

Addiction Research Centres and the Nurturing of Creativity

RAND's Drug Policy Research Center

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ABSTRACT

In September 1989, amid an emotional and ideological debate regarding problematic drug use in the United States and the 'war on drugs', RAND's Drug Policy Research Center (DPRC) was created through private foundation funds. The purpose of this new research center was to provide objective empirical analysis on which to base sound drug policy. Twenty years later, RAND's DPRC continues its work, drawing on a broad range of analytical expertise to evaluate, compare and assess the effectiveness of a similarly broad range of drug policies. More than 60 affiliated researchers in the United States and Europe make up the Center, which attempts to provide objective empirical analyses to better inform drug policies within the United States and abroad. This paper provides a look back at the creation, evolution and growth of the Center. It then describes how the Center operates today and how it has maintained its clear identity and focus by drawing on the analytical capabilities of a talented group of researchers from a broad range of academic disciplines.

Keywords Benefit-cost, drug policy, economics, modeling, research center.

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ORIGINS OF THE CENTER

Twenty years ago, US concern about illicit drugs had risen to near-panic levels. Public opinion polls showed that drugs were seen as the most important problem facing the nation and the ramifications of drug use, particularly violence and human immunodeficiency virus (HIV), were widespread and dramatic. Flagrant street markets, burgeoning homelessness and media reports of 'crack babies' contributed to a sense of cities spinning out of control. The response was an escalation of the 'War on Drugs'.

RAND recognized in this debate an opportunity to pursue its mission of informing public policy with objective, empirical research. RAND was established in 1948 as an independent non-profit research organization to perform such analysis for the US Air Force, but its scope had long since expanded to cover a wide range of national security and domestic issues. Indeed, RAND had already developed a body of research spanning the whole

spectrum of policy fields affecting drug problems (most notably Polich *et al.* [1]).

Government funding was unlikely, as there was no agency that had broad policy responsibilities or which was likely to welcome objective, critical review of its policies. In September 1989, after a year of proposal writing and trolling around the philanthropic sector, RAND received 3-year grants from both the Ford Foundation and the Weingart Foundation to create the Drug Policy Research Center (DPRC).

The Center began under the leadership of Peter Reuter, an economist, and Barbara Williams, a sociologist, both with backgrounds in criminal justice issues. The early staff were mainly not specialists in the drug abuse or drug policy field. This was a deliberate effort to build on RAND's strengths in modelling and policy analysis. The strategy was to take researchers with strong methodological skills, who had worked typically in an area adjacent to drug policy (e.g. mental health or criminal justice). Some came in with even less of a connection.

The most influential study of the Center's early years [2] involved two researchers with strong mathematics and operations research skills who had worked mainly on national security issues. They developed a model that allowed for the examination of the cost-effectiveness of different methods for reducing drug use in the United States, asking how much it would cost with treatment, domestic enforcement, interdiction and source country controls to reduce cocaine consumption by 1 kg. This involved synthesis of work from a large number of prior research efforts, and they drew heavily upon the substantive expertise of the rest of the staff.

Initially, the DPRC's research was aimed primarily at national and local policy options rather than individual programs or international issues. There was a great deal of discussion around 1990 of budget balance; was national funding too focused upon enforcement as opposed to prevention and treatment? This was addressed in part through a study of the federal drug budget [3] and through the Everingham & Rydell modelling effort [2]. This work drew upon a substantial investment in assembling drug data indicators and assessing their strengths and limitations [4,5], which has remained an ongoing contribution of the Center. There was also an interest in developing role-playing simulations that helped policy makers, particularly at the local level, learn about the consequences of their policy choices [6]. Although, in the end, this line of work died out because it was simply too time-consuming for the policy participants and too expensive for RAND, it was a fascinating experience that gave some insight into the fragmentation of drug policy and the limited vision of policymakers.

