

Chapin Hall Issue Brief

Policy research
that benefits
children, families,
and their
communities

November 2017

Chapin Hall at the University of Chicago 1313 East 60th Street Chicago, IL 60637 T: 773.753.5900 F: 773.753.5940 www.chapinhall.org

The Use of Psychotropic Medications over Time among Foster Youth Transitioning to Adulthood

By Keunhye Park, Nathanael J. Okpych, Mark E. Courtney

Introduction

High rates of psychotropic medication use among children and adolescents in foster care have concerned researchers (Breland-Noble et al., 2004; Brenner, Southerland, Burns, Wagner, & Farmer, 2014; Leslie et al., 2010; Raghavan et al., 2005) and led the federal government to respond (Sheldon, Berwick, & Hyde, 2011; U.S. Government Accountability Office, 2017). Through the Child and Family Services Improvement Act of 2006, the US Congress mandated state child welfare agencies to develop plans to monitor the use of psychotropic medications administered to children in state care (Congressional Research Service, 2017).

In California, the state with the largest foster youth population in the US, three senate bills (SB 238, SB 484, and SB 1174) were enacted in 2015 and 2016 to improve oversight of psychotropic medication use among children in foster care. SB 238 mandates that the state develop curriculum to train professionals involved with the oversight of children in foster care (e.g., foster parents, relative caregivers, group

home staff, social workers, juvenile court judges, attorneys, and foster care public health nurses) on the authorization, uses, risks, benefits, oversight, and monitoring of psychotropic medications and mental health treatments. This bill also changed the authorization process for providing psychotropic medications to foster youth to ensure that caregivers and youth had an opportunity to provide input on the use of the medications being prescribed. SB 484 pertains to children in group home facilities; it requires psychotropic medications to be recommended by a physician and ordered by a juvenile court judicial officer and increases the monitoring, reporting, and oversight of psychotropic medication use in these facilities. Finally, SB 1174 orders prescribing physicians to share data with the Medical Board of California about physicians' prescription patterns when treating foster care children covered by Medi-Cal, California's Medicaid program. These data are intended to ensure appropriate uses of psychoactive medications and to create treatment guidelines that will be disseminated each year to physicians who provide

services reimbursed by Medi-Cal.¹ The passage of these bills followed a state audit reporting that child welfare jurisdictions failed to perform appropriate oversight of medication prescriptions to children in foster care (California State Auditor, 2016).

Most research to date on psychotropic drug use in foster care has focused on school-age children (e.g., Zima, Bussing, Crecelius, Kaufman, & Belin, 1999a) and reports that children in foster care are more likely than their peers not in care to be prescribed psychoactive medication and to be treated with more types of medications (dosReis et al., 2011). Previous research has shown that while between 4 and 10 percent of Medicaid-enrolled children used psychotropic medications, 30 to 43 percent of children in foster care used such medications (dosReis, Zito, Safer, & Soeken, 2001; Ferguson, Glesener, & Raschick, 2006; Zito, Safer, Zuckerman, Gardner, & Soeken, 2005; Zito et al., 2008). Less is known about psychotropic medication use among older adolescents in foster care and changes over time in their medication use. Some studies suggest that adolescents in care have higher rates of psychotropic drug use than younger children in care (Brenner et al., 2014; Raghavan & McMillen, 2008; Zima et al., 1999a). One large study of over 700 transition-age foster youths in three Midwestern states reported that the prevalence rates of both behavioral health problems and medication use declined from ages 17 to 19 (Courtney, Terao, & Bost, 2004; Courtney et al., 2005). Furthermore, another analysis of the same study found that, among youths who had a behavioral health problem, the proportion of youths who received behavioral health services (psychotropic medication, psychological counseling, or alcohol/drug treatment) decreased from age 17 to age 19 (Brown, Courtney, & McMillen, 2015). For instance, 61 percent of 17-year-olds with depressive symptoms received behavioral health services, which dropped to 45 percent for 19-year-olds with depressive symptoms.

While these studies provide a sense of trends in psychotropic medication use over time, we know even less about foster youths' perceptions of their psychotropic medications. Stigma around psychotropic drug use (e.g., secrecy, shame, limiting social interaction) is a commonly reported experience among adolescents who take these medications (Kranke, Floersch, Townsend, & Munson, 2010). From a developmental perspective, older adolescents have increased autonomy and agency about their medication decisions, such as weighing the costs and benefits of taking medication. Thus, youths' experiences with and perceptions of their medication use can potentially influence whether they continue treatment and adhere to prescribers' treatment recommendations.

In this memo, we explore the use of and experiences with psychotropic medications over time for California foster youth transitioning to adulthood. We also examine how psychotropic drug use differs for youth who have different types of behavioral health problems. Throughout this memo, "behavioral health problems" will be used to denote both mental health problems and alcohol/drug use problems.

Study Methods

This memo draws on information collected from two interview waves of the California Youth Transitions to Adulthood Study (CalYOUTH). CalYOUTH is a longitudinal study following over 700 transition-age adolescents who had been in foster care in California for at least six months (Courtney, Charles, Okpych, Napolitano, & Halsted, 2014; Courtney et al., 2016). Most respondents were 17 years old during the baseline interview conducted in 2013 and 19 years old during the follow-up interview conducted in 2015. This memo includes information from the 611 youths who completed both interview waves. The baseline interview used a stratified random sampling method to select

¹ In addition to these three laws, a fourth bill (SB 1291), enacted in 2016, focused on Specialty Mental Health Services, with some attention paid to psychotropic medication. SB 1291 requires that an external organization conduct annual mental health plan reviews of the number and types of mental health services provided to children in foster care. It also mandates that quality assessments be reported to the State Department of Health Care Services and then to county boards to assist with the creation of mental health service plans and performance outcomes metrics.

participants for the study. Sample weights are used in the current analysis to account for the sampling design and response rates. The findings reported in this memo represent estimates of the statewide population of foster youth who met CalYOUTH criteria (see Courtney et al., 2014 and Courtney et al., 2016 for more information about survey weights). In the tables and figures throughout this memo, we report findings from both age 17 and age 19, using unweighted frequencies and survey weighted percentages.

