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## Chronic Medical Disorders and Stressful Life Events in Late Life Depression in Older Adults

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CHRONIC MEDICAL DISORDERS AND STRESSFUL LIFE EVENTS  
IN LATE LIFE DEPRESSION IN OLDER ADULTS

By

Comfort Titi Seibure, RN, BSN  
Bachelor of Science in Nursing  
Bethel University, St. Paul MN, 2004

An Independent Study  
Submitted to the Graduate Faculty  
of the  
University of North Dakota  
in partial fulfillment of the requirements  
for the degree of  
Masters of Science in Nursing

Grand Forks, North Dakota

May 2012

This independent study, submitted by Comfort Titi Seibure in partial fulfillment of the requirements for the Degree of Master of Science in Nursing from the University of North Dakota, has been read by the Faculty Advisor under whom the work has been done and is hereby approved.

Department: Nursing

Degree: Master of Science

Karen Semmens

Advisor

Comfort Titi Seibure

5/11/13

TABLE OF CONTENTS

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Approximately 7 percent of the nation's adults aged 65 years and older are affected by depression, which leaves them with persistent feelings of sadness, anxiety, emptiness, hopelessness and despair. The purpose of this research study is to provide a review of the symptoms of late life depression (LLD) in the context of chronic medical illnesses and

Dedicated to my four daughters who have been very supportive throughout these three years of graduate education: Mayama, Yomi Atombi and Elange. Their famous question was "mommy how is your homework coming?"

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### Abstract

Approximately 7 million of the nation's adults aged 65 years and older are affected by depression, which leaves them with persistent feeling of sadness, anxiety, emptiness hopelessness and pessimism. The purpose of this independent study is to provide a review of the literature of late life depression (LLD) in the context of chronic medical disorders and stressful life events, detection tools and methods of interventions. Evidence indicates that comorbid depression is often misdiagnosed and undertreated or not diagnosed at all in older adults. The tendency for older adults to have chronic medical disorders, experiencing stressful life events are high and are predisposed to biological, physical, psychological, environment, and psychosocial factors. Articles investigating chronic medical disorders and stressful live events and treatment modalities that incorporate preventions strategies were included. All advanced practice nurses (APNs) who see older adults have the responsibility to routinely assess their patients for the presence of depression. The goal is to identify high risk groups especially those with prior history of depression in earlier adulthood, experiencing chronic medical illnesses and stressful life events that predispose them to LLD, with the aim to implement management strategies that include preventing, treating and monitoring for relapse and maintain remission.

## Introduction

A clinically significant condition called LLD is not a normal part of the aging process; however, the prevalence is high in older adults, hard to diagnose, hard to treat in 20 percent and treatable approximately 80 percent in older adults (Capezuti, Zwicker, Mezey&Fulmer, 2008; Centers for Disease Control and Prevention and National Association of Chronic Disease Directors, 2009). Mental health care in America is in crisis according to the World Health Organization (WHO). Depression is the leading cause of disability as measured by years lived with disabilities and the fourth leading contributor to the global burden of disease. By 2020 depression will be ranked 2<sup>nd</sup> place on the disability adjusted lived years (DALY) for all ages and sexes (WHO, 2012).

In America, it is estimated that 7 million older adults aged 65 years and older are affected by significant depressive disorders (Steinman et al., 2007) and approximately 20 percent of older adults with chronic physical health problems (Chew-Graham, 2009). States in America are becoming increasingly aware of the burden of depression in older adults. For instance in 2008, Minnesota launched a program called Depression Improvement Across Minnesota, Offering a New Direction (DIAMOND) to improve health care for people with depression in Minnesota. The program was spearheaded by the Institute for Clinical Systems Improvement (Institute for Clinical Systems Improvement, 2008 [ICSI]).

Among the many consequences of undiagnosed, untreated and undertreated depression are reduced life satisfaction and quality, social isolation and deprivation, cognitive decline, difficulties with activities of daily living, suicide and increased non-suicide mortality (Steinman, et al. 2007). Implementation of the DIAMOND model of care across health care settings in Minnesota and nationwide stands to benefit all older adults with depression.

The cost of managing depression in older adults is staggering. The National Institute of Mental Health [NIMH], (2009) found that significant Medicare dollars were spent on older adults diagnosed with depression including home health care, skilled nursing facility costs, outpatient care, inpatient care, physician charges, and on durable medical equipment. Among these older adults receiving Medicare, their cost of health care was significantly higher than those with one or two chronic medical conditions co-existing with depression (NIMH, 2009).

Depression in older adults is increasingly recognized as a public health problem, it often goes unrecognized and undertreated, however, it is easy to detect, with high potential to respond to treatment in 80 % of identified older adults (Snowden, Steinman, & Frederick, 2008; Centers for Disease Control and Prevention and National Association of Chronic Disease Directors, 2009). Among those detected and treated the effectiveness of available interventions are modest, and fewer than 50 % achieve remission with first line depression treatment, the majority are left with clinically significant symptoms and functional impairment (Reynolds III, et al., 2010).

Depression is a psychiatric problem, but usually diagnosed and poorly managed by primary care providers (Capezuti et al. 2008). As with any other age, certain high risk groups



exist among the elderly where depression is a concern, those with chronic medical conditions that results in functional and cognitive dysfunction, disability, and those experiencing psychosocial adversity (Kane, Ouslander, Abrass & Resnick, 2007). Although the complex medical presentation of depression may challenge health care provider's ability to detect depression, because other highly prevalent conditions among older adults may manifest in a similar fashion, screening for depression by Geriatric Nurse Practitioners (GNPs) and Geriatric Clinical Nurse Specialists (GCNs) should be routine in all high risk older adults.

Depression is not a normal part of aging. It is in the best interest of public health to prevent depression due to the prevalence of major depression increasing in those born more recently. It can be expected that the prevalence of LLD in older adults will increase in the years to come since older adults are the fastest growing segment of the population (Capezuti et al. 2008).

### **Purpose**

Depressive symptoms are frequently experienced with chronic medical conditions and stressful life events (Skultety & Zeiss, 2006). Older adults are at increased risk for depression in late life due to the high prevalence of chronic medical disorders and stressful life events associated with aging. Older adults with depression have approximately 2-3 times increased morbidity and a lifetime suicidal risk of about 15 % with approximately 10 % of those dying from suicide (Das, Greenspan, Muralee, Choe & Tampi, 2007). It is vital for members of the health care team to appreciate the unique presentation, diagnosis, and treatment of LLD. Remission is



the goal of treatment which is associated with better and optimal functioning and a lower likelihood of relapse.

Although public health is often conceptualized only as the prevention of physical illness, recent data suggest that mental illnesses such as LLD are increasingly relevant to the mission of health promotion and disease prevention that calls for a collaborative care model of management (Centers for Disease Control and Prevention and National Association of Chronic Disease Directors, 2009). The potentials for older adults to experience chronic medical disorders and stressful life events are high, linked with biological, physical, environmental and psychosocial factors. The sufferings endured by older adults with depression and the lives lost to suicide attest to the great burden of depression on individuals, families, caregivers and society (Kane et al. 2007). GNPs and GCNSs must be aware of these predisposing factors to depression in diverse health care settings, cultures and minority population where depression is a concern and be able to detect, implement strategies that will treat to remission (Reynolds III et al. 2010). GNPs and GCNSs are at the front line to put into operation the goals of Healthy People 2020 a reality to achieve health equity, improve the health of all groups, eliminate disparities, and promote quality of life and healthy behaviors across all life stages. Raising awareness will significantly increase the number of older adults detected, diagnosed and treated for depressive disorders.

### **Significance**

Thirty nine million people in the United States are 65 years and older, and the life expectancy at birth has reached 78.3 years (NIMH, 2009). Most notable is the growth in the

population of individual aged 85 years and older with chronic medical conditions, disabilities and functional declines who are more likely to experience depression from these chronic medical conditions and stressful life events (NIMH, 2009; Centers for Disease Control and Prevention and National Association of Chronic Disease Directors, 2008). Depression is under-diagnosed and undertreated mental health conditions within the primary care setting, with recurrence rates estimated over 50 % after the first depressive episode (NIMH, 2009). The implications of depression are substantial and include increased mortality and morbidity, disability, functional decline, high rates of health care use resulting in increased medication use, emergency room visits and outpatient charges, increased risk of suicide and completed suicide (Kane et al. 2007; Skultety & Zeiss, 2006). Because mental health is very essential to the overall health and well-being, it is imperative that depression be recognized and treated in all older adults with the same urgency as physical conditions. The symptoms of depression are persistent if not detected and managed with evidence-based guidelines, the Symptom Management Theory attempts to provide an explanation to the symptoms of depression as experienced by the patients.

### **Theoretical Framework**

GNPs and GCNSs frequently care for older adults who present with a variety in severity of depressive symptoms, ranging from mild, moderate, moderately severe to psychotic symptoms. These symptoms are bothersome to patients, families and health care professionals who sometimes do not know how to detect, diagnose and manage symptoms of depression. This becomes a major challenge in effective disease management as older adults' depression

symptoms presentations are atypical in the context of comorbid conditions and stressful life events. Unrelieved symptoms of depression have been associated with higher levels of functional disability, physical and emotional pain for patients and families (Skultety & Zeiss, 2006). The Theory of Symptom Management (SMT) (Appendix A) is an effective framework that strongly emphasizes patients' symptom experience, symptom management strategies and symptom status outcomes which are bottom line to attainment of quality of life especially an illness (Smith & Liehr, 2008). SMT is a middle range theory which was developed by The University of California, San Francisco School of Nursing in 1994 (Smith & Liehr, 2008). SMT has undergone extensive revision incorporating evidence-based knowledge that led to the theory now known as one of the middle range theories for nursing, relevant to every diagnosis that patients experiences symptom, management strategies and management outcomes.

