Overdoses have surged in rural areas in the U.S. and globally for years, but harm reduction interventions have lagged. Overdose education and naloxone distribution (OEND) programs reduce overdose mortality, but little is known about people who use drugs’ (PWUD) experience with these interventions in rural areas.

Overdose burden is elevated in the United States’ rural communities including Appalachian Kentucky. In 2021, Kentucky had the fifth-highest age-adjusted fatal overdose rate in the U.S., 1.7 times the national average at 55.6 per 100,000 people.

In this study, researchers interviewed PWUD in Appalachian Kentucky to learn about participants’ experiences with OEND interventions, and about how participants’ perceptions of their rural risk environments influenced the interventions’ effects.

**Methods:**

**Data Collection:**
- All participants in this sample were part of a parent study, CARE2HOPE (C2H), which assessed the extent to which PWUD benefited from a healthcare navigation, HIV/HCV testing, and OEND intervention. This sub-study focuses the perceptions of the OEND component of the intervention through which participants received nasal naloxone and overdose education.
- Individuals were eligible for C2H if they lived in one of the Kentucky counties targeted by the study; were 18 years old or older; had been engaged in the criminal-legal system in the past 30 days prior to enrollment screening; and either used opioids or injected drugs 30 days prior to criminal legal system involvement.
- Twenty-nine one-on-one, semi-structured qualitative interviews were conducted with rural PWUD engaged in the C2H OEND intervention in Appalachian Kentucky.
  - Researchers purposively sampled C2H participants, seeking to create a qualitative sample of people that varied by county and gender.
- Interviews were conducted via Zoom, audio-recorded, and transcribed verbatim.

**Analysis:**
- Thematic analysis was conducted, guided by the Rural Risk Environment Framework (R-REF).
- Results were organized by larger thematic categories of accessing/accepting naloxone, carrying naloxone, and administering naloxone. Within those categories, sub-themes were mapped onto intersecting R-REF domains of physical, social, political, criminal-legal system, healthcare and economic environments.

**Findings:**
- Through the intervention, over half of participants (n=16) gained knowledge on naloxone (access points, administration technique) and on the criminal-legal environment as it pertained to naloxone.
- Almost all participants (n=27) accepted naloxone. About two-thirds of participants (n=19) opted to carry naloxone, citing factors related to the social environment (responsibility to their community) and physical/healthcare environments (overdose prevalence, suboptimal emergency response systems).
- Over half of participants (n=16) described recent experiences administering intervention-provided naloxone. These experiences were shaped by features of the local rural social environment (anticipated negative reaction from recipients, prior naloxone conversations).

**Discussion:**
Factors that influence rural PWUDs’ decisions to accept, carry, and administer naloxone are complex and touch upon all domains of their rural risk environment. These findings highlight the need for more OEND interventions; outreach to rural PWUD on local policy that impacts them; tailored strategies to help rural PWUD engage in productive dialogue with peers about naloxone and navigate interpersonal conflict associated with overdose reversal; and opportunities for rural PWUD to formally participate in emergency response systems as peer overdose responders.