

Projects and Developments

Treating substance abuse in primary care: a demonstration project

Denise Ernst, MA, MS, Center on Alcoholism, Substance Abuse and Addiction, University of New Mexico, USA

William R. Miller, PhD, Center on Alcoholism, Substance Abuse and Addiction, University of New Mexico, USA

Stephen Rollnick, PhD, Department of General Practice, Cardiff University, Center for Health Sciences Research, School of Medicine, Cardiff, UK

Correspondence to: Denise Ernst, Center on Alcoholism, Substance Abuse and Addiction, University of New Mexico, 2650 Yale Ave SE, Albuquerque, New Mexico 87110, USA. Phone: 1-(505)883-3762, Fax: 1-(505)925-2351, E-mail: dernst@unm.edu

Abstract

Purpose: The purpose of this project was to implement the delivery of a full range of substance abuse services in a primary care setting. Implementation and logistical issues including confidentiality and communication are discussed. The delivery of services, types of patients, and contextual and policy factors that influenced project implementation are described.

Context: Substance use disorders are associated with significant morbidity and mortality worldwide. Patients with alcohol/drug problems frequently present in primary care. Effective and brief treatments are available and recommended for primary care but infrequently implemented. Institutional and provider barriers to implementation have been identified.

Data source: Project documentation, data from the patient tracking system, and clinical case notes were used for description and analyses.

Conclusion: Addressing substance abuse problems in primary care is important. Behavioral health professionals with training in substance abuse can provide a range of services that are likely to enhance the quality and quantity of care available to patients. Although contextual factors needed to be addressed, integration of services was manageable and seemed acceptable to both providers and patients in this project.

Keywords

substance abuse, primary care, addiction treatment, brief intervention, integrated care

Introduction

Substance abuse profoundly affects public health worldwide. According to the World Health Organization [1], 4% of the burden of disease and 3.2% of all deaths globally are attributable to alcohol. Only about half of all alcohol-related problems are caused by people with alcohol dependence [2]. The Institute of Medicine [3] recommends that the medical system address the full spectrum of alcohol use disorders. Primary-care-based treatment for other drug problems is at an earlier stage, but effective brief interventions have been documented [4] and buprenorphine has now been approved for office-based treatment of opioid dependence [5].

There are good reasons to attend to substance abuse in primary care. Alcohol problems are overrepresented

in many populations seeking medical care, affecting up to 44% [6] of primary care patients. Tobacco smoking is often addressed in primary care, and brief interventions for other substance abuse are effective [7–15], available [16–19], and recommended [3, 20, 21] though seldom integrated into routine care. Although at-risk drinkers are often reluctant to seek specialist addiction treatment, about two-thirds do visit their general practitioner each year [7]. The prescription of dependence-producing medications also warrants attention to potential abuse. Addressing substance abuse within the context of primary care could increase access to and retention in care [22–24], and improve health outcomes [25, 26]. Providers have preferred integrated care for managing alcohol problems [27], and potential societal benefits include reduced costs of health care and social problems

related to substance abuse, particularly for patients with chronic medical and mental health disorders [28–30].

Why, then, is substance abuse care so seldom integrated into routine health services? Common barriers include system and reimbursement issues, lack of provider training and knowledge, and challenges in identifying and engaging patients [17, 31, 32]. Providing training and ongoing support for providers can somewhat enhance care [33, 34], though institutional factors such as competing priorities and time demands continue to inhibit successful implementation by physicians [35].

An alternative for integration is to use physician-extendors to deliver behavioral health services within primary care. In clinical trials, medically-trained providers including nurses, physician assistants, and residents, successfully delivered a brief outpatient psychosocial treatment for alcohol dependence, using naltrexone, an emphasis on abstinence, and medical case management [24, 36]. Another option, referred to as a Primary Mental Health Model [29] utilizes behavioral health specialists to deliver brief assessment and treatment in health care settings under the direction of the primary care provider. A comparison of a specialist-delivered versus primary care provider-delivered brief interventions found that specialists could be more effective and less costly, depending on provider and institutional characteristics [27, 37].

