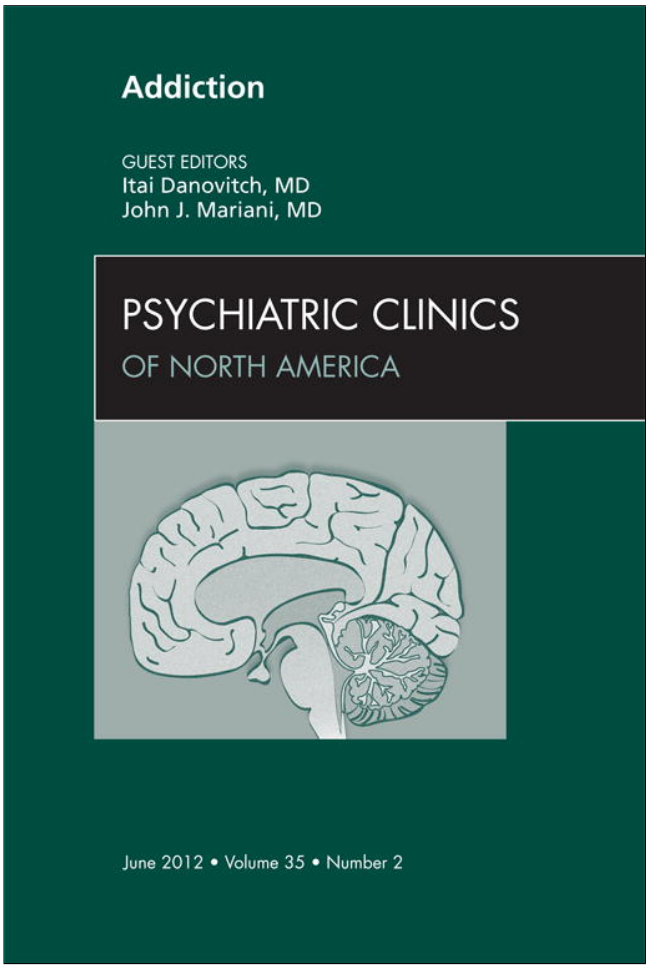

New Systems of Care for Substance Use Disorders

Treatment, Finance, and Technology Under Health Care Reform

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KEYWORDS

• Substance abuse • Addiction treatment • Health care reform • Brief intervention

KEY POINTS

- Approximately 23.5 million American adults have a substance use disorder, but only 10.4% receive the addiction treatment they need.
- Few patients with addiction receive continuity care, despite the fact that the course of illness is often characterized by acute exacerbations followed by periods of remission and relapse.
- For persons with substance use disorders, integration with primary care may be the only hope for patients for whom stigma substantially impedes utilization of specific addiction care services.
- Within the world of addiction care, clinicians must move beyond their self-imposed "stigmatization" and sequestration of specialty addition treatment.
- Clinicians need to show exactly *how* addiction treatment works, and to what extent it works through metrics showing changes in symptom level or functional outcome, changes in health care utilization, or other measures.

Overall, persons in America with substance abuse disorders receive insufficient professional treatment and the frequency and duration of care they receive is

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inadequate to produce meaningful clinical results. Recent legislative reforms and policy initiatives will increase the accessibility and availability of clinically appropriate substance abuse treatment services. In this report, we review the current system of health care delivery for the treatment of substance use disorders as well as examine opportunities for the expansion and improvement of treatment under health care reform.

This 4-part report examines new systems of care for substance use conditions under health reform.

1. We briefly review the **prevailing general system** of care for the treatment for substance-related conditions.
2. We provide a **detailed exploration of the emerging systems** of publicly and privately funded substance use disorders treatment, which—driven by new insurance regulations and new mechanisms for payment reimbursement—will change significantly under health care reform.
3. We examine **3 case studies of expanded care** for clinically distinct subsets of patients—those with unhealthy substance use who do not yet have addiction (persons with hazardous use), those with the highest recent rate of increase in mortality among substance use disorders (persons with opioid addiction), and those with the highest overall incidence of substance-related deaths (persons with nicotine addiction)—to examine how persons with different disorders should be able to receive better, more frequent care through federally mandated health care reforms.
4. We examine **how health information technology systems will** drive substance use disorders treatment toward greater connectivity, accountability, and improved outcomes.

Embedded throughout this discussion are recommendations to transform the care for substance use disorders under health care reform. These recommendations are offered with a caveat: although the authors are all experts in their field, no amount of evidence-based forecasting can capture the enormous change and complexity that we anticipate will result from health care reform. Instead, we are humbled by the complex fabric of overlapping systems, which will form the new system of care for the treatment of substance use disorders as the US health care system evolves toward increased affordability and accountability.

PREVAILING SYSTEMS OF ADDICTION TREATMENT AND FUNDING

Roughly 23.5 million American adults have a substance use disorder, but only 10.4% receive the addiction treatment they need.[1,2] Stated differently, 20.9 million persons, totaling 8.3% of the US population age 12 years or older, needed treatment for an illicit drug or alcohol use problem but did not receive treatment at a specialty substance abuse facility in the last year. Although most persons with addiction see a physician at least once every 2 years,[3] it is most often for medical/surgical complications of their substance use, rather than for the addiction itself. Among those receiving treatment, only 20% are offered US Food and Drug Administration (FDA)-approved pharmacotherapies from which they may benefit.[4,5] The “treatment gap” experienced by persons with addiction results in substantial social burdens and is acknowledged by major health services researchers and federal policymakers.[6] According to the United States Preventive Services Task Force, reducing hazardous alcohol use through early screening and brief intervention is a more cost-efficient and effective prevention activity than breast or prostate cancer screenings, depression screening, or reduction of obesity. Hazardous alcohol use screening only narrowly

falls behind tobacco cessation, immunizations, and taking daily aspirin in its positive public health impact; yet, its broad scale adoption grossly lags behind other public health priorities.[7]

Part of the complexity of adequately addressing substance use conditions has to do with the fact that addiction is essentially both an acute and chronic health problem. The course of illness is often characterized by acute exacerbations (intoxication and withdrawal requiring intervention and stabilization) followed by periods of remission and relapse, which may diminish in frequency over time with appropriate continuing care.[8,9] Few patients with addiction, however, receive continuity care, despite the fact that continuity is a standard of care for other chronic diseases (diabetes, heart disease, or cancer) in which disease management is a "mainstream" activity. When patients do receive addiction treatment, it is usually episodic and in specialty care delivery systems that are separate from general medical care.[10] Addiction services are rarely located in general medical hospitals or clinics. Instead, addiction treatment is usually offered in separate locations by staffs who specialize in addiction care but who interact infrequently with general medical providers or even the primary care physicians for the patients treated in their programs.

When patients do receive addiction treatment, it is generally paid for by payment systems separate from the ones that pay for general medical care. Things have likely not changed from a decade ago, when 82% of the addiction treatment in America was paid for by public funding systems, and 9% of addiction treatment was paid for by private health insurance (with the remaining costs paid for out of pocket).[11] Most public funding for addiction treatment does not come via Medicare or Medicaid but via unique Substance Abuse Prevention and Treatment Block Grants from the federal government to specific state agencies that administer receipt of those funds and distribution of dollars to local treatment agencies.[10] In the ensuing years, these trends did not see any increases in private sector (commercial insurance) contributions to payment for addiction services. With health care reform, major changes in insurance regulation and reimbursement will dramatically alter how addiction treatment is delivered in the United States and how it is paid for.

