

6-1-2013

# Challenges and Opportunities for Improving Mental Health Services in Rural Long-Term Care

Jean A. Talbot PhD

*University of Southern Maine, Muskie School of Public Service, Maine Rural Health Research Center*

Andrew F. Coburn PhD

*University of Southern Maine, Muskie School of Public Service, Maine Rural Health Research Center*

Follow this and additional works at: [http://digitalcommons.usm.maine.edu/longterm\\_care](http://digitalcommons.usm.maine.edu/longterm_care)



Part of the [Community Health Commons](#)

---

## Recommended Citation

Talbot, J. A., & Coburn, A. F. (2013). Challenges and opportunities for improving mental health services in rural long-term care. (Working Paper #50). Portland, ME: University of Southern Maine, Muskie School of Public Service, Maine Rural Health Research Center.

This Report is brought to you for free and open access by the Maine Rural Health Research Center (MRHRC) at USM Digital Commons. It has been accepted for inclusion in Long-term Care by an authorized administrator of USM Digital Commons. For more information, please contact [jessica.c.hovey@maine.edu](mailto:jessica.c.hovey@maine.edu).

Maine Rural Health Research Center

Working Paper #50

# Challenges and Opportunities for Improving Mental Health Services in Rural Long-Term Care

June 2013

*Authors*

Jean A. Talbot, PhD, MPH

Andrew F. Coburn, PhD

*Cutler Institute for Health and Social Policy*

*Muskie School of Public Service*

*University of Southern Maine*



Maine  
Rural Health  
Research Center

Muskie School of Public Service, University of Southern Maine  
34 Bedford Street, PO Box 9300, Portland, ME 04104

**R | H | R | C**

**Rural Health Research  
& Policy Centers**

Funded by the Federal Office of Rural Health Policy

[www.ruralhealthresearch.org](http://www.ruralhealthresearch.org)



# **Challenges and Opportunities for Improving Mental Health Services in Rural Long-Term Care**

June 2013

Jean A. Talbot, PhD, MPH  
Andrew F. Coburn, PhD

Working Paper #50

Maine Rural Health Research Center  
Cutler Institute for Health and Social Policy  
Muskie School of Public Service  
University of Southern Maine

This study was funded under a Cooperative Agreement with the federal Office of Rural Health Policy, Health Resources and Services Administration, DHHS (CA#U1CRH03716). The conclusions and opinions expressed in the paper are the authors' and no endorsement by the University of Southern Maine or the sponsor is intended or should be inferred.



**TABLE OF CONTENTS**

INTRODUCTION..... 1

BACKGROUND ..... 2

    Population of Interest ..... 2

    Mental Health Needs and Services in Long-Term Care ..... 2

    Rationale for Reform..... 4

BARRIERS TO THE PROVISION OF MENTAL HEALTH SERVICES IN RURAL LONG-TERM CARE ..... 5

    Limited Financial Resources ..... 5

    Workforce Limitations ..... 7

    Physical Access Barriers ..... 8

PROSPECTS FOR IMPROVING MENTAL HEALTH SERVICES IN RURAL LONG-TERM CARE ..... 9

    Strengthening the Rural Mental Health Workforce ..... 10

    Overcoming Geographic and Physical Access Barriers..... 13

    Integrated Care for Rural Long-Term Care Recipients in the Community..... 15

POLICY CONSIDERATIONS..... 19

LIST OF ACRONYMS ..... 21

REFERENCES..... 22

APPENDIX: Provisions of The Affordable Care Act (ACA) With Potential Relevance to Improvement of Mental Health Services in Rural Long-Term Care ..... 31

LIST OF RECENT WORKING PAPERS ..... 32



## **INTRODUCTION**

Over 10 million Americans with chronic disabilities require long-term services to assist them with activities of daily living.<sup>1</sup> Mental health comorbidities are common among members of the United States long-term care population.<sup>2-4</sup> Inadequately treated, these conditions can become debilitating and costly.<sup>2,5,6</sup> Yet our long-term care system often fails to deliver necessary mental health care to those it serves,<sup>2,7,8</sup> especially in rural areas.<sup>9-11</sup> Evidence indicates that improved mental health services in rural long-term care could improve outcomes and reduce the costs of care,<sup>12,13</sup> but rural provider organizations have historically lacked the resources and capacity to establish the necessary mental health infrastructure and services to care adequately for the long-term care population.<sup>9-11</sup> However, strong pressures for health care delivery system innovation combined with new funding opportunities under the Affordable Care Act (ACA)<sup>14</sup> have created new opportunities for expanding access to appropriate mental health interventions for rural long-term care populations.

This paper explores novel practices that hold promise for increasing the quality, quantity, and accessibility of mental health services in rural long-term care. First, we provide context for this discussion by defining our population of interest, characterizing the mental health needs of individuals within this population, describing the psychiatric services typically afforded to them, and delineating potential benefits of enhancing those services. We also discuss why the present policy climate may favor efforts toward reform in mental health and long-term care. Next, we focus on conditions that limit the provision of high-quality psychiatric services to rural long-term care recipients. Further, we explore new approaches that have been proposed or used as means of addressing these obstacles. As part of this examination, we consider the potential for synergies between these innovations and reforms promulgated under the ACA. We conclude



with a discussion of the policy implications for advancing new mental health service models in rural long-term care.

## **BACKGROUND**

### **Population of Interest**

When we discuss the long-term care population in this paper, we refer to adults who suffer from chronic, disabling conditions, and who need long-term services to manage these conditions and any functional impairment resulting from them. Required services could include varying combinations of medical care, skilled nursing, home health care, assistance with activities of daily living, homemaker services, and psychosocial supports. Within the overall long-term care population, we focus on rural elders who reside either in nursing facilities or in their own homes in the community. Due to the dearth of relevant data on non-elderly long-term care recipients and those who live in settings such as assisted living facilities and residential care, we omit discussion of mental health needs among these subpopulations. It should be noted, however, that many of the workforce development and delivery system innovations reviewed here could be adapted for long-term care recipients in a broad range of living situations.

### **Mental Health Needs and Services in Long-Term Care**

Psychiatric disorders are widespread in the United States long-term care population. Most adults in nursing homes have some clinically significant psychiatric or behavioral problem, with estimates of prevalence ranging from 65 per cent to 91 per cent.<sup>2</sup> Among long-term care recipients in the community, reported rates of psychiatric morbidity exceed 40 per cent.<sup>3,4</sup> The limited available data indicate that depression is the most common mental health condition among both nursing home residents<sup>15</sup> and community-dwelling long-term care recipients.<sup>3</sup> We know of no current studies comparing rural and urban long-term care populations with respect to

their rates of mental health disorders. However, national epidemiological data show that most psychiatric diagnoses occur at similar rates across rural and urban settings.<sup>16,17</sup> This overall finding offers some justification for surmising that the prevalence of mental health problems among rural long-term care recipients is at least on a par with rates observed in long-term care settings throughout the country.

