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Expanding the Geriatric Mental Health Workforce through Utilization of Non-Licensed Providers

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Abstract

Objectives—The rapidly growing older adult population in the United States is poised to overwhelm the geriatric mental healthcare workforce. We evaluate several policy and practice strategies for bolstering the geriatric mental healthcare workforce and describe the costs and other considerations of implementing one approach.

Method—Narrative overview of the literature and policy retrieved from searches of databases, hand searches, and authoritative texts. We identified three proposed strategies to increase the geriatric mental healthcare workforce: 1) production of more geriatric mental health providers; 2) team-based care; and 3) non-licensed providers. We evaluate each in terms of their challenges and potential for increasing the geriatric mental healthcare workforce. Based upon our previous work, we provide real-world estimates of the costs, policy, and practice considerations for training, employing, and supervising non-licensed mental health providers.

Results—We conclude that the use of non-licensed providers is a key component of reforms needed to allow a greater number of older adults to access needed mental healthcare. Licensed and non-licensed providers have achieved similar improvements for generalized anxiety disorder among patients, although non-licensed providers were able to do so at a lower cost.

Conclusion—Supervised non-licensed providers can extend the reach of licensed providers for specific mental health conditions, resulting in lower costs and increased number of patients treated. Although several barriers to implementation exist, there is evidence of policy and infrastructure changes that may support this type of care-delivery model emerging from reforms in financing and associated delivery initiatives created by the Affordable Care Act.

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Keywords

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Introduction

Between 2010 and 2030, the population of older adults age 65 and over will increase from 40.3 million to 72.1 million (Institute of Medicine, 2012) and the current healthcare workforce cannot address the resulting demand (Institute of Medicine, 2012; Karlamangla et al., 2007; Kraus-Schuman et al., 2015). In mental healthcare, insufficient numbers of adequately trained mental healthcare providers are expected in coming years, but this concern is particularly salient for geriatric mental healthcare (Bartels & Naslund, 2013; Institute of Medicine, 2012). By 2030, it is expected that the geriatric workforce will need more than 4,700 geropsychiatrists and more than 21,000 non-physician mental health providers to meet the burgeoning demand (Shea, 2013).

Mental health issues among older adults have been associated with negative outcomes, including increased emotional distress, mortality, suicide, hospitalization and/or nursing home placement, and costs. The complex interactions of mental health conditions with the physical, cognitive, and functional impairments common among this population require a mental healthcare workforce with specific competencies and ability to function within a larger care team (Institute of Medicine, 2012; Institute of Medicine (US) Committee on the Future Health Care Workforce for Older Americans, 2008; Karlamangla et al., 2007). However, mental healthcare providers lack training in geriatrics, geriatric care providers lack training in mental healthcare, and general providers lack significant educational requirements in either geriatrics or mental health (Institute of Medicine, 2012).

Traditionally, older adults have been less likely than their younger counterparts to use mental healthcare. However, baby boomers have had somewhat higher average rates of mental healthcare use than the current generation of older adults, which is expected to continue as they age. Furthermore, older adults have been less likely to use services provided in specialty settings (i.e., mental health clinics and psychiatric hospitals), instead opting for services provided in general medical care and community-based settings (Institute of Medicine, 2012). This preference has also been driven by reforms and new programs resulting from the Affordable Care Act, including Accountable Care Organizations (ACOs), Patient Centered Medical Homes, and hospital readmission/care transition interventions. These programs and reforms shift acute care to community and home-based settings with increased focus on providing improved care coordination, medication management, and care transitions (Bartels, Gill, & Naslund, 2015).

The IOM and others have called for exploration of innovative models of care to increase capacity to provide mental health services to this population, particularly focusing on utilization of non-traditional healthcare providers (Arean, Raue, Sirey, & Snowden, 2012; Bartels & Naslund, 2013; Kraus-Schuman et al., 2015; Ricketts & Fraher, 2013). ACOs and bundled payment structures allow flexibility in terms of who pays for services and how those

services may be delivered to older adults. Our work has progressed from establishing an integrated model for late-life generalized anxiety disorder (GAD; Stanley et al., 2009) to examining outcomes with delivery by lay providers working under the supervision of licensed providers (Stanley et al., 2014). Based on this work, we advocate for the use of non-licensed providers to deliver mental health services for older adults and outline key challenges, implementation strategies, and policy recommendations.

