

By Michael A. Hoge, Gail W. Stuart, John Morris, Michael T. Flaherty, Manuel Paris Jr., and Eric Goplerud

ANALYSIS & COMMENTARY

Mental Health And Addiction Workforce Development: Federal Leadership Is Needed To Address The Growing Crisis

DOI: 10.1377/hlthaff.2013.0541
HEALTH AFFAIRS 32,
NO. 11 (2013): 2005–2012
©2013 Project HOPE—
The People-to-People Health
Foundation, Inc.

ABSTRACT The mental health and addiction workforce has long been plagued by shortages, high turnover, a lack of diversity, and concerns about its effectiveness. This article presents a framework to guide workforce policy and practice, emphasizing the need to train other health care providers as well as individuals in recovery to address behavioral health needs; strengthen recruitment, retention, and training of specialist behavioral health providers; and improve the financial and technical assistance infrastructure to better support and sustain the workforce. The pressing challenge is to scale up existing plans and strategies and to implement them in ways that have a meaningful impact on the size and effectiveness of the workforce. The aging and increasing diversity of the US population, combined with the expanded access to services that will be created by health reform, make it imperative to take immediate action.

Michael A. Hoge (michael.hoge@yale.edu) is a professor of psychiatry at the Yale School of Medicine, in New Haven, Connecticut.

Gail W. Stuart is a professor in and dean of the College of Nursing, Medical University of South Carolina, in Charleston.

John Morris is executive director of the Annapolis Coalition on the Behavioral Health Workforce, in Columbia, South Carolina.

Michael T. Flaherty is a clinical psychologist in Murrysville, Pennsylvania, and a founder of the Institute for Research, Education, and Training in the Addictions.

Manuel Paris Jr. is an associate professor of psychiatry at the Yale School of Medicine.

Eric Goplerud is senior vice president for substance abuse, mental health, and criminal justice studies at NORC at the University of Chicago, in Bethesda, Maryland.

Mental health and substance use conditions are major contributors to the overall burden of disease around the world.¹ Of the six leading causes of years lived with disability, the following four are mental health or substance use conditions: depression, alcohol use disorders, schizophrenia, and bipolar disorder. Commonly referred to as behavioral health conditions, they also are inextricably linked to physical illnesses, serving as risk factors and often impeding adherence to the treatment of those illnesses.²

In the United States at the beginning of the current decade, about forty-five million people, or one in five adults, experienced a mental condition. Substance use conditions affected about twenty-two million people age thirteen or older, with the majority of those people being dependent on or abusing alcohol.³ Prescription drug

abuse has been described by the Centers for Disease Control and Prevention as a public health epidemic.⁴

Unfortunately, the same data reveal that many people in need of treatment never receive it. Only 39 percent of those with mental health conditions obtained care.³ The situation was far worse for those with substance use conditions: Only 10.8 percent of those people received treatment.⁵

Many factors are cited as sources of this “treatment gap,” including the stigma and discrimination associated with these conditions, lack of health care coverage, insufficient services and linkages among services, and an inadequate behavioral health care workforce.^{6,7} The workforce’s insufficient size, frequent turnover, relatively low compensation, minimal diversity, and limited competence in evidence-based treatment have all been cause for concern.⁸

This article examines issues surrounding the supply of and demand for the mental health and

addiction workforce. Additionally, it examines three factors that have implications for that workforce nationally: the aging of the US population, the increasing racial and cultural diversity of that population, and health care reform. The article outlines a framework to guide policy regarding health workforce development. We argue that federal leadership and action are needed to scale up well-defined plans and strategies to address the growing workforce crisis.

Defining The Workforce Shortage

There are no systematically collected and uniform data on the US mental health and addiction workforce.⁸ Information on its size, demographic characteristics, geographic distribution, and specialties can best be understood by piecing together disparate information from professional associations, licensing and certification boards, and scattered state and federal sources. Despite the absence of solid data, there is a longstanding and commonly held belief that the behavioral health workforce supply is inadequate.