The DPRC had the good fortune of being able to build upon long-standing RAND work in related policy areas. One of the most prominent examples was Project ALERT, a school-based prevention curriculum developed by Phyllis Ellickson and colleagues with funding from the Hilton Foundation [7,8]. The program, which is now listed by the National Institute on Drug Abuse (NIDA) and Substance Abuse and Mental Health Services Administration (SAMHSA) as a model prevention program, was innovative not only in the curriculum that was developed, but also in the early use of a multi-site randomized trial of middle schools and students and long-term follow-up of participants.

THE EVOLUTION OF THE DPRC'S LEADERSHIP AND RESEARCH

Although the original co-directors both had backgrounds in criminal justice issues, there has been a concerted effort since then to have the Center led by individuals with different academic backgrounds, one rooted in health issues and the other with more of a policy or systems

orientation. During its 20 years the DPRC has had seven co-directors, with expertise including economics, clinical psychology, operations research, policy analysis and treatment delivery. The research skills of the staff have been similarly diverse.

Addressing big-picture questions that cut across government agencies, departments and political jurisdictions became the hallmark of the DPRC, although funding for these sort of comprehensive studies usually fell outside the standard program announcements. Frequently, the research funding had to be culled from a variety of sources, including government agencies, private foundations and concerned individuals who were interested in supporting specific pieces of these analyses. For example, grants from the Robert Wood Johnston Foundation and a private benefactor facilitated further modelling of cocaine markets that extended the cost-effectiveness assessments to a broader range of supply-side strategies (mandatory minimums and arresting dealers) and to prevention [9,10]. A subsequent grant took the analysis one step further by considering the broader effects that prevention has in terms of reducing various forms of substance use, versus targeted enforcement and treatment that impact primarily the consumption of a single drug [11].

The range of questions asked remained quite broad and, in many cases, quite controversial. For example, early on the president of the Alfred P. Sloan Foundation approached the president of RAND because the foundation's board was troubled by the refusal of the government to even discuss legalization. Would RAND be willing to consider preparing a full-scale study of this option? A decade of subsequent research led to a book that tried to provide a consumer's guide to policy options including legalization [12].

Another controversial research topic during the 1990s was mental health and substance abuse (MH/SA) insurance parity, or the requirement that insurance companies provide benefits for MH/SA services that are equal to those of services for physical health conditions. Insurance companies and employers complained vigorously that mandates of this nature would escalate the cost of health insurance overall. RAND's participation in the Robert Wood Johnson Foundation funded Healthcare for Communities initiative, a 60-site evaluation of individual-, insurance-, employer- and provider-driven factors influencing access to and utilization of substance abuse and mental health services [13], enabled DPRC investigators to conduct a series of studies examining the effects of state parity mandates on insurance offerings, utilization and costs. The results demonstrated that more generous MH/SA benefits would have minimal effects on utilization and costs in the current health care environment and would have no effect on insurance coverage

overall [14–17]. These studies paved the way for broader state adoption of more comprehensive mandates and subsequent Federal reforms.

In other early modelling work, a clinical psychologist and a statistician demonstrated that the sequencing of drug use across different substances referred to commonly as 'the gateway effect' could actually be produced by a random process in which no causal association exists between early initiation of marijuana and subsequent use of harder substances [18]. Interestingly, this study emerged from a failed initiative to project future cocaine trends from household marijuana use rates.

THE DPRC TODAY

Today, the Drug Policy Research Center has more than 60 affiliated researchers located primarily in two countries (the United States and the United Kingdom). Although the co-directors are involved generally in the review of proposals, the ideas are generated by the researchers themselves and not decided centrally. Projects initiated by this group of researchers produce annual revenue for RAND exceeding \$17 million. The Center continues to provide a multi-disciplinary environment, with researchers from a wide variety of backgrounds. That disciplinary breadth is a characteristic of RAND generally and has been built into its organizational structure from the beginning, enabling the DPRC to draw on a broad range of skills without having to provide ongoing support or coverage for these individuals in this single policy area. The Center's mission remains the same as when it began: to draw upon this broad analytical expertise to provide a firm, empirical foundation for drug policy decisions.