Methods

We conducted a review of the scientific literature using PubMed (example key words: geriatric, older adults, workforce capacity, workforce shortage), searches of government and professional society websites, hand searches of the references of retrieved manuscripts, and review of authoritative texts from the Institute of Medicine (2008, 2012) to identify strategies that have been proposed to increase the capacity of the geriatric mental healthcare workforce. Because no single recommendation has been endorsed to address this concern, we chose the most commonly described proposed strategies to present in this analysis.

Results

Proposed Strategies to Bolster the Geriatric Mental Healthcare Workforce

Production of More Geriatric Mental Health Providers—A report from the IOM recommended that the Department of Health and Human Services should be responsible for tasking its agencies with ensuring sufficient capacity and organization of the mental health workforce to meet the needs of the growing older adult population (Institute of Medicine, 2012). The report also recommended that organizations providing accreditation, certification, professional examination, and licensing should enact mental health curriculum and credentialing requirements for all personnel responsible for the care of older adults including primary care providers, psychologists, and social workers (Batchelor-Aselage, DiMeglio, Aaron, & Dugger, 2014; Institute of Medicine, 2012). However, not all studies find that providing geriatrics training for these professionals has an impact on their practice (Baloch, Moss, Nair, & Tingle, 2010; Frank & Seguin, 2009).

Despite the staggering statistics regarding gaps in the geriatric workforce, the number of individuals choosing to pursue specialty training in these fields has stagnated or declined (Institute of Medicine, 2012; Institute of Medicine (US) Committee on the Future Health Care Workforce for Older Americans, 2008; Shea, 2013; The American Geriatrics Society, 2013). Barriers to increasing and strengthening the geriatric mental healthcare workforce are varied and firmly entrenched in the US healthcare and educational systems (Bartels & Naslund, 2013; Institute of Medicine, 2012; Ricketts & Fraher, 2013). The current financial structure of providing mental healthcare does not incentivize individuals to specialize in the older adult population. Because additional preparation in geriatrics does not result in higher pay, there is little return on the investment of time, energy, and other costs for the individual and low likelihood that the additional knowledge and skills will be appreciated fully in practice (Bishop, 2013). The Mental Health Parity and Addiction Equity Act, implemented in 2008, requires insurance companies provide the same level of coverage for mental health and substance abuse treatment as for medical and surgical services. The Affordable Care Act

went a step further, mandating that mental health and substance abuse treatment is an essential benefit and that plans offered in the insurance exchanges must include this coverage (Substance Abuse and Mental Health Services Administration, 2014). The shift towards equality of coverage has been slow, but will likely improve payments and income for geriatric mental healthcare providers (Bishop, 2013; Shea, 2013). For this strategy to be successful, changes in policy and professional culture would be necessary to provide greater financial incentives, mentorship, training programs, and opportunities for positive experiences.

Outside the United States, it is common policy practice to conduct coordinated workforce planning to develop national and regional goals, with input from technical workforce experts, policy makers, clinicians, and patients to guide the size and expertise of the healthcare workforce (Institute of Medicine, 2012). However, the United States has relied predominantly on market forces to guide the structure of the healthcare system, with clinical guidelines and regulation as secondary concerns (Rice, 1997; Ricketts & Fraher, 2013). With clear indication that the US geriatric mental healthcare workforce is insufficient to meet increasing demand, one might question whether this laissez-faire style is the ideal option for the future. Regardless, stakeholders are constrained by this approach in formulating recommendations for improving the capacity of the geriatric mental healthcare workforce.

Team-Based Care—With enactment of the Affordable Care Act, a great deal of emphasis has been placed on pilot studies to identify innovative models of care delivery (Centers for Medicare & Medicaid Services, 2015; Sprague, 2012). Many of the resulting models have included team-based care and providers from a variety of disciplines working at the top of their licensure or training. Ricketts and Fraher (2013) conceptualized the roles of team members as falling into two categories. The first was that of lower-cost healthcare professionals as substitutes for higher-cost professionals, commonly seen in the example of nurse practitioners on behalf of physicians. The second was lower-cost healthcare professionals acting as extenders for others, such as in the case of increasingly common discharge coordinators.