Despite their high levels of need, individuals in the long-term care system often fail to receive appropriate mental health services. Deficiencies exist in both quantity and quality. For example, misuse of psychotropic medications<sup>7</sup> and delays in the initiation of care are common in nursing facilities.<sup>2</sup> Moreover, while evidence suggests that psychotherapy is often the treatment of choice for frail elders,<sup>13,18,19</sup> nursing homes rely primarily on one-time, “as needed” medication management consultations with psychiatrists.<sup>2,8</sup> Although relevant research is scarce, it appears that few home care providers and home health nursing agencies conduct mental health screening and referrals, and that still fewer offer mental health services to their clients.<sup>9</sup>

The limited evidence suggests that rural long-term care recipients have even more restricted mental health options than their urban counterparts. Shea and colleagues<sup>10</sup> reported that Medicare beneficiaries living in non-metropolitan nursing homes received fewer mental health treatment contacts than their peers in metropolitan areas. In their study of Maine nursing homes, Bolda and colleagues<sup>11</sup> found that in comparison to urban facilities, rural sites were less likely to employ or contract with mental health clinicians. As for community-dwelling long-term care recipients in rural areas, they are subject to the same obstacles that impede access to mental health care for rural residents in general.<sup>20-22</sup> These include scarce funding,<sup>10,23,24</sup> limited provider supply,<sup>25-27</sup> geographic barriers,<sup>28</sup> and limited transportation alternatives.<sup>28</sup>

## **Rationale for Reform**

The inadequacies of mental health services in long-term care adversely affect both consumers and society. In adults with long-term care needs, comorbid mental health issues contribute to major clinical complications. Long-term care recipients with behavioral health problems experience greater psychological distress, higher levels of functional impairment, and worse health outcomes than their counterparts without such problems.<sup>5,29,30</sup> Because of their exceptionally poor health status, elderly and disabled people with mental disorders use more medical services and therefore incur higher health care costs than their peers who are free from psychiatric diagnoses.<sup>2,6</sup>

Appropriate mental health care can mitigate negative outcomes associated with psychiatric disorders in the long-term care population. For example, many psychotherapy interventions have proven to be effective in treating depression in older adults, even those with multiple medical conditions and cognitive impairments.<sup>12,13,18</sup> In dementia care, cholinesterase inhibitors can slow declines in cognitive functioning.<sup>18</sup>

In addition to alleviating psychiatric symptoms, proper mental health care can reduce overall morbidity. Studies conducted over the past ten years support the use of integrative service models, or medical homes, in which multidisciplinary health care teams collaborate to provide primary and preventive care, chronic disease management, mental health treatment, and comprehensive care coordination.<sup>13,31-33</sup> Integrated care can lead to sustained improvements in the adaptive functioning and general health status of those with comorbid psychiatric and medical conditions,<sup>12,32</sup> while at the same time decreasing total per-patient health care expenditures.<sup>34</sup> In sum, available evidence suggests that expanded access to appropriate mental

health services could improve quality of life for long-term care recipients, while at the same time enhancing the cost-effectiveness of the care they receive.

In recent years, provider organizations, payers, and purchasers have shown intense interest in redesigning delivery systems to improve the quality and contain the costs of health services, especially those rendered to people with long-term care needs,<sup>35-38</sup> chronic comorbid conditions,<sup>39-41</sup> and dual eligibility in the Medicaid and Medicare programs.<sup>42</sup> The Affordable Care Act (ACA) of 2010, which introduced multiple delivery system reform provisions, including the dual eligible, health home, and home-based primary care demonstrations (ACA §3021, §2073, §3024), has fueled these ongoing trends.<sup>14,41,43</sup> Notwithstanding these important new directions in policy, efforts to promote better mental health treatment in rural long-term care face a broad array of challenges, including inadequate funding, workforce limitations, and physical access barriers. In the following sections of this paper, we review these challenges and explore novel approaches for improving access to high-quality mental health services for rural long-term care recipients.

## **BARRIERS TO THE PROVISION OF MENTAL HEALTH SERVICES IN RURAL LONG-TERM CARE**

### **Limited Financial Resources**

*Financing for Community Mental Health Centers.* In most rural areas, community mental health centers (CMHCs) are the only providers of specialty mental health care.<sup>20</sup> For this reason, a rural CMHC's service capacity is typically a crucial determinant of mental health access for members of the local community. Unfortunately, rural CMHCs operate under a variety of financial constraints, whose combined effect is to limit the mental health services they can provide to rural residents, including long-term care recipients.

In general, for CMHCs in rural and urban settings alike, Medicaid is the primary funding source. Two other important sources of income for CMHCs are state general revenues and federal block grants,<sup>44,45</sup> both of which are allocated to CMHCs by state mental health agencies (SMHAs).<sup>46</sup> Each of these three major funding streams is associated with problems or disadvantages for rural CMHCs. To begin with, in comparison to their urban counterparts, rural providers rely more heavily on the Medicaid program for payment.<sup>23</sup> Because Medicaid offers relatively low rates of reimbursement, rural CMHCs earn less on average per unit of service than do urban providers.<sup>10,23,47</sup>

Recent trends in the allocation of state general revenues likewise present a challenge to rural CMHCs. In 2008, SMHAs depended on state general funds for 40 per cent of their combined budgets.<sup>48</sup> However, between 2009 and 2011, many states drastically curtailed general funds allocated to SMHAs. These cuts, which totaled \$2.1 billion throughout the United States,<sup>48</sup> threw SMHAs and the CMHCs they support into financial crisis. In response, many CMHCs eliminated services, reduced staff, and consolidated or closed sites.<sup>48</sup> More cuts to general funds for mental health are expected in coming years, as states continue to cope with serious budget problems.<sup>48</sup> This trend has had a disproportionate rural impact, because CMHCs are often the only source of specialty mental health care in rural communities.<sup>45</sup> The widespread erosion of the services provided by rural CMHCs further reduces the resources potentially available to rural long-term care recipients, who are already underserved with respect to mental health.

Rural CMHCs are also impeded in their ability to serve elderly and disabled individuals in long-term care by their relative dependence on targeted federal block grant funding, which requires them to prioritize the treatment of adults with serious mental illness (SMI) and children with severe emotional disturbance. As a result of this requirement, rural CMHCs typically provide a

narrow range of services in tightly defined catchment areas,<sup>49</sup> and they have few resources to spare for long-term care recipients with mental health needs, most of whom suffer from disorders other than SMI.<sup>3,15</sup> Although all CMHCs cope with these restrictions, rural agencies are particularly affected, because block grant funds represent a greater share of their budgets.<sup>24</sup>

*Financing for Long-Term Care Providers.* Meanwhile, Congress has recently proposed steep reductions in Medicare payments to nursing homes and home health care providers.<sup>50,51</sup>

Although the results of ongoing federal budget negotiations are difficult to predict, the long-term care system will almost certainly be operating under heightened financial restrictions. These developments could decrease long-term care providers' capacity to work toward improving the quality of mental health services for consumers in their care.

### **Workforce Limitations**

The lack of mental health clinicians in rural areas is another major factor preventing rural long-term care recipients from accessing appropriate mental health treatment.<sup>11</sup> Rural counties are more likely than urban ones to have unmet needs for mental health professionals.<sup>52</sup> In 2004, 79 per cent of rural counties were designated as either whole or partial mental health professional shortage areas (HPSAs),<sup>53</sup> and as of January 2013, seventy percent of those Americans living in mental health HPSAs were rural residents.<sup>25</sup> Rural primary care providers, who often serve as first-line sources of mental health treatment, are also in short supply,<sup>26,27</sup> and their numbers are expected to decline further in coming years.<sup>26</sup> Rural communities that lack both mental health professionals and primary care providers will likely find it particularly difficult to develop the kinds of multidisciplinary, integrated service models believed to be optimal for people with comorbid psychiatric and chronic physical conditions.<sup>54</sup>

Where rural communities have access to mental health providers, qualifications of the workforce may not be appropriate to the needs of the long-term care population. For example, few community mental health centers (CMHCs) in either urban or rural settings offer programs targeting the elderly,<sup>47</sup> nor is it typical for mental health providers in any location to have specific expertise in treating the long-term care population.<sup>55</sup> While mental health providers with geriatric training and experience are rarely encountered anywhere,<sup>55</sup> they may be more conspicuously absent in rural areas.<sup>56</sup> Long-term care recipients who seek mental health treatment in primary care are likely to find that their primary care clinicians are equally lacking in geriatric or psychiatric training.<sup>55</sup> Even when individuals in long-term care have access to episodic psychiatric consultation, they may not be able to benefit fully from this service, because the staff responsible for their direct care have minimal training in addressing psychiatric issues, and may thus be poorly prepared to implement consultants' recommendations.<sup>2</sup>