Generalist and specialist services within primary care are not mutually exclusive. Substance abuse treatment services vary along a continuum of intensity. Brief advice, medication management, case management, and certain brief treatments can be effectively delivered by generalist practitioners within a primary care structure. Indeed, it has been argued [38] that a strength of primary care is in the use of generalist skills to address the broad range of health care issues related to substance abuse. More intensive outpatient services include detoxification treatment provided by addiction specialists. Bringing these together, it is possible for specialists to deliver substance abuse services within primary care settings. The United Kingdom Models of Care for Alcohol Misuse [39] recommends including specialist services as a second tier of interventions.

Integrating care also includes strong linkages between specialty treatment and primary care. Addiction treatment has occurred primarily in specialist settings, without ongoing primary care. Such integration can include expedited referral arrangements shared practice guidelines, and a coordinated continuum of levels of care [40]. The specific nature of these linkages will

differ by level of urbanization [41] or organization of care delivery [42], population served [43], type of financing available [44] and national or regional policies [45]. Past linkages have focused mostly on bringing primary care to patients in addiction treatment [22, 26, 30, 46] and facilitating referral to specialist treatment by primary care providers [23, 42].

Description of the care procedure

The purpose of this demonstration project was to implement delivery of a full range of substance abuse services within a primary care setting. The goal was to explore the feasibility and acceptability of these services to providers and patients in a busy urban primary care clinic serving a culturally diverse population. Objectives included offering support and expertise to staff and providers, providing on-site treatment for patients, building linkages with specialist treatment facilities, and documenting the process. We specifically explored system barriers and the types of primary care patients needing substance abuse services.

The project was a collaborative effort of the University of New Mexico's Center on Alcoholism, Substance Abuse and Addiction with its Department of Community and Family Medicine, and was funded by a substance abuse innovation grant from the Robert Wood Johnson Foundation. The site was the Family Practice Clinic, a teaching clinic providing primary care for patients regardless of income. Though social workers and case managers were on staff, the clinic had neither routine screening nor systematic interventions for substance use disorders. Ordinary care consisted at most of asking whether patients drank and how much, treating alcohol-related medical problems, and occasionally suggesting specialist treatment.

For 20 months, the first author, with master's level training in clinical psychology and substance abuse, was placed as an on-site behavioral health counselor at the clinic 20 hours per week. She was charged with developing 'from scratch' a system for providing evidence-based practices for the screening, evaluation and treatment of substance abuse or addiction problems identified during routine primary care. The first several months required resolving logistical issues, educating and negotiating with staff and providers about the program. She gradually became a member of the treatment team, had access to medical records, and served as a resource for the attending physicians, primary care providers, and pharmacy, social work and case managers. She shared an office with the case managers and saw patients in regular clinic rooms.

Confidentiality and communication

Substance abuse services in the United States are subject to the Code of Federal Regulations Title 42 [47], which protects and regulates the documentation and communication of patient information related to treatment for substance use disorders. These regulations do not address integrated services such as those provided in this project. Legal counsel determined that the program was subject to the regulations because the services were specific to substance abuse, and psychotherapy was provided to some patients. This required keeping separate therapy notes that were not part of the open medical record. Brief summary reports of visits were kept in a secure section of the medical record with extremely limited access, as the primary method to document patient care and facilitate communication between providers. The clinic was just converting to an electronic medical record that had not yet been modified to safeguard such sensitive, regulated information. Therefore, care summaries were kept on paper, not scanned into the electronic medical record and thus less accessible to the primary care provider. Fortunately, the first author's regular presence in the clinic allowed for onsite communication of pertinent information related to the treatment provided.

