

Drug Company Payments to Physicians Tied to Harmful Prescriptions for Foster Youth: An Analysis from the National Center for Youth Law

Nationwide, youth in foster care services are prescribed psychotropic medication at a rate greater than 3 times that of Medicaid insured youth as a whole. Instances of polypharmacy, wherein youth are prescribed multiple medications at once, are especially problematic and unfortunately common among foster youth. The negative consequences of polypharmacy are worse still when youth are prescribed multiple concurrent antipsychotics—the riskiest class of psychotropic drugs. Side effects include, but are not limited to, diabetes, metabolic disruption, seizures, rapid weight gain, heart murmurs, high cholesterol, and kidney problems. Despite the fact that this practice is outside of medically recommended guidelines, it continues to occur.

In order to end these harmful prescription practices, it is necessary to understand what motivates some physicians to engage in these practices to begin with. This report focuses on a hypothesis that physicians are much more likely to prescribe medication promoted to them by drug companies. As such, this report hypothesizes that: **Physicians are more likely to prescribe inappropriately to foster youth when they receive payments from pharmaceutical companies.**

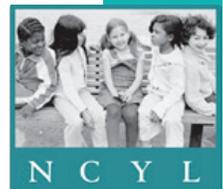
Results of an analysis on the prescribing patterns of physicians to foster youth confirm this hypothesis. Across specialties such as psychiatry, neurology, and pediatrics, physicians who were paid by drug companies promoting antipsychotic medication were much more likely to prescribe concurrent antipsychotics.¹ In the specialty of pediatrics, for example, we found an almost tenfold increase in the prescription of concurrent antipsychotics for physicians who were paid by pharmaceutical companies.

To address this problem, **this report recommends legislation to increase transparency and oversight.** Specifically, bills related to the prescriptions of psychotropic drugs to foster youth, academic detailing and consultation for prescribers practicing outside of safety parameters for children, and restrictions on pharmaceutical company payments to physicians.

Background

Nationwide, youth in foster care are prescribed psychotropic medication at a rate greater than 3 times that of Medicaid insured youth as a whole.² This includes nearly 30% of all 400,000 foster youth across the country.³ While appropriate prescriptions of psychotropic medication at recommended doses can be an important component of mental health care, foster youth are often prescribed too many medications with too high dosages to treat symptoms for which the efficacy of these medications is unsubstantiated by scientific evidence and unsupported by prescription guidelines.⁴

Instances of polypharmacy, wherein youth are prescribed multiple medications at once, are especially problematic. Far from being rare, for foster youth prescribed any psychotropic medication, about 41% are prescribed three psychotropic drugs at the same time.⁵ And of particular concern is the fact that up to 19% are prescribed two or more antipsychotics concurrently^{6 7}.



This is concerning because no scientific studies have demonstrated any evidence for the efficacy of either polypharmacy or concurrent antipsychotics.⁸ Moreover, the health problems and complications from polypharmacy, especially with antipsychotic usage, are profound. Side effects include, but are not limited to, diabetes, metabolic disruption, seizures, rapid weight gain, heart murmurs, high cholesterol, and kidney problems.⁹ And despite the fact that the vast majority of foster youth lack necessary labs, monitoring, and follow up services required for the patients placed on these drugs, about 24,000 foster youth are prescribed two or more concurrent antipsychotics and about 48,000 are prescribed three or more psychotropics from any class annually.¹⁰

Due to the gravity of this problem, it is essential for policymakers to use their authority and expertise to address it. Thankfully, policymakers in many states have already instituted legislative and policy reforms aimed at reducing these harmful prescribing practices. Oversight mechanisms such as judicial review, prior authorization, and database review have demonstrated considerable success.¹¹ Notably, Ohio and New York have seen 25% reductions in the rate of medication prescribed to foster youth.¹² Other notable states such as Arkansas and Maryland reported 13.5% to 85.7% declines (depending on age group) in prescriptions of antipsychotic medication.¹³ In spite of these successes, many more states will need to take action before foster youth nationwide receive appropriate prescriptions of psychotropic medication.