### **Physical Access Barriers**

Geographic and physical barriers, including long distances and travel times, may reduce access to mental health care for rural long-term care recipients.<sup>28</sup> The lack of transportation services compounds these barriers for many rural long-term care recipients. The Medicare program does not cover non-emergency patient transportation, and Medicaid funding for these services is often limited in rural areas by state budget or infrastructure problems.<sup>28</sup> Although some long-term care providers attempt to resolve problems of geographic access by recruiting mental health clinicians to conduct treatment in nursing facilities or patient homes, independent practitioners and mental health provider organizations are sometimes reluctant to deliver off-site services, perhaps because such work entails inconvenience, unreimbursed travel expenses, and lost opportunities to engage in billable activities.<sup>11,55</sup>

Where face-to-face clinical contacts are impossible or impractical, telehealth technologies have been used successfully to connect isolated rural long-term care recipients to mental health providers in remote locations.<sup>57</sup> However, several hurdles currently impede widespread dissemination of telepsychiatry alternatives in rural regions. Although the American Recovery and Reinvestment Act (ARRA) of 2009 included funding to provide broadband Internet access throughout the United States, progress toward this goal is not complete.<sup>58</sup> Consequently, some rural areas still lack the broadband capacity required to conduct mental health interventions via videoconferencing.<sup>28</sup> According to estimates by the Federal Communications Commission and the National Telecommunications & Information Administration, whereas 99.7 per cent of Americans in urban areas have Internet access with high download/upload speeds, only 84.7 per cent of rural residents have such access.<sup>59</sup> Another potential problem is that relatively impoverished rural delivery systems may find it difficult to afford the costs of telehealth infrastructure, or to assemble a workforce capable of maintaining equipment and providing technical support to users.<sup>23</sup> Reimbursement for tele-mental health may likewise present obstacles in some instances: although the Medicare program<sup>60</sup> and 42 state Medicaid programs<sup>61</sup> now supply reimbursement for tele-psychiatry or tele-mental health, private plans have increased their provision of such coverage more slowly over the past four to five years<sup>58,62</sup> and only 16 states require private carriers to provide payment for telemedicine services.<sup>61</sup>

## **PROSPECTS FOR IMPROVING MENTAL HEALTH SERVICES IN RURAL LONG-TERM CARE**

Although there are formidable challenges to expanding mental health services to the rural long-term care population, the current climate of innovation in health care has already produced strategies for rural workforce development and delivery system redesign that could promote the development of high-quality, sustainable mental health services in rural long-term care. In the



remainder of this paper, we review some of the most promising approaches. Some of these models are already being implemented in a variety of contexts,<sup>3,37,38,57,63-65</sup> while others are proposed as ways of leveraging potentially useful provisions of the ACA to promote positive changes in service delivery. Wherever applicable, we discuss how opportunities afforded by the ACA might foster the further evolution and dissemination of the strategies discussed. A recurring theme in this discussion is that collaboration among rural health and human service providers and other stakeholders will be a key to success in building the capacity of rural health systems to deliver mental health services to long-term care recipients.

### **Strengthening the Rural Mental Health Workforce**

*Recruitment of Professionals to Rural Areas.* The standard policy prescription for alleviating rural health workforce shortages has been to deploy health care workers to underserved areas. Under the auspices of the federally funded National Health Service Corps (NHSC), which exemplifies this strategy, eligible health professionals, including mental health clinicians, receive federal repayment of their academic loans if they agree to serve for two years at an approved site in a Health Professions Shortage Area (HPSA).<sup>66</sup> To qualify for participation in the NHSC program, provider sites must offer primary care, dental, and/or behavioral health services.<sup>67</sup> Eligible sites include outpatient facilities such as Critical Access Hospitals, Federally Qualified Health Centers, their look-alikes, Rural Health Clinics, community outpatient clinics, community mental health facilities, mobile units, and private practices.<sup>68</sup> The ACA (§10503) has increased NHSC resources, dedicating \$1.5 billion in new additional funding to the program over five years from 2011 to 2015.<sup>14</sup>

Rural outpatient facilities could augment their capacity to address the psychiatric and behavioral needs of the local long-term care population by using the NHSC program to recruit mental health

professionals with geropsychiatric expertise. To leverage resources available through the program, interested facilities within a rural region might consider forming a network to act as a single approved site, whose members would share the services of an NHSC-sponsored mental health clinician. An urban-based, multidisciplinary gerontological practice with rural reach might be ideally situated to spearhead such an effort. In order to ensure that the NHSC could provide useful assistance for these purposes, rural health advocates should encourage the program to enlist a pool of mental health professionals who are both willing and well-prepared to work with the rural long-term care population.

*Growing an Indigenous Rural Mental Health Workforce.* A major limitation of the traditional approach to building the rural mental health workforce is that it focuses recruitment resources on personnel who make time-limited commitments to work in rural communities.<sup>66</sup> The National Advisory Committee on Rural Health and Human Services<sup>38</sup> observed that rural areas might realize greater returns on their recruitment investments by working to develop desired mental health care skills in local residents with a long-term stake in their communities of origin. One model for accomplishing this end is exemplified in the Alaska Rural Behavioral Health Training Academy (ARBHTA). This program resulted from a collaboration between the University of Alaska at Fairbanks and the Norton Sound Health Cooperative, an agency serving the needs of Alaska Native communities in the Bering Strait region.<sup>63</sup> Together, these two entities designed a training program for community members interested in delivering mental health care to the population served by the provider organization. The university's role was to contribute a curriculum, faculty, and academic credit to be applied toward a degree in mental health care. The rural provider organization furnished supervisors and clinical practica embedded in its own

work flow. The training program was designed so that successful graduates would be eligible to provide reimbursable services in the communities where they received training.<sup>38</sup>

To create a “home-grown” rural workforce of mental health clinicians equipped to serve local long-term care populations, universities with geropsychiatric training capabilities could form consortia with rural mental health provider organizations to establish programs similar to ARBHTA. To maximize their impact, these consortia could encompass multiple clinical training sites within a given rural region. University-based experts in geropsychiatric clinical practice could offer consultation to senior clinicians at consortium sites, and these clinicians could then supervise training program enrollees in the provision of mental health treatment to long-term care recipients. Participating sites could incorporate successful graduates of the training programs into their staff, thus strengthening their capacity to serve patients in long-term care.

At least two provisions in the ACA (§5102 and §5306(a)) could be used to support the training model described above. First, the ACA’s State Health Care Workforce Development program awards states one-year grants of up to \$150,000 to design comprehensive workforce development strategies.<sup>14,69</sup> States could use this funding to broker partnerships like those of the ARBHTA. Second, newly created Mental and Behavioral Health Education and Training Grants are available for institutions of higher education to help them recruit and train students in clinical social work and clinical psychology.<sup>14,69</sup> Universities could direct these funds toward individuals with interests in rural and/or geriatric mental health. Obviously, these grant opportunities can benefit rural long-term care recipients only if stakeholders can recruit potential applicants to submit proposals specifically intended to address the needs of the population.

*Building Mental Health Care Competencies in the Rural Health Care Workforce.* As indicated previously, rural mental health professionals, primary care clinicians, and direct care staff may

lack skills to respond effectively to the mental health needs of long-term care recipients.