Multiple factors drive this belief. Foremost among these is the fact that many health care employers report high turnover rates among behavioral health workers and difficulty in filling vacant positions.⁹ It is particularly challenging to recruit physicians and nurses into the behavioral health field. And just as challenging is recruiting clinicians who specialize in the treatment of children, adolescents, older adults, and people with co-occurring mental and substance use conditions.¹⁰⁻¹²

For example, according to the estimates in one analysis, in 2020 there will be 4,312 fewer child and adolescent psychiatrists than will be needed.¹³ According to the same analysis, only six states have an adequate supply of child and adolescent psychiatrists, and people living in rural areas or in poverty have less access to those professionals than do people who are better off or who live in more densely populated areas.¹³

The consensus that a behavioral health workforce shortage exists has been further bolstered by the fact that people seeking services frequently struggle to obtain timely access to a qualified provider.¹⁰ Advocacy organizations and the media have noted the refusal of many private practitioners to accept insurance and their insistence on payment from the patient. This problem is unlikely to be remedied by recent health care reforms that expand coverage but do not mandate providers' participation.¹⁴

Access issues are complicated by the uneven geographic distribution of the behavioral health workforce, which is heavily concentrated in urban areas. Notably, 85 percent of federally des-

ignated mental health professional shortage areas are in rural locations.⁸

A recent and extensive analysis funded by the Health Resources and Services Administration found that 77 percent of US counties had a severe shortage of prescribers (psychiatrists), and almost one in five counties had an unmet need for nonprescribers (psychologists, advanced-practice psychiatric nurses, social workers, licensed professional counselors, and marriage and family therapists). Rural counties and those with lower per capita incomes had greater shortages than more densely populated counties and those whose residents were better off.¹⁵

In a recent survey, 49 percent of clinical directors in agencies specializing in the treatment of substance use conditions acknowledged that they had difficulty filling open positions, primarily because of a lack of qualified applicants.⁹ Annual turnover has been high: It is estimated to be 18.5 percent nationally⁹ but exceeds 40 percent in some reports.¹⁰ This high turnover rate has been attributed to the fact that addiction counselors move among vacant positions in the field or leave the field altogether because of its low wages and benefits and heavy caseloads, as well as the stigma associated with both having addictions and working with people who do.⁹

The Bureau of Labor Statistics projects a 27 percent increase in the number of jobs for counselors specializing in substance abuse and behavioral disorders between 2010 and 2018. That projection is based on the assumption that more people will seek treatment and that drug offenders will increasingly be required to get treatment rather than being sentenced to jail.¹⁶

The Impact Of Changing Demographics And Reforms

THE AGING POPULATION The Census Bureau projects that from 2010 to 2030 the number of adults age sixty-five or older will increase from 12 percent to 20 percent of the US population.¹⁷ A recent Institute of Medicine report on the mental health and addiction workforce for older adults estimated that in 2010, 5.6–8.0 million adults age sixty-five or older had one or more of twenty-seven mental or substance use conditions that are experienced by older adults—which include anxiety, depressive, and personality disorders; alcohol and drug dependence and abuse; and complicated grief.¹¹ These conditions were associated with a broad range of negative effects, including emotional distress, functional disability, declines in physical health, increased hospitalization and nursing home placement, greater mortality and suicide, decreased quality of life, and increased cost.

A consensus has emerged that the mental health and addiction workforce must be competent to treat people from diverse cultures.

Not only does the aging US population require a large volume of services, but providing care to older adults with behavioral health problems requires special knowledge and skills. For example, aging has an impact on the metabolism of alcohol, drugs, and prescription medications. And because older adults are more likely than younger people to have cognitive and functional impairments, it may be more difficult both to diagnose and to manage behavioral health problems in older adults. In addition, the feelings of loss and grief that many older adults experience affect their health in ways that caregivers must be able to recognize and manage.¹¹

The Institute of Medicine concluded that there is a major shortfall in professionals who are adequately trained and actively engaged in meeting the behavioral health needs of older adults.¹¹ There are fewer than 1,800 geriatric psychiatrists in the United States, and the number is declining.¹⁸ It is projected that by 2030 there will be only one geriatric psychiatrist for every 6,000 older Americans with mental and substance use conditions.¹⁸ Just 1 percent of the nation's advanced-practice registered nurses are certified and working full time in gerontology, and just 4 percent are certified in mental health and addictions. Similarly, only 4.2 percent of licensed members of the American Psychological Association identified geropsychology as a focus.¹¹

INCREASING RACIAL AND CULTURAL DIVERSITY

Another major demographic shift with implications for behavioral health workforce development is the projected increase in diversity in the US population. Members of racial and ethnic minority groups made up 37 percent of the population in 2010—a proportion expected to grow to 57 percent by 2060.¹⁹ Minority status is associated with higher levels of poverty, unemployment, and homelessness as well as with lower levels of education, health insurance coverage,

and proficiency in English. In turn, these characteristics are related to difficulty in accessing and receiving high-quality care, which adversely affects overall behavioral health.^{20,21}

