



Pompidou Group

The current state of the art of the effects and associated costs of drug control policies to individuals

Asbtracts and sections summaries

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1/09/2015

Abstracts and sections summaries

The suggested preliminary organization for this report consists on an Introduction (no subheading), four main categories (first-order headings) and the Conclusion and Policy Implications. The organizational structure includes a matrix pattern combining elements of descriptive, analytic and argumentative approach. The overall introduction and key priorities will state the scope of the review of the related literature, formulate the aims and the objectives, as well as indicate current trends and justify the selected material and conceptualization.

1. Introduction

Edwards C and Galla, M. (2014). Governance in EU illicit drugs policy. *International Journal of Drug Policy*.

Abstract. This commentary represents the authors' views on EU governance in illicit drug policy, a field in which they were active for more than 10 years between them. EU drug policy has a narrow legal basis in the European Treaties and is mostly non-binding. The main policy instruments are 8-year EU Drug Strategies, underpinned by 4-year Action Plans which set out specific objectives at national, EU or international level. The approach that guides EU drug policy is known as the 'balanced approach'. It is remarkably restrained and reflects the reality that very few Member States have either the socio-political culture or the resources to consistently apply the punitive sanctions foreseen by the UN conventions. An important feature of EU governance in the field of drugs is the proactive support that is provided to non-governmental organisations both within the EU as well as in accession, associated or third countries. At a global level, the EU is a major financial aid donor also in this field. This position is not however reflected in corresponding political clout for the EU within the UN system. EU governance on drugs has made it possible for many of its Member States to accommodate the problem rather than to "solve" what by all the evidence from the last 100 years may well be insoluble, at least by means of criminalisation and prohibition. The big question is where EU drug policy is headed in the next few years. The EU has been promoting measures and practices that target real problems. It has done so without indulging too much in unhelpful rhetoric. However, like all successful formulae this one also has a sell-by date. EU governance in the field of drugs cannot afford to stand still. It needs to find a second wind.

1.2. The sui generis nature of the current drug control regime

This section focuses on the paradoxical nature of current drug policy, that is to say; 1) the drug control measures set to protect are in reality causing more harm than good; and 2) the disproportionate focus of the current drug policy on the malicious law enforcement practices despite the lack of scientific confirmation, and the evidence of the contrary. Despite evidence provided by the scientific community, the majority of the governmental available resources on drug policy, in most nations, are devoted on the supply reduction and law enforcement.

Abstracts from key articles

Godfrey C., Stewart D., and Gossop, M. (2004). Economic analysis of costs and consequences of the treatment of drug misuse: 2-year outcome data from the National Treatment Outcome Research Study (NTORS). *Addiction* 99 (6), 697-707.

Abstract. Aims Some economic costs and consequences of drug misuse and treatment were investigated among clients recruited to the National Treatment Outcome Research Study (NTORS). Design This was a longitudinal prospective cohort design comprising 549 clients recruited from 54 residential and community treatment programmes: data were collected from interviews conducted at treatment intake, at 1 year and at 2-year follow-ups. Measurements Treatment costs included index and other drug treatments. Costs were

estimated for use of health and social care services, criminal activity and the use of criminal justice resources. Costs were based upon self-reported data collected by structured face-to-face interviews combined with unit cost estimates taken from a variety of sources. Findings Addiction treatment was costed at £2.9 million in the 2 years prior to index treatment, and a further £4.4 million in the subsequent 2 years. Economic benefits were largely accounted for by reduced crime and victim costs of crime. Crime costs fell by £16.1 million during the first year, and by £11.3 million during the second year. Health-care costs were relatively small but approximately doubled during the course of the study. The ratio of consequences to net treatment investment varied from 18 : 1 to 9.5 : 1, depending on assumptions. This is likely to be a conservative estimate of the benefit–cost ratio because many potential benefits were not estimated. Conclusions The data showed clear economic benefits to treating drug misusers in England.

Kerr, T., Small, W., & Wood, E. (2005). The public health and social impacts of drug market enforcement: A review of the evidence. *International journal of drug policy*, 16(4), 210-220.

Abstract. The primary response to the harms associated with illicit injection drug use in most settings has involved intensifying law enforcement in an effort to limit the supply and use of drugs. Policing approaches have been increasingly applied within illicit drug markets since the 1980s despite limited scientific confirmation of their efficacy. On the contrary, a growing body of research indicates that these approaches have substantial potential to produce harmful health and social impacts, including disrupting the provision of health care to injection drug users (IDU), increasing risk behaviour associated with infectious disease transmission and overdose, and exposing previously unaffected communities to the harms associated illicit with drug use. There are, however, alternatives to traditional targeted enforcement approaches that may have substantially less potential for negative health and social consequences and greater potential for net community benefit. Some of these approaches involve modifying policing practices, fostering partnerships between policing and public health agencies, and developing systems to monitor policing practices. Other alternatives involve the provision of harm reduction services, such as safer injecting facilities, that help to minimize drug-related harms, and addiction treatment services which ultimately help to reduce the demand for illicit drugs.

Reuter, P., & Pollack, H. (2006). How much can treatment reduce national drug problems? *Addiction*, 101(3), 341-347.

Abstract. Aims. Treatment of drug addiction has been the subject of substantial research and, in contrast to several other methods of reducing drug use, has been found to be both effective and cost-effective. This review considers what is known about how much a nation can reduce its drug problems through treatment alone and what is known at the aggregate level about the effectiveness of prevention and enforcement. Methods. The literature on the effectiveness of treatment, prevention and enforcement are reviewed, and set in a policy analytical framework. Findings. Many studies have found treatment to have large effects on individuals' consumption and harms. However, there is an absence of evidence that even relatively well-funded treatment systems have much reduced the number of people in a nation who engage in problematic drug use. For prevention, the scientific literature shows useful and modest effects at the individual level but there is little support for substantial aggregate effects. For enforcement, research has failed almost uniformly to show that intensified policing or sanctions have reduced either drug prevalence or drug-related harm. Nor—outside the UK—is there more than a modest effort to improve the evidence base for making decisions about the appropriate level of enforcement of drug prohibitions. Conclusions. Treatment can justify itself in terms of reductions in harms to individuals and communities. However, even treatment systems that offer generous access to good quality services will leave a nation with substantial drug problem. Finding effective complementary programs remains a major challenge.

Smismans, Stijn. "Policy evaluation in the EU: the challenges of linking ex ante and ex post appraisal." *this Symposium*. Vol. 7. 2015.

Abstract. The EU's new approach to policy evaluation is characterised by a focus on closing the policy cycle (linking ex ante and ex post appraisal) and by applying evaluation to all types of policy intervention, whether expenditure or regulatory policy. This article analyses the main features and challenges of this new approach. It first studies the conceptual and interdisciplinary challenge of such an encompassing approach to evaluation. It then assesses the new approach in the light of four key objectives of ex ante and ex post appraisal; ensuring evidence and learning; accountability, transparency and participation; policy coherence; and reducing the regulatory burden.

1.3. EU policy evaluation: policy cycle integrating ex ante and ex post appraisal

This section focuses on the importance of drug policy evaluation as one of the key issues in the development of social policy. It describes some common misconceptions about policy evaluation, presents the EU policy evaluation framework and suggests the transfer of this evaluation platform to the drug policy arena on a basis of 'full accounting', integrating both *ex post* and *ex ante* appraisal on harm assessment.

Abstracts from key articles

Mark, M. M., Cooksy, L. J., & Trochim, W. M. (2009). Evaluation policy: An introduction and overview. *New Directions for Evaluation*, 2009(123), 3-11.

Abstract. Evaluation policy is of considerable importance, especially in relation to the limited amount of attention it receives as a general topic in the mainstream evaluation literature. Evaluation policies matter for several reasons, among them that they can profoundly affect evaluation practice, they underlie many recent and current controversies about evaluation, and they may be a lever for change that can have far-reaching effects for practice. This chapter gives an overview of several issues regarding evaluation policy, including defining it, identifying possible facets of evaluation policy, describing how it is established, and outlining the potentially greater role for evaluators in shaping the evaluation policies that influence evaluation practice. © Wiley Periodicals, Inc.

Paoli, L., & Greenfield, V. A. (2013). Harm: A Neglected Concept in Criminology, a Necessary Benchmark for Crime-Control Policy. *European Journal of Crime, Criminal Law and Criminal Justice*, 21(3-4), 359-377.

Abstract. Despite the centrality of harm to crime and criminalization and increasing interest in harm as a basis for crime-control policy, there has been little systematic reflection within criminology on criminal harms or their identification, evaluation, and comparison. In this paper, we review the literature on the harms of crime and related concepts, i.e., the perceived seriousness and cost of crime, impact of criminal victimization, and drug-related harm. Each of these related bodies of work suggests either a reason, by way of inadequacy, or a means, by way of insight or analytical method, to advance a harm-based approach. We then identify substantial challenges in assessing the harms of crime and conclude that, despite these challenges, a systematic empirically-based assessment of the harms of criminal activities can serve important roles in policy analysis.

1.4. Dichotomous conceptualization of drug policy: A binary artifact

In this part of the report the polarized climate of the drug policy, based on the two extremes of the political spectrum, is discussed and analyzed. Different standpoints for investigating policy alternatives are presented as well as the policy-use-harm nexus.

Abstracts from key articles

Reuter, P., & MacCoun, R. (1995). Assessing the legalization debate. *Policies and strategies to combat drugs in Europe*, 39-49.