Telemedicine technologies could be employed to address this gap in expertise. Throughout the United States, telemedicine programs linking urban-based tertiary care centers to rural sites are already commonly used to furnish continuing education to rural health care workers.<sup>70</sup> Existing and newly created networks could be leveraged to offer geriatric and psychiatric training to mental health professionals and primary care clinicians, and to support direct care staff in identifying and managing mental health issues in long-term care patients.<sup>71</sup>

The ACA contains at least two initiatives that could promote distance learning opportunities like those described above: One provision (§5403) establishes grant programs for Area Health Education Centers (AHECs) to develop infrastructure for new workforce education programs, and a second (§5302) offers grants for provider organizations to create new training curricula for direct care workers in both nursing home and community-based settings.<sup>14,69</sup> Again, in order to ensure that these resources are directed toward the enhancement of mental health services in rural long-term care, rural stakeholders would need to persuade AHECs and rural provider organizations to submit proposals with this goal in mind.

## **Overcoming Geographic and Physical Access Barriers**

### *Facilitating Face-to-Face Contacts between Long-term Care Recipients and Mental Health*

*Providers.* To overcome physical obstacles impeding the access of rural long-term care recipients to mental health care, researchers<sup>11</sup> and stakeholders including mental health clinicians<sup>71</sup> and mental health advocates<sup>72</sup> have proposed enhanced insurance benefits and provider reimbursement to cover the cost of transportation to provider sites or to facilitate the delivery of mental health services to consumers in their places of residence. Section 2402 of the ACA expands the State Medicaid Option for Home-and-Community-Based Services (§1915(i) of

the Social Security Act), creating new opportunities of this kind for Medicaid beneficiaries who receive long-term services at home. Under the ACA, §1915(i), which originally covered community services only for enrollees at risk of institutional placement, now authorizes states to provide these services to any disabled Medicaid beneficiaries in the community, specifically including those with mental illnesses. In addition, the revised law allows states to cover services such as transportation and mental health treatment delivered either at mental health centers or at off-site locations.<sup>14,72</sup>

*Tele-Mental Health.* As noted earlier, expanding the use of telemedicine is an alternative approach to increasing access to psychiatric consultation and other mental health services for rural long-term care recipients. Limited research suggests that tele-mental health approaches are cost-effective, acceptable to patients, and as likely to improve outcomes as face-to-face clinical contacts.<sup>73</sup> The Fletcher Allen Health Care/University of Vermont Telemedicine Program has demonstrated the feasibility and utility of telepsychiatry in long-term care. This program currently contracts with 13 underserved nursing homes in rural Vermont and upstate New York to provide residents with psychiatric services via two-way interactive videoconferencing.<sup>57</sup> Although we know of no tele-mental health programs that deliver services to long-term care recipients living in the community, such applications appear to be technically feasible, given that the Department of Veterans Affairs (VA) has successfully used telemedicine technologies including videophones and personal computers to permit clinical contacts between care managers and home-bound veterans with chronic illnesses.<sup>64</sup>

Section 3026 of the ACA directs the Center for Medicare and Medicaid Innovation within the Centers for Medicare and Medicaid Services to study the use of telehealth services as a means of treating behavioral issues among those in medically underserved areas.<sup>14,70</sup> Although this

provision could ultimately promote the use of telepsychiatry in rural long-term care, its impact is difficult to predict, given the persisting limitations in rural broadband capacity.<sup>28</sup>

### **Integrated Care for Rural Long-Term Care Recipients in the Community**

Recent years have seen an upsurge of interest in the clinical integration of mental health services with medical care, especially for the most medically and psychiatrically vulnerable individuals. As suggested earlier, the wider use of appropriate integrated care could help to bring more effective mental health services to members of the rural long-term care population living in the community. Here, we describe two exemplary integrative models and the ACA-sponsored programs that support their further dissemination. We also discuss strategies for making these delivery system innovations more sustainable in rural areas.

*Home-Based Primary Care for Veterans.* The Veterans Administration Home-Based Primary Care (VA HBPC) program is one example of integrative care that appears particularly well suited to the needs of rural residents receiving community-based long-term services and supports.<sup>3</sup> The VA HBPC program is designed for home-dwelling veterans with complex, chronic conditions, which may be disabling, and which often include psychiatric comorbidities. Thus, the target population's clinical profile resembles that of non-veteran long-term care recipients living in the community. Within the VA HPBC, care is delivered in veterans' homes by physician-led, multidisciplinary clinical teams, who work together to devise and carry out a unified treatment plan for each patient. Recognizing that effective management of any psychiatric comorbidities is essential for maintaining participants' health status, the VA HPBC program includes mental health clinicians in its treatment teams.<sup>3</sup> The VA's national evaluation of HBPC in 2002 showed that while home visits for enrollees increased by 264 per cent over the course of a year, total VA costs for enrollee care declined by 24 per cent, a change that might

have been related to reductions in inpatient and nursing home bed days (62 per cent and 88 per cent respectively).<sup>74</sup>

The VA HBPC program was the basis for Medicare's Independence at Home Demonstration (IAH), a project authorized by §3024 of the ACA.<sup>14</sup> This demonstration is designed to increase the capacity of the home-based primary care model to meet the needs of Medicare beneficiaries with chronic illnesses. In order to be eligible for the project, participants must have at least two chronic conditions, at least two functional dependencies, and a non-elective hospital stay in the year prior to enrollment. The project may involve up to 10,000 Medicare beneficiaries. As in the VA HPBC, participants will receive in-home care from interdisciplinary teams that coordinate care across all treatment categories, including behavioral health. Teams who generate lower costs than those that would have been incurred through traditional modes of delivery will receive incentive payments.<sup>75,76</sup> Programs established under the auspices of the demonstration receive federal support for three years.<sup>14</sup> According to information currently available from the Centers for Medicare and Medicaid Services, 19 practices and consortia in 17 states and the District of Columbia have launched projects under the Independence at Home Demonstration.<sup>77</sup> Some participating practices in Michigan, Texas, and Wisconsin serve both rural and urban counties.<sup>77,78</sup>

*Integrating Long-Term Services and Mental Health Care into Medical Homes.* Launched as a demonstration project in 1998, Community Care of North Carolina (CCNC) is now an ongoing and evolving medical home initiative financed by North Carolina's Medicaid program. Within CCNC, primary care practices organize themselves into regional networks, which contract with Medicaid to provide enrollees with medical home services (i.e., primary care, comprehensive coordination of health care and supports, and chronic disease management). CCNC serves over

800,000 enrollees in both rural and urban areas of the state. In 2008, CCNC expanded to target the aged, blind, and disabled (ABD) Medicaid population, some of whom receive long-term care in the community. To defray increased costs associated with the care of these complex patients, North Carolina's Medicaid program grants regional networks and participating physicians enhanced per-member per-month payments. To assist practices in addressing this group's special needs, CCNC's regional networks offer training and consultation on a range of issues, such as the coordination of long-term services and supports and the effective integration of mental health care into the medical home's offerings.<sup>37,38</sup>

Studies conducted for CCNC by consulting firms suggest that this medical home model has led to improvements in quality of care and cost containment. A utilization evaluation indicated that for the ABD Medicaid population, those enrolled in CCNC had fewer inpatient admissions and ED visits and more primary care visits than their unenrolled peers. Similar findings were reported for non-ABD adult Medicaid recipients with schizophrenia and other moderate chronic diseases.<sup>79</sup> Moreover, a cost analysis concluded that CCNC yielded health care cost savings of nearly \$1 billion in the four-year period from 2007 to 2010.<sup>80</sup>