EMERGING SYSTEMS OF ADDICTION TREATMENT AND FUNDING

For the last decade, national quality agencies have recognized the need to transform the US health care system. Acknowledging inefficiencies in health care service delivery and deficiencies in overall health care quality, the Institute for Healthcare Improvement called for the simultaneous pursuit of 3 aims as part of a national vision to improve the US health care system: improving the experience of care, improving the health of populations, and reducing per-capita costs of health care.[12] Similar to this, recognizing the large "gaps" in the treatment of substance use disorders as well the significant imbalance in public versus private funding for addiction services, the Institute of Medicine called for a fundamental transformation in the system of care for substance use disorders to "cross the quality chasm."[6] Fundamental to both these general and specialty perspectives is the view underscored by the President's New Freedom Commission: "To achieve the promise of community living for everyone, new service delivery patterns and incentives must ensure that every American has easy and continuous access to the most current treatments and best support services."[13]

The Affordable Care Act

The Affordable Care Act of 2010 (ACA) brings new opportunity to transform the delivery of general medical and specialty addiction treatment to the United States.

Box 1
The Affordable Care Act: what is it?[a]

Coverage: Expands coverage to 32 million Americans who are currently uninsured.

Health Insurance Exchanges: Creates state-run exchanges, which create purchasing pools to offer insurance at reduced rate for individuals and small employer groups.

Subsidies: Available to individuals and families with income between the 133% and 400% of federal poverty level.

Medicaid: Expands Medicaid to include 133% of federal poverty level but excludes illegal immigrants as not eligible for Medicaid.

Medicare: Closes the Medicare prescription drug ″donut hole″ by 2020.

Insurance Reform: Coverage for children, regardless of a preexisting condition. Dependent care coverage for children younger than 26. Mandatory preventive care coverage for all new, private policies. Removal of annual and lifetime benefit limits. Elimination of policy cancellations. Guarantees coverage and renewal. Bans preexisting conditions. Mandates Essential Benefits Package, which includes benefitted treatment for mental health and substance use disorders.

Affordability: Reduces out-of-pocket costs (for lower-incomes). Limits small group plan deductibles. Requires copay and limits for mental health and substance abuse be comparable to those for medical and surgical disorders (parity).

Individual Mandate: (pending legal challenge as of 12/2011) Everyone must purchase health insurance or face a $695 annual fine. There are some exceptions for low-income people.

Employer Mandate: Employers with more than 50 employees must provide health insurance or pay a fine of $2000 per worker each year if any worker receives federal subsidies to purchase health insurance.

Immigration: Illegal immigrants will not be allowed to buy health insurance in the exchanges—even if they pay completely with their own money.

[a]**This is a partial list of key ACA provisions adapted from Henry J. Kaiser Family Foundation**.

Adapted from The Henry J Kaiser Family Foundation. Focus on health reform: summary of new health reform law. Updated April 15, 2011. Available at: http://www.kff.org/healthreform/upload/8061.pdf. Accessed December 18, 2011.

The ACA establishes new financing and insurance mechanisms to provide health insurance to more than 30 million persons currently uninsured, among which it is estimated that the rates of substance use disorders could be 2 or 3 times the rates in the population in general. The ACA and related legislation, collectively known as Health Care Reform, creates new governmental structures (health insurance and health technology exchanges), increases the availability of private insurance and Medicaid coverage, assures coverage for mental health and substance use disorders as essential health care benefits, protects patients from inappropriate denial of coverage for preexisting conditions, and directs payment incentives to improve quality of care, which includes addiction treatment (**Box 1**).[14]

Coverage expansion

Under the ACA, 4.3 million of 32 million newly insured persons are expected to become new users of mental health or substance abuse treatment services, either through expanded affordability for privately funded health insurance (2.0 million) or

expanded eligibility of publically sponsored Medicaid coverage (2.3 million).[15] The expansion in health care coverage embraces 3 financially distinct sectors of care comprising:

1. Individuals with private insurance
2. Those receiving Medicaid
3. Uninsured individuals who belong to the "Safety Net."

Individuals with private insurance

For individuals with higher incomes, capable of purchasing commercial insurance (especially sole proprietors and farmers who are not part of group health insurance plans), newly created state-run health insurance exchanges offer the opportunity to purchase health insurance at lower premiums through large purchasing pools, which leverage multiple sources of funding including individual contributions, subsidies from employers, and contributions from federal Medicare programs. These are combined with premium and cost-sharing subsidies, which further lower the cost of available insurance for citizens and legal immigrants with incomes between 133% and 400% of federal poverty level (FPL) (FPL in 2011 is $10,890 for an individual and $22,350 for a family of 4).[16]

Individuals receiving Medicaid

For those with lower incomes, eligibility for Medicaid will expand to include those with incomes up to 133% of FPL. In most states, these Medicaid changes will increase enrollment and increase Medicaid benefits for new Medicaid enrollees, whose coverage must be comparable to the essential benefits required for exchange-qualified health plans.

Uninsured individuals

For the remaining individuals who are uninsured, county and state "safety net" services will continue to provide the bulk of available care, which unfortunately may be subject to future reductions in direct federal funding.

The net effect of coverage expansion under this 3-tier financial system is the dominant position of health insurance as the backbone of US health care. In this system:

1. Dollars will follow patients with substance use disorders, rather than flow into prepurchased "block-grant" programs
2. States and counties will develop or expand Medicaid-eligible managed care health plans (a government-funded form of health insurance) to control population-based risks
3. Medicaid fee-for-service reimbursement will decrease
4. Local contracts for addiction treatment services, typically as county-purchased treatment beds or slots, will become less common (counties will receive less federal "block grant" funding funneled to them by state addiction agencies).

Significantly, substance abuse treatment programs incapable of billing insurance for their services may not survive if they are unable to adapt to these financial reforms.

Mental Health and Addiction Treatment Parity

While health care reform increases the affordability of health insurance, separate provisions of the ACA additionally mandate that all "qualified health plans" increase equity in coverage for substance use disorders. Under the ACA, not only will mental health and addiction treatment likely be included as "essential health benefits" in all plans, but benefit structures will have to incorporate provisions from the Mental Health Parity and Addiction Equity Act of 2008 (Parity Act).[17] The Parity Act mandates

that covered health benefits for the treatment of substance use disorders must be equal to or comparable (at par) with the benefits offered for medical and surgical conditions. More importantly, the Parity Act mandates that individual service copays and day or dollar limits for addiction treatment in a health plan must be "not substantially different" from the "predominant" level of copays, deductibles, and day/dollar limits for medical or surgical disorders offered by the same plan.

The benefits to be derived from addiction treatment parity are significant.[18] In a study of 6 Federal Employee Health Benefit Plans, which had mandates in place since 1996 to provide parity-level addiction treatment benefits, addiction treatment parity resulted in increased utilization that was paid for by medical cost offsets (reduced emergency room visits or hospitalizations).[19] The results were a minimal net increase in overall cost and a larger increase in quality because of greater utilization of appropriate treatment. Similar results have been reported for the states of Washington and Oregon, whose parity laws closely mirror the benefits mandated under the federal Parity Act.[20,21]

Despite the positive effects of parity-level benefits, prior experience from states in which broad-scale ACA-like universal coverage expansion has been mandated—including Massachusetts, Maine, and Vermont—demonstrated mixed results in the ability to promote access to care through expanded coverage alone. In these states, individuals with substance use disorders failed to meet enrollment expectations, despite the overall lowered cost to purchase insurance.[22] One possible explanation for this failure is that individuals with substance use disorders are medically disenfranchised; as a cohort, they do not access regular medical care or access the financial means (insurance) to pay for care, even when systemic barriers to enrollment are lowered.[22] As state health insurance exchanges roll out nationwide, it is necessary to ensure that outreach programs actively enroll individuals in needed substance use disorders care. Failure to repatriate individuals with substance use problems into the health care system will make it difficult to realize the social benefits (eg, reduced homelessness or crime) of improved health care.[13]

Delivery System Reform

Alongside the expansion in health insurance coverage, the ACA mandates reforms to health care service delivery. The ACA links reimbursement for addiction treatment to 6 quality aims for health care services outlined by the Institute of Medicine (IOM). According to the IOM, high quality care is[23]:

1. Safe
2. Effective
3. Patient-centered
4. Timely
5. Efficient
6. Equitable.

These aims prompted a nationwide movement to integrate behavioral health (mental health and substance use disorders treatment services) into primary care,[24] because the majority of patients with substance use disorders also have chronic medical or psychiatric conditions; yet, in the current pre-ACA environment, only 20% of adults with addiction and only 3% to 6% of older adults (over 65 years) with addiction actually receive treatment in specialty addiction treatment programs.[25] When we consider that the majority of individuals with substance use disorders present to primary care at some point during their illness, as well as the declaration by the World Health Organization that the comorbidity of mental and physical

Box 2
What are patient-centered health care homes?

