

POLICIES FOR THE TREATMENT OF ALCOHOL AND DRUG USE DISORDERS: A RESEARCH AGENDA FOR 2010-2015

AUTHORS

DENNIS MCCARTY, PH.D.

OREGON HEALTH & SCIENCE UNIVERSITY

K. JOHN MCCONNELL, PH.D.

OREGON HEALTH & SCIENCE UNIVERSITY

LAURA A. SCHMIDT, PH.D.

UNIVERSITY OF CALIFORNIA, SAN FRANCISCO

**SUBSTANCE ABUSE POLICY RESEARCH PROGRAM (SAPRP) IS A
NATIONAL PROGRAM OF THE ROBERT WOOD JOHNSON FOUNDATION**

**SUBSTANCE ABUSE POLICY RESEARCH PROGRAM (SAPRP) IS A
NATIONAL PROGRAM OF THE ROBERT WOOD JOHNSON FOUNDATION**



Robert Wood Johnson Foundation

*Copies of SAPRP research agendas are available at
http://www.saprp.org/research_agenda.cfm*

OCTOBER 2009

Contents

Policies for the Treatment of Alcohol and Drug Use Disorders

1	Advisory Board
2	Introduction
3	Key Alcohol and Drug Treatment Policy Issues for 2010 to 2015
3	I. Organization and Delivery of Care
7	Priority Research Questions 2010-2015
10	II. Quality of Care
12	Priority Research Questions 2010-2015
14	III. Evidence-Based Practices
15	Priority Research Questions 2010-2015
17	IV. Access to Care
20	Priority Research Questions 2010-2015
21	V. Financing, Costs of Care, and Cost-Effectiveness
23	Priority Research Questions 2010-2015
24	Conclusion
25	Appendix: Relevant Sources
26	References

Advisory Board

Members of the Advisory Board include policy researchers and experts in all aspects of substance abuse—alcohol, tobacco, and drugs.

Sven Andréasson, M.D., Ph.D.

Swedish National Institute of Public Health

Lawrence S. Brown, Jr., M.D., M.P.H., FASAM

Addiction Research & Treatment Corporation

Frank J. Chaloupka, Ph.D.

Department of Economics, University of Illinois at Chicago

R. Lorraine Collins, Ph.D.

School of Public Health and Health Professions,

University at Buffalo, SUNY

K. Michael Cummings, Ph.D., M.P.H.

Roswell Park Cancer Institute

Michael Eriksen, Sc.D.

Institute of Public Health, Georgia State University

Matthew C. Farrelly, Ph.D.

RTI International

Eric A. Feldman, J.D., Ph.D.

University of Pennsylvania Law School

David A. Fiellin, M.D.

Yale University School of Medicine

Denise Dion Hallfors, Ph.D.

Pacific Institute for Research and Evaluation (PIRE)

Harold D. Holder, Ph.D.

Pacific Institute for Research and Evaluation (PIRE)

Keith Humphreys, Ph.D.

Stanford University School of Medicine

Andrew Hyland, Ph.D.

Roswell Park Cancer Institute

Robin J. Mermelstein, Ph.D.

*Institute for Health Research and Policy,
University of Illinois at Chicago*

Lorraine T. Midanik, Ph.D.

University of California, Berkeley, School of Social Welfare

Matthew L. Myers, J.D.

Campaign for Tobacco-Free Kids

C. Tracy Orleans, Ph.D.

Robert Wood Johnson Foundation

Deborah Podus, Ph.D.

UCLA Integrated Substance Abuse Programs

Kurt M. Ribisl, Ph.D.

UNC Gillings School of Global Public Health

David L. Rosenbloom, Ph.D.

*National Center on Addictions and Substance Abuse
at Columbia University*

Stephen D. Sugarman, J.D.

University of California, Berkeley, Boalt Hall School of Law

John A. Tauras, Ph.D.

Department of Economics, University of Illinois at Chicago

Alexander C. Wagenaar, Ph.D.

University of Florida, College of Medicine

Constance Weisner, Dr.P.H., M.S.W.

*Division of Research, Northern California
Kaiser Permanente*

Introduction

This document identifies potential policy research priorities for 2010-2015 for treatment of drug and alcohol addiction. “Treatment” is defined broadly to include screening and brief interventions in primary care, criminal justice, and health care settings; services provided in specialty drug and alcohol treatment centers; and the ongoing support services provided to help individuals maintain a stable recovery. The goal of policy research on addiction treatments is to increase access to services, promote utilization of services, and strengthen the quality of addiction treatment services.

Treatments for alcohol and drug use disorders continue to evolve. Although potential health care reforms (at both state and federal levels) may be delayed or inhibited by the collapse of credit markets and the reallocation of resources to support the financial and housing sectors, funders, investigators, and consumer advocacy groups must continue to assess policy impacts on addiction treatment services. The economic recession (that began in 2008) may be associated with rising rates of alcohol- and drug-related problems and disorders, particularly among economically disadvantaged communities. Shifting dynamics in the need for and supply of treatment services will demand a continued investment in policy-oriented research to identify more effective, efficient, and targeted interventions.

The Substance Abuse Policy Research Program (SAPRP) has funded many of the landmark studies in treatment policy during the last 15 years. The program, as funded by the Robert Wood Johnson Foundation, is coming to a close. But the focus on alcohol and drug treatment policies needs to continue. SAPRP has helped create a field of addiction policy researchers. This research agenda will guide their efforts, the efforts of new researchers entering the field, and those of the many federal and private funders who have a stake in reducing the harm caused by alcohol and drug use in the United States.

Key Alcohol and Drug Treatment Policy Issues for 2010 to 2015

There are five interdependent categories of policy concerns that are likely to drive addiction treatment: (I) Organization and Delivery of Care; (II) Quality of Care; (III) Evidence-Based Practices; (IV) Access to Care; and (V) Financing and Costs of Care. These topic areas take into account recent statements on research priorities for the addiction treatment field from stakeholders and expert groups (see Appendix). Running throughout this discussion are emerging needs for both international and domestic (U.S.) research, with several key crosscutting themes. These themes pertain to workforce development, disparities in care, consumer perspectives, and the changing demands for a data infrastructure that supports policy-oriented research on addiction treatment.

I. Organization and Delivery of Care

Addiction treatment services are often organized and delivered as freestanding services and not integrated into other health, human service, and criminal justice settings. The freestanding nature of these services reflects a general lack of interest in addressing addiction treatment needs and the lack of individuals qualified to provide addiction treatment and support services. The pervasiveness of alcohol and drug disorders in mental health, criminal justice, and health care services requires more attention to and blending of addiction treatment services into all human service environments. Different populations receive care in these distinct settings, and effective policy research will address the broad issue of which setting provides the most appropriate care for different patient groups. Health care services including primary care and emergency services, however, require more attention because of the large numbers of individuals interacting with these services and the weakness of current integration systems.

