

*The White Papers*

# Integrate Now: The Important Role of Behavioral Health in Geriatric Care

Evidence From Depressive Disorders in the Community-Dwelling Elderly Population

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## Table of Contents

Introduction .....	1
Depression in the Elderly Population .....	2
Depression and Frailty in the Elderly Population .....	4
Impact of Depression .....	5
Treatment and Quality of Care .....	7
Conclusion .....	9



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## Introduction

...a sensible vision of primary health care must have mental health care woven into its fabric; that the primary care setting is well suited to the provision of most mental health services; that despite suboptimal recognition and management of mental disorders and attention to mental health, the structure and operation of primary care can be modified so as to greatly augment the provision of these services; and that the efforts under way in the United States to reform the health care system offer an opportunity to find the most effective of these modifications and to discover fruitful collaborative structures both within the primary care setting and between primary care clinicians and mental health professionals.

The Institute of Medicine promulgated these sentiments on behavioral health and primary care integration in its 1996 report *Primary Care: America's Health in a New Era*. Despite the many changes made to the U.S. healthcare system since this vision was published more than 20 years ago, the quote is still relevant today. In 2017, we are again on the brink of another healthcare system reform, and although progress continues, the system still lacks comprehensive behavioral health and primary care integration.

Maintaining good behavioral health is important across a person's lifespan. In this paper, we seek to motivate the expansion of behavioral health services to the largest group of healthcare consumers: the elderly. The U.S. Census Bureau estimates that by 2030, the elderly population (individuals age 65 and older) will grow to 72.7 million, or 20 percent of the total population (Ortman, Velkoff, & Hogan, 2014). The healthcare needs of this group accounted for 35 percent of hospital stays and 34.5 percent of total healthcare expenditure in the United States in 2012. Recent healthcare expenditure data further show that spending on and by individuals older than 65 grew at an average rate of 6.4 percent annually between 2002 and 2012 (CMS, 2016b).

Specifically, we focus on examining the prevalence and treatment of depressive disorders among community-dwelling older adults. Depression offers an important—albeit complex—case study of the importance of behavioral health treatment. Depression often goes undiagnosed in the elderly population because of both a lack of screening and the frequent confusion of its symptoms with normal features of aging. Even when depression is recognized and properly diagnosed in the elderly, treatment rates remain low. In fact, age is a major factor in the likelihood that a patient with depression will receive adequate care. Individuals over age 65 are approximately one-fifth as likely to receive adequate depression treatment as middle-aged adults are (Duhoux, Fournier, Gauvin, & Roberge, 2012). Estimates of the proportion of patients who receive adequate depression treatment range from just 14 percent to 56 percent, so even under the most generous estimates, under-treatment is problematic for almost half of patients affected by mental illness. This statistic alone provides ample motivation to systematically integrate behavioral healthcare into the standard of care for elderly patients; after all, would we stand behind a healthcare system that only treated 56 percent of patients after a cancer diagnosis? Or one that turned 6 out of every 10 patients away from the emergency department after a heart attack?

To truly gauge the quality of a modern healthcare system, measurement should include the extent to which patients have access to quality treatment for *all* their maladies, not only their physical ailments.

Our work targets several audiences:

- First, we hope the information we provide aids in continuing the important work already taking place in behavioral health and primary care integration. This paper presents the latest understanding of depression in the elderly and provides valuable insights for consideration in designing integrated care programs and initiatives.
- Second, this paper provides policymakers with a clear case for integrated behavioral health and primary care to consider as they continue working toward further healthcare system reform.

- Third, through this paper we aim to increase the attention given to depression and other mental illnesses when measuring healthcare quality across all care settings. To truly gauge the quality of modern healthcare, measurement should include the extent to which patients have access to quality treatment for *all* their maladies, not only their physical ailments.