In 2007, the American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, and American Osteopathic Association released the Joint Principles of the Patient-Centered Medical Home. In a patient-centered medical home, key characteristics of health care should include:

1. Personal physicians
2. Physician-directed medical practice
3. Whole person orientation
4. Coordinated/integrated care
5. Quality and safety
6. Enhanced access
7. Payment for value-added

Adapted from Joint Principles of the Patient-Centered Medical Home March 2007, http://www.aafp.org/online/en/home/media/releases/2007/20070305pressrelease0.html.

disorders is the norm across the lifespan,[26] the failure to engage persons with substance use disorders presenting in the primary care setting is a tremendous "missed opportunity."[27] For persons with substance use disorders, integration with primary care may be the only hope for patients for whom stigma substantially impedes utilization of specific addiction care services.

Public sector reforms

In the public system of most states, the shift to primary care as the location in which people will receive care for their substance use conditions will be effected mostly via an expansion of Federally Qualified Health Centers (FQHC). FQHC and other Primary Care clinics designated as Patient Centered Health Care Homes (PCHCHs) are targeted to receive incentives for funding workforce development under the ACA (**Box 2**).[10,28] Financial incentives are also provided to FQHCs to bring mental health and addiction clinicians into those settings to work as full members of the clinical team[10] so that persons with these conditions will be able to be treated within FQHCs and PCHCHs and not have to be referred to separately located, separately staffed, separately funded clinics offering mental health and substance use disorders care. In the ACA, physician and nonphysician clinicians with psychiatric or addiction treatment expertise are envisioned to be teachers, mentors, clinical consultants, and direct caregivers for the benefit of persons with substance use disorders and the generalists who are caring for them. In a reformed health care system, this expanded and newly certified mental health and addiction treatment workforce will deliver care at the time and place requested by the patient, not when or where it is convenient for the provider (Roy K, Miller M. The medicalization of addiction treatment professionals. J Psychoactive Drug 2012. Submitted for publication). For patients with substance use disorders, there can be "no wrong door" to addiction treatment if we want to reduce the impact of substance abuse on their comorbid medical conditions. Similarly, there can be no effective health care without integrated behavioral health care.

Integrated behavioral health care

Several models of integrated care have proven feasible in demonstration projects.[29,30] These include:

1. Fully integrated services in which primary care providers may provide medication-assisted therapy, such as buprenorphine, and coordinate care with onsite specialty alcohol and drug counselors
2. Onsite colocation of substance use treatment services in primary care, or "reverse colocation" of primary care services into substance use treatment settings
3. Various sequential or coordinated care models by clinics that are not colocated.

Each of these models has strengths and weakness, and almost all must overcome implementation challenges including new costs, required staffing, establishment of infrastructure including health information sharing, and concrete needs, such as office space. Regardless, over the last half decade, the Substance Abuse and Mental Health Services Administration (SAMHSA), the Indian Health Service, and many national state mental health and alcohol and drug programs have committed to collaborative demonstration efforts (**Box 3**).[31]

Research studies on the effectiveness of behavioral health service integration within a large private-sector prepaid integrated health care system have been positive. When patients with medical or psychiatric problems (the majority of the patients) receive medical services in "reverse colocated" primary care clinics embedded in an outpatient addiction treatment setting (rather than with addiction services colocated in a primary care clinic), they are twice as likely to be sober at 6 months and have significantly reduced hospital and medical costs than a comparable cohort receiving nonintegrated care.[32–34] In a parallel study, patients who received coordinated (not-integrated) care consisting of routine physician screening for substance abuse in primary care, referral to specialty care when needed, and referral back to primary care when stabilized, also had reduced costs and improved outcomes.[35] Unfortunately, only 13% of patients studied received this level of coordination despite the availability of these services. This is a sobering caution to clinical administrators who must be aware of the complex systemic, provider, and culture changes that are required to effectively adopt integrated care strategies. Health care costs consumed by those who receive continuing care have been shown to approach other matched health plan members when tallied over a 9-year span.[36]

Private sector reforms

In the private sector—where 80% of patients receive their general medical and mental health care, mostly through employer-sponsored commercial insurance as the major source of funding for treatment—one of the major impediments to patients receiving adequate treatment for substance use disorders has been the discriminatory structure of insurance benefits and utilization review processes for addiction treatment. Benefit structures limiting the number of lifetime encounters for intensive outpatient or inpatient addiction treatment, the number of outpatient visits for addiction treatment, the medications that would be covered under the formulary for the pharmacy benefit, and the specific providers who could see patients under behavioral health care "carve-out" plans, all restrict access to care and widen the "treatment gap."[37]

Systemically, large gaps in the continuum of services available to privately insured individuals with addiction are the norm.[10] Private sector organizations such as general hospitals and multispecialty medical clinics have not built capacity for treating patients with addiction like they have for treating persons with cancer or heart disease. In some cases, the private insurance industry has utilized treatment capacity

Box 3
Models of integrated behavioral health care

Integrated models of Behavioral Health Care incorporate an array of services elements to improve efficiency and effectiveness of patient-centered care. Common elements include:

- Use of a screening tool to identify mental health or substance use problems
- Presence of "warm hand-offs"
- Physical proximity of behavioral staff with medical staff
- Financial integration
- Use of outcome measures to assess effectiveness
- Case conferencing between primary and behavioral staff
- Use of psychiatrists and addiction specialists as service providers or consultants
- Degree of case management
- Length of therapy
- Therapeutic orientation
- Severity of substance use or mental health disorders the clinic is willing to treat
- Physician willing to prescribe anti-craving or psychiatric medication
- Involvement of primary care physicians in behavioral care
- Consolidation/separation of client's record
- Group or individual self-management sessions designed to help patients' compliance with medical treatment regimen
- Provision of cross-education: mental health training for primary care providers and medical training for behavioral staff
- Conjoint consultation
- "Ownership" and supervision of the behavioral staff
- Level of involvement of behavioral staff with medical issues
- Relationship with local mental health or addiction treatment program; and ease of referrals to that system
- Comprehensiveness of feedback provided to the primary care physician by behavioral staff
- Collaboration with colleges/universities to provide training for students
- Participation in collaboratives

The design of integrated programs varies widely—often they evolve in unique ways to match staffing, available funding, and system of care structure to meet the needs of populations served. There is no "one size fits all." Integrated services may be colocated or offered separately through coordinated (not colocated) programs that provide services either sequentially or concurrently.

Adapted from the Integrated Behavioral Health Project (IBHP) Models of Behavioral Health Integration. Available at: http://www.ibhp.org/index.php?section=pages&cid=91. Accessed December 19, 2011; with permission.

from public sector agencies, "piggy-backing" onto the publicly funded addiction treatment system, which would redirect its block grants to fund prepaid outpatient treatment slots or beds in residential treatment programs for privately insured individuals, making it even tougher for persons relying on the public system to receive treatment.