During the next five years the nation will struggle with strategies for health care reform. Addiction treatment must be part of that conversation. *If policymakers and researchers could focus on only one issue in the coming five years, the most critical is the need to more fully blend addiction treatment with primary care and other medical services.* Medical services are defined broadly and could include dental, vision, mental health, and other specialty clinics. To increase treatment capacity, promote early case finding, provide more capacity for chronic care, and reduce the stigma of addiction, addiction treatment needs to be a facet of health care.

The use of health care settings as a venue for drug and alcohol treatment is increasing slowly. The Drug Addiction Treatment Act of 2000, for example, allows trained physicians to prescribe FDA-approved medications for the treatment of opioid dependence. Within three years of the introduction of Suboxone, 500,000 opioid-dependent patients received care in physicians' offices (Fiellin 2007). Screening, brief intervention, and referral to treatment (SBIRT) strategies have empirical support; for example, recommendations from health professionals to reduce alcohol use lead to lower levels of use among individuals who drink heavily but do not meet criteria for addiction (Babor et al. 2007). New mechanisms for billing and reimbursement promote the use of SBIRT strategies in health care settings. There is also a slow but steady increase in the development, approval, and availability of medications targeted to treat drug and alcohol dependence. Access to effective pharmacotherapies increases the likelihood that a portion of addicted individuals will receive care in health care settings.

The emerging model of the “patient-centered medical home” in primary care offers a unique opportunity to mainstream addiction treatment services. Medical homes provide care that is “accessible, continuous, comprehensive, and coordinated and delivered in the context of family and community.” They provide an ideal context for promoting brief screening and referral services and facilitate chronic disease management for those with more severe dependence. Key physician groups endorse the medical home concept (e.g., the American Academy of Family Physicians, the American Academy of Pediatrics, the American College of Physicians, American Osteopathic Association), and at least one group—the American Academy of Family Physicians—targeted mental health and substance abuse services for inclusion in the medical home model.

What we know.

Currently, over 11,000 specialty addiction treatment facilities are the foundation for public and private addiction treatment in the United States (SAMHSA 2007a). Most are small independent outpatient clinics with minimal economic resources and limited professional management (Corredoira and Kimberly 2008; Kimberly and McLellan 2006; SAMHSA 2007a). Economic instability and efforts to enhance long-term viability are likely to lead treatment programs to consolidate, standardize, and reduce variability in the delivery of care (Corredoira and Kimberly 2008; Knott et al. 2008). Many specialty drug and alcohol treatment centers struggle to maintain economic stability and financial viability (McLellan et al. 2003). Low pay and high levels of job-related stress lead to turnover among addiction treatment counselors and support staff (Knudsen et al. 2003). The economic stability of the drug and alcohol treatment system is uncertain. Demands to use evidence-based practices, changes in the financing of care, and struggles finding and retaining qualified staff challenge the current system of care. These factors suggest great potential for fundamental reorganization of services and delivery of care. Demand far exceeds

the supply of services available, even taking into account the current use of primary care and other service providers for substance abuse problems (Schmidt et al. 2007). Effective implementation of medication-assisted treatment and recovery, moreover, requires enhanced linkages with primary and emergency medical care.

What we need to know.

The Substance Abuse and Mental Health Services Administration (SAMHSA) uses the National Survey of Substance Abuse Treatment Services (N-SSATS) to census and monitor the population of specialty addiction treatment facilities in the nation (SAMHSA 2007a). The survey, however, provides only a superficial perspective on the nation's treatment infrastructure. Little detail is available on the economic stability and the quality of business practices in these centers. There is little research on the organization, financing, and management of addiction treatment services, particularly as they change over time (Kimberly and McLellan 2006). In a rapidly changing economic environment, efficient treatment centers will rely more strongly on technology to deliver and support the delivery of treatment services. Electronic health records, performance monitoring, and the use of computerized assessment and treatment require substantial investments in system development and staff training.

Pressure from payers to constrain costs may limit the ability of treatment centers to provide accessible and high-quality care. Treatment providers and policymakers are testing strategies for continuing care and moving the treatment system from an acute care model of intervention to a chronic care approach, one that focuses on ongoing support to maintain and reinforce lifestyle changes among individuals with the most severe and relapsing forms of addiction. It is likely that technology will become more central to service delivery. Medication-assisted treatment and recovery, and an expansion of screening and brief intervention in medical settings, require strategies to integrate specialty addiction treatment professionals into the broad base of medical practice and to train the personnel in standard health care settings. Similarly, the burden of drug use on courts and correctional facilities requires specialized addiction treatment services for the criminal justice system.

Evidence-based management is an emerging strategy that recognizes that medical care (including treatment for alcohol and drug disorders) is a business and that good clinical care requires trained managers who are skilled in standard business practices (Shortell et al. 2007; Walshe and Rundall 2001). However, we need

more research on not only how explicit management practices affect the survival of treatment organizations, but also on how they affect patient care. Research on the organization and culture of hospitals, however, suggests that organizational attributes have inconsistent influences on patient outcomes (Hoff et al. 2004; Mitchell and Shortell 1997).

Some of the most vexing issues surround the need to maintain patient confidentiality in the context of more efficient information systems that rely on electronic record systems and other health information technologies. Federal regulations (CFR 42 Part 2; Code of Federal Regulations for the confidentiality of alcohol and drug abuse patient records), authorized and implemented in the 1970s, counteracted the stigma associated with addiction treatment and protected women and men seeking recovery from unnecessary disclosure of their treatment participation. The confidentiality regulations facilitated widespread patient acceptance of the safety of addiction treatment. In the 21st century health care system, however, the regulations appear to pose a barrier to integrated electronic health records. Confidentiality regulations inhibit communication and coordinated/integrated care between addiction treatment services and health care services. Inclusion of addiction diagnoses and treatment in electronic health records may expose the medical record to the federal confidentiality regulations and inhibit sharing of medical information. This risk is inhibiting structural changes in the organization and delivery of care. Legal analysis and policy assessments are needed to prepare addiction treatment services for better integration with health care.

Systematic assessments of management practices and alternative models of service delivery can inform policymakers as they seek more effective strategies for organizing and delivering services. Interest is high in the development of continuing care strategies for service delivery that recognize addiction as a chronic relapsing condition. Current outpatient and inpatient models of care appear to be poorly suited to the provision of ongoing support with variable intensity. Treatment providers and researchers must test and develop alternative models for recovery management. This is all within a context of poorly financed systems of care and economic instability among treatment centers. Investigators with experience in management and organizational research suggest that the addiction treatment field needs greater consolidation and standardization to remain economically viable and to achieve more consistent quality (Corredoira and Kimberly 2008; D'Aunno 2006; Kimberly and McLellan 2006; Knott et al. 2008; Roman et al. 2006). Most importantly, research must test policy strategies that promote integration with primary care and the emerging medical home model (Berenson et al. 2008). Research priorities are listed for location of care, delivery of care, and management of care.

