/psu/9495
- Beal SJ, Nause K, Lutz N, Greiner MV. The Impact of Health Care Education on Utilization Among Adolescents Preparing for Emancipation From Foster Care. J Adolesc Health. Jun 2020;66(6):740-746. doi:10.1016/j.jado-health.2019.12.009
- 7. Child Population in Out-of-Home Care. Colorado Department of Human Services Community Performance Center. 1/26/22, Accessed January 26, 2022, https://rom.socwel.ku.edu/CO_Public/Login.aspx?H=7200
- 8. US Department of Health and Human Resources, Office of Disease Prevention and Health Promotion. Healthy People 2030. October 26, 2021, Accessed 10/25/21, https://health.gov/healthypeople/objectives-and-data/browse-objectives/adolescents
- 9. Not All Children in Foster Care Who Were Enrolled in Medicaid Received Required Health Screening. 2015. Accessed 9/1/2021. https://oig.hhs.gov/oei/reports/oei-07-13-00460.pdf
- 10. Ruff SC, Harrison K. "Ask Me What Want": Community-based participatory research to explore transition-age foster Youth's use of support services. Children and youth services review. 2020;108doi:10.1016/j.childyouth.2019.104608
- 11. Kaferly J, Mathieu S, Alishahi M, et al. Behavioral and Physical Health Complexities of Children and Youth in Foster Care with Health First Colorado Coverage, Policy Brief 11. 2020. Brief 11.
- 12. 111th U.S. Congress. The Patient Protection and Affordable Care Act. P.L. 111-148. 2010.
- 13. Ahrens KR, Garrison MM, Courtney ME. Health outcomes in young adults from foster care and economically diverse backgrounds. *Pediatrics*. Dec 2014;134(6):1067-74. doi:10.1542/peds.2014-1150
- 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. Apr 2013;38(2):421-39. doi:10.1215/03616878-1966360
- 15. Park MJ, Scott JT, Adams SH, Brindis CD, Irwin CE, Jr. Adolescent and young adult health in the United States in the past decade: little improvement and young adults remain worse off than adolescents. *J Adolesc Health*. Jul 2014;55(1):3-16. doi:10.1016/j.jadohealth.2014.04.003
- 16. Institute of Medicine (US) Committee on the Future of Primary Care. Primary care: America's health in a new era. 1996.
- 17. Shi L. The impact of primary care: a focused review. Scientifica (Cairo). 2012;2012:432892. doi:10.6064/2012/432892
- 18. Starfield B, Shi L, Macinko J. Contribution of primary care to health systems and health. *Milbank Q*. 2005;83(3):457-502. doi:10.1111/j.1468-0009.2005.00409.x
- 19. Florence C, Brown DS, Fang X, Thompson HF. Health care costs associated with child maltreatment: impact on medicaid. *Pediatrics*. Aug 2013;132(2):312-8. doi:10.1542/peds.2012-2212
- Bennett CE, Wood JN, Scribano PV. Healthcare Utilization for Children in Foster Care. Academic pediatrics. Oct 14 2019;doi:10.1016/j.acap.2019.10.004
- 21. Center for Mental Health Services and Center for Substance Abuse Treatment. *Diagnoses and Health Care Utilization of Children Who Are in Foster Care and Covered by Medicaid.* 2013.
- 22. Landers G, Snyder A, Zhou M. Comparing preventive visits of children in foster care with other children in Medicaid. *Journal of health care for the poor and underserved*. May 2013;24(2):802-12. doi:10.1353/hpu.2013.0066
- Bright MA, Kleinman L, Vogel B, Shenkman E. Visits to Primary Care and Emergency Department Reliance for Foster Youth: Impact of Medicaid Managed Care. Academic pediatrics. May - Jun 2018;18(4):397-404. doi:10.1016/j. acap.2017.10.005
- Jee SH, Antonucci TC, Aida M, Szilagyi MA, Szilagyi PG. Emergency department utilization by children in foster care. Ambulatory pediatrics: the official journal of the Ambulatory Pediatric Association. Mar-Apr 2005;5(2):102-6. doi:10.1367/A04-068R.1

- 25. James K, Marsh R, Fisher M. Primary Care Providers: Decision-Making Factors for Child Protective Service Reporting 2020.
- 26. Solmi M, Radua J, Olivola M, et al. Age at onset of mental disorders worldwide: large-scale meta-analysis of 192 epidemiological studies. Mol Psychiatry. Jun 2 2021;doi:10.1038/s41380-021-01161-7
- 27. Pottick KJ, Bilder S, Vander Stoep A, Warner LA, Alvarez MF. US patterns of mental health service utilization for transition-age youth and young adults. J Behav Health Serv Res. Oct 2008;35(4):373-89. doi:10.1007/s11414-007-9080-4
- 28. Bronsard G, Alessandrini M, Fond G, et al. The Prevalence of Mental Disorders Among Children and Adolescents in the Child Welfare System: A Systematic Review and Meta-Analysis. Medicine. Feb 2016;95(7):e2622. doi:10.1097/ MD.000000000002622
- 29. McMillen JC, Zima BT, Scott LD, Jr., et al. Prevalence of psychiatric disorders among older youths in the foster care system. Journal of the American Academy of Child and Adolescent Psychiatry. Jan 2005;44(1):88-95. doi:10.1097/01. chi.0000145806.24274.d2
- 30. Havlicek J, Garcia A, Smith DC. Mental Health and Substance Use Disorders among Foster Youth Transitioning to Adulthood: Past Research and Future Directions. Children and youth services review. Jan 2013;35(1):194-203. doi:10.1016/j.childyouth.2012.10.003
- 31. Raghavan R, Brown DS, Allaire BT, Garfield LD, Ross RE. Medicaid expenditures on psychotropic medications for maltreated children: a study of 36 States. Psychiatric services (Washington, DC). Dec 1 2014;65(12):1445-51. doi:10.1176/ appi.ps.201400028
- 32. Park K, Okpych NJ, Courtney ME. Memo from CalYOUTH: The use of psychotropic medications over time among foster youth transitioning to adulthood. 2017.
- 33. White PH, Cooley WC, Transitions Clinical Report Authoring G, American Academy Of P, American Academy Of Family P. American College Of P. Supporting the Health Care Transition From Adolescence to Adulthood in the Medical Home. Pediatrics. Nov 2018;142(5)doi:10.1542/peds.2018-2587
- 34. Lebrun-Harris LA, McManus MA, Ilango SM, et al. Transition Planning Among US Youth With and Without Special Health Care Needs. Pediatrics. Oct 2018;142(4)doi:10.1542/peds.2018-0194
- 35. Campbell F, Biggs K, Aldiss SK, et al. Transition of care for adolescents from paediatric services to adult health services. The Cochrane database of systematic reviews. Apr 29 2016;4:CD009794. doi:10.1002/14651858.CD009794.
- 36. Jacquez F, Vaughn LM, Wagner E. Youth as partners, participants or passive recipients: a review of children and adolescents in community-based participatory research (CBPR). Am J Community Psychol. Mar 2013;51(1-2):176-89. doi:10.1007/s10464-012-9533-7
- 37. Vaughn LM, Wagner E, Jacquez F. A review of community-based participatory research in child health. MCN Am J Matern Child Nurs. Jan-Feb 2013;38(1):48-53. doi:10.1097/NMC.0b013e31826591a3
- 38. President Biden's FY 2023 Budget Advances Equity. The White House; March 30, 2022, Accessed 4/6/2022. https:// www.whitehouse.gov/omb/briefing-room/2022/03/30/president-bidens-fy-2023-budget-advances-equity/