Scheduling and space

Scheduling of clinic time and space were critical concerns for this project. A centralized scheduling system for primary care providers allocated specific clinic rooms during their scheduled hours. Support providers were not in the centralized scheduling system, controlled their own schedules, and negotiated for space, which was frequently hard to find. For the first year of this project, the behavioral health counselor was considered a support provider. This meant that patients could not schedule appointments except by direct contact. This obstacle was eventually eliminated by adding the counselor to the centralized scheduling system.

Consultations

The behavioral health counselor interacted with clinic providers in several ways. Providers could request immediate consultation prior to a patient primary care visit, invite the counselor to collaborate in delivering a brief intervention during the visit, and/or walk the patient to her office for further consultation after the medical visit. She also, in response to formal referrals, scheduled specialist on-site visits with patients, sometimes in tandem with follow-up medical care. Most

often the referring provider introduced the program to the patient, did not personally participate in the consultation, received a report from the counselor, and collaborated to coordinate follow-up care.

The content of substance abuse consultations centered on the delivery of evidence-based treatments [48]. The overall clinical style was motivational interviewing [49, 50], a patient-centered and goal-directed approach to facilitate behavior change by resolving ambivalence about change. The counselor also drew on a menu of cognitive-behavioral strategies, relapse prevention, behavioral contracting, and case management as needed, similar to the Combined Behavioral Intervention developed for and tested in the multisite COMBINE trial [51].

Referrals were facilitated by a significant clinic policy change that was implemented during the project, requiring providers to obtain random urine drug screens for all patients prescribed narcotics or other highly addictive medications. Patients testing positive for illegal drugs, including marijuana, received a warning that a second positive test would result in terminating their prescription. Patients with positive drug screens were referred for consultation, sometimes as they were being tapered from medications. These included chronic pain patients with long histories of high-dose narcotics. Others were referred because they had developed substantial tolerance to their pain medications. Treating these patients required a broader range of behavioral health care. Most of these patients would not consider referral to a specialist addiction treatment program, but did engage in on-site consultations. Some were using illicit drugs for pain control, particularly when they experienced severe side effects from or tolerance to narcotic medications. In such cases, the counselor helped patients to manage depression, anxiety, and pain. This illustrates the advantage of having a more broadly trained behavioral health specialist with expertise beyond substance abuse.

Patients served

During the project period, a total of 89 different patients (69% female) were scheduled, with a mean age of 40 years (range 15–77). Observed ethnicity was 69% non-Hispanic Caucasian, 24% (21) Hispanic and 6% (5) African-American. Most patients (79%) were referred by their primary care provider, with the rest referred by a nurse, social worker, clinical pharmacist, family member or self-referred. Most were treated for problems associated with alcohol (38%), illicit drugs (34%), both alcohol and illicit drugs (10%) or prescription drugs (9%). The remainder was treated

for gambling (2), smoking (3) or seeking help for a family member's substance abuse (3).

A total of 516 visits were scheduled. Of these, 111 (22%) were missed, with 14 patients (16%) never attending. Most visits (76%) were conducted in person, with the first typically done at the time of the primary care visit, and 24% were completed by telephone. About one third of treated patients had either one visit or <1 hour of treatment. This is comparable to brief intervention recommended for primary care settings. Another third of the patients received 2–5 visits or 1–4 hours total. This is consistent with effective brief treatments such as motivational interviewing. The remaining patients received more intense treatment in both number of visits and total time. Their treatment consisted of case management, follow-up telephone calls, check-in during primary care visits, and facilitation and management of referrals. Six patients were referred out for additional treatment.

Of the 23 patients who received only brief intervention, all but one had been scheduled for only one session, usually by the patient's choice. The other scheduled but failed to come for further appointments. These were opportunistic interventions, in that they had not been seeking help for the problem discussed: alcohol, drugs, smoking or gambling.

Six patients had significant legal, social and family problems related to their substance abuse and were required by authorities to seek treatment in order to retain benefits, stay out of jail, or recover custody of their children. These patients also had medical issues, including chronic illness, disability or follow-up care for hospitalization or injury. In these cases the counselor provided short-term 'bridge treatment' that met the system requirements until referral to specialist treatment was completed. This required coordination with the legal and social systems as well as community programs.