Another approach would see private insurers providing limited or "carved-out" benefits, which may also include limited counseling by individual therapists from a narrowly constructed network of approved providers, occasional use of office-based medication-assisted treatment (buprenorphine, injectable naltrexone), and referrals to self-help meetings[38] as substitutes for offering patients comprehensive drug and alcohol treatment administered by experienced and licensed addiction clinicians. At the other extreme of this spectrum, private fee-for-service specialty clinics and "luxury rehab" programs serve elite clients who have the capability to pay out of pocket. Often costing $10,000 to $50,000 per month of treatment, these programs

represent a Cadillac-level of services without a broad demonstration of enhanced outcomes commensurate with the enhanced fees charged for these services.[39]

With the advent of the Mental Health Parity and Addiction Equity Act of 2008, some of these treatment gaps in privately funded services will narrow. Federal regulations will prohibit group health plans—even those offered via self-insured companies, unions, and municipalities to their employees, outside of a formal insurance policy—from having addiction treatment benefit limits that are more restrictive than the prevailing limits for medical/surgical care. Indeed, an early survey of employer-sponsored insurance coverage since 2008 indicates that most sponsored health plans have removed treatment limitations, such as the number of allowed office visits or inpatient days and slightly decreased required copayments for outpatient or in-network care, in response to the Parity Act.[37] Little is known, however, about how health plans use nonquantifiable treatment limits, such as pre-authorization requirements for mental health or substance use benefits, which must also remain comparable to the use of pre-authorization of medical/surgical benefits if they are to be in compliance with the Parity Act.[37] Continued vigilance will be needed by consumers, clinicians and policy makers to assure that insurers meet the medically necessary treatment needs of individuals with addiction.

Optimal health insurance benefits

We envision, when freed of utilization-based benefit limits, new models for office- and clinic-based services will permit the development of evidence-based continuums of care that are both appropriate and medically necessary to manage addiction as it manifests both as acute and chronic conditions. At the time of this article, the covered services under the federal ACA-mandated essential health benefits for substance use disorders treatment, to be incorporated into all plans purchased through state health insurance exchanges, are under review. Expert consensus supports optimal substance use disorder treatment benefits that provide at least 3 months of treatment initiation and stabilization per episode, provided as a graded continuum of age-appropriate outpatient or residential counseling, followed by up to 3 years of continuing care monitoring in either primary care or a specialty outpatient settings. Benefits must also include detoxification, hospitalization, and medical or psychiatric care as needed for co-occurring conditions; appropriate placement to achieve psychosocial stabilization through either outpatient or residential treatment; anticraving or anti-addiction medications (including methadone); and random drug/toxicology testing and other ongoing clinical monitoring.[40–42] Placement in care should be determined by professionally accepted tools such as the American Society of Addiction Medicine's *Patient Placement Criteria* (**Fig. 1**).[43] Also, as addiction treatment becomes more integrated into primary care, broader use of screening tools will require greater use of motivational interventions, perhaps offered by addiction treatment counselors working outside their usual work settings.

IMPLEMENTING AND EXPANDING SYSTEMS OF ADDICTION TREATMENT: CASE STUDIES

By now, it should be recognized that expansions in health insurance coverage and incentives to transform the delivery of services under health care reform, harbors the promise to develop a national system of care for the treatment of addiction that is both comprehensive and effective. Realizing this national promise, however, is fraught with uncertainty, arising from new regulations, financing, incentives and real-world implementation challenges, which all must be mastered to "put services on

Adolescent Criteria: Crosswalk of Levels 0.5 through IV

Criteria Dimensions	Levels of Service				
	Level 0.5 Early Intervention	Level I Outpatient Treatment	Level II Intensive Outpatient Treament	Level III Medically-Monitored Intensive Inpatient Treatment	Level IV Medically-Managed Intensive Inpatient Treatment
DIMENSION 1: Acute Intoxication and/or Withdrawal Potential	No withdrawal risk	No withdrawal risk	Manifests no overt symptoms of withdrawal risk	Risk of withdrawal syndrome is present but manageable in Level III	Severe withdrawal risk
DIMENSION 2: Biomedical Conditions and Complications	None or very stable	None or very stable	None or, if present, does not distract from addiction treatment; manageable at Level II	Require medical monitoring but not intensive treatment	Requires 24-hour medical and nursing care
DIMENSION 3: Emotional/Behavioral Conditions and Complications	None or very stable	None or manageable in an outpatient structured environment	Mild severity, with the potential to distract from recovery efforts	Moderate severity; requires a 24-hour structured setting	Severe problems require 24-hour psychiatric care, with concomitent addiction treatment
DIMENSION 4: Treatment Acceptance/ Resistance	Willing to understand how current use may affect personal goals	Willing to cooperate but needs motivating and monitoring strategies	Resistance high enough to require structured program but not so high as to render outpatient treatment ineffective	Resistance high despite negative consequences; needs intensive motivating strategies in a 24-hour structured setting	Problems in this dimension do not qualify patient for Level IV treatment
DIMENSION 5: Relapse/ Continued Use Potential	Needs understanding of, or skills to change, current use patterns	Able to maintain abstinence and recovery goals with minimal support	Intensification of addiction symptoms; high likelihood of relapse without close monitoring and support	Unable to control use despite active participation in less intensive care; needs 24-hour structure	Problems in this dimension do not qualify patient for Level IV treatment
DIMENSION 6: Recovery Environment	Social support system or significant others increase risk of personal conflict about alcohol/other drug use	Supportive recovery environment and/or patient has skills to cope	Environment unsupportive but, with structure or support, patient can cope	Environment dangerous for recovery, necessitating removal from the environment; logistical impediments to outpatient treatment	Problems in this dimension do not qualify patient for Level IV treatment

This overview of the Adolescent Admission Criteria is an approximate summary to illustrate the principal concepts and structure of the criteria.

Fig. 1. ASAM Patient Placement Criteria 2. (*Courtesy of* the American Society of Addiction Medicine, Chevy Chase, MD; with permission.)

the street." Additionally, Although integrating behavioral health care broadly into primary care theoretically improves overall health care quality, the actual delivery of care for specific substance use disorders remains complicated by intangibles, such as clinic culture, workforce competency, and the capacity of health information systems to meaningfully bridge programs.

We examine 3 case studies of clinically distinct subsets of patients to explore with higher resolution, how new systems of care for specific conditions may evolve under health care reform:

1. Those with unhealthy substance use who do not yet have addiction (persons with hazardous use)
2. Those with the highest recent rate of increase in mortality among substance use disorders (persons with opioid addiction)
3. Those with the highest overall incidence of substance-related deaths (persons with nicotine addiction).

In these examples, we (1) study the prevalent system of care for specific substance use disorders, (2) study variations on how health care reform may facilitate implementation of integrated services or the adoption of effective best-practices, and (3) provide recommendations to establish optimal systems of care.

Case Study: Expanding Preventive Care for the Person with Subsyndromal Unhealthy Alcohol and Other Drug Use

Historically, the emphasis of substance use–related intervention has been placed on either specialist treatment for the most severely affected individuals who have alcohol

Box 4
Screening and brief intervention: what is it?

Screening and Brief Intervention (SBI) is a set of therapeutic techniques and a clinical orientation toward preventive care designed to opportunistically assess individuals for possible unhealthy or dependent alcohol or drug use and to provide brief counseling with those who screen positive to assist them to reduce their harmful or hazardous use.