Organization and Delivery of Care

Location of Care

Priority Research Questions 2010-2015

- 1 | How can policies foster better integration of addiction treatment into primary care? How does addiction treatment fit into the emerging medical home model? How do we adapt addiction services for chronic care management into primary care? Which policies will promote implementation of HIV rapid tests in specialty addiction treatment services?
- 2 | What modifications in the federal regulations for the confidentiality of patient addiction treatment records impact delivery of addiction screening, intervention, and treatment services in health care settings? Will changes in confidentiality regulations affect patient access to and utilization of care?
- 3 | Does integration of medical and behavioral care improve treatment outcomes? Is integrated care cost-effective? What are the unintended consequences of integration for service providers, specialty care, and segments of the traditional addiction treatment population?
- 4 | What are the policy barriers to facilitating the implementation of screening, brief intervention, referral, and treatment (SBIRT) strategies into medical practice? Who provides the services and how are the services financed? How will the addiction treatment workforce change when services are integrated with primary care and become more focused on medication-assisted treatment?
- 5 | How will emerging addiction treatment models be adapted for the criminal justice systems (i.e., drug courts, corrections, parole)? What organizational and financing mechanisms are needed to promote use of medications within the criminal justice system?

Organization and Delivery of Care

Delivery of Care

Priority Research Questions 2010-2015

- 1 Can multidisciplinary care teams provide more effective services than individual counselors?
- 2 What organizational factors promote implementation of medication-assisted treatment and recovery?
- 3 How does policy affect treatments for abuse of prescription medications? What impacts do prescription monitoring systems have on utilization of care?
- 4 How will policy influence variation in services to address the needs of ethnically and culturally diverse patient populations, individuals with co-occurring disorders, and adolescents and elders with alcohol and drug use disorders?
- 5 Can emerging technologies for computer assisted and Web-enabled treatment be developed and implemented in the addiction treatment field? How will they be financed and regulated? Will consumers value and use services that rely on computers rather than counselors?
- 6 What does a chronic system of care look like for addiction treatment and recovery?

Organization and Delivery of Care

Management of Care

Priority Research Questions 2010-2015

- 1 | How do enhanced management and business practices affect the stability and viability of treatment centers? Which models of management are the most effective to meet these ends? How do management practices impact patient care and outcomes?
- 2 | How can the capacity of the current data infrastructure to study and track changes in the management of care be improved or deepened? How can health information technologies and electronic medical records be integrated into the management of addiction treatment and with what effects?

II. Quality of Care

The 2006 Institute of Medicine (IOM) report on quality of care for alcohol, drug, and mental health disorders set the stage for efforts to address six key dimensions of quality of care: making care safe, effective, patient-centered, timely, efficient, and equitable (IOM 2001, 2006).

In the coming years, treatment services will be required to measure and account for their performance across these dimensions. The blending of addiction treatment and medical care will add challenges to the definition and monitoring of quality of care.

What we know.

Research on the quality of care for alcohol and drug disorders is a new and relatively emerging area of inquiry. Accreditation, licensure, and certification have been primary policy mechanisms for structuring services and ensuring that treatment provided in specialty addiction treatment programs meet minimum standards for facilities, record keeping, and counselor qualifications (IOM 1997; McCarty et al. 2009). Policymakers, however, are shifting from the relatively static approach of inspecting for quality toward the implementation of process and performance measures. The Washington Circle measures of treatment initiation and treatment engagement, for example, are now included in the Healthcare Effectiveness Data and Information Set (HEDIS); and health plans report these performance measures to document the quality of health care services (Garnick et al. 2002, 2007; McCorry et al. 2000). NIATx (formerly known as the Network for the Improvement of Addiction Treatment) works at the treatment program level to support the implementation of process improvements that enhance proximal outcomes assumed to reflect better quality of care (e.g., days to admission, retention in care). NIATx participants have reduced days to treatment start, increased treatment retention, reduced no-shows and increased capacity (Capoccia et al. 2007; Hoffman et al. 2008; McCarty et al. 2007). Inequities and disparities in access to care and the outcomes of care, however, suggest much remains to be accomplished in policy efforts to reduce health care disparities among racial and ethnic populations (Schmidt et al. 2006). Multiple studies find lower rates of treatment engagement and retention for ethnic-minority clients (McLellan, Gutman, et al. 2003; Mertens and Weisner 2000; Tonigan 2003). Minorities, moreover, report significantly lower satisfaction with alcohol and drug treatment relative to whites (Tonigan 2003) and are less likely to complete outpatient and residential alcohol treatment (Jacobson et al. 2007).

What we need to know.

Policymakers are demanding more documentation of the quality and effectiveness of treatments for alcohol and drug disorders. There has been little work on the influence of accreditation, licensure, and certification on treatment outcomes, and the value of alternative models for enforcing quality standards. More to the point, little is known about the quality of addiction treatment services in general, and particularly those provided in physicians' offices and clinics. Treatment providers, researchers, and policymakers, however, often confuse the use of terms related to performance, quality, and quality assessment (McLellan et al. 2007). Measures must be operationalized clearly and consistently, and the data infrastructure to monitor programs using these measures must be put into place. Studies suggest that some treatment organizations and practitioners are able to develop and use performance indicators to monitor treatment processes (Hoffman et al. 2008; McCarty et al. 2007; Wisdom et al. 2006), but implementation of the measures still requires application to statewide systems of care. The links between performance measures and treatment outcomes remain speculative: While a few studies have reported predictive relationships (e.g., Garnick et al. 2007), others have failed to find relationships (e.g., Harris et al. 2007). The links between process measures and patient outcomes are also elusive in medical practice (Bradley et al. 2006; Werner and Bradlow 2006) and suggest that the development of performance measures that reliably predict variation in program outcomes may be a persistent challenge. It is, however, a critical link and essential to facilitate the interface with health care organizations and the criminal justice system.

The most critical policy issues for research on quality of care pertain to the link between performance measures and evidence of enhanced treatment outcomes. There is little value in building expensive data systems for managing performance if the changes in treatment program performance fail to enhance treatment outcomes. Uncertainties remain related to the ability of treatment programs and systems to build and use performance measurement systems. Priorities are identified below for research on measures of the treatment process, links to treatment outcomes, and workforce development.

Quality of Care

Performance Measures and Tools

for Accountability

Priority Research Questions 2010-2015

- 1 | How will policymakers operationalize and specify measures of treatment processes and quality of care? How do the measures affect care delivery?
- 2 | Can contemporary data systems support linkages between measures of treatment process and measures of treatment outcome?
- 3 | How can the development and implementation of electronic medical records facilitate or inhibit the construction of performance measures and quality indicators? How will the definition and collection of performance measures change with improvements in enhanced data infrastructures?

Quality of Care

Links to Treatment Outcomes

Priority Research Questions 2010-2015

- 1 | How can outcomes be defined and standardized to permit comparisons across policy environments?
- 2 | Are quality and performance measures collected during treatment related to patient status at discharge and post-treatment outcomes?

Quality of Care

Links to Treatment Outcomes (continued)

Priority Research Questions 2010-2015

- 3 | What strategies facilitate state and national implementation of performance measurement and application to systems of care?
- 4 | What systems and policy factors contribute to health care disparities and reductions in health care disparities?
- 5 | Can financial incentives impact quality of care?