Abstract. The debate over alternative regimes for currently illicit psychoactive substances focuses on polar alternatives: harsh prohibition and sweeping legalization. This study presents an array of alternatives that lies between these extremes. The current debate lacks an explicit and inclusive framework for making comparative judgments. In this study, we sketch out such a framework, as a reminder of possible policy levers and their costs and benefits that might otherwise be neglected or go unrecognized. The framework identifies a range of pharmacological and economic characteristics of substances, potential harms and their bearers, and the sources of those harms, including drug use, trafficking, law enforcement, and illegal status per se. The framework highlights the difficulty of making objective, rigorous comparisons among regimes, but we believe that it can serve a useful heuristic role in promoting more constructive debate and identifying fruitful questions for research.

2. Drug control policy: the current state of the art

This chapter focuses on the examination of the literature on individual harms generated by both drug use and drug control policy. The review includes policy papers, empirical studies and major international research projects (Global Commission, RAND, etc.). According to the harm trends and research findings, this chapter is divided by second-order headings into three main sections: health related harms, crime and violence related harms and harms related to human rights violation, stigma and discrimination. Each section is followed by a critical discussion and integration with recent studies concerning selected indicators.

Abstracts from key articles

Basov, S., Miron, J., & Jacobson, M. (2001). Prohibition and the market for illegal drugs. *World Economics*, 2(4), 113-158.

Abstract. Over the past 25 years in the United States, enforcement of drug prohibition has expanded dramatically. Over the same period, however, the trends in drug production and consumption have been essentially flat, and the real, purity-adjusted prices of both cocaine and heroin have more than halved. This combination of facts raises questions about the effectiveness of prohibition enforcement, and it constitutes a puzzle that is interesting to explain. In this paper the authors document these facts and explore possible explanations. They do not claim to provide a complete answer, but shed light on which explanations are likely to be important.

Kuziemko, I., & Levitt, S. D. (2001). *An empirical analysis of imprisoning drug offenders* (No. w8489). National bureau of economic research.

Abstract. The number of prisoners incarcerated on drug-related offenses rose fifteen-fold between 1980 and 2000. This paper provides the first systematic empirical analysis of the implications of that dramatic shift in public policy. We show that the increase in drug prisoners led to reductions in expected time served for other crimes, especially for less serious offenses. Reductions in time served, however, increased other crimes by no more than a few percent. Moreover, incarcerating drug offenders is found to be almost as effective in reducing violent and property crime as locking up other types of offenders. We estimate that cocaine prices are 10-15 percent higher today as a consequence of increases in drug punishment since 1985. Based on previous estimates of the price elasticity of demand for cocaine, this implies a reduction in cocaine consumed of as much as 20 percent.

MacCoun, R. J., & Reuter, P. (2001). *Drug war heresies: Learning from other vices, times, and places*. Cambridge University Press.

Abstract. This book provides the first multidisciplinary and nonpartisan analysis of how the United States should decide on the legal status of cocaine, heroin and marijuana. It draws on data about the experiences of Western European nations with less punitive drug policies as well as new analyses of America's experience with legal cocaine and heroin a century ago, and of America's efforts to regulate gambling, prostitution, alcohol and cigarettes. It offers projections on the likely consequences of a number of different legalization regimes and shows that the choice about how to regulate drugs involves complicated tradeoffs among goals and conflict among social groups. The book presents a sophisticated discussion of how society should deal with the uncertainty about the consequences of legal change. Finally, it explains, in terms of individual attitudes toward risk, why it is so difficult to accomplish substantial reform of drug policy in America.

2.1. Harms associated with drug use

Here will be provided a brief overview of the main reasons indicating the importance of capturing the harms associated with drug use per se, but also the harms arising from the contextual responses such as drug control policies and law enforcement practices.

2.1.1. Disentangling drug use from drug policy harms

This section raises the importance of disentangling the major overlap between harms arise from policy and enforcement practices from the harms that are directly related to drugs. It emphasizes that without such disaggregation, any findings or conclusions will be misleading and biased.

2.2. Evidence on the association of health harms and policy – use - nexus

In this chapter of the literature review, an analysis of the major harms related to drug control measures and law enforcement practices is conducted.

2.2.1. Mortality and morbidity

This section provides evidence on mortality by overdose and its association with drug control policy. It shows that accidental overdose is primary cause of death and represents a major challenge for public health policy in Europe. Examples will be provided showing how drug policy responses are responsible of this phenomenon and how they could prevent many of the recorded EU fatal overdoses i.e. naloxone schemes, unknown quality and potency of the drug or supervised drug consumption facilities.

Abstracts from key articles

Darke, S., Ross, J. & Hall, W. (1996) Overdose among heroin users in Sydney, Australia: I. Prevalence and correlates of non-fatal overdose. *Addiction*, 91 (1996), pp. 405–411

Abstract. A sample of 329 heroin users were interviewed regarding their personal experience of non-fatal heroin overdose. Experience of overdose was widespread, with two-thirds of subjects (68%) reporting having overdosed. The median number of life-time overdoses was three, with males and females equally likely to have overdosed. The majority (62%) of most recent heroin overdoses occurred in conjunction with the consumption of other central nervous system depressants (alcohol, benzodiazepines and other opioids). Logistic regression analyses indicated three independent factors associated with having overdosed: longer heroin using careers, greater heroin dependence and higher levels of alcohol consumption. Implications for the reduction in the prevalence and frequency of overdose are discussed.

Kerr, T., Fairbairn, N., Tyndall, M., Marsh, D., Li, K., Montaner, J., & Wood, E. (2007). Predictors of non-fatal overdose among a cohort of polysubstance-using injection drug users. *Drug and alcohol dependence*, 87(1), 39-45.

Abstract. Background. Non-fatal overdose is a major determinant of morbidity among injection drug users (IDU). We sought to evaluate factors associated with non-fatal overdose among IDU in Vancouver. Methods. We examined non-fatal overdose among participants in the Vancouver Injection Drug Users Study. Correlates of non-fatal overdose occurring between 1996 and 2004 were identified using generalized estimating equations (GEE). Results. There were 1587 participants included in this analysis, including 576 (36%) women. At baseline, 750 (47%) reported a history of non-fatal overdose. In total, 985 reports of non-fatal overdose were made during follow-up by 519 (32.7%) participants. In multivariate GEE analyses, factors independently associated with non-fatal overdose included: heroin injection (AOR = 2.67), cocaine injection (AOR = 2.01), benzodiazepine use (AOR = 2.00), requiring help injecting (AOR = 1.58), binge drug use (AOR = 1.52), homelessness (AOR = 1.38), alcohol use (AOR = 1.32), street injecting (AOR = 1.22), non-injectable opiate use (AOR = 1.16), speedball use (AOR = 1.15), and recent incarceration (AOR = 1.14). Younger age (AOR = 0.99) and methadone use (AOR = 0.51) were protective. Conclusions. We found that non-fatal overdose was common among local IDU. Non-fatal overdose was associated with several factors that may be amenable to intervention, including opiate and stimulant use, and the characteristic of requiring help with injecting. These findings indicate the need for the ongoing development of structural interventions to address this common cause of morbidity among IDU.

2.2.2. Rush injecting behavior out of fear of apprehension

Here will be discussed evidence on various harms related to drug users injecting behavior in an effort to consume the drug before its confiscation by the police.

Abstracts from key articles

Broadhead, R. S., Kerr, T. H., Grund, J. P., & Altice, F. L. (2002). Safer injection facilities in North America: Their place in public policy and health initiatives. *Journal of Drug Issues*, 32(1), 329–355.

Abstract. The continuing threat posed by HIV, HCV, drug overdose, and other injection-related health problems in both the United States and Canada indicates the need for further development of innovative interventions for drug injectors, for reducing disease and mortality rates, and for enrolling injectors into drug treatment and other health care programs. Governmentally sanctioned “safer injection facilities” (SIFs) are a service that many countries around the world have added to the array of public health programs they offer injectors. In addition to needle exchange programs, street-outreach and other services, SIFs are clearly additions to much larger comprehensive public health initiatives that municipalities pursue in many countries. A survey of the existing research literature, plus the authors' ethnographic observations of 18 SIFs operating in western Europe and one SIF that was recently opened in Sydney, Australia, suggest that SIFs target several problems that needle exchange, street-outreach, and other conventional services fall short in addressing: (1) reducing rates of drug injection and related-risks in public spaces; (2) placing injectors in more direct and timely contact with medical care, drug treatment, counseling, and other social services; (3) reducing the volume of injectors' discarded litter in, and expropriation of, public spaces. In light of the evidence, the time has come for more municipalities within North America to begin considering the place of SIFs in public policy and health initiatives, and to provide support for controlled field trials and demonstration projects of SIFs operating in injection drug-using communities.

2.2.3. Physical displacement of injecting drug users

This section focuses on the physical displacement of injecting drug users into remote non-public locations due to law enforcement pressure and fear of apprehension. The evidence provided shows

the increased risk of harm related to “shooting galleries” such as overdose, syringe sharing and HIV infection.

Abstracts from key articles

Ball, A. L., Rana, S., & Dehne, K. L. (1998). HIV prevention among injecting drug users: Responses in developing and transitional countries. *Public Health Reports*, 113(Suppl. 1), 170–181.