A small but important group was the two adolescents seen. They had intact families who were concerned about their use of alcohol and marijuana, and had a long-term relationship with their primary care provider. The adolescents were high functioning and their involvement with drugs and alcohol was in early stages. Providing counseling in the primary care setting reduced stigma for the families, normalized the process of seeking help before problems become severe, and invited the adolescents to rethink their substance use in a safe environment.

Finally, 33 patients had substance use problems of varying severity related to medical care issues. Some referrals were triggered by significant risk factors including pregnancy, elevated blood pressure or liver

enzymes, or family and social problems reported by the patient or family members. For some patients, substance use had precipitated a medical or psychiatric crisis that had been resolved but required follow-up care. These crises included overdose, severe detoxification, sexually transmitted diseases, severe abscesses as a result of skin popping, hospitalizations for infections, or other serious medical conditions such as dehydration and loss of blood. These patients were medically stable and sought substance abuse consultation to prevent recurrence. Several of these patients requested or were offered medications such as disulfiram or naltrexone to support their efforts to manage their drinking.

Of these 33, 20 patients had chronic conditions including hepatitis C, asthma, epilepsy, pancreatitis, chronic pain and diabetes, all of which require consistent monitoring, frequent visits, and a team of providers for good disease management. As such medical conditions worsen, patients' lives increasingly center on the illness, and substance abuse treatment becomes a small yet significant part of the overall picture. Having substance abuse treatment integrated into routine chronic disease care reduced the burden and kept substance use on the agenda. The term dual-diagnosis (referring to having both a substance use disorder and a mental health diagnosis) does not begin to capture the extent of comorbidity and the severe decrease in functioning of this group. Most patients carried one or more major medical diagnosis, a significant psychiatric diagnosis (including depression, anxiety, bipolar disorder or schizophrenia), and a diagnosed or undiagnosed substance use disorder. In addition, many had documented personality disorders, developmental delays or severe disabilities. Many had a long history of substance abuse and mental health treatment, involvement with social service and legal systems, and poverty.

Discussion

It just makes sense to address substance use in primary care. Most people with substance use disorders are already being seen by primary care providers for other concerns, many of which are related to or exacerbated by alcohol/drug problems. Effective treatments are available, many of which can be delivered within the context of primary health care.

There are at least three models for addressing substance use in primary care. One is for providers to offer relatively brief interventions in the course of ordinary care. Materials to use with patients and to guide brief counseling are readily available [16–19] and there is strong clinical trial evidence that brief

intervention can reduce alcohol, tobacco, and other drug use [52]. The availability of effective medications also enhances the options for managing substance use disorders in primary care [36]. For alcohol problems disulfiram, naltrexone and acamprosate were all available at the time of the project, but seldom prescribed. A drug for treating heroin addiction, buprenorphine, that can be prescribed and managed in primary care settings, also became available during the project. The main constraints in physician management of substance use disorders seem to be lack of training and the time pressures of medical practice.

A second option is referral of patients to addiction treatment clinics. This may be particularly appropriate for patients with severe dependence. Significant obstacles here may be lack of available and affordable services, and patient reluctance to seek formal addiction treatment. Many specialist treatment programs, however, are not well prepared (or funded) to treat patients with less severe alcohol/drug problems, which would constitute the majority of those seen in primary care. During this project, access to specialist substance abuse treatment was severely limited for poor, uninsured patients. Even the most accessible public programs had long waiting lists. The major public psychiatric facility was overwhelmed, essentially accepting only patients in extreme crisis. Patients with dual diagnosis were often passed back and forth depending on which diagnosis seemed primary. Some patients had been involved in both mental health and substance abuse treatment and perceived that they had been 'kicked out' and were not welcome back. It thus fell back to the primary care providers to manage their medical problems as well as their psychiatric and substance use disorders.