Utilizing a team-based approach to care for older adults is necessary given the range of conditions an older adult may be managing at any given time. Within the arena of geriatric mental health, several clinical trials around integration of mental health care and primary care, particularly for depression) have produced promising results regarding access, clinical effectiveness, and cost savings (Bartels, Gill, & Naslund, 2015). These integrated care models rely on teamwork involving primary care providers, a designated collaborative care manager, and a consulting geriatric mental health specialist. Guidelines for Patient Centered Medical Homes created by the ACA incentivize (i.e., provide higher payments for) the use of team-based care for complex patients. To meet the required standard of care, the team must include a consulting psychiatrist and embedded mental health provider who are supported by the primary care provider (Bartels, Gill, & Naslund, 2015). However, adoption of these approaches still requires an adequate mix of medical and mental health professional expertise, which may not be easy to obtain.

A great deal of attention and financial resources have been devoted to developing team-based models of care across healthcare in general, but few resources have been focused on determining ideal composition of teams, linking with systems responsible for training or regulating the workforce, or preparing healthcare providers to function in the team-based structure. Another challenge of implementing team-based care is the size of primary care practices with 75% of primary care providers practicing in groups of five or less. These small practices have significant difficulty creating team-based care, even when using resources available in their community (Rich, Lipson, Libersky, Peikes, & Parchman, 2012). Much work is still necessary before this approach is sufficient to close the gap in providing geriatric mental healthcare.

Non-Licensed Medical Care Providers—Although largely unexplored in the United States, utilizing non-licensed mental healthcare providers may increase the capacity of the geriatric mental healthcare workforce relatively quickly. When managing long-term chronic conditions, the physician assumes a less prominent role, often transitioning to the role of medical consultant for allied healthcare professionals (e.g., visiting nurse, dietician, physical therapist, etc.) who are primarily responsible for day-to-day management of the condition (Ricketts & Fraher, 2013; Zola & Miller, 1973). Precedent exists for non-licensed professionals providing healthcare under the supervision of a licensed professional, including in the settings of emergency medical services and disease self-management.

The utilization of emergency medical technicians (EMTs) and paramedics has long been accepted as a successful model of non-licensed healthcare professionals providing emergency medical services under the supervision of licensed physicians. EMTs and paramedics practice under the license and supervision of a physician medical director (Kellermann et al., 2013). Emergency medical service providers rely heavily on clinical protocols and standing orders to guide their work in the field, but have access to additional medical direction via radio or telephone. These providers receive highly focused classroom instruction and supervised practice, with most obtaining additional certification through the National Registry of EMTs and a state license (Kellermann et al., 2013). With highly specialized training and established protocols for providing care away from their licensed supervising physician, EMTs and paramedics are able to greatly expand the emergency care workforce.

The Indiana University Center for Aging Research has developed the Aging Brain Care program, which is an effective collaborative care coordination model for older adults with dementia, depression, or both (Boustani et al., 2011; Callahan et al., 2006). A key part of this program designed to address the significant shortage of trained geriatricians, nurses, social workers, and paraprofessionals trained to work with older adults is the inclusion of Care Coordinator Assistants. These individuals deliver evidence-based and individualized care protocols under the close supervision of registered nurse Care Coordinators. The Care Coordinator Assistants are required only to have a high school diploma and receive job-specific training after being hired. By shifting some of the tasks to the assistants, Care Coordinators can oversee care for an expanded group of older adults (Boustani et al., 2011; Callahan et al., 2006).

Synthesis of Strategies Identified to Increase Workforce Capacity

Each of the strategies for increasing the capacity of the geriatric mental healthcare workforce described in this paper have merit, but no single approach is sufficient to address this looming crisis. We advocate for an approach to bolstering the workforce that incorporates elements from each strategy, but highlight the training of non-licensed mental healthcare providers to function as part of the interdisciplinary team under the supervision of licensed providers, thus extending the reach of licensed healthcare providers and freeing them up to focus on the more severe cases. Below is a description of our work in this area and recommendations for implementation and policy.

Our Work with Non-Licensed Mental Healthcare Providers—Several recent studies and literature reviews have demonstrated positive mental health outcomes for patients of non-licensed mental health counselors, including community health workers, social workers, clinical case managers, and nurses (Arean et al., 2012; Ciechanowski et al., 2004; den Boer, Wiersma, Russo, & van den Bosch, 2005; Montgomery, Kunik, Wilson, Stanley, & Weiss, 2010; Patel et al., 2011; Quijano et al., 2007; Waitzkin et al., 2011). Our team conducted the first study, to our knowledge, comparing patient outcomes for non-licensed and licensed PhD-level providers. We found that, in older adults with generalized anxiety disorder (GAD), Cognitive Behavioral Therapy delivered by bachelor-level non-licensed providers under the supervision of licensed providers was equally effective as treatment delivered by licensed PhD-level providers (Stanley et al., 2014). Specifically, those who received CBT from either a bachelor- or PhD-level provider showed significantly greater improvements in GAD severity, anxiety, depression, and mental health quality of life relative to a usual care condition. Importantly, improvement in these mental health outcomes did not differ between patients of non-licensed and licensed providers and these results were maintained in both treatment groups over one year follow-up.

