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Late Life Depression: A Global Problem with Few Resources

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Synopsis

Mental health disorders in terms of an aging population are discussed in this review. Statistics on depression in later life are presented with discussion of physical health comorbidities. This presentation postulates that the healthcare infrastructure currently in place is inadequate to meet the present, much less the future needs of this population. The care of the depressed elder will require the coordinated effort of psychiatrists, psychologists, social workers, Nurse Practitioners and Advanced Practice Psychiatric Nurses, internal medicine gerontologists, internal medicine and family medicine general physicians, community agencies and volunteers.

Keywords

Late life depression; Aging population; Depressive symptoms; Healthcare resources

An Aging Population

According to recent United States (US) Census Bureau estimates, over 41 million (13.3%) individuals were 65 years of age or older in 2011 (**Figure 1**). Trends suggest that the population in this age group will have increased to over 92 million, or 21.9% of the population, by 2060 (**Figure 2**),¹ with 1 in 5 individuals being aged 65 years or older by 2030.² In addition, the age structure among those 65 years and older will also shift as the 'baby boomer' generation ages. In 2010, only 14% of those 65 years and older was in the oldest age category (85 years and older). By 2050, the proportion in this age category over 85 years will be 21%.²

Similar trends have been noted internationally. The median life expectancy worldwide has increased from 68 years in 1990 to 72 years in 2009 (range: 47 to 83 years).³ Data from other developed countries such as Australia, Canada, Japan, and many countries of the European Union also suggest that the average age of these populations is increasing, while fertility rates have declined.⁴ Some of these countries are expecting their aging population to increase rapidly over the next 10 years, such as Japan (54%) and Canada (43%), compared to the US (33%).⁴ However, the US surpasses average global estimates in terms of aging,

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with 18% of the US population aged 60 and older compared to the average 11%, according to the World Health Organization (WHO).³

The Burden of Mental Health Disorders

General Mental Health

The WHO estimates that mental health disorders are the most common cause of disabilities in people worldwide. Neuropsychiatric disorders caused about a third of all 'years lost due to disability (YLDs)' in 2004. Furthermore, there is a greater burden of mental health problems in women, with mental disorders making up three of the top ten leading causes of disease burden for women in low- to mid-income countries, and four of the top ten for women in high-income countries.⁵

The World Mental Health Survey is a survey of mental health problems conducted in 17 countries from 2001 through 2003.⁶ Based on the results of this study, the United States has the highest prevalence of mental illness (26.4%) compared to global estimates. Other countries range from 4.3% (Shanghai, China) to 20.5% (Ukraine). Internationally, anxiety (2.4 to 18.2%) and mood (0.8 to 9.6%) disorders are the most important contributing factors, and the majority of all disorders are classified as mild to moderate severity.⁶

In the US, the CDC conducts annual health surveys that collect general information on mental health. The National Health Interview Survey (NHIS) collects information on selected mental health characteristics. In 2011, the overall age-adjusted percentage of individuals who reported experiencing the following symptoms all or some of the time, respectively, is as follows:

- Sadness (3.2/8.6%)
- Hopelessness (2.2/4.5%)
- Worthlessness (1.9/3.5%)
- 'Everything is an effort' (5.7/9.2%)

Individuals aged 65 to 74 years and 75 years and older reported similar trends, with those who reported feeling sadness some of the time (9.3% for 65 to 74 years, and 9.0% for 75 years and older) being higher than the national average.⁷

Depression

Depressive disorders are debilitating health problems that are the leading cause of disability worldwide.^{5,8} These disorders are characterized by loss of interest in activities, changes in weight and sleeping patterns, fatigue, and feelings of guilt and worthlessness.⁹ Depression can lead to impairments in one's ability to function socially, decreased quality of life, and increased risk of health problems.¹⁰ Finally, it is one of the most common chronic diseases in the general population.¹⁰ In 2000, it was estimated that depression cost the US \$83.1 billion in economic costs, including \$26.1 billion in direct healthcare costs and \$51.5 billion in workplace costs based on absenteeism, in the US alone.¹¹