Depression in the elderly population is a complex topic that has garnered robust attention from researchers over the past 10 years. We seek to move the conversation forward by presenting a succinct review of the current state of evidence on the prevalence, treatment, quality of care, and impact of depression on health outcomes among the U.S. elderly population. To do so, we conducted a systematic search of the literature using the PubMed database for articles related to the incidence of depression in community-dwelling older adults, the impact of depression on quality of life in elderly individuals, the role depression treatment plays in providing care to the elderly population, and efforts to measure quality of care as related to depression treatment.<sup>1</sup> An initial search for keywords “depression” and “elderly” resulted in 10,393 articles; narrowing the search to a more targeted Medical Subject Header Major Topics search of the same keywords resulted in 624 articles. We eliminated non-English articles, articles published before 2007, and articles with no available abstract to identify 119 articles. Additionally, we identified 8 articles through a search using the keywords “depression,” “treatment,” and “quality of care” and the same exclusion criteria, resulting in a total of 127 articles. As we reviewed the articles, we further screened for relevance and omitted articles that:

- Focused on relationships between specific diseases/health issues and depression (e.g., stroke and depression, cancer and depression, and heart disease and depression).
- Examined the relationship between depression and other health-related outcomes (e.g., the impacts of depression on cortisol levels over time).
- Examined the causes, indicators, and/or symptomology of depression.
- Examined populations not comparable to community-dwelling older adults in the United States (e.g., the elderly in an urban slum in Bangalore).
- Examined depression of caregivers and healthcare providers to elderly patients.<sup>2</sup>

The resulting body of literature consisted of 37 relevant articles published in English between 1998 and 2017. Although exclusion criteria removed most articles published before 2007, a few earlier articles are included in this review because they are relevant to understanding how estimates of the incidence of depression in the elderly population have changed over time. The research we conducted is presented in four areas: (1) the incidence, prevalence, and identification of depression among the elderly population; (2) the relationship between frailty and depression; (3) the impacts of depression; and (4) treatment and quality of care across various care settings widely used by elderly individuals.

## Depression in the Elderly Population

Estimates of depression prevalence in community-dwelling elderly adults vary widely across studies. Schulberg et al. (1998) estimated that depression prevalence is between 6 and 9 percent among the community-dwelling elderly population participating in primary care. Although prevalence tends to increase with age, the “oldest-old” individuals who continue to live in the community interestingly have a lower prevalence of depression, suggesting that “the fact that they remain at home despite the challenges of ill health and disability may have a positive effect on their psychological well-being” (Szczerbińska, Hirdeš, & Zyczkowska, 2012). On the low end of prevalence estimates, one study suggested that 2.6 percent of individuals in this population suffer from a mood disorder, which includes depression and anxiety disorders (Gum, King-Kallimanis, &

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<sup>1</sup> PubMed is provided by the National Center for Biotechnology Information’s National Library of Medicine, located at the National Institute of Health. It is available online at <https://www.ncbi.nlm.nih.gov/pubmed>.

<sup>2</sup> We recognize that these exclusion criteria are important to consider in developing an exhaustive understanding of the role depression plays in geriatric healthcare. However, for the purposes of this paper, we sought to narrow our focus to provide the most succinct yet comprehensive overview of this issue as possible. Readers interested in any of the topics omitted from this paper will find an extensive literature on each of the listed exclusions.

Kohn, 2009). Consistent with this finding, Buigues et al. (2015) reported that the median prevalence of *serious* depression in the elderly population is between 1 and 5 percent, but the range increases to 10 to 15 percent when considering milder forms of depressive disorders as well. The prevalence rate is higher, and can contribute to increased mortality, among those with comorbid conditions (Evans et al., 2005). Further, researchers observe differences in the estimated prevalence rate when differentiating between the point-rate (i.e., the prevalence rate at any given time), the 6-month rate (i.e., the presence of depression at any time over a 6-month period), and the 12-month rate (i.e., the presence of depression at any time over a 1-year period). Meta-analysis has provided that the range of depression prevalence at any given point is between 4.6 percent and 9.3 percent; the analysis calculated a pooled point-prevalence rate across studies of 7.2 percent. Meanwhile, 6-month prevalence estimates range from 6.2 percent to 9.5 percent, and 12-month rate estimates range from 1.4 percent to 9.3 percent (Luppa et al., 2012).