Quality of Care

Workforce Development

Priority Research Questions 2010-2015

- 1 | How can treatment systems and practitioners use performance measures more effectively?
- 2 | Do credentialed and licensed counselors provide higher quality care?
- 3 | Can licensing and accreditation boards enhance training for the broad array of health care practitioners and human services providers addressing alcohol and drug disorders?
- 4 | How does the quality of care provided in health care settings and primary care offices compare to that provided in specialty addiction treatment settings?

III. Evidence-Based Practices

The use of effective treatments is one of the six IOM dimensions of quality of care, where the recommendations include explicit attention to the use of empirically proven treatments. The National Quality Forum's Consensus Standards (National Quality Forum 2007) for evidence-based treatment of alcohol, tobacco, and drug use disorders, for example, is an initial step toward standards of care that expect appropriate use of behavioral therapies and pharmacological therapies.

What we know.

Clinical trials document an increasing number of empirically valid, efficacious behavioral and pharmacological therapies for the treatment of alcohol and drug disorders. Trials conducted within the National Drug Abuse Treatment Clinical Trials Network (CTN), moreover, suggest that these treatments can be effective even in the chaos of real-world clinical environments and heterogeneous clinical populations (Amass et al. 2004; Carroll et al. 2006; Ling et al. 2005; Peirce et al. 2006; Petry et al. 2005). Many practitioners, however, remain skeptical about the value of empirically-based treatments, and ethnic minorities tend to be under-represented in randomized clinical trials. Research is also underway to identify the elements associated with widespread adoption and use of these therapies (Ducharme et al. 2007; Fuller et al. 2005; IOM 1998; Knudsen et al. 2005, 2006, 2007; Mark et al. 2003; McCarty et al. 2004; Roman and Johnson 2002; Simpson 2002; Thomas et al. 2003).

What we need to know.

Implementation of evidence-based treatments requires a supportive environment, appropriate training, supervision and monitoring, proper financing and economic incentive structures, and feedback to counselors to maintain treatment fidelity (Fixsen et al. 2005). Specific strategies to promote widespread adoption and reliable use of these therapies, however, remain a policy challenge. Policymakers may use legislation, regulation, and contracting to promote and/or mandate the use of evidence-based therapies for alcohol and drug disorders (National Quality Forum 2007). The effects of different policy strategies on implementation of evidence-based practices are, however, largely unknown. Payment mechanisms and policies are in flux, yet we know little about how changes in policy environments produce changes in the use of evidence-based practices. There are few studies of the influence of policy on workforce development and training as well. Still, implementation of evidence-based practices requires treatment fidelity and the need for quality clinical supervision to assure adherence to the treatment approach (Gallon 2006).

Research on how financing, regulations, workforce, and other facets of care promote and sustain the diffusion of evidence-based practices in addiction treatment is the highest priority for policies related to implementation of evidence-based practices. Consistent implementation of evidence-based practices may reduce variation in treatment practices and quality. Variables that foster selection, implementation, and system-wide adoption of evidence-based practices, however, have not been specified. Without substantial attention to fidelity of practice, moreover, there is concern that practitioners will report using evidence-based practices but that actual interactions with patients will be based on usual practices rather than specific evidence-based practices.

Evidence-Based Practices

Application of Practices

Priority Research Questions 2010-2015

- 1 | What are the intended and unintended impacts of policy mandates on the implementation and use of evidence-based practices?
- 2 | What role do health care payers play in the selection and implementation of specific evidence-based practices, and with what unintended consequences?
- 3 | How effectively will treatment practitioners use these practices and what training and supervision is required?
- 4 | How do policymakers identify and categorize evidence-based practices?

Evidence-Based Practices

Fidelity of Implementation

Priority Research Questions 2010-2015

- 1 | What systems can be developed to assure treatment fidelity?
- 2 | What supervision strategies will assure consistent implementation and adherence to evidence-based practices, and how will supervision practices be monitored to document fidelity?
- 3 | How should current data systems and measurement approaches be modified to better support monitoring fidelity?
- 4 | Can training mandates improve the implementation of evidence-based practices?

Evidence-Based Practices

Implementation of Practices

Priority Research Questions 2010-2015

- 1 | How can practitioners integrate behavioral and pharmacological therapies?
- 2 | What regulatory and financial incentives facilitate and sustain implementation?
- 3 | Do policies have different impacts on the implementation of behavioral and pharmacological therapies?
- 4 | What technologies facilitate standardization of treatment interventions and reductions in the cost of treatments?
- 5 | How will consumer preferences and expectations affect the implementation of evidence-based practices?

IV. Access to Care

An estimated 23 million individuals in the U.S., or 9% of the population aged 12 years and older, meet criteria for a diagnosis of substance use, abuse, or dependence. However, only about 4 million people enter care each year (SAMHSA 2007b). The gap between the number in need of treatment and the number in treatment is a persistent policy concern. Moreover, this “treatment gap” is disproportionately large for young adults and for all ethnic minority groups except Asian-Americans (Schmidt et al. 2007). Strategies to reduce the treatment gap will continue to be developed and tested. It is critical that state and federal health care reform initiatives broadly include benefits for treatment of alcohol and drug disorders. Policy research must evaluate the influence of these reforms on access to care. In the process, policymakers should not overlook the need for treatment among individuals incarcerated in state prisons and county jails.

What we know.

The treatment gap (the difference between treatment utilization and treatment need) persists. Access to care is primarily a function of financing—the resources available to support addiction treatment services. Expansion of Medicaid benefits and Medicaid eligibility promoted increased access to addiction treatment services in some states. Health care reforms can also support expanded access to addiction treatment if the benefit plans include addiction treatment services. Similarly, state and federal plans for parity between medical and behavioral health services may support expanded access to addiction treatment, although some studies point to their limits (Mechanic 1999; Sturm 1999). More money, however, is not the only response to restrictions in access. Greater efficiency and productivity can also facilitate expanded access, as can public education and stigma reduction. Some participants in NIATx increased admissions without increases in revenues.

Individuals with alcohol and drug disorders are generally viewed as “vulnerable populations” (Aday 1993; Miller 2001). As with other chronic conditions, rates of relapse and treatment recidivism among substance-abusing populations are high. About 40 to 60 percent of patients treated for alcohol or drug dependence subsequently return to active symptoms (McLellan et al. 2000). These realities may not always be incorporated into health plan standards and expectations for judging the appropriate costs of treatment and evaluating its economic efficiency. For example, applying standard annual and lifetime limits on insurance coverage for treatment poses problems for people with chronic alcohol and drug disorders, who often require multiple episodes of care to achieve full recovery (Rogowski 1992). If insurers fail to understand the chronic, cyclical nature of addiction, they may limit coverage for repeat episodes of care in efforts to reduce “unnecessary”

patient visits. Due to insurance restrictions, patients may receive only detoxification and acute stabilization with no rehabilitation services or continuing care (McLellan et al. 2000; McLellan et al. 1996). Ironically, when insurance does not cover the necessary levels of care—for example, by not providing for adequate rehabilitation and aftercare—it may only add to the need for repeated episodes of care. Many people who abuse alcohol or drugs also need psychosocial services, such as transportation; childcare; and employment, legal, and counseling services that go above and beyond standard clinical care (Edmunds et al. 1997; Gerstein and Harwood 1990). Low-income and public sector clients, in particular, require these services. Many of these wraparound services are not reimbursed by public or private insurance plans, but have been shown in outcome studies to be essential to the retention and effectiveness of addiction treatment (McLellan et al. 1998, 1999; McLellan, Alterman et al. 1993; McLellan, Arndt, et al. 1993).