How does it work? Screening: Patients are screened for substance use with a brief, standardized tool. This tool should be simple enough to be administered by a wide range of health professionals. It should focus on the frequency and the quantity of substance use over a particular timeframe (generally 1 to 3 months). An online screening tool at www.alcoholscreening.org provides a demonstration of a basic screening tool, the Alcohol Use Disorder Identification Test (AUDIT). Brief Intervention: Brief intervention, which usually happens in a single session immediately after a positive screening test, consists of a motivational discussion with the patient. This discussion is focused on increasing the patient's understanding of the impact of substance use and motivating behavior change. If the patient needs more extensive treatment than a brief intervention, the provider can refer the patient to specialized substance use treatment. One mnemonic for organizing brief counseling, the 5As, includes:

1. **Assess:** Ask about/assess behavioral health risk(s) and factors affecting choice of behavior change goals/methods.
2. **Advise**: Give clear, specific, and personalized behavior change advice, including information about personal health harms and benefits.
3. **Agree:** Collaboratively select appropriate treatment goals and methods based on the patient's interest in and willingness to change the behavior.
4. **Assist:** Using behavior change techniques (self-help and/or counseling), aid the patient in achieving agreed-upon goals by acquiring the skills, confidence, and social/environmental supports for behavior change, supplemented with adjunctive medical treatments when appropriate.
5. **Arrange:** Schedule follow-up contacts (in person or by telephone) to provide ongoing assistance/support and to adjust the treatment plan as needed, including referral to more intensive or specialized treatment.

or other drug addiction[44,45] or on universal prevention strategies aimed at those who have never initiated use.[46] Until recently, little attention was paid to the large group of individuals who use alcohol and other drugs, are not dependent or addicted, and could successfully reduce their use through *early intervention.*[47] Providing universal screening combined with early intervention (screening and brief intervention [SBI]) to those demonstrating *hazardous levels of substance use*[48] leads to substantial reductions in the problems caused by hazardous substance use.[49,50]

For quite some time, research evidence has pointed to the effectiveness of opportunistic screening and brief counseling for alcohol and drug use (**Box 4**). In 1990, the IOM found that, "suitable methods of identification and readily learned brief intervention techniques with good evidence of efficacy are now available."[46] Fourteen years later, the US Preventive Services Task Force (USPTF) in 2004 recommended:

> *Screening and behavioral counseling for all adults, including pregnant women, in the primary care setting. . .can accurately identify those patients whose levels or patterns of alcohol consumption do not meet criteria for alcohol dependence, but place them at risk for increased morbidity or mortality and brief behavioral counseling interventions with follow-up produce small to moderate reductions in alcohol consumption that are sustained over 6 to 12 month periods or longer.*[51]

In 2009, the federal Centers for Medicare and Medicaid Services (CMS) initiated payment for Screening and Brief Intervention delivered to Medicare beneficiaries, and in 2011, CMS officially determined that evidence of the effectiveness and cost effectiveness of SBI as a population health intervention was sufficiently strong that Medicare would cover SBI as a 100% Medicare reimbursable preventive service. Medicare will reimburse primary care physicians and other primary care practitioners to deliver annual alcohol screening; for those that screen positive, Medicare will reimburse up to 4 brief, face-to-face, behavioral counseling interventions per year for beneficiaries, including pregnant women. Finally, beginning mid-2102, under the ACA, all insurers must cover preventive services without copayment or coinsurance. This includes SBI for alcohol and drug misuse, as well as screening and counseling for depression, tobacco, and obesity and other prevention activities.

The evidence for screening and brief intervention

A comprehensive analysis of 361 controlled clinical trials of treatments for alcohol use disorders[49] found the evidence of effectiveness of SBI found in 31 controlled clinical trials of SBI was the strongest of more than 40 alcohol treatment modalities studied. For example, 1 randomized study that assessed effects of SBI after a 48-month follow-up found that the intervention group had, relative to controls[52]:

- 20% reduction in emergency department visits
- 33% reduction in nonfatal injuries
- 37% fewer hospitalizations
- 46% fewer arrests
- 50% fewer motor vehicle crashes.

The intervention group experienced, relative to controls:

- 20% reduction in binge drinking episodes
- 10% reduction in drinks per week
- 4% reduction in those reporting no binge drinking episodes.

And the impact of SBI on mortality and health care service utilization may exceed reductions in alcohol consumption itself.[53] Project TREAT (Trial for Early Alcohol Treatment), a 4-year randomized clinical trial of SBI in 64 primary care clinics in Wisconsin found a $4.30 cost savings towing to reductions in future health care costs for each $1.00 invested in the intervention for nondependent adults who used alcohol at unhealthy levels.[54]

Another randomized, control trial of SBI among hospitalized trauma patients[55] found $3.81 in savings in health care use over 3 years for each $1.00 spent on the intervention. Similar positive returns on investment in SBI have been reported for inpatient medical/surgical patients[56] and specialty substance use treatment. Those interested in health reform and reducing health care costs should take heed of such compelling data.

Opportunities for improved screening through accreditation processes

SBI shows up frequently among the clinical practice standards for primary care and specialty physicians. A compilation of the practice guidelines and performance measures develop by professional societies that recommend routine, opportunistic SBI has been assembled by the Agency for Healthcare Research and Quality (AHRQ *www.guidelines.gov*). Prominent among these are the guidelines of the Committee on Trauma of theAmerican College of Surgeons, which is responsible for accrediting the nation's trauma centers. Recognizing that alcohol is a significant associated factor

and contributor to injury, the ACS has decreed that it is vital that trauma centers have a mechanism to identify patients who are problem drinkers. Since January 2007, level I and level II trauma centers must demonstrate to accreditors that they can use the teachable moment generated by the injury to implement effective primary prevention, for example, alcohol counseling for problem drinkers. In addition, level I centers must demonstrate the capability to provide an intervention for patients identified as problem drinkers. Such steps have been found to reduce trauma recidivism by 50%.

Similarly, in 2011, The Joint Commission (formerly, the Joint Commission on Accreditation of Healthcare Organizations) adopted a set of 4 substance use screening and intervention performance measures for use with virtually all hospital inpatients[57]:

1. Inpatient screening for unhealthy alcohol use
2. Brief interventions for patients who screen positive for unhealthy alcohol use
3. Initiation of treatment while inpatient or immediately on discharge for patients with substance use disorders
4. Assessing response to the intervention or referral within 30 days after discharge.

These recommendations are now under review for endorsement by the National Quality Forum. Additionally, in 2008, the Physician Consortium on Performance Improvement of the American Medical Association developed and approved performance measures addressing "Unhealthy Alcohol Use: Screening" and "Unhealthy Alcohol Use: Screening & Brief Counseling" among its performance measure set on Preventive Care and Screening.[58] Despite this high-level support for SBI, opportunities exist to increase the availability of SBI in general medical and specialty settings, facilitated by provisions of the ACA.

Primary care

In a nationally representative survey of general internal medicine physicians, family medicine physicians, obstetrician/gynecologists, and psychiatrists, Friedmann and his colleagues (2000) found that only 13% used standardized alcohol screening instruments. A survey of primary care patients with diagnosable substance use disorders found that more than half reported their physician did nothing about their substance abuse; 43% said their physicians never diagnosed their condition.[54] Only 10% to 20% of patients in primary care settings are screened for alcohol misuse,[59] making it one of the least commonly performed of the USPTF-recommended clinical preventive services.[60] In the absence of screening, clinicians cannot reliably identify those with alcohol misuse.[61] Millstein and Arik[62] found that between 23% and 43% of pediatricians and 14% to 27% of family physicians ask adolescents whether they use alcohol, but only 17% inquire more fully and systematically about alcohol use through a standardized screening instrument.

Emergency physicians and trauma surgeons

A nationally representative study of the quality of care delivered conducted by McGlynn and her colleagues at RAND[63] found that only 15.5% of hospitalized trauma or hepatitis patients have any indication in their medical records that alcohol or drug use was assessed, despite evidence that 40% to 60% of trauma admissions are caused by alcohol or drug use. In a self-report survey of emergency physicians, O'Rourke and colleagues[64] found that 29% assert that they routinely ask about alcohol quantity and frequency. A survey of trauma surgeons[65] reported that more than two-thirds of respondents asserted that they frequently check a blood alcohol concentration, with one-third of the group reporting that they always do. However,

only one-fourth reported use of formal screening questionnaires. Just more than one-third (36%) reported that their trauma center was currently performing brief interventions with patients with alcohol problems.

