Non-addictive pain medication changing therapy for substance use disorders

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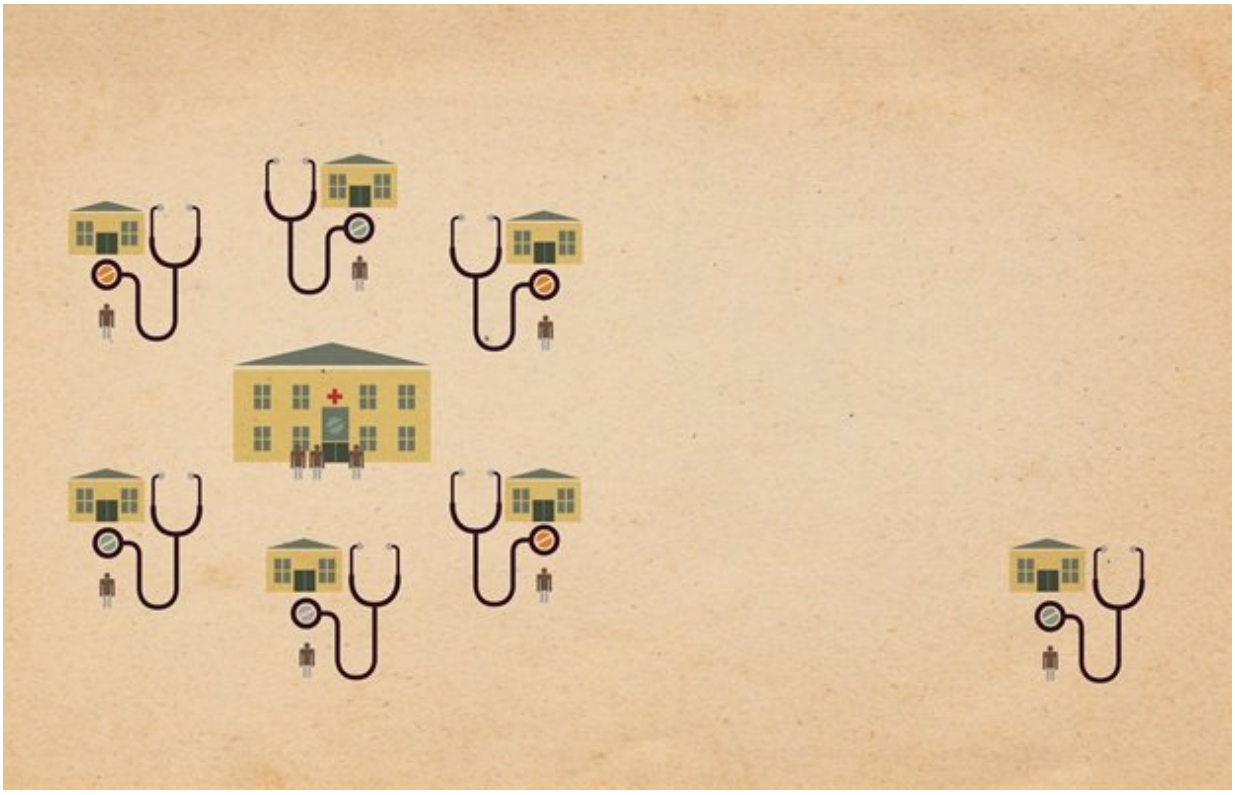

Credit: Yale University

"It's not often that a psychiatrist gets to hear 'Doctor, you saved my life,' " said Ellen Edens, M.D., FW '09, assistant professor of psychiatry and associate fellowship director in addiction psychiatry. But she gets that a lot from patients receiving outpatient treatment for opioid use disorder.

"They tell me, 'I have my children back, I'm working, I feel good.' "

Treatment for opioid use disorder hasn't always brought such clear rewards. Throughout the 1960s, abstinence-based detox was the only widely available treatment despite high relapse rates. Then, in 1965, methadone clinics emerged as a game-changer.

Rockefeller University clinicians Vincent Dole, M.D., and Marie Nyswander, M.D., reported in *JAMA*: *Journal of the American Medical Association* that year that they had used once-daily oral methadone—an opioid painkiller—to stabilize 22 young men who were addicted to heroin. Methadone relieved both withdrawal and cravings, and allowed patients to resume their lives. On September 15, 1969, Robert DuPont, M.D., who would become the first director of the National Institute on Drug Abuse, started the first methadone maintenance treatment program, which served 25 parolees in Washington, D.C.