The DPRC functions as a virtual Center; there is no specific physical space within RAND where the Center is located. Instead, as with other non-military research centers inside RAND, researchers are dispersed throughout the buildings and across sites to facilitate interaction of people across disciplines and research areas.

This physical dispersion reflects the very high value RAND places on the interaction of researchers from different disciplines and substantive areas. It expends considerable effort to ensure that researchers will communicate regularly with experts outside their area of expertise. For example, literature pertinent to DPRC work is housed in RAND's main library, not a Center-specific room, and the main library contains social areas designed to promote spontaneous interactions prompted by serendipitous meetings.

Because DPRC researchers are not located centrally, they remain connected through a combination of communication tools. An internal e-mail alias enables DPRC investigators to quickly share relevant announcements, inquiries, ideas and project or grant requests for assis-

tance. Regular 'brown bag' (or lunchtime) seminars are held and broadcasted to all three main US locations (Santa Monica, Washington DC and Pittsburgh), and occasionally our European offices, so that work in progress can be shared and feedback can be solicited from the group. The brown bags are open to all researchers at RAND and, depending on the topic, often draw in researchers working on military operations, border safety issues, organized crime, policing, education, worker productivity, health care, environmental and work-place safety and children's issues. External speakers are also invited regularly to present papers.

The DPRC mission includes disseminating key findings to stakeholders and policy makers. A variety of methods are used, including a monthly e-newsletter (entitled 'DPRC Insights'), regular briefings and webinars and interactions with the media (journalists for newspapers, magazines, television, radio, blogs and on-line forums). Researchers from the DPRC are called upon to testify before the US Congress, state legislatures and other government bodies, providing scientific expertise on evolving patterns of drug use and markets, interpretation of data indicators and assessments of the impacts of policy. All this information is made publicly available on our external webpage.

The DPRC does not advocate for any specific reform, but aims only to bring scientifically relevant information to the discussion. Because of our need to maintain a reputation for objectivity, the Center has and will continue to forgo work when it is unable to reach agreement with the funding organization on issues related to our ownership of the work and ability to publish findings from it.

The research conducted by DPRC staff remains entirely investigator-initiated, with funding from external sources, predominantly grants from the US government [NIDA, National Institute on Drug Abuse and Alcoholism (NIAAA), National Institute for Mental Health (NIMH), Centers for Disease Control (CDC) and Department of Justice] and foundations. Smaller projects have also been funded through contracts with the European Commission, European governments and state and local government agencies. The work remains committed to trying to answer big-picture questions that are considered infrequently by other institutions, as well as timely issues that have long-term policy implications, such as racial disparities in drug enforcement and drug treatment, the integration of care for MH/SA comorbidities and the role of substance abuse in the spread of blood-borne diseases and violence. At the same time, the DPRC remains involved in efforts in the United States and abroad to improve monitoring systems containing indicators of drug use, drug markets and drug-related consequences and also in debunking myths that arise from naive interpretation of the sometimes subtle issues concerning the

interpretation of these data. In many cases, the work conducted today builds naturally on earlier efforts, and in other areas we continue to break new ground. Some examples of particularly influential work completed in recent years include the following:

- *The Price and Purity of Illicit Drugs in the United States* [19,20]. This work built on a decade of research within the DPRC that began with a model for analyzing price data that took account of quantity discounts and buyers' uncertainty about drug purity (the Expected Purity Hypothesis [21]). Continuous methodological advances, guided by an operational knowledge of how individuals behave in illegal markets, led to the sophisticated modelling approach developed in the 2004 project [19], which has now been adopted by the Office of National Drug Control Policy (ONDCP) for ongoing market price monitoring [22].
- *Getting to Outcomes (GTO)* [23,24]. Prevention scholars, community organizers and service researchers within the DPRC developed a 10-step process to assist community-based coalitions with the adoption of substance abuse prevention services that generate positive outcomes. The researchers created manuals, worksheets and other resources to assist communities in the planning, implementation and evaluation of prevention programs. Evaluations of the program suggested that the prevention gains in communities who adopt this process were greater than those in communities that did not. The community planning process was so successful that the materials have been translated into Spanish for Hispanic communities and a new initiative that considers the integration of prevention services with other community health initiatives is currently under way.
- *Evaluation of Parity in the Federal Employee Health Benefits Program* [25,26]. In 2001 the US government required the Federal Employees Health Benefits (FEHB) program, which provides health care services to more than 8.5 million federal workers, retirees and their dependants, to provide benefits for all mental health care services that are identical to those for physical health conditions. Unlike most of the prior state and Federal initiatives, no exemptions were provided and substance abuse care was included, making this the most comprehensive parity experiment to date. The findings from this study, published in a series of reports, demonstrated that the expansion of benefits for MH/SA, when combined with managed care, can actually improve access to these without increasing the total cost of care, and laid the groundwork for the 2008 Wellstone and Domenici Mental Health Parity and Addiction Equity Act.
- *How racial disparities in the criminal system translate into community health disparities* [27,28]. This research

highlighted how over-representation of minorities in drug arrests and incarceration has affected disproportionately the health and wellbeing of minority communities due to the impact these felony drug convictions have on access to jobs and job-related health benefits, access to public housing and food stamps, access to financial support for higher education and, in some states, the right to vote. It then demonstrates how various communities have adopted quality assessment approaches to mitigate the biases that contribute to the disparities both in minority confinement as well as access to resources improving health.

- *An assessment of global changes in drug problems and policies from 1998 to 2007* [29]. This study, funded by the European Commission, provided an analytical framework for making comparisons over time and across countries in the way in which drug problems had developed and drug policies were implemented. It found, *inter alia*, evidence of growing convergence of both problems and policies among western countries. This built upon a series of earlier studies of the specific markets [30] and development of cross-country comparisons [12].

THE STRENGTHS AND WEAKNESSES OF RAND'S DPRC

Distinctive aspects of RAND make it a particularly good setting for conducting drug policy research. First and foremost is the daily interaction with affiliated and non-affiliated researchers that occurs naturally in all the buildings. It is an environment where intellectual curiosity and specialized knowledge from a variety of areas naturally meet, generating exchange that truly enlightens all who participate.

A second benefit is the interaction with representatives engaged actively in the implementation of policies and programs being assessed. Drug policies and programs are messy, implemented frequently in difficult situations, with inadequate or fragmented funding and disparate authorities. Real knowledge of how these systems operate facilitates the development of more practical research that can better inform future programs and policies. RAND work is conducted frequently in collaboration with community organizations that play a role in the day-to-day implementation of drug prevention, treatment and enforcement, making it possible to bridge the gap that exists all too often between academic idealism regarding optimal policy and real-world implementation.

There are, of course, challenges. In particular, the DPRC struggles persistently in obtaining core funding to support the broad, objective policy analyses for which it is known. Drug policy is very divisive. The philanthropic

sector usually gives money in this area for advocacy, not for dispassionate analysis. The only US federal government agency with broad drug policy responsibilities, the ONDCP, has in the past been unwilling to fund research that might challenge existing policies. It is possible to acquire funding for research projects evaluating specific interventions and for epidemiological investigation, but usually this research is incremental and narrow; it is rare for one project by itself to support a broader comprehensive analysis. Hence, a number of examples within the DPRC of broader research agendas were funded through a series of incremental analyses, including the cost-effectiveness work comparing supply control policies with prevention and treatment, the parity work assessing access, utilization and cost and the drug market modeling work that has been the backbone of a number of significant projects.

A virtual, multi-disciplinary, multi-site center creates problems of coherence and communication, even with contemporary technology. Intellectual connections, more from informal contacts rather than staff meetings or seminars, which might occur in a single location among a group of researchers with a shared methodology are harder to achieve.