What we need to know.

Policy research related to access tends to focus on strategies to estimate the treatment gap and monitor and explain disparities in access. Assessments of the treatment gap remain elusive because of variability in the substances of interest (e.g., alcohol versus illicit drug use), criteria for treatment need, exclusion or inclusion of individuals who need but do not seek treatment, and specification of the population of interest (e.g., adults, adolescents, criminal justice offenders, women, and minorities). Strategies to increase access for specific priority populations will continue to be of interest to state and federal policymakers. Passage of federal parity legislation that includes treatment for alcohol and drug disorders may create opportunities to assess the implementation of parity and its impacts on access to care, but this remains to be shown by research.

The need to close the treatment gap and improve access to care for underserved populations will remain a priority for policymakers in the coming five years. Policymakers are demanding more access to care for individuals involved in the criminal justice system because alcohol and drug use are frequent correlates of criminal involvement. The field also struggles with financing chronic care services for individuals with persistent substance use disorders. Standardized chronic care strategies are underdeveloped, and viable strategies for financing these strategies have not been tested. The federal parity legislation could improve access for addiction treatment services in privately-insured populations. However, these positive effects may be offset by changes in the management of benefits within health plans that constrain the availability of care. Parity, moreover, does not apply to one of the largest payers of addiction treatment services, Medicaid. Expansions of Medicaid benefits and eligibility, however, seem increasingly less likely in the current economic crisis (that began in 2008).

The access problems confronted by populations with overlapping medical and substance abuse problems are poorly studied. Studies that address access for women and men with human immuno-deficiency virus (HIV) and hepatitis C virus (HCV) infections suggest income-based inequalities in access to substance abuse and medical services (Burnam et al. 2001). For individuals at risk for HIV and HCV related to injection drug use, syringe exchange programs reduce transmission of HIV and other diseases and may increase the likelihood of treatment entry (Huo et al. 2005; Latkin et al. 2006; Shah et al. 2000; Strathdee et al. 1999).

Studies of victims of alcohol-related traumas in emergency rooms point to important insurance-related barriers to care. Insurance laws in over half of states allow companies to exclude individuals from medical coverage whose injuries are due to drinking, thus dramatically increasing the cost burden on patients (Rivara et al. 2000). One study of pregnant women in primary care settings suggested that providers in private sector managed care environments are less likely to provide education and advice to their patients about drinking and drug use than those working in comparable public sector settings (Nageotte 1997). Constraints by health care organizations may limit the time medical providers have to routinely address alcohol and drug problems in their patient populations.

Access to Care

Treatment Need

Priority Research Questions 2010-2015

- 1 | What policy measures in private and public sectors can influence individuals who need treatment but neither seek nor receive services?
- 2 | How can better integration of addiction screening and treatment services increase access to care for individuals in primary care, emergency care, corrections, and courts?
- 3 | Where do the greatest disparities in access to care exist, and what policy measures will close gaps in access to care?
- 4 | Do HIV risk reduction services promote access to medical care and to addiction treatment, and do community attitudes and law enforcement practices influence use of the services?

Access to Care

Treatment Utilization

Priority Research Questions 2010-2015

- 1 | Does parity lead to greater use of addiction treatment services? Where is utilization affected the most? And what is the overall impact of state and federal parity on the organization and delivery of treatment services?
- 2 | Can policy interventions reduce disparities in the utilization of care?
- 3 | How will continuing care interventions be used effectively?

V. Financing, Costs of Care, and Cost-Effectiveness

Public payers dominate and account for about 78% of the total expenditures on treatments for alcohol and drug dependence (Mark et al. 2007). In coming years, treatment providers and public policymakers will be under constant pressure to constrain costs of care. Skepticism about the quality and effectiveness of treatment for substance use disorders and the expense of new medications will lead to substantial interest in and demands for cost and cost-effectiveness analyses. Financing of care will continue to evolve. Federal parity legislation may reduce public-sector investments. There has been relatively little research on insurance benefit structures and benefits for addiction treatment. Higher co-pay requirements can reduce utilization of addiction treatment services. Pay-for-performance reimbursement strategies are emerging. Changes in financing policies, moreover, are likely to be linked to the use of evidence-based behavioral therapies and require staff with sufficient education and training to use the therapies effectively and consistently. These demands from payers and policymakers require persistent attention to issues of workforce development and retention.

What we know.

Expenditures for the treatment of alcohol and drug disorders total approximately \$21 billion annually in the U.S. Cost per patient per episode is relatively modest, although cost can vary substantially depending on the level and intensity of care. Overall, substance abuse spending represents about 1% of the nation's expenditures for health care (Mark et al. 2007). One analysis of data from publicly funded treatment centers in California, for example, reported a mean cost of \$1,583 per treatment episode, but the cost varied from \$838 in outpatient to \$2,737 in methadone and \$2,791 for residential treatment (Ettner et al. 2006). Policymakers are often more attentive to cost-effectiveness estimates than overall spending estimates. The California analysis reported an overall benefit/cost ratio of more than \$7 in economic benefits for every \$1 spent on treatment (Ettner et al. 2006). There were significant increases in employment income (\$3,352) and significant decreases in costs associated with victimization from criminal activities (-\$3,019), other costs associated with crimes (-\$2,657), incarceration (-\$1,788), and use of emergency medicine (-\$223) (Ettner et al. 2006). The bottom line is that treatment appears to have a positive economic benefit for society. It remains difficult, however, to persuade payers to purchase treatment when the major cost benefits are the reductions in spending in other sectors of the economy, such as in criminal justice costs.

What we need to know.

Policymakers continue to ask for evidence of the economic value of treatment for alcohol and drug disorders, and there is continued interest in the potential for cost offsets in Medicaid and criminal justice spending. Costs will become more critical as consumers begin to demand access to new medications to support their treatment and recovery, and many of these medications may require prolonged periods of use. Demands for cost-effectiveness analysis as well as cost and benefit-cost studies are likely to increase as states add addiction treatment and recovery medications to their systems of care and must justify apparently costly expenses.