A third option already being implemented in Europe and highlighted in this article is to have behavioral health specialists offer services on-site within primary care systems. Most evidence-based treatments for substance use disorders can be offered as outpatient consultation in a primary care clinic. Providing such services in the context of healthcare can reduce stigma and increase patient access to appropriate treatment. This approach also provides for closer coordination of specialist consultation with primary care, as would be desirable in the treatment of any chronic illness. An ideal provider would be a behavioral health professional who is competent in treating substance use disorders and who can also provide consultation on other psychosocial and behavioral problems that arise in relation to healthcare. Such professionals can be valuable team members in caring for multi-problem patients.

There are some obvious obstacles to co-locating behavioral health and primary care. One is that most providers and patients are still unaccustomed to such one-stop service in primary care. Another is that it can be challenging to find behavioral health professionals with sufficiently broad training. U.S. addiction counselors have historically focused solely on alcohol/drug problems, and may be unaccustomed to working with patients having less severe use, problems and dependence. Many mental health professionals, on the other hand, have received little or no training in how to address substance use disorders [53]. Behavioral health professionals may also be unaccustomed to communicating and working collaboratively with primary health care providers. There are practical issues to be resolved around credentialing, scheduling, reimbursement, space, documentation, confidentiality, and interdisciplinary communication and collaboration.

The use of any of these three models suggests that there should be routine screening for alcohol/drug problems in primary care, much as providers routinely ask about smoking. Even a single question such as "How often do you have four or more drinks in one day?" can pick up a substantial proportion of people with hazardous drinking. Similarly, one can ask how often patients use illicit drugs, with follow-up questions to any answer other than "never." Add these to a question about tobacco use, and you have in three questions a screen that is far better than no screening at all. Asked in a matter-of-fact manner, such questions can also detect use and problems at much earlier stages of development, while prevention and treatment are easier. Without routine screening, one is likely to detect only more severe and entrenched substance use problems.

Conclusion

It is a surprisingly new idea that substance use disorders fall within the domain of primary health care, at least within the United States where alcohol/drug problems have historically been thought of as a separate issue to be dealt with only by specialist services. Consequently, substance dependence is the only chronic illness for which there has been no primary care. There are persuasive reasons to integrate the treatment of these disorders within mainstream healthcare. There are various models for doing so, and effective treatments are available. It is overdue that routine screening and services for substance use disorders should find their rightful place within primary healthcare.

Reviewers

Ulfert Hapke, PhD, visiting Lecturer, Kiel University of Applied Sciences—Faculty of Social Work and Health, member of the board of directors of the German Society for Addiction Research and Addiction Therapy, Germany.

Lidia Segura, Psychologist, Acting as public health officer and coordinating the Alcohol Prevention Programs, Program on Substance Abuse, Directorate General of Public Health, Department of Health, Government of Catalonia, Barcelona, Spain.

One anonymous reviewer.