Although these estimates vary, it is clear that depressive disorders are not uncommon in the elderly population. The prevalence rates may seem small in percentage terms, but using U.S. census data to conduct a quick, “back-of-the-envelope” calculation, the estimates suggest that as many as 7.2 million elderly individuals are impacted by depression. Moreover, the authors of nearly all these publications suggest that they are *underestimating* the true prevalence rate. The literature attributes the large range in prevalence rate estimates—and the likelihood that these estimates are too low—to many factors, including variance based on the diagnostic tools being used, nuances of the types of depression considered across studies (e.g., major depressive disorder versus minor depression), widespread incidence of individuals with symptomology just below a threshold meriting a formal diagnosis, underdiagnosis and underreporting of the disorder, and evidence that suggests older individuals do not recognize their own symptoms as depression (Büchtemann, Luppa, Bramesfeld, & Riedel-Heller, 2012; Buigues et al., 2015; Gum et al., 2009; Luppa et al., 2012; Wetherell et al., 2009). Among these many reasons, the most agreed-upon contributor to the lack of precision in prevalence estimates is the absence of widespread assessment and screening for depression in the elderly population.

Routine depression screening is not only important to enhancing the accuracy of prevalence estimates but also to avoiding the common challenges in identifying depression in the elderly population. The presence of co-occurring medical conditions, including dementia, and the effects of various medications can make accurately identifying and diagnosing depression difficult (O’Connor, Whitlock, Gaynes, & Beil, 2009). Relatedly, it has been hypothesized that depression in the elderly population may have a more somatic presentation than depression in younger populations, making it more difficult to identify the disorder distinctly from other late-life somatic diseases or even from the expected somatic declines of aging. Hegeman, de Waal, Comijs, Kok, & van der Mast (2015) did find evidence of high severity of depression’s somatic symptoms among older individuals, but they also found that the mood and motivational symptoms present more intensely in older populations than younger ones. Identifying depression in the elderly is further complicated by the presence of other syndromes or disorders, such as frailty, which can lead to overdiagnosis of depression through the misattribution of symptoms to the mood disorder (Collard, Comijs, Naarding, & Oude Voshaar, 2014). The association between depression and frailty is further explained below. These complications all contribute to the prevailing consensus that early and regular depression screening is a crucial aspect of high-quality care for the elderly. Moreover, Vink (2008) provided evidence that early identification and treatment of elderly individuals at risk of mental health disorders is a cost-effective tool to minimize the ongoing health challenges accompanied by mood disorders.

Currently, there are prevailing disparities that persist in depression screening among the elderly population in primary care practices. In a study of adult primary care in New England, Black and Asian patients were less likely to be screened for

#### Notable

Researchers believe the prevalence of depression among the elderly is underestimated. Even so, current estimates suggest that as many as 7.2 million elderly individuals—approximately 1 out of every 7—suffer from depression.

depression than White ones. Further, the disparity between White and Black patients was larger for females than for males (Hahn, Cook, Ault-Brutus, & Alegria, 2015). Earlier research found that mass and universal screening in primary care can help clinicians identify missed cases and detect cases early in the course of the disease (Ormel et al., 1999).