The Medicaid Health Homes Option created under §2703 of the ACA<sup>1</sup> could foster the wider acceptance and adoption of the medical home model exemplified in CCNC's program for medically vulnerable adults. The new option allows states to use Medicaid funds to create primary care practices that coordinate treatment and support services for Medicaid beneficiaries with multiple chronic conditions. States that adopt the Health Homes Option are eligible for federal planning grants, and will receive federal matching payments of 90 per cent for their first two years of operation. Conditions that qualify patients for participation in health homes include psychiatric diagnoses and substance abuse disorders, as well as physical illnesses. As of



November 2012, eight states had obtained approval from the Centers for Medicare and Medicaid Services for at least one health home under the ACA's §2703, and 24 additional states were at various stages of the health home planning process.<sup>65</sup>

In addition to providing primary care and care coordination, health homes must offer mental health and substance abuse treatment, long-term care, and linkages to community services and supports. These requirements have important implications for the provision of mental health services to community-dwelling long-term care recipients. They specifically suggest that individuals in long-term care are eligible to become health home enrollees, and that as such, they will be guaranteed routine access to integrated mental health interventions.<sup>31,72,76</sup>

As the examples above indicate, the dissemination of integrated care models into rural regions could improve access to high-quality mental health services among community-dwelling long-term care recipients, provided this population is specifically targeted for inclusion in new medical home initiatives. Due to the dearth of funds and the workforce shortages that typically prevail in rural health care environments, rural providers will likely find it challenging to create and sustain medical homes with well-developed mental health services and other supports for the fragile, medically complicated long-term care population.<sup>54,71</sup> Nevertheless, the experience of CCNC suggests that rural implementation is attainable, and that regional networks can facilitate the sharing of expertise and resources among providers participating in medical home projects for the long-term care population.

It is important to emphasize that no single model of regional cooperation need be imposed across all rural areas. In some regions, providers aiming to establish medical homes for long-term care recipients may be able to achieve their goals by joining together in informal partnerships for purposes of sharing clinical staff and infrastructure. Elsewhere, providers might find it useful to

organize themselves into more formal networks like CCNC's. For such organizations, a useful additional strategy might be to collaborate with an urban-based, non-profit, integrated health care system with regional scope and a commitment to rural health. Such a partner might be able to contribute resources including startup funds to cover infrastructure costs, consultation on clinical and administrative issues, and telehealth technology to permit the participation of urban providers in rural treatment teams.

## **POLICY CONSIDERATIONS**

Mental health services in rural long-term care are overdue for transformation. A growing body of research indicates that many long-term care recipients have mental health needs that could benefit greatly from proper attention. Denial of such care imposes unnecessary suffering on patients, reduces the effectiveness of the medical services they do receive, and increases overall costs. Although we cannot expect program initiatives of the kind discussed here to produce short-term savings for rural delivery systems, improvements in mental health treatment will undoubtedly help rural long-term care recipients and may ultimately enhance the overall value of the care they receive.

There are many promising models for improving the mental health care afforded to long-term care populations. Provisions of the ACA, leveraged appropriately, could stimulate further advances along these lines. The challenge for rural health is to ensure that states and provider organizations take up potentially helpful workforce and delivery system innovations and target them to meet mental health needs in rural long-term care.

A key finding of this report is the paucity of research on mental health problems among long-term care recipients, both generally and in rural areas. Empirical investigations on mental health

services for these populations are also scarce. We need further work in these areas to guide reform efforts.

We also need descriptive and evaluative research on the rural implementation and impact of workforce and delivery system innovations like those discussed above. Such research should concentrate on challenges and opportunities confronted by rural mental health and long-term care systems in their attempts to adopt these innovative practices. Key policy and research questions must be framed in ways that allow investigators to tap funding sources supporting the study of issues such as comparative effectiveness and rural health.

The potential for reform in the delivery of mental health services within rural long-term care is significantly enhanced by state efforts, under the ACA, to increase the value of care delivered to high-need long-term care recipients, many of whom suffer from psychiatric problems. Rural health policy leaders at federal and state levels must focus attention on these important initiatives and identify ways to adapt them to meet the mental health needs of rural long-term care populations.

## **LIST OF ACRONYMS**

**ABD:** Aged, Blind, and Disabled

**ACA:** Affordable Care Act

**ARBHTA:** Alaska Rural Behavioral Health Training Academy

**ARRA:** American Recovery and Reinvestment Act

**AHEC:** Area Health Education Center

**CCNC:** Community Care of North Carolina

**CMHC:** Community Mental Health Center

**HPSA:** Health Professional Shortage Area

**NHSC:** National Health Service Corps

**VA:** Veterans Administration

**VA HPBC:** Veterans Administration Home-Based Primary Care program

## REFERENCES

1. Kaiser Commission on Medicaid and the Uninsured. *Medicaid and Long-Term Care Services and Supports*. Washington, DC: Kaiser Family Foundation; February 2009. Fact Sheet #2186-06.
2. Grabowski DC, Aschbrenner KA, Rome VF, Bartels SJ. Quality of Mental Health Care for Nursing Home Residents: A Literature Review. *Med. Care Res. Rev.* 2010;67(6):627-656.
3. Edes T. Innovations in Homecare: Va Home-Based Primary Care. *Generations.* 2010;34(2):29-34.
4. Li LW, Conwell Y. Mental Health Status of Home Care Elders in Michigan. *Gerontologist.* 2007;47(4):528-534.
5. Aschbrenner KA, Cai S, Grabowski DC, Bartels SJ, Mor V. Medical Comorbidity and Functional Status among Adults with Major Mental Illness Newly Admitted to Nursing Homes. *Psychiatr. Serv.* Sep 2011;62(9):1098-1100.
6. Unutzer J, Patrick DL, Simon G, et al. Depressive Symptoms and the Cost of Health Services in Hmo Patients Aged 65 Years and Older. A 4-Year Prospective Study. *JAMA.* May 28 1997;277(20):1618-1623.
7. Reichman WE, Conn DK. Nursing Home Psychiatry: Is It Time for a Reappraisal? *Am. J. Geriatr. Psychiatry.* Dec 2010;18(12):1049-1053.
8. Li Y. Provision of Mental Health Services in U.S.Nursing Homes, 1995-2004. *Psychiatr. Serv.* 2010;61(4):349-355.
9. Zeltzer BB, Kohn R. Mental Health Services for Homebound Elders from Home Health Nursing Agencies and Home Care Agencies. *Psychiatr. Serv.* 2006;57(4):567-569.
10. Shea DG, Russo PA, Smyer MA. Use of Mental Health Services by Persons with a Mental Illness in Nursing Facilities: Initial Impacts of Obra87. *J. Aging Health.* Nov 2000;12(4):560-578.