References

1. The World Health Report 2002. Reducing risks, promoting healthy life. Geneva: World Health Organization; 2002. [cited 2006 Jun 13]. Available from: <http://www.who.int/whr/2002/en/>.
2. Caetano R, Cunradi C. Alcohol dependence: a public health perspective. *Addiction* 2002 Jun;97(6):633–45.
3. Institute of Medicine. Broadening the base of treatment for alcohol problems. Washington, DC: National Academy Press; 1990.
4. Bernstein J, Bernstein E, Tassiopoulos K, Heeren T, Levenson S, Hingson R. Brief motivational intervention at a clinic visit reduces cocaine and heroin use. *Drug and Alcohol Dependence* 2005 Jan 7;77(1):49–59.
5. Fiellin DA, Kleber H, Trumble-Hejduk JG, McLellan AT, Kosten TR. Consensus statement on office-based treatment of opioid dependence using buprenorphine. *Journal of Substance Abuse Treatment* 2004 Sep;27(2):153–9.
6. Buchsbaum DG, Buchanan RG, Lawton MJ, Schnoll SH. Alcohol consumption patterns in a primary care population. *Alcohol and Alcoholism* 1991;26(2):215–20.
7. WHO Europe. The World health Organization Collaboration Project on Identification and Management of Alcohol-related Problems in Primary Health Care: Phase IV. [webpage on the Internet]. c2001 [cited 2006 Jun 16]. Available from: <http://www.who-alcohol-phaseiv.net>.
8. Bertholet N, Daeppen J, Wietlisbach V, Fleming M, Burnand B. Reduction of alcohol consumption by brief alcohol intervention in primary care: systematic review and meta-analysis. *Archives of Internal Medicine* 2005 May 9;165(9):986–95.
9. Miller WR, Wilbourne PL. Mesa Grande: a methodological analysis of clinical trials of treatment for alcohol use disorders. *Addiction* 2002 Mar;97(3):265–77.
10. Ballesteros J, Gonzalez-Pinto A, Querejeta I, Arino J. Brief interventions for hazardous drinkers delivered in primary care are equally effective in men and women. *Addiction* 2004 Jan;99(1):103–8.
11. Wilk AI, Jensen NM, Havighurst TC. Meta-analysis of randomized control trials addressing brief interventions in heavy alcohol drinkers. *Journal of General Internal Medicine* 1997 May;12(5):274–83.
12. Bien TH, Miller WR, Tonigan JS. Brief interventions for alcohol problems: a review. *Addiction* 1993 Mar;88(3):315–35.
13. Moyer A, Finney JW, Swearingen CE, Vergun P. Brief interventions for alcohol problems: a meta-analytic review of controlled investigations in treatment-seeking and non-treatment seeking populations. *Addiction* 2002 Mar;97(3):279–92.
14. Poikolainen K. Effectiveness of brief interventions to reduce alcohol intake in primary health care populations: a meta-analysis. *Preventive Medicine* 1999 May;28(5):503–9.
15. Reiff-Hekking S, Ockene JK, Hurley TG, Reed GW. Brief physician and nurse practitioner-delivered counseling for high-risk drinking. Results at 12-month follow-up. *Journal of General Internal Medicine* 2005 Jan;20(1):7–13.
16. Babor TF, Higgins-Biddle JC. Brief intervention for hazardous and harmful drinking: a manual for use in primary care. Geneva: World Health Organization; 2001. [cited 2006 Mar 29]. Available from: http://whqlibdoc.who.int/hq/2001/WHO_MSD_MSB_01.6b.pdf.
17. Fleming MF, Maxwell LB. Brief intervention in primary care settings. A primary treatment method for at-risk, problem, and dependent drinkers. *Alcohol Research and Health* 1999;23(2):128–37.
18. U.S. Department of Health and Human Services, National Institutes of Health, National Institute on Alcohol Abuse and Addiction. Helping patients with alcohol problems: a health practitioner's guide. Bethesda, MD: National Institute on Alcohol Abuse and Alcoholism; 2003. [cited 2007 Feb 17]. Available from: <http://www.thehealth.com/Practitioner/ceduc/physguide.html>.
19. U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Substance Abuse Treatment. A guide to substance abuse services for primary care clinicians: Treatment Improvement Protocol (TIP) Series 24. Rockville, MD: Center for Substance Abuse Treatment, Substance Abuse and Mental Health Services Administration; 2003. [cited 2007 Feb 17]. Available at URL: <http://www.ncbi.nlm.nih.gov/books/bv.fcgi?rid=hstat5.chapter.45293>.
20. Whitlock EP, Polen MR, Green CA, Orleans T, Klein J, U.S. Preventive Services Task Force. Behavioral counseling interventions in primary care to reduce risky/harmful alcohol use by adults: a summary of the evidence for the U.S. Preventive Services Task Force. *Annals of Internal Medicine* 2004 Apr 6;140(7):557–68.