Physician Motivation

In order to achieve the goal of appropriate psychotropic prescriptions to foster youth nationwide, it is essential to understand what motivates some physicians to prescribe inappropriately to begin with. Thankfully multiple, evidence informed explanations already exist. Answers to this question range from a lack of proper physician education to involuntary hospitalization laws, which sometimes require medication, and even perverse financial incentives for physicians to prescribe drugs rather than provide therapy.¹⁴ This report focuses on another possible explanation: Physicians are more likely to prescribe inappropriately to foster youth when they receive payments from drug companies.

This hypothesis is drawn from the results of multiple recent studies, which show that physicians are much more likely to prescribe medication promoted to them by drug companies.¹⁵ One such study published in the *Journal of the American Medical Association*, found that something as simple as one payment for one meal to a physician from a drug company resulted in significantly higher rates of prescriptions of the drugs being promoted by the drug company in question. Another study by ProPublica using the Dollars for Docs Database¹⁶ echoed those results, finding that physicians across five common specialties prescribed higher rates of brand name medication after just one payment from a drug company. **Psychiatrists, for example, were 40% more likely to prescribe brand name medication when paid more than \$5,000 by drug companies than those who were not paid at all.**¹⁷

Furthermore, this phenomenon is not only a question of academic study but has had far reaching legal implications as well. Drug companies have paid hundreds of millions of dollars in lawsuits and settlements as a result of these promotion practices.¹⁸ However, they have continued to engage in these practices, including the promotion of antipsychotics with patently false information to treat symptoms and disorders without evidence of efficacy and with evidence of severe side effects.¹⁹ To date, these studies and lawsuits have focused on prescriptions from physicians to the population in aggregate. The question examined here is whether it applies to foster youth in particular.

Analysis

Previous research demonstrates there is a problem of overprescription of psychotropic medication to foster youth. Research also demonstrates the unfortunate reality that physicians are more likely to prescribe medication promoted to them by drug company payments. As a result of these distinct

findings, the National Center for Youth Law (NCYL) has undertaken an analysis to determine a relationship between the two. Are physicians who prescribe concurrent antipsychotic medication to foster youth influenced by pharmaceutical company payments?

The reason this study focuses on the use of concurrent antipsychotics specifically, rather than psychotropic prescription patterns as a whole is due to the fact that concurrent antipsychotic prescriptions are only appropriate in very limited circumstances, specifically when used during a period called “cross-tapering.” Groups such as the American Academy of Child and Adolescent Psychiatry recommend only using concurrent antipsychotics in this instance. As a result, concurrent, in this study, is defined as a period of more than thirty days, which is outside the period of cross tapering. Consequently, all instances of this behavior reviewed in this study are definitively outside medically recommended guidelines.²⁰

Methods and Data

This investigation uses two primary data sources. The first consists of data on each prescriber of psychotropic medication to foster youth in California and details their total number of prescriptions of different types of psychotropic drugs as well as their name, location, and specialty. It was provided by the California Department of Healthcare Services (DHCS) and spans a five-year period from July 1, 2009, to June 30, 2014.

The second dataset includes aggregate totals of payments to physicians from drug companies in the promotion of all brand name antipsychotics and was drawn chiefly from ProPublica’s Dollars for Docs database. It uses publicly available data, about payments to physicians from pharmaceutical companies as a result of the Physician Financial Transparency Reports (Sunshine Act) which began collecting data in 2010. These two data sources were merged together and analyzed to determine the statistical relationship between payments to physicians for antipsychotics and the prescription of two or more concurrent antipsychotics to foster youth.

Additionally, NCYL also took measures to make sure that the results of this study were robust. To do this, the NCYL analysis controlled for physician classification, specialty, and work location. And to further increase the validity of the study, prescription patterns were examined in the following three different ways:

- The total number of prescriptions of concurrent antipsychotic medication.
- The total number of prescriptions of concurrent antipsychotic medication as a percentage of prescriptions of all psychotropic drugs.
- The likelihood a physician would demonstrate a pattern²¹ of prescribing concurrent antipsychotics.