The assumptions of SMT is based on (1) that the gold standard for the study of symptoms is based on the perception of the individual experiencing the symptom and his or her report; (2) that the symptom does not have to be experienced by an individual, however, the individual may be at risk for the development of the symptom because of the influence or impact of a context variable such as a work hazard (Smith & Leer, 2008). Interventional strategies such as primary prevention may be initiated before an individual experiences the symptoms; (3) that nonverbal patients such as post stroke aphasic older adults may experience symptoms and the interpretation by the family member or caregivers is assumed to be accurate for purposes of intervening; (4) that all troublesome symptoms need to be managed; (5) that management strategies may be targeted at the individual, group, family or work environment; (6) and that symptom management is a dynamic process that is it is modified by individual



outcomes and the influences of the nursing domains of person, health/illness, or environment (Dodd, et al., 2001).

The subjective and objective symptoms of depression less often recognized by patients and families are the reasons why older adults seek care from their primary care providers. The full spectrum of depression symptoms are nine symptoms, as defined by the Diagnostic Statistical Manual of Mental Disorders (DSM-IV-TR), ranging in severity from major depressive symptoms, dysthymia to subsyndromal depression (Capezuti et al., 2008). These symptoms include depressed mood, diminished interest or pleasure in activities, significant change in appetite and or weight; sleep disturbances, restlessness or sluggishness, fatigue or loss of energy, lack of concentration or indecision, feelings of worthlessness and inappropriate guilt and thoughts of death or suicide for two weeks (Capezuti et al. 2008).

In most health care settings nurses are the leaders in ensuring that the symptoms that patients' experience are effectively managed (Smith & Liehr, 2008). Also nurses are the health care professionals who have traditionally tried to assist patients and families cope with their symptoms. Nurses are aware that when both the underlying cause and presenting symptoms of a disorder such as depression are managed simultaneously, patients and their families are more likely to attain a higher quality of life, prevent disability, maintain higher level of functioning, eliminate disparities in caregiver burden and prevent premature death from suicide and non-suicidal behaviors and distress from poorly managed symptoms.

The three dimensions of SMT are: symptom experience, symptom management strategies and symptom status outcomes. It is worthy to note that the three essential elements

of SMT are dynamic and the concepts are framed within the dimensions of the nursing science: person, environment, health and illness. These three dimensions are connected in that effective management of symptoms requires considerations in all three dimensions (Smith & Liehr, 2008).

The first dimension is symptom experience. It involves the patient's perception of a symptom or symptoms, evaluation of the symptoms and response to symptoms. Symptom experience holds true in the clinical presentation of LLD in older adults because the clinical presentation profile of LLD is distinct from that of the younger population with lesser perception attributed to symptoms of depression. The symptoms of depression are more likely to develop insidiously, and older adults and their health care providers' are less likely to attribute depressive symptoms to depression as opposed to the normal aging process or to other chronic medical conditions with similar presentation to depression (Smith & Liehr, 2008).

Older adults with depression may notice changes in their mood different from their baseline; they may not attribute these changes to symptoms of depression. They may report symptoms of loss of interest or pleasure in activities that were once pleasurable, sleep disturbance, changes in energy level, concentration, psychomotor activity, alcohol abuse, as well as feelings of inappropriate guilt or worthlessness and thoughts of suicide. They might consider these symptoms to be part of normal aging process. It might be difficult for older adults to link their symptoms to depression and seek care, which could lead to decline in functioning and worsening of comorbidities (Smith & Liehr, 2008).



The symptom experience as depicted in SMT should be viewed as multi-dimensional for the personal manifestations of depressive symptoms. It is the interaction of many factors such as demographic, psychological, environmental, sociological, physiological and developmental factors that influence a person's perception, evaluation and response to the interventions intended to relieve the symptoms of depression even when evidence-based interventions are implemented (Dodd et al. 2001).

The second dimension of SMT is symptom management strategies. A successful symptom management calls for a therapeutic relationship that must exist between the patients, families and the clinicians working in partnership and in collaboration to accomplish the goal of symptom management. Symptom management postulates that troublesome symptoms must be managed and the management should influence or control the symptoms with a goal to bring relief to the patient and prevent negative outcomes (Smith & Liehr, 2008).

It is challenging to manage depressive symptoms in older adults, it requires interventions that are implemented in a collaborative care model that follows a stepped care model of interventions (National Institute of Clinical Excellence, 2009 [NICE]) When a comprehensive approach to symptom management that focuses on a collaborative, stepped care approach is implemented to tackle depressive symptoms, patients and their families obtain greater remission in their depressive symptoms (Centers of Disease Control and Prevention and National Association of Chronic Disease Directors, 2009). Biomedical managements often involve the use of pharmacological interventions which requires that many factors taken into consideration as changes in absorption, excretion, and metabolism lead to higher blood levels

and longer half-lives for most antidepressants with high potential for adverse reactions. Among many factors, noncompliance with a medication regimen significantly affect management of depressive symptoms as approximately 70% of older adults are not following recommended doses of prescribed medications for depression (Das et al. 2007). It is worthy to note that symptom management is a dynamic process in depression management in older adults in that, it requires a team approach consisting of competent practitioners to work in collaboration with patients and families for to successfully treat depression to remission.

The third dimension in SMT is symptom status outcomes. This dimension is crucial if symptom management strategies fails, it can significantly affect a person's functional and emotional state which could lead to decline in function, impaired cognition, self-care deficit, increased utilization of health care and decreased quality of life with important ramification that affect treatment outcomes (Smith & Liehr, 2008). Barriers to positive depression outcomes exist that are attributable to patients, health care providers and service systems (Ell, 2006). The negative effects of these barriers prevent older adults from realizing the target goal which is to relieve all depressive symptoms and a return to functional self. Stigma, provider attitudes and experience, economic barriers, lack of care coordination and collaboration are significant barriers to positive outcome attainment (Ell, 2006). Evidence-based depression management in older adults calls for a well-coordinated, collaborative care model that is comprehensive and integrates approaches to alleviate depressive symptoms using a stepped approach, symptom management provided by competent health care providers for positive symptom outcomes for all.

## Definitions

*Depression:* is defined by Capezutiet al., (2008) as a syndrome consisting of a constellation of affective, cognitive, and somatic or physiological manifestations. Central to the diagnosis of depression is depressed mood and or loss of pleasurable activities (Alexopoulous, 2005).

Depression is diagnosed in older adults with either the Diagnostic or Statistical Manual of Mental Disorder (DSM-IV-TR) or the International Classification of Disease-10 (ICD-10). Severity of depression is determined by the number and severity of symptoms as well as the degree of functional impairment.

*Late Life Depression:* refers to depressive syndromes that occur in older adults 65 years and older in the context of chronic medical illnesses, cognitive impairment, or disability from stressful life events precipitated by psychosocial adversity such as bereavement (Alexopoulous, 2005; Kane et al. 2007).

*Major Depressive Disorder (MMD):* also known as unipolar depression (Capezuti et al. 2008; Delano-wood, & Abeles, 2005). The criteria for diagnosing MMD in older adults require five out of nine depressive symptoms for two weeks with sufficient severity for most of every day. The severity must include core symptoms of depressed mood or loss of interest or pleasure which represent a change from previous functioning for MDD to be diagnosed (Capezuti et al. 2008). These symptoms should last for 2 weeks, lead to distress or functional impairment, and not be a direct effect of substance use, medical condition, or bereavement (Alexopoulous, 2005). It is worthy to note that majority of older adults clinical presentation of MMD is atypical that does not fit the criteria as listed on DSM-IV definition. Appendix B depicts the differences



presenting symptoms between older adults and younger adults. GPs and GCMs and other health care providers should be aware of these clinical presentations to be able to detect depression especially in those with chronic medical conditions and experiencing stressful life events.

*Subsyndromal/Minor Depressive Disorder:* is defined as presenting with at least one key symptom of depression but with insufficient other symptoms and or functional impairment to meet the criteria for full diagnosis. Subsyndromal depression is associated with increased risk for subsequent development of MMD and is linked with greater use of health service utilization and decrease quality of life (Capezuti et al. 2008).

*Subcortical Vascular Depression:* is a type of depressive syndromes prevalent in late life attributed to vascular disease from cerebrovascular diseases (NIMH, 2008), prevalent after a cerebrovascular event, associated with loss of blood supply to the brain called post-stroke depression (Kales, Maixner & Mellow, 2005). Sub-cortical white-matter and gray-matter hyperintensities are noted in magnetic resonance imaging (MRI) scans (Kales et al, 2005). The basis of vascular depression is supported by the comorbidity of depression and vascular diseases such as hypertension, diabetes, hyperlipidemia and heart diseases prevalent in older adults, and the association of ischemic lesions to unique behavioral symptoms. (Kales et al. 2005).

*Psychotic depression:* presents with delusional thinking and characterized with the notion of worthlessness, exaggerated guilt, death and dying, with severe contemplation of suicide (Das et al, 2007). Presenting symptoms include somatic delusions that involve misperceptions of impaired functioning of body systems.

## Review of Literature

A review of current literature and guidelines was conducted that incorporated a nursing theory and medical model of care to unravel evidence based guidelines, interventions and management of LLD in older adults. The goal is to increase the knowledge and awareness of prevention interventions among other interventions to tackle LLD in care settings where older adults receive care, with a focus on remission not just response to treatment in older adults.

Depression in the context of stressful life events such as bereavement and many losses; in the context of chronic medical conditions such as dementia, chronic kidney disease, hip fracture, chronic obstructive pulmonary disease, persistent pain, diabetes, heart disease, Parkinson's disease, stroke, cancer, and macular degeneration. Prevalent across races, can be difficult to treat to full remission.