At each interview wave, a brief structured diagnostic tool was used to identify the presence of several current mental health disorders and substance use disorders (see Courtney et al., 2014 and Courtney et al., 2016 for more information). In this memo, we consider seven behavioral health problems that were assessed during both interview waves: major depressive episode, manic or hypomanic episode, social phobia, posttraumatic stress disorder, psychotic thinking,² alcohol use problems (abuse or dependence), and substance use problems (abuse or dependence).

In terms of psychotropic medication use, respondents were asked if they had received medications for their emotions in the past year. Furthermore, to gauge youths' experiences with their medication, we asked youth to respond to the following four statements: "medicine improves my mood or helps me concentrate or behave better," "I get along better with people when on medication," "my medicine gives me bad side effects," and "good things about medication outweigh the bad." For each statement, respondents could select from one of five responses, ranging from "strongly disagree" to "strongly agree." In this memo, we collapsed the five options into three categories that represent disagreement with the statement, a neutral

stance, and agreement with the statement.³ None of the items in this memo had more than 10 percent missing data.

The findings presented in this memo are organized in three sections. In the first section, we look at overall rates of behavioral health problems, medication use, and receipt of counseling. Differences in rates by gender, race/ethnicity, and sexual minority status⁴ are also explored. In the second section, we examine rates of specific behavioral health problems, as well as the rates of medication use among youths who had those specific behavioral health problems. Finally, the third section considers youths' experiences with and perceptions of the effects of their medication.

Findings

A snapshot of behavioral health problems, medication use, and receipt of counseling over time

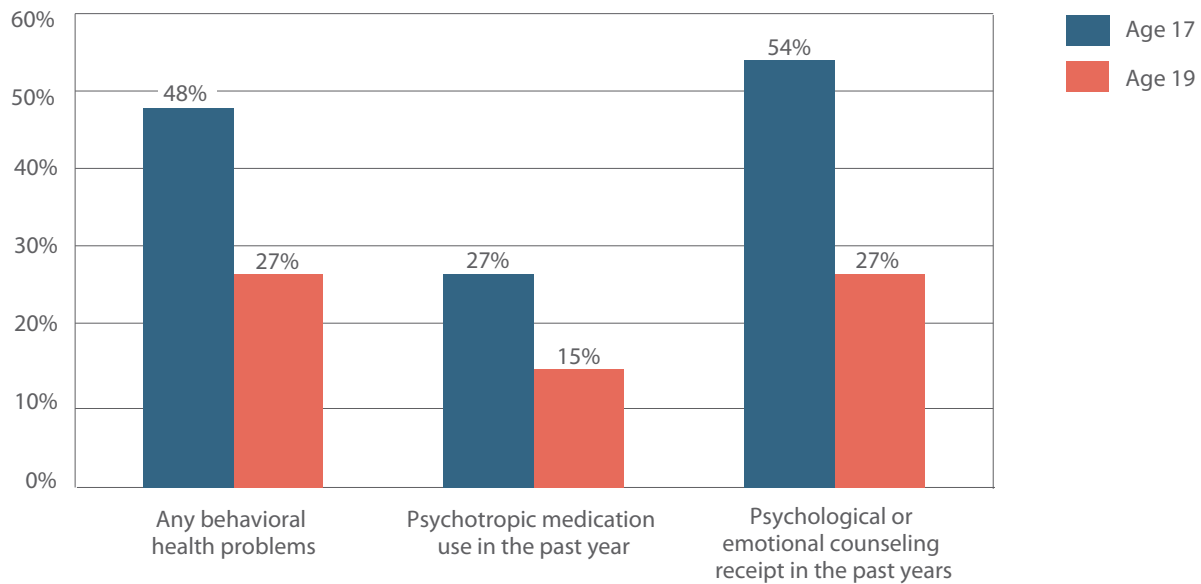
The three sets of bars in Figure 1 display (1) the proportion of respondents with at least one of the seven current behavioral health problems that were screened at each interview wave, (2) the proportion of respondents who reported taking psychotropic medications at each interview wave, and (3) the proportion of respondents who reported receiving psychological or emotional counseling at each interview wave. All three prevalence rates declined from age 17 to age 19. The proportion of youth with a behavioral health problem dropped by more than two-fifths ($p < .001$), as did the proportion of youth taking psychotropic medication ($p < .001$). The proportion of youth receiving counseling dropped by half from age 17 to age 19 ($p < .001$).

² Symptoms of psychotic thinking were assessed using different instrument tools at each interview wave. The MINI-KID was used at age 17 (Sheehan et al., 1998, 2010), and the Psychoticism Dimension of the Symptoms Checklist-90-Revised (SCL-90-R) was used at age 19 (Derogatis, 1996; Derogatis & Unger, 2010).

³ The original response options for these questions ranged from 1 through 5 (1 = strongly agree; 2 = agree; 3 = neither agree nor disagree; 4 = disagree; 5 = strongly disagree). The three-category measure used in this analysis included an affirmative response ("agreed" or "strongly agreed"), a neutral response ("neither agree nor disagree"), and a disagreeing response ("disagreed" or "strongly disagreed").

⁴ Sexual minority status was assessed by one item asking about youths' sexual orientation. The response options included: 100% heterosexual, mostly heterosexual, bisexual, mostly homosexual, 100% homosexual, and not sexually attracted to either males or females. A binary variable with two categories was created based on whether youth reported being 100% heterosexual or not.

Figure 1.
Proportion of Youths with Behavioral Health Problems, Proportion of Youths Using Medication for Emotions, and Proportion of Youths Receiving Counseling Services ($n = 611$)



We found statistically significant differences in rates of behavioral health problems by gender and sexual orientation. Females were more likely than males to screen positive for a behavioral health problem at age 17 (53% vs. 41%, $p < .05$). Additionally, a greater proportion of sexual minority youths than youths who identified as 100 percent heterosexual screened positive for at least one behavioral health disorder at both age 17 (66% vs. 44%, $p < .001$) and at age 19 (40% vs. 23%, $p < .01$). There were no statistically significant differences by race and ethnicity in the prevalence rates of behavioral health problems.