Abstract. OBJECTIVE: Human immunodeficiency virus (HIV) infection associated with injecting drug use has been reported in at least 98 countries and territories worldwide. There is evidence that new epidemics are emerging in different regions, including Eastern Europe, Latin American, and the eastern Mediterranean. The authors provide a global overview of the situation of HIV infection associated with injecting drug use and responses that have been implemented in various developing and transitional countries. METHODS: Although there has been extensive documentation of the extent and nature of HIV infection associated with injecting drug use in many developed countries and the various interventions implemented in those countries, there is very limited information on the situation in developing and transitional countries. This chapter brings together information from a broad range of sources, including published literature; “gray” or “fugitive” literature; data collected by the World Health Organization (WHO), the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the United Nations International Drug Control Programme (UNDCP); personal communications; and direct observation by the authors. The authors have traveled extensively to a wide range of developing and transitional countries and have accessed information not readily available to the international research community. RESULTS: A wide range of HIV prevention strategies targeting injecting drug users (IDUs) has been implemented in developing countries and countries in transition. Interventions include opioid substitution pharmacotherapy, needle syringe exchange and distribution, condom and bleach distribution, outreach to IDUs, peer education programs, and social network interventions. In some communities, completely new models of intervention and service delivery have developed in response to specific local needs and limitations. CONCLUSIONS: Although empirical data may currently be lacking to demonstrate the effectiveness of many HIV prevention programs targeting IDUs in developing and transitional countries, there is evidence that innovative HIV prevention initiatives are being implemented and sustained in a wide range of sociocultural settings.

Broadhead, R. S., Kerr, T. H., Grund, J. P., & Altice, F. L. (2002). Safer injection facilities in North America: Their place in public policy and health initiatives. *Journal of Drug Issues*, 32(1), 329–355.

Abstract. The continuing threat posed by HIV, HCV, drug overdose, and other injection-related health problems in both the United States and Canada indicates the need for further development of innovative interventions for drug injectors, for reducing disease and mortality rates, and for enrolling injectors into drug treatment and other health care programs. Governmentally sanctioned “safer injection facilities” (SIFs) are a service that many countries around the world have added to the array of public health programs they offer injectors. In addition to needle exchange programs, street-outreach and other services, SIFs are clearly additions to much larger comprehensive public health initiatives that municipalities pursue in many countries. A survey of the existing research literature, plus the authors' ethnographic observations of 18 SIFs operating in western Europe and one SIF that was recently opened in Sydney, Australia, suggest that SIFs target several problems that needle exchange, street-outreach, and other conventional services fall short in addressing: (1) reducing rates of drug injection and related-risks in public spaces; (2) placing injectors in more direct and timely contact with medical care, drug treatment, counseling, and other social services; (3) reducing the volume of injectors' discarded litter in, and expropriation of, public spaces. In light of the evidence, the time has come for more municipalities within North America to begin considering the place of SIFs in public policy and health initiatives, and to provide support for controlled field trials and demonstration projects of SIFs operating in injection drug-using communities.

Kerr, T., Wood, E., Small, D., Palepu, A., & Tyndall, M. W. (2003). Potential use of safer injecting facilities among injection drug users in Vancouver's Downtown Eastside.

Canadian Medical Association Journal, 169(8), 759–763

Abstract. Background: The Vancouver Coastal Health Authority will initiate North America's first sanctioned safer injecting facility, as a pilot project, on Sept. 15, 2003. The analyses presented here were conducted to estimate the potential use of safer injecting facilities by local illicit injection drug users (IDUs) and to evaluate the potential impact of newly established Health Canada restrictions and current police activities on the use of the proposed facility.

Methods: During April and May 2003, we recruited active IDUs in Vancouver's Downtown Eastside to participate in a feasibility study. We used descriptive and univariate statistics to determine potential use of a safer injecting facility and to explore factors associated with willingness to use such a facility with and without federal restrictions and police presence.

Results: Overall, 458 street-recruited IDUs completed an interviewer-administered survey, of whom 422 (92%) reported a willingness to use a safer injecting facility. Those expressing willingness were more likely to inject in public (odds ratio [OR] 3.9, 95% confidence interval [CI] 1.9–8.0). When the restrictions in the Health Canada guidelines were considered, only 144 (31%) participants were willing to use a safer injecting facility. IDUs who inject alone were more likely (OR 1.8, 95% CI 1.0–3.1) and women were less likely (OR 0.6, 95% CI 0.4–0.9) to be willing to use a safer injecting facility operating under these restrictions. Only 103 (22%) of the participants said they would be willing to use a safer injecting facility if police were stationed near the entrance. Interpretation: Most IDUs participating in this study expressed a willingness to use a safer injecting facility. However, willingness declined substantially when the IDUs were asked about using a facility operating under selected Health Canada restrictions and in the event that police were stationed near the entrance.

McGregor, C., Darke, S., Ali, R., & Christie, P. (1998). Experience of non-fatal overdose among heroin users in Adelaide, Australia: Circumstances and risk perceptions. *Addiction*, 93(5), 701–711.

Abstract. Aims : To ascertain the prevalence and risk factors for non-fatal overdose among heroin users to assist in the development of an effective intervention. Design : Cross-sectional design. Setting. : Community setting, principally metropolitan Adelaide. Participants : Current heroin users (used heroin in the previous six months). Measurements : A structured questionnaire including the Severity of Dependence Scale. Finding : Of 218 current South Australian heroin users interviewed in 1996, 48% had experienced at least one non-fatal overdose their life-time (median: two overdoses), and 11% had overdosed in the previous 6 months. At some time, 70% had been present at someone else's overdose (median: three overdoses). At the time of their own most recent overdose, 52% had been using central nervous system depressants in addition to heroin, principally benzodiazepines (33%) and/or alcohol (22%). The majority of overdoses occurred in a private home (81%) and in the presence of other people (88%). Unrealistic optimism regarding the risk of overdose was evident across the sample. Despite almost half the sample reporting having had an overdose, and the belief expressed by respondents that on average about 50% of regular heroin users would overdose during their life-time 73% had, during the previous 6 months, "rarely" or "never" worried about possibly overdosing. Optimism regarding the possibility of future overdose was reduced in those with recent experience of overdose in comparison to the rest of the sample. A targeted intervention aimed at the reduction of overdose among heroin users is outlined.

Neaigus, A., Friedman, S. R., Curtis, R., Des Jarlais, D. C., Furst, R. T., Jose, B., et al. (1994). The relevance of drug injectors' social and risk networks for understanding and preventing HIV infection. *Social Science and Medicine*, 38 (1), 67–78

Abstract. Focusing on the social environment as well as the individual should both enhance our understanding of HIV transmission and assist in the development of more effective prevention programs.

Networks are an important aspect of drug injectors' social environment. We distinguish between (1) risk networks (the people among whom HIV risk behaviors occur) as vectors of disease transmission, and (2) social networks (the people among whom there are social interactions with a mutual orientation to one another) as generators and disseminators of social influence. These concepts are applied to analyses of data from interviews with drug injectors in two studies. In the first study drug injectors' risk networks converge with their social networks: 70% inject or share syringes with a spouse or sex partner, a running partner, or with friends or others whom they know. Qualitative data from interviews with injectors in the second study also show that the social relationships between drug injectors and members of their risk network are often based on long-standing and multiplex relationships, such as those based on kinship, friendship, marital and sexual ties, and economic activity. In the first study the vast majority of injectors, over 90%, have social ties with non-injectors. Injectors with more frequent social contacts with non-injectors engage in lower levels of injecting risk behavior. Risk settings may function as risk networks: injectors in this study who inject at shooting galleries are more likely than those who do not to rent used syringes, borrow used syringes and inject with strangers. Since the adoption of a network approach is relatively new, a number of issues require further attention. These include: how to utilize social networks among drug injectors to reduce risk through peer pressure; how to promote risk reduction by encouraging ties between injectors and non-injectors; and how to integrate biographical and historical change into understanding network processes. Appropriate methodologies to study drug injectors' networks should be developed, including techniques to reach hidden populations, computer software for managing and analyzing network data bases, and statistical methods for drawing inferences from data gathered through dependent sampling designs.

2.2.4. Preventing access to health related services

This section examines the potential impact of police presence on preventing drug users' access to health. Evidence is provided on the association of police activity and surveillance with decreased attendance at voluntary treatment programs and needle exchange services. This section also demonstrates evidence of the police purposeful interventions against safe injection and bleach kits, directly threatening drug users' health.

Abstracts from key articles

Aitken, C., Moore, D., Higgs, P., Kelsall, J., & Kerger, M. (2002). The impact of a police crackdown on a street drug scene: evidence from the street. *International Journal of Drug Policy*, 13(3), 193-202.

Abstract. This article documents the impact of a police crackdown on a street heroin market in a suburb of Melbourne, Australia, as perceived by individuals involved in the market. While our data suggest that 'Operation Clean Heart' achieved its objective of reducing the visible aspects of this street drug scene, they also imply that the drug market rapidly adapted to its new conditions and that the impact of the operation was essentially superficial and temporary. In addition, we contend that the operation had numerous (unintended) negative consequences, some of which are potentially harmful to public health. Negative outcomes implied by our data included the partial displacement of the drug scene to nearby metropolitan areas; the discouragement of safe injecting practice and safe needle and syringe disposal; and more frequent occurrences of violence and fraud. These outcomes may outweigh the perceived positive impacts, which were achieved at significant public expense. We conclude that police crackdowns are inappropriate responses to illicit drug problems; instead, in line with longstanding Australian policy, approaches which incorporate and balance demand reduction, supply reduction and harm reduction principles should be followed.

