

Using Digital Education and Longitudinal Measurement to Advance Community-Based Fentanyl Prevention



About PATHS

[PATHS](#) is a patient-centered healthcare platform that streamlines care planning, improves patient engagement, and supports coordinated care. By reducing administrative burden and providing personalized education and guidance between visits, PATHS helps providers deliver informed care while empowering patients to navigate their healthcare journey with confidence.



The opportunity

- Across the United States, pediatric fentanyl exposures have surged by 1,194% since 2015, while drug overdoses have become the third-leading cause of death among children and adolescents.
- There is a growing need for scalable, evidence-informed fentanyl prevention and education programs that can reach diverse community audiences.
- Digital platforms enable delivery of education to students, parents, and educators while supporting population-level engagement and measurement.
- There is increasing interest in how digital measures can extend beyond education to support broader community mental and behavioral health evaluation.



The challenge

- Traditional prevention programs often rely on episodic assessments that limit visibility into how engagement and learning evolve over time.
- Measuring changes in knowledge, attitudes, and behaviors across an intervention period can be operationally complex.



The approach

- PATHS implemented a four-week digital fentanyl prevention program across five high schools in Cochise County, Arizona.
- The program sequentially engaged teachers, parents, and students using tailored educational content delivered through a centralized platform.
- Module completion, engagement metrics, and pre/post knowledge assessments were tracked digitally throughout the program.
- More than 2,000 participants were included in the evaluation, enabling population-level analysis of engagement and learning.



The impact

- ✓ The program achieved a 52% goal-based completion rate across more than 2,000 participants, with completion rates of 83% among teachers, 74% among parents, and 53% among students.
- ✓ Among 1,366 students completing both pre- and post-assessments, average knowledge scores increased from 92.5% to 96.1%.
- ✓ Between 33% and 60% of students demonstrated measurable individual improvement depending on school, with post-course pass rates reaching 99–100% across all sites.
- ✓ The results demonstrated the ability of digital platforms to capture longitudinal engagement and learning outcomes at scale.
- ✓ The findings also highlighted the potential for integrating passive digital measures, such as sleep, activity, mobility, and device-use patterns, to better understand behavioral change and support community mental and behavioral health initiatives.



Measuring how engagement, learning, and behavioral health outcomes evolve over time can improve how community mental and behavioral health interventions are designed and evaluated.

— **Oliva Shanahan**

Director of Operations, PATHS