Regarding psychotropic medication use, there were no significant racial/ethnic differences or gender differences at age 17 or at age 19. However, differences were found by sexual orientation. Sexual minority youths were more likely than youths who identified as 100 percent heterosexual to receive psychotropic medications at age 17 (37% vs. 23%, $p < .01$) and at age 19 (22% vs. 13%, $p < .05$).

Lastly, the proportion of youths receiving psychological or emotional counseling significantly differed by gender and sexual orientation, but did not differ by race and

ethnicity. Females were more likely than males to receive mental health counseling at age 17 (59% vs. 45%, $p < .01$). Moreover, a greater proportion of sexual minority youths than youths who identified as 100 percent heterosexual reported receiving counseling services at age 17 (67% vs. 48%, $p < .001$) and at age 19 (35% vs. 24%, $p < .05$). We also examined the proportions of youths receiving counseling services among those who used psychotropic medications. The results showed that the vast majority of youths using psychotropic medications also received counseling services at both ages (84% at age 17, 80% at age 19).

A closer look at prevalence rates of specific behavioral health problems and prevalence rates of psychotropic medication use among those with behavioral health problems

In the previous section, we looked at overall prevalence rates of behavioral health problems and the use of psychotropic medications at age 17 and age 19. In this section, we take a closer look at specific mental health and substance use problems and how the prevalence rates changed from age 17 to age 19. We also examine the proportions of youths who used psychotropic

medications among those with a specific behavioral health problem and how these prevalence rates differed between age 17 and age 19.

The left columns of Table 1 (“% screened positive for disorder”) present the prevalence rates of specific behavioral health problems at age 17 and age 19 among all participants in each interview wave. The middle columns of Table 1 (“% receiving psychotropic medications, among those who screened positive for disorder”) present the proportion of respondents who used psychotropic medications, among the youths who had screened positive for the corresponding behavioral health problem. For example, at age 17, 48 percent of respondents screened positive for one or more behavioral health problems. Among youths with at least one behavioral health problem at age 17, almost 38 percent had used psychotropic medications in the past year.

At age 17, 48 percent of youths screened positive for either a mental health or substance use disorder and 12 percent had a co-occurring mental health problem and a substance use problem. The most prevalent behavioral health disorders were a drug use disorder (nonalcohol) and depression. At age 19, 27 percent of youths screened positive for either a mental health or substance use disorder, and 6 percent had both mental health and substance use problems. The most prevalent behavioral health disorders were also depression and nonalcohol drug use problems, as well as symptoms of psychotic thinking. Prevalence rates of behavioral health problems were generally lower at age 19 than at age 17, with significant declines found for most disorders except for psychoticism and social phobia.

As shown in the middle columns of Table 1, rates of psychotropic medication use among youths with behavioral health problems were generally lower at age 19 than at age 17. The prevalence rate of medication use declined by 12 percentage points for youths with any behavioral health problems ($p < .05$). The prevalence rate of psychotropic medication use dropped by 26 percentage points for youths with co-occurring mental health and substance use disorders ($p < .01$). Looking at specific behavioral health problems, significant decreases were found in medication use from age 17 to age 19 in youths with the following disorders: a manic episode (a decrease of 26 percentage points; $p < .05$), an alcohol use disorder (a decrease of 25 percentage points; $p < .01$), and a nonalcohol drug use disorder (a decrease of 18 percentage points; $p < .05$). However, additional analyses found that the drop in psychotropic medication use among youths with an alcohol/drug use problem was explained, in part, by the accompanying drop in the prevalence of co-occurring mental health problems from age 17 to age 19.⁵

Lastly, although not the focus of this memo, we also examined the proportion of youth with behavioral health problems that had received counseling.⁶ The right columns of Table 1 (“% receiving counseling, among those who screened positive for disorder”) present the proportion of respondents who received emotional or psychological counseling, among the youths who had screened positive for the corresponding behavioral health problem. Overall, greater proportions of youth with behavioral health problems received counseling than psychotropic medications. For example, at age 17, about 65 percent of youths with a behavioral health problem received counseling while 38

⁵ Note that the proportion of youths with co-occurring disorders dropped from 11.5% to 5.9% from age 17 to age 19. That is, among youths with a substance use problem at each interview wave, a smaller percentage at age 19 than at age 17 also had a mental health problem. We suspected that this drop in co-occurring mental health problems may have accounted for some of the decline in psychotropic medication use observed among youths with substance use disorders. To investigate this, we compared the rates of psychotropic medication use across ages among youths who only had a substance use problem (i.e., no co-occurring mental health problem). In this analysis, the difference in rates of psychotropic medication use between ages was just 10 percentage points for an alcohol use disorder (30% vs. 20%), 13 percentage points for a drug use disorder (35% vs. 22%), and 14 percentage points for any alcohol/drug disorders (33% vs. 19%). None of these three differences were statistically significant ($p > .10$). This suggests that the decline in the psychotropic medication use among youths with substance use disorders is explained, at least in part, by the drop in the prevalence of co-occurring mental health problems

⁶ At each interview wave, the study participants were asked the following question about their receipt of outpatient mental health services: “In the past year, have you received psychological or emotional counseling?”