For example, Benjamin Le Cook and colleagues²² examined the data from the Medical Expenditure Panel Survey between 2004 and 2009 and found that 40 percent of whites with a probable need for mental health care initiated treatment, as compared to 27 percent of Hispanics and 24 percent of African Americans. And members of minority groups have significantly higher mortality rates from conditions related to substance use.²³

In contrast to the increasingly diverse population needing behavioral health services, there is a striking lack of diversity in the behavioral health workforce. Only 6.2 percent of psychologists, 5.6 percent of advanced-practice psychiatric nurses, 12.6 percent of social workers, and 21.3 percent of psychiatrists are members of minority groups.²⁴ Non-Hispanic whites constitute 70–90 percent of the addiction treatment workforce.²⁵

The low rates of diversity in the workforce are troubling since evidence suggests that minority health professionals are more likely than others to serve people of color.²⁵ In addition, health care consumers who share a culture and race with a provider develop a stronger therapeutic alliance and have higher treatment retention rates, compared to consumers who are from a different culture and race than their provider.^{26,27}

Of course, even if a provider shares a race or culture with a client, the two may still differ in their awareness or beliefs about the impact of race or culture on health and health care. In any case, matching providers and clients by race or culture is often not possible. Thus, a strong consensus has emerged among federal and state policy makers and educators that there must be equitable access to culturally relevant care²⁸ and that the entire mental health and addiction workforce must be competent to treat people from diverse cultures. Achieving these goals means that educators and supervisors must help providers develop a sensitivity to cultural differences in perceptions about illness, treatment, and recovery, as well as the ability to adapt care to the personal goals, cultural beliefs, and primary language of each client. Although cultural competence training has been made a high priority, data on its impact are largely lacking.²⁹

HEALTH CARE REFORM Another major force shaping behavioral health workforce needs is the Affordable Care Act. Passage of the act led many policy makers to conclude that demand for behavioral health services and professionals to provide them would increase dramatically. A re-

cent report from the Department of Health and Human Services³⁰ projected that the act will expand mental health and substance abuse disorder benefits for sixty-two million Americans. A previous report from the Substance Abuse and Mental Health Services Administration³¹ projected that every 10 percent increase in the demand for treatment would result in the need for 6,800 additional counselors for substance abuse alone. As a result, the projected increase in access to care is likely to have major, as yet uncertain, implications for workforce demand.

The Affordable Care Act includes provisions designed to further develop this workforce through mechanisms such as grants for education, training, and loan repayment, with a specific focus on social workers, psychologists, and child and adolescent mental health care providers. Physicians and nurses are not eligible for these grants. However, the funds authorized for many of these provisions are relatively small, and funding has not been appropriated for all of them. In addition, implementation of the act has already been marked by controversy and complexities that diminish its potential impact.

Policy Recommendations

The mental health and addiction fields have undertaken numerous efforts to examine these workforce issues and devise strategies to address them.^{9,32} The most comprehensive effort, led by the Annapolis Coalition on the Behavioral Health Workforce, involved more than 5,000 stakeholders in the development of a national action plan funded by the Substance Abuse and Mental Health Services Administration in response to concerns expressed by provider

and professional associations, consumer advocates, educators, and policy makers. The final report, available online, outlines hundreds of specific recommended actions to be taken by different groups of stakeholders.⁸ (The authors of this article helped create and manage the Annapolis Coalition during the past decade.)

The Annapolis Framework, which was derived from the action plan, initially focused on the specialist behavioral health workforce. Recent initiatives have expanded it to include integrated behavioral health and primary care. As shown in Exhibit 1 and discussed below, the framework outlines nine strategic goals, which are the focus of the recommendations in this article. The goals are focused on broadening the concept of “workforce,” strengthening the workforce, and creating structures to support it.