Behavioral and primary care integration can involve more than early detection and screening services during primary care visits, but the literature does present compelling evidence that engaging primary care physicians even in just these activities has the potential for broader positive impacts. Early pilot models have shown success already. A program implemented by health plans in four cities in California, Maryland, Tennessee, and Texas integrated primary care and mental health/substance use disorder treatment through co-location in an attempt to improve the detection, diagnosis, and treatment of these conditions. In the program's first 3 years (since its establishment in 2013), 29 percent of patients screened had diagnosable depression and 9 percent had diagnosable substance use disorders (Anthem Public Policy Institute, 2016).<sup>3</sup>

An important step in the transformation to an integrated healthcare system is building a baseline understanding regarding the extent of the problem. In terms of depression among the elderly, primary care offers the opportunity, as a frequent contact point, to enhance depression screening and move toward a more comprehensive understanding of the true prevalence rate. Then care integration can be built on a more informed foundation as providers—referring to interdisciplinary care teams consisting of behavioral health professionals, primary care physicians, and other healthcare professionals—begin to develop comprehensive treatment strategies that address all the healthcare needs of individuals.

## Depression and Frailty in the Elderly Population

The above literature focuses on depression disorders broadly across the elderly population, but the literature also provides a robust discussion of the relationship between depression and frailty. Investigation into this relationship is relatively new. Early studies identified an association between depression and the development of physical disabilities (Penninx, Leveille, Ferrucci, van Eijk, & Guralnik, 1999; Ormel et al., 1999). Similar specification and reporting challenges contribute to a wide range in estimates of the co-occurrence of the two syndromes: Vaughan, Corbin, & Goveas (2015) reported a range in estimates from 16.4 percent to 53.8 percent in their analysis of literature on the topic, published between 2000 and 2015, and Buigues et al. (2015) reported that a range of 4 to 16 percent of frail elders over age 65 and as many as 35 percent of frail elders over 75 have serious depression. Considering the issue from the other direction, one study showed that 27 percent of elderly individuals with depression are also identifiable as frail through the Fried Criteria (Collard et al., 2014).

There is a wider consensus on the consequences associated with the coexistence of depression and frailty as well as an extensive commentary on the direction of causality between the two ailments. St. John, Tyas, & Montgomery (2013) provided a gradient estimation for the relationship by examining the presence of frailty and the number of depressive symptoms exhibited by an individual. They found strong positive and negative associations between depression and frailty (i.e., as the number of depression symptoms increases, so too does the percentage of individuals with frailty, and vice versa). Studies have reached a consensus on

### Notable

Evidence suggests that early intervention (identification and treatment) for individuals with increased risk of depression or other mood disorders not only improves quality of life but is a cost-effective strategy for mitigating other ongoing health challenges accompanied by mental illness.

<sup>3</sup> Patients participating in this model were not limited to elderly individuals but included all Medicaid recipients. The model nonetheless provides a good real-world example of care integration.

the presence of a relationship even after controlling for demographic factors and comorbidities (St. John et al., 2013; Ní Mhaoláin et al., 2012; Mezuk, Lohman, Dumenci, & Lapane, 2013; and Collard et al., 2014). By considering operational criteria, Mezuk et al. (2013) found that they could identify both conditions in two distinct—but highly overlapping—subpopulations of elderly individuals, suggesting a potential coincidental relationship rather than a causal one. Given the persistent presence of the correlation between depression and frailty, researchers nearly unilaterally recommend addressing both of these factors in treatment planning—a task achieved more easily under an integrated healthcare system.

Because the interconnection of depression and frailty has implications related to the treatment of both conditions, it is worth exploring the literature’s findings on the potential for a causal relationship between them. Collard et al. (2014) offered the best synopsis of the three possibilities of directionality. In the first, depressed patients are more likely to develop frailty because of the symptoms of depression, such as a lack of motivation leading to inactivity or medication noncompliance. The second offers the exact opposite and asserts that frailty may induce depression through the functional limitations it brings as well as its relationship with other chronic somatic diseases. Finally, it is possible that some other factor contributes to both depression and frailty behind the scenes. Researchers have tried to untangle these possibilities to varying degrees of success, but the topic remains highly debated. For example, Makizako et al. (2015) followed a cohort of elderly individuals over time and found that patients without depression but *with* frailty at baseline were more likely to have developed depression at the follow-up intervals than their peers without frailty or depression at baseline. Similarly, Ní Mhaoláin et al. (2012) showed that signs of pre-frailty are associated with the later development of emotional disorders. Conversely, Brown et al. (2014) showed that the presence of depression is associated with increased weakness, mobility deficits, and fatigue, although they add to their findings the caveat that the direction of causation is still not entirely clear.