Table 1.
Prevalence of Specific Behavioral Health Problems ($n = 611$) and Psychotropic Medication Use among Youths with Behavioral Health Problems ($n = 177$ at age 17, $n = 106$ at age 19)

	% screened positive for disorder		Between ages	% receiving psychotropic medications, among those who screened positive for disorder		Between ages	% receiving counseling, among those who screened positive for disorder		Between ages
	Age 17	Age 19	p	Age 17	Age 19	p	Age 17	Age 19	p
Mental health and/or substance use disorders									
Either mental health disorder or substance use disorder	48.0	27.3	***	37.8	25.7	*	64.8	41.5	***
Both mental health disorder and substance use disorder	11.5	5.9	**	54.2	28.1	**	72.6	51.1	*
Mental health disorders									
Major depression episode	21.5	9.6	***	45.7	40.1		74.9	60.6	
Mania (manic episode or hypomanic episode)	13.5	2.3	***	45.5	19.5	*	70.5	39.5	*
Psychotic thinking	7.9	9.0		38.9	35.1		58.9	51.9	
PTSD	7.2	3.0	**	62.6	39.3		73.6	46.6	
Social phobia	5.0	4.8		46.3	38.9		63.8	67.2	
Any mental health disorder	33.1	18.7	***	40.1	28.6	*	69.5	50.0	**
Substance use disorders									
Alcohol abuse or dependence	12.7	8.5	*	44.4	19.8	**	58.9	32.3	**
Drug abuse or dependence	22.7	9.4	***	44.8	26.5	*	65.6	38.7	***
Any substance use disorder	26.5	14.1	***	42.2	23.0	**	62.3	35.0	***

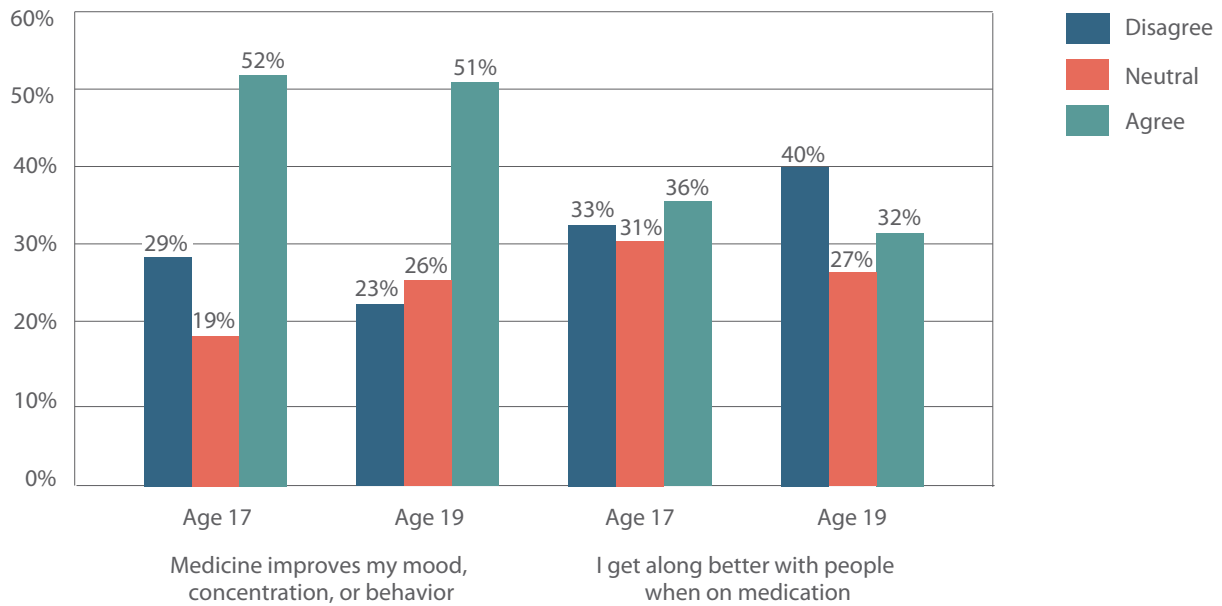
* $p < .05$; ** $p < .01$; *** $p < .001$

percent of youths received psychotropic medications. As shown in the table, youth with behavioral health problems experienced a drop in counseling use from age 17 to age 19. The proportion of youths who had received counseling declined by 23 percentage points for youths with any behavioral health problem ($p < .001$) and by 22 percentage points for youths with co-occurring mental health and substance use disorders ($p < .05$). Looking at specific behavioral health problems, significant decreases were found in counseling use from age 17 to age 19 for the following disorders: a manic episode (a decrease of 31 percentage points; $p < .05$), an alcohol use disorder (a decrease of 27 percentage points; $p < .01$), and a nonalcohol drug use disorder (a decrease of 27 percentage points; $p < .001$).

Youths' experiences with and perceptions of psychotropic medication use

This section provides information about youths' perceptions of the effects, benefits, and downsides of their psychotropic medication, at both age 17 and age 19. Importantly, for all comparisons between ages 17 and 19 described below, no statistically significant differences were found. However, this analysis in particular includes relatively small numbers of youths at each interview wave who reported using psychotropic medication. Thus, there may have been inadequate statistical power to detect differences in medication experiences.

Figure 2.
Youths' Perceptions of the Effect of Psychotropic Medication on Their Mood and Interaction with Others (n = 177 at age 17, n = 106 at age 19)



As seen in the left half of Figure 2, respondents using psychotropic medication were asked whether their medication improved their mood, concentration, or behavior. At both ages 17 and 19, about one-half of youths agreed that their medication had those positive benefits, while the rest had a neutral or negative view about the benefits.

The right half of Figure 2 shows that at age 17, roughly equivalent proportions (about one-third) of youths disagreed, had a neutral view, or agreed that medications helped them get along better with others. At age 19, somewhat similar proportions of youth had positive, negative, and neutral perceptions of the effects of psychotropic medications, with no statistically significant difference between responses at 19 and those two years earlier.