General medical, surgical, and orthopedic inpatients

At least 2.5 million of the 35 million people admitted to US hospitals annually have serious alcohol and drug problems that go untreated. Opportunistic screening of medical/surgical inpatients by research teams finds between 20% or more of hospitalized adults drinking at moderate to high risk levels.[66] Fewer than half have any indication in their medical records that drinking or drug use was assessed, and only about half of hospitalized patients the research teams determine to have a diagnosable substance use disorder have any notation in their records. Only 1 in 5 patients with an alcohol use disorder received any inpatient alcohol intervention, and less than one-fourth were referred for alcohol treatment at discharge.[67]

Taken as a whole, these studies substantiate the meta-analysis conducted by The Partnership for Prevention, which ranked the clinical effectiveness and cost effectiveness of SBI among 1 of the top 5 public health prevention activities by the USPTF.[7,68] Although the ACA eliminates copayments for screening and brief intervention, clinical leaders must work diligently to train staff and modify clinic culture to assure adoption of SBI as an essential service in reformed health care systems.

Case Study: Expanding Behavioral Health Integration for the Person with Opioid Addiction

Persons in America with opioid addiction receive professional interventions for their heroin or prescription opioid problems—but not often enough and generally not using the modalities and durations of care that can produce the best clinical results. The rate of increase in opioid overdose deaths is accepted by the Centers for Disease Control and Prevention and others as a true epidemic.[69] In 2011, prescription drugs were the second-most abused category of drugs in the United States after marijuana.[70] Recently, annual prescription drug deaths in America reached almost 40,000, exceeding the annual deaths from motor vehicle crashes.[71] Although responsible prescribing and use of opioids for pain is a rational approach to this crisis, the need to treat opioid addiction is overlooked.[72] Opioid addiction is virtually never addressed in the general medical care setting, and treatment of persons with opioid addiction using maintenance pharmacotherapies is not even embraced in many specialty addiction treatment clinics.

Methadone maintenance treatment

The primary medical approach offered in the United States for chronic opiate addiction since the Narcotics Treatment Act of 1974 has been methadone maintenance treatment (MMT). The Narcotics Treatment Act of 1974 established the highly regulated system of specialty licensed facilities called Opioid Treatment Programs (OTPs), which are largely sequestered from mainstream medical care—and often considered as “last resort” by patients and practitioners. Payment for OTP care is usually not included in private health insurance plans, but some states allow Federal Substance Abuse Treatment Block Grant funds to be used for methadone maintenance treatment. MMT requires high levels of interdisciplinary care, with daily observed dosing by a nurse or pharmacist, mandated counseling, and medical monitoring, including random toxicology tests. In 1997, the National Institutes of Health declared MMT the most successful treatment option for heroin addiction of its time, calling for increased access and reduced regulatory restraints on methadone

maintenance.[73] Since then, dramatic changes in patterns of opioid use, especially increases in the nonmedical use of prescription opioids, even in areas of the country where heroin use is rare, have underscored the need for new treatment alternatives for patients with opioid addiction. Epidemics of human immunodeficiency virus (HIV) and hepatitis C have furthered the public health mandate demanding that improved systems of care be implemented to reduce the impact of injection drug use, as is seen in many persons with heroin addiction, on infectious disease incidence in American communities, large and small.[74]

Throughout the 1990s, successful pilots of office-based methadone treatment proved equally as effective in reducing heroin use compared with OTP care, with positive experiences noted by both patients and providers.[75–77] Based on such pilots, changes in Federal Regulations in 2001 allowed monthly dispensing of methadone from OTPs; stable patients who are compliant with treatment can receive 1 observed dose per month at the OTP, taking home the remainder of the month's doses for unsupervised use. For these patients, the components of care for opioid dependence are similar to the those of the office-based treatment for chronic intractable pain, including use of opioid contracts or patient agreements, random call-back for medication monitoring ("pill counts") and toxicology tests, and psychosocial services as needed. Reimbursement for these treatment alternatives are different, and levels of oversight, including Drug Enforcement Agency rules, state regulations, and unique accreditation requirements, remain much higher for the OTP than for office-based physician who prescribes opioids for the treatment of pain or the treatment of addiction.

Office-based opioid treatment

Since 2001, office-based maintenance with sublingual buprenorphine/naloxone has been available, with fewer restrictions than those for methadone maintenance OTPs.[78] Contrary to OTP care, buprenorphine treatment under the Drug Abuse Treatment Act of 2000 does not require observed dosing and can be prescribed in a general medical office setting. In most locations, maintenance treatment with buprenorphine and maintenance treatment with methadone are in different venues and not equitably available. For many patients, the cost of sublingual buprenorphine preparations is prohibitive.

Under SAMHSA's strategy to address the wave of prescription drug abuse, office-based buprenorphine maintenance expanded in the last 10 years. The initial model for medication-assisted therapy utilizing buprenorphine, based on early evidence from US clinical trials, included an intense induction phase, which required observation over several hours, and was inconsistent with typical office-based practice scheduling patterns.[79] Observed induction was seen as a patient hurdle—patients were required to have withdrawal symptoms before induction—and scheduling for busy clinicians was difficult. Since then, more flexible induction algorithms have emerged, including home induction under various levels of clinical supervision.[80] Following induction, the need for frequent visits necessary to achieve stabilization still poses challenges; however, once patients are stabilized, treatment structure and patient agreements related to use of buprenorphine for opioid dependence can be similar to opioid medication agreements used in pain management. Bringing addiction care into primary care via office-based opioid treatment is an excellent example of the "colocation" of addiction care into general medical care that will become more prevalent with integration of addiction and general medical care via health care reform. As maintenance treatment with buprenorphine moves into general medical service delivery systems, a new challenge is to assure that patients will receive

needed psychosocial treatments so that medication-assisted treatment of opioid addiction through office-based general medical physicians does not become medication-only treatment.

Relationship of opioid treatment to medical homes

Because of the prevalence of high medical comorbidity associated with opioid addiction (hepatitis C, HIV, chronic pain), there is great support under the ACA for the integration of medication-assisted therapy for opioid addiction into the primary care medical home, particularly for populations with high comorbid risks.[81] Protocols to coordinate office-based medication-assisted treatment include the association of buprenorphine "induction centers," which admit, evaluate, and stabilize patients on buprenorphine before transfer back to primary care for ongoing maintenance. Other models include integrating knowledgeable clinicians, who are capable of providing on-site buprenorphine maintenance, counseling, or drug testing, into the medical home team.[80] Lastly, the most common model remains primary care coordination with a "medical neighbor" that offers addiction treatment.

In the case of methadone maintenance at OTPs, several considerations make it reasonable to have OTPs themselves become medical homes (another example of "reverse colocation"). These clinics are especially effective in providing essential medical services to intravenous drug users, individuals who are homeless, or those with severe psychiatric impairment. Patients with these conditions often prioritize receiving their daily methadone dose ahead of receiving medical care. The presence of nurses, physicians, and counselors at embedded medical services in OTP clinics facilitates these patients obtaining medications for infections, chronic medical disorders, or psychiatric conditions[82] and provides a reliable setting to obtain blood tests, glucose checks, blood pressure monitoring—all under supervision at the methadone dosing window. Some OTPs even provide chronic medical care, for example, interferon therapy for needle-related illnesses such as hepatitis C or HIV. In these clinics, OTP-based individual and group counseling not only helps provide basic addiction recovery skills but can reinforce medical health, safety, and medication adherence.[83]

To make this level of integration commonplace, regulations impacting federal and state reimbursement for OTPs must allow greater flexibility to blend and braid funding to achieve optimally integrated medical and OTP care. Similarly, public policy directed by state health insurance exchanges must require the incorporation of methadone and other medication-assisted therapies into the essential health benefits of privately insured and Medicaid-eligible individuals, as well as require health plans to provide opioids-dependent patients with all medically necessary services to manage their many comorbid conditions. As is the case for all cases of addiction, the best results for opioid addiction derive from offering patients both medications and counseling, integrated and individualized to the patient's needs.[9] Maintenance therapies with opioid agonists (methadone and buprenorphine) or antagonists (naltrexone) lead to reduced craving and preoccupation and effectively prevent opioid overdose. The most important aspects of the ACA with respect to opioid addiction treatment involve the requirement that health plans abide by the provisions of the Mental Health Parity and Addiction Equity Act and not establish arbitrary a priori limitations on authorizations for referral to methadone maintenance treatment or formulary exclusions for methadone, buprenorphine, or long-acting injectable naltrexone.