11. **Bolda EJ, Dushuttle P, Keith RG, Coburn AF, Bridges K. *Does Access to Mental Health Services for Rural and Urban Nursing Home Residents with Depression Differ?* Portland, ME: University of Southern Maine, Edmund S. Muskie School of Public Service, Maine Rural Health Research Center;1998. Working Paper #11.**
12. **Hunkeler EM, Katon W, Tang L, et al. Long Term Outcomes from the Impact Randomised Trial for Depressed Elderly Patients in Primary Care. *BMJ*. Feb 4 2006;332(7536):259-263.**
13. **Unutzer J, Katon W, Callahan CM, et al. Collaborative Care Management of Late-Life Depression in the Primary Care Setting: A Randomized Controlled Trial. *JAMA*. Dec 11 2002;288(22):2836-2845.**
14. **Patient Protection and Affordable Care Act. 2010; Pub L. No 111-148. Available at: <http://www.gpo.gov/fdsys/pkg/BILLS-111hr3590enr/pdf/BILLS-111hr3590enr.pdf>. Accessed March 5, 2013.**
15. **Fullerton CA, McGuire TG, Feng Z, Mor V, Grabowski DC. Trends in Mental Health Admissions to Nursing Homes, 1999-2005. *Psychiatr. Serv*. Jul 2009;60(7):965-971.**
16. **Kessler RC, Berglund P, Demler O, Jin R, Merikangas KR, Walters EE. Lifetime Prevalence and Age-of-Onset Distributions of Dsm-Iv Disorders in the National Comorbidity Survey Replication. *Arch. Gen. Psychiatry*. 2005;62(6):593-602.**
17. **Jameson JP, Blank MB. Diagnosis and Treatment of Depression and Anxiety in Rural and Nonrural Primary Care: National Survey Results. *Psychiatr. Serv*. Jun 2010;61(6):624-627.**
18. **Bartels SJ, Dums AR, Oxman TE, et al. Evidence-Based Practices in Geriatric Mental Health Care. *Psychiatr. Serv*. Nov 2002;53(11):1419-1431.**
19. **Reichman WE, Coyne AC, Borson S, et al. Psychiatric Consultation in the Nursing Home. A Survey of Six States. *Am. J. Geriatr. Psychiatry*. Fall 1998;6(4):320-327.**
20. **Lambert D, Agger MS. Access of Rural Afdc Medicaid Beneficiaries to Mental Health Services. *Health Care Financ. Rev*. 1995;17(1):133-145.**

21. Reschovsky JD, Staiti AB. Access and Quality: Does Rural America Lag Behind? *Health Aff. (Millwood)*. Jul-Aug 2005;24(4):1128-1139.
22. The President's New Freedom Commission on Mental H. *Achieving the Promise: Transforming Mental Health Care in America. Final Report*. Rockville, MD: Department of Health and Human Services;2003. DHHS Pub. No SMA-03-3832.
23. Rural Health Advisory Committee, Work Group on New Rural Health Care Delivery Models. *Rural Health Care: New Delivery Model Recommendations*. St. Parul, MN: Office of Rural Health and Primary Care; January 2009.
24. Hartley D, Bird DC, Lambert D, Coffin J. *The Role of Community Mental Health Centers as Safety Net Providers*. Portland, ME: University of Southern Maine, Edmund S. Muskie School of Public Service, Maine Rural Health Research Center;2002. Working Paper #30.
25. Office of Shortage Designation, Bureau of Health Professions. Designated Health Professional Shortage Areas (Hpsa) Statistics. 2013, January 9; [http://ersrs.hrsa.gov/ReportServer/Pages/ReportViewer.aspx?/HGDW\\_Reports/BCD\\_HPSA/BCD\\_HPSA\\_SCR50\\_Smry](http://ersrs.hrsa.gov/ReportServer/Pages/ReportViewer.aspx?/HGDW_Reports/BCD_HPSA/BCD_HPSA_SCR50_Smry). Accessed January 25, 2013.
26. Doescher MP, Skillman SM, Rosenblatt RA. *The Crisis in Rural Primary Care*. Seattle, WA: WWAMI Rural Health Research Center April 2009. Policy Brief.
27. Merwin E, Hinton I, Dembling B, Stern S. Shortages of Rural Mental Health Professionals. *Arch. Psychiatr. Nurs.* Feb 2003;17(1):42-51.
28. National Advisory Committee on Rural Health and Human Services. *The 2010 Report to the Secretary: Rural Health and Human Services Issues*. Rockville, MD: Health Resources and Services Administration, Office of Rural Health Policy, NACRHHS;2010.
29. Hoover DR, Siegel M, Lucas J, et al. Depression in the First Year of Stay for Elderly Long-Term Nursing Home Residents in the USA. *Int. Psychogeriatr.* Nov 2010;22(7):1161-1171.
30. Kaup BA, Loreck D, Gruber-Baldini AL, et al. Depression and Its Relationship to Function and Medical Status, by Dementia Status, in Nursing Home Admissions. *Am. J. Geriatr. Psychiatry.* May 2007;15(5):438-442.

31. Alexander L, Druss BG. *Behavioral Health Homes for People with Mental Health and Substance Use Conditions: The Core Clinical Features*. Washington DC: SAMHSA-HRSA Center for Integrated Health Solutions; May 2012.
32. Butler M, Kane RL, McAlpine D, et al. *Integration of Mental Health/Substance Abuse and Primary Care*. Rockville, MD: Agency for Health Research and Quality;2008. Evidence Report/Technology Assessment Number 173.
33. Druss BG, von Esenwein SA. Improving General Medical Care for Persons with Mental and Addictive Disorders: Systematic Review. *Gen. Hosp. Psychiatry*. Mar-Apr 2006;28(2):145-153.
34. Unutzer J, Katon WJ, Fan MY, et al. Long-Term Cost Effects of Collaborative Care for Late-Life Depression. *Am. J. Manag. Care*. Feb 2008;14(2):95-100.
35. Engquist G, Johnson C, Johnson WC. *Medicaid-Funded Long-Term Supports and Services: Snapshots of Innovation*. Hamilton, NJ: Center for Health Care Strategies, Inc.; May 2010.
36. Engquist G, Johnson C, Lind A, Barnette LP. *Medicaid-Funded Long-Term Care: Toward More Home- and Community-Based Options*. Hamilton, NJ: Center for Health Care Strategies, Inc.;2010.
37. Lind A, Gore S, Barnette LP, Somers SA. *Profiles of State Innovation: Roadmap for Managing Long-Term Supports and Services*. Hamilton, NJ: Center for Health Care Strategies; November 2010.
38. National Advisory Committee on Rural Health and Human Services. *The 2009 Report to the Secretary: Rural Health and Human Services Issues*. Rockville, MD: Health Resources and Services Administration, Office of Rural Health Policy, NACRHHS;2009.
39. Commonwealth Fund. Missouri: Pioneering Integrated Mental and Medical Health Care in Community Mental Health Centers. *States in Action Archive 2011*; <http://www.commonwealthfund.org/Newsletters/States-in-Action/2011/Jan/December-2010-January-2011/Snapshots/Missouri.aspx>. Accessed January 29, 2013.



40. Kim J, Higgins T, Gerolamo A, Esposito D, Hamblin A. *Early Lessons from Pennsylvania's Smi Innovations Project for Integrating Physical and Behavioral Health in Medicaid*. Hamilton, NJ: Center for Health Care Strategies, Inc.;2012. Policy Brief.
41. Silow-Carroll S, Rodin D. Health Homes for the Chronically Ill: An Opportunity for States. *States in Action Archive* 2011; <http://www.commonwealthfund.org/Newsletters/States-in-Action/2011/Jan/December-2010-January-2011/Feature/Feature.aspx>. Accessed September 18, 2012.
42. Bureau of TennCare. *TennCare Plus: A Draft Proposal for an Integrated Medicaid/Medicare Model*. Nashville, TN: Bureau of TennCare; April 13 2012. Response to RFP CMS-2011-0009.
43. Commonwealth Fund. Minnesota: Health Homes Tie Together State, National Health Reform Concepts. *States in Action Archive* 2011; <http://www.commonwealthfund.org/Innovations/State-Profiles/2011/Jan/Minnesota.aspx>. Accessed September 18, 2012.
44. Doub T, Morrison, DP, Goodson J. Community Mental Health Centers. In: Levin B, Hennessy, KD, Petrila, J, ed. *Mental Health Services: A Public Health Perspective*. Third ed. New York: Oxford University Press; 2010:349-374.
45. Larrison CR, Hack-Ritzo S, Koerner BD, Schoppelrey SL, Ackerson BJ, Korr WS. State Budget Cuts, Health Care Reform, and a Crisis in Rural Community Mental Health Agencies. *Psychiatr. Serv.* Nov 2011;62(11):1255-1257.
46. Lutterman T, Hogan, M, Phelan, BE, Mazade, NA. State Mental Health Agencies. In: Levin B, Hennessy, KD, Petrila, J, ed. *Mental Health Services: A Public Health Perspective*. Third ed. New York: Oxford University Press; 2010:321-348.
47. Bazelon Center for Mental Health Law. *Last in Line: Barriers to Community Integration of Older Adults with Mental Illness and Recommendations for Change*. Washington, DC: Bazelon Center for Mental Health Law;2003.
48. Lutterman T. *Impact of the State Fiscal Crisis on State Mental Health Systems*. Alexandria, VA: National Association of State Mental Health Program Directors Research Institute;2011.