Results

The results of this study demonstrate that physicians who are paid by drug companies promoting an antipsychotic are more likely to prescribe concurrent antipsychotics to foster youth. Over the five-year period in the DHCS data set, the **top 5% of physicians²² with the highest prescription rate of two or more antipsychotics at once, combined to make up nearly 50% of the total instances this occurred.**²³ Of the 1,115 physicians who prescribed any psychotropic medication at least ten times during this five-year period, just over 75%²⁴ never appear in the data as having ever prescribed concurrent antipsychotics. This means that just under 25% of the providers account for all instances of concurrent antipsychotics prescribed to foster children in the DHCS dataset. **Moreover, 70%²⁵ of this top 5% received payments from drug companies for antipsychotics compared to just 35% from the sample overall.**

Across all specialties, being paid for any antipsychotic predicted a 3.2 times rate increase in prescriptions of concurrent antipsychotics to foster youth. It likewise predicted a 2.5 times

higher total prescription rate of concurrent antipsychotics as a percentage of total psychotropic prescriptions. Finally, physicians paid by a pharmaceutical company for any antipsychotic medication were 2.4 times as likely to present a pattern of prescribing concurrent antipsychotics to foster youth.

Below are three graphs expressing the results above in more detail. All instances are broken down by payment and physician specialty.

Figure 1:

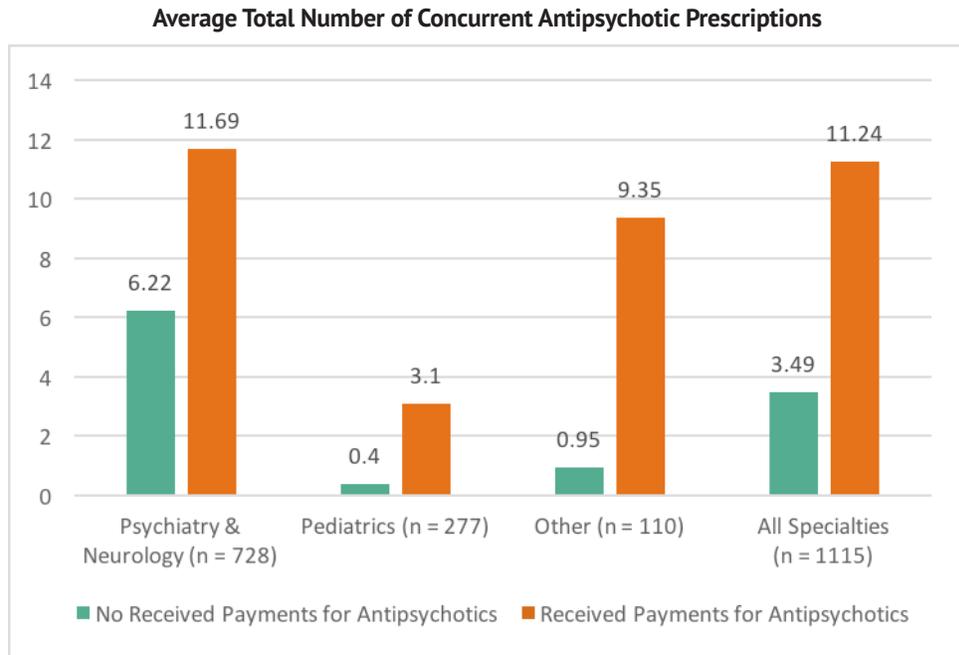


Figure 2:

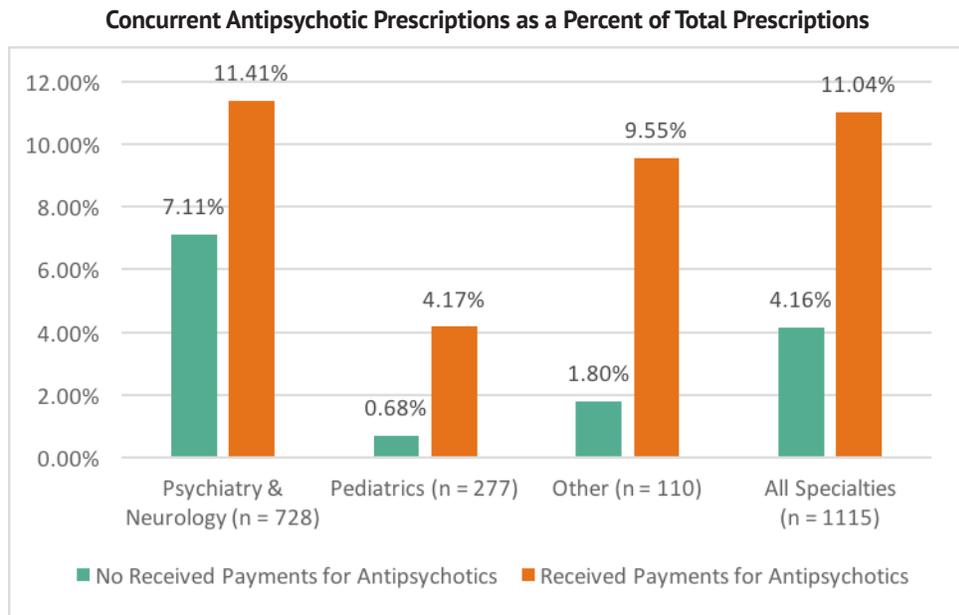
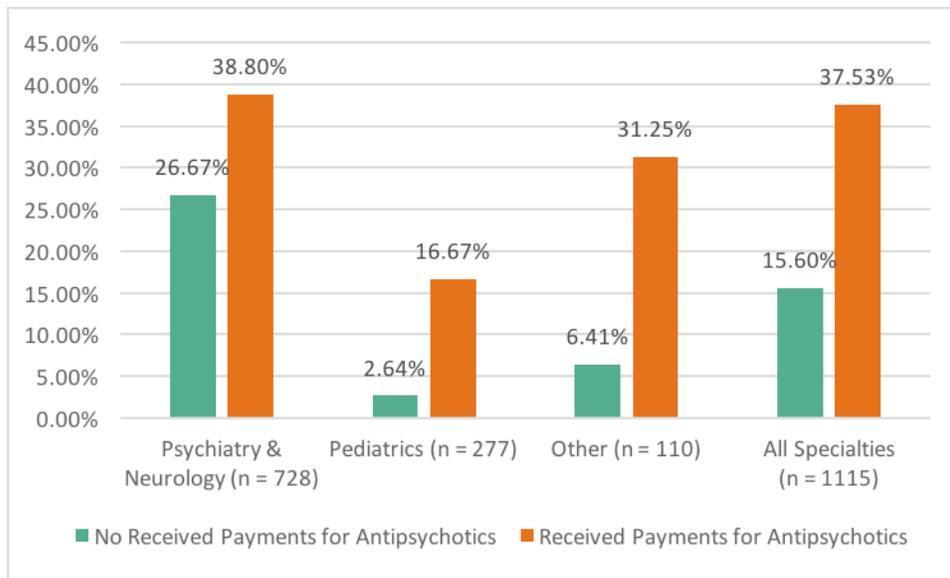


Figure 3:

Likelihood a Physician Would Demonstrate a Pattern²⁶ of Prescribing Concurrent Antipsychotics



Limitations

While these results are robust, certain limitations still persist in this analysis due to a lack of available data. To begin with, the data provided only included information through 2014. This could mask more recent trends in prescription practices to foster youth. Additionally, individualized data is only available when a prescriber engages in a pattern of prescribing more than 10 times. This applies to both total number of psychotropics and to total number of two or more concurrent antipsychotics. This means that both the number of prescribers who prescribed psychotropic medication is greater than listed as well as the number who prescribed more than two concurrent antipsychotics.

Furthermore, this data only includes information on antipsychotics. Further studies on inappropriate prescriptions of antidepressants and attention-deficit/hyperactivity disorder (ADHD) medications are crucial for oversight purposes. Publicly available antidepressant and ADHD prescription data could be matched with physician payment data in the same manner as this study on antipsychotics. In addition to the study of concurrent medication, studying dosage information is essential for oversight purposes. Further, when trying to circumscribe inappropriate prescriptions to foster youth, it is also essential to have valid data on dosages in order to track instances where overprescription was the result of too high dosages rather than too many medications.