The nexus of these syndromes epitomizes the need for integrated care systems. Frailty is a physical ailment, but it is shown to be highly related—potentially even causally—to depression, a behavioral ailment (though depression may present physical symptoms such as fatigue or even migraines). Moreover, frail elderly with depression have been shown to be at an increased risk for bad health outcomes, including increased mortality, furthering the call for access to treatment plans that address both mental and physical health problems. One cohort study estimated that men with both depression and frailty have a mortality rate four times higher than comparable individuals without depression (Almeida et al., 2015). Another examined the gender differences in the relationship between depression, frailty, and mortality and reported that having both conditions is particularly troublesome for elderly women because it is associated with a faster progression to death; however, the authors reported that males with both conditions are also expected to have a higher mortality rate than males and females with only one or neither condition (Brown et al., 2014).

## Impact of Depression

The effects of untreated depression on quality of life, morbidity, and mortality in older adults are substantial (Gallo et al., 2013). Depression is estimated to be the third leading cause of loss of quality-adjusted life years in older adults (Unützer et al., 2000). Clear evidence was presented above of the increase in the mortality rate of elderly in general—and frail elderly in particular—with depressive disorders. In addition, a longitudinal study that followed 140,774 elderly individuals over a 3.5-year period found that depression symptomology is associated with increased risk of nursing home admission after controlling for functional status, health history, social determinants, and the presence of other health conditions (Harris, 2007). Although the association between nursing home admissions is significant (statistically and clinically), there is no definitive evidence that the relationship

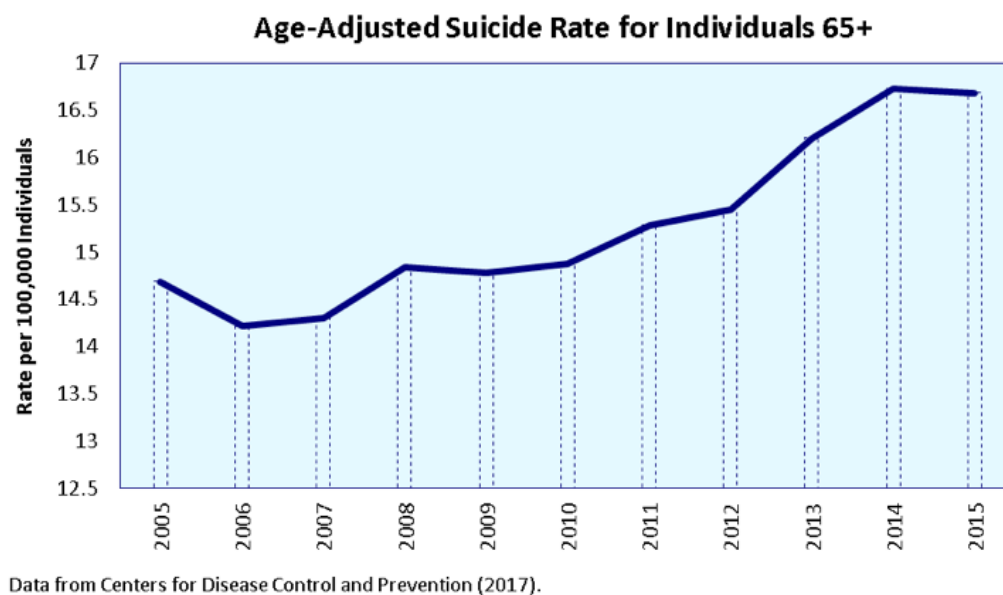
### Notable

As many as 54 percent of frail elderly individuals also have diagnosable depression, leading researchers to suspect the two ailments may have a causal relationship. However, because their symptoms overlap to such an extent, identifying the direction of causality is a persistent challenge.



is causal; however, the study does conclude that increased recognition and treatment of depression may help avoid preventable nursing home admissions.

