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Evidence-based drug policy: It starts with good evidence and ends with policy reform

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Editorial

This issue of the *International Journal on Drug Policy* highlights a wide breadth of topics related to the worldwide production in and trade of illicit drugs. From a methodological standpoint, this collection of articles covers two key thematic areas: the qualitative characterization of aspects of the drug trade and/or drug policy in a given region, and the measurement of drug production, consumption and subsequent economic impacts.

These thematic areas are intrinsically linked: good quantitative research needs to be informed by good qualitative research, particularly in circumstances where the illegality of drug markets creates such a high level of complexity and uncertainty. This factor is eloquently illustrated in articles discussing the personal and structural barriers to exiting the illicit drug trade (Campbell and Hansen, 2012) and the various forces that dictate the scale of local cannabis production for individual growers (Hammersvik, Sandberg and Pedersen, 2012). Without such contextual knowledge, policies to, for example, encourage exit from the illicit drug trade and limit the scale of cannabis production would be ill-informed and subsequent evaluations incomplete.

This issue also features a selection of studies which provide valuable discussions of current and emerging policy changes, with a global scope. Farthing and Kohl's paper (2012) provides a review of Bolivia's drug control policies aimed at reducing the harm from coca production. Van Dun (2012) provides an ethnographic study characterizing the local impact of cocaine trade in Peru, while Shukla, Crump and Chrisco (2012) review the literature on illicit methamphetamine supply in the US. These studies all demonstrate how important it is to recognize that illicit drugs are commodities operating under the same principles of supply and demand as any other. Each of these papers also describes the overall ineffectiveness of policies implemented to control illicit drug production and distribution. Here again the laws of supply and demand loom large with efforts to limit supply being confronted by the enormous profitability of the industry.

Natural experiments, such as the change in Oxycontin formulations in Canada, described by Fischer and Keates (2012) also highlight specific areas in need of rigorous evaluation.

Similarly, Dunlap, Graves and Benoit (2012) description of changes in the drug trade in New Orleans brought about by Hurricane Katrina, provides a rare glimpse into what an unexpected exogenous force, such as a natural disaster, can have on the illicit drug market in a given region. Perhaps not surprisingly, these effects were small and short-lived, with the authors concluding that the drug trade in New Orleans re-constituted itself soon after communities began to be rebuilt. These findings underscore the resiliency of the illicit drug trade in the face of unconstrained consumer demand.

The illegal and often consequent underground nature of the production and consumption of illegal drugs makes accurate measurement of drug markets an area of considerable unmet need. Accurate measurements of economic value of the drug trade are necessary to inform policy decisions regarding domestic illicit drug production and consumption in a given region. To this end, Werb *et al* (2012) combine data from national surveys and other sources to estimate the monetary value of domestic cannabis consumption in British Columbia, Canada. In contrast, Leoncini and Rentocchini (2012) provide an innovative analysis to measure cocaine production in Colombia with data on laboratory seizures reported in press releases of government agencies. In addition, measuring the health and economic impacts of the drug trade are imperative to quantify the health and other effects of potential policy changes. Finally, Fernandez (2012) provides an analysis measuring the socioeconomic impact of drug-related crime in Chile, highlighting the impact of the drug trade in the criminal justice system and beyond.

Together this collection of studies forms an important contribution to understanding drug production and drug markets. Moving forward, we see three priorities in the development of an evidence-base for drug policy.

The first is an expansion of high quality evidence through both qualitative and quantitative data collection, excellent examples of which are presented in this issue. The second, related issue is the importance of how this type of information is synthesized to provide direction for illicit drug policy reform. This point is underlined by the breadth of dimensions of illicit drug supply and demand and policy-impact measurement highlighted in this issue. Wherever possible, we believe modernization and standardization of evaluation methods is critical for the sake of maximizing research impact as well as assessing the positive and negative impacts across disparate policy approaches and interventions.

In this regard, we think that welfare economics is a relevant modern market evaluation approach, emphasizing the maximization of social welfare at its core (Feldman and Serrano, 2006). The elements comprising social welfare are broad-ranging and disparate, incorporating the revenues from drug production and the costs related to crime and violence cited in this issue, but also including the benefits, or utility, derived from a given policy option, and, implicitly, society's willingness to pay to achieve this utility. Indeed all costs and benefits to society as a whole are under consideration in welfare economics, a critical advantage of this framework for evidence-based decision making.

Health economic evaluation has undergone a renaissance over the last 20 years, with a flourish of methodological development (Drummond *et al*, 2005; Briggs, Claxton and

Sculpher, 2006) and standardization in study design (Ramsey et al, 2005). These foundations have been hotly debated, with considerable discussion on what constitutes good value for money (Gafni and Birch, 2006; World Health Organization, 2009) – an all too often overlooked consideration by policy makers in this area. Supported by statistical and mathematical modeling, modern health economic evaluation can synthesize information and evidence from a wide range of sources, and has routinely been applied to drug-related health technologies, the impacts of which supersede the health sector (Nosyk et al, 2012; Zarkin et al, 2005). In this regard, mathematical models, as applied in health economic evaluations, are a promising tool for drug policy evaluation, as they can effectively synthesize data from a range of different sources and account for the stochastic and often heterogeneous nature of policy responses, allowing a quantitative assessment of the uncertainty surrounding the results of these evaluations. At their core, these methods are geared towards making informed decisions, but the decisiveness of analyses based on such models is dependent on the quality of the available parameter estimates and underlying assumptions (Kilmer et al, 2010; Caulkins et al, 2012).

A third priority for the implementation of evidence-based approaches for addressing the harms of illegal drug use (and drug policies) is having research impact upon policy maker's decisions (Reuter, 2001; Wood, 2010). Currently, there is a growing sense of realization that criminalizing drug users through enforcement-based supply-side responses aimed at curtailing the illicit drug trade have failed. For instance, there is now widespread discussion of the economic and social costs of the mass incarceration of drug offenders (Rich, Wakeman and Dickman, 2011), as well as actions towards rectifying the problem (American Civil Liberties Union, 2012). Policies aimed at reducing the public health impact of illicit drug use are slowly being adopted in most regions of the globe (United Nations Office on Drugs and Crime, 2011). While exceptions persist (Department of Justice Canada 2012; Rhodes et al., BMJ), there emerging momentum and enthusiasm towards reform of drug policy being influenced by scientific evidence as opposed to philosophical ideals or the demands of special interest groups The Global (Commission on Drugs, 2011).

To this end, drug policy researchers need to continue to provide a high quality evidence base with which to guide better policy responses and to continue to research ways of accelerating the pace of drug policy reform (Wood et al, 2010; Reuter, 2001). The articles featured in this issue provide foundational data to inform active reconsideration of existing policy approaches towards evidence-based drug policy, optimized to maximize social welfare - an objective that needs to be universally embraced.

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