Abuse-Deterrent Narcotics: A good idea with unintended consequences

By ACSH Staff — April 22, 2015

It is hardly news that the US is plagued by an enormous narcotic addiction problem. Nor is it news that the so-called war on drugs has been an abysmal failure since its inception.

Thanks to new technology, there is, at least, a reasonable method that could minimize opioid (aka opiate) abuse arguably the most serious problem at this time. (Methamphetamine, aka meth abuse is probably comparable.)

However, with drug abuse, nothing is simple. And nothing demonstrates this better than the OxyContin story. The drug a high dose, slow release formulation of oxycodone (the narcotic found in Percocet) was intended to provide an alternative to multiple dosing of oxycodone. The theory behind this is sound. In addition to convenience, slow release drugs have a number of advantages, primarily that they provide a constant blood level of the drug. This minimizes the highs and lows that arise from short acting narcotics. The highs are the most dangerous, since they feel good, and encourage people to take more and more to feel better. This is the hallmark of addiction.

Good intentions aside, OxyContin became the poster child of drug addiction in the US. Addicts discovered that by simply grinding up the pill, they could defeat the time-release properties of the drug, providing them with a very high dose of pure oxycodone. This contributed mightily to the rapid escalation of narcotic addiction.

By 2010, Purdue Pharma, the makers of OxyContin finally discovered a formula that made it impossible for the average addict to abuse. Now when ground, the pill gives a gum rather than a powder. The abuse of OxyContin dropped like a rock, which could not be more obvious than from the graph below.
But something else happened:

As OxyContin became safer, addicts turned en masse to heroin, which is far more dangerous, as
indicated by the more than two-fold increase in deaths in two years. Heroin use often involves needle sharing, so the spread of HIV becomes and additional problem.

There is certainly a role that abuse-deterrent technology can play, especially in preventing people who are not addicted from becoming so. But the solution is far from perfect.

In a commentary [1] on Forbes.com, Dr. Robert Glatter makes it clear that there is no easy answer. In discussing a new study [2] in JAMA Internal Medicine, Dr. Glatter reinforces what the graphs indicate: Results of the study demonstrated that total opioid prescriptions dropped by 19% from the expected rate two years after the market changes were introduced. In addition, the estimated overdose rate dropped by nearly 20% at the same time. One caveat, the authors noted, was that heroin overdoses increased by 23%.

Glatter quotes Dr. Scott Krakower, the assistant unit chief of psychiatry at Zucker Hillside Hospital, who is both hopeful and realistic: Opioid abuse often follows a progression from oral administration to snorting or injection and can have serious consequences. Abuse deterrent formulations were designed to reduce the potential for crushing, breaking, or dissolving of tablet. They may help to prevent overdose, unintended therapeutic errors, and accidental ingestion (especially for minors).

On the other hand, he says: Concerns have been raised that these abuse-deterrent formulations may lead to switching to alternative opioid agents that are more likely to be abused.

ACSH’s Dr. Josh Bloom, who has written numerous times about the extreme difficulty of managing drug abuse says, The abuse-deterrent formulation of narcotics is almost certainly going to be of some help in coping with this impossible problem especially preventing some people, who would have previously become addicted from falling into this pit. Yet, as has been the case with virtually every other attempt to rein in drug abuse, it can only work so well. This is a problem that pharmaceutical reformulation alone cannot solve.