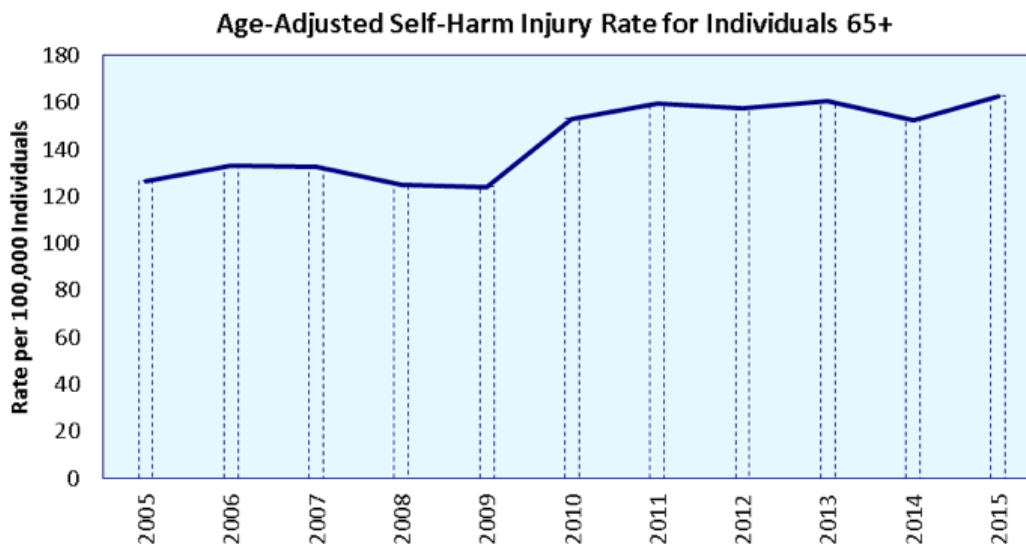
A discussion about the impacts of depression is clearly incomplete without examining suicide. Although suicide is not a leading cause of death for elderly adults by any means—the Centers for Disease Control and Prevention (CDC) reported it to be 17th in 2015 (the most recent data available)—the trends in the suicide rate over the past decade for individuals over the age of 65 are alarming. As illustrated in the figure below, the age-adjusted suicide rate for this population has been increasing steadily, experiencing a 12-percent total increase since 2005.



The trend fits inside the broader trend of suicide rates across all age groups, which have been steadily increasing since 1999: Across age groups, the rate increased 24 percent over this period (Curtin, Warner, & Hedegaard, 2016). Taylor (2014) explored the increase in mortality rate among elderly individuals with depression and found evidence that the increase is partially explained by an increased risk of suicide as well. The increase observed over the past decade is particularly concerning because it follows a nearly 15-year period of steady decline in the suicide rate.

The above data show only “successful” suicides among elderly individuals and omits suicide ideation, suicide attempts, and other types of self-harming behavior associated with mental illness. The graph below shows the age-adjusted self-harm rate (which includes failed suicide attempts among other self-injurious behaviors like cutting, scratching, burning, and piercing) for the same population over the same period of time. Although the trend is less explosive, the rate of self-harm—defined here by CDC as “intentional, self-inflicted injury”—is nearly 10 times the age-adjusted suicide rate. The persistence of these preventable harms further supports the need to address mental health while providing medical care to elderly individuals.