There is continuing interest in how addiction treatment impacts the cost of medical care, reduces potential costs in the criminal justice systems, and provides potential savings for employers. Clinical trials should routinely collect more detailed information on the costs of the tested medication or behavioral intervention. Costs include startup expenses and the ongoing costs of training and supervising personnel. Too often cost analyses overlook these treatment program costs. These data should be collected routinely so that policymakers and program administrators can make better decisions on the costs and cost benefits of adopting practice innovations.

Financing, Costs of Care, and Cost-Effectiveness

Priority Research Questions 2010-2015

- 1 Is documentation of cost-effectiveness and improvements in quality of life measures sufficient to justify expansion of spending for addiction treatment?
- 2 Is addiction treatment associated with cost savings in other sectors of the economy and where do the savings accrue?
- 3 What are the long-term costs of pharmacotherapy and is there a continuing cost benefit over time?
- 4 How do costs in actual practice differ from costs in clinical trials?
- 5 How do policymakers control the costs of addiction treatment, and how do the controls affect treatment quality and effectiveness?
- 6 How will health care reform affect financing for addiction treatment services and strategies to blend funding streams?
- 7 Will states be able to reallocate public funds to provide support services for long-term recovery if health care reforms cover the cost of acute care addiction treatment services?

Conclusion

This research agenda is designed to raise numerous critical research questions that need to be answered to improve treatment for alcohol and drug use problems. New and innovative approaches to reduce the burden of these addictions need to be generated and they need to be debated with the support of an evidence base. The authors hope that this research agenda will advance that process.

The Substance Abuse Policy Research Program (SAPRP) website has syntheses of current knowledge on many important treatment-related topics. These syntheses are available as “Knowledge Assets” at www.saprp.org.

SAPRP has also developed three other research agendas on tobacco control, alcohol prevention, and drug prevention. Each agenda was written by a primary author or authors with input from a group of advisors. All four agendas, including the highlights, are available on the SAPRP website at http://www.saprp.org/research_agenda.cfm.

Appendix: Relevant Sources

Strategic Plans

- Strategic plan for the National Institute on Drug Abuse (NIDA)
(http://www.drugabuse.gov/StrategicPlan/NIDA_SP121907.pdf; see also Compton et al. 2005).
- Recommendations from the National Institute on Alcohol Abuse and Alcoholism (NIAAA) Extramural Advisory Board (<http://www.niaaa.nih.gov/NR/rdonlyres/9FB9BE15-8FCE-4DF7-B235-F452BE57D8E2/0/AlcoHealthServicesResearch2007.pdf>).
- Strategic plan for the Substance Abuse and Mental Health Services Administration
(<http://www.samhsa.gov/About/SAMHSAStrategicPlan.pdf>).

Institute of Medicine Reviews

- Institute of Medicine (1997). *Managing Managed Care: Quality Improvement in Behavioral Health*. Washington, DC: National Academy Press.
- Institute of Medicine (1998). *Bridging the Gap Between Practice and Research: Forging Partnerships with Community-Based Drug and Alcohol Treatment*. Washington, DC: National Academy Press.
- Institute of Medicine (2000). *To Err is Human: Building a Safer Health System*. Washington, DC: National Academy Press.
- Institute of Medicine (2001). *Crossing the Quality Chasm: A New Health System for the 21st Century*. Washington, DC: National Academy Press.
- Institute of Medicine (2006). *Improving the Quality of Health Care for Mental and Substance-Use Disorders: Quality Chasm Series*. Washington, DC: National Academy Press.

Federal Program Announcements

- For NIDA/NIAAA sponsored health services research
(<http://grants.nih.gov/grants/guide/pa-files/PA-08-263.html>)
- For collaboration with the Clinical and Translational Science Awards
(<http://grants.nih.gov/grants/guide/pa-files/PAS-09-001.html>)
- For the Criminal Justice Drug Abuse Treatment System (CJ-DATS2)
(<http://grants.nih.gov/grants/guide/rfa-files/RFA-DA-09-006.html>)
- For the economics of drug treatment
(<http://grants.nih.gov/grants/guide/pa-files/PA-08-174.html>)

References

- Aday LA. 1993. Who are the vulnerable? In *At risk in America: The health and health care needs of vulnerable populations in the United States*. San Francisco: Jossey-Bass Publishers.
- Amass L, Ling W, Freese TE, Reiber C, Annon JJ, Cohen AJ, et al. 2004. Bringing buprenorphine-naloxone detoxification to community treatment programs: The NIDA Clinical Trial Network field experience. *The American Journal on Addictions* 13:S42-S66.
- Babor TF, McRee BG, Kassebaum PA, Grimaldi PL, Ahmed K, and Bray J. 2007. Screening, brief intervention, and referral to treatment (SBIRT): Toward a public health approach to the management of substance abuse. *Substance Abuse* 28(1):7-30.
- Berenson RA, Hammons T, Gans DN, Zuckerman S, Merrell K, Underwood WS, and Williams AF. 2008. A house is not a home: Keeping patients at the center of practice redesign. *Health Affairs* 27:1219-30.
- Bradley EH, Herrin J, Elbel B, McNamara RL, Magid DJ, Nallamotheu BK, et al. 2006. Hospital quality for acute myocardial infarction: Correlation among process measures and relationship with short-term quality. *JAMA, the Journal of the American Medical Association*, 296:72-78.
- Burnam MA, Bing EG, Morton SC, Sherbourne C, Fleishman JA, London AS, et al. 2001. Use of mental health and substance abuse treatment services among adults with HIV in the United States. Statistical data included. *Archives of General Psychiatry* 58(8):729-36.
- Capoccia VA, Cotter F, Gustafson DH, Cassidy E, Ford J, Madden L, et al. 2007. Making “stone soup”: How process improvement is changing the addiction treatment field. *Joint Commission Journal on Quality and Patient Safety* 33:95-103.
- Carroll KM, Ball SA, Nich C, Martino S, Frankforter TL, Farentinos C, et al. 2006. Motivational interviewing to improve treatment engagement and outcome in individuals seeking treatment for substance abuse: A multisite effectiveness study. *Drug and Alcohol Dependence* 81:301-12.
- Compton WM, Stein JB, Robertson EB, Pintello D, Pringle B, and Volkow ND. 2005. Charting a course for health services research at the National Institute on Drug Abuse. *Journal of Substance Abuse* 29:167-72.
- Corredoira RA and Kimberly JR. 2008. Industry evolution through consolidation: Implications for addiction treatment. *Journal of Substance Abuse Treatment* 31:255-65.
- D’Aunno T. 2006. The role of organization and management in substance abuse treatment: Review and roadmap. *Journal of Substance Abuse Treatment* 31:221-33.
- Ducharme LJ, Knudsen HK, Roman PM, and Johnson JA. 2007. Innovation adoption in substance abuse treatment: Exposure, trialability and the Clinical Trials Network. *Journal of Substance Abuse Treatment* 32:321-9.
- Edmunds M, Frank R, Hogan M, McCarty D, Robinson-Beale R, and Weisner C, eds. 1997. Summary. In *Managing managed care: Quality improvement in behavioral health*. Washington, DC: National Academy Press.
- Ettner SL, Huang D, Evans E, Ash DR, Hardy M, Jourabchi M, et al. 2006. Benefit-cost in the California Treatment Outcome Project: Does substance abuse treatment “pay for itself”? *Health Services Research* 41(1):192-213.
- Fiellin DA. 2007. The first three years of buprenorphine in the United States: Experience to date and future directions. *Journal of Addiction Medicine* 1(2):62-7.
- Fixsen DL, Naoom SF, Blase KA, Friedman RM, and Wallace F. 2005. *Implementation research: A synthesis of the literature*. Tampa, FL: University of South Florida, Louis de la Parte Florida Mental Health Institute, The National Implementation Research Network.
- Fuller B, Rieckmann T, McCarty D, Smith KW, and Levine H. 2005. Adoption of naltrexone to treat alcohol dependence. *Journal of Substance Abuse Treatment* 28:273-80.