### **Risk Factors of LLD**

Biological, physical, psychological, psychosocial and environmental factors have significant implications for the development of depression in older adults Kane et al. (2007). Female gender, social isolation, functional and cognitive impairment, insomnia, substance misuse, chronic medical conditions, uncontrolled and persistent pain, low socioeconomic status, certain medications, and stressful life events have significant implications for the development and sustainment of LLD (Kane et al. (2007). Although studies have linked these risk factors as contributing to depression, some of these factors contribute to the development of secondary depression (Kane et Al. (2007). In older adults, treating the primary cause of depression takes care of secondary depression; it is worthy to note that secondary depression



is resistant to conventional depression treatment in those with persistent pain, insomnia, and those using certain medications prone to causing depression (Kane et al. 2007).

### **Epidemiology of LLD**

#### ***Medical Disorder/Disability***

For clinicians to positively impact the incidence, prevalence and morbidity of LLD a sound knowledge of the epidemiology of depressive disorder is warranted, because these data can be used to identify older adults at risk of developing LLD (Kane et al. 2007). Studies have revealed a strong correlation between LLD and medical disorders and disabilities. Das et al (2007) found that there is approximately a 25% incidence of medical disorders and disabilities among patient's status post cerebral vascular accidents and 40% in patients with Parkinson's disease. These diseases are linked with significant physical disabilities and functional decline that predispose older adults to LLD.

A longitudinal study to examine the relationship between specific medical illnesses and the outcomes of treatment for LLD performed by Oslin et al. (2002) found that older adults with illnesses such as cancer, diabetes mellitus, glaucoma, hypertension, Parkinson's disease, chronic kidney and heart disease were related to worsening outcomes with their depressive symptoms. Also, in their study to determine long-term risk for depressive symptoms after a new diagnosis of cancer, diabetes, hypertension, heart disease, arthritis, chronic lung disease and stroke, Polsky, et al. (2005) found that patients with cancer had the highest hazard of depressive symptoms, followed by patients with chronic lung disease and heart disease. Given the common relationship that exist between medical health problems, stressful life events and

depression in older adults, providing integrated care in one location such as primary care settings where most older adults receive care for their physical and mental health problems will significantly benefit depressed older adults.

### ***Stressful Life Events***

Although health related events have been found to correlate with the development of depression resulting from an undesirable life event, stressful life events that are health related, family related, financial, occupational and social stress have been found to trigger the development of depression in older adults (Lueboonthavatchai, 2009). The losses that older adults endure are enormous predisposing them to depression. Psychosocial and environmental stressors in the form of losses, especially death of close family members or friends and social isolation can trigger depression in vulnerable older adults (Lueboonthavatchai, 2009). Repeated loss that is coupled with inadequate coping skills and lack of social support can lead to detrimental consequences that significantly affect quality of life. Many studies have shown an association between exposures to stressful life events and subsequent onset of depression; however, the magnitude of this association varies across studies depending on how life events are measured (Hammen, 2005). Hammen found that there is consistent evidence for a dose-response relationship between stressful life events and depression with severe events more strongly correlating with depression than less severe events. In their study, to describe the effect and association between the loss of a spouse or significant other on subsyndromal depression and depressive symptoms, Turvey, Carney, Arndt, Wallace & Herzog (1999) found that recent bereavement was a significant risk factor for subsyndromal depression in older

adults, even after two years of the loss, some widows and widowers continued to exhibit high levels of depressive symptoms.

### ***Female Gender***

Female gender has been found to be a risk factor for the development of depression in older adults. According to Murakumi, (2002), theories accounting for this difference can be divided into three major categories: biological, environmental, and psychological explanations. It will be argued that environmental and psychological explanations are more convincing than biological, however, no one theory has fully accounted for the extent and prevalence of the higher rates of depression in women than in men (Murakumi, 2002). Rather a woman's biology, environment, and psychology all seem to key play roles in increasing her risk of developing depression (Murakumi, 2002). Factors that account for the disproportionate prevalence of depression in older women include greater susceptibility of depression, greater persistence of depression after its onset, and lower mortality rate among older women. The stresses of maintaining a relationship or caring for an ill loved one and/or parents also typically fall more heavily on women, which could contribute to higher rates of depression. Unmarried and widowed older women as well as those lacking supportive social network have high rates of depression (National Alliance on Mental Health, 2009).

### ***Male Gender***

Older men have been found to mask their depression through externalizing acts such as alcoholism, substance abuse and high prevalence of suicide rates among older men (Das et al, 2007). Depression is a major risk factor for suicide in older adults with high prevalent rates in



men which accounts for approximately 24% of all completed suicide rates especially white males (NIMH, 2008). More than two thirds of suicides in the elderly take place in the context of depression, and approximately 75% of all geriatric patients who complete suicide had seen their primary care provider in the previous month before the suicide (Alexopoulos, 2005). A randomized controlled study was conducted by Unutzer et al. (2002), to determine the effect of the use of primary care-based collaborative care programs for depression on suicidal ideation in older adults. It was found that the use of primary care-based collaborative care programs represented one strategy to reduce suicidal ideation and potentially the risk of suicide in older primary care patients (Unutzer et al. 2002). Depressed older adults are more likely to accept collaborative mental health treatment within primary care than in mental health or substance abuse clinics.

### **Depression in Various Settings**

#### ***Depression in Primary Care Settings***

Rates of major depression among older adults are significantly higher in particular subsets of the older population including nursing homes, acute care settings, those living within communities, assisted living facilities, and primary care settings (Alexopoulos, 2005). Many depressed older adults present to their primary care providers instead of a psychiatrist for their mental health needs (Robinson, Geske, Prest, & Barnacle, 2004). Several studies have reported that primary care providers under diagnosed and under treat depression in older adults; they also spend very little time in discussing mental health with their older patients (Klinkman, 2003). In their study to assess how care is delivered to older adults in primary care settings, Tai-



Seale, McGuire, Colenda, Rosen & Cook (2007) found that mental health topics is addressed in only 22% of primary care patients visits. It was also found that a typical mental health discussion lasted approximately two minutes with rare referrals to mental health specialist even for severely depressed and suicidal patients. Klinkman (2003) found that primary care providers have limited time to accurately identify depressed older adults due to their atypical presentations of depressive symptoms, comorbid medical and mental health conditions that compete for clinical time. Negative physician and patient attitudes towards the stigma of depression, somatically focused clinical presentations, Medicare and other health care plan constraints, competing medical demands, as well as gender and geographic isolation have been linked as constraints in depression detection and management in primary care settings (Burroughs et al., 2005). GNPs and GCNSs along with other health care providers who treats older adults should remain sensitive and prepare to provide evidence based practice interventions and education to patients and family members about depression.

### ***Depression in Nursing Homes***

The prevalence of depressive disorders in nursing homes is significant with a wide range in severity from minor to major depressive symptoms (Dagenaar et al. 2003). As many as 70% of nursing home residents are depressed especially during their first year of stay in nursing homes (Teresi, Abrams, Holmes, Ramirez & Eimicke, 2001; McSweeney & O'Connor, 2008)). Factors found to contribute to high prevalence of depression in nursing homes include inactivity, decline in functional abilities, loss of personal autonomy, and unavoidable confrontation with the process of death and dying that are associated with nursing home

placement (Teresi et al. 2001)). Also some nursing home residents have had previous episodes of depression or are admitted to nursing homes already dysthymic or with other chronic forms of depression (Teresi et al. 2001). These circumstances provide a favorable culture for the development and persistence of depression in nursing homes.

### ***Depression in Acute Care Setting***

Approximately 10-30% of acutely ill older adults hospitalized have depressive symptoms as reported by Das et al, (2007) which increases their risk of mortality, rehospitalization and functional decline (Bula et al. 2001). Also hospitalized older adults with depression present with higher rates of psychotic symptoms, with prevalence rates ranging between 16 to 23% (Das et al, 2007). Furthermore, 25 to 50% of admissions to inpatient geriatric psychiatry units were blamed on psychotic LLD (Das et al, 2007). Causes have been linked to age related deterioration of cortical areas, neurochemical changes that are common in aging, comorbid physical and mental illnesses, social isolation, sensory deficits, cognitive changes, and polypharmacy (Das et al, 2007). Enhanced screening efforts that include pre-screening questions to enhance recognition and treatment of depression in acute care settings has the potential to decrease mortality rates, rehospitalizations and functional decline prevalent in hospitalized older adults.

### **Depression Across Races**

Depression is underdiagnosed and undertreated in older adults across races, but more so in the black population than any other race (Bailey, Blackmon, & Francis, 2009; Fyffe, Sirey, Heo, & Bruce, 2004). Studies have revealed that variations in the presentation of depressive symptoms among older African Americans may complicate assessment of depression, especially

among those with multiple medical comorbidities and functional disabilities (Bailey et al. 2009). Older African Americans are at a greater risk of depression due to high risk conditions prevalent in African Americans, such as diabetes and heart disease, socioeconomic and environmental detriments (Bailey et al. 2009). Furthermore, African Americans have been found to have poorer access, underutilization of mental health services with fewer acceptances of traditional mental health treatment services such as pharmacology, and community mental health due to shame, denial and stigma (Bailey et al. 2009). In their study to determine the impact on stigma and its association with treatment acceptance between African Americans and whites, Givens, Katz, Bellamy, Holmes, (2007) found that depressed African Americans compared to whites endorsed a high level of public stigma and were less likely to engage in or attempt to seek mental health treatments. Givens et al. (2007) found that older African Americans were more likely to internalize stigma and endorsed less positive attitudes toward seeking mental health treatment than white older adults. It has been reported that due to stigma, older African American turn to spirituality as a method to relieve their depressive symptoms (Koenig, 2007).