Data from Centers for Disease Control and Prevention (2017)

It is important to note that not all suicides are attributable to depression. For example, financial strife is an often-observed contributor to suicide as well, particularly in adults over 50 (Oyesanya, Lopez-Morinigo, & Dutta, 2015; Duberstein, Conwell, Conner, Eberly, & Caine, 2004; Saxby & Anil, 2012). The above data illustrate the association well; notice the significant increase in the suicide rate from 2007 to 2008, during the onset of the financial crisis, and the similar uptick in the self-harm rate the following year, during the heart of the Great Recession.<sup>4</sup> However, CDC reports that the majority of suicides are at least partly associated with depressive disorders. Data show that just over 50 percent of individuals who commit suicide had a diagnosis of major depression; the figure increases to 75 percent when including co-occurring alcohol or substance use disorders. The causes of self-harming behavior tend to be more abstract, but the Mayo Clinic (2017) related the behavior to “an inability to cope in healthy ways with psychological pain.” Although often related to depression, self-harming behavior is a symptom of a number of other mental illnesses as well. Other mood disorders, and mental illnesses in general (schizophrenia, for example), also contribute to the suicide rate, of course. The focus of this paper has been on depressive disorders, but by integrating behavioral and primary healthcare, providers can more readily address the full range of mental health issues that contribute to negative outcomes for elderly individuals.

## Treatment and Quality of Care

As is the case with prevalence, it is challenging to measure the extent to which affected individuals receive an adequate level and quality of care pertaining specifically to depression. In broad terms, studies have used practice guidelines and existing quality indicators to measure the adequacy of care across the population; these indicators typically include a variety of measures related to psychopharmacological treatment, psychotherapies and cognitive therapies, and patient education (Duhoux, Fournier, & Menear, 2011).

<sup>4</sup> These surges are similar to those observed during the Great Depression. The suicide rate increased from 14 per 100,000 individuals to 17 per 100,000 individuals between 1929 and 1932 (McElvaine, 1993).

The literature consistently shows under- or wrongful treatment of depressive disorders. George, Davison, McCabe, Mellor, & Moore (2007) found that nearly 50 percent of individuals with depression living in a low-level-care residential setting were not receiving any treatment. In fact, they found that more than half of individuals *with* a diagnosis of depression did not even have depression recorded on their list of medical conditions. In the same study, the authors also found that more than two-thirds of the patients prescribed antidepressants did *not* have a depression diagnosis. The incidence of false-treatment demonstrates that although initial screening is important, careful follow-up assessment and treatment design should be considered before enacting a treatment plan (Taylor, 2014).

Anecdotal evidence has suggested that elderly patients are often open to discussing their emotional well-being and its relationship to their overall treatment but are not always afforded the opportunity to do so (Hall & Furnedged, 2009). Depression treatment tends to be a secondary priority in elderly care in many settings, and constrained resources tend to lead to inadequate attention to depression treatment. Through extensive qualitative interviews with care staff who work with community-dwelling elderly individuals, Hassall & Gill (2008) found that “staff were aware that depression increased the physical care needs of clients and therefore some action was required to treat the condition, but they noted that there simply was not enough time during their care visit to adequately deal with depression.” The authors also found that many workers did not have formal procedures to address the needs of patients with depression but that they often provided “informal” depression treatment based on the understanding and knowledge level of each individual staff person.

Individual treatment preference may vary widely, and treatment decisions should be made by the individual and their healthcare professionals; although addressing depression is important, a one-size-fits-all solution is not a solution at all. Research shows that providing treatment options increases the likelihood that patients will engage in and accept a depression treatment plan (Raue, Weinberger, Sirey, Meyers, & Bruce, 2011). One study found that just under half (48 percent) of elderly individuals with depression would prefer an active treatment strategy—such as antidepressants, psychotherapy, or a combination thereof—as their first treatment choice; 15 percent would prefer to be treated through religious and/or spiritual activities; 13 percent would prefer using exercise as a treatment strategy; and only 10 percent would prefer not to engage in treatment at all (Raue et al., 2011). It should not be surprising that a majority of elderly individuals prefer non-active treatments, given evidence that the negative side effects of antidepressants can be exacerbated in elderly individuals (Taylor, 2014).