Respondents were also asked about the negative side effects of their psychotropic medications, and their responses appear in the left half of Figure 3. Responses about negative side effects were very similar between ages 17 and 19. At both ages, over four in ten youths

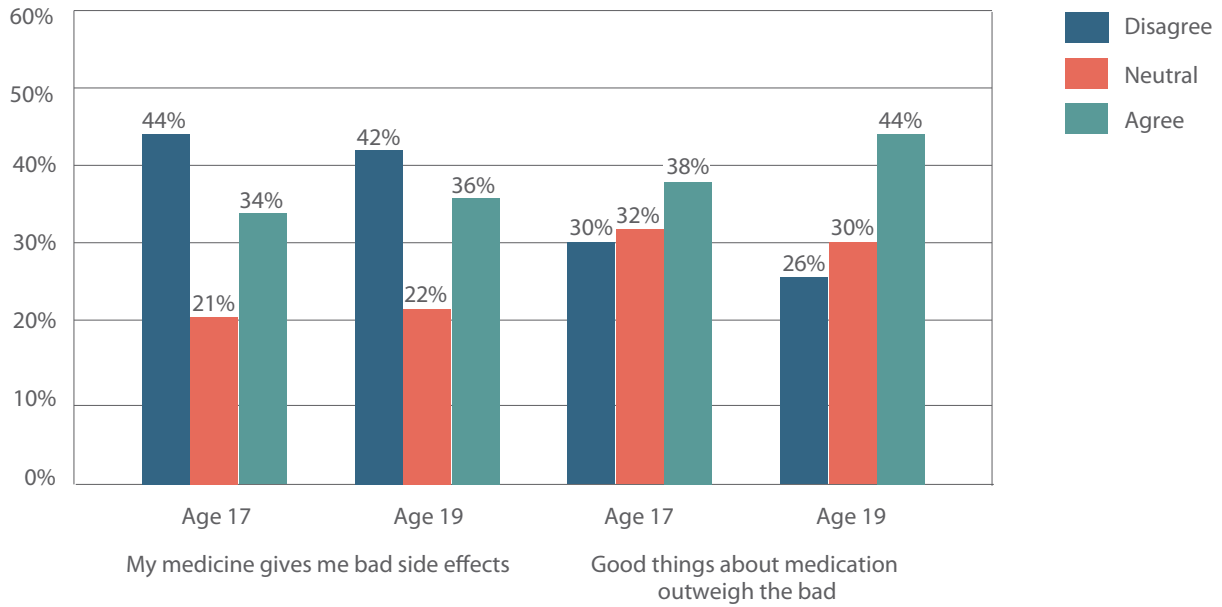
disagreed that their medication gave them bad side effects, over two in ten were neutral about the negative side effects, and less than four in ten reported that there were negative side effects from their medication.

A final question pertained to the net benefits of psychotropic medications, asking respondents whether the good things about their medication outweighed the bad things. The right half of Figure 3 shows that the majority of youths who had used medication reported a positive or neutral view with respect to whether the advantages of using medications outweighed the disadvantages (70% at age 17, 74% at age 19).

Study Limitations

It is important to note several limitations of the study. First, the measures of behavioral health disorders collected in this study were self-reported by respondents using a brief screening tool rather than a formal diagnostic assessment. Second, time constraints of conducting the survey prevented us from gathering more specific information on youths'

Figure 3.
Youths' Perceptions of the Side Effects and Net Benefits of Their Psychotropic Medication (n = 177 at age 17, n = 106 at age 19)



psychotropic medication. For example, we did not have data on the specific types of medication youths were taking, how many medications youths were prescribed, and which mental health problem(s) the medication was intended to treat. Moreover, the question about psychotropic medications asked about “medications for emotions,” which may not have captured the total array of psychoactive drugs used to treat behavioral health problems. Information was also not collected on the types of side effects youths experienced or on the effects that they felt were most problematic or concerning. This information would be especially relevant when examining benefits and side effects of specific types of psychotropic medications, which may have different sets of side effects. Small sample sizes, particularly in the analyses involving subgroups of the study sample (i.e., youths with a specific behavioral health problem, youths who used psychotropic medications), may have limited the statistical power to detect significant differences. Finally, the study findings may not represent the experiences of youth in other states,

due to differences in youth characteristics as well as differences in policies and practices in the child welfare systems and behavioral health care systems.

Summary and Implications

Overall rates of psychotropic medication use at age 17

Among CalYOUTH participants, 27 percent of 17-year-olds indicated that they had used medication for their emotions in the past year. These estimates are consistent with recent estimates based on administrative records of the statewide prevalence of psychotropic medication use, which reported that 26 percent of children ages 16 and 17 in California foster care were prescribed psychotropic medication during a 12-month period (April 2016 through May 2017; California Child Welfare Indicators Project [CCWIP], 2017). There were differences between the CalYOUTH Study and state administrative records in the source of data, the ages of the samples, and the measurement of psychotropic

medication use.⁷ Despite these differences, the psychoactive drug use estimates were similar between studies.

Consistent with prior studies, the high rates of psychotropic medication use among older adolescents in foster care call for attention from child welfare professionals, social workers, clinicians, and caregivers. One promising finding is that counseling services for emotional and psychological problems were used by more youth than were psychotropic medications. This suggests that psychotropic medications are not being used as the predominant treatment of behavioral health problems. Moreover, the fact that the vast majority of youth using psychotropic medications were also seeing a counselor at the time suggests that their use of these drugs is likely done with the oversight of a mental health professional.

Differences in psychotropic medication use by subgroups

When looking at prevalence rates by subgroups (gender, race/ethnicity, and sexual orientation), sexual minority youths were more likely than their sexual majority counterparts to have behavioral health problems, to use psychotropic medications, and to receive psychological or emotional counseling. Additional analyses (not shown) indicate that, among youths with a behavioral health problem, sexual minority youths were more likely than sexual majority youths to have received psychotropic medications (47% vs. 33% at age 17, $p < .05$; 38% vs. 19% at 19, $p < .05$). As sexual minority youth are often likely to experience marginalization and exclusion in their families, communities, and schools (Hammack & Cohler, 2011), it is essential to ensure that their psychotropic medication yields clinical benefits to them and is accompanied by treatment that addresses social stigma, isolation, and discrimination. In this study, nearly one-fourth of respondents at

age 17 reported their sexual orientation as being something other than 100 percent heterosexual. Future work should further explore differences in the use of psychotropic medications by sexual orientation, including differences in behavioral health problems that prompt the use of psychotropic medication.

