

Understanding and Addressing Antipsychotic Prescribing Practices for Medicaid-enrolled Children

Statement of Problem

Children enrolled in Medicaid, and particularly those in foster care, are more likely to be prescribed psychotropic medications than privately insured children.

In 2016, the Pennsylvania Department of Human Services (DHS) announced several new initiatives to reduce the use of psychotropic medications among Medicaid-enrolled youth in the state, including the release of new prescribing guidelines for physicians. These initiatives were informed by research PolicyLab did in collaboration with DHS to review psychotropic prescribing in the Pennsylvania Medicaid program, with a focus on antipsychotic medications and prescribing trends to youth in foster care.

While interim reporting from Pennsylvania's Medicaid program shows initial declines in prescription rates of antipsychotics, we lack a nuanced understanding of how prescribing practices and diagnoses shifted following implementation of these state initiatives and the impacts of the COVID-19 pandemic on mental/behavioral health care access.

Description

PolicyLab's foundational research on this topic aimed to understand the scope of the problem. Researchers used national Medicaid data from the Centers for Medicare and Medicaid Services to respond to four primary research aims related to psychotropic prescribing to Medicaid-enrolled children between 2002 and 2009:

- Describe trends over time in the use of antipsychotics and polypharmacy at both the national and state levels, with particular focus on youth in foster care
 - Key Findings: Between 2002 and 2007, the number of Medicaid-enrolled children ages 3-18 using antipsychotics increased 62%, reaching 354,000 children by 2007. Additionally, wide variation in state level prescribing of antipsychotics was observed.
- Identify the mental and behavioral health diagnoses associated with antipsychotic use across the United States
 - Key Findings: Growth in antipsychotic use was evident across almost every diagnosis; however, most children taking antipsychotics (65%) were receiving them for diagnoses lacking regulatory approval for use, such as ADHD and conduct disorder.
- Examine how antipsychotics are prescribed with other psychotropic medication classes to Medicaid-enrolled youth
 - Key Findings: In general, children did not receive antipsychotics as their only medication; an analysis of children ages 6-18 found that most youth (85%) with antipsychotic use during a year received them concurrently with another psychotropic medication class. Such concurrent use of antipsychotics with all other psychotropic medication classes increased over time, and the duration of this use was not short-

term, accounting for 35% to 40% of annual calendar days.

- Assess the association between antipsychotic use and incident type 2 diabetes
 - Key Findings: This analysis of children and adolescents ages 10-18 found that antipsychotic use was associated with a 50% increase in the risk of developing type 2 diabetes. The risk for diabetes was even higher for youth who used antidepressants and antipsychotics at the same time. Finally, the study demonstrated that newer antipsychotic medications may not have a lower side effect profile than risperidone, an older and frequently prescribed antipsychotic.

Additionally, to address policy questions raised by observed trends in antipsychotic prescribing across the country, the team conducted two policy-focused studies:

- A 16-state policy review to explore existing oversight measures for psychotropic medication use
 - Key Findings: Few state child welfare agencies had formal policies in place to monitor the prescribing of psychotropic medications to children in foster care. In states that did have policies in place, policies were informal and had little, if any, opportunities for redress if not followed. There is a great need for the state policymaking process to become more transparent to ensure broad public input and recourse in the case of noncompliance.
- A policy review and Medicaid data analysis to assess the relationship between Medicaid behavioral health payment structure and antipsychotic prescribing within U.S. counties
 - Key Findings: Rates of antipsychotic use varied by county-level Medicaid behavioral health payment structure, with some evidence of lower antipsychotic prescribing in counties with carved out behavioral health arrangements than in counties with fee-for-service arrangements and counties with integrated managed care arrangements for both physical and behavioral health.

With an understanding of the prescribing and policy trends, we then undertook a project in 2015, with funding from the WT Grant Foundation, to develop and test communications strategies intended to educate providers who care for Medicaid-enrolled youth on concerns about the misuse of antipsychotics and, ultimately, change their prescribing practices. We conducted a statewide mixed-methods randomized control trial in Pennsylvania to test an innovative provider education strategy using clinician-generated narratives.

Developed from in-depth interviews and focus groups with a diverse set of clinicians, the narratives took the form of short videos—shared through a newsletter and a website—by which clinicians explained evidence-based prescribing guidelines for antipsychotic prescribing to their peers. We compared the use of these narratives to traditional didactic presentation of guidelines and are working to analyze and publish our findings.