Case Study: Expanding Chronic Care Management for the Person with Nicotine Addiction

Persons in America with nicotine (tobacco) addiction receive professional interventions for smoking and addiction to smokeless tobacco—but not often enough and not using the modalities and durations of care that can produce the best clinical results. Tobacco addiction is the leading cause of increased morbidity and mortality in the United States and the second most common cause of morbidity and mortality in the world. Almost 50% of smokers will die from a chronic medical disease caused or worsened by tobacco use.[84] Nicotine addiction negatively impacts the prognosis and treatment of most medical disorders, other addictions, mental illnesses, and common health problems such as obesity. Health care reform must address tobacco and expand access to the many excellent effective evidence-based pharmacotherapy and counseling approaches and guidelines, which must be better integrated into all health care settings and practices. In recent years, more individuals are receiving these interventions; however, most do not receive the full range of both modalities or durations of care that can produce the best clinical results, and some continue to receive no treatment.[85–88]

Despite numerous best practice examples from hospitals, health care networks, and outpatient practices,[89,90] there is continued need to train clinicians in all settings, disciplines, and specialties on how to better screen, assess, document treatment plans, refer for postdischarge treatment and community resources, and integrate tobacco addiction treatment and medications into provider's clinical practice. Currently, there are seven FDA-approved medications, including 5 nicotine replacements (patch, gum, spray, lozenge, and inhaler)—providing patient and provider education on use of these is important.[91] There are also effective evidence-based psychosocial treatments, including cognitive behavioral therapy and educational/motivational interventions for higher or lower motivated individuals.[92] Both pharmacotherapy and counseling achieve good outcomes, and better outcomes when both approaches are combined. Effective community-based interventions are also available, including quit lines (phone counseling often with medication support; 1-800-QUIT-NOW), internet-based counseling (eg, *www.becomeanex.org*), mobile technology applications, and community-based peer support such as Nicotine Anonymous (NicA). Of note, NicA has limited availability and even less research evaluation compared with other 12-step programs such as Alcoholics Anonymous or Narcotics Anonymous; however, 12-step facilitation has been shown to be effective for other addictions.[86,93]

Clinical care systems most effective in integrating tobacco addiction treatment utilize combined staff training with organizational change strategies by modifying the electronic health record to include reminders and clinical prompts, incentivizing or monitoring clinical practices, promoting employee and staff recovery from tobacco addiction, and developing tobacco-free campuses for both buildings and grounds.[94] Outstanding resources are available to help guide systems to better address tobacco and become tobacco free, including the following: Helping Patients Quit: Implementing The Joint Commission Tobacco Measure Set in Your Hospital (Partnership for Prevention)[89] Destination Tobacco-Free: A Practical Tool for Hospitals and Health Systems (Washington Health Foundation)[90] Becoming Tobacco-Free, A Guide for Healthcare Organizations (Maine Health).[95]

Changing incentives to better address tobacco, driven by the ACA, the 2011 Joint Commission on Tobacco Use and Cessation Measures, and improved reimbursement by the Centers for Medicare & Medicaid Services (CMS), will encourage and create incentives for private and public health care systems to implement sustainable

tobacco addiction treatment programs. Health care reform policies, including electronic health record "meaningful use" requirements specific to tobacco use assessment, treatment, and follow-up, will encourage the development of registries and primary care network model practices for tobacco addiction. The Veterans Affairs Health Care system is an outstanding example of an Electronic Health Record system that includes many cues for tobacco assessment and treatment. The decision by CMS to improve Medicare and Medicaid reimbursements for tobacco counseling will financially incentivize programs of behavioral counseling and medication therapy for tobacco addiction. Soon, CMS may even align its tobacco measurements with the Joint Commission through the Inpatient Prospective Payment System. Yet, while Medicare provides medications and counseling coverage, most state Medicaid programs provide less than full treatment except for pregnant women, who are eligible for comprehensive tobacco addiction treatment.[90,96] Perhaps, specific ACA incentives to promote prevention services, which may include tobacco addiction treatment as prevention for many other medical diseases, may advance this cause.[97]

In 2011, Rigotti proposed that all tobacco care management systems include routine assessment of tobacco use, the development of tobacco user registries, provision of comprehensive treatment, "direct to smoker" outreach as supplement to visit-based care, centrally coordinated care across networks and plans, and requirements for reporting tobacco outcomes as proposed in "meaningful use" incentives.[96] This type of plan is within reach and requires organizational change, staff training, eliminating copayments for tobacco treatment, employee and staff recovery from nicotine addiction, and system incentives and monitoring. These are all possible under the ACA and are needed now.

EMERGING TECHNOLOGY AND INFORMATION MANAGEMENT IN ADDICTION TREATMENT

Supporting all the aforementioned advances in clinical care are parallel advances in health information technology, expanded data collection systems, and the use of computer-based treatments. Adoption of these new technology-based systems and therapies are necessary as an effective and cost-efficient means to directly support the systemic change goals promoted by health care reform. When addiction treatment is driven by fully integrated electronic medical records; automated utilizing computer-based or internet-based screening, treatment, or continuing care monitoring; and measured with comprehensive population-based utilization and outcomes data, then overall quality, safety, and efficiency improves. Less well understood, however, are the indirect effects of new technology on systemic change, including its profound impact on the patient and provider interface—the "doctor–patient" relationship.

Impact of Connectivity

When persons in America with addiction do receive care, it is mostly in specialty clinics and treatment centers that are technologically ill equipped to adopt electronic health record (EHR) systems or e-prescribing, or integrate into larger EHR networks alongside general medical care.[98] This disparity is exacerbated by the Health Information Technology for Economic and Clinical Health Act of 2009 (HITECH), which incentivized the expansion EHR systems through specific Medicare and Medicaid payments upon demonstration of "meaningful use of certified EHR technology"[99] but specifically excluded "meaningful use" incentives for providers of mental health and addiction treatment, many of whom are small, independent, nonprofit agencies.[100,101] Additionally, federal regulations intended to support the ACA, promote a national health information technology infrastructure more suitable

for traditional medical or surgical delivery than for clinics that provide care to persons with addiction.[102] It remains to be seen whether recently introduced federal legislation or the newly formed state Health Information Exchanges—which are established coincident with state Health Insurance Exchanges to provide the framework through which health information from one health information system platform can be shared with another health information system—can facilitate the incorporation of behavioral health information into general medical care.

The practical aspects of providing integrated behavioral health information are obvious: emergency departments, primary care physicians, and other physicians can access health information regardless of the location where health care services are obtained. Dramatic improvements in health care quality will result from improved medical decision making and medical cost savings through reductions in duplicate diagnostic and laboratory tests and reduced medical errors.[100] Applied to substance use disorders treatment, the sharing of integrated medical information sounds promising. Patients with substance use disorders, who appear in emergency departments or other crisis clinics requesting refills of opioid pain medications, can be quickly triaged to appropriate care. Similarly, patients on the alcoholism treatment medication, disulfiram, who present with elevated liver functions, may be appropriately assessed by primary care providers. Before these improvements in integration are realized, however, current barriers to health information sharing must be overcome.