Changes in psychotropic medication use from age 17 to age 19

Our findings show notable changes in overall rates of behavioral health problems and medication use from age 17 to age 19. Among all respondents, both prevalence rates of behavioral health problems and psychotropic medication use dropped from age 17 to age 19. Among youths with a behavioral health problem, the rate of medication use also declined significantly from age 17 to age 19. The findings are consistent with existing studies that have examined trends in service usage, showing that foster youth with behavioral health issues transitioning to adulthood are less likely to receive ongoing treatment as they reach adulthood (Brown et al., 2015; Courtney, Piliavin, Grogan-Kaylor, & Nesmith, 2001). The significant decline in medication use was observed among youths who screened positive for any mental health problem at ages 17 and 19. While the significant drops in medication use were also found in youths with any alcohol/drug use problems at ages 17 and 19, this was explained, at least in part, by the accompanying decrease in youths with co-occurring mental health problems.

Why might we see declines over time in psychotropic medication use?

Decreases in medication use between ages 17 and 19 among youths with behavioral health problems could be explained by a confluence of structural barriers, changes in living context, and changes in personal preferences. Structural barriers may include discontinuity in

⁷ There are some differences between the CalYOUTH Study and the California Department of Social Services (CDSS) in how psychotropic medication use was measured. First, the CalYOUTH Study analyzed self-reports of medication use, while the CDSS measure came from administrative data on paid claims from Medi-Cal pharmacy providers. Second, the CalYOUTH Study sample (mostly 17-year-olds) was older than the adolescents in the CDSS data (16- and 17-year-olds). Third, the CalYOUTH Study asked youth a general question about “medications [they] received for [their] emotions,” whereas the CDSS measure captured classes of medications designed to treat specific psychological disorders (i.e., anxiolytic agents, antidepressants, mood stabilizers, antipsychotic medications, anti-Parkinson agents, hypnotics, medications for dementia, and psychostimulants; CCWIP, 2017).

systemic supports upon exit from care, challenges in accessing services or navigating services, or difficulties with transportation and appointment availability (Brown et al., 2015; Dworsky, Ahrens, & Courtney, 2013; Reilly, 2003; Sakai et al., 2014).

Changes in living context might also explain the drop in medication use as youth transition to adulthood. At age 17, more than half of the participants lived in a placement with a therapeutic component (31% were placed in therapeutic foster care homes and 23% resided in a group home or residential treatment center). At age 19, fewer youths resided in placements with more restrictions or a therapeutic component (e.g., 7% lived in therapeutic foster homes and 15% lived in transitional housing placements). The majority of youths at age 19 lived in relative or nonrelative foster homes (27%), in supervised independent living placements (24%), were out-of-care and lived with friends or relatives or in their own place (18%), or lived in some other setting (9%). Compared to the living arrangements at age 17, on average, the places youths lived at age 19 had less supervision and support by professionals or adults who are in a position to encourage youths to take advantage of needed behavioral health services and help them navigate the steps needed to receive medication (e.g., completing paperwork, scheduling an appointment, finding transportation, refilling prescriptions).

Furthermore, changes in personal preferences about medication use might also factor in to these trends. As youth become more independent in making choices during the transition to adulthood, their perceptions about side effects of medication, their desire to deal with behavioral health problems on their own, and their willingness to seek nondrug treatments may influence their decision to use psychotropic medications. More research is needed to explain the downward trend in medication use as foster youth transition to adulthood.

Youths' experiences with psychotropic medications

In terms of medication experiences, overall our findings suggest that most youths had favorable or neutral views about the effects of their psychotropic medications.

Those views did not change significantly over time. However, a nontrivial minority of participants at each interview wave expressed negative views or experiences—they felt that their medication did not improve their mood or their interactions with others, they experienced negative side effects, or they did not perceive that the positive aspects of their medication outweighed the negative aspects. From a quality assurance perspective, it is important to consider youths' negative reports about their medication experiences because this could signal an issue with their current prescriptions (e.g., dosage or type(s) of medication) or a need for a different or an additional treatment approach. Further, included in this population are youths approaching adulthood or who have reached the age of majority. From a consumer's perspective, since these young people exercise a greater degree of autonomy and discretion in their use of psychotropic medications than younger children do, information collected about their experiences accessing and navigating services, their interactions with prescribers, and their views about medication benefits are important indicators of treatment satisfaction and service performance. These data may be particularly important for young people living in placements where there is less oversight and support and where the responsibility falls on them for obtaining and using psychotropic medications.

These findings also have implications for professionals working with transition-age foster youth who take psychotropic medications. The ways in which youths come to see and understand their need for medication, the benefits of medication, and interpretation of the side effects are co-constructed through dialogues youths have with providers, professionals, and other significant individuals in their lives (Longhofer, Floersch, & Okpych, 2011; Townsend, Floersch, & Findling, 2009). Thus, these people play an important role in shaping how youth view themselves in relation to their behavioral health issues, how youth make sense of ambivalence and other feelings around taking medication, and whether youth stick to the treatment regimens to increase the chances that the medication will have its intended benefits. Professionals in the child

welfare and mental health fields need to be prepared to engage foster youth in conversations that will increase youths' competency and comfort with making decisions about addressing their behavioral health issues.