Estimates vary regarding rates of depression and depressive symptoms in the US by source. During 2005-2006, the National Health and Nutrition Examination Survey (NHANES) reported that over 5% of individuals in the US experienced depression. These rates varied by age, gender, race/ethnicity, and socioeconomic status.¹² Based on the 2006 and 2008 Behavioral Risk Factor Surveillance System (BRFSS), 9.1% of the US population met the criteria for depression.¹³ This survey also showed differences in rates of depression by age, gender, race/ethnicity, and socioeconomic status. In both surveys, depression increased with

age, with those between the ages of about 40 to 64 years old having the highest prevalence of depression. Females were more likely to have symptoms of depression than males, and non-Hispanic white individuals were less likely to report depression than individuals of other racial or ethnic groups.^{12,13} Low income¹², low education, being unemployed status, and having no health insurance were also related to higher rates of depression.¹³ Of individuals reporting symptoms of depression, 80% reported functional impairment. Less than half of these reported contacting a physician or mental health professional for their symptoms.¹²

Among the USA population aged 65 years and older, 4.1% reported major depression, 5.1% reported other depression, and 9.1% reported any depression in 2006, according to NHANES.¹³ In 2010, it was estimated that between 1.2 and 1.8 million adults 65 years of age and older had a depressive disorder, or 3.0 to 4.5% of this age group. Rates of depressive disorders in community dwelling elderly over 65 years old vary by race/ethnicity, with the highest rates of depressive disorders being among the Hispanic/Latino populations. Older Whites, African-Americans, and Asians report rates of depressive disorders about 3.6 to 4.0%, but older Hispanics report rates of 6.9%. Among individuals in this age group who are in nursing homes, the prevalence of depression is significantly higher (49.6%).¹⁴

According to NHANES data from 2005 through 2010, 61.72% of individuals aged 65 years and older reported having at least one symptom of depression in the two-week period prior to the survey (**Table 1**). The most common symptoms reported in this age group include 'feeling tired or having little energy', 'trouble sleeping or sleeping too much', 'little interest in doing things', and 'feeling down, depressed, or hopeless' (**Table 2**). Of those with at least one symptom of depression, 23.72% reported that their symptom(s) caused them some to extreme difficulty in their daily lives.

Depressive disorders are associated with greater morbidity and mortality, in general, in older individuals. Depression often coexists with other chronic medical conditions in this aged population. For example, the highest prevalence for coexisting chronic conditions includes hypertension (58%), chronic pain, and arthritis (56%). Another study showed that individuals over 55 years of age were four times more likely to die over a 15-month period than individuals without major depressive disorder.¹⁴

Globally, it is estimated that 350 million individuals suffer from depression, with 1 in every 20 people having at least one episode of depression in the previous year.⁸ Not surprisingly, depression is also the leading cause of disability worldwide, as measured by years lost to disability, in both developed and developing countries.^{5,8} Unipolar depressive disorders ranked third worldwide, eighth in low-income countries, and first in both mid- and high-income countries in terms of YLDs. Furthermore, depression was the most common cause among the neuropsychiatric disorders for both men and women, with women having a 50% greater burden of depression than men.⁵

Impact of Aging on Healthcare Resources

General Healthcare Resources

With the growing population aged 65 years and over and the longer life expectancy of individuals, the demand on healthcare services by the geriatric populations is expected to increase. Understanding how this demand will affect both general and specialized medical care is important for planning in terms of manpower and resources.

Aging has led to an increase in prevalence and mortality due to non-communicable chronic conditions worldwide.³ Furthermore, as individuals age, their healthcare utilization increases, starting around age 55.¹⁵ One study suggests that population aging will have a

modest effect on total hospital utilization. From 2005 to 2015, aging will account for a 7.6% increase on per person inpatient resources, or 0.74% per year. This is over double the increase in demand from the previous 10-year period (0.35% per year increase).¹⁵

While there are a large number of family and general internal medicine physicians in the US (about 208,000 in 2008), there are few physicians with specialized training to deal with the demands of this ever-increasing population. Of the medical programs surveyed in 2008, about half of family medicine and one-third of internal medicine residency programs offered 12 or fewer hours of specific geriatric training to their residents. In 2011, there were only about 7,500 board certified geriatricians in the US. And while there may be adequate residency programs available for geriatric medicine, between one-fourth and one-half of fellowship positions have not been filled annually over the past 20 years.¹⁴

Mental Health Resources

In general, there are limited resources worldwide and nationally to deal with mental illness in terms of both manpower and infrastructure. According to WHO estimates, there are only 0.3 (global) and 0.8 (US) psychiatrists per 10,000 population, and 2.5 (global) and 3.4 (US) psychiatric hospital beds per 10,000 population. In the European Region, there are 1.1 psychiatrists and 6.3 psychiatric beds per 10,000 population.³ This demonstrates that the US is lagging in terms of focused mental healthcare professionals and resources.

