Benefits of Linking Primary Medical Care and Substance Abuse Services

Patient, Provider, and Societal Perspectives

Jeffrey H. Samet, MD, MA, MPH; Peter Friedmann, MD, MPH; Richard Saitz, MD, MPH

Individuals with alcohol and drug use problems may receive health care from medical, mental health, and substance abuse providers, or a combination of all three. Systems of care are often distinct and separate, and substantial opportunities for benefit to patient, provider, and payer are missed. In this article, we outline (1) the possible benefits of linking primary care, mental health, and substance abuse services from the perspective of the major stakeholders—medical and mental health providers, addiction clinicians, patients, and society—and (2) reasons for suboptimal linkage and opportunities for improving linkage within the current health care system. We also review published models of linked medical and substance abuse services. Given the potential benefits of creating tangible systems in which primary care, mental health, and substance abuse services are meaningfully linked, efforts to implement, examine, and measure the real impact should be a high priority.

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A 41-year-old man with a history of heroin dependence and alcoholism, depression, human immunodeficiency virus (HIV) infection, and hepatitis C presented to initiate medical care and to obtain HIV medications. His medical history was significant for 4 detoxifications over the past 8 years, methadone treatment, a positive HIV test result 3 years before treatment, and no consistent medical care before he was incarcerated a year before we saw him. His drug of choice was heroin, but he had used both alcohol and cocaine regularly. He denied substance use in jail except for smoking 1 pack of cigarettes daily. He presented from a prison prerelease treatment program to establish medical care.

Providing health care for individuals with alcoholism and other drug use disorders presents challenges to clinicians, including those who have traditionally been concerned with specific medical issues (medical clinicians), mental health issues (mental health clinicians), and issues focused on the substance dependence itself (substance abuse clinicians). These clinicians approach these patients from a perspective reflecting their respective training and background. Medical clinicians typically address the toxic effects (such as seizures or alcoholic cirrhosis) of a particular substance or the health consequences of a high-risk lifestyle (such as infectious hepatitis or HIV infection). Psychiatrists and other mental health clinicians focus on the mental health issues prevalent among substance-dependent patients. Chemical dependency counselors typically focus on the individual's destructive preoccupation with obtaining and consuming a psychoactive chemical substance, and the negative consequences thereof. For the patient, the issues from all of these perspectives are pressing, often inseparable problems, yet health care providers operate in separate systems of care. The shortcoming of these parallel approaches is that the patient's problems are interrelated and require input from all systems for optimal treatment.

The case presented above illustrates the reality of health care for an individual with severe substance abuse, and mental health and medical problems. The pa-
patient had a clear history of receiving care in a substance abuse treatment setting while not having his hepatitis C, HIV infection, or depression treated. It is not uncommon for patients similar to the one presented to be discouraged from taking effective medication for depression by well-meaning acquaintances in recovery. Similarly, there are many cases in the literature that document instances of medical clinicians neglecting the substance abuse needs of patients by failing to screen, intervene, or refer.1,2 Collaboration across the separate systems of substance abuse, medical, and mental health treatment promises to improve the quality of care delivered to patients with addictive disorders.

In the past decade, there have been proposals to link substance abuse and primary medical and mental health care treatment systems for optimal care of affected individuals.3,4 The HIV epidemic brought this issue to the fore: astute observers realized that patients with alcoholism and drug abuse issues have a disproportionate burden of medical and mental health problems, use these services in inefficient ways (eg, emergency department visits instead of outpatient clinic visits), and do not receive primary care in a consistent, ongoing manner.3 Primary care has been defined as “the provision of integrated, accessible health care services by clinicians who are accountable for addressing a large majority of personal health care needs, developing a sustained partnership with patients, and practicing in the context of family and community.”5,6 Several models have been proposed to bring the system of care for patients with substance use disorders closer to a system based on integrated, accessible care.7-9 One model uses colocation services, described as a “one-stop shopping” centralized approach in which substance abuse treatment, primary medical care, and mental health services are accessible at a single site. Alternatively, in a distributive model, the sites providing care can be linked by more effective systems to refer patients between sites. In this article, we briefly outline the potential benefits of linking primary care, mental health, and substance abuse services, review the barriers to such linkage, and describe feasible published models of linkage.

### POTENTIAL BENEFITS OF LINKED SERVICES

Effective linkage may benefit individuals with substance abuse, mental health, and medical problems in the following common scenarios: (1) when substance dependence issues are not addressed in primary care and mental health settings; (2) when medical and mental health issues are not addressed in substance abuse treatment; and (3) when the patient is seen in 2 or more of these settings but no effective communication occurs between the systems. The potential benefits discussed below are listed in the Table.