References

- Breland-Noble, A. M., Elbogen, E. B., Farmer, E. M., Dubs, M. S., Wagner, H. R., & Burns, B. J. (2004). Use of psychotropic medications by youths in therapeutic foster care and group homes. *Psychiatric Services, 55*(6), 706–708.
- Brenner, S. L., Southerland, D. G., Burns, B. J., Wagner, H. R., & Farmer, E. M. (2014). Use of psychotropic medications among youth in treatment foster care. *Journal of Child and Family Studies, 23*(4), 666–674.
- Brown, A., Courtney, M. E., & McMillen, J. C. (2015). Behavioral health needs and service use among those who've aged-out of foster care. *Children and Youth Services Review, 58*, 163–169.
- California Child Welfare Indicators Project. (2017). *Outcome Measure 5a.1—Use of psychotropic medication among youth in foster care*. Retrieved from: http://cssr.berkeley.edu/ucb_childwelfare/CDSS_5A.aspx
- California State Auditor. (2016). *California's foster care system: The state and counties have failed to adequately oversee the prescription of psychotropic medications to children in foster care*. Retrieved from: <http://www.auditor.ca.gov/pdfs/reports/2015-131.pdf>
- Congressional Research Service. (2017). *Child welfare: Oversight of psychotropic medication for children in foster care*. Retrieved from: https://www.everycrsreport.com/files/20170217_R43466_74f90fe0b0a68eead9696c2dd87a56129a95e227.pdf
- Courtney, M. E., Charles, P., Okpych, N. J., Napolitano, L., Halsted, K. (2014). *Findings from the California Youth Transitions to Adulthood Study (CalYOUTH): Conditions of foster youth at age 17*. Chicago, IL: Chapin Hall at the University of Chicago. Retrieved from: http://fosteringsuccessmichigan.com/uploads/misc/CalYOUTH_Conditions_of_Foster_Youth_at_Age_17_report.pdf
- Courtney, M. E., Dworsky, A. L., Ruth, G., Keller, T., Havlicek, J., & Bost, N. (2005). *Midwest Evaluation of the Adult Functioning of Former Foster Youth: Outcomes at age 19*. Chicago, IL: Chapin Hall Center for Children at the University of Chicago. Retrieved from: http://www.chapinhall.org/sites/default/files/ChapinHallDocument_4.pdf
- Courtney, M. E., Dworsky, A., Cusick, G., Keller, T., Havlicek, J., & Perez, A. (2007). *Midwest Evaluation of the Adult Functioning of Former Foster Youth: Outcomes at age 21*. Chicago, IL: Chapin Hall Center for Children at the University of Chicago. Retrieved from: http://www.chapinhall.org/sites/default/files/ChapinHallDocument_2.pdf
- Courtney, M. E., Dworsky, A., Lee, J. A., & Raap, M. (2010). *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. Retrieved from: http://www.chapinhall.org/sites/default/files/Midwest_Study_Age_23_24.pdf
- Courtney, M. E., Dworsky, A., Brown, A., Cary, C., Love, K., & Vorhies, V. (2011). *Midwest Evaluation of the Adult Functioning of Former Foster Youth: Outcomes at age 26*. Chicago, IL: Chapin Hall at the University of Chicago. Retrieved from: http://www.chapinhall.org/sites/default/files/Midwest%20Evaluation_Report_4_10_12.pdf
- Courtney, M. E., Okpych, N. J., Charles, P., Mikell, D., Stevenson, B., Park, K., Kindle, B., Harty, J., & Feng, H. (2016). *Findings from the California Youth Transitions to Adulthood Study (CalYOUTH): Conditions of youth at age 19*. Chicago, IL: Chapin Hall at the University of Chicago. Retrieved from: http://www.chapinhall.org/sites/default/files/CY_YT_RE0516_4.pdf
- Courtney, M. E., Piliavin, I., Grogan-Kaylor, A., & Nesmith, A. (2001). Foster youth transitions to adulthood: A longitudinal view of youth leaving care. *Child Welfare, 80*(6), 685–717.
- Courtney, M. E., Terao, S., & Bost, N. (2004). *Midwest Evaluation of the Adult Functioning of Former Foster Youth: Conditions of youth preparing to leave state care*. Chicago, IL: Chapin Hall Center for Children at the University of Chicago. Retrieved from: https://www.chapinhall.org/sites/default/files/CS_97.pdf
- Derogatis, L. R. (1996). *SCL-90-R: Symptom Checklist-90-R: Administration, scoring, and procedures manual*. New York, NY: Pearson.
- Derogatis, L. R. & Unger, R. (2010). Symptom Checklist-90-Revised. *Corsini Encyclopedia of Psychology, 4th edition* (pp. 1–2). Hoboken, NJ: John Wiley and Sons.
- dosReis, S., Yoon, Y., Rubin, D.M., Riddle, M.A., Noll, E., & Rothbard, A. (2011). Antipsychotic treatment among youth in foster care. *Pediatrics, 128*(6), e1459–e1466.
- dosReis, S., Zito, J. M., Safer, D. J., & Soeken, K. L. (2001). Mental health services for youths in foster care and disabled youths. *American Journal of Public Health, 91*(7), 1094–1099.
- Dworsky, A., Ahrens, K., & Courtney, M. (2013). Health insurance coverage and use of family planning services among current and former foster youth: Implications of the health care reform law. *Journal of Health Politics, Policy and Law, 38*(2), 421–439.
- Ferguson, D. G., Glesener, D. C., & Raschick, M. (2006). Psychotropic drug use with European American and American Indian children in foster care. *Journal of Child & Adolescent Psychopharmacology, 16*(4), 474–481.
- Hammack, P. L., & Cohler, B. J. (2011). Narrative, identity, and the politics of exclusion: Social change and the gay and lesbian life course. *Sexuality Research and Social Policy, 8*(3), 162–182.