The situation is far worse for specialized psychiatric care of the aging population. In 2012, there were 1,707 active board certified geriatric psychiatrists, 55 accredited geriatric psychiatry programs, and 71 geriatric psychiatry fellows in the US. (American Board of Psychiatry and Neurology – personal communication) Therefore, there is approximately 0.4 geriatric psychiatrists per 10,000 population aged 65 and over (**Figure 3**). A recent Institute of Medicine report focused on mental healthcare of the aging population in the US. The number of geriatric psychiatrists has remained fairly stable over the past 20 years.¹⁴ If the population increases as expected, and the number of specialists remains relatively stable over this time, there will be 0.2 geriatric psychiatrists per 10,000 population aged 65 and over in 2060. Furthermore, based on the way that healthcare services have evolved, it is difficult to predict with accuracy the number of specialists that will be needed in the future to care for this population.¹⁴ In addition to the specialized mental health or geriatric physicians, there are about 9,000 registered nurses (RN) specialized in gerontology, 19,000 RNs specialized in mental health, and 1,700 geriatric pharmacists. Finally, starting in 2011, physician assistants are able to be certified in certain areas of psychiatry.¹⁴

As the population ages, it is obvious that there will be a greater demand on healthcare resources by those 65 years of age and older. The infrastructure that is currently in place is inadequate to meet the present, much less the future needs of this population. A greater emphasis must be placed on the challenges of aging, and specifically the mental health problems of aging, in terms of infrastructure, resources, personnel, and training programs in order to successfully manage and treat late life depression. The care of the depressed elder will necessarily require the coordinated effort of general psychiatrists, (a few) geriatric psychiatrists, general and geriatric psychologists, social workers, Nurse Practitioners and Advanced Practice Psychiatric Nurses, internal medicine gerontologists, internal medicine and family medicine general physicians, community agencies and volunteers.

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Key Points

- Depressive disorders are debilitating health problems that are the leading cause of disability worldwide.
- Depressive disorders are associated with greater morbidity and mortality, in general, in older individuals.
- Aging has led to an increase in prevalence and mortality due to non-communicable chronic conditions worldwide.

Figure 1.
Number of US Geriatric Psychiatry Programs and Fellows with Percent of US Population 65 Years and Older, 2001-2012

Figure 2.
Population Projections for Individuals 65 Years of Age and Older, United States, 2000-2060

Figure 3.
Individuals 65 Years and Older per Geriatric Psychiatry Fellow, United States 2001-2012

Table 1

Frequency of Reported Symptoms of Depression in Adults 65 Years of Age and Older, NHANES Depression Screener, United States, 2005-2010

Number of Symptoms Reported	%
0	38.28
1	22.07
2	16.27
3	8.57
4	6.42
5	4.07
6	2.64
7	1.14
8	0.40
9	0.14

*Responses were weighted to account for sampling design and combining multiple survey years, according to NHANES analytic guidelines.

† From Centers for Disease Control and Prevention (CDC). National Center for Health Statistics (NCHS). National Health and Nutrition Examination Survey Data. Hyattsville, MD: US Department of Health and Human Services, CDC, 2005-2010 http://www.cdc.gov/nchs/nhanes/nhanes_questionnaires.htm.

Table 2

Categories of Reported Symptoms of Depression in Adults 65 Years of Age and Older, NHANES Depression Screener, United States, 2005-2010

	Did not experience symptom	Did experience symptom	Several days	More than 1/2 the days	Nearly every day
	%	%	%	%	%
Little interest in doing things	82.02	17.98	13.31	2.47	2.19
Feeling down, depressed, or hopeless	82.98	17.02	12.67	2.32	2.03
Trouble sleeping or sleeping too much	65.61	34.39	20.18	5.60	8.62
Feeling tired or having little energy	56.88	43.12	27.30	7.13	8.69
Poor appetite or overeating	85.86	14.14	8.64	2.80	2.69
Feeling bad about yourself	90.73	9.27	7.21	0.89	1.17
Trouble concentrating on things	90.19	9.81	6.73	1.16	1.92
Moving or speaking slowly or too fast	93.60	6.40	4.44	0.99	0.97
Thought you would be better off dead	97.55	2.45	1.87	0.28	0.31

* Responses were weighted to account for sampling design and combining multiple survey years, according to NHANES analytic guidelines.

† From Centers for Disease Control and Prevention (CDC). National Center for Health Statistics (NCHS). National Health and Nutrition Examination Survey Data. Hyattsville, MD: US Department of Health and Human Services, CDC, 2005-2010 http://www.cdc.gov/nchs/nhanes/nhanes_questionnaires.htm.