Few, if any, studies have examined costs and cost savings using non-licensed mental healthcare providers as extenders for licensed providers. The upfront and ongoing costs of training a non-licensed provider in our work have been minimal, considering the number of additional older adults able to receive care. Given that our study was based in VA and used part-time non-licensed providers, we present salary costs (not including benefits) based on the 2014 national mean salary for community health workers of \$38,180 (Bureau of Labor Statistics, 2014b) and the national mean salary for clinical psychologists of \$74,030 (Bureau of Labor Statistics, 2014a) to provide a real world estimate of up front and ongoing costs of implementing this model. These salaries are based on national data and, thus may need to be calculated using variations based on cost of living, education/training level, and years of experience. We extrapolate the time spent receiving and providing supervision based on a full time case load of 25 patients per week for the non-licensed provider. The initial training for non-licensed providers averaged approximately 45 hours and included readings, didactics, listening to expert sessions, role plays, and treating practice patients (Stanley et al., 2014). With a median hourly wage of \$18.36, the upfront cost to train each non-licensed provider is approximately \$826.20. The licensed supervisor spent an average of 14 hours training the non-licensed provider at a median hourly wage of \$35.59, resulting in a cost of \$498.26 per non-licensed provider. Thus, the total initial costs for training the non-licensed

provider are approximately \$1,324.46. Ongoing costs include supervision and treatment delivery costs. Assuming a full time case load of 25 patients, we estimate 2 hours of scheduled supervision with an additional half hour of unscheduled consultation per week, resulting in a cost of \$45.90 for the non-licensed provider and \$88.98 for the licensed supervisor. We estimate that it takes 7 hours for a non-licensed provider to treat one patient (assuming the patient completes 7 sessions lasting an average of 40 minutes and allowing time to write notes, conduct care planning, etc.) at a cost of \$128.52 (Stanley et al., 2014). With the same assumptions, it would cost \$249.13 for a clinical psychologist to treat the same patient, which is nearly double the cost.

Benefits of Using Non-Licensed Mental Health Providers—Both groups in our study (Stanley et al., 2014) improved similarly, although there are benefits to using non-licensed mental healthcare providers and chief among them is lower cost. Licensed mental healthcare providers may be reluctant to support the entry of non-licensed providers into the field. Several important considerations would need to be addressed to insure quality of care including compliance with regulatory requirements, careful screening of candidates and adequate basic preparation in topics such as ethics, basic counseling skills etc. However, we argue that their inclusion will provide benefits for licensed providers as well. By expanding the geriatric mental healthcare workforce, a greater number of older adults would have access to the care they need. Licensed providers could delegate routine encounters and maintenance visits to trained non-licensed providers, allowing the former to focus on patients with more complex needs. The licensed provider would need to provide training and ongoing supervision of the non-licensed provider, although the time investment is modest (Stanley et al., 2014; Kraus-Schuman et al., 2015). The training provided to the non-licensed provider should be manualized, allowing them to gain the knowledge and skills necessary to address specific mental health issues in older adults, such as GAD. Training of these non-licensed providers must include basic knowledge on issues core to typical specialty geropsychology training such as general knowledge about adult development and aging, including assessment, intervention, and consultation with this population (Knight, Karel, Hinrichsen, Qualls, & Duffy, 2009). Depending on the model of care delivery, non-licensed providers may provide care in the community and would ideally be recruited from within the community they serve. Given the projected growth of Hispanic, African American, and Asian segments of the older adult population (Institute of Medicine, 2012), having a workforce that reflects this cultural and linguistic diversity is becoming more important. Non-licensed providers from within a community may be able to reach patients traditionally less likely to access mental healthcare by developing trust through shared language, culture, and experiences.