Blankenship, K. M., & Koester, S. (2002). Criminal law, policing policy, and HIV risk in female street sex workers and injection drug users. *Journal of Law, Medicine and Ethics*, 30(4), 548–559.

Abstract. Drawing from fieldwork and life history and focus group interviews, the authors examine how law and policing policies shape HIV-related risks among individuals using injection drugs and women exchanging sex for money. They show how a focus on punishment and coercion contribute to the HIV-related risk associated with these activities.

Bluthenthal, R. N., Lorvick, J., Kral, A., Erringer, E. A., & Kahn, J. G. (1999). Collateral damage in the war on drugs: HIV risk behaviors among injection drug users. *International Journal of Drug Policy*, 10, 25–38.

Abstract. Objective: To determine whether two key War on Drugs policies, the criminalization of syringes and the disqualification of drug users from the Supplemental Security Income (SSI) program, are associated with injection-related human immunodeficiency virus (HIV) risk behaviors among injection drug users (IDUs). Methods: IDUs were interviewed regarding HIV risk behaviors, drug use, and criminal activities in six San Francisco Bay Area communities in 1996 and followed through 1997 ($n=1257$). Multivariate analysis was conducted to examine the association between concern about arrest while carrying drug paraphernalia and injection-related risk behaviors. Regarding SSI, respondents were interviewed before (1996) and after (1997) drug and alcohol addicts were disqualified from SSI ($n=88$). Bivariate analysis was conducted comparing IDUs who lost SSI benefits with those who retained benefits. Results: Among our study sample, 32% of IDUs reported being concerned about possible arrest while carrying drug paraphernalia. In multivariate analysis, concerned IDUs were over one-and-a-half times more likely to share syringes than IDUs not concerned (adjusted odds ratio=1.74; 95% confidence interval =1.24, 2.44). Regarding SSI, 60% (53/88) of baseline SSI recipients had lost benefits by their follow-up interview. IDUs who lost benefits were more likely to participate in illegal activities (48 vs. 27%; $P<0.05$), more likely to share syringes (17 vs. 0%; $P<0.05$) and injected drugs on average more (43.8 vs. 36.4 per month; $P<0.03$) than those who retained benefits. Conclusions: These data suggest that War on Drugs policies which deny injection equipment and federal income support to IDUs also increase their risk for HIV infection, and should be reconsidered.

Bluthenthal, R. N., Kral, A. H., Lorvick, J., & Watters, J. K. (1997). Impact of law enforcement on syringe exchange programs: A look at Oakland and San Francisco. *Medical Anthropology*, 18(1), 61–83.

Abstract. Drug paraphernalia and prescription laws make syringe exchange programs SEPs illegal in most states in the U.S. Nonetheless, SEPs have been started in 25 states and the District of Columbia as of September 1995. In some states like California and New Jersey, SEPs have operated despite police arrest of volunteers and clients. We examine the impact of police action and threat on SEPs by comparing an underground syringe exchange site (SES) in West Oakland to a tolerated SES in the Fillmore neighborhood of San Francisco. The following data sources are utilized: demographic and service utilization data from Alameda County Exchange (ACE) in West Oakland and Prevention Point Needle and Syringe Exchange (PPNSE) in the Fillmore, San Francisco; demographic and syringe exchange utilization information collected from street- recruited samples of injection drug users (IDUs) in West Oakland and the Fillmore; and participant observation of SES in these two communities. We found that police action and the threat of police action in West Oakland decreased utilization of SEP by IDUs, limited the number and diversity of volunteers at SES, and inhibited the operation and expansion of SEP.

Gleghorn, A. A., Jones, T. S., Doherty, M. C., Celentano, D. D., & Vlahov, D. (1995). Acquisition and use of needles and syringes by injecting drug users in Baltimore,

Maryland. *Journal of Acquired Immune Deficiency Syndromes and Retrovirology*, 10(1), 97–103.

Abstract. Our objective was to determine how injection drug users (IDUs) in Baltimore, Maryland obtain and use needles and syringes (NS) for drug injection, before the opening of a needle exchange program (NEP). The method of this study was a cross-sectional structured interview survey in 1992 of active IDUs in a longitudinal study of human immunodeficiency virus (HIV) infection. For 466 IDUs (94.6% black, 83% male), usual sources of NS were "street" dealers (49.6%), pharmacies (29.8%), diabetics (16.3%), friends/ neighbors (2.2%), and "shooting galleries" (1.9%). Half (53.5%) reported pharmacy purchase of NS, and 55.6% had diabetic friends/relatives. Twenty-three percent traded drugs, and 5% traded sex for NS. Eighty-eight and two-tenths percent would use a needle exchange program; 24.6% currently own no NS (median owned = 2.2). NS reuse was common (median = three times). Concern about (55.2%) or history of (33.9%) hassle/arrest for NS possession was typical; 81% kept NS at home, and 67% do not carry NS when purchasing drugs. Pharmacy purchasers (versus "street") were less likely to have been jailed, shared NS, or used shooting galleries during the preceding 6 months. In Maryland, although IDUs can legally purchase NS at pharmacist discretion, possession remains illegal; fewer than one-third of IDUs use pharmacies, and most obtain NS from illegal sources. Most IDUs reuse NS, but discard them after several uses. Current patterns of NS acquisition and use in Baltimore are likely to increase HIV transmission. Increased availability and decriminalization of NS possession could decrease the risk of injection-related HIV transmission.

Hedrich, D., Kerr, T., & Dubois-Arber, F. (2012). Drug consumption facilities in Europe and beyond. In T. Rhodes, & D. Hedrich (Eds.), *Harm reduction: Evidence, impacts and challenges* (pp. 305–329). Lisbon: EMC.

Abstract. Drug consumption rooms (DCRs) are professionally supervised healthcare facilities where drug users can use drugs in safer and more hygienic conditions. Since 1986, more than 90 DCRs have been set up in Switzerland, the Netherlands, Germany, Spain, Luxembourg, Norway, Canada and Australia. Consumption rooms aim to establish contact with difficult-to-reach populations of drug users, provide an environment for more hygienic drug use, reduce morbidity and mortality risks associated with drug use — in particular street-based drug injecting — and promote drug users' access to other social, health and drug treatment services. They also aim to reduce public drug use and improve public amenity near urban drug markets. At times, their establishment has been controversial due to concerns that they may encourage drug use, delay treatment entry or aggravate problems of local drug markets. As with evaluations of other public health interventions, research on DCRs faces methodological challenges in taking account of the effects of broader local policy or ecological changes. Despite these limitations, research shows that the facilities reach their target population and provide immediate improvements through better hygiene and safety conditions for injectors. At the same time, the availability of safer injecting facilities does not increase levels of drug use or risky patterns of consumption, nor does it result in higher rates of local drug acquisition crime. There is consistent evidence that DCR use is associated with self-reported reductions in injecting risk behaviour such as syringe sharing, and in public drug use. Due to a lack of studies, as well as methodological problems such as isolating the effect from other interventions or low coverage of the risk population, evidence regarding DCRs — while encouraging — is insufficient for drawing conclusions with regard to their effectiveness in reducing HIV or hepatitis C virus (HCV) incidence. However, use of the facilities is associated with increased uptake of detoxification and treatment services. While there is suggestive evidence from modelling studies that they may contribute to reducing drug-related deaths at a city level where coverage is adequate, the review-level evidence of this effect is still insufficient. Taken in sum, the available evidence does not support the main concerns raised about this kind of intervention and points to generally positive impacts in terms of increasing drug users' access to health and social care, and reducing public drug use and associated nuisance.

Maher, L., & Dixon, D. (1999). Policing and public health: Law enforcement and harm minimization in a street-level drug market. *British Journal of Criminology*, 39(4), 488–512.

Abstract. This article describes the impact of street-level law enforcement on Australia's principal heroin market. Based on three years of research, including interviews and extended ethnographic fieldwork, it uses data on drug-use, risk practices, crime, and policing to examine the relationship between law enforcement and harm minimization. Findings suggest that the 'successes' of police crackdowns and their impact on drug markets (including threats to public health and community safety as a result of geographical, social, and substance displacement) may be won at substantial costs, raising doubts as to their value.

Rhodes, T., Mikhailova, L., Sarang, A., Lowndes, C. M., Rylkov, A., Khutorskoy, M., et al. (2003). Situational factors influencing drug injecting, risk reduction and syringe exchange in Togliatti City Russian Federation: A qualitative study of micro risk environment. *Social Science and Medicine*, 57 (1), 39–54.

Abstract. We undertook a qualitative study to explore the micro-environment of drug injecting, risk reduction and syringe exchange practices among injecting drug users (IDUs) in Togliatti City, Russia. Semi-structured qualitative interviews ($n=57$) were undertaken with current IDUs in May 2001. Findings highlight a recent transition away from hanka (a home-produced liquid opiate derived from opium poppy) towards the injection of heroin powder, and a drug use culture in which injecting predominates. Findings emphasise that risk reduction practices may be influenced less by availability of injecting equipment than by an interplay of situational and micro-environmental factors. Principal among these is a reported fear of police detainment or arrest among IDUs which encourages a reluctance to carry needles and syringes, and which in turn, is associated with needle and syringe sharing at the point of drug sale. We note the role of policing practices in influencing risk reduction and the potential role of policing agencies in supporting HIV prevention initiatives among IDUs.