- Gallon SL. 2006. *Motivational interviewing assessment: Supervisory tools for enhancing proficiency* (MIA: STEP). Kansas City, MO: Addiction Technology Transfer Center National Office.
- Garnick D, Horgan C, Lee MT, Panas L, Ritter GA, and Davis SA. 2007. Are Washington Circle performance measures associated with decreased criminal activity following treatment? *Journal of Substance Abuse Treatment* 33(4):341-52.
- Garnick DW, Lee MT, Chalk M, Gastfriend DR, Horgan CM, McCorry F, et al. 2002. Establishing the feasibility of performance measures for alcohol and other drugs. *Journal of Substance Abuse Treatment* 23:375-85.
- Gerstein DR and Harwood HJ, eds. 1990. *Treating drug problems: Volume 1. A study of the evolution, effectiveness, and financing of public and private drug treatment systems*. Washington, DC: National Academy Press.
- Harris A, Humphreys KN, and Finney JW. 2007. Veterans Affairs facility performance on Washington Circle indicators and casemix-adjusted effectiveness. *Journal of Substance Abuse Treatment* 33(4):333-9.
- Hoff T, Jameson L, Hannan E, and Fink E. 2004. A review of the literature examining linkages between organizational factors, medical errors, and patient safety. *Medical Care Research and Review* 61:3-37.
- Hoffman K, Ford JH, Choi D, Gustafson D, and McCarty D. 2008. Replication and sustainability of improved access and retention within the Network for the Improvement of Addiction Treatment. *Drug and Alcohol Dependence* 98:63-9.
- Huo D, Bailey SL, Hershow RC, and Ouellet L. 2005. Drug use and HIV risk practices of secondary and primary needle exchange users. *AIDS Education & Prevention* 17(2):170-84.
- Institute of Medicine. 1997. *Managing managed care: Quality improvement in behavioral health*. Washington, DC: National Academy Press.
- Institute of Medicine. 1998. *Bridging the gap between practice and research: Forging partnerships with community-based drug and alcohol treatment*. Washington, DC: National Academy Press.
- Institute of Medicine. 2000. *To err is human: Building a safer health system*. Washington, DC: National Academy Press.
- Institute of Medicine. 2001. *Crossing the quality chasm: A new health system for the 21st century*. Washington, DC: National Academy Press.
- Institute of Medicine. 2006. *Improving the quality of health care for mental and substance-use disorders: Quality Chasm Series*. Washington, DC: National Academy Press.
- IOM. See Institute of Medicine.
- Jacobson JO, Robinson PL, and Bluthenthal RN. 2007. Racial disparities in completion rates from publicly funded alcohol treatment: Economic resources explain more than demographics and addiction severity. *Health Services Research* 42(2):773-94.
- Kimberly JR and McLellan AT. 2006. The business of addiction treatment: A research agenda. *Journal of Substance Abuse Treatment* 31:213-19.
- Knott AM, Corredoira R, and Kimberly J. 2008. Improving consistency and quality of service delivery: Implications for the addiction treatment field. *Journal of Substance Abuse Treatment* 35(2):99-108.
- Knudsen HK, Ducharme LJ, and Roman PM. 2006. Early adoption of buprenorphine in substance abuse treatment centers: Data from the private and public sectors. *Journal of Substance Abuse Treatment* 30:363-73.
- Knudsen HK, Ducharme LJ, and Roman PM. 2007. The adoption of medications in substance abuse treatment: Associations with organizational characteristics and technology clusters. *Drug and Alcohol Dependence* 87(2-3):164-74.
- Knudsen HK, Ducharme LJ, Roman PM, and Link T. 2005. Buprenorphine diffusion: The attitudes of substance abuse treatment counselors. *Journal of Substance Abuse Treatment* 29:95-106.
- Knudsen HK, Johnson JA, and Roman PM. 2003. Retaining counseling staff at substance abuse treatment centers: Effects of management practices. *Journal of Substance Abuse Treatment* 24:129-35.

- Latkin CA, Davey MA, and Hua W. 2006. Needle exchange program utilization and entry into drug user treatment: Is there a long-term connection in Baltimore, Maryland? *Substance Use & Misuse* 41(4):1991-2001.
- Ling W, Amass L, Shoptow M, Annon JJ, Hillhouse M, Babcock D, et al. 2005. A multi-center randomized trial of buprenorphine-naloxone versus clonidine for opioid detoxification: Findings from the National Institute on Drug Abuse's Clinical Trial Network. *Addiction* 100:1090-100.
- Mark TL, Kranzler HR, Poole VH, Hagen CA, McLeod C, and Crosse S. 2003. Barriers to the use of medications to treat alcoholism. *The American Journal on Addictions* 12:281-95.
- Mark TL, Levit KR, Coffey RM, McKusick D, Harwood HJ, King E, et al. 2007. *National expenditures for mental health services and substance abuse treatment: 1993-2003*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. DHHS Publication No. SMA 07-4227.
- McCarty D, Capoccia VA, and Gustafson D. 2009. Quality improvement for addiction treatment. In *Principles of Addiction Medicine*. New York: Lippencott, Williams & Wilkens.
- McCarty D, Gustafson DH, Wisdom JP, Ford J, Choi D, Molfenter T, et al. 2007. The Network for the Improvement of Addiction Treatment (NIATx): Enhancing access and retention. *Drug and Alcohol Dependence* 88:138-45.
- McCarty D, Rieckmann T, Green CA, Gallon S, and Knudsen J. 2004. Training rural practitioners to use buprenorphine: Using The Change Book to facilitate technology transfer. *Journal of Substance Abuse Treatment* 26:203-8.
- McCorry F, Garnick DW, Bartlett J, Cotter F, and Chalk M. 2000. Developing performance measures for alcohol and other drug services in managed care plans. *Joint Commission Journal on Quality Improvement* 26:633-43.
- McLellan AT, Alterman AI, Woody GE, and Metzger DS. 1993. Psychosocial services in substance abuse treatment? A dose ranging study of psychosocial services. *JAMA, the Journal of the American Medical Association*, 269(15):1953-59.
- McLellan AT, Arndt IO, Metzger DS, Woody GE, and O'Brien CP. 1993. The effects of psychosocial services in substance abuse treatment. *JAMA, the Journal of the American Medical Association* 269(15):1953-59.
- McLellan AT, Carise D, and Kleber HD. 2003. Can the national addiction treatment infrastructure support the public's demand for quality care? *Journal of Substance Abuse Treatment* 25:117-21.
- McLellan AT, Chalk M, and Bartlett J. 2007. Outcomes, performance and quality—What's the difference? *Journal of Substance Abuse Treatment* 32:331-40.
- McLellan AT, Gutman M, Lynch K, McKay JR, Ketterlinus R, Morgenstern J, et al. 2003. One-year outcomes from the CASAWORKS for Families intervention for substance-abusing women on welfare. *Evaluation Review* 27(6):656-80.
- McLellan AT, Hagan TA, Levine M, Gould F, Meyers K, Bencivengo M, et al. 1998. Supplemental social services improve outcomes on public addiction treatment. *Addiction* 93(10):1489-99.
- McLellan AT, Hagan TA, Levine M, Meyers K, Gould F, Bencivengo M, et al. 1999. Does clinical case management improve outpatient addiction treatment? *Drug and Alcohol Dependence* 55(1-2):91-103.
- McLellan AT, Lewis DC, Obrien CP, and Kleber HD. 2000. Drug dependence, a chronic medical illness: Implications for treatment, insurance, and outcomes evaluation. *JAMA, the Journal of the American Medical Association*, 284(13):1689-95.
- McLellan AT, Woody GE, Metzger DS, McKay J, Durell J, Alterman AI, et al. 1996. Evaluating the effectiveness of addiction treatments: Reasonable expectations, appropriate comparisons. *Milbank Quarterly* 74(1):51-85.
- Mechanic D and McAlpine D. 1999. Mission unfulfilled: Potholes on the road to mental health parity. *Health Affairs* 18(5):7-21.
- Mertens J and Weisner C. 2000. Predictors of substance abuse treatment retention among women and men in an HMO. *Alcoholism: Clinical and Experimental Research* 24(10):1525-33.