Implementation—There has been demonstrated success with models of care using non-licensed mental healthcare providers (Institute of Medicine, 2012; Kaskie, 2013; Stanley et al., 2014; Unutzer et al., 2002), but this has not translated into widespread implementation of the successful programs. Previous research on dissemination and adoption of evidence-based innovations in mental healthcare has identified several key factors at the provider, systems, patient, and policy levels that impact success (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). Introducing the role of a non-licensed mental healthcare provider would require

changes at many levels and require clear guidance for how to build the appropriate mix of providers with adequate competencies, but first an infrastructure must be in place to replicate these models in new sites. The healthcare field has emphasized the importance of team-based care, but there is little evidence to guide the disciplinary makeup of these teams. Furthermore, providers are typically not trained in the construction or management of interdisciplinary teams, although they are often expected to lead them in practice. It is critical that licensed providers have access to best practices for selection, supervision, and training of non-licensed providers to be successful in implementing new models of care. Key considerations include determining who has the potential to become an effective non-licensed provider and which roles are appropriate for them to fill. Kellerman et al. suggested that the primary considerations to keep in mind when choosing non-licensed providers are that “they should be easy to train, inexpensive to employ, and capable of working miles apart from their supervising providers” (Kellermann et al., 2013). While preparing to hire frontline Care Coordinator Assistants for the Aging Brain Care program, the Indiana University Center for Aging Research recognized that traditional hiring practices were insufficient to screen for this new position. The team developed an effective screening process to specifically target the individual’s ability to express caring and empathy (Cottingham et al., 2014).

In this model of mental healthcare delivery, training must provide non-licensed providers with a basic set of competencies necessary to perform their specific role. Providing this type of training may be challenging for established licensed providers, who would need to create a course structure, content, and materials for their new team members. Successful programs often have training and technical assistance available as part of the implementation process, which could reduce the time investment required by the provider. Regardless of the training model, it is essential that the roles of licensed and non-licensed providers for providing care must be clearly delineated. For example, a team may decide that a non-licensed provider can administer brief standardized screening and a manualized intervention, but the licensed provider would be needed to determine diagnoses, conduct ongoing supervision, and provide immediate response to crisis situations. Another important consideration is how the team will track and address successes and challenges to ensure successful utilization of non-licensed providers.

A full description of the training and supervision methods used by our team has been previously reported (Kraus-Schuman et al., 2015; Stanley et al., 2014). To choose the best candidates for the program, a senior-level licensed clinical psychologist and an experienced program manager conducted interviews with potential non-licensed providers and made decisions based on interpersonal and communication skills. For individuals with a bachelor’s degree, training consisted of reading (8 hours) and didactics (3 hours), review of audiotaped sessions conducted by experts (20 hours), role plays of skills (5 hours), and treating practice patients (9.21 hours). The reading materials related to CBT, GAD, late-life anxiety, aging and cognitive disorders, program procedures, and the treatment manual and workbook. The first didactic session focused on CBT principles for anxiety and depression and development of the treatment approach. The second didactic session covered the procedures for patient enrollment, including recruitment, selection, screening, and diagnostic processes. Non-licensed providers were trained to recommend and conduct CBT modules based on an

algorithm. The non-licensed providers listened to two sets of tape recordings of experts delivering the protocol CBT treatment, then participated in group discussions and role plays of the core and elective sessions. The non-licensed providers provided the protocol treatment to two practice patients before progressing to seeing study patients. Supervision by the licensed provider included role playing (5 hours), didactic training sessions (3 hours), and giving feedback on treatment of practice patients (5.66 hours). Ongoing weekly group supervision meetings averaged approximately .5 hours (non-licensed providers in our study were part time). To ensure fidelity, sessions were audio taped and 20% were chosen randomly to be rated by two independent treatment integrity raters.

Our approach to training non-licensed mental health providers for our study focused primarily on the clinical aspects of care. Other studies and policy statements on training similar workers (e.g., community health workers, home health aides, and certified nursing assistants) have emphasized the importance of adequate training that also includes relevant interpersonal and other non-clinical skills that would allow competent and confident job performance. Some examples of these skills include establishing clinical boundaries, communication and relational skills for person-centered care, tailoring services to individual needs and preferences, how to function in care teams, and self-care for the non-licensed provider (Hoeft, Hinton, Liu, & Unutzer, 2016; Paraprofessional Healthcare Institute, 2012).