Salmon, A. M., Dwyer, R., Jauncey, M., van Beek, I., Topp, L., & Maher, L. (2008). Injecting-related injury and disease among clients of a supervised injecting facility. *Drug and Alcohol Dependence*, 101, 132–136.

Abstract. Background. The process of drug injection may give rise to vascular and soft tissue injuries and infections. The social and physical environments in which drugs are injected play a significant role in these and other morbidities. Supervised injecting facilities (SIFs) seek to address such issues associated with public injecting drug use. Aims. Estimate lifetime prevalence of injecting-related problems, injury and disease and explore the socio-demographic and behavioral characteristics associated with the more serious complications. Design, Setting, Participants. Self-report data from 9552 injecting drug users (IDUs) registering to use the Sydney Medically Supervised Injecting Centre (MSIC). Findings. Lifetime history of either injecting-related problems (IRP) or injecting-related injury and disease (IRID) was reported by 29% of the 9552 IDUs; 26% ($n = 2469$) reported ever experiencing IRP and 10% ($n = 972$) reported IRID. Prevalence of IRP included difficulties finding a vein (18%), prominent scarring or bruising (14%) and swelling of hands or feet (7%). Prevalence of IRID included abscesses or skin infection (6%), thrombosis (4%), septicaemia (2%) and endocarditis (1%). Females, those who mainly injected drugs other than heroin, and those who reported a history of drug treatment, drug overdose, and/or sex work, were more likely to report lifetime IRID. Frequency and duration of injecting, recent public injecting, and sharing of needles and/or syringes were also independently associated with IRID. Conclusions. IRPs and IRIDs were common. Findings support the imperative for education and prevention activities to reduce the severity and burden of these preventable injecting outcomes. Through provision of hygienic environments and advice on venous access, safer injecting techniques and wound care, SIFs have the potential to address a number of risk factors for IRID.

Wood, E., Kerr, T., Small, W., Li, K., Marsh, D., Montaner, J. S., & Tyndall, M. W. (2004). Changes in public order after the opening of a medically supervised safer injecting facility for illicit injection drug users. *Canadian Medical Association Journal*, 171, 731–734.

Abstract. Background: North America's first medically supervised safer injecting facility for illicit injection drug users was opened in Vancouver on Sept. 22, 2003. Although similar facilities exist in a number of European cities and in Sydney, Australia, no standardized evaluations of their impact have been presented in the scientific literature. Methods: Using a standardized prospective data collection protocol, we measured injection-related public order problems during the 6 weeks before and the 12 weeks after the opening of the safer injecting facility in Vancouver. We measured changes in the number of drug users injecting in public, publicly discarded syringes and injection-related litter. We used Poisson log-linear regression models to evaluate changes in these public order indicators while considering potential confounding variables such as police presence and rainfall. Results: In stratified linear regression models, the 12-week period after the facility's opening was independently associated with reductions in the number of drug users injecting in public ($p < 0.001$), publicly discarded syringes ($p < 0.001$) and injection-related litter ($p < 0.001$). The predicted mean daily number of drug users injecting in public was 4.3 (95% confidence interval [CI] 3.5–5.4) during the period before the facility's opening and 2.4 (95% CI 1.9–3.0) after the opening; the corresponding predicted mean daily numbers of publicly discarded syringes were 11.5 (95% CI 10.0–13.2) and 5.4 (95% CI 4.7–6.2). Externally compiled statistics from the city of Vancouver on the number of syringes discarded in outdoor safe disposal boxes were consistent with our findings. Interpretation: The opening of the safer injecting facility was independently associated with improvements in several measures of public order, including reduced public injection drug use and public syringe disposal.

2.2.5 Confrontations between drug users and police

Here will be provided evidence on the health harms of drug users derived from the police misuse power and excessive confrontation, as well as evidence of the violence and excessive use of force against drug users, and on the association of police invasion with drug users' displacement to new neighborhoods and its devastating consequences to the local communities.

Abstracts from key articles

Best, D., Strang, J., Beswick, T., & Gossop, M. (2001). Assessment of a concentrated high-profile police operation: No discernible impact on drug availability price or purity. *British Journal of Criminology*, 41, 738–745.

Abstract. Two weeks after the start of a major police initiative targeting drug dealing in London (described by the Metropolitan Police as a 'spectacular success'), 174 street drug users were interviewed about drug price, availability and purity. Only seven users reported price increases for any drug, with the majority stating that there had been no change in any market features. This basic pattern was not influenced by whether the users were aware of the operation, whether they lived in the areas directly affected or by the number of different dealers that they used to purchase their drugs. Paradoxically, any perceived changes were more likely to be 'improvements' in the market than deterioration (i.e. lower price, greater availability and higher levels of purity). There is limited evidence from the current study to support the assertion that targeted policing will impact on the accessibility, price or quality of heroin, cannabis or crack cocaine.

Cooper, H., Moore, L., Gruskin, S., & Krieger, N. (2004). Characterizing perceived police violence: Implications for public health. *American Journal of Public Health*, 94(7), 1109–1118

Abstract. Despite growing recognition of violence's health consequences and the World Health Organization's recent classification of police officers' excessive use of force as a form of violence, public

health investigators have produced scant research characterizing police-perpetrated abuse. Using qualitative data from a study of a police drug crackdown in 2000 in 1 New York City police precinct, we explored 40 injection drug using and 25 non-drug using precinct residents' perceptions of and experiences with police-perpetrated abuse. Participants, particularly injection drug users and non-drug using men, reported police physical, psychological, and sexual violence and neglect; they often associated this abuse with crackdown-related tactics and perceived officer prejudice. We recommend that public health research address the prevalence, nature, and public health implications of police violence.

Cornish, D., & Clarke, R. (1987). Understanding crime displacement: An application of rational choice theory. *Criminology*, 25, 933–947.

Abstract. It has been claimed that the rational choice perspective, which sees criminal behavior as the outcome of decisions and choices made by the offender, can provide a useful framework for analyzing crime control policies. By developing the concept of “choice-structuring properties,” which refers to the constellation of opportunities, costs, and benefits attaching to particular kinds of crime, this paper attempts to develop rational choice theory in order to improve analysis of crime displacement—a concept frequently invoked by the critics of opportunity-reducing measures of crime prevention.

Dixon, D., & Maher, L. (2002). Anh Hai: Policing culture and social exclusion in a street heroin market. *Policing & Society*, 12(2), 93–110.

Abstract. This paper reports research on how Indo-Chinese youth experience and perceive policing in Cabramatta, a predominantly Vietnamese community located in South Western Sydney. Interviews were conducted with 123 Indo-Chinese youth involved in heroin use and/or distribution. Results indicate that encounters with police were often conducted in a climate of fear, racism and hostility. Many were subject to routine harassment, intimidation and mistreatment. Young people were detained and searched unlawfully and in a manner interpreted as denigrating and offensive by the wider Indo-Chinese community. We also found evidence of questionable and illegal conduct by police officers in seizing drugs and money. Young people's perceptions of their treatment by the police are shaped by their political and economic exclusion which, ironically, is compounded by their cultural inclusion. Far from expressing the world view of an alien underclass, participants in the study assessed police activities according to mainstream normative values. Using empirical data we develop and extend the notion of social exclusion as a complex and internally contradictory process characterized by the interplay and possible conflict between its cultural, political, and economic dimensions.

Pollanen, M. S., Chiasson, D. A., Cairns, J. T., & Young, J. G. (1998). Unexpected death related to restraint for excited delirium: A retrospective study of deaths in police custody and in the community. *Canadian Medical Association Journal*, 158(12), 1603–1607.

Abstract. BACKGROUND: Some people in states of excited delirium die while in police custody. Emerging evidence suggests that physical restraint in certain positions may contribute to such deaths. In this study the authors determined the frequency of physical restraint among people in a state of excited delirium who died unexpectedly. METHODS: The authors reviewed the records of 21 cases of unexpected death in people with excited delirium, which were investigated by the Office of the Chief Coroner for Ontario between 1988 and 1995. Eyewitness testimony, findings during postmortem examinations, clinical history, toxicological data and other official documents describing the events surrounding the deaths were analyzed. Specific reference was made to documented eyewitness testimony of restraint method, body position and use of capsicum oleoresin (pepper) spray. Because cocaine was detected in the blood of some of these people during the postmortem examination, the role of cocaine in excited delirium was examined by comparing the cocaine levels in these cases with levels in 2 control groups: 19 people who died from acute cocaine intoxication and 21 people who had used cocaine shortly before they died but who had died from other causes. RESULTS: In all 21 cases of unexpected death associated with excited delirium, the deaths were associated with restraint (for violent agitation and hyperactivity), with the person either in a

prone position (18 people [86%]) or subjected to pressure on the neck (3 [14%]). All of those who died had suddenly lapsed into tranquillity shortly after being restrained. The excited delirium was caused by a psychiatric disorder in 12 people (57%) and by cocaine-induced psychosis in 8 (38%). Eighteen people (86%) were in police custody when they died. Four (19%) had been sprayed with capsicum oleoresin, and heart disease was found in another 4 at autopsy. The blood level of cocaine in those whose excited delirium was cocaine induced was similar to levels found in recreational cocaine users and lower than levels found in people who died from cocaine intoxication. INTERPRETATION: Restraint may contribute to the death of people in states of excited delirium, and further studies to test this hypothesis are recommended. Meanwhile, law enforcement authorities and others should bear in mind the potential for the unexpected death of people in states of excited delirium who are restrained in the prone position or with a neck hold.