Even though depression is under-diagnosed and undertreated in older adults, especially in the older black population; when compared to Non-Hispanics, white, and blacks, the prevalence of depression is higher among Hispanics older adults (Gonzalez, Haan, & Hinton, 2001). Studies have reported factors that explained differences in self-reported level of depressive symptoms among older adults across races to include language acculturation, number of years of education, number of years of U.S. residency, health status, income, social isolation, underutilization of health services and prior history of depression and gender (Gonzalez et al, 2001).



The delivery of adequate mental health care to Hispanics, now the largest, heterogenous group and fastest growing ethnic minority group, has been afflicted by low utilization rates and inadequate or delayed mental health services (Gonzalez et al. 2001). Among the issues compounding the problem are the diversity that exists within the Hispanic population, the varied ways that depressive symptoms are presented and expressed and the unique sets of risk factors, treatment choices and options and barriers to treatment (Fernandez, Das, Alfonso, Weissman, & Olfson, 2005). GPs and GCNSs should make significant efforts to increase awareness of the presentation of depression in ethnic minority population and actively engage patients in key decisions regarding treatment options and promote adherence to effective treatments.

### **Interventions**

Universal prevention interventions that target the general population of older adults without reference to those at particular risk are methods to prevent late life depression. All members of a community such as older adults seen in primary care settings, nursing homes benefit from a universal prevention effort, not just specific individuals.

### ***Spirituality***

Religiosity and spirituality beliefs can be a source of hope for those facing difficult life problems and has been shown to protect against depression especially those with chronic medical conditions, disabled, and having persistent pain (Koenig, George and Titus, 2004). In their cross sectional quantitative survey, Koenig et al examined the effects of religion, spirituality and health in medically ill hospitalized older patients in association with greater



social support, better psychological health, and better physical health. Other studies as well have reported that when older adults are asked how they are able to manage with the stress of medical illness, disability and persistent pain, they frequently reported that religious beliefs and practices are a source of comfort and strength (Koenig, et al. 2007; Koenig, 2007). Religious activity is positively related to hope and optimism and negatively related to depression

Bolstering of religiosity and spirituality has been shown to protect against depression in older adults as evidenced in a quantitative study by Braam et al. (2001) who examined the protective effects of religious beliefs in depressed older adults. Braam et al found lower rates of depression among regular church goes mostly Roman Catholics, notably in females. In another quantitative study that examined the effect of church attendance association between depressive symptoms and cognitive function among older Mexican Americans, Reyes-Ortiz, Berges, Raji, Koenig, Kuo, & Markides, (2008) found that older adults who had regular church attendance appeared to maintain cognitive functioning, and cognitive functioning in older adults is linked to independent living and need for care.

Modifiable and nonmodifiable risk factors to prevent cognitive decline in older adults include smoking, excessive alcoholism, illicit drug use, malnutrition, stress, hypertension, diabetes and lack of physical exercise. Mental stimulation improves brain functioning and actually protects against cognitive decline as does physical exercise. In their study by Ball et al. (2002), the protective effects of late life intellectual stimulation on the incident of cognitive decline was examined using 3 cognitive training interventions: memory, reasoning and speed of processing. It was found that cognitive training interventions improved targeted cognitive

abilities. Improvement in cognitive functioning protects against depression as up to 60% of community dwelling older adults 60 years and older who expressed concerns about declining memory (Balls et al. 2002).

### *Exercise*

Promotion of cognitive functioning, mood and self-esteem through regular physical exercise is a universal prevention approach that benefits all older adults and is vital for the general health and well-being of older adults. Active and fit older adults are at lower risk of having cognitive decline, mood disorders, heart disease, bone fracture, sleep disturbance and loss of function than their sedentary and unfit counterparts (Singh, Clements & Singh, (2001).

The American College of Sports Medicine guideline is in support of primary care providers prescribing exercise and physical activity for healthy older adults and older adults with chronic disease and disabilities (American College of Sports Medicine, 2009). The benefits of regular physical exercise with aerobic exercise and resistance training were evident in an exploratory, cross-sectional study by Purath, Buchholz & Kark, (2009) in which 34 community dwelling older adults were assessed for physical fitness measures, to examine the relationships among general health and well-being, social support, and physical activity; and to assess feasibility of transferring findings to primary care settings. This study revealed that older adults who reported optimal general health had fewer chronic conditions and even scored better on the physical fitness tests. Support and encouragement received from their health care providers for physical activity was found to correlate with high endurance, motivation and high level of participation. Older adults who were active had significant upper and lower body

strength, aerobic endurance and dynamic balance. This study reveals the impact that increased levels of physical activity and physical fitness have in the aging body, chronic conditions, better health and well-being. Nurse practitioners and other health care providers are strongly encouraged to assess and counsel their patients about physical activity because it plays a vital role in preserving the quality of life and independence, and not only reducing illness and mortality. Maintenance of physical and mental health goes hand in hand.

### ***Nutrition***

There is growing evidence that nutrition in general and omega-3 fatty acids in particular has demonstrable benefits on mood disorders. The brain and central nervous system contain high concentrations of n-3 polyunsaturated fatty acids (n-3 PUFAs) for neural structure and function (Appleton, Rogers & Ness, 2009). Deficiency in omega-3 fatty acids have been linked with preventing renewal of brain neurons and contribute to cerebral aging and depressive mood. In their 2009 updated systematic review and meta-analysis Appleton et al, (2009) revealed that available evidence provides support that omega-3 fatty acids supplements are beneficial to individuals with diagnosed depressive illness, however, the evidence does not support preventative benefits in persons without a diagnosis of depression. This systematic review and meta-analysis was an updated 2006 review from their published randomized controlled trials that investigated the effects of omega 3 fatty acids on depressive disorders. The current review published in 2009 took into account results of 17 trials published from 2002 to 2006, in addition of the 18 randomized controlled trials used in the 2006 review. The combined trials from the 2006 and 2009 systematic review and meta-analysis found that



available data investigating the effects of omega-3 fatty acids on depressed mood presents with heterogeneous data in the population studied and the interventions used. Omega 3 fatty acids

## Therapies

### *Problem Solving Therapy*

Prevention of depression in older adults using selective prevention interventions targets older adults with high risk indicators for developing depression as seen in stroke disability, macular degeneration, heart disease, and cancer and in those experiencing stressful life events. For instance divorce, social isolation, abnormal grief, loneliness, and bereavement which are high risk factors for the development of LLD. Providing support and counseling via problem-solving therapy (PST) have been found to reduce vulnerability towards depression as depicted in their quantitative study by Rovner, Casten, Hegel, Leiby & Tasman (2007). Studies have found Problem-solving therapy, a non-pharmacological intervention effective in treating and preventing depression. Based on the notion that helping patients become better managers of their lives reduces stress and ameliorates depression. PST trains patients to identify problems vital to their well-being and provides a process for selecting and implementing problem-solving plans. There is evidence that PST is effective as depicted in their study by Rovner et al. (2007) who found that PST interventions implemented to older adults with age related macular degeneration prevented depressive disorders compared to usual care. PST participant received 6 in-home PST sessions 45-60 minutes, administered by trained PST therapists for 8 weeks. It was found that 11.6% of PST subjects compared to 23.2% of usual care controls developed major and minor depressive symptoms at 2 months of study. However, at 6 months the



prevalence of depressive disorders between the PST and control subjects was not significant 21% for PST and 27.4 percent for control subjects. It is worth noting that fewer PST subjects had relinquished a valued activity as evidenced by a subjective measure of vision related task difficulty, compared to controlled participants. Furthermore, PST subjects had improved subjective vision function despite no change in objective acuity, as compared to control revealed decline in vision function when assessed using the National Eye Institute Vision Function Questionnaire 17. Patients with bilateral macular degeneration and those suffering from high risk chronic medical conditions and stressful life events are often overwhelmed by their inability to engage in the world, and are frustrated by the challenges of remaining independent, putting them at risk for depression, functional decline and poor quality of life. Rovner et al. (2007) found that the effect of PST was temporary and did not persist over time; however, older adults who received some form of assistance with their visual impairments preserve valued activities, which is key to maintaining independence.

The effectiveness of PST was compared against supportive therapy in older adults with major depression and executive dysfunction in a 12 week quantitative study by Arean, Raue, Mackin, Kanellopoulos, & McCulloch, (2010). When executive dysfunction accompanies LLD, treatment with antidepressant agents appears to be a challenge due to identified structural and functional brain abnormalities underlying executive dysfunction, interfering with antidepressant response (Arean et al. 2010). Non-pharmacological approach using PST in this study was found superior over supportive care in that the premise of PST addresses problems that maximize patients' skills in addressing the problems that originates from their depressive symptoms without the need for antidepressant, but with assistance from therapists. The

severity of depression was assessed during at 12 weeks using HAM-D score. It was evidenced that by week 12, PST participant's scores indicated greater improvement in HAM-D scores compared to participant in supportive therapy. This study clearly indicates PST is an effective approach in reducing depressive symptoms and producing greater response and remission in older adults with depression and executive dysfunction.

### ***Cognitive Behavioral Therapy***

Interventions geared towards indicated prevention focuses on older adults with high risk conditions such as comorbid insomnia and early or subsyndromal symptoms of depression in whom an intervention may reduce the likelihood of developing a full blown case of depression (Madhusoodanan, Ibrahim & Malik, 2010). Sleep disorders are an importance risk factor for major depression and poor sleep quality is directly linked with subsequent life dissatisfaction and that increases vulnerability to major depression (Madhusoodanan, et al. 2010). Older adults with sleep disturbance are often viewed as difficult to treat, yet they are among the groups with the greatest need of treatment (Rybarczyk, Lopez, Schelble & Stepanski, 2005). Sleep pattern normalization using cognitive behavioral therapy (CBT) was shown to protect against depression in comorbid insomnia and depression in older adults in their pilot study utilizing video CBT by Rybarczyk et al. (2005). In this study, it was found that implementation of CBT home based video therapy demonstrated significant improvements in sleep latency, time awake after sleep onset, total time in bed, overall sleep quality, and dysfunctional beliefs and attitudes about sleep after treatment were implementation. Post treatment benefits with home based CBT video therapy participants also had significant improvements in their daytime

functioning capacity, including mood improvement, pain perception, social functioning, and energy and vitality.

In another quantitative study that compared the effects of CBT singly and in combination with pharmacological therapies for chronic insomnia, Morin et al, (2009) found that CBT when used as a standalone or in combination with medication significantly enhanced sleep latency, decreased time awake after sleep onset, and increased sleep efficiency during the initial therapy. This study also reported that the best long-term outcomes were obtained when the initial treatment approach was CBT then combined with medication, and followed by CBT alone. This was evidenced by higher remission rates at the 6 months follow up when 51% of participants were on remission. It is worthy to note that while pharmacotherapy is the most common modality of treating insomnia in older adults short term, CBT modalities seek to change poor sleep habits, alter faulty beliefs and attitudes about sleep, and promote better sleep hygiene and the benefits are maintained over time to protect against depression.

Effective psychosocial treatments exist for depression in older adults depending on the severity of depression. Cognitive Behavioral Therapy and interpersonal psychotherapy (IPT) have strong evidence-based support for treating depression in older adults alone or in combination with antidepressants (American Psychiatric Association, 2010). A variety of other therapies such as brief dynamic psychotherapy, life review and reminiscence therapy have been found efficacious in the treatment of depression in older adults. Studies have revealed that older adults prefer psychotherapy rather than pharmacological treatment (American Psychiatric Association, 2009).



### ***Suicide Prevention***

Depression is the primary risk factor for suicide. Interventions that reduce the risk for suicide in late life gave rise to the Prevention of Suicide in Primary Care Elderly: Collaborative Trial (PROSPECT). In their quantitative study by Bruce, et al (2004), they examined suicidal ideation and depression severity at baseline, 4, 8, and 12 months after implementation of the PROSPECT guidelines, tailored for the elderly using collaborative care management. Their findings revealed that suicidal ideation declined by 12.9% points from 29.4% to 16.5% in older adults both minor and major depression from baseline to four months of PROSPECT interventions, and 17.2% at 8 months and 14.6% at 12 months. Decline in suicidal ideation was more noticeable in older adults with major depression compared to minor depression (Bruce, et al, 2004). This study found a decreased in depression severity in participants using PROSPECT interventions. This study clearly shows that implementation of PROSPECT interventions at primary care settings has the potential to resolve suicidal ideation quicker; participants were able to experience less severity of depressive symptoms, greater response to treatment and high rates of remission. Implementation of interventions that minimize the risk of committing suicide in older adults seen in primary care settings such as PROSPECT approach will decrease the rates of suicide among older adults.

### ***Pharmacotherapy***

The American Psychiatric Association recommends pharmacotherapy and psychotherapy in the treatment and prevention of relapse in depressed older adults in the context of chronic medical conditions and stressful life events (American Psychiatric



Association, 2010). The choice of antidepressant agents depend on many factors such as comorbid medical or psychiatric illness, drug to drug interactions, risk of vulnerabilities such as falls, cost, and the side effect profile of the chosen medication. Also the effectiveness of antidepressants and psychosocial therapies depends on compliance in addition to adequate dosing of antidepressants (Kane et al, 2007). Furthermore, pharmacodynamics and pharmacokinetics alteration with ageing in addition to concomitant medications and physical illness are factors that must be taken into considerations. Usually antidepressant treatments can be effective however, older adults experience lower rates of recovery and remission of depressive symptoms and higher rates of relapse while on antidepressants.

The problem with poor compliance and lack of adequate dosages has been found to be a problem in achieving long term treatment benefits. Older adults exhibit marked variation in how medication is metabolized and eliminated. Studies and guidelines have reported the effectiveness of Selective Serotonin Reuptake Inhibitors (SSRIs), Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs), monoamine oxidase inhibitors (MAOIs), Dopamine Norepinephrine Reuptake Inhibitors(DNRIs) and tricyclics antidepressants (TCAs) in treating depression in older adults. Many newer antidepressants require dose adjustments for older adults, with caution in older adults with renal and or hepatic dysfunction.

### ***Electro-Convulsive Therapy***

Many studies regarding electroconvulsive therapy (ECT) have shown significant efficacy in treating depression in older adults because of severe psychiatric or medical morbidity who have failed trials of medications and psychotherapy with suicidal ideations (American Psychiatric Association, 2009). The efficiency of ECT does not diminish with age and case

reports revealed to the safe use of ECT in older adults (Jain et al. 2010). A report from the American Psychiatric Association (APA) Task Force Report clearly states that ECT should not be considered as a last alternative intervention but rather as a first line treatment when a rapid and definitive response is needed based on the severity of acute psychiatric and or chronic medical conditions (APA, 2010). APA reports that ECT has a greater possibility of achieving remission in older adults with psychosis symptom or atypical presentation of depression, however, the presence of melancholic features significantly decreased the possibility of achieving full remission.

### ***Other Therapies***

American Psychiatric Association, (2010) found emerging treatment modalities utilized for the treatment of depression with varying degree of evidence to support the efficacies of these modalities. Trans-cranial magnetic stimulation, vagus nerve stimulation, complementary and alternation treatments such as St. John's wort, S-adenosyl methionine, omega-3 fatty acids, folate, light therapy, and acupuncture are showing varying degrees of clinical significance for their implementation towards older adults with depression

### **Screening**

The U. S. Preventative Service Task Force recommends screening older adults for depression when staff-assisted depression care supports are in place to ensure that accurate diagnosis, effective treatment and follow up care are available (U. S. Preventive Services Task Force, 2009). The Patient Health Questionnaire (PHQ-9) is considered the screening tool of choice for case findings for depression in adults seen in primary care settings, with or without

dementia. (Kroenke, Spitzer & Williams, 2001). The 9-item instrument has emerged as a reliable depression screening tool, and has demonstrated the ability to identify clinically important depressive symptoms, accurately diagnose depression, to track severity of depression overtime and monitor response to therapy (Kroenke et al. 2001). The tool has been validated as a reliable tool for assessing and monitoring depression severity in older adults post stroke as well (Kroenke, et al. 2001; William et al., 2005). The 9 items derived specifically from the DSM-IV criteria for major depressive has the potential of fulfilling two purposes. It can be used to establish a depression diagnoses as well as to grade the severity of depressive symptoms (Kroenke et al. 2001). The severity of scores are 5, 10, 15, and 20 represents a cut-points for mild, moderate, moderately severe and severe depression on which treatment decisions are implemented (Kroenke, et al. 2001). The PHQ-9 scores and treatment actions, based on severity scores are shown in Appendix C.

The 2-item brief version of the Patient Health Questionnaire (PHQ-2) is considered a best practice tool found effective in screening for depression in older adults with past history of depression or chronic physical health conditions (NICE Clinical Guidelines, 2009). The 2-item version of the PHQ depression measures the frequency of depressed mood and anhedonia over the past 2 weeks. A "0" rating indicates that mood or anhedonia is not present and a "3" indicates the presence of depressed mood or anhedonia nearly every day (Kroenke et al. 2003). A follow up evaluation is done to confirm or refute positive screening results by a competent health care provider.



The most widely validated screening instrument is the Geriatric Depression Scale (GDS). It was introduced by Yesavage et al. in 1983 (Baldwin & Wild, 2004). GDS has been tested and used extensively with older adults with depression and translated in many languages (Baldwin & Wild, 2004). GDS was created for older adults, its items were based on characteristics of depression in the elderly. The GDS Long Form is a brief 30-item questionnaire in which older adults are asked to respond to yes or no questions. GDS Short Form consists of 15 questions, developed in 1986 (Baldwin & Wild, 2004). Appendix D depicts 15-item GDS Short Form and severity score. GDS is easy to administer in less than five minutes.

Given the close association between comorbid anxiety and depression, studies suggest that anxiety is frequently a symptom of depression (Olsson, Mykletun, & Dahl, 2005; Bunevicius, Peceliuniene, Mickuviene, Valius, & Bunevicius, 2007). The detection of anxiety in primary care setting either as a symptom of depression or as a separate diagnosis is vital in primary care settings (Olsson et al. 2005). The generalized anxiety disorder scale (GAD-7) is a brief screening questionnaire found to have high sensitivity and specificity to screen and evaluate for the presence and severity of anxiety disorders in primary care settings (Kroenke, Spitzer, Williams, Monahan, & Lowe, 2006). The first 2 items (GAD-2) representing core anxiety symptoms that has been compared to the PHQ-2, and it is used as a brief screening tool with high sensitivity and specificity to detect generalized anxiety disorders in primary care linked with depression. (Kroenke et al. 2006).

Depression at any stage of a dementing illness from Alzheimer's type or subcorticalvascular dementia contributes to distress, poor functioning, agitation or even



predisposes to psychosis (Barca et al. 2010). The Cornell Scale of Depression in Dementia (CSDD) is the screening tool of choice used to screen for depression in older adults with dementia. Studies have found strong validity and reliability when CSDD is used among older adults with dementia and those without dementia (Barca et al. 2010).

The Mini Mental State Exam (MMSE) is a valid and reliable tool that is widely used in care settings to screen for cognitive impairment in older adults. Careful interpretation of the results of the MMSE, together with the history and physical assessment, has the potential to assist in the differentials of cognitive impairment as a result of depression, Alzheimer's disease and vascular depression (Vertesi et al. 2001). Repeated measurements can be used to evaluate change over time and response to treatment in depressed older adults (Vertesi et al. 2001).

Unlike MMSE screening tool, the Saint Louis University Mental Status Examination (SLUMS) is a simple, efficient tool with sensitivity and specificity abilities found effective in diagnosing older adults with mild neurocognitive impairment and dementia (Tariq et al. 2006). SLUMS consists of 11 items, 0-30 score tool that measures aspects of cognition including orientation, short-term memory, calculations, naming of animals, recognition of geometric figures and clock drawing as found in their quantitative study by Tariq et al. (2006). Researchers at the Saint Louis University compared SLUMS and the MMSE on 705 older participants 60 years and older. While both tools are used to detect dementia, only SLUMS recognized a group of older adults with mild neurocognitive impairments. Early changes detected in neurocognitive functioning warrants early treatment initiation to prevent further cognitive decline. SLUMS Examination is shown in Appendix E.

Screening tools for the detection of depression in older adults are only the first step in the assessment of the treatment process. Further follow up evaluations and a thorough comprehensive assessment are required in finalization of clinical decision process regarding treatment implementation. Once treatment is initiated, periodic screening is an integral component of treatment plan throughout the course of interventions (Ayalon & Arean, 2005). Ayalon & Arean, (2005) also reported that using a combined approach that incorporates the full PHQ screen tool which assesses for anxiety, substance abuse, psychosis, somatoform, and eating disorders in primary care settings within the time confinements was found practical. Interview based instruments such as the Structured Clinical Interview for the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV and Primary Care Evaluation of Mental Disorders (PRIME-MD) are diagnostic tools that rely on a mixture of structured questions and clinical judgment mostly utilized by mental health professionals with adequate training on how to proficiently use these tools.

### **Access**

Increasing direct access to mental health services using integrated, collaborative care management interventions was found to improved outcomes for older adults with depression. In a quantitative study by Bartel et al. (2004) it was revealed that most primary care older adults prefer to be treated by their primary care provider, and are more likely to accept collaborative mental health treatment within primary care than in mental health and/or substance abuse clinic (Arean, et al. 2010; Unutzer, 2002).

In another study by Ayalon & Arean, (2005), it was found that collaborative care management interventions that incorporated psychotherapy and antidepressants benefited

older adults from ethnic minority groups consisting of Hispanics and Blacks. The interventions were individualized and designed to meet the specific mental health needs of these depressed ethnic minority older adults. However, minor adjustments were made to the treatment interventions to meet the cultural needs of the different ethnic participants (Ayalan & Arian, 2005).

The main goal of treating depression is obtaining remission of most or all symptoms. Remission is linked with improvement in functioning in older adults, improvements in depressed mood and prevention of functional decline. Response to treatment is defined as a reduction of at least 50% in baseline symptom levels (Ayalan & Arian, 2005). However, response without full remission is associated with continuation of impairments in psychosocial functioning, productivity, and disability, high use of health care resources, high rates of relapse, recurrence and risk for suicide (Chew-Graham, 2009).

The National Institute for Clinical Excellence (NICE) guidelines on depression in adults with chronic physical health problems is an evidence-based recommendation that focuses on a stepped approach in the management of depression in the context of chronic physical health problems (The National for Clinical Excellence, 2010). NICE recommendations acknowledges the roles of health care providers including advanced practice nurses in supporting patients who have been diagnosed with depression (Chew-Graham, 2009). The NICE model provides a basis in which health care providers can arrange for the provision of services supporting both patients, caregivers, GPs and GPs in clinical decision making. In identifying and accessing the most effective interventions starting with the least intrusive and most cost



effective interventions in collaboration with patients and families (Chew-Graham, 2009). NICE stepped care model is shown in Appendix F.

### Method

We live in an aging world and illnesses such as depression; a psychiatric disorder is prevalent and causes significant morbidity and mortality in older adults. Furthermore it consumes an increasing portion of health care resources. LLD is devastating in older adults because it often goes undiagnosed or inadequately treated in primary care, acute care and skilled nursing facilities. Furthermore, treatment does not necessarily improve with enhanced detection due to noncompliance with prescribed treatments due to lack of knowledge of illness, cost of treatment and medication side effects. The consequences of inadequately treated depression in older adults have a profound impact on quality of life for both patients and care givers and are associated with an increased risk of mortality from suicide and vascular disease.

Chronic medical disorders and stressful life events effect in late life depression will be reviewed. GNPs and GCNSs and other health practitioners working in settings where older adults receive care are competent practitioners who should be alert to possible depressive symptoms. In older adults with chronic medical conditions associated with functional impairment and those experiencing stressful life events, two questions specifically: 1) during the last month, have you often been bothered by feeling down, depressed or hopeless; and 2) during the last month, have you often been bothered by having little interest or pleasure in doing things? Asking these questions depicts best practice approach and evidence-based.



The majority of older adults with depression seek care in primary care, and depression can be successfully managed in medical settings through the use of a collaborative care model that are evidence-based. It is worthy to note that the focus in the management of LLD as a mood disorder has changed from a psychiatric disorder that is solely diagnosed and treated by a psychiatrist to a common and serious disorder that can be diagnosed and safely managed in general settings in collaboration between primary care and mental health care providers to enhance treatment for depression and improve outcomes.

The literature review was based on searches from MEDLINE, Ovid, Cumulative Index to Nursing and Allied Health and Literature (CINAHL), and the internet for potentially relevant articles from 1990 to present, limited to articles in English. The following search terms were used: depression in late life; evidence-based treatment for depression in older adults; prevention of late life depression using primary preventions in late life; stressful life events and late life depression; depression and chronic medical conditions; pharmacology and psychotherapy treatment for late life depression; consequences of undertreated and undiagnosed depression in older adults; and risk factors for development of late life depression. Because the literature on this topic is extensive, the bibliographies of relevant articles were searched for additional references in the field of depression from 1999 and present.

### **Results**

A power point presentation was provided to a group of primary care providers in the form of an in-service, to relay findings from the literature review. Before the presentation was given, the powerpoint contents were submitted to my clinical advisor for critique and suggestions. After

incorporating recommendations from my advisor into the slides, the presentation was given to a group of 13 primary care providers at a primary care clinic. The presentation was well received with positive feedbacks and comments from my lead preceptor. The information provided was educational to enhance detection, diagnosis, and evidence-based therapeutic management of late life depression. Primary care providers treat approximately 80% of depressed older adults, it was imperative that the audience consist of primary care providers.

## Discussion

### Interpretation

Majority of older adults seek care and are treated for depression in primary care settings and often will not follow through with referrals to see a mental health specialist due to factors such as stigma as well as barriers imposed by Medicare and insurance companies. Early detection and evaluation of depression, psychosocial and pharmacological interventions, vigilant symptom monitoring through follow up visits are key to a successful depression treatment plan in settings where older adults receive care. The signs and symptoms of depression are easily missed in older adults seen in primary care settings or are assumed to be normal aging changes and responses to life events or medical problems. Part of the problem is that most depressed older adults do not present with the typical symptoms of depression, such as depressed mood, or sadness. The signs and symptoms that they present with may be related to a physical illness and frequently exacerbated or even exaggerated by the depression which create difficulties in the diagnostic process and depression is often missed. However, the diagnostic and treatment of depression in older adults have increased dramatically in recent years, increasing by more than 100% (Arean & Unutzer, 2003). Prescriptions for antidepressants

and psychotherapies have also increased due to the fact that health care providers are becoming more comfortable and knowledgeable in managing depression in older adults in part because of as more evidence based practice studies available to guide practice (Arean & Unutzer, 2003).

Despite these positive strides in depression management, not all older adults have access to adequate treatment for their depression, such as older minorities and the very old. The quality of care received might be suboptimal due to restrictions imposed by Medicare for antidepressant and psychotherapy treatments (Arean & Unutzer, 2003). There are barriers that have been found that affect suboptimal treatment of depression in minority depressed older adults. Some of those patient related barriers such as the acceptability of mental health services by minority depressed population; also, treatment choices by certain minority groups tend to work at their disadvantage. For instance, studies have revealed that depressed older Latino participants preferred pharmacologic interventions over counseling, while African Americans preferred counseling over pharmacologic interventions (Arean & Unutzer, 2003). However, Medicare might not cover the choice of the treatment that patients are requesting or the type of treatment that would benefit the patient.

The overall goal of prevention is to decrease the incidence of LLD. Prevention of LLD would decrease emotional suffering, morbidity and mortality and may even decrease the dependence of professionals without background in mental health to detect depression and initiate a treatment referral. Incidence of depression can be reduced dramatically when interventions that focus on prevention efforts are implemented. Screening tools have been evaluated for high specificity and sensitivity for change over time in primary care older adults,



such as the PHQ-2, that is quick to administer, and highly acceptable to older adults. Because primary care providers sometimes miss identifying older adults with depression, a systematic screening program is the best practice approach in primary care used to improve outcomes in depressed older adults.

Older adults with chronic medical conditions such as diabetes, chronic obstructive pulmonary disease, chronic kidney disease and stressful life events such as bereavement are at high risk for depression. The U.S. Preventive Services Task Force (USPSTF) now recommends screening all adults for depression in practices that have a system in place to assure accurate diagnosis, effective treatment, and follow-up. PHQ-2 can be used effectively in both acute and primary care settings.

The provision of services that have been found effective to manage LLD have been hindered by disparities that exist in health insurance coverage for services that are not covered under Medicare when older adults cannot afford supplement insurance (Arean & Unutzer, 2003). Access to supplemental insurance that covers effective treatments for depression such as antidepressant medications or psychotherapy have the potential for improving quality of care for all older adults. However, older adults especially minorities, cannot afford supplemental insurance coverage. The Improving Mood-Promoting Access to Collaborative Treatment (IMPACT) study identified effective strategies that can be implemented in the management of depression in older adults. Due to systems barriers such as reimbursement to services provided by trained case managers that are not covered under current fee-for-service Medicare rules render studies like IMPACT worthless (Arean & Unutzer, 2003).



Many older adults are financially stretched and may live on a fixed budget. Also, many older adults do not get the necessary help or treatment for depression because Medicare reimburses psychiatric services differently. Health care providers are reimbursed at the rate of 50% of the allowed charge for a psychiatric, psychologist or psychotherapist and older adults are responsible for the remainder 50%. The out of pocket expenses for services that are not covered by Medicare is high and unaffordable by most depressed older adults which could be a contributing factor as to why depression is undertreated. Not until 2014 when reimbursement for mental health services will be reimbursed at 80% of the allowed charges leaving the remaining 20% to be paid by older adults. On a positive note, starting in 2012, Medicare will cover preventive screenings for depression. Medicare coverage of annual screening for depression along with behavioral counseling and other treatment modalities for those who screened positive is a vital step to increase the diagnosis and treatment of depression. Coverage by Medicare stands to benefit older adults and their families because health care providers, including advanced practice nurses (APNs) will hopefully use integrated care models for managing depression and screen patients with general medical conditions that can be linked to depression.

The stepped care model for depression management introduced by NICE is a framework of care that incorporates evidence-based approaches in the management of depressive disorders based on the step of depressive severity to match the needs of older adults with depression to the most appropriate services, depending on the characteristics of the depression, personal and social circumstances. A rise in a step reflects an increase in the interventions that are need to stabilized the patient, with higher steps assuming interventions

than preceding steps. Not all older adults with depressive symptoms need the same type and intensity of preventive interventions. For some older adults, no interventions are required for their depressive symptoms to resolve. However, some older adults require help from psychotherapy and pharmacological interventions that are intensive.

There is a vast amount of information and studies currently available regarding LLD with numerous recommendations for treatment and prevention strategies. Older adults with Parkinson's, Alzheimer's disease, dementia and anxiety disorders often have an existing depressive disorder, or they may even develop depression during the course of their disease. Treating depression in this population has the potential to allow better functioning in activities of daily living; and even the potential to prevent or delay placement in long-term care (LTC) facilities. It should be noted that depression often is found in family caregivers caring for depressed older adults and exacts a tremendous toll on caregivers' health and well-being. The mental and physical ability of caregivers sometimes determines whether LTC placement is required. Unrecognized depression in caregivers accounts for significant costs to families and society. Recommendations for regular screening for depression in caregivers caring for depressed older adults with neurological diseases like Alzheimer's disease benefits both depressed older adults; and it is imperative that caregivers are taken into considerations when screening for depression.

### **Outcome**

One of the main objectives of this project is to develop a PowerPoint and present the findings to providers who care for older adults and families with chronic medical conditions and stressful life events. Most life events and chronic medical conditions implicated in studies of

depression are inevitable consequences of aging. However, the occurrence may signal a period of increased risk of onset of depression and preventive interventions may be possible. The intended aim of this project is for providers to incorporate findings into their practice, targeting older adults at greatest risk of LLD. The strategies used in secondary and tertiary preventions are already been employed in good clinical practices by providers, however, primary prevention interventions are less defined across settings.

A presentation using power-point slides and handouts will be delivered to practitioners in primary care setting. Since health care providers in primary care settings treat majority of older adults with depression, this setting appears to be the appropriate venue for the presentation. Other venues include acute care settings, skilled nursing facilities, assisted living and home care.

#### **Implications to Nursing**

The care of older adults with depression has evolved to include active interventions and continuous focus on prognosis and quality of life. From the first detection of depression and through the treatment process, APNs should work with patients and their families in a multidisciplinary team. The multidisciplinary teams consisting of physicians, social workers, chaplain, case managers, pharmacists, physician assistants, psychologists and psychiatrists to ensure the highest possible quality of care and quality of life for older adults with depression. APNs have a better understanding of the disease process of LLD which make it easier to educate patients and their families along with other health care professional caregivers.

GNPs and GCNSs are committed in providing each patient with a continuity of care, engaging patients and families in the decision making for therapies that will achieve the



highest level of adherence. APNs provide education, medication management, referral for individual and family counseling, and spiritual guidance.

GNPs and GCNSs are committed in providing comprehensive, exceptional, compassionate and cost effective care to depressed older adults and their families. APNs are known to treat the whole person and not just their symptoms; they thrive to give older adults and their families the opportunity to enjoy an optimal quality of life.

One of the major barriers to recognition and treatment of LLD is the limited time of health care providers and lack of health care providers to provide primary care services to older adults. APNs are being asked to step to the forefront to assess, diagnose and manage older adults with depression using evidence-based practice and guidelines.

The Institute of Medicine (IOM) has identified the need and demand for better provision of services such as mental health services for all (Institute of Medicine, 2010). According to the IOM, APNs should be allowed to practice in accordance with their professional training that equips them to deliver patient-centered, equitable, safe, high-quality health care services, engage with physicians and other health care professionals to deliver efficient and effective care, and assume leadership roles in the redesign of the health care system (Institute of Medicine, 2010). GNPs and GCNSs stand to make positive contributions in the lives of older adults with depression with early detection, prevention and implementation of evidence-based interventions.

### **Conclusion**

Depression in late life is a devastating syndrome that warrants vigilance in detection, diagnosing and utilization of management approaches that are evidence-based and incorporate



the wishes of patients and families in the treatment plan for successful adherence to therapy. Improved screening procedures in primary care settings have helped the detection and recognition of depression in older adults. Depression that is experienced in the context of chronic medical conditions and stressful life events are not part of the normal aging process. Depression result in functional and cognitive impairment that exacerbates medical illnesses and impact physical health. Older adults with depression who are adequately treated are able to regain their lives and functioning, requires routine monitoring for relapse prevention.

Nurses are committed to patient care that improves safety, quality and better patient outcomes. One of the strengths of APNs is in areas of care coordination, health promotion, disease prevention and quality improvement, these qualities are essential for management of depression in older adults. GNPs and CNSs working in primary care settings are in positions to improving the recognition and treatment of depression in the care for older adults. Engaging and consulting with patients, families and caregivers are key to a successful treatment plan. The five stepped care model from the National Institute for Clinical Excellence (NICE) guideline for depression is a useful approach to depression management with aims to match the needs, focus interventions on those with depression to the most appropriate service based on the step of their depression.

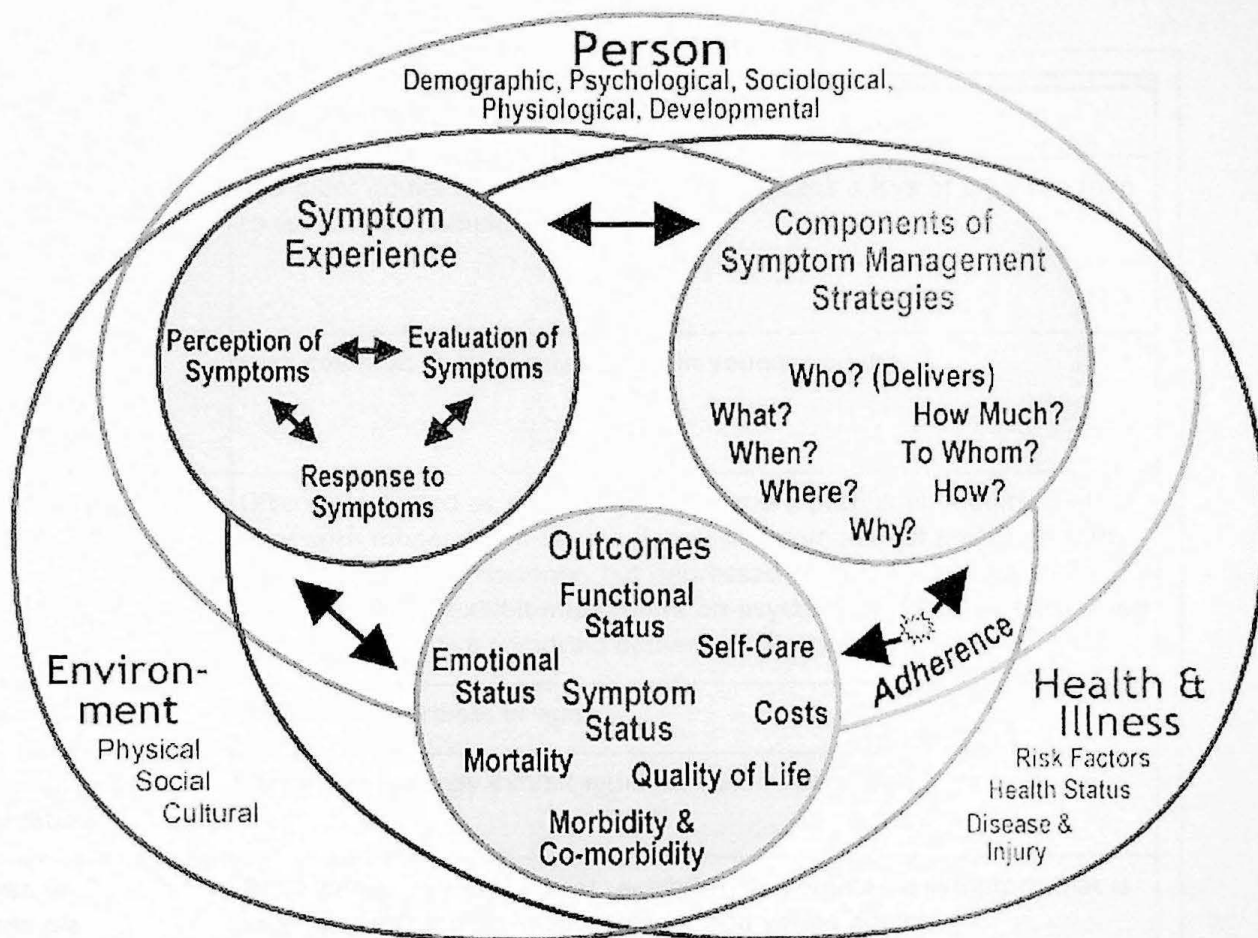
Advanced practice nurses and other health professionals caring for older adults in all settings have the potential to significantly decrease the ramifications of LLD in older adults with chronic medical disorders and experiencing stressful life events, by decreasing both morbidity and mortality rates with early interventions. Advanced practice nurses remains at the front line

in the recognition of late life depression and the facilitation of older adults' access to appropriate mental health care.



APPENDIX A

Symptom Management Model Source; Dodd et al, 2001.





## APPENDIX B

Depressive Symptoms Presentation in Older Adults Compared to Young Adults Source; Cole S.A., Christensen J.F., Raju Cole M., Cohen H., Feldman M.D. (2008).

SYMPTOM	DESCRIPTION
Depressed mood and/or lack of interest or pleasure in usual activities	The older adults may be more likely to express a loss of pleasure than to specifically complain of depression
Feelings of worthlessness or inappropriate guilt	Less common in older adults than in younger adults
Diminished ability to concentrate or make decisions	Often manifested as a complaint of memory problems—adults of all ages with moderate-to-severe depression complain of problems with concentration and memory, but depressed elders, in contrast to younger adults, exhibit impairment on psychological testing even when they do not have a comorbid dementing disorder
Fatigue	Common regardless of age
Psychomotor agitation or retardation	Older persons may exhibit either of these symptoms
Insomnia or hypersomnia	Older persons rarely, if ever, exhibit hypersomnia—a symptom that is much more common in adolescence and young adults
Significant decrease or increase in weight or appetite	Older adults rarely gain weight or experience an increase in appetite during a depressive episode
Recurrent thoughts of death or suicidal ideation	Although thoughts of death are not uncommon in older adults, suicidal ideation among depressed elders is less frequent than among the depressed who are younger

## APPENDIX C

## PHQ-9 Severity Score and Interpretation

Personal Health Questionnaire (PHQ-9) Score Interpretation and Possible Actions Total Score	Depression Severity	Actions Needed
1-4	<b>Minimal depression</b>	<p><b>Initial Assessment</b> – This score suggests the patient, at this time, may not need depression treatment. You may consider a referral to EAP or Online Coaching and provide education about depression. Quarterly monitoring is suggested if there is a history of previous bouts of depression or strong family history.</p> <p><b>Ongoing Monitoring</b> – Reduction of score to this level implies remission of depression. Medications need to be continued for at least 6 months with no history of previous bouts of depression and for at least a year for those with previous history of treatment. Provide ongoing education about depression relapse and continuing medication.</p>
5-9	<p><b>Mild depression</b></p> <p>Few, if any, symptoms in excess of those required to make diagnosis &amp; symptoms result in only minor impairment in occupational functioning or social/relationship functioning.</p>	<p><b>Initial Assessment</b> – Use clinical judgment in deciding the appropriate treatment. Quarterly monitoring is suggested if there is no history of previous bouts of depression or strong family history. For patients with previous history of bouts of depression, treatment should be seriously considered. 1) Antidepressants if preferred by patient or if there is a history of previous medication treatment 2) Referral to EAP, Online coaching or to a behavioral health therapist 3) Provide education about depression</p> <p><b>Ongoing Monitoring</b> – A 5 point reduction in score or greater indicates a <u>solid response</u> to treatment. Continue to: 1) Provide ongoing education about depression relapse 2) Monitor with repeat PHQ-9 scoring, and 3) Provide education about the need for continuing medication.</p>
10-14	<p><b>Moderate depression</b></p> <p>Symptoms in excess of the minimal number required for the diagnosis that often keep the person from doing things they need to do.</p>	<p><b>Initial Assessment</b> – With no previous history of depression, a referral to counseling through EAP, CIGNA Behavioral Health or directly to a behavioral health therapist may be beneficial. For patients with previous history of bouts of depression, treatment should be seriously considered. 1) Antidepressants if preferred by patient or if there is a history of previous medication treatment 2) Referral to EAP, Online coaching or to a behavioral health therapist 3) Provide education about depression</p> <p><b>Ongoing Monitoring</b> – Reduction of a</p>

		score of 5 points or greater indicates a <u>solid response</u> to treatment. Reduction of a score less than 5 points within 8 weeks indicates no response. Treatment plan change may be considered at this time. Provide ongoing education about depression relapse and continuing medication.
15-19	<b>Moderately severe depression</b>	<b>Initial Assessment</b> – Treatment for depression using antidepressant, referral for psychotherapy and/or combination of treatment. Provide education about depression. <b>Ongoing Monitoring</b> – Indicates poor or no response unless score has decreased 5 or more points. Lack of response within 8 weeks may require medication change, additional medication or augmentation or referral to a psychiatrist.
20-27	<b>Severe depression</b> Nearly all symptoms of major depressive disorder, and symptoms markedly interfere with daily functioning (with or without psychotic features)	<b>Initial Assessment</b> – Warrants treatment for depression using antidepressants or a combination of antidepressants and psychotherapy. Physician may wish to contact CIGNA Behavioral Health for consultation or referral. Provide education about depression. <b>Ongoing Monitoring</b> – Indicates severe depression that would require psychiatric referral for consultation and/or management.



## APPENDIX D

Geriatric Depression Scale 15-Item Source; Baldwin, R., & Wild, R. (2004).

**The 15-item Geriatric Depression Scale, also showing questions for the 4- and 5-item scales**

*Instructions:* Choose the best answer for how you have felt over the past week.

- 1 Are you basically satisfied with your life? Yes/No (No)
- 2 Have you dropped many of your activities and interests? Yes/No (Yes)
- 3 Do you feel your life is empty? Yes/No (Yes)
- 4 Do you often get bored? Yes/No (Yes)
- 5 Are you in good spirits most of the time? Yes/No (No)
- 6 Are you afraid something bad is going to happen to you? Yes/No (Yes)
- 7 Do you feel happy most of the time? Yes/No (No)
- 8 Do you often feel helpless? Yes/No (Yes)
- 9 Do you prefer to stay at home, rather than going out and doing new things? Yes/No (Yes)
- 10 Do you feel you have more problems with your memory than most? Yes/No (Yes)
- 11 Do you think it is wonderful to be alive now? Yes/No (No)
- 12 Do you feel pretty worthless the way you are? Yes/No (Yes)
- 13 Do you feel full of energy? Yes/No (No)
- 14 Do you feel that your situation is hopeless? Yes/No (Yes)
- 15 Do you think most people are better off (in their lives) than you are? Yes/No (Yes)

*Questions 1, 2, 6 and 7 make up the 4-item version.*

*Questions 1, 4, 8, 9 and 12 make up the 5-item version.*

*The answers shown in parentheses indicate possible depression.*

*Possible cut-offs: 5 for the 15-item version; 2 for the 4-item and 5-item versions*




## APPENDIX E

Saint Louis University Mental Status Examination (SLUM). Source; Tariq et al. 2006.

## VAMC SLUMS Examination

Questions about this assessment tool? E-mail [aging@slu.edu](mailto:aging@slu.edu).

Name \_\_\_\_\_ Age \_\_\_\_\_  
Is patient alert? \_\_\_\_\_ Level of education \_\_\_\_\_

_ /1	<b>1</b> 1. What day of the week is it?
_ /1	<b>1</b> 2. What is the year?
_ /1	<b>1</b> 3. What state are we in?
	4. Please remember these five objects. I will ask you what they are later. Apple Pen Tie House Car
	5. You have \$100 and you go to the store and buy a dozen apples for \$3 and a tricycle for \$20.
_ /3	<b>1</b> How much did you spend? <b>2</b> How much do you have left?
_ /3	6. Please name as many animals as you can in one minute. <b>1</b> 0-4 animals <b>2</b> 5-9 animals <b>3</b> 10-14 animals <b>4</b> 15+ animals
_ /5	7. What were the five objects I asked you to remember? 1 point for each one correct.
	8. I am going to give you a series of numbers and I would like you to give them to me backwards. For example, if I say 42, you would say 24.
_ /2	<b>1</b> 87 <b>2</b> 649 <b>3</b> 8537
	9. This is a clock face. Please put in the hour markers and the time at ten minutes to eleven o'clock.
_ /4	<b>2</b> Hour markers okay <b>2</b> Time correct
_ /2	<b>1</b> 10. Please place an X in the triangle. 
	<b>1</b> Which of the above figures is largest?
	11. I am going to tell you a story. Please listen carefully because afterwards, I'm going to ask you some questions about it. Jill was a very successful stockbroker. She made a lot of money on the stock market. She then met Jack, a devastatingly handsome man. She married him and had three children. They lived in Chicago. She then stopped work and stayed at home to bring up her children. When they were teenagers, she went back to work. She and Jack lived happily ever after.
_ /8	<b>2</b> What was the female's name? <b>2</b> What work did she do? <b>2</b> When did she go back to work? <b>2</b> What state did she live in?

TOTAL SCORE \_\_\_\_\_



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### SCORING

HIGH SCHOOL EDUCATION		LESS THAN HIGH SCHOOL EDUCATION
27-30	