Finally, the analysis did not find any link between the amount of money paid and the total, percentage, or likelihood of prescribing multiple concurrent antipsychotics. For example, the model used in this analysis did not predict any difference in prescribing patterns for a physician being taken out to dinner by a drug company once or ten times. This demonstrates a possibility that simply being paid by large pharmaceutical companies for antipsychotics is enough to alter behavior and that the amount itself is relatively unimportant.

Discussion and Recommendations

This report recommends both more transparent data and oversight surrounding the prescriptions of psychotropic drugs to foster youth. This study has provided evidence that it is a small handful of prescribers (5%) who appear to account for the majority of inappropriate prescriptions toward foster youth in the form of concurrent antipsychotic prescription (almost 50%). Better oversight at all levels of government are needed to stop this harmful behavior.

At the same time, this study has shown that more timely, accurate, and centralized data is needed to truly understand the depth of this problem and to see how it changes over time. Many state agencies obligated to protect this vulnerable population of foster youth are unprepared and unable to truly provide oversight due to a lack of necessary information. More light must be shed on this issue in order to truly alter the behavior of physicians who prescribe inappropriately.

Specifically, this report recommends that state legislatures pass laws to provide Health and Human Services departments with the funding and authority to collect, distribute, and analyze data surrounding prescription patterns to foster youth. Concurrently, this report also recommends those state legislatures pass laws and regulations that allow those same state agencies, or other agencies such as the Medical Board, the authority to appropriately educate and, if need be, discipline the small handful of physicians who prescribe inappropriately to foster youth. Finally, this report recommends that state legislatures pass laws to restrict pharmaceutical company gifts and payments to physicians.

Current Progress

Many states are already beginning to implement effective laws and policies to both acquire necessary data and properly oversee prescribers. In California specifically, legislative champions and NCYL have taken the lead to solve these problems through the implementation of model legislation that increases data transparency on prescription practices and oversight mechanisms to stop harmful ones.²⁷

SB 1174 (McGuire), for example, codifies a data use agreement between California DHCS and its Medical Board wherein the DHCS provides information about inappropriately prescribing physicians to the Medical Board and gives the Medical Board authority to review the practice of those physicians. Another bill, SB 1291 (Beall), calls for annual county data sharing that will improve foster youth's access to mental health services. States such as Washington, Ohio, and Vermont have taken other approaches to oversee the influence of pharmaceutical company payments to physicians and to oversee prescribing to foster children. Washington has a consultation line for providers²⁸, Ohio trains outlying prescribers and provides technical assistance²⁹, and Vermont has a ban³⁰ on pharmaceutical company payments.³¹

Current efforts in California and other states demonstrate both progress and potential. Bills such as SB 1174 and SB 1291 show promise to be effective in reducing the overmedication of foster youth. However, a concerted effort on the part of policy advocates and policy makers is required and policy change is essential to ensure that the 400,000 foster youth across the country receive the mental health care they require and deserve.



Noah Lehman is a second year public policy student and statistics graduate student instructor at UC Berkeley's Goldman School of Public Policy. As an intern at the National Center for Youth Law (NCYL), Noah researched systemic mental health care issues for foster youth. Through his work at NCYL and beyond he hopes to redress problems created by inequality, injustice, and lack of opportunity for youths both in America and abroad.

Appendices

National Center for Youth Law Legislation

Approved Legislation

SB 1174 (McGuire), 2016

Issue: Prescriber Oversight

Content: SB 1174 would establish a process for the Medical Board of California to review and investigate psychotropic medication prescription patterns among California children. Specifically, this bill enables the Medical Board of California to collect and analyze data, and, where warranted, conduct investigations of physicians who frequently prescribe outside recognized safety parameters for children. Treatments with the greatest risks to children's health would be flagged and analyzed in a physician's prescribing history.

SB 1291 (Beall), 2016

Issue: Data Transparency—Availability of Mental Health Services for Children in Foster Care

Content: SB 1291 would improve the ability of the State and counties to oversee mental health services for foster children and youth and to track outcomes related to those services. Specifically, this bill calls for annual reviews that detail services, access, timeliness, and quality for children's mental health services and needs.