From a patient’s perspective, the potential for improved overall care is the motivating force for linking systems. A striking example is the patient described above who, one year later, was receiving methadone maintenance and antiretroviral therapy, including nevirapine. As nevirapine can decrease methadone blood levels, the patient’s methadone dose had to be increased to stabilize his opioid maintenance treatment. Without coordination of care, a decline in methadone levels on initiation of nevirapine therapy might lead to withdrawal symptoms, concern about methadone diversion, and potential relapse. A significant benefit of linked systems would be the improved well-being of patients in terms of substance abuse severity, medical and psychiatric problems, and overall quality of life.10 Another patient benefit is convenient service, but this must be weighed against a likely increase in service utilization.

From the primary care and mental health clinicians’ perspective, possible benefits of linkage are improved early identification of substance abuse and prevention of relapse,7 increased identification of alcohol and drug causes when formulating differential diagnoses, better access to substance abuse treatment services, enhanced adherence with keeping appointments and taking medications, and substance abuse training opportunities for personnel.

From an addiction perspective, stronger linkage may yield improved outcomes in substance abuse treatment, similar to improvements that occur when psychosocial services are added.8,9 Knowledge of cases of successful treatment may reduce stigma among medical and mental health clinicians about substance dependence and enhance these providers’ appreciation of the value of such

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treatment. Bringing this treatment closer to mainstream medical care and exposing its similarities to the treatment of other chronic illnesses may increase reimbursement parity for substance abuse services. Substance abuse providers could learn about the medical and mental health complications of addiction and enhance their appreciation of prevention strategies and their clients’ conditions and health care needs. Conceivably, linking services may provide an opportunity to create an impact on other behavior-related issues, such as smoking and sexually transmitted diseases, including HIV infection. Finally, linking services, a relatively recent requirement for Joint Commission on Accreditation of Healthcare Organizations accreditation, could enhance quality improvement efforts within substance abuse treatment systems by providing information about such efforts in medical settings in which these issues have been grappled with when restructuring medical care systems.

From the societal perspective, cost-effectiveness analyses of these linkages are needed to assess possible increased health care costs in the short-term but reduced overall long-term costs, including savings from reduced incarceration and other criminal justice expenditures, from avoiding HIV infection and other health-related sequelae of substance use, and from increased productivity. Another benefit may be a decrease in duplicating services since each provider would be aware of the other’s clinical activities. Finally, a potential public health achievement would be improved health outcomes of specific populations with a high prevalence of alcoholism or drug abuse.

WHY SUBOPTIMAL LINKAGE?

There are many reasons for the lack of services linkage. One well-documented problem is medical clinicians’ perception that treating alcoholism and drug abuse is not providing medical care and is therefore beyond their purview.11 This point of view is slowly changing within the profession, but medical education about these issues was sorely deficient in past years.15 In the mid-1980s, medical profession, but medical education about these issues was appropriate standards, curricula, and effective substance abuse educators within many disciplines.14,15 Nonetheless, their readiness to accept services, stigma can manifest in medical clinicians not wanting to spend time dealing with patients with alcoholism or drug abuse. In addition to affecting whether patients recognize their needs and their readiness to accept services, stigma can manifest in medical clinicians not wanting to spend time dealing with drug and alcohol issues or can lead to a lower perception of providers who work in this field. Both results prevent overall progress.

Medical and mental health providers may not appreciate the efficacy of substance abuse treatment. The
overwhelmingly supportive body of research on substance abuse treatment appears infrequently in the medical literature: physicians do not appreciate the fact that treatment for alcoholism or heroin dependence has a therapeutic value comparable with that of standard treatment for diabetes mellitus or asthma.27,28

In summary, the obstacles to an integrated system of care for patients with substance use disorders are manifold. Barriers include issues of professional responsibility, education among providers, financial disincentives, concerns about confidentiality, and stigma, among others. While these seem extensive, they are not insurmountable. On a broad level, addressing linkage at the systems level would greatly improve integrated care. Systems approaches for implementing linkage models of care include payment systems that encourage linkage, and quality measures that value coordinated care. Parity of health care benefits for mental health, substance abuse, and medical health (as achieved recently in Connecticut) would help decrease stigma and improve coordination of care. Linking services may also serve to decrease stigma. Confidentiality issues can be addressed at a systems level (ie, by having all care occur under the umbrella of one health care system, thereby facilitating record availability), and at an individual patient-physician level with office systems that prompt clinicians and their staffs to advise patients to sign appropriate releases that allow all of their caregivers to communicate. Recently published and future studies demonstrating the feasibility and effectiveness of these models will help convince payers and practitioners to move in this direction.

At the clinician level, various approaches can be taken simultaneously to help overcome barriers. Physician attitudes, skills, and practices can be changed by active learning educational programs.29,30 Studies showing the benefits of linked services will also lead clinicians to favor better-integrated care. The next section describes feasible models of linked primary medical, mental health, and substance abuse services that have overcome these barriers, and shows evidence about their success in facilitating the multidisciplinary care of addicted patients.