21. WHO Brief Intervention Study Group. A cross-national trial of brief interventions with heavy drinkers. *American Journal of Public Health* 1996 Jul;86(7):948–55.
22. Saxon AJ, Malte CA, Sloan KL, Baer JS, Calsyn DA, Nichol P, et al. Randomized trial of onsite versus referral primary medical care for veterans in addictions treatment. *Medical Care* 2006 Apr;44(4):334–42.
23. Bartels SJ, Coakley EH, Zubritsky C, Ware JH, Miles KM, Arian PA, et al. Improving access to geriatric mental health services: a randomized trial comparing treatment engagement with integrated versus enhanced referral care for depression, anxiety, and at-risk alcohol use. *American Journal of Psychiatry* 2004 Aug;161(8):1455–62.
24. Willenbring ML, Olson DH. A randomized trial of integrated outpatient treatment for medically ill alcoholic men. *Archives of Internal Medicine* 1999 Sep 13;159(16):1946–52.
25. Saitz R, Horton NJ, Larson MJ, Winter M, Samet JH. Primary medical care and reductions in addiction severity: a prospective cohort study. *Addiction* 2005 Jan;100(1):70–8.
26. Friedmann PD, Zhang Z, Hendrickson J, Stein MD, Gerstein DR. Effect of primary medical care on addiction and medical severity in substance abuse treatment programs. *Journal of General Internal Medicine* 2003 Jan;18(1):1–8.
27. Gallo JJ, Zubritsky C, Maxwell J, Nazar M, Bogner HR, Quijan LM, et al. Primary care clinicians evaluate integrated and referral models of behavioral health care for older adults: results from a multisite effectiveness trial (PRISM-e). *Annals of Family Medicine* 2004 Jul–Aug;2(4):305–9.
28. Samet JH, Friedmann P, Saitz R. Benefits of linking primary medical care and substance abuse services: patient, provider, and societal perspectives. *Archives of Internal Medicine* 2001 Jan 8;161(1):85–91.
29. Strosahl K. Integrating behavioral health and primary care services: the primary health care model. In: Blount A, editor. *Integrated primary care: the future of medical and mental health collaboration*. New York, NY London: W.W. Norton & Company; 1998. p. 139–166.
30. Friedmann PD, Hendrickson JC, Gerstein DR, Zhang Z, Stein MD. Do mechanisms that link addiction treatment patients to primary care influence subsequent utilization of emergency and hospital care? *Medical Care* 2006 Jan;44(1):8–15.
31. Aalto M, Pekuri P, Seppä K. Obstacles to carrying out brief intervention for heavy drinkers in primary health care: a focus group study. *Drug and Alcohol Review* 2003 Jun;22(2):169–73.
32. Miller WR, Baca C, Compton WM, Ernst D, Manuel JK, Pringle B, et al. Addressing substance abuse in health care settings. *Alcoholism: Clinical and Experimental Research* 2006;30(2):292–302.
33. Nilssen P, Aalto M, Bendtsen P, Seppä K. Effectiveness of strategies to implement brief alcohol intervention in primary healthcare: a systematic review. *Scandinavian Journal of Primary Health Care* 2006 Mar;24(1):5–15.
34. Babor TF, Higgins-Biddle JC. Alcohol screening and brief intervention: dissemination strategies for medical practice and public health. *Addiction* 2000 May;95(5):677–86.
35. Babor TF, Higgins-Biddle J, Dauser D, Higgins P, Bureson JA. Alcohol screening and brief intervention in primary care settings: implementation models and predictors. *Journal of Studies on Alcohol* 2005 May;66(3):361–8.
36. Anton RF, O'Malley SS, Ciraulo DA, Cisler RA, Couper D, Donovan DM, et al. Combined pharmacotherapies and behavioral interventions for alcohol dependence: the COMBINE study: a randomized controlled trial. *Journal of the American Medical Association* 2006 May 3;295(17):2003–17.
37. Zarkin GA, Bray JW, Davis KL, Babor TF, Higgins-Biddle JC. The costs of screening and brief intervention for risky alcohol use. *Journal of Studies on Alcohol* 2003 Nov;64(6):849–57.
38. Rollnick S, Boycott M. Intervening through primary health care. In: Miller WR, Weisner CM, editors. *Changing substance abuse through health and social systems*. New York, NY: Kluwer Academic/Plenum Publishers; 2002. p. 49–60.
39. Department of Health, National Treatment Agency for Substance Misuse. *Models of care for alcohol misusers (MoCAM)*. Department of Health; 2006 Jun. [cited 2007 Sep 9]. Available from: http://www.nta.nhs.uk/publications/documents/nta_modelsofcare_alcohol_2006_mocam.pdf.
40. Ahgren B, Axelsson R. Evaluating integrated health care: a model for measurement. *International Journal of Integrated Care* [serial online] 2005 Aug 31; 5. Available from: <http://www.ijic.org>.
41. Fleury M. Quebec mental health services networks: models and implementation *International Journal of Integrated Care* [serial online] 2005 Jun 1; 5. [cited 2006 Jun 13]. Available from: <http://www.ijic.org>.
42. Menchetti M, Tarricone I, Bortolotti B, Berardi D. Integration between general practice and mental health services in Italy: guidelines for consultation-liaison services implementation. *International Journal of Integrated Care* [serial online] 2006 May 15; 6. [cited 2006 Jun 13]. Available from: <http://www.ijic.org>.
43. Lee SD, Morrissey JP, Thomas KC, Carter WC, Ellis AR. Assessing the service linkages of substance abuse agencies with mental health and primary care organizations. *American Journal of Drug and Alcohol Abuse* 2006;32(1):69–86.
44. Lehtinen V, Taipale V. Integrating mental health services—the Finnish experience. *International Journal of Integrated Care* [serial online] 2001 Jun 1; 1. [cited 2006 Jan 20]. Available from: <http://www.ijic.org>.
45. England E, Lester H. Integrated mental health services in England: a policy paradox? *International Journal of Integrated Care* [serial online] 2005 Oct 3; 5. [cited 2006 Jun 13]. Available from: <http://www.ijic.org>.
46. Saitz R, Horton NJ, Sullivan LM, Moskowitz MA, Samet JH. Addressing alcohol problems in primary care: a cluster randomized, controlled trial of a systems intervention. The screening and intervention in primary care (SIP) study. *Annals of Internal Medicine* 2003 Mar 4;138(5):372–82.