An additional challenge facing DPRC investigators is the consistent struggle between the short time horizon in which policy makers need answers (or at least think they do) and the longer time horizon required for careful research. Although this is a problem in all policy areas, we believe that the relatively high politicization of the issue makes it particularly acute for drug policy. Frequently, the DPRC is confronted with opportunities to conduct important timely analyses, and struggles with the decision of whether to accept these projects. The decision is always made based upon an assessment of whether the time period allows for high quality research. If the Center already has a strong foundation of work and methods in a given area (e.g. the economic cost of substance abuse), then it is much easier to take on relatively short-time-frame analyses (e.g. the economic cost of methamphetamine abuse in the United States [31]).

FURTHER ORGANIZATIONAL ISSUES

A critical component of the original DPRC mission was investing in a new generation of drug policy scholars. Although the Center itself no longer has core funding that can be dedicated for staff development, the broader RAND environment still provides numerous opportunities and resources for mentoring of new researchers and development of young scholars through its doctoral program in Policy Analysis (the Pardee RAND Graduate School), RWJ Foundation Health Scholars

Program [joint with University of California Los Angeles (UCLA)] and the Summer Research Associates program. Some very successful scholars have developed out of the mentoring activities undertaken by DPRC staff [32–34].

The DPRC does not conduct direct community service (beyond our research and dissemination activities), summer schools or clinical services, as these are not part of RAND's core mission. It does, however, encourage (and in the past has provided support for) its key research staff to attend scientific meetings, such as the College on Problems of Drug Dependence, American Public Health Association and the International Society for the Study of Drug Policy. It is also common for staff to participate in the meetings of their disciplinary homes, such as the American Society of Criminology, Association for Public Policy Analysis and Management, American Economics Association and American Psychological Association. The DPRC, like the rest of RAND, benefits from a strong two-way flow between RAND and top research universities, and more than a few DPRC alumni now hold good academic positions. Happily for the DPRC, they remain engaged in the Center, often because the DPRC offers greater opportunities for connecting with policy and policy makers and for cross-disciplinary research collaborations.

There is no pressure either of a political or bureaucratic kind on the research conducted within the DPRC. Again, this reflects the general norms of RAND, which has long prided itself on its independence. Staff are encouraged to publish in good academic peer-reviewed outlets, although RAND's own monograph series are an important outlet for studies whose length precludes a traditional academic publication. Frequently these RAND monographs are complemented with briefer papers in scientific journals.

All RAND work must undergo scientific review, whether it is published internally or externally. This is how RAND ensures that the work produced is objective and meets scientific standards. When the work is being submitted for publication to an external peer-reviewed outlet RAND defers the review process to that outlet unless the investigator is brand new. Work being submitted to a non-peer reviewed venue, work that is published by a funding agency or government agency or work published by RAND must undergo a formal quality review. Although conducted internally, RAND quality assurance requires that at least one external review be part of the process and the investigator is required to respond to all reviewers' comments *to the reviewers' satisfaction* before the document can be released. In other words, reviewers can kill the release of a RAND document if the science is not sufficient to warrant the recommendations made within it.

CONCLUDING COMMENTS

The DPRC has created a body of work that has a clear identity, with economics and systems analysis a more important element than in many other drug research centers. The DPRC has established a collegial, collaborative and supportive environment that attracts bright and talented people. Whether the research has influenced policy is impossible to assess in a systematic fashion. Some studies [2,12] do seem to be cited frequently in discussion of major policy issues.

The greatest frustration remains the limited funding opportunities available for conducting the broad-based policy analysis that is needed so desperately. There are so many important questions that we think the Center could tackle, but for which no one is willing to pay. We are mildly optimistic that recent political changes in the United States may provide a more supportive environment for such research. Also, in a perverse way, the ongoing globalization of drug use increases the likelihood that non-US funding sources will become more willing to invest in the DPRC's distinctive niche, which might be characterized as 'basic' research on the applied problems generated by the production, distribution, use and control of illegal drugs.

Declarations of interest

None.

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