The Collective Approach: Facing the Substance Use Disorder Epidemic in North Carolina and the Region

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North Carolina, like much of the country, has seen a significant increase in substance use disorders and overdose deaths. This issue of the journal outlines how our state is managing funds from opioid settlements through collaborative partnerships among policymakers, public health, health care providers, and communities.

Introduction

n 1854, John Snow, MD, published "certain conclusions" about cholera and the water supply of London's south districts in the summer of 1849 [1]. Dr. Snow was a pioneer in the field of epidemiology; 170 years later, the tools of epidemiology have adapted to work in 2024. The evolution of society has necessitated the need for the evolution of public health practices. Today's understanding of health outcomes is visible in the model of population health developed by the University of Wisconsin Population Health Institute and County Health Rankings and Roadmaps [3]. Health behaviors make up 30% of the factors that drive outcomes; 40% come from social and economic factors, often known as social determinants of health (SDOH) [3]. Many of the factors in that 70% influence today's substance use disorders. In the United States, the age-adjusted rate of drug overdose deaths has increased precipitously over the last two decades. In 2022, the drug overdose death rate was 32.6 per 100,000 [4]. In that similar period, we lost more than 36,000 North Carolina citizens to overdose death [5].

The COVID-19 pandemic made SDOH worse for those living in Appalachia. Whether from isolation, the novel disease itself, or both, people suffering from substance use disorder were at higher risk during the pandemic for poorer health outcomes from COVID-19, making a terrible situation worse [6]. Further SDOH in the region included poverty, housing and food insecurity, increased lack of access to care, and increased complications from complex chronic conditions [7]. In Burke County's most recent community health assessment, substance use disorder (SUD) and mental health concerns were overwhelmingly the top priorities for this community, and the two are intricately related [8]. Furthermore, North Carolina, much like the rest of the coun-

try, has seen significant increase in rates of premature death from overdoses that began with prescription drug abuse and have now morphed into illicit use of drugs like fentanyl and methamphetamine [9]. National, state, regional, and local data paint a less than pleasant picture of what SUD can do to a community. COVID-19 coupled with the introduction of more substances and increased availability of those substances has increased the rate of SUD, and with it the rate of mortality [6].

Over the last few years, cases in the court system have been aggregated into national settlements that have created a revenue source for communities across the country to combat substance use disorder. These settlements are in response to the role companies played in creating the crisis. Across the country, tens of billions of dollars are flowing to communities, including \$1.5 billion to North Carolina [10]. Burke County itself, where this author serves as the Public Health Director, will receive an excess of \$24 million over the next two decades [11]. The North Carolina Memorandum of Agreement that governs these settlements outlines how much each community will receive and how the funds may be used. Unlike most states, North Carolina's agreement will distribute most (85%) of the money directly to the counties and municipalities affected. These local governments must spend the money in proven, effective ways to combat SUD and limit overdose deaths [10].

Policy Efforts to Combat the Opioid Crisis

In this edition of the North Carolina Medical Journal, you will hear from a series of experts on SUD policy. Steve Mange, an attorney at the North Carolina Department of Justice, writes about North Carolina's model for distributing opioid settlement funds [12]. Jill Rushing, Elizabeth Brewington, and Nidhi Sachdeva of the North Carolina Association of County

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Commissioners explain how local governments are being equipped to respond to the opioid crisis across our state [13]. Dr. Katie Varnadoe of Burke County Public Health gives the local public behavioral health perspective, highlighting efforts to address substance use trends as they emerge, with a well-developed collaborative of community partners [14]. Kelly Crosbie of the North Carolina Department of Health and Human Services explains the department's role in this work at the state and local level as well [15]. The justice system is also an important part of the calculus for this complex problem. Recovery courts give people facing drug charges an opportunity to be sentenced to treatment. Chief Justice Paul Newby of the North Carolina Supreme Court gives his perspective on the role of recovery courts in our state [16].

Dr. Rahul Gupta, Director of the White House Office of National Drug Control Policy (ONDCP), discusses federal SUD policy and his view of North Carolina's role [17]. The White House prevention priorities include expansion of access to evidence-based prevention, harm reduction, treatment, and recovery. Further, federal policy from ONDCP aims to disrupt the supply of illicit drugs and work with the United States Congress to develop a comprehensive proposal for severe penalties on suppliers of illicitly produced fentanyl analogues [18].

Policy is most effective when backed by data. Jeremy Kourvelas of the University of Tennessee share lessons learned from using data to make substance use-related policy decisions in their state [19]. Alexis French and coauthors from Duke University, UNC, and the Women, Infant, and Community Wellness Section of the North Carolina Division of Public Health "run the numbers" on behavioral health trends among perinatal North Carolina Medicaid beneficiaries, a particularly vulnerable community facing SUD [20].

Lifting Up Lived Experience

No discussion on SUD is complete without the view from those persons with lived experience. As PA Amy Ford writes, stigma still presents a challenge, and "patients with substance use disorders present to every medical specialty, especially primary care, yet many primary care providers feel unprepared to handle these patients" [21]. In this edition of the journal you will get the firsthand experience of Dr. Stephen Loyd, a physician, national thought leader, inspiration for the character Dr. Finnix (played by Michael Keaton in the Hulu television series *Dopesick*), and a person in active recovery [22]. Dr. Joe Jordan, CEO of the North Carolina Professionals Health Program, gives a wider view of the challenges and resources available to medical professionals who experience SUD [23].