MODELS OF LINKED SERVICES

Centralized Models

Centralized (on-site) models have brought primary care, mental health, and/or substance abuse services together at a single site. This one-stop shopping model has been attempted best in primary care clinics and in substance abuse treatment programs. In addition to overcoming the substantial political, bureaucratic, attitudinal, and financial barriers that separate substance-dependent persons from needed services, centralized delivery solves the problems of geographic separation, patient disorganization, and poor motivation that inhibit patients receiving substance abuse treatment from keeping outside appointments.29,30

In general, patients with tobacco dependence, at-risk drinking habits, and moderate illicit drug use can be managed entirely in primary care settings. Patients with substance abuse or dependence should generally be cared for in settings that offer specialty addiction input (either integrated in a primary care office or located elsewhere). All patients should have primary and preventive health care—where this care is delivered will depend on the system of care. Clearly, a specialist’s medical input is often necessary, and whether this occurs at an addiction specialty treatment site or in a primary care setting, the key is that systems be integrated to deliver the most appropriate and efficient care.

Willenbring and Olson29 report favorable results for a model of integrated alcoholism treatment in a primary care clinic for poorly motivated, medically ill alcoholics. Their model included (1) a minimum of monthly visits (2) outreach for patients who missed appointments (3) clinic notes that cued the primary care physician or nurse practitioner to monitor alcohol intake at each visit (4) advice for physicians or nurse practitioners that emphasized reducing the ill effects of alcoholism, and cutting down consumption instead of strict abstinence; (5) verbal and graphic feedback about improvement and deterioration in biological markers, such as γ-glutamyltransferase (GGT); and (6) on-site mental health services as needed.32,33 In a randomized design, medically ill patients with alcoholism in the integrated clinic were compared with similar patients referred to traditional alcoholism treatment and ambulatory medical care. During 2 years of follow-up, patients in the integrated clinic had improved outcomes, including greater abstinence, returning twice as often for outpatient visits, and a lower mortality rate.29 Although this model may prove too elaborate for many primary care settings, it serves as a starting point for a disease-management system for substance abuse disorders similar to the management of asthma, diabetes mellitus, and congestive heart failure.35 With further study this model may prove cost-effective for recalcitrant alcohol-dependent patients or other poorly motivated substance-dependent patients.

Less resource-intensive intervention models developed for problem drinkers in primary care settings have also proven feasible. The cost analysis of Project TrEAT (Trial for Early Alcohol Treatment), a randomized study of physician-delivered brief interventions, showed substantial improvements in drinking outcomes and substantial savings for society and health systems.36 An early study suggested that the simple feedback changes in biological markers, such as γ-glutamyltransferase, may by themselves reduce sick days, hospital days, and mortality.37 Adams et al22 reported that 2.5 hours of primary care provider training in a brief patient-centered alcohol intervention was feasible and reduced alcohol consumption among problem drinkers.38 In another model of alcohol treatment in primary care, O’Connor et al39 reported successful treatment with naltrexone in a series of patients with alcoholism. Other models have successfully incorporated behavioral health personnel into primary care practices.40,41 Substantial training of the clinician delivering the service in primary care is needed before these results can be generalized to primary care settings as they exist today.

Few US studies have integrated drug dependence treatment and primary care, though general practitioners frequently participate in the management of these disorders elsewhere in the world. In one randomized trial, drug-dependent patients treated with buprenorphine...
maintenance had a higher rate of retention in a primary care setting than those in a drug treatment program (78% vs 52%; P = .06) and had lower rates of opioid use based on urine toxicology (63% vs 85%; P < .01).47 With the development and dissemination of new pharmacological therapies for alcoholism and drug dependence, the impetus for linked services will only strengthen.

Centralized models of primary medical and mental health care in addiction treatment programs also improve addicted patients’ access to these services.8,10,45 For example, Umbricht-Schneiter and colleagues33 found that 92% of patients randomized to a centralized delivery program in a methadone treatment program received medical services, compared with only 35% of patients referred to a local clinic. This model has also been found to augment delivery of HIV-related care and routine primary care, and to promote medication compliance.94,45 Other investigators suggest that on-site delivery of psychosocial services with addiction treatment lengthens treatment retention, reduces relapses to substance abuse, and improves health.8 Integration of substance abuse treatment and mental health services similarly reduces relapses and improves social stability for patients with a dual diagnoses of addictive disorders and mental illnesses.36-48