Policy—Adaptations and development of new policies at the national, state, organizational, and professional levels are critical to the spread of the non-licensed mental healthcare provider model. Licensed providers and laypersons alike may have reservations about non-licensed mental healthcare professionals providing care. As discussed, licensed providers may feel threatened or slighted by the idea of non-licensed professionals providing care that they were able to provide only after enduring the lengthy education, internship, and licensing process. These biases need to be overcome to enact the needed policy changes. We should reiterate that we are not suggesting non-licensed professionals as replacements for licensed mental health providers. Instead, they should be considered as a means to extend the reach of licensed providers, freeing the latter to work at the top of their competence and focus on more complex cases. This model may be an ideal opportunity for psychologists and psychiatrists who are interested in expanding their presence in the increasingly common integrated healthcare models (Health Service Psychology Education Collaborative, 2013). The requirements for training competencies and designation of activities that may be performed by a non-licensed provider will need to be established, which will require the entities responsible for licensing standards (including states and professional groups) to work together to establish evidence-based criteria.

The competence, capacity, and membership of the geriatric mental healthcare workforce is largely influenced by federal policy and federal agencies, particularly agencies under the Department of Health and Human Services. However, the diffusion of responsibility for strengthening the geriatric mental healthcare workforce across agencies, bureaus, and departments has resulted in no single agency leading the charge (Institute of Medicine, 2012). The Centers for Medicare and Medicaid Services (CMS) places limitations on which personnel can be reimbursed for providing patient care. CMS has the ability (e.g., through the CMS Innovation Center) to change these policies for demonstrations of promising

models of care, which often use non-licensed providers. However, translating these temporary policies to permanent national or state policy has proven to be difficult and precludes the dissemination of successful new models of care. There has been some flexibility on the part of Medicaid to include community health workers and peer-support providers in reimbursement models (Witgert, Kinsler, Dolatshahi, & Hess, 2014), but Medicare has not yet implemented comparable policy changes. Statutory changes are critical for Medicare to adapt to the evolving needs of the older adult population. State policy also plays an important role in shaping the geriatric mental healthcare workforce and in determining whether elements of these interventions may be implemented. Most states have enacted scope-of-practice laws that may prevent non-licensed professionals from applying their skills in patient care, although there have been ongoing efforts to address this issue.

Conclusion

The rapidly increasing population of older adults in the United States is poised to overwhelm the geriatric workforce, including those in geriatric mental healthcare. Some proposed solutions for this issue have included methods for encouraging greater numbers of individuals to enter the traditional geriatric mental healthcare profession, putting greater emphasis on the team-based care model, and using lay providers. Drawing from each of these strategies, our team implemented and evaluated an effective model of mental healthcare delivery for older adults using non-licensed bachelors-level psychologists. This work is unique because we compared outcomes for patients of licensed and non-licensed providers and examined costs and cost savings of using this model of mental health care delivery. The licensed and non-licensed providers achieved similar improvements among patients, although non-licensed providers were able to do so at a lower cost. This allows the opportunity to reach a greater number of older adults within the constraints of the current geriatric mental healthcare workforce. However, widely implementing such a model is not without challenges. Infrastructure needs to be in place at both the organizational and national levels, including manualized training protocols, scope-of-practice definitions, and education for licensed providers on choosing and supervising non-licensed providers. Professional societies will need to accept the role of non-licensed providers in their ranks and work to develop the necessary infrastructure to use them effectively. Federal and state policies remain a significant hurdle for the inclusion of non-licensed providers in payment schemes, but opportunities for change are emerging through Affordable Care Act demonstration programs. The benefits of utilizing non-licensed mental healthcare providers outweigh the challenges. This model of mental healthcare delivery has the potential to provide greater access to care through increased capacity and lower costs, to allow non-licensed professionals to receive sharply focused training in geriatric mental healthcare, and to reach older adults from ethnically and culturally diverse communities who may not have traditionally accessed mental healthcare. Using non-licensed mental healthcare providers is a timely and creative solution to address the impending shortage of geriatric mental healthcare providers and the growing need for these services.

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Table 1
Costs of CBT Delivered by Non-Licensed Providers Supervised by Licensed Providers

Cost Domain	Non-Licensed Provider		Licensed Supervisor		Total Costs
	Description	Cost	Description	Cost	
Initial Training Costs	Time spent receiving training = 45 hours × \$18.36	\$826.20 per provider	Time spent providing training = 14 hours × \$35.59	\$498.26 per provider	\$1,324.46 per provider
Ongoing Supervision Costs	Time spent receiving supervision = 2.5 hours × \$18.36	\$45.90 per provider per week	Time spent supervising = 2.5 hours × \$35.59	\$88.98 per provider per week	\$134.88 per provider per week
Ongoing Treatment Delivery Costs	Cost to treat one patient = 7 hours × \$18.36	\$128.52 per patient	n/a	n/a	\$128.52 per patient

Patients treated by non-licensed providers received an average of 7 weekly sessions