49. Rathbone-McCuan E. Mental Health Care Provision for Rural Elders. *J. Appl. Gerontol.* 2001;20(2):170-183.
  
50. Carey MA. Hospitals, Home Health Care Services Lobby against Cuts in Deficit Deal. *Capsules: The KHN Blog* 2012, November 15; <http://capsules.kaiserhealthnews.org/index.php/2012/11/hospitals-home-health-care-services-lobby-against-cuts-in-deficit-deal/>. Accessed November 20, 2012.
  
51. Viebeck E. Nursing Homes to Congress: Stop Looming Medicare Cuts. *Healthwatch: The Hill's Healthcare Blog* 2012, November 12; <http://thehill.com/blogs/healthwatch/medicare/267301-nursing-homes-to-congress-stop-looming-medicare-cuts>. Accessed November 20, 2012.
  
52. 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):1323-1328.
  
53. National Advisory Committee on Rural Health. *The 2008 Report to the Secretary: Rural Health and Human Services Issues*. Rockville, MD: Health Resources and Services Administration, Office of Rural Health Policy, NACRHHS;2008.
  
54. Hauenstein EJ. Building the Rural Mental Health System: From De Facto System to Quality Care. *Annu. Rev. Nurs. Res.* 2008;26:143-173.
  
55. Bartels SJ, Brewer G, Mays W, Rawlings B. *Community Integration for Older Adults with Mental Illnesses: Overcoming Barriers and Seizing Opportunities*. Rockville, MD: Substance Abuse and Mental Health Services Administration, Center for Mental Health Services;2004. DHHS Publication No. SMA 05-4018.
  
56. Kaufman AV, Scogin FR, MaloneBeach EE, Baumhover LA, McKendree-Smith N. Home-Delivered Mental Health Services for Aged Rural Home Health Care Recipients. *J. Appl. Gerontol.* 2000;19(4):460-475.
  
57. Rabinowitz T, Murphy KM, Amour JL, Ricci MA, Caputo MP, Newhouse PA. Benefits of a Telepsychiatry Consultation Service for Rural Nursing Home Residents. *Telemed J. E Health.* Jan-Feb 2010;16(1):34-40.

58. Noblin A, Cortelyou-Ward K, Cantiello J. Utilizing Telemedicine Techniques to Confront Rural Mental Health Care Challenges: The Progressions Towards a Technological Health Ecosystem. *J Health Med Informat.* 2012;S7(001).
59. National Broadband Map. Broadband Statistics Report: Broadband Availability in Urban Vs. Rural Areas. 2012; <http://www2.ntia.doc.gov/files/broadband-data/national-broadband-map-broadband-availability-in-rural-vs-urban-areas.pdf>. Accessed February 14, 2013.
60. Medicare Learning Network. *Telehealth Services: Rural Health Fact Sheet Series*. Baltimore, MD: U.S. Department of Health and Human Services, Centers for Medicare & Medicaid Services; December 2012. ICN 901705.
61. National Conference of State Legislatures. State Coverage for Telehealth Services. 2013; <http://www.ncsl.org/issues-research/health/state-coverage-for-telehealth-services.aspx>. Accessed February 13, 2013.
62. Hall M, Hall P, Martin C, Alvarez I. *Telemedicine Reimbursement: A National Scan of Current Policies and Emerging Initiatives*. Sacramento, CA: California Telemedicine and eHealth Center (CTEC);2009.
63. Roberts M, Smith J, McFaul M, et al. Behavioral Health Workforce Development in Rural and Frontier Alaska. *Journal of Rural Mental Health.* 2011;35(1):10-16.
64. Hogan TP, Wakefield B, Nazi KM, Houston TK, Weaver FM. Promoting Access through Complementary Ehealth Technologies: Recommendations for Va's Home Telehealth and Personal Health Record Programs. *J. Gen. Intern. Med.* Nov 2011;26 Suppl 2:628-635.
65. Integrated Care Resource Center. State-by State Health Home State Plan Amendment Matrix. 2012, December; [http://www.chcs.org/usr doc/State by State HH SPA matrix.pdf](http://www.chcs.org/usr_doc/State%20by%20State%20HH%20SPA%20matrix.pdf). Accessed January 31, 2013.
66. National Health Service Corps. Full-Time Loan Repayment Program. n.d.; <http://nhsc.hrsa.gov/loanrepayment/fulltimeprogram/index.html>. Accessed January 30, 2013.

67. National Health Service Corps. Application Process. n.d.; <http://nhsc.hrsa.gov/loanrepayment/applicationprocess/index.html>. Accessed January 30, 2013.
68. National Health Service Corps. Eligibility. n.d.; <http://nhsc.hrsa.gov/sites/becomenhscapprovedsite/eligibility/index.html>. Accessed January 30, 2013.
69. Gibbons B. *Potential Impact of Health Reform on Rural North Dakota Health Workforce*. Grand Forks, ND: Center for Rural Health; Winter 2011. Fact Sheet.
70. American Telemedicine Association. Telemedicine in the Patient Protection and Affordable Care Act (2010). 2010; <http://www.americantelemed.org/docs/default-source/policy/telehealth-provisions-within-the-patient-protection-and-affordable-care-act.pdf>. Accessed September 18, 2012.
71. Semansky R, Willging C, Ley DJ, Rylko-Bauer B. Lost in the Rush to National Reform: Recommendations to Improve Impact on Behavioral Health Providers in Rural Areas. *J. Health Care Poor Underserved*. May 2012;23(2):842-856.
72. Siegwarth AA, Koyanagi C. The New Health Care Reform Act and Medicaid: New Opportunities for Psychiatric Rehabilitation. *Psychiatr Rehabil J*. Spring 2011;34(4):277-284.
73. Richardson LK, Frueh BC, Grubaugh AL, Egede L, Elhai JD. Current Directions in Videoconferencing Tele-Mental Health Research. *Clin. Psychol. (New York)*. Sep 1 2009;16(3):323-338.
74. Beales JL, Edes T. Veteran's Affairs Home Based Primary Care. *Clin. Geriatr. Med.* Feb 2009;25(1):149-154, viii-ix.
75. Bazelon Center for Mental Health Law. How Health Care Reform Can Improve Care for People with Chronic Health Conditions (Including Individuals with Serious Mental Illnesses). 2011; <http://www.bazelon.org/LinkClick.aspx?fileticket=Tf8iX-DlvaQ%3D&tabid=218>. Accessed February 22, 2013.