Devin Lyall, a North Carolinian in active recovery, describes her path to founding Wilkes Recovery Revolution, Inc., a nonprofit that brings peer specialists to the substance use recovery and mental health community in Wilkes County, with a harm reduction model [24]. Ashley Wurth, Mollie Bolick, and Tyler Yates of the North Carolina

Division of Public Health's Injury and Violence Prevention Branch give some additional context on harm reduction and its evolution [25].

Conclusion

It is unclear whether Dr. Snow would recognize modern public health, or the epidemiology of substance use disorder. However, a robust 21st-century public health system must be working in concert with policymakers, law enforcement, health care providers, and communities to give hope to those suffering from this plague. Whether or not Dr. Snow would recognize it, the reader of this edition of the *NCMJ* should get an excellent primer on SUD in the region and what state leaders are doing to solve this complex issue. NCMJ

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References

- Snow J. Cholera and the water supply in the south districts of London in 1854. J Public Health Sanit Rev. 1856 Oct;2(7):239-257. PMID: 30378891
- Tulchinsky TH, Varavikova EA. A History of Public Health. In: The New Public Health. Elsevier; 2014. doi: 10.1016/B978-0-12-415766-8.00001-X
- The University of Wisconsin Population Health Institute. County Health Rankings & Roadmaps, 2024. www.countyhealthrankings. org
- Spencer MR, Garnett MF, Miniño AM. Drug Overdose Deaths in the United States, 2002–2022. NCHS Data Brief, no 491. Hyattsville, MD: National Center for Health Statistics. 2024. Accessed July 18, 2024. https://www.cdc.gov/nchs/data/databriefs/db491.pdf
- Overdose data. North Carolina Department of Health and Human Services. Accessed July 18, 2024. https://www.ncdhhs.gov/about/ department-initiatives/overdose-epidemic/overdose-data
- Wang QQ, Kaelber DC, Xu R, et al. COVID-19 risk and outcomes in patients with substance use disorders: analyses from electronic health records in the United States. Mol Psychiatry. 2021;26:30–39. https://doi.org/10.1038/s41380-020-00880-7
- Miller M, Rollston R, Beatty KE, Meit M. Rural Appalachia battling the intersection of two crises: COVID-19 and substance-use disorders. J Appalach Health. 2020;2(4):86-91. https://doi.org/10.13023/ jah.0204.10
- Burke Wellness Initiative. 2022 Burke County Community Health Assessment. Published 2022. Accessed July 2024. https://www. burkenc.org/DocumentCenter/View/2666/2022-Community-Health-Assessment
- North Carolina Institute of Medicine. Healthy North Carolina 2030: A Path Toward Health. North Carolina Institute of Medicine; 2020. Published January 2020. Accessed July 2024. https://nciom.org/wp-content/uploads/2020/01/HNC-REPORT-FINAL-Spread2.pdf
- North Carolina Opioid Settlements. Published May 13, 2024. Accessed June 24, 2024. https://ncopioidsettlement.org/
- NC Payment Schedule Dashboard. North Carolina Opioid Settlements. April 29, 2024. Accessed July 22, 2024. https://ncopioidsettlement.org/data-dashboards/payment-schedule/
- Mange S. The North Carolina model for opioid settlement funds. N C Med J. 2024;85(5):336-339 (in this issue).
- Rushing J, Brewington E, Sachdeva N. The North Carolina model for opioid settlements: partnering to equip local governments' overdose response. N C Med J. 2024;85(5):337-339 (in this issue).
- 14. Varnadoe K. The role of local health departments in addressing the opioid crisis and deploying opioid settlement funds. *N C Med J.* 2024;85(5):331-333 (in this issue).
- 15. Crosbie K. The North Carolina Division of Mental Health's stra-

- tegic plan for limiting substance use overdose deaths. *N C Med J.* 2024;85(5):334-335 (in this issue).
- 16. Newby P. North Carolina treatment courts: therapeutic jurisprudence as a path toward recovery and restoration. *N C Med J.* 2024;85(5):340-342 (in this issue).
- 17. Gupta R. Nation's response to the substance use crisis. *N C Med J.* 2024;85(5):313-316 (in this issue).
- Office of National Drug Control Policy. https://www.whitehouse.gov/wp-content/uploads/2023/03/FY-2024-Budget-Highlights.pdf
- 19. Kourvelas J, Tourville J. The rize of xylazine shows why local data must inform policy and spending decisions. *N C Med J.* 2024;85(5):304-307 (in this issue).
- 20. French A, Jones KA, Davis NO, et al. Running the numbers: behavioral health trends among perinatal North Carolina Medicaid beneficiaries. *N C Med J.* 2024;85(5)322-328 (in this issue).
- 21. Ford A. Stigma is still a barrier to substance use disorder treatment in North Carolina. *N C Med J.* 2024;85(5):311-312 (in this issue).
- 22. Loyd S. Lessons from one physician's experience with substance use recovery. *N C Med J.* 2024;85(5):318-320 (in this issue).
- 23. Jordan J. The role and importance of physician and health care professional programs. N C Med J. 2024;85(5):317-321 (in this issue).
- 24. Lyall D. Creating recovery-ready communities. *N C Med J.* 2024;85(5):329-330 (in this issue).
- 25. Wurth A, Bollick M, Yates T. Evolution of the science and perception of harm reduction. *N C Med J.* 2024;85(5):308-310 (in this issue).