Chapter 42 Part 2 of the Code of Federal Regulations (42CFR) contains statutory language that protects and prohibits the release of any information obtained in the course of treatment by substance abuse treatment programs. Without prior written authorization, exemption from this confidentiality standard is permitted only under specific circumstances: in response to a court order, in a bona fide medical emergency, or to a qualified service organization that provides contracted services (eg, billing, lab collection) to the treatment program. In 2011, the Substance Abuse and Mental Health Services Administration issued a clarifying FAQ (Frequently Asked Questions) memo to assist health providers in navigating 42CFR confidentiality regulations under health care reform.[102] Nonetheless, clinicians and consumer advocates remain divided on the best means to handle these confidentiality standards during the expansion of electronic medical record keeping and health information sharing. Where one group sees improved quality for addiction care, the other sees potential for inappropriate rerelease of medical and addiction treatment information, sometimes resulting in adverse outcomes associated with discrimination, including loss of insurability (eg, life insurance), referral to the criminal justice (for using illegal drugs or participating in illegal activities), or loss of employment.[103–105] These concerns may not abate until broader national electronic information systems and standards are established to protect not only health information, but also financial and personal data as well.

Utilizing New Technology-Based Treatments

In 2012, 70 million persons utilized internet-based social media including chat rooms, personal blogs, and social network sites, reflecting major changes in nationwide patterns of social interaction. Despite this move toward greater online connectivity, the addiction treatment industry has been historically slow to adopt new technologies.[106,107] Treatment programs typically utilize face-to-face interventions based on therapeutic techniques developed in the 1970s during the heyday of 28-day “Minnesota Model” programs.[108] Overlooked are opportunities to engage new generations of young people with alcohol or other drug addiction

through online screening, social network–based peer recovery, and online continuing care or monitoring programs.[109] Even remote telepsychiatry, which has broad mainstream support under ACA provisions to bring behavioral health care to rural or underserved areas, has largely been limited to general psychiatry and not implemented for addiction psychiatry, even though remote video-based assessment, substance abuse counseling, and medication-assisted treatment are quite feasible. If reimbursement mechanisms or the business case for utilizing these new innovations becomes more accessible, then the addiction treatment system has the opportunity to lead general health care with the development of programs that promote online recovery and wellness as well as establish whole communities of peers and providers dedicated to internet-assisted sobriety and health.

Moving Toward Accountable Outcomes

Underpinning much of our national reforms to our health care system are global concerns that the American health care system is inefficient. There is the concern that our health system should pay for results more than for processes, and should pay for outcomes that are generated rather than services that are rendered.[110] As general health care pushes toward improving quality, developing definitions of and measurements of quality, evaluating of the performance of systems and individual practitioners, comparing performance to "best practices" or benchmarks of "community standards of practice," insisting that services be "evidence-based," and requiring that measurement and metrics become more central to the health care enterprise, addiction medicine as a field must also improve its definitions of performance and quality.

Efforts are now underway to define addiction treatment outcomes and performance measures for patients, systems, and providers, but the hurdles are challenging.[111] For persons with addiction who are undergoing treatment, clinical measures of improvement are still not standard. Although the Addiction Severity Index[112] has been adopted widely, it is cumbersome to administer, even in its computerized form. Promising new measures include the Brief Addiction Monitor, which is undergoing pilot testing nationally by the Veterans Health Administration but still awaiting validation.[113] Regardless of the tool, health plans, purchasers, and agencies like the National Committee for Quality Assurance are demanding standardized outcomes, not just with systemic measures that compare how one health care delivery system performs with all the patients with addiction with others, but also for individual clinicians to see how well they perform when they encounter patients with addiction. As health reform moves forward, addiction treatment will not be able to move into "mainstream medicine" without adhering to accountability processes that apply to the rest of medical care. Addiction professionals must collect data on their clinical performance and clinical outcomes and become comfortable having these data publicly reported through public domain Websites, just like hospital data, and individual physician data are now collected regarding surgical, cardiology, and oncology care.

SUMMARY

This article outlined ways in which persons with addiction are currently underserved by our current health care system. However, with the coming broad scale reforms to our health care system, the access to and availability of high-quality care for substance use disorders will increase.[18] Addiction treatments will continue to be offered through traditional substance abuse care systems, but these will be more integrated with primary care, and less separated as treatment facilities leverage opportunities to blend services, financing mechanisms, and health information

Box 5
Essential recommendations to improve care for substance use disorders under health care reform

Persons in America with substance use disorders are underserved: 20.9 million people in need of treatment for an illicit drug or alcohol use problem did not receive it.[1] The following are essential recommendations to improve the care for substance use disorders under health care reform:

Coverage: Required expansion and protections of coverage for substance use disorders must comply with the Mental Health Parity and Addiction Equity Act to redress decades-old imbalance resulting from reliance on public funding to pay for US addiction treatment.[17]

Enrollment: State insurance exchanges and health plans must actively enroll and repatriate individuals with substance use disorders to reduce the preventable disease burden related to medical disenfranchisement.[22,13]

Benefits: Essential health benefits must support medically necessary treatment to assure optimal initiation, engagement, stabilization, and recovery from substance use disorders across the lifespan (including adolescents and adults). These benefits must minimally include[40–42]:

- Substance use prevention and early intervention activities, including universal screening and brief intervention in all clinical settings.
- At least 3 months outpatient or residential treatment to achieve psychosocial stabilization per episode.
- At least 3 years of continuing care in primary care or specialty outpatient settings.
- Medical detoxification, hospitalization, and care for medical and psychiatric comorbidities as needed.
- Medication-assisted therapy, including anticraving, anti-addiction, or opioid maintenance medications.
- Random drug toxicology testing.
- Placement in care that is determined by industry-accepted tools such as the American Society of Addiction Medicine's Patient Placement Criteria.[43]

Integration: Health researchers and administrators must collaboratively strive to understand the complex systemic, provider, and cultural changes required to effectively adopt and achieve maximal benefits through behavioral health integration. Electronic privacy and confidentiality regulations must allow medically necessary sharing of health information.

Treatment: Practice guidelines and performance measures for Screening and Brief Intervention must be universally implemented across health systems[68]; Tobacco care management systems must include routine assessment of tobacco use; develop tobacco user registries; provide comprehensive treatment, "direct to smoker" outreach, and centrally coordinated care across networks and plans; and report tobacco outcomes.[94] Regulations impacting federal and state reimbursement for opioid treatment programs must permit flexible funding to integrate medical and OTP care. Medication assisted therapy for opioid dependence should be an essential health insurance benefit. Reimbursement strategies must encourage expansion of new technology to permit remote or online access to services for substance use disorders.

Performance: Addiction professionals must collect and report data on their clinical performance and clinical outcomes through public domain websites.

Adapted from California Society of Addiction Medicine, Expansion of Substance Use Disorder Treatment within Reach through Health Care Reform, April 2011. San Francisco, CA. Available at: http://www.csam-asam.org/pdf/misc/CSAM_HCR.pdf.

systems under federally driven incentive programs.[29] To further these reforms, vigilance will be needed by consumers, clinicians, and policy makers to assure that the unmet treatment needs of individuals with addiction are addressed. Embedded in this article are essential recommendations to facilitate the improvement of care for substance use disorders under health care reform (**Box 5**).

Ultimately, as addiction care acquires more of the "look and feel" of mainstream medicine, it is important to be mindful of preexisting trends in health care delivery overall that are reflected in recent health reform legislation. Within the world of addiction care, clinicians must move beyond their self-imposed "stigmatization" and sequestration of specialty addiction treatment. The problem for addiction care, as it becomes more "mainstream," is to not comfortably feel that general slogans like "Treatment Works," as promoted by Substance Abuse and Mental Health Services Administration's Center for Substance Abuse Treatment during its annual Recovery Month celebrations, will meet the expectations of stakeholders outside the specialty addiction treatment community.[114] Rather, the problem is to show exactly *how* addiction treatment works, and to what extent it works—there have to be metrics showing changes in symptom level or functional outcome, changes in health care utilization, improvements in workplace attendance and productivity, or other measures. At minimum, clinicians will be required to demonstrate that their new systems of care and future clinical activity are in conformance with overall standards of "best practice" in health care.

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