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Chapter Author: Jonathan P. Caulkins

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Comment: Can We Treat Our Way Out of Incarcerating Drug-Involved Offenders? Jonathan P. Caulkins

Introduction

A conventional wisdom in the drug policy literature is that "treatment works" (e.g., Bhati, Roman, and Chalfin 2008). This leads Pollack, Reuter, and Sevigny to ask, "If treatment works so well, why are so many drug users in prison?"

Their answer addresses most directly drug courts and other diversion programs that target people who have relatively short criminal records (e.g., nonviolent first time offenders). They observe that drug problems evolve over an epidemic cycle, and the United States is now in the mature or endemic stage. There are some new initiates each year, but today, unlike a generation ago, most criminally involved drug offenders have been offending for more than a decade and so have accumulated records that disqualify them from the typical diversion program. This is ironic inasmuch as violence has a sharper age-crime peak than does property offending, so releasing these older offenders under community supervision may be less risky now than in the past.

Figure 3C.1 captures the basic insight. Classic diversion programs affect the flow of first-time offenders into the traditional system for controlling and punishing offenders (prison, probation, and parole), but today the biggest flow of drug-involved offenders into prison comes from people who already had a prior felony conviction. They come mostly from the pool of people on probation or parole (the notorious "revolving door"); others are ex-offenders who had already completed their terms of probation or parole (not shown in the figure because it is a smaller flow).

Cutting the inflow of new people will empty the system eventually, but not quickly. Even in the United States, prison time served (as opposed to sentenced) per offense is usually less than five years, so one might think cutting the inflow would quickly reduce prison populations. However, even though a particular spell of imprisonment may not be terribly long, the typical "career criminal" strings together a long series of such stays. So emptying the system is more like waiting for the current generation of drug-involved offenders to die or age out of drug use than merely waiting for their current sentences to expire.

Jonathan P. Caulkins is the Stever Professor of Operations Research and Public Policy at the Heinz College and the Doha, Qatar, campus of Carnegie Mellon University.

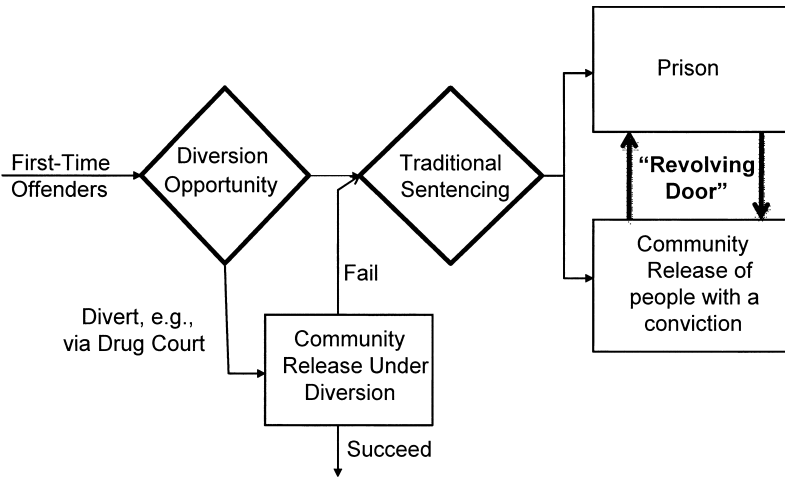


Fig. 3C.1 Traditional diversion programs address the “front-end flow” but in endemic stage of a drug problem the “revolving door” of repeat offenders generates the larger flow into prison

Indeed, more formal analysis of “stocks and flows” or differential equation models that embody the architecture of figure 3C.1 shows that changing recidivism rates can be a more powerful way to reduce prison populations than are comparable reductions in the original inflow (Weatherburn et al. 2009). Unfortunately, intervening with first-time offenders is often perceived to be easier both politically and practically.

One interpretation of Pollack, Reuter, and Sevigny’s message to policy-makers is, “Drug courts are all well and good, perhaps with some tweaking to admission criteria, but do not think they obviate the need for interventions that target the revolving door.” This gets back to the question in their title: “If drug treatment works so well . . .” why can we not just use treatment to deal with these recidivists? The answer, in a nutshell, is that treatment can look wonderful in terms of social cost averted per million taxpayer dollars while simultaneously looking awful in terms of recidivism rates (Caulkins and Kleiman, forthcoming).

Most people admitted to treatment relapse. Indeed, many of those diverted into treatment by programs like California’s Proposition 36 never even show up for treatment (Urada et al. 2008). One response to this is that people who have been cycling in and out of the criminal justice system need a lot more than basic drug treatment; for example, they may benefit from job training and placement (Raphael, chapter 11, this volume). Another is that even if evidence concerning long prison sentences’ ability to deter efficiently is underwhelming (Durlauf and Nagin, chapter 1, this volume), sticks may still usefully complement or even supplant the carrot of treatment for drug-involved offenders if frequent drug tests are combined with immediate, brief

(flash) incarceration. This coerced or mandated abstinence model has been advocated by Kleiman (2001, 2009), among others.