BROADENING THE CONCEPT OF ‘WORKFORCE’

The large gap between demand and supply suggests that the specialist workforce alone will not be able to meet the future behavioral health care needs of the US population. Given the uneven distribution of the specialist workforce, simply expanding it is unlikely to remedy problems of access, particularly for underserved populations.³³

▶TRAINING OTHER HEALTH CARE PROVIDERS: Developing the capacity of health care providers other than behavioral health specialists to address mental and substance use conditions has emerged as a high priority on the agenda of this field. For example, the Institute of Medicine report on older adults¹¹ placed a strong emphasis on evidence-based, integrated care models that shift the locus of responsibility to primary care providers; the organization of care through interprofessional teams, in which behavioral

6,800

Counselors needed

Every 10 percent increase in the demand for substance abuse treatment could result in the need for 6,800 additional counselors. The increased access to care resulting from health reform will have major although uncertain implications for workforce demand.

EXHIBIT 1

The Annapolis Framework

Area	Specific goals
Broadening the concept of “workforce”	<ol style="list-style-type: none"> 1. Expand the roles of individuals in recovery and their families to actively participate in and influence their own care, provide care and support to others, and educate the workforce 2. Expand the role and capacity of communities to effectively identify their needs and promote behavioral health and wellness 3. Expand the role and capacity of all health and social service providers, through interprofessional collaboration, to meet the needs of people with mental and substance use conditions
Strengthening the workforce	<ol style="list-style-type: none"> 4. Implement systematic recruitment and retention strategies at the federal, state, and local levels 5. Increase the relevance, effectiveness, and accessibility of training and education 6. Foster the development of supervisors and leaders in all sectors of the workforce
Creating structures to support the workforce	<ol style="list-style-type: none"> 7. Establish financing systems that enable employee compensation commensurate with required education and levels of responsibility 8. Build a technical assistance infrastructure that promotes adoption of workforce best practices 9. Implement a national research and evaluation program on behavioral health workforce development

SOURCE Adapted from Hoge MA, et al., An action plan for behavioral health workforce development (Note 8 in text).

The boundaries between the educational silos of the behavioral health disciplines need to become more permeable.

health specialists are often consultants rather than the primary providers; and the use of care management, outreach, patient and family education, and self-management strategies.

Similarly, in addiction treatment there is evidence for the effectiveness of integrated care models in which primary care providers conduct early screening and brief interventions, provide therapy that includes medication such as buprenorphine, and coordinate care with addiction counselors in the same health care setting.³⁴

► **CONSUMERS AS PROVIDERS:** People in recovery from addiction have long been employed as part of the workforce in the substance use disorders field.^{35,36} In fact, 41 percent of clinical directors in addiction agencies reported making concerted efforts in the past year to recruit and employ people in recovery.⁹ Recent initiatives have greatly expanded consumers' involvement in the mental health workforce through such approaches as self-care, sharing decision making with professionals, and providing peer support in volunteer or paid positions.⁸

There have also been major efforts to develop competencies, training programs, and certifications for people providing peer support.¹⁰ More than twenty states are now reimbursing certified peer specialists under Medicaid, and another twenty-two states have indicated their intent to do so.³⁷ Although the evidence base lacks rigor, research has supported the value of peer interventions in reducing substance use and psychiatric inpatient readmissions and in improving physical and mental health, as well as interpersonal relationships and occupational functioning.^{36,38}

For people with alcohol dependence, there is evidence that participation in peer-led twelve-step groups increases abstinence rates among those in professional treatment and that it may produce equivalent outcomes for those not seek-

ing professional treatment.³⁶ A recent Cochrane Review concluded that outcomes for clients served by consumer-providers on mental health teams were no better or worse than those served by professionals employed in similar roles.³⁹

STRENGTHENING THE WORKFORCE

► **RECRUITMENT AND RETENTION:** There will always be the need for a specialist behavioral health workforce, particularly to treat people with severe behavioral health conditions. The relevant specialties include psychiatry, psychology, clinical social work, advanced-practice psychiatric nursing, marriage and family therapy, psychosocial rehabilitation, and mental health and addiction counseling.

Best practices in recruiting and retaining a workforce of such specialists include early exposure to career opportunities in this field and the special populations served, mentoring by behavioral health specialists, training stipends, minority fellowships, loan repayment programs, and the development of career ladders. Paying wages commensurate with the education, experience, and responsibility required of such specialists appears to be a primary factor in the success or failure of recruitment and retention efforts.⁸

From a policy perspective, the combination of political will and funding can yield successful recruitment of specialists. For example, the wars in Iraq and Afghanistan led eventually to the expansion of behavioral health services in the Veterans Health Administration, which in turn created greater workforce demand and identified shortages. Increased funding, combined with an executive order signed by President Barack Obama, led to the hiring of 3,262 mental health professionals and support staff within twelve months.⁴⁰ At a broader level, federal legislation creating greater parity in coverage between medical and behavioral health conditions has challenged the societal stigma associated with the latter⁴¹ and set the stage for an expansion of service and workforce demand.