Integrating depression screening and monitoring into the primary care system could help combat both under- and false-treatment of depression. Given the complexities of the disorder, and research findings like those shown above, additional scrutiny is certainly necessary. Furthermore, although George et al. (2007) is only a single paper, its findings are indicative of a clear need for increased quality controls when it comes to acknowledging and treating depression in the elderly. Quality measurement that directly targets depression treatment has the potential to increase the perceived importance of behavioral health in elderly care settings and the availability of these widely needed services. For example, including a metric for the prevalence of accurate depression treatment in the quality rating systems for elderly care settings could improve incentives to allocate the necessary resources to successfully support depressed patients.

As of the beginning of 2017, there were six publicly available Quality Rating Systems for post-acute care settings—that is, the settings used most frequently by elderly patients—and two additional Quality Compare websites for these types of settings, as well (long-term care hospitals and inpatient rehabilitation facilities). These are powerful tools to promote healthcare quality for elderly patients, as they provide transparent information that can be leveraged when choosing providers. The systems also

#### Notable

CDC finds depression to be among the most treatable mental illnesses; it reports that between 80 and 90 percent of individuals have positive responses to treatment and that almost every person reports at least some relief from symptoms after receiving treatment.

provide performance guidelines as well as an intrinsic incentive for the provider/facility to provide high-quality care because their performance rating is made publically available and, in some cases, has financial implications. The prevailing Quality Rating Systems measure quality on a wide range of metrics, including immunizations, monitoring falls and falls resulting in injuries, bathing, acute hospitalizations, breast cancer screening, blood pressure screening and treatment, staff hours, urinary tract infections, and many more; in total, there are more than 35 unique measures across these systems (University of California San Francisco, 2015; Centers for Medicare & Medicaid Services (CMS), 2015; CMS, 2016a; Texas Department of Aging and Disability Services, 2017; CMS, 2017a; CMS, 2017b; CMS, 2017c). However, they do not include a single measure to monitor the proper screening and treatment of depression or any other behavioral health issue. This is not to say that the prevailing measures are not important, only that the systems do not measure quality on the full spectrum of care.

Despite the effectiveness of early screening and treatment, the impact that depression has on elderly individuals, and the observed level of success and benefits that treatment can have on a wide range of other somatic health issues, behavioral health is too often ignored in elderly care settings. Research shows that the extent to which depression goes untreated or undertreated increases with age, such that the oldest-old are the least likely to receive adequate treatment (Szczerbińska et al., 2012). As such, in way of prioritization, quality measures related to behavioral health treatment may be most influential—and most necessary—in settings serving the oldest-old individuals.

## Conclusion

Examining the prevalence and treatment of depressive disorders in the elderly population offers a clear case for the need to enhance integration between behavioral health services and primary care. Elderly individuals are the largest consumers of healthcare in the United States, but they are participating in a system that largely overlooks important health services they need to thrive in old age (access to adequate and appropriate depression treatment is but one example). The research we present definitively shows that depression in the elderly population is often an overlooked and undertreated condition with potentially severe negative impacts on their quality of care and health outcomes.

Depression treatment in general is a complex issue, but because of the co-occurring and often related illnesses present in older adults, depression's impact on overall health is even more pronounced. Despite the complexities introduced by the inherent endogeneity between depression, frailty, and the normal physical changes that come with age, researchers are confident and consistent in their findings that the presence of depression itself accounts for increased mortality and suicide, increased likelihood of nursing home admissions, and decreased quality of life. As research continues, we can anticipate achieving a clearer idea about some outstanding issues, such as the nature of any causal relationships between depression and other comorbidities. However, the evidence as it stands is too strong to continue placing depression treatment as a secondary, or even tertiary, priority in providing healthcare to the U.S. elderly population.

### Notable

The eight publicly available Quality Rating and Quality Compare Systems for elderly healthcare settings track quality performance on more than 35 different measures. None of these measures address care quality related to depression or any other behavioral health issue.

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