- Miller RH. 2001. Health care organizational change: Implications for access to care and its measurement. In *Health policy: Crisis and reform in the U.S. health care delivery system*, 326-340. Sudbury, MA: Jones and Bartlett Publishers.
- Mitchell PH and Shortell SM. 1997. Adverse outcomes and variations in organization of care delivery. *Medical Care* 35:NS19-32.
- Nageotte C. 1997. Prenatal providers' and patients' agreement on alcohol, tobacco, and other drug (ATOD) use counseling: Comparison of public health and managed care settings. *Psychiatry in Medicine* 27:343-44.
- National Quality Forum. 2007. *National Voluntary Consensus Standards for the Treatment of Substance Use Conditions: Evidence-Based Treatment Practices*. Washington, DC: National Quality Forum.
- Peirce JM, Petry NM, Stitzer MC, Blaine J, Kellogg S, Satterfield F, et al. 2006. Effects of lower-cost incentives on stimulant abstinence in methadone maintenance treatment: A National Drug Abuse Treatment Clinical Trials Network Study. *Archives of General Psychiatry* 63:201-8.
- Petry NM, Peirce JM, Stitzer ML, Blaine J, Roll JD, Cohen A, et al. 2005. Prize-based incentives increase retention in outpatient psychosocial treatment programs: Results of the National Drug Abuse Treatment Clinical Trials Network Study. *Archives of General Psychiatry* 62:1148-56.
- Rivara FP, Tollefson S, Tesh E, and Gentilello LM. 2000. Screening trauma patients for alcohol problems: Are insurance companies barriers? *Journal of Trauma: Injury, Infection, and Critical Care* 48(1):115-18.
- Rogowski JA. 1992. Insurance coverage for drug abuse. *Health Affairs* 11(3):137-48.
- Roman PM, Ducharme LJ, and Knudsen HK. 2006. Patterns of organization and management in private and public substance abuse treatment programs. *Journal of Substance Abuse Treatment* 31:235-43.
- Roman PM and Johnson JA. 2002. Adoption and implementation of new technologies in substance abuse treatment. *Journal of Substance Abuse Treatment* 22:211-18.
- SAMHSA. See Substance Abuse and Mental Health Services Administration.
- Schmidt L, Greenfield T, and Mulia N. 2006. Unequal treatment: Racial and ethnic disparities in alcoholism treatment services. *Alcohol Research and Health* 29(1):49-54.
- Schmidt L, Tam T, and Larson MJ. May 2007. Understanding the substance abuse treatment gap. Washington, DC: Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration.
- Shah N, Celentano D, Vlahov D, Stambolis V, Johnson L, Nelson K, and Strathdee S. 2000. Correlates of enrollment in methadone maintenance treatment programs differ by HIV-serostatus. *AIDS* 14(13):2035-43.
- Shortell SM, Rundall TG, and Hsu J. 2007. Improving patient care by linking evidence-based medicine and evidence-based management. *JAMA, the Journal of the American Medical Association*, 298:673-6.
- Simpson DD. 2002. A conceptual framework for transferring research to practice. *Journal of Substance Abuse Treatment* 22:171-82.
- Strathdee SA, Celentano DD, Shah N, Lyles C, Stambolis VA, Macalino G, et al. 1999. Needle-exchange attendance and health care utilization promote entry into detoxification. *Journal of Urban Health* 76(4):448-60.
- Sturm R and Pacula RL. 1999. State mental health parity laws: Cause or consequence of differences in use? *Health Affairs* 18(5):182-92.
- Substance Abuse and Mental Health Services Administration. 2007a. *National Survey of Substance Abuse Treatment Services (N-SSATS): 2006 Data on substance abuse treatment facilities*, DASIS Series S-39. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration. DHHS Publication SMA 07-4296.

- Substance Abuse and Mental Health Services Administration. 2007b. *Results from the 2006 National Survey on Drug Use and Health: National findings*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies. NSDUH Series H-32, DHHS Publication No. SMA 07-4293.
- Thomas CP, Wallack S, Lee SS, McCarty D, and Swift R. 2003. Research to practice: Factors affecting the adoption of naltrexone in alcoholism treatment. *Journal of Substance Abuse Treatment* 24:1-11.
- Tonigan SJ. 2003. Project MATCH treatment participation and outcome by self-reported ethnicity. *Alcoholism: Clinical and Experimental Research* 27(8):1340-4.
- Walshe K and Rundall TG. 2001. Evidence-based management: From theory to practice in health care. *The Milbank Quarterly* 79:429-57.
- Werner RM and Bradlow ET. 2006. Relationship between Medicare's Hospital Compare performance measures and mortality rates. *JAMA, the Journal of the American Medical Association*, 296:2694-702.
- Wisdom JP, Ford J, Hayes RA, Edmundson E, Hoffman K, and McCarty D. 2006. Addiction treatment agencies' use of data: A qualitative assessment. *Journal of Behavioral Health Services & Research* 33:394-407.

Notes