► **EDUCATION AND TRAINING:** Higher education programs and accrediting bodies must expedite curriculum reform as they struggle to keep pace with emerging evidence-based practices and guidelines, quality improvement approaches, and models of care based on inter-professional teams.²⁸ Continuing education programs should adopt evidence-based teaching approaches, replacing the typical brief lecture and workshop formats that have been proven to have little or no effect on the skills of health care providers.⁸ The boundaries between the educational silos of the numerous behavioral health disciplines need to become more permeable to address the absence of cross-fertilization of knowledge and skills across provider types,

effective team functioning, common standards of care, and consensus on core competencies.²⁸

Greater use must be made of online technologies as a way to increase access to education, with an ongoing review of their efficiencies and effectiveness.⁴² Continuing efforts should be made to identify and teach competencies in collaborative team-based care, particularly care for children and adolescents, older Americans, and racially and culturally diverse populations. The current and future workforce also needs training in addiction treatment, since half of the professionals in most mental health disciplines and a third of addiction counselors have had no coursework in the diagnosis and treatment of substance use conditions.⁴³

CREATING STRUCTURES TO SUPPORT THE WORKFORCE

► **FINANCING SYSTEMS:** A team of researchers at Brandeis University has argued that partial failures in the economic market have left behavioral health services and the agencies that deliver them underfunded.⁴⁴ The impact of these forces on the supply side is that the size of the workforce is constrained: Employers, striving to remain fiscally viable, suppress wages and benefits and increase the burden on each worker, producing higher levels of employee burnout and turnover.⁴⁵ Salaries in behavioral health care—particularly in addiction services—are considered to be well below those for parallel positions in other health care sectors and in business.¹⁰

Richard Frank and Sherry Glied⁴⁶ estimated that shortly after World War II, the economic benefit to an individual of pursuing graduate training in behavioral health was 10–25 percent greater than having a bachelor's degree; however, the economic return on that graduate training is now negative compared with training for other potential careers. Efforts to recruit and retain an adequate workforce will be seriously hampered until payments for services reach levels that incentivize people to choose and remain in behavioral health careers and that enable provider organizations to offer employee compensation commensurate with required education, levels of responsibility, and work demands.

► **TECHNICAL ASSISTANCE STRUCTURE:** There are few organized efforts to gather, analyze, and disseminate knowledge about workforce practices in behavioral health. Thus, an infrastructure providing information and technical assistance to the field on the implementation of best practices in workforce development is sorely needed.

Discussion

Although the sources of information are imperfect, there is a relatively clear consensus about

the general characteristics, strengths, and weaknesses of the mental health and addiction workforce. There has also emerged a fairly clear and consistent vision regarding the broad strategies and specific actions necessary to expand and better train the specialist workforce, engage other health and social service providers and people in recovery to meet behavioral health needs, and develop the structural supports necessary to grow the workforce and make it more effective.

Missing, however, is evidence that any of these strategies is being scaled up and implemented in a fashion that is likely to have a meaningful impact on workforce size or effectiveness. Over the past fifteen years the federal government has funded multiple workforce assessments and plans, but it has never adopted or implemented a comprehensive plan. With few exceptions, workforce initiatives have been limited in scope, affecting few areas of the country and few current or potential providers. And whether these initiatives are federal or local, seldom have sufficient resources been allocated to produce major changes in the composition or practice of the workforce.

Time and again, the impact of pilot workforce projects has eroded as demonstration funding ended without any mechanism for sustainability.⁸ For example, in 2003 the Health Resources and Services Administration created grants under the Graduate Psychology Education Program to develop geropsychology training programs. However, the agency funded only seven programs nationwide and terminated all funding after three years. This led directly to program closures.¹¹

There are many hypotheses about why there has been no concerted response to the workforce crisis in behavioral health. One possible explanation is that the societal stigma associated with mental and substance use conditions creates a culture in which inattention to needs is tolerated, at least to a degree. Another is that the responsibility for workforce development is widely dispersed among governmental agencies and nongovernmental organizations, which diminishes the likelihood that any single entity will take action. A third is that workforce development requires a long-term, comprehensive plan and sustained action, which do not fit easily within the time-limited, issue-focused agendas of ever-changing government administrations.