We had strong partners in the development and execution of this project, including the Pennsylvania chapter of the American Academy of Pediatrics, Pennsylvania's Office of Medical Assistance Programs, the Pennsylvania Psychiatric Society and the Pennsylvania Society of Family Medical Physicians.

Next Steps

We continue to share findings from our foundational work with stakeholders at the city, state, and federal levels, and we're also undertaking new projects with our Medicaid partners in the Commonwealth to understand how 2015 changes to Pennsylvania's prescribing guidelines and the COVID-19 pandemic impacted trends in psychotropic prescribing, mental/behavioral health diagnoses, and mental/behavioral health care utilization among Medicaid-enrolled youth in the state.

In our current work, we aim to describe 2016-2021 trends in:

- Psychotropic medication prescription rates by medication class, as well as trends in cross-class polypharmacy

- The average number of annual and monthly mental/behavioral health care encounters by setting (outpatient, inpatient, ED, telehealth) across patient demographic groups (age, race/ethnicity, sex, and Medicaid payor region)
- High-risk opioid use metrics and substance use disorder diagnoses among children with comorbid mental health diagnoses and/or psychotropic prescriptions

The findings from these studies will inform targeted quality improvement efforts to strengthen prescribing and monitoring guidelines within the Pennsylvania Medicaid program, with a focus on improving equity in mental health care access and outcomes for youth in Pennsylvania.

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PolicyLab Leads

Meredith Matone **DrPH, MHS**

Director

Dr. Matone's research interests include maternal and young child health, as well as family well-being. She focuses on building community and public agency research partnerships to support improvements in policies and programs that serve mothers and infants in under-resourced communities. She is experienced in large-scale program evaluation, mixed-methods research designs, and use of administrative data for observational study designs in areas of child and caregiver health.

Dr. Matone is a senior fellow at the University of Pennsylvania's Leonard Davis Institute of Health Economics, a faculty affiliate at The Field Center, and a board member of the Pennsylvania Association for the Education of Youth Children. Dr. Matone received her Doctor of Public Health, specializing in child and adolescent health and development, from Johns Hopkins Bloomberg School of Public Health. She is an alumnus of the Doris Duke Fellowship for the Promotion of Child Well-being program and a former Stoneleigh Foundation fellow.



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Team

Katie Wu **MPH**

Clinical Research Project Manager

Katie Wu (she/her) is a clinical research project manager at PolicyLab and the Qualitative Research Core at Children's Hospital of Philadelphia. In this role, she works on qualitative and quantitative projects across many content areas with a particular interest in social determinants of health and maternal child health programs. She is passionate about applying high-quality and trauma-informed qualitative methodology to center patient, family and community voices.

Ms. Wu has qualitative expertise in program implementation and evaluation, semi-structured interviewing, and qualitative data analysis. She has experience training students and teams in qualitative data analysis methods and software. Her recent qualitative work includes a multi-method evaluation of a Utah-based social needs screening and community health worker program and a multi-method evaluation of a therapy model aiming to improve parent-child attachment for parents in substance use disorder treatment.

Ms. Wu also has experience working on population-based quantitative projects at PolicyLab, including a project examining trends in psychotropic medication prescribing to children enrolled in Medicaid. She received her bachelor's degree in biology and her Master of Public Health from the University of Pennsylvania.



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Doug Strane **MPH**

Research Scientist

Doug Strane (he/him) is a research scientist at PolicyLab at Children's Hospital of Philadelphia (CHOP). Mr. Strane is experienced in mixed methods program evaluation and analysis of administrative data for observational study designs related to child and family health. His research interests include the ways in which

health systems can address social determinants of health; the changing health insurance landscape for families; and the intersection of parenting and substance use disorder. He also serves as the senior evaluation manager at CHOP's Center for Health Equity.

Mr. Strane received his Master of Public Health in Epidemiology from University of Michigan School of Public Health. He is a former Centers for Disease Control and Prevention Public Health Associate Program fellow.



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Katherine Kellom

Administrative Manager

Katherine Kellom (she/they) is an administrative manager at PolicyLab and the director of the Qualitative Research Core at Children's Hospital of Philadelphia. She has worked at nationally top-ranked institutions with teams comprised of experts in their fields conducting qualitative, mixed and multi-method research for more than ten years. Beginning as a research assistant at the University of Pennsylvania's Mixed Methods Research Lab, Katherine currently serves across a variety of project teams to provide conceptual and technical support for clinical and community-based research projects. She has extensive knowledge and valuable practical experience applying qualitative research methodologies with a focus on integrating key stakeholder perspectives and goals into research designs.

Katherine leads and advises project teams using qualitative methods to achieve research aims on projects ranging from small pilots to state-wide, mixed-methods evaluations. Katherine is an expert in facilitation techniques and in the use of the qualitative data analysis tool, NVivo; she provides training in both areas. As director of the Qualitative Research Core, Katherine manages and supports staff members and qualitative team members in the Core and at PolicyLab, ensuring skillset development and access to the resources needed to contribute high-quality work to various project teams.

Katherine received her Bachelor of Arts degree from Bryn Mawr College in 2009, majoring in psychology.



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Additionally, Dr. Mollen is a professor of pediatrics at the Perelman School Medicine at the University of Pennsylvania, core faculty leader for the Qualitative Research Core at CHOP, faculty leader for the Qualitative Methods Research Affinity Group, and a practicing pediatric emergency medicine physician at CHOP. Dr. Mollen completed both her pediatrics residency and pediatric emergency medicine fellowship at CHOP and became a faculty member upon completing her training in 2001. She also completed the Master of Science in Clinical Epidemiology during her fellowship.

Since joining the faculty at the University of Pennsylvania and CHOP, Dr. Mollen has developed and refined a research and clinical interest in adolescent health, with a particular focus on utilizing the emergency department and non-primary care settings as sites for interventions related to major public health issues affecting adolescents, such as unintended teenage pregnancy and sexually transmitted infections. She has also pursued training in qualitative research methods and has utilized those methods in a variety of research projects. Dr. Mollen's projects have included interviewing adolescents to learn about their attitudes about developing an intervention aimed to improve the use of emergency contraception; exploring minority adolescents' perception about bias when seeking family planning care; assessing the decision-making processes of parents with terminally ill children; and improving access to expedited partner therapy for adolescents.



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Zachary Meisel **MD, MPH, MSHP**

Faculty Scholar

Zachary F. Meisel is a PolicyLab faculty scholar and the director of the Center for Emergency Care Policy Research and associate professor of Emergency Medicine at the Perelman School of Medicine at the University of Pennsylvania. He serves as the patient safety officer at the Hospital of the University of Pennsylvania, the primary hospital of Penn Medicine. Dr. Meisel's research interests include pain treatment and opioid prescriptions, narrative communication, guideline adherence, opioid use disorder, patient safety, emergency medical services and patient-centered comparative effectiveness research. He has a specific focus on using and testing persuasive narratives to promote evidence translation to patients, providers and policymakers.

Dr. Meisel studies ways to improve the translation of research evidence, particularly around prescription opioids. He is the principal investigator of the Life STORRIED study (Life Stories for Opioid Risk Reduction in the Emergency Department) a multiyear, multicenter Patient-Centered Outcomes Research Institute (PCORI) funded clinical trial focusing on the comparative effectiveness of probabilistic versus patient narrative enhanced risk communication for pain management following emergency care. He also directs the Policy and Dissemination core for the National Institute on Drug Abuse-funded Center for Health Economics of Treatment Interventions for Substance Use Disorder, HCV and HIV (CHERISHresearch.org). He is also the principal investigator on multiyear grants from PCORI and the Agency for Healthcare Research and Quality (AHRQ) focused on the translation of evidence to providers and patients. He has collaborated with PolicyLab on a WT Grant Foundation-sponsored study focused on studying narratives to improve provider prescribing of psychotropic medications to vulnerable children. He is also associate director of the Penn Injury Science Center (PISC).

Dr. Meisel is also a medical journalist with expertise in dissemination translation of health services research results for audiences such as patients and policymakers. He is a graduate of the Johns Hopkins School of Medicine and University of Pennsylvania house officer training program in emergency medicine. He completed additional training in health policy research and health services research as a Robert Wood Johnson Foundation Clinical Scholar at the University of Pennsylvania. He has written for Time.com and Slate. Dr. Meisel is associate editor at *Academic Emergency Medicine*, the official journal for the Society for Academic Emergency Medicine. Dr. Meisel served on the PCORI methodology report writing team and currently serves on the Philadelphia Mayor's Task Force to Combat the Opioid Epidemic in 2017.



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Related Tools & Publications

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[Antipsychotic Prescribing to Children: An In-Depth Look at Foster Care and Medicaid Populations Evidence to Action Briefs](#)

May 2015

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[Psychotropic Medication Use by Pennsylvania Children in Foster Care and Enrolled in Medicaid Tools and Memos](#)

Jun 2015

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[Policy and Practice Innovations to Improve Prescribing of Psychoactive Medications for Children Article](#)

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