SB 319 (Beall), 2015

Issue: Data Transparency and Prescriber Oversight—Public Health Nurses, Psych Drug Monitoring, and Medical Records

Content: This bill will give public health nurses the authority to receive medical records directly from physicians serving foster children and highlights their role in the oversight of screening and monitoring appointments for psychotropic medications. With these changes public health nurses will be able to ensure that lab tests, other screenings, evaluations and assessments meet reasonable standards of medical practice in a more timely manner.

SB 484 (Beall), 2015

Issue: Group Home Oversight—Utilization of Psych Drugs

Content: This bill will identify group homes that rely excessively on psychotropic medication, use such medications as the primary intervention for behavior problems, or employ other high-risk practices. When problem practices are found a corrective action plan will be formulated for safe and appropriate care for the children and youth in those homes.

SB 238 (Mitchell), 2015

Issue: Data Transparency and Prescriber Oversight—Psych Drug Data, Alerts, Training, JV-220 form

Content: This bill will identify group homes that rely excessively on psychotropic medication, use such medications as the primary intervention for behavior problems, or employ other high-risk practices. When problem practices are found a corrective action plan will be formulated for safe and appropriate care for the children and youth in those homes.

Proposed Legislation

SB 253 (Monning), 2015-2016

Issue: Prescriber Oversight—Support for the Courts

Content: This bill aims to strengthen the court authorization process for foster children. The bill would establish the following:

- Judges, in making their determination to authorize psychotropic medications, will be provided comprehensive treatment information, alternatives, and treatment history.
- Second opinion criteria for the most extreme prescribing cases such as for use with children ages 0-5, multiple antipsychotics, and three or more psychotropic medications at the same time.
- Follow up monitoring requirements reported to the courts to clarify the safety and impact of the medication treatment.