Whatever the reason, it is clear that concerted federal action and leadership are the ingredients most needed now to address the workforce crisis in behavioral health. Multiple federal agencies—particularly some of those in the Department of Health and Human Services—have enormous potential influence in this arena. These include

the Substance Abuse and Mental Health Services Administration, the Health Resources and Services Administration, the Agency for Healthcare Research and Quality, the Centers for Medicare and Medicaid Services, the National Institutes of Health, the Centers for Disease Control and Prevention, and the Indian Health Service. They are uniquely positioned to accomplish the following four critical tasks.

The first is to advocate for resources from the administration and Congress to effectively address the workforce crisis. The case needs to be made that expanded access to services under health reform is of limited usefulness without a workforce that is both competent and large enough to provide effective services to the country's diverse population.

The second task is to allocate a greater portion of the agencies' energies and resources to workforce development. A recent Institute of Medicine report documented critical instances in which federal agencies are withdrawing support for behavioral health workforce development and pursuing policies that undermine workforce efforts to deliver evidence-based treatment.¹¹

The third task is to create a robust national technical assistance infrastructure on workforce development that encompasses mental health and addiction services. As described above, this practical step is necessary to assemble and disseminate information on best practices on topics such as recruitment, retention, and training and to assist educators, employers, and others in

implementing these practices.

The final task is to facilitate coordinated and sustained activity on workforce development by federal agencies and other important stakeholders. Federal agencies must coordinate their own efforts and should convene and influence action by other groups that shape recruitment, retention, training, and employment of the workforce. These include state and county governments, educational institutions, professional associations, employers and their trade organizations, third-party payers, accrediting bodies, and foundations.

The limitations of federal authority and influence are clearly recognized. Nonetheless, the carrots, sticks, and bully pulpits typically used by federal agencies to influence health care or address problems in the workforce have not been widely employed in this case.

Conclusion

Federal agencies have commissioned many initiatives to assess and document workforce challenges and to create a number of detailed blueprints for systematically strengthening the behavioral health workforce. A comprehensive nationwide effort to scale up these plans and strategies is now long past due. The aging and increasing diversity of the US population, combined with the expanded access to services that will be created by health reform, make it imperative to act now. ■

NOTES

- 1 Kessler RC, Aguilar-Gaxiola S, Alonso J, Chatterji S, Lee S, Ormel J, et al. The global burden of mental disorders: an update from the WHO World Mental Health (WMH) surveys. *Epidemiol Psychiatr Soc*. 2009; 18(1):23-33.
- 2 World Health Organization. *Investing in mental health*. Geneva: WHO; 2003.
- 3 Substance Abuse and Mental Health Services Administration, Center for Behavioral Health Statistics and Quality. Results from the 2010 National Survey on Drug Use and Health: summary of national findings. Rockville (MD): SAMHSA; 2011.
- 4 Center for Disease Control and Prevention. CDC grand rounds: prescription drug overdoses—a U.S. epidemic. *MMWR Morb Mortal Wkly Rep*. 2012;61(1):10-3.
- 5 Office of National Drug Control Policy. 2013 national drug control strategy [Internet]. Washington (DC): White House; 2013 [cited 2013 Sep 13]. Available from: <http://www.whitehouse.gov/ondcp/2013-national-drug-control-strategy>
- 6 Substance Abuse and Mental Health Services Administration, Office of Applied Studies. Results from the 2009 National Survey on Drug Use and Health: mental health findings. Rockville (MD): SAMHSA; 2010.
- 7 Schomerus G, Lucht M, Holzinger A, Matschinger H, Carta MG, Angermeyer MC. The stigma of alcohol dependence compared with other mental disorders: a review of population studies. *Alcohol Alcohol*. 2011;46(2):105-12.
- 8 Hoge MA, Morris JA, Daniels AS, Stuart GW, Huey LY, Adams N. An action plan for behavioral health workforce development: a framework for discussion [Internet]. Rockville (MD): Substance Abuse and Mental Health Services Administration; 2007 [cited 2013 Sep 13]. Available from: <http://www.samhsa.gov/workforce/annapolis/workforceactionplan.pdf>
- 9 Ryan O, Murphy D, Krom L. Vital signs: taking the pulse of the addiction treatment profession: a national report—version 1 [Internet]. Kansas City (MO): Addiction Technology Transfer Center National Office in residence at the University of Missouri-Kansas City; 2012 Sep 28 [cited 2013 Sep 13]. Available from: <http://www.attcnetwork.org/documents/VitalSignsReport.pdf>
- 10 Substance Abuse and Mental Health Services Administration. Report to Congress on the nation's substance abuse and mental health workforce issues. Rockville (MD): SAMHSA; 2013.
- 11 Institute of Medicine. *The mental health and substance use workforce for older adults: in whose hands?* Washington (DC): National Academies Press; 2012.
- 12 Kim WJ. Child and adolescent psychiatry workforce: a critical shortage and national challenge. *Acad Psychiatry*. 2003;27(4):277-82.
- 13 Thomas CR, Holzer CE 3rd. The continuing shortage of child and adolescent psychiatrists. *J Am Acad Child Adolesc Psychiatry*. 2006; 45(9):1023-31.
- 14 Cunningham PW. Loophole for mental health care. *Politico* [serial