Reay, D. T., & Eisele, J. W. (1982). Death from law enforcement neck holds. *American Journal of Forensic Medical Pathology*, 3(3), 253–258.

Abstract. We report two deaths which resulted from the use of neck holds by law enforcement officers. The mechanisms of death are discussed in addition to an assessment of the use of neck holds by law enforcement personnel. The hazards of neck holds are emphasized and we review those conditions where there is an increased risk for a fatal outcome when the neck hold is used.

Smith, M. R. (2001). Police-led crackdowns and clean-ups: An evaluation of a crime control initiative in Richmond Virginia. *Crime & Delinquency*, 47(1), 60–83.

Abstract. In April 1999, the Richmond, Virginia, Police Department, in conjunction with other city agencies, began a crackdown and cleanup initiative in seven city neighborhoods. This article reports on an evaluation of this “Blitz to Bloom” initiative that was conducted in the first of the seven neighborhoods. Pre-and postcrackdown data on reported crime and calls for service were analyzed using difference of means tests. A 92% reduction in reported crime occurred in the target area during the month-long crackdown period. Significant reductions in reported crime persisted in some parts of the neighborhood surrounding the area up to 6 months after the crackdown ended. No displacement was observed into the surrounding neighborhood. Although reductions in crime were being recorded, calls for service increased in the neighborhood after the crackdown. Additional research is called for that examines the impact of police maintenance efforts on the continuation of crackdown-induced reductions in reported crime.

Wood, E., Tyndall, M. W., Spittal, P. M., Li, K., Anis, A. H., Hogg, R. S., et al. (2003). Impact of supply-side policies for control of illicit drugs in the face of the AIDS and overdose epidemics: Investigation of a massive heroin seizure. *Canadian Medical Association Journal*, 168(2), 165–169.

Abstract. Background: More than 93% of the nearly \$500 million spent annually on Canada's drug strategy goes toward efforts to reduce the illicit drug supply. However, little is known about the effectiveness of this strategy. On Sept. 2, 2000, Canadian police seized approximately 100 kg of heroin in one of the nation's largest-ever seizures of this drug. An ongoing prospective cohort study of injection drug users afforded an opportunity to evaluate the impact of this seizure. Methods: The Vancouver Injection Drug User Study is a prospective cohort study of injection drug users that began in 1996. The present study relied primarily on data acquired from participants who were seen during the 30-day periods immediately before and after the seizure. We compared drug use and behavioural characteristics, heroin and cocaine prices, and participants' reports of whether law enforcement had affected their source of drugs or the types of drugs available on the street, as well as overdoses, in these 2 periods. Results: The 138 participants seen before the seizure were similar to the 123 participants seen after the seizure with respect to age, sex, ethnic background, education, HIV serostatus, neighbourhood residence, instability of housing, employment status, use of methadone maintenance therapy and all other measured potential confounders (all $p > 0.10$). We found no difference in the extent to which participants in the 2 groups reported daily use of heroin, frequency of nonfatal overdoses, or whether law enforcement had affected their source of drugs or the types of drugs available

on the street (all $p > 0.10$). Although we detected no difference in the price of cocaine, the median reported price of heroin went down after the seizure ($p = 0.034$), which suggests that other shipments compensated for the seizure. External evaluations of deaths from overdoses and heroin purity indicated that the seizure had no impact, nor was any impact seen when the periods of analysis were extended. Interpretation: The massive heroin seizure appeared to have no measurable public health benefit. Closer scrutiny of enforcement efforts is warranted to ensure that resources are delivered to the most efficient and cost-effective public health programs.

Zakrison, T. L., Hamel, P. A., & Hwang, S. W. (2004). Homeless people's trust and interactions with police and paramedics. *Journal of Urban Health*, 81(4), 596–605.

Abstract. Although the health impact of patients' trust in physicians has been well documented, less is known about the possible health effects of trust in police or paramedics. Homeless people frequently interact with police officers and paramedics, and these experiences may affect their health and future willingness to seek emergency assistance. We examined homeless people's self-reported interactions with police and paramedics in Toronto, Canada, and their level of trust in these emergency service providers. In a sample of 160 shelter users, 61% had interacted with police in the last 12 months, and 37% had interacted with paramedics ($P=.0001$). The proportion of subjects who expressed willingness to call police in an emergency was significantly lower than those willing to call paramedics in an emergency (69% vs. 92%, $P=.0001$). On a Likert scale ranging from a minimum of 0 to a maximum of 5, trust levels were lower in police than in paramedics (median level 3 vs. 5, $P=.0001$). Among shelter users, 9% (95% confidence interval [CI], 5% to 14%) reported an assault by a police officer in the last year, and 0% (95% CI, 0% to 4%) reported an assault by a paramedic. These findings showed that homeless people have much lower levels of trust in police than paramedics. Reports of negative interactions with police are not uncommon, and homeless people's perceptions of the police may pose a barrier to seeking emergency assistance. Further research is needed for objective characterization of homeless people's interactions with police officers and the potential health implications of low levels of trust in the police.

2.3. Evidence on the association of crime and violence harms and drug policy - use - nexus

This chapter attempts to unfold the traditional stereotypic view of drug users as prone to crime, and shows that there is actually very little evidence indicating that drug use per se is causing crime. In order to understand the relation of drug and crime as it encompasses a wide range of criminal behaviors, the conceptualization provided by the EMCDDA is adopted, which distinguishes the drug related crime into four types namely -Psychopharmacological crimes; Economic-compulsive crimes; Systemic crimes and Drug law offences.

2.3.1 Law enforcement violence

This section includes a critical analysis of the law enforcement practices and presents the conflictual evidence from studies focusing on the effectiveness of law enforcement in reducing consumption or on the deterrence effect. Overall, the deterrence effect is at best marginal, and the literature on this issue is very limited. Finally, it presents some arguments showing that deterrence effect and punitive approaches have a different impact on different groups i.e. heavy users or vulnerable groups. Despite the limited scientific confirmation of their effectiveness, their application has been increasingly into force the last decades.

Abstracts from key articles

Babor T, Caulkins J, Edwards G et al (2010) Drug policy and the public good. Oxford: Oxford University Press

Abstract. Drug use represents a significant burden to public health through disease, disability and social problems, and policy makers are becoming increasingly interested in how to develop evidence-based drug policy. It is therefore crucial to strengthen the links between addiction science and drug policy. *Drug Policy and the Public Good* is collaboratively written by an international group of career scientists to provide an analytical basis on which to build relevant global drug policies, and to inform policy makers who have direct responsibility for public health and social welfare. *Drug Policy and the Public Good* presents, in a comprehensive, practical, and readily accessible form, the accumulated scientific knowledge on illicit drugs that has direct relevance to the development of drug policy on local, national, and international levels. The authors describe the conceptual basis for a rational drug policy and present new epidemiological data on the global dimensions of drug misuse. The core of the book is a critical review of the cumulative scientific evidence in five general areas of drug policy: primary prevention programs in schools and other settings; supply reduction approaches, including drug interdiction and legal enforcement; treatment interventions and harm reduction approaches; criminal sanctions and decriminalization; and control of the legal market through prescription drug regimes. The final chapters discuss the current state of drug policy in different parts of the world, and describe the need for a new approach to drug policy that is evidence-based, realistic, and co-ordinated. The authors describe the conceptual basis for a rational drug policy and present new epidemiological data on the global dimensions of drug misuse. The core of the book is a critical review of the cumulative scientific evidence in five general areas of drug policy: primary prevention programs in schools and other settings; supply reduction approaches, including drug interdiction and legal enforcement; treatment interventions and harm reduction approaches; criminal sanctions and decriminalization; and control of the legal market through prescription drug regimes. The final chapters discuss the current state of drug policy in different parts of the world, and describe the need for a new approach to drug policy that is evidence-based, realistic, and co-ordinated. By locating drug policy primarily within the realm of public health, this book draws attention to the growing tendency of governments, both national and local, to consider illegal psychoactive substances as a major determinant of ill health, and to organize societal responses accordingly. It will appeal to those involved in both addiction science and drug policy, as well as those in the wider fields of public health, health policy, epidemiology, primary prevention, and treatment services. A companion volume published by Oxford University Press, *Alcohol: no ordinary commodity - research and public policy*, is also available.

Dobkin C, Nicosia N. The war on drugs: methamphetamine, public health, and crime. *Am Econ Rev* 2009; 99: 324–49.

Abstract. In mid-1995, a government effort to reduce the supply of methamphetamine precursors successfully disrupted the methamphetamine market and interrupted a trajectory of increasing usage. The price of methamphetamine tripled and purity declined from 90 percent to 20 percent. Simultaneously, amphetamine-related hospital and treatment admissions dropped 50 percent and 35 percent, respectively. Methamphetamine use among arrestees declined 55 percent. Although felony methamphetamine arrests fell 50 percent, there is no evidence of substantial reductions in property or violent crime. The impact was largely temporary. The price returned to its original level within four months; purity, hospital admissions, treatment admissions, and arrests approached preintervention levels within eighteen months.