Evidence of the Epidemic Cycle

Pollack, Reuter, and Sevigny's analysis leverages the idea that waves of drug initiation create a bolus of dependent users who then gradually age. Even though initiation does not subsequently drop to zero, the average age of problem drug users still increases for a decade or two after the drug burst onto the scene. Aging has implications for how policy ought to evolve, including eligibility requirements for prison diversion programs. Inasmuch as Pollack, Reuter, and Sevigny's conclusions flow from this premise, it is worth looking further into the premise. Two simple pictures are instructive.

The first question is whether there is any consistent pattern to how a drug spreads. Immersing oneself in details uncovers myriad ways in which each drug and associated epidemic is different. Different drugs affect different neuroreceptors (e.g., dopamine vs. serotonin), appeal to different groups (meth is rarely used by African Americans; crack dependence is more common), and so on.

However, stepping back, initiating use of a drug is just an example of "new product adoption," and there are standard models governing how new products such as HDTV and i-Phones diffuse through a population (Bass 1969). The typical result is an S-shaped initial adoption profile driven by viral or word-of-mouth spread. Some people adopt in response to general availability (so-called "innovators"), but most ("imitators") do so through contact with another person who has already adopted the product. Is there evidence that such diffusion models apply to illegal drug adoption?

The short answer is yes. Figure 3C.2 updates Caulkins' (2008) plot of numbers of first time users of a drug in the United States (i.e., initiation) for ten diverse illegal drugs based on self-reports to the 1999 to 2008 National Surveys on Drug Use and Health (a total of 555,070 respondents).¹ The initiation series by drug and year are adjusted in two ways to highlight the commonality: (a) height is normalized since some drugs (e.g., marijuana) are more popular than others (e.g., heroin), and (b) curves are shifted left or right to line up the initial growth phase because some drugs (e.g., marijuana and heroin) became available earlier than others (e.g., cocaine and crack). The key observation is that the adjusted initiation curves for ten quite different chemicals are strikingly similar throughout their initial spread, and are all followed by a subsequent trough. Subsequent patterns are more diverse, but the modal outcome seems to be more or less stable ongoing initiation at rates below the initial peak.

If initiation stabilized at a constant rate per year and remained—as is usual—concentrated among young people, then eventually the age distri-

1. Author's analysis using online data sets available at <http://www.icpsr.umich.edu/SAMHDA/using-data/sda.html>.

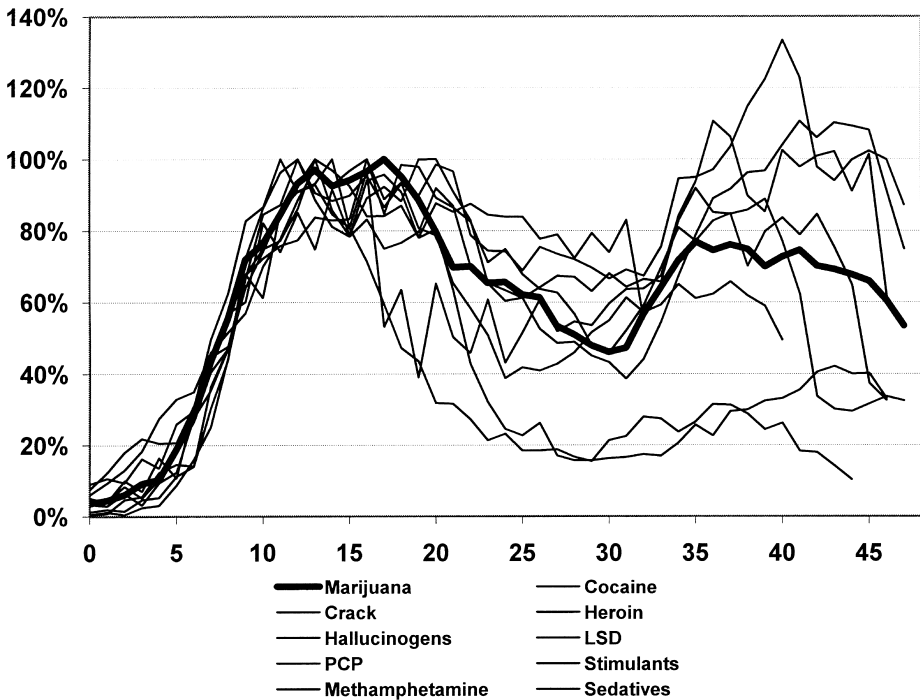


Fig. 3C.2 Normalized plots of initiation are very similar across all ten illegal drugs, with marijuana in bold

bution of dependent users would stabilize. However, that takes time, and we have not yet reached that stable pattern. Figures 3C.3 and 3C.4 show how the generational composition of treated cocaine and heroin users, respectively, evolved between 1992 to 2007, as reflected in data from the Treatment Episode Data Set (TEDS-A).² Subsequent generations do not always generate as much use; neither early nor late Gen-Xers ever generated as many treatment admissions as did Baby Boomers. And older generations persist in the data. Over the sixteen-year span covered by the graph, roughly two of these groups comprised of nine birth cohorts should have turned over if the system had already been in steady state; instead, the older generations hang on, being added to rather than replaced by the younger generations. So the average age grows over time, as Pollack, Reuter, and Sevigny document in detail.