- Kranke, D., Floersch, J., Townsend, L., & Munson, M. (2010). Stigma experience among adolescents taking psychiatric medication. *Children and Youth Services Review, 32*(4), 496–505.
- Leslie, L. K., Mackie, T., Dawson, E. H., Bellonci, C., Schoonover, D. R., Rodday, A. M., . . . Hyde, J. (2010). Multi-state study on psychotropic medication oversight in foster care. Boston, MA: Tufts Clinical and Translational Science Institute.
- Longhofer, J., Floersch, J., & Okpych, N. (2011). Foster youth and psychotropic treatment: Where next? *Children and Youth Services Review, 33*(2), 395–404.
- McMillen, J. C., & Raghavan, R. (2009). Pediatric to adult mental health service use of young people leaving the foster care system. *Journal of Adolescent Health, 44*(1), 7–13.
- Raghavan, R., & McMillen, J. C. (2008). Use of multiple psychotropic medications among adolescents aging out of foster care. *Psychiatric Services, 59*(9), 1052–1055.
- Raghavan, R., Zima, B. T., Andersen, R. M., Leibowitz, A. A., Schuster, M. A., & Landsverk, J. (2005). Psychotropic medication use in a national probability sample of children in the child welfare system. *Journal of Child & Adolescent Psychopharmacology, 15*(1), 97–106.
- Reilly, T. (2003). Transition from care: Status and outcomes of youth who age out of foster care. *Child Welfare, 82*(6), 728–746.
- Sakai, C., Mackie, T. I., Shetgiri, R., Franzen, S., Partap, A., Flores, G., & Leslie, L. K. (2014). Mental health beliefs and barriers to accessing mental health services in youth aging out of foster care. *Academic Pediatrics, 14*(6), 565–573.
- Sheehan, D. V., Lecrubier, Y., Sheehan, K. H., Amorim, P., Janavs, J., Weiller, E., . . . Dunbar, G. C. (1998). The Mini-International Neuropsychiatric Interview (MINI): The development and validation of a structured diagnostic psychiatric interview for DSM-IV and ICD-10. *Journal of Clinical Psychiatry, 59*, 22–33.
- Sheehan, D. V., Sheehan, K. H., Shytle, R. D., Janavs, J., Bannon, Y., Rogers, J. E., . . . Wilkinson, B. (2010). Reliability and validity of the Mini International Neuropsychiatric Interview for Children and Adolescents (MINI-KID). *The Journal of Clinical Psychiatry, 71*(3), 313–326.
- Sheldon, G., Berwick, D., & Hyde, P. (2011). *Joint letter to state child welfare, Medicaid, and mental health authorities on the use of psychotropic medication for children in foster care & substance abuse and mental health services administration*. Retrieved from: <https://www.medicaid.gov/Federal-Policy-Guidance/Downloads/SMD-11-23-11.pdf>
- Townsend, L., Floersch, J., & Findling, R. L. (2009). The conceptual adequacy of the Drug Attitude Inventory for measuring youth attitudes toward psychotropic medications: A mixed methods evaluation. *Journal of Mixed Methods Research, 4*(1), 32–55.
- U.S. Government Accountability Office. (2017). *Foster care: HHS has taken steps to support states' oversight of psychotropic medications, but additional assistance could further collaboration*. (GAO Publication No. GAO-17-129). Retrieved from: <https://www.gao.gov/assets/690/681916.pdf>
- Zima, B. T., Bussing, R., Crecelius, G. M., Kaufman, A., & Belin, T. R. (1999a). Psychotropic medication treatment patterns among school-aged children in foster care. *Journal of Child and Adolescent Psychopharmacology, 9*(3), 135–147.
- Zima, B. T., Bussing, R., Crecelius, G. M., Kaufman, A., & Belin, T. R. (1999b). Psychotropic medication use among children in foster care: Relationship to severe psychiatric disorders. *American Journal of Public Health, 89*(11), 1732–1735.
- Zito, J. M., Safer, D. J., Gardner, J. F., Boles, M., & Lynch, F. (2000). Trends in the prescribing of psychotropic medications to preschoolers. *JAMA, 283*(8), 1025–1030.
- Zito, J. M., Safer, D. J., Sai, D., Gardner, J. F., Thomas, D., Coombes, P., Dubowski, M., & Mendez-Lewis, M. (2008). Psychotropic medication patterns among youth in foster care. *Pediatrics, 121*(1), e157–e163.
- Zito, J. M., Safer, D. J., Zuckerman, I. H., Gardner, J. F., & Soeken, K. (2005). Effect of Medicaid eligibility category on racial disparities in the use of psychotropic medications among youths. *Psychiatric Services, 56*(2), 157–163.

ChapinHall at the University of Chicago

Chapin Hall is an independent policy research center at the University of Chicago focused on providing public and private decision-makers with rigorous data analysis and achievable solutions to support them in improving the lives of society's most vulnerable children.

Chapin Hall partners with policymakers, practitioners, and philanthropists at the forefront of research and policy development by applying a unique blend of scientific research, real world experience, and policy expertise to construct actionable information, practical tools, and, ultimately, positive change for children, youth, and families.

Established in 1985, Chapin Hall's areas of research include child and adolescent development; child maltreatment prevention; child welfare systems; community change; economic supports for families; home visiting and early childhood initiatives; runaway and unaccompanied homeless youth; schools, school systems, and out-of-school time; and youth crime and justice.

Recommended Citation

Park, K., Okpych, N. J., & Courtney, M. E. (2017). *Memo from CalYOUTH: The use of psychotropic medications over time among foster youth transitioning to adulthood*. Chicago, IL: Chapin Hall at the University of Chicago.

Related Publications

Okpych, N. J., Courtney, M., & Dennis, K. (2017). *Memo from CalYOUTH: Predictors of high school completion and college entry at ages 19/20*. Chicago, IL: Chapin Hall at the University of Chicago.

Courtney, M. E., Park, E., & Okpych, N. J. (2017). *Memo from CalYOUTH: Factors associated with remaining in foster care as young adults*. Chicago, IL: Chapin Hall at the University of Chicago.

Courtney, M. E., & Okpych, N. J. (2017). *Memo from CalYOUTH: Early findings on the relationship between extended foster care and youths' outcomes at age 19*. Chicago, IL: Chapin Hall at the University of Chicago.

For a complete list of Chapin Hall projects and to download publications, please visit our website.

Contact

Chapin Hall at the University of Chicago

1313 East 60th Street
Chicago, IL 60637
T: 773.753.5900
F: 773.753.5940
www.chapinhall.org

Disclaimer

The findings reported herein were performed with the permission of the California Department of Social Services. The opinions and conclusions expressed herein are solely those of the authors and should not be considered as representing the policy of the collaborating agency or any agency of the California government.