Distributive Models

In light of the lack of parity for the treatment of substance dependence and the absence of unified budgets for medical and behavioral health services,49 most providers lack the resources to provide comprehensive, centralized services for addicted patients.50 Therefore, the development and dissemination of effective decentralized (distributive) models is an important step toward integrating service in the current health care environment. Successful referral is the central task of the distributive model. Anecdotal and limited data suggest that referral alone cannot integrate the care of addicted patients in primary care settings. For example, among 1440 patients undergoing substance abuse treatment with a primary care physician, 45% reported that the physician who cared for them was unaware of their substance abuse.1 A study of one community in California similarly noted that 45% of drug users had contact with the mainstream health care system in a given year, but medical or mental health providers were major client referral sources or destinations for less than 10% of substance abuse programs.51 Thus, the substantial interorganizational gap between addiction treatment programs and mainstream health care presents great barriers to successful referral. Because substance-abusing populations can have disorganized lifestyles and poor motivation, contemporary distributive models typically use case management to facilitate referrals. Community-based case management can effectively link substance-dependent patients to needed services.32,53

In substance abuse treatment programs, distributive arrangements are commonly used to link patients to medical and mental health services.54,55 Distributive arrangements range, for example, from a substance abuse treatment unit that contracts with a local group practice to provide physical examinations and routine medical care to its patients, to one that makes ad hoc referrals to a local clinic, to provide physical examinations and routine medical care.56 The advantage of this model is that it makes use of existing health care systems. For example, in an ongoing study, patients in an inpatient detoxification unit receive a facilitated referral to primary care in the local community from a multidisciplinary team (physician, nurse, and social worker).59 This model requires no rearrangement of existing health care delivery systems. It does require efforts (and therefore costs) to assure that linkage is facilitated. Case management or transportation assistance can facilitate these referrals.30,37,38 A recent study of public addiction treatment programs showed that contracted referral with case management increased medical services utilization 2- to 3-fold over ad hoc referral.9

In summary, addiction interventions in medical settings may be appropriate for hazardous drinkers and those with other moderate substance use disorders, medically ill substance-dependent patients who refuse formal treatment referral, and substance-dependent patients who receive rehabilitative counseling elsewhere yet would benefit from medical therapy. Minimally motivated patients who will accept only harm-reducing interventions may also benefit from management in primary care settings. Primary care physicians may have a productive role in outpatient detoxification as well.9 For patients in formal addiction treatment, linkage to needed medical and psychological services may improve access to health care, improve physical and mental health, and reduce relapses. Further research should determine whether these promising models could be applied to other settings and populations of substance-dependent patients. Cost studies of their implementation are also desirable.60 Such studies would evaluate costs and care utilization of substance-dependent patients across the health care system over a period sufficient to demonstrate any long-term substance-related, medical, and mental health benefits of integrated models of care. However, one must acknowledge the difficulties of developing adequate costing methodologies for these systemic interventions. Indeed, few rigorous studies of system-level interventions exist for other chronic diseases, and the inclination to hold substance use disorders to a higher standard should not delay efforts to implement systems of comprehensive, continuous, longitudinal care for patients with these devastating disorders.45

IS BETTER LINKAGE POSSIBLE IN THE CURRENT HEALTH CARE SYSTEM?

Despite the enormity of the challenge, the missed opportunities exemplified in the initial case presentation compel us to suggest constructive solutions. In fact, we are optimistic that it is time to transform the configuration of substance abuse treatment and health care services. A number of factors support our optimism that a window of opportunity exists for innovation: the staggering burden of medical and mental health problems affecting substance-dependent patients is now well documented, from HIV infection, hepatitis C, and drug overdose, to depression, anxiety, and victimization.61-64 The enormous economic burden that care of patients with substance use problems places on our medical care sys-
and society is well known, and forces policy makers to consider alternative approaches to the management and care of this population. New models of care for patients with alcohol and drug use disorders are being explored and refined. Advances in diagnosis and treatment, including pharmacological and behavioral approaches in the primary care setting, promise to change the approach to these common disorders. Primary care is not restricted to physicians, but rather includes a multidisciplinary team. Thus, the fact that primary care physicians feel overburdened should not preclude the development of such a linkage system, but rather should influence its development so that its implementation does not rely solely on physicians. The ability to treat substance abuse in less intensive settings will promote cost savings and cost-effectiveness. Increased attention to the improvement of quality in health care systems will also create opportunities to address linkage to substance abuse treatment as a quality issue. Present support from the National Institutes of Health to examine linkage of substance abuse treatment to medical and mental health care will provide data about the value of such linkages. Finally, this era has seen rapid reorganization of health care services, and despite the inherent difficulties this presents, it also presents the opportunity to restructure inadequate systems of health care delivery. We believe that the time is now to move ahead with innovative linkages between the substance abuse treatment and mainstream health care systems.

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Reprints: Jeffrey H. Samet, MD, MA, MPH, Clinical Addiction Research and Education (CARE) Unit, Section of General Internal Medicine, Boston Medical Center, 91 E Concord St, Suite 200, Boston, MA 02118 (e-mail: jsamet@bu.edu).

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