Conclusion

In closing it is worth stepping back to note two implications Pollack, Reuter, and Sevigny’s analysis has for the study of drug-related crime more

2. Ibid.

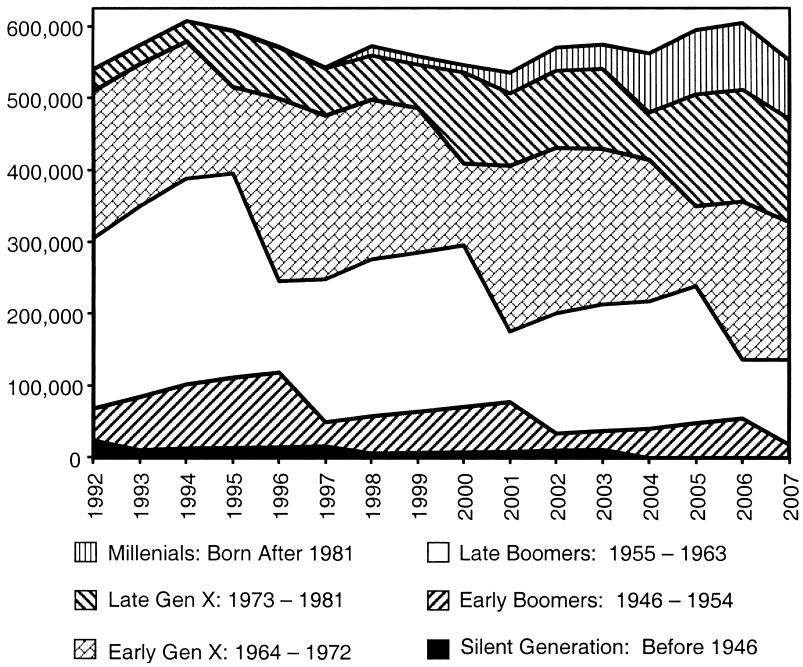


Fig. 3C.3 U.S. cocaine treatment client admissions over time, by birth cohort

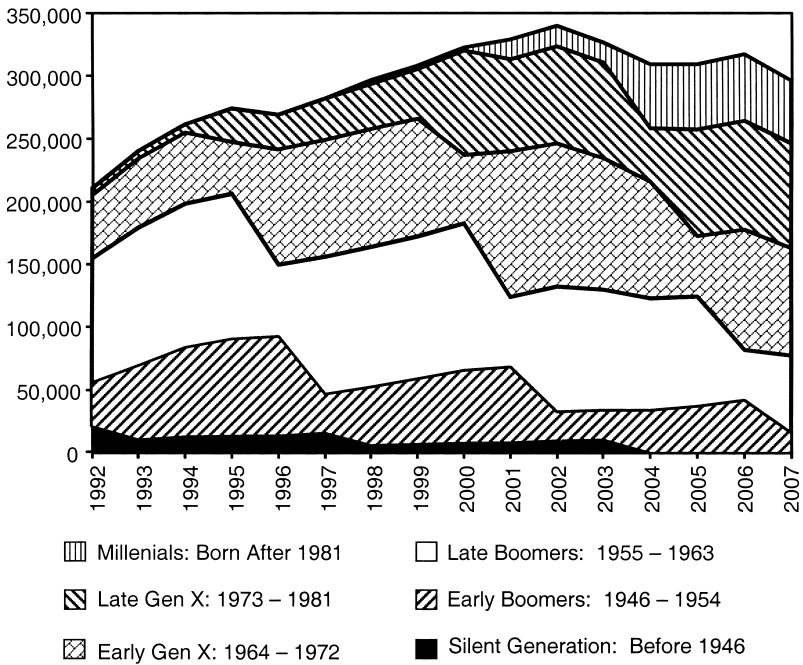


Fig. 3C.4 U.S. heroin treatment client admissions over time, by birth cohort

generally. First, it is important to break analyses down by drug, epidemic stage, and intensity of use. Trends for total prevalence of use of a drug that has recently become available can be entirely different than trends in dependent use of another drug that has been around for many years. That is not a new idea, but it bears repeating because dabblers doing analysis without deep domain expertise can go astray. Second, analysis needs to pay attention to age-period-cohort effects not just age or time or cohort. In the language of systems analysis, one needs distributed parameter or partial differential equation models that track the state as a vector—with components reflecting different intensities of use—that depends on both age and time, that is, $X(a,t)$, not only time, $X(t)$. An interesting question is the extent to which the substantial ebb and flow in juvenile offense rates implies that the same insight holds with respect to analysis of street crime more generally, as opposed to drug-related crime in particular.

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