Pratt TC, Cullen FT, Blevins KR, Daigle LE, Madensen TD. 2006. The empirical status of deterrence theory: A meta-analysis. In *Taking Stock: The Status of Criminological Theory: Advances in Criminological Theory*, ed. FT Cullen, JP Wright, KR Blevins, 15:367–95. New Brunswick, NJ: Transaction

Abstract. Social learning theory has remained one of the core criminological paradigms over the last four decades. Although a large body of scholarship has emerged testing various propositions specified by the theory, the empirical status of the theory in its entirety is still unknown. Accordingly, in the present study,

we subject this body of empirical literature to a meta-analysis to assess its empirical status. Results reveal considerable variation in the magnitude and stability of effect sizes for variables specified by social learning theory across different methodological specifications. In particular, relationships of crime/deviance to measures of differential association and definitions (or antisocial attitudes) are quite strong, yet those for differential reinforcement and modeling/imitation are modest at best. Furthermore, effect sizes for differential association, definitions, and differential reinforcement all differed significantly according to variations in model specification and research designs across studies. The implications for the continued vitality of social learning in criminology are discussed.

Strang, J., Babor, T., Caulkins, J., Fischer, B., Foxcroft D and Humphreys K. (2012). Drug policy and the public good: evidence for effective interventions. *Lancet*

Abstract. Debates about which policy initiatives can prevent or reduce the damage that illicit drugs cause to the public good are rarely informed by scientific evidence. Fortunately, evidence-based interventions are increasingly being identified that are capable of making drugs less available, reducing violence in drug markets, lessening misuse of legal pharmaceuticals, preventing drug use initiation in young people, and reducing drug use and its consequences in established drug users. We review relevant evidence and outline the likely effects of fuller implementation of existing interventions. The reasoning behind the final decisions for action might be of a non-scientific nature, focused more on what the public and policy-makers deem of value. Nevertheless, important opportunities exist for science to inform these deliberations and guide the selection of policies that maximise the public good.

2.3.2. Drug trafficking: major cause of violence

Here will be presented evidence on illegal drug trade as a major cause of violence as well as evidence indicating that law enforcement practices are not effective in reducing drug trafficking and are in fact increasing violence. A conclusion of these evidences is that law enforcement, instead of ameliorating the negative effects of illegal drug trade and reducing the related violence in the communities, is in reality breeding criminality and fostering violence and community harm. Furthermore, the ineffectiveness of policing practices in terms of budgetary constraints means lost of investments in other areas of police work or in effective harm reduction programs.

Abstracts from key articles

Brownstein, H. H., Crimmins, S. M., & Spunt, B. J. (2000). A conceptual framework for operationalizing the relationship between violence and drug market stability. *Contemporary Drug Problems*, 27, 867–890.

Abstract. The existence of a relationship between violence and drug market operation and activity has been well established in the research literature. In recent years increasing attention has been given particularly to a hypothetical relationship between violence in a community and the relative stability of local drug markets. Unfortunately attempts to study this nexus have been hampered by an uncertainty in the literature about how to conceptualize the stability or instability of drug markets. In this paper, narrative data from interviews collected during a variety of studies of drugs and violence are used to conceptualize drug market stability. It is argued that any definition of drug market stability must consider both structural and interactional measures.

Decker, S. H. (2003). Policing gangs and youth violence. Wadsworth Publishing Co.

Abstract. Two introductory chapters provide an overview of how community policing and problem solving have been used to address gang problems, with one chapter focusing on the role of police gang units in community policing. Five chapters present case studies of the strategies that five cities have used in applying problem solving approaches to gangs and youth violence. Operation Ceasefire in Boston was a

problem solving initiative designed to address gun violence. Based on an analysis of the problem of youth gun violence in the city and the cooperation of criminal justice agencies, Operation Ceasefire focused on countering trafficking in illegal firearms and intensifying the police and prosecutorial responses to violent crimes by members of youth gangs. Through problem solving methods, the city of Indianapolis identified a link between violent crime and gangs and became a participant in the Anti-Gang Initiative of the U.S. Department of Justice, Office of Community Oriented Policing Services. A key element of this project was training all officers about gangs and gang identification. Further, through the creation of the Indianapolis Violence Reduction Partnership, a working group of criminal justice officials developed interventions that focused on the arrest and Federal prosecution of violent gang members. The Los Angeles' approach to youth and gang violence involved a modification of the Boston Ceasefire project. It consisted of both an intensification of law enforcement and court responses to violent crimes by youth gangs and the expansion of services and positive activities for youth in targeted neighborhoods. The approach to gang violence in Chicago focused on drug dealing and violence centered in multiunit dwellings. It involved the eliciting of the cooperation of building owners in efforts to rid their buildings of gangs and their activities of drug dealing and violence. A community near Seattle, Washington, used the expansion of services and leisure activities for youth as a means of diverting them from delinquent activity in the evenings and on weekends. Four chapters present case studies of suppression-based approaches to gangs and youth violence. The strategies profiled were implemented in St. Louis, Detroit, southern California, and Dallas. These strategies involved the targeting of gang activities for coordinated law enforcement efforts and the aggressive enforcement of curfew and truancy laws (Dallas). A concluding chapter focuses on the need to improve evaluations of gang-related strategies. Chapter references and notes.

Donohue, J. J., III, & Levitt, S. D. (1998). Guns, violence, and the efficiency of illegal markets. *American Economic Review*, 463–467.

Abstract. This paper provides a theoretical analysis of violence as a mechanism for allocating scarce resources in a nonmarket setting. We demonstrate that the efficiency with which resources are allocated in that context are strongly positively related to the predictability of fight outcomes. The lethality of the weapons used, in contrast, has an indeterminate impact on the costs of violence, except at very high or very low levels of lethality. Our results suggest that the observed link between guns and homicide rates may not be primarily attributable to the lethality of guns, but rather to the lack of ex ante predictability of the winner when guns are involved in a fight.

Miron, J. A. (1999). Violence and the US prohibitions of drugs and alcohol. *American Law and Economics Review*, 1(1), 78.

Abstract. This paper examines the relation between prohibitions and violence, using the historical behavior of the homicide rate in the United States. The results document that increases in enforcement of drug and alcohol prohibition have been associated with increases in the homicide rate, and auxiliary evidence suggests this positive correlation reflects a causal effect of prohibition enforcement on homicide. Controlling for other potential determinants of the homicide rate does not alter the conclusion that drug and alcohol prohibition have substantially raised the homicide rate in the U.S. over much of the past 100 years.

Paoli, L., Greenfield, V. A., & Zoutendijk, A. (2013). The harms of cocaine trafficking: Applying a new framework for assessment. *Journal of drug issues*, 0022042613475614.

Abstract . Seeking to fill a substantial gap in analytical infrastructure, this article lays out a summary of a newly developed framework for systematically assessing the harms of criminal activities and presents findings from an initial application to cocaine trafficking in Belgium. The application is based on a substantial data collection, which included an analysis of records in the Organized Crime Database of the Belgian Federal Police, 52 criminal proceedings, and interviews with 18 experts, and 12 convicted traffickers. First, we construct a business model for cocaine trafficking in Belgium to characterize the key operational phases and “accompanying” and “enabled” activities. On this basis, we identify the possible

harms associated with cocaine trafficking and related activities, evaluate the severity and incidence of those harms, prioritize the harms, and establish their causality. The application demonstrates the merits of the approach and the conceptual and technical challenges confronting it.

Shepard, E. M., & Blackley, P. R. (2005). Drug enforcement and crime: Recent evidence from New York State. *Social Science Quarterly*, 86(2), 323.

Abstract. Objective. The objective of this article is to provide evidence about the effectiveness of drug law enforcement as a tool for reducing other types of crime. Considerable resources are devoted to enforcing our nation's drug laws, but existing research suggests that intensifying drug law enforcement may serve to increase, rather than decrease, crime. Method. Using data for 62 counties in New York State for 1996–2000, we estimate a set of models that evaluate the effects of recent drug arrests on reported rates of assault, robbery, burglary, and larceny. The estimated statistical model includes controls for fixed effects, time effects, autocorrelation, and heteroskedasticity. Results. The consistency of results is striking—there is no model in which drug arrests are found to have a significant negative relationship with crime. All crimes are positively related to arrests for the manufacture and sale of “hard drugs.” Increases in total per capita drug arrests and arrests for “hard drug” possession are accompanied by higher rates for all crimes except assault. Increased arrests for the manufacture or sale of marijuana are associated with increases in larcenies. Conclusions. The empirical findings raise serious questions about the effectiveness of drug enforcement as a crime-control measure and suggest that significant social costs may arise from existing approaches to drug control.

2.3.3. Pricing and taxation

This section provides evidence on the association of high drug prices with individual harm.

2.3.4. Over incarceration

This section presents data relative to the over-incarceration of drug offenders, even proven guilty of minor offences, and discusses some of the resulting problems such as government expenditure on prisons, loss of the notion of proportionality and fairness of the law, encumberment of the criminal justice system as well as high risk of HIV transmission and increased marginalization of drug offenders. According to this evidence, the need for modern practices based on the principles of “therapeutic justice” and “therapeutic jurisprudence” will be demonstrated.

Abstracts from key articles

Beyrer C, Jittiwutikarn J, Teukul W, et al. Drug use, increasing incarceration rates, and prison-associated HIV risks in Thailand. *AIDS Behav* 2003; 7: 153–61.