Endnotes

- 1 In this study, “concurrent” is defined as a period of more than thirty days
- 2 Psychotropic Medication Patterns Among Youth in Foster Care, Julie M. Zito, Daniel J. Safer, Devadatta Sai, James F. Gardner, Diane Thomas, Phyllis Coombes, Melissa Dubowski, Maria Mendez-Lewis, *Pediatrics* Jan 2008, 121 (1) e157-e163; DOI: 10.1542/peds.2007-0212
- 3 Managing Psychotropic Medications for Children and Youth in Foster Care | Administration for Children and Families. (n.d.). Retrieved August 02, 2016, from <http://www.acf.hhs.gov/blog/2012/08/managing-psychotropic-medications-for-children-and-youth-in-foster-care>
- 4 Mackie, T. I. (2014). Extending psychotropic medication oversight for children in foster care: A sociological and econometric examination of state monitoring mechanisms (Order No. 3622244). Available from ProQuest Dissertations & Theses A&I. (1548007824). Retrieved from <http://search.proquest.com/docview/1548007824?accountid=14496>
- 5 Psychotropic Medication Patterns Among Youth in Foster Care, Julie M. Zito, Daniel J. Safer, Devadatta Sai, James F. Gardner, Diane Thomas, Phyllis Coombes, Melissa Dubowski, Maria Mendez-Lewis, *Pediatrics* Jan 2008, 121 (1) e157-e163; DOI: 10.1542/peds.2007-0212
- 6 For the purposes of this report, concurrently is defined as, “two or more in 30-45 days” and is from data provided by the California Department of Health Care Services.
- 7 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. Retrieved from <http://search.proquest.com/docview/1034514982?accountid=14496>
- 8 U.S. Department of Health and Human Services. (n.d.). Use of multiple concurrent antipsychotics in children and adolescents: percentage of children and adolescents 1 to 17 years of age who were on two or more concurrent antipsychotic medications. | National Quality Measures Clearinghouse. Retrieved from <https://www.qualitymeasures.ahrq.gov/summaries/summary/49749/use-of-multiple-concurrent-antipsychotics-in-children-and-adolescents-percentage-of-children-and-adolescents-1-to-17-years-of-age-who-were-on-two-or-more-concurrent-antipsychotic-medications>
- 9 National Institute of Mental Health. (n.d.). Mental health medications. Retrieved from www.nimh.nih.gov/health/topics/mental-health-medications/index.shtml#part_149866
- 10 U.S. Department of Health and Human Services. (n.d.). Use of multiple concurrent antipsychotics in children and adolescents: percentage of children and adolescents 1 to 17 years of age who were on two or more concurrent antipsychotic medications. | National Quality Measures Clearinghouse. Retrieved from <https://www.qualitymeasures.ahrq.gov/summaries/summary/49749/use-of-multiple-concurrent-antipsychotics-in-children-and-adolescents-percentage-of-children-and-adolescents-1-to-17-years-of-age-who-were-on-two-or-more-concurrent-antipsychotic-medications>
- 11 Mackie, T. I. (2014). Extending psychotropic medication oversight for children in foster care: A sociological and econometric examination of state monitoring mechanisms (Order No. 3622244). Available from ProQuest Dissertations & Theses A&I. (1548007824). Retrieved from <http://search.proquest.com/docview/1548007824?accountid=14496>
- 12 National Center for Youth Law. (n.d.). Curbing the high rates of psychotropic medication prescriptions among children and youth in foster care. Retrieved from <http://youthlaw.org/wp-content/uploads/2016/02/curbing-high-rates.pdf>
- 13 Centers for Medicare & Medicaid Services. (n.d.). A Review of State Medicaid Approaches on Child Antipsychotic Monitoring Programs. Retrieved from <https://www.medicaid.gov/medicaid-chip-program-information/by-topics/benefits/prescription-drugs/downloads/state-medicaid-dur-summaries.pdf>
- 14 American Psychological Association. (2012, June). Inappropriate prescribing. Retrieved from <http://www.apa.org/monitor/2012/06/prescribing.aspx>
- 15 American Psychological Association. (2012, June). Inappropriate prescribing. Retrieved from <http://www.apa.org/monitor/2012/06/prescribing.aspx>
- 16 For more information on Dollars for Docs go to: <https://projects.propublica.org/docdollars/>
- 17 <https://projects.propublica.org/docdollars/>
- 18 New York Times. (2010, October 2). Antipsychotic Drugs - Side Effects May Include Lawsuits - NYTimes.com. Retrieved from http://www.nytimes.com/2010/10/03/business/03psych.html?pagewanted=all&_r=0
- 19 New York Times. (2010, October 2). Antipsychotic Drugs - Side Effects May Include Lawsuits - NYTimes.com. Retrieved from http://www.nytimes.com/2010/10/03/business/03psych.html?pagewanted=all&_r=0
- 20 U.S. Department of Health and Human Services. (n.d.). Use of multiple concurrent antipsychotics in children and adolescents: percentage of children and adolescents 1 to 17 years of age who were on two or more concurrent antipsychotic medications. | National Quality Measures Clearinghouse. Retrieved from <https://www.qualitymeasures.ahrq.gov/summaries/summary/49749/use-of-multiple-concurrent-antipsychotics-in-children-and-adolescents-percentage-of-children-and-adolescents-1-to-17-years-of-age-who-were-on-two-or-more-concurrent-antipsychotic-medications>
- 21 A pattern is defined as, “10 or more times” for the purposes of this study due to the fact that observations under 10 times are masked in health data.
- 22 54 out of the 1,115 physicians in the data set
- 23 3,258 of the 6,975 instances this occurred
- 24 854 physicians
- 25 38 of the top 54 prescribers
- 26 A pattern is defined as, “10 or more times” for the purposes of this study due to the fact that observations under 10 times are masked in health data.
- 27 For a full list of bills sponsored by NYCL address this problem, as well as other problems related to foster youth, please see appendix A.
- 28 <http://www.seattlechildrens.org/healthcare-professionals/access-services/partnership-access-line/>
- 29 http://www.ohiomindsmatter.org/Prescribers_Psychotropic.html
- 30 <http://legislature.vermont.gov/assets/Documents/2016/WorkGroups/House%20Health%20Care/Bills/H.866/W-Jennifer%20Carbee-Vermont%E2%80%99s%20Gift%20Ban%20and%20Disclosure%20Laws-2-4-2016.pdf>
- 31 For more information on prescriber oversight practices in various states visit <https://youthlaw.org/publication/3405/>