76. **Kaiser Family Foundation.** *Affordable Care Act Provisions Relating to the Care of Dually Eligible Medicare and Medicaid Beneficiaries.* Menlo Park, CA: Kaiser Family Foundation;2011. Publication #8192.
77. **Centers for Medicare and Medicaid Services.** *Where Innovation Is Happening.* 2013; <http://innovation.cms.gov/initiatives/map/index.html#model=independence-at-home-demonstration>. Accessed June 14, 2013.
78. **Health Resources and Services Administration.** *List of Rural Counties and Designated Eligible Census Tracts in Metropolitan Counties 2005;* <ftp://ftp.hrsa.gov/ruralhealth/Eligibility2005.pdf>. Accessed June 14, 2013.
79. **Treo Solutions.** *Performance Analysis: Healthcare Utilization of Ccnc-Enrolled Population 2007-2010.* Troy, NY: Treo Solutions; June, 2012 2012.
80. **Cosway R, Girod, C., Abbott, B.** *Analysis of Community Care of North Carolina Cost Savings.* San Diego, CA2011.

**APPENDIX: PROVISIONS OF THE AFFORDABLE CARE ACT (ACA) WITH POTENTIAL RELEVANCE TO IMPROVEMENT OF MENTAL HEALTH SERVICES IN RURAL LONG-TERM CARE**

ACA Section	Description
§2073	Medicaid Health Homes Option: allows states to use Medicaid funds to create primary care practices that coordinate treatment and support services for Medicaid beneficiaries with multiple chronic conditions.
§2402	Expands the State Medicaid Option for Home-and-Community-Based Services (§1915(i) of the Social Security Act (42 USC 1396(i))). Revised law allows states to cover a broadened range of support services for disabled Medicaid beneficiaries in the community, specifically including those with mental illnesses. Newly authorized services include transportation and mental health treatment delivered either at mental health centers or at off-site locations
§3024	Independence At Home Demonstration: physician-led, multidisciplinary teams deliver home-based primary care to participating Medicare enrollees with chronic illnesses.
§3026	Directs the Center for Medicare and Medicaid Innovation within the Centers for Medicare and Medicaid Services to study the use of telehealth services as a means of treating behavioral issues among those in medically underserved areas.
§5102	State Health Care Workforce Development program: awards states one-year grants of up to \$150,000 to design comprehensive workforce development strategies.
§5302	Offers grants for provider organizations to create new training curricula for direct care workers in nursing home and community-based settings
§5306(a)	Mental and Behavioral Health Education and Training Grants: available for institutions of higher education to help them recruit and train students in clinical social work and clinical psychology.
§5403	Establishes grant programs for Area Health Education Centers (AHECs) to develop infrastructure for new workforce education programs.
§10503	Dedicating additional resources to the National Health Service Corps, which grants federal repayment of academic loans to health professionals who agree to serve for two years at an approved site in a Health Professions Shortage Area (HPSA). Amount of increase: \$1.5 billion over five years (2011 to 2015).

## LIST OF RECENT WORKING PAPERS

WP 49. Anderson, N., Neuwirth, S., Lenardson, J.D., & Hartley, D. (2013, June). *Patterns of care for rural and urban children with mental health problems.*

WP48. Gale, J.A., Lenardson, J.D., Lambert, D., & Hartley, D. (2012, March). [Adolescent alcohol use: Do risk and protective factors explain rural-urban differences.](#) (Working Paper #48).

WP47. Published as: Ziller, E.C., Lenardson, J.D., & Coburn, A.F. (2012). Health care access and use among the rural uninsured. *Journal of Health Care for the Poor and Underserved*, 23(3), 1327-1345.

WP46. Anderson, N., Ziller, E.C., Race, M.M., Coburn, Andrew F. (2010). [Impact of employment transitions on health insurance coverage of rural residents.](#)

WP45. Lenardson, J.D., Ziller, E.C., Lambert, D., Race, M.M., & Yousefian, A. (2010). [Access to mental health services and family impact of rural children with mental health problems.](#)

WP44. Hartley, D., Gale, J., Leighton, A., & Bratesman, S. (2010). [Safety net activities of independent Rural Health Clinics](#)

WP43. Gale, J., Shaw, B., Hartley, D., & Loux, S. (2010). [The provision of mental health services by Rural Health Clinics](#)

WP42. Race, M., Yousefian, A., Lambert, D., & Hartley, D. (2009, September). *Mental health services in rural jails.*

WP41. Lenardson, J., Race, M., & Gale, J.A. (2009, December). *Availability, characteristics, and role of detoxification services in rural areas.*

WP40. Published as: Ziller, E.C., Anderson, N.J., & Coburn, A.F. (2010). Access to rural mental health services: Service use and out-of-pocket costs. *Journal of Rural Health*, 26(3), 214-24. doi : 10.1111/j.1748-0361.2010.00291.x

WP39. Lambert, D., Ziller, E., Lenardson, J. (2008). [Use of mental health services by rural children.](#)

WP38. Morris, L., Loux, S.L., Ziller, E., Hartley, D. [Rural-urban differences in work patterns among adults with depressive symptoms.](#)

WP37. Published as: Yousefian, A., Ziller, E., Swartz, J., & Hartley, D. (2009). Active living for rural youth: Addressing physical inactivity in rural communities. *Journal of Public Health Management and Practice: Special Issue on Rural Public Health*, 15(3), 223-231.

WP36. Published as: Hartley, D., Loux, S., Gale, J., Lambert, D., & Yousefian, A. (2010, June). [Inpatient psychiatric units in small rural hospitals](#). *Psychiatric Services*, 61(6), 620-623.

WP 35a. Lenardson, J. D., & Gale, J. A. (2007, August). [Distribution of substance abuse treatment facilities across the rural-urban continuum](#).

WP35b. Published as: Lambert, D., Gale, J.A., & Hartley, D. (2008, Summer). Substance abuse by youth and young adults in rural America. *Journal of Rural Health*, 24(3), 221-8.

WP34. Published as: Ziller, E.C., Coburn, A.F., Anderson, N.J., & Loux, S.L. (2008). Uninsured rural families. *The Journal of Rural Health*, 24(1), 1-11.

WP33. Published as: Ziller, E. C., Coburn, A. F., & Yousefian, A. E. (2006, Nov/Dec.). Out-of-pocket health spending and the rural underinsured. [Health Affairs](#), 25(6), 1688-1699.

WP32. Published as: Hartley, D., Ziller, E., Loux, S., Gale, J., Lambert, D., & Yousefian, A. E. (2007). Use of Critical Access Hospital emergency rooms by patients with mental health symptoms. *Journal of Rural Health*, 23(2), 108-115.

WP31. Published as: Hanrahan, N. P., & Hartley, D. (2008). Employment of advanced-practice psychiatric nurses to stem rural mental health workforce shortages. *Psychiatric Services*, 59(1), 109-111.



Established in 1992, the Maine Rural Health Research Center draws on the multidisciplinary faculty, research resources and capacity of the Cutler Institute for Health and Social Policy within the Edmund S. Muskie School of Public Service, University of Southern Maine. Rural health is one of the primary areas of research and policy analysis within the Institute, and builds on the Institute's strong record of research, policy analysis, and policy development.

The mission of the Maine Rural Health Research Center is to inform health care policymaking and the delivery of rural health services through high quality, policy relevant research, policy analysis and technical assistance on rural health issues of regional and national significance. The Center is committed to enhancing policymaking and improving the delivery and financing of rural health services by effectively linking its research to the policy development process through appropriate dissemination strategies. The Center's portfolio of rural health services research addresses critical, policy relevant issues in health care access and financing, rural hospitals, primary care and behavioral health. The Center's core funding from the federal Office of Rural Health Policy is targeted to behavioral health.

Maine Rural Health Research Center  
Muskie School of Public Service  
University of Southern Maine  
PO Box 9300  
Portland, ME 04104-9300  
207-780-4430  
207-228-8138 (fax)  
<http://usm.maine.edu/muskie/cutler/mrhc>



**Rural Health Research  
& Policy Centers**

Funded by the Federal Office of Rural Health Policy  
[www.ruralhealthresearch.org](http://www.ruralhealthresearch.org)