Abstract. *Background:* Incarceration is a known risk for HIV infection in Thai drug users. Through the 1990s, incarceration rates for drug-related offenses rose sharply, whereas HIV prevention and drug treatment in prisons remained limited. *Methods:* We assessed HIV and incarceration risks for injection drug users (IDU) and non-IDU in a large treatment center cohort in northern Thailand to investigate HIV and prison risks in this period. We used Thai Bureau of Corrections data to assess incarceration and prevention funds in prisons, 1992–2000. *Results:* Among 1,865 drug users in the treatment cohort, 503 (27.0%) had ever been jailed. Men (OR 3.3, 95% CI 2.1, 5.2), IDU (OR 6.3, 95% CI 5.1, 7.9), and men who have sex with men (MSM) (OR 3.4, 95% CI 1.8, 6.3) were more likely to have been jailed. Among male IDU who had ever been jailed ($N = 272$), 15.8% had used drugs in prison. In a multivariate model, incarceration and ever IDU remained independently associated with HIV infection; IDU, MSM behaviors, and harmful traditional practices remained independently associated with having been jailed. From 1992 to 2000, overall alleged narcotics offenses increased from 117,000 to 276,000/year. The number of persons incarcerated for narcotics offenses increased fivefold from 1992 to 1999, from 12,860 to 67,440. For FY 2000, narcotics

treatment accounted for 0.06% of the Thai corrections budget, whereas HIV programs in prisons were 0.017%. *Conclusions:* Incarceration rates for narcotics offenses have increased sharply in Thailand, whereas prevention has lagged. Having been jailed is an important independent risk for HIV infection among Thai male drug users, especially IDU and MSM. HIV prevention and drug treatment are urgently needed in Thai prisons.

MacDonald M. A Study of health care provision, existing drug services and strategies operating in prisons in ten countries from central and eastern Europe. Helsinki: Heuni, 2005.

Abstract. This study reviewed health care services in 2 sample prisons in each of 10 countries in Central and Eastern Europe, with attention to inmate drug treatment and the compliance of these services with current Council of Europe and World Health Organization guidelines as well as the national strategies of each country. The 10 countries studied were Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia. The information and observations presented in this report stemmed from the author's visits in 2003 to at least two prisons in each country and interviews with representatives of nongovernmental organizations that were providing drug treatment services to inmates. A chapter on health care, drug use, and communicable diseases in the general populations of the 10 countries notes that all of the countries are experiencing an increase in the prevalence of drug use, accompanied by concern that HIV is spreading among injecting drug users. Following an overview of the prison system in each of the 10 countries, key issues for the prison administrations of the 10 countries are identified. The two primary problems are the increasing number of drug abusers in prisons and the high incidence of hepatitis and, in some countries, of HIV among inmates. A chapter on health care services in prisons addresses its structure; inmates' access to health care; confidentiality; its equivalence with health care provided in the community; and cleanliness, hygiene, and food. The chapter on prevention and harm reduction focuses on information given inmates about drugs; harm reduction and communicable diseases; and the use of condoms, bleach to clean drug injection needles, needle exchange, and substitution treatment. A separate chapter describes drug strategies and treatment programs in prisons, followed by a chapter on the professional disciplines represented in the prison staff, staff training, and staff welfare. Recommendations are offered. 80 references and appended checklist used in the research

2.4. Violation of human rights, discrimination and social exclusion

Here will be discussed, according to strong evidence, the different ways in which the punitive drug control responses in most EU countries and outside are putting drug users in a fringe by exclusion, discrimination, reduced access to health and constant violation of human rights. It will be shown that the priority has been given to the control of drug markets instead of the respect of the basic rights of the individual.

Abstracts from key articles

Barret D, Nowak M. The United Nations and Drug Policy: towards a human rights-based approach. In: Constantinides A, Zaikos N, eds. The diversity of international law: essays in honour of professor Kalliopi K Koufa. Boston: Martinus Nijhoff Publishers, 2009: 449–77.

Abstract. In 1945, the United Nations was established to 'save succeeding generations from the scourge of war.' Today, the language of war has been adopted for policy objectives. The 'war on drugs' is now more widespread and higher in financial and human cost than ever, and has impacted negatively across borders and across human rights protections. In much the same way as the 'War on Terror,' the war on drugs has

left in its wake human rights abuses, worsening national and international security and barriers to sustainable development. Although UN bodies have never officially endorsed the term, for many human rights, public health, HIV and drug policy reform advocates - and for many of those on the front lines of the war on drugs, including indigenous people, farmers, people who use drugs and service providers - the United Nations drug control system is seen as a significant part of the drug problem, rather than part of the solution. We argue that the aims of international drug policy must be revisited in line with the purposes and principles of the Charter of the United Nations and the binding normative framework of human rights. We argue further that the UN drug conventions are insufficient, alone, as a legal framework for the complex issue of drug policy and that human rights law must be recognised by the relevant organs of the UN as a part of that framework. The implications of this 'expanded' legal framework for the current pillars of international drug policy are then considered as are the human rights obligations of the drug control entities, and their possible future roles in the promotion and protection of human rights.

Jürgens, R., Csete, J., Amon, J. J., Baral, S., & Beyrer, C. (2010). People who use drugs, HIV, and human rights. *The Lancet*, 376(9739), 475-485.

Abstract. We reviewed evidence from more than 900 studies and reports on the link between human rights abuses experienced by people who use drugs and vulnerability to HIV infection and access to services. Published work documents widespread abuses of human rights, which increase vulnerability to HIV infection and negatively affect delivery of HIV programmes. These abuses include denial of harm-reduction services, discriminatory access to antiretroviral therapy, abusive law enforcement practices, and coercion in the guise of treatment for drug dependence. Protection of the human rights of people who use drugs therefore is important not only because their rights must be respected, protected, and fulfilled, but also because it is an essential precondition to improving the health of people who use drugs. Rights-based responses to HIV and drug use have had good outcomes where they have been implemented, and they should be replicated in other countries.

Rhodes, T. (2002). The 'risk environment': A framework for understanding and reducing drug-related harm. *International Journal of Drug Policy*, 13(2), 85

Public discourses on health increasingly emphasise the environment. While harm reduction has developed in parallel with the new public health movement, and both seek to encourage risk reduction by promoting individual and community action as well as environmental change, there remains an over reliance on individualistic modes of behaviour change. This commentary offers the concept of the 'risk environment' as a potentially useful framework for understanding and reducing drug-related harm, especially HIV infection associated with drug injection. It is argued that a shift in focus towards the 'risk environment' as a unit of analysis and change helps to overcome the limits of individualism characterising most HIV prevention interventions as well as to appreciate how drug-related harm intersects with health and vulnerability more generally. This in turn raises the importance of 'non-drug' and 'non-health' interventions for harm reduction and the facilitation of alliances between harm reduction and other social movements oriented to tackling vulnerability as a means of promoting public health.

3. Methodological challenges on assessing harms

This section will include an analysis and discussion of the key challenges and methodologies used to assess drug use harms and its implications. A critical overview of theoretical background will follow as well as a presentation of various economic models to examine the social costs of drug misuse. Special emphasis will be given to compelling and challenging issue of harm based approach in drug policy evaluation.

3.1. The current classification system and alternative models

In this section different harm based methodologies and models will be discussed and analysed. A critical analysis will be conducted questioning the appropriateness of the current classification system and discussing alternatives. Further on, a discussion of current controversies and conflicting findings will follow.

Abstracts from key articles

Nutt, D., King, L. A., Saulsbury, W., & Blakemore, C. (2007). Development of a rational scale to assess the harm of drugs of potential misuse. *The Lancet*, 369(9566), 1047-1053

Drug misuse and abuse are major health problems. Harmful drugs are regulated according to classification systems that purport to relate to the harms and risks of each drug. However, the methodology and processes underlying classification systems are generally neither specified nor transparent, which reduces confidence in their accuracy and undermines health education messages. We developed and explored the feasibility of the use of a nine-category matrix of harm, with an expert delphic procedure, to assess the harms of a range of illicit drugs in an evidence-based fashion. We also included five legal drugs of misuse (alcohol, khat, solvents, alkyl nitrites, and tobacco) and one that has since been classified (ketamine) for reference. The process proved practicable, and yielded roughly similar scores and rankings of drug harm when used by two separate groups of experts. The ranking of drugs produced by our assessment of harm differed from those used by current regulatory systems. Our methodology offers a systematic framework and process that could be used by national and international regulatory bodies to assess the harm of current and future drugs of abuse.

3.2. Harm-based approach as basis for drug - control policy evaluation

This section will present the most influential empirical models of harm minimization, compare contemporary harm based conceptualizations. An analysis will follow presenting evidence of these frameworks in relation to adverse effects of current drug control measures.

Abstracts from key articles

Paoli L., Greenfield V.A. and Zoutendijk A., The Harm of Cocaine Trafficking. Applying a New Framework for Assessment, 43 *Journal of Drug Issues* (2013) 407–436.

Seeking to fill a substantial gap in analytical infrastructure, this article lays out a summary of a newly developed framework for systematically assessing the harms of criminal activities and presents findings from an initial application to cocaine trafficking in Belgium. The application is based on a substantial data collection, which included an analysis of records in the Organized Crime Database of the Belgian Federal Police, 52 criminal proceedings, and interviews with 18 experts, and 12 convicted traffickers. First, we construct a business model for cocaine trafficking in Belgium to characterize the key operational phases and “accompanying” and “enabled” activities. On this basis, we identify the possible harms associated with cocaine trafficking and related activities, evaluate the severity and incidence of those harms, prioritize the harms, and establish their causality. The application demonstrates the merits of the approach and the conceptual and technical challenges confronting it.