47. Code of Federal Regulations Title 42—Public Health: Chapter I—Public Health Service, Department of Health and Human Services, Subchapter A—General Provisions; Part 2—Confidentiality of Alcohol and Drug Abuse Patient Records, Subpart A—Introduction. National Archives and Records Administrations; current as of 27 August 2007. [cited 2004 May 5]. Available from: http://ecfr.gpoaccess.gov/cgi/t/text/text-idx?&c=ecfr&tpl=/ecfrbrowse/Title42/42tab_02.tpl.
48. Hester RK, Miller WR, editors. Handbook of alcoholism treatment approaches; effective alternatives. 3rd ed. Boston, MA: Allyn and Bacon; 2003.
49. Miller WR, Rollnick S. Motivational interviewing: preparing people for change. New York, NY: Guilford Press; 2002.
50. Rollnick S, Miller WR, Butler CC. Motivational interviewing in health care; helping patients change behavior. New York, NY: Guilford Press; 2007.
51. Miller WR, editor. Combined behavioral intervention: a clinical research guide for therapists treating individuals with alcohol abuse and dependence. Bethesda, MD: National Institute on Alcohol Abuse and Alcoholism, Public Health Service, U.S. Dept of Health and Human Services; 2004. (COMBINE Monograph Series; vol 1).
52. Miller WR, Munoz RF. Controlling your drinking: tools to make moderation work for you. New York, NY: Guilford Press; 2005.
53. Miller WR, Brown SA. Why psychologists should treat alcohol and drug problems. *American Psychologist* 1997 Dec; 52(12):1269–79.