"That is when treatment for opioid use disorder emerged from the Dark Ages," said Patrick G. O'Connor, M.D., M.P.H. '88, FW '88, the Dan Adams and Amanda Adams Professor of General Medicine, and chief of general internal medicine.

As methadone clinics opened in cities around the country, studies showed that the treatment decreased drug use and opioid overdoses, lowered hepatitis B and C rates, improved pregnancy and birth outcomes, increased overall survival, and—crucially—lowered risk for HIV infection.

But the groundbreaking treatment wasn't perfect. Patients who landed a coveted spot in one of a handful of licensed clinics had to show up every day for their dose until they were deemed trustworthy enough to take a supply home. That process could take months. As heroin users tried to escape the soaring risk of HIV infection in the late 1980s, the model

could barely support the demand.

"Here in New Haven, we had waiting lists of six to 12 months for a slot in a methadone clinic," said O'Connor. "People were literally dying while they were waiting for this highly effective treatment."

O'Connor and colleagues at Yale knew there had to be a better way. "What if we developed an approach to treating opioid dependence that didn't rely on one or two methadone programs in New Haven, but rather was available in primary care clinics and physicians' offices all over the city?" O'Connor asked.

Chronic care for addiction

In a 1992 article in the *Journal of General Internal Medicine*, O'Connor and colleagues showed that they could manage withdrawal from heroin with clonidine, a drug introduced in 1966 to treat high blood pressure and that was found to manage opioid withdrawal. Once opioid-free, patients received naltrexone, an opioid blocker which renders them less able to feel "high" or to overdose when they use heroin. Theoretically, the medication would eliminate the stimulus to use opioids. But cravings persisted and patients often gave up naltrexone and returned to using opioids.

Still, says O'Connor, "We showed that patients would come to primary care for treatment and that we had an effective protocol that could get them to a drug-free state in an outpatient setting." Integrating addiction treatment into primary care has additional benefits. This model would allow patients to receive both addiction treatment and general medical care "under one roof," without the stigma of an addiction treatment program.

Because patients often abandoned naltrexone, O'Connor explored a new

approach—using opioid maintenance therapy in primary care. Since methadone could be used only in specialized programs, he performed the first randomized trial of primary care-based buprenorphine—an experimental medication that had been found as effective as methadone in specialized treatment programs.

"Our study found that patients who received buprenorphine in primary care did just as well as those who received it in specialized addiction treatment settings," said O'Connor.

Soon, the Drug Addiction Treatment Act of 2000 permitted physicians who met certain criteria to treat opioid addiction in outpatient offices using FDA-approved Schedule III, IV, and V narcotics, although none were available at that time. Two years later, the FDA approved two drugs that fit the bill.

Subutex (buprenorphine hydrochloride), the partial opioid agonist that O'Connor studied, could alleviate withdrawal and cravings with less risk of overdose or abuse than methadone. Suboxone (buprenorphine hydrochloride and naloxone hydrochloride) added naloxone to decrease the risk of misuse. Both formulations could be administered in a doctor's office.

Medication-assisted therapy—Subutex or Suboxone in addition to such psychosocial treatment as counseling—became the standard of care. "It was revolutionary," said Edens. "One patient could be waiting to get their blood pressure checked next to another who is waiting to get Suboxone for opioid use disorder, and nobody knows the difference."

Researchers, including David A. Fiellin, M.D., HS '94, FW '96, professor of medicine, challenged a long-standing belief when they began to show that treatment with buprenorphine combined with primary care physician management was as effective as buprenorphine

combined with cognitive behavioral therapy.

Aligning evidence with policy

While treatment has advanced over the last 50 years, policy and medical education lag. Medical school curricula spend little time on addiction. In part because of this neglect, physicians who want to treat patients with buprenorphine must first attend an all-day course. Federal law limits them to treating up to 275 patients at a time in a "qualified setting" that complies with information technology requirements and makes counseling services available. For practical reasons clinicians rarely if ever treat the full 275 patients allotted to them.

"It sends a message to physicians," said Edens, "that this is a dangerous or abusable system, but buprenorphine is so easy to use, and when it's misused, it's usually for the exact reason we would use it: to treat withdrawal."

But treatment for opioid use disorder won't stop, now that it's treated as a chronic condition in an outpatient setting in a manner similar to such other chronic diseases as diabetes. "As with any other chronic disease," said O'Connor, "we'll continue to search for new and more effective medication and psychosocial treatment approaches to improve health and save lives."

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