- on the Internet]. 2013 Mar 4 [cited 2013 Sep 18]. Available from: <http://www.politico.com/story/2013/03/reform-law-expands-access-to-mental-health-care-88347.html>
- 15 Thomas KC, Ellis AR, Konrad TR, Holzer CE, Morrissey JP. County-level estimates of mental health professional shortage in the United States. *Psychiatr Serv*. 2009;60(10):1323–8.
 - 16 Bureau of Labor Statistics. Occupational outlook handbook: substance abuse and behavioral disorder counselors [Internet]. Washington (DC): Department of Labor; 2012 Mar 29 [cited 2013 Sep 13]. Available from: <http://www.bls.gov/ooh/community-and-social-service/substance-abuse-and-behavioral-disorder-counselors.htm>
 - 17 Institute of Medicine. Retooling for an aging America: building the healthcare workforce. Washington (DC): National Academies Press; 2008.
 - 18 Bartels SJ, Naslund JA. The underside of the silver tsunami—older adults and mental health care. *N Engl J Med*. 2013;368(6):493–96.
 - 19 Census Bureau [Internet]. Washington (DC): Census Bureau. Press release, U.S. Census Bureau projections show a slower growing, older, more diverse nation a half century from now; 2012 Dec 12 [cited 2013 Sep 13]. Available from: <https://www.census.gov/newsroom/releases/archives/population/cb12-243.html>
 - 20 Alegria M, Lin J, Chen C, Duan N, Cook B, Meng X. The impact of insurance coverage in diminishing racial and ethnic disparities in behavioral health services. *Health Serv Res*. 2012;47(3 Pt 2):1322–44.
 - 21 Sanchez K, Chapa T, Ybarra R, Martinez ON Jr. Eliminating disparities through the integration of behavioral health and primary care services for racial and ethnic minority populations, including individuals with limited English proficiency: a literature review report [Internet]. Austin (TX): Hogg Foundation for Mental Health; 2012 Sep [cited 2013 Sep 13]. Available from: http://www.hogg.utexas.edu/uploads/documents/OMH%20Report_FINAL-FINAL.pdf
 - 22 Le Cook B, Zuvekas SH, Carson N, Wayne GF, Vesper A, McGuire TG. Assessing racial/ethnic disparities in treatment across episodes of mental health care. *Health Serv Res*. 2013 Jul 16 [Epub ahead of print].
 - 23 Lo CC, Cheng TC. Racial/ethnic differences in access to substance abuse treatment. *J Health Care Poor Underserved*. 2011;22(2):621–37.
 - 24 Substance Abuse and Mental Health Services Administration. Mental health, United States, 2010. Rockville (MD): SAMHSA; 2012.
 - 25 Pfeiffer SG, Gibson TS. Minority recruitment for the 21st century: an environmental scan. Cambridge (MA): Abt Associates, Inc.; 2010.
 - 26 Field C, Caetano R. The role of ethnic matching between patient and provider on the effectiveness of brief alcohol interventions with Hispanics. *Alcohol Clin Exp Res*. 2010;34(2):262–71.
 - 27 Chao PJ, Steffen JJ, Heiby EM. The effects of working alliance and client-clinician ethnic match on recovery status. *Community Ment Health J*. 2012;48(1):91–7.
 - 28 Institute of Medicine. Improving the quality of health care for mental and substance-use conditions. Washington (DC): National Academies Press; 2006.
 - 29 Bhui K, Warfa N, Edonya P, McKenzie K, Bhugra D. Cultural competence in mental health care: a review of model evaluations. *BMC Health Serv Res*. 2007;7:15.
 - 30 Beronio K, Po R, Skopec L, Glied S. Affordable Care Act expands mental health and substance use disorder benefits and federal parity protections for 62 million Americans [Internet]. Washington (DC): Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation; 2013 Feb 20 [cited 2013 Sep 13]. (ASPE Issue Brief). Available from: http://aspe.hhs.gov/health/reports/2013/mental/rb_mental.cfm
 - 31 Substance Abuse and Mental Health Services Administration. Report to Congress: addictions treatment workforce development. Rockville (MD): SAMHSA; 2009.
 - 32 Substance Abuse and Mental Health Services Administration. Strengthening professional identity: challenges of the addictions treatment workforce—a framework for discussion. Rockville (MD): SAMHSA; 2006.
 - 33 Robiner WN. The mental health professions: workforce supply and demand, issues, and challenges. *Clin Psychol Rev*. 2006;26(5):600–25.
 - 34 Pating DR, Miller MM, Goplerud E, Martin J, Ziedonis DM. New systems of care for substance use disorders: treatment, finance, and technology under health care reform. *Psychiatr Clin North Am*. 2012;35(2):327–56.
 - 35 Faces and Voices of Recovery. Addiction recovery peer service roles: recovery management in health reform [Internet]. Washington (DC): Faces and Voices of Recovery; 2010 Sep 10 [cited 2013 Sep 13]. Available from: http://www.facesandvoicesofrecovery.org/publications/enews/2010-09-23/9.11.10_PRSS_health_reform_final.pdf
 - 36 White WL. Peer-based addiction recovery support: history, theory, practice, and scientific evaluation. Chicago (IL): Great Lakes Addiction Technology Transfer Center; 2009.
 - 37 Daniels AS, Fricks L, Tunner TP, editors. Pillars of peer support—2: expanding the role of peer support services in mental health systems of care and recovery [Internet]. Atlanta (GA): Pillars of Peer Support; 2011 Feb [cited 2013 Sep 19]. Available from: <http://www.pillarsofpeer-support.org/POPS2010-2.pdf>
 - 38 Sledge WH, Lawless M, Sells D, Wieland M, O’Connell MJ, Davidson L. Effectiveness of peer support in reducing readmissions of persons with multiple psychiatric hospitalizations. *Psychiatr Serv*. 2011;62(5):541–4.
 - 39 Pitt V, Lowe D, Hill S, Prictor M, Hetrick SE, Ryan R, et al. Consumer-providers of care for adult clients of statutory mental health services. *Cochrane Database Syst Rev*. 2013;3:CD004807.
 - 40 Department of Veterans Affairs. Washington (DC): VA. Press release, VA hires more mental health professionals to expand access for veterans; 2013 Feb 11.
 - 41 Cummings JR, Lucas SM, Druss BG. Addressing public stigma and disparities among persons with mental illness: the role of federal policy. *Am J Public Health*. 2013;103(5):781–5.
 - 42 LeBlanc P. Making sense of disruptive technologies and higher education: a theory of change, the growth of online programs, and the next generation of delivery models. Paper presented at: American Enterprise Institute Conference; 2012 Aug 2; Washington, DC.
 - 43 Dilonardo J. Workforce issues related to physical and behavioral healthcare integration: specifically substance use disorders and primary care: a framework. Paper presented at: Workforce Issues: Integrating Substance Use Services into Primary Care Conference; 2011 Aug 10–11; Washington, DC.
 - 44 Tompkins CP, Merrick EL, Reif S, Horgan CM. Financing issues in the behavioral health workforce. Chapter 21 in: Hoge MA, Morris JA, Daniels AS, Stuart GW, Huey LY, Adams N. An action plan for behavioral health workforce development: a framework for discussion [Internet]. Rockville (MD): Substance Abuse and Mental Health Services Administration; 2007 [cited 2013 Sep 13]. p. 272–8. Available from: <http://www.samhsa.gov/workforce/annapolis/workforceactionplan.pdf>
 - 45 Gabel S. Demoralization in mental health organizations: leadership and social support help. *Psychiatr Q*. 2012;83(4):489–96.
 - 46 Frank RG, Glied SA. Better but not well: mental health policy in the United States since 1950. Baltimore (MD): Johns Hopkins University Press; 2006.