Children's Hospital of Philadelphia PolicyLab

What Data Can (and Can't) Teach Us about the Opioid Epidemic for Youth

Adolescent Health & Well-Being

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Since 1999, the number of overdose deaths involving opioids has quadrupled, and each day we learn more about how opioids are impacting many groups across the United States. As policymakers, public health practitioners and health care providers develop local and national strategies for prevention and treatment, we must ensure that new initiatives consider teens who account for 19 percent of overdose deaths—double the rate since 1999. A barrier standing in the way of us creating evidence-based solutions – and also likely to our arguably delayed awareness of the scope and impact of this epidemic – is the limitations of data sources available to study this issue.

As a research center, we spend a great deal of time and effort considering the advantages and limitations of different data sources to the study of key child and adolescent health issues. For instance, we know that informing effective, equitable prevention interventions to curb misuse of opioids among youth requires data on:

1. which teens may be disproportionately at risk for opioid exposure and/or dependence,
2. the risk and protective factors individual teens face that may contribute to their substance use behaviors, and
3. the systems that may facilitate or protect teens from substance exposure and risk-taking behaviors.

From a research perspective, this is a tall order. Unfortunately, as with many complex children's health issues, no one data source can give us this whole picture. Let's take the challenge of number one above – simply

documenting the scope of the problem among different groups of teens. Administrative data (i.e., insurance billing claims data from health care visits) have been an important source of information on opioid use trends and prevalence; for example, recent research showed that teens with pre-existing mental health conditions are more likely receive opioids and transition to long-term opioid therapies than teens without mental health conditions.

However, administrative claims data – the source for the aforementioned study – document prescriptions filled at a pharmacy, but cannot tell us if teens are using non-prescribed opioids. Information on adolescents' illicit behaviors, such as using non-prescribed medications, has traditionally been documented through national or smaller scale study-specific surveys, which can be limited in their ability to represent important subpopulations of youth (e.g., homeless youth or incarcerated youth) or youth living in specific localities (e.g., Pittsburgh). Lastly, we can use qualitative data from interviews and focus groups to directly engage with youth in an in-depth way, a particularly useful strategy for reaching those who are marginalized, to learn more about which teens are using substances and why. But, qualitative data are unable to give us reliable estimates of scope, or how many teens are using opioids.

What's a public health researcher to do? Knowing that effective and equitable solutions to reduce non-medical use and abuse of opioids among adolescents rely on quality research, we must challenge ourselves to perform innovative studies that overcome common methodological challenges.

At PolicyLab, our investigators are engaged in innovative mixed-methods and linked-data projects to accurately and comprehensively represent the status and needs of teens across a number of important health issues. Mixed-methods studies pair measurement and statistical modeling with qualitative data to provide a robust understanding of a problem both in terms of numbers and context (lived experience). Linked-data projects recognize that data from individual systems (health care, public health, social services, etc.) become more valuable when connected. This type of innovative, illuminating research is important because we recognize that adolescents often experience unique health care needs that can go unmet and that special populations of adolescents, such as those involved with public systems, those with complex and chronic health conditions, and gender non-conforming youth, may require targeted prevention strategies.

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Recently, using a linked administrative dataset, PolicyLab and Stoneleigh Foundation research documented high rates of substance use disorder among teen mothers with experiences in the child welfare or juvenile justice systems. Moreover, we found that substance use disorder was often one of *several* behavioral and/or psychiatric conditions these young mothers experience. We were able to get this clear sense of the prevalence of substance use disorder among this unique population by linking administrative claims data (to observe diagnoses) with vital statistics records (to document births and confirm when these youth became mothers) and child welfare system data (to observe how and when they were involved in the system). With this kind of strong data, we can gain a window into the lives of families affected by substance use disorders and tailor interventions to their unique needs.

For this first-ever Global Teen Health Week, we recognize that more work lies ahead for us to better understand the impact and experience of the opioid epidemic for our country's youth and to determine how best to meet the pressing need for prevention and treatment services. I feel inspired by my PolicyLab colleagues and others around the country who continuously push to advance research methodologies to get to the root of challenging health issues. This type of innovation is necessary to ensure that programs and policies are evidence-informed and all adolescents can receive care to meet their unique needs and, ultimately, transition to healthy, productive adults.

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