Many observers were surprised when Indiana Governor Mike Pence issued an executive order on March 26, 2015, declaring a public health emergency after a rapidly escalating outbreak of human immunodeficiency virus (HIV) was identified in Scott County, a rural region on the Kentucky border. Others, however, had seen it coming.

Over the years, a growing number of young people in Scott County — like those in surrounding counties and states — had begun abusing opiates such as oxymorphone, an opioid analgesic prescribed by local medical providers, until a more tamper-resistant formulation and policy reform began limiting its abuse. Facing the throes of opioid dependence, some users shifted to other potent injectable opioids or to heroin. Although needle-exchange programs can reduce both needle sharing and HIV incidence, they are illegal in Indiana. When needles are in short supply, injection-drug users have little choice but to share. Given increases in injection-drug use in nonurban communities and the high efficiency of HIV transmission through injection, it was only a matter of time before an outbreak ensued. Southeast Indiana had previously recorded only about five cases of HIV infection annually, yet by June 10, 2015, a total of 169 people had been newly diagnosed with HIV in about half a year. More than 80% of them were coinfected with hepatitis C virus (HCV).

The Indiana outbreak provides a cautionary tale. First, the epidemiologic profile of Indiana’s HIV outbreak differs markedly from that revealed by historical U.S. HIV–AIDS surveillance data. Second, although it was relatively easy for people in Scott County to obtain opiates, includ-
Physician Actions
1. Screening patients for substance-use disorders and mental health disorders.
2. Testing patients and their sexual and drug-injection partners for HIV, HCV, and sexually transmitted infections, with appropriate pre- and post-test counseling.
3. For patients testing positive for HIV and HCV, offering immediate treatment according to established guidelines.
4. Providing HBV vaccination; even one dose can be effective.
5. Providing naloxone to opioid users and their families and partners to prevent fatal overdoses.
6. Offering immediate referrals to substance-use treatment programs that provide opioid-agonist therapy.
7. Becoming licensed to provide opioid agonist therapy.
8. Supporting injection-drug users by providing them with sterile syringes or referring them to places where they can obtain them.
9. Supporting legislative reforms to expand Medicaid and to allow federal funds to support needle-exchange programs.

State Actions
1. Supporting needle-exchange programs and legal access to over-the-counter syringe purchase without a prescription.
2. Supporting screening and referral to free or affordable treatment for substance-use disorders.
3. Supporting reimbursement for medication-assisted therapies (e.g., methadone, buprenorphine, and vivitrol) without roadblocks.
4. Providing free HIV testing and initiation of HAART for substance users who are HIV-positive, along with the services they need to sustain adherence.
5. Monitoring state HIV and HCV epidemiologic testing data to identify and respond to outbreaks early.
6. Adapting prescription-drug monitoring programs to make them public health tools that are secure and searchable in real time.

* HAART denotes highly active antiretroviral therapy, HBV hepatitis B virus, HCV hepatitis C virus, and HIV human immunodeficiency virus.
The literature is rife with examples from North America, Southeast and Central Asia, and Eastern Europe, where HIV prevalence among injection-drug users had been below 5% for decades but leapt to 80% or higher within a year owing to continuing high-risk behaviors in the absence of adequate HIV prevention and access to treatment. Such outbreaks can, however, be prevented and even reversed. An explosive HIV outbreak among injection-drug users in Vancouver, British Columbia, which resulted in an HIV incidence of 18.6 per 100 person-years in 1996, was controlled by expansion of needle-exchange programs and provision of opioid-agonist therapy and HAART free of charge through Canada’s universal health care system. More recently, providing HIV treatment as prevention reversed the HIV epidemic throughout British Columbia. We believe that threading the needle to prevent further HIV outbreaks among substance users requires aggressive implementation of evidence-based practices for HIV prevention (see box). These practices cannot be implemented without resources for expanding HIV screening among substance users and offering HAART to those who test positive, while providing opioid-agonist therapy to those with opioid dependence. Primary care models that integrate screening for substance use and mental health disorders and testing and treatment for HIV, HCV, and sexually transmitted infections with concomitant provision of opioid-agonist therapy are therefore an urgent priority.

Permanently lifting the ban on using federal funds to support needle-exchange programs will be a critical component of HIV prevention, since these programs reduce HIV incidence and frontline exchange workers are often the first people injection-drug users reach out to for help. There are currently 228 known needle-exchange programs in 35 U.S. states, the District of Columbia, the Commonwealth of Puerto Rico, and Indian Nations. However, the federal funding ban limits their scalability and quality of services, including their ability to provide critical ancillary services (e.g., on-site HIV and HCV testing and referrals for drug treatment). States can adapt prescription-drug monitoring programs so they are secure, enable searches in real time, and are used as clinical and public health tools rather than law-enforcement weapons. But such supply-reduction measures will work best when complemented by the harm reduction achievable with opioid-agonist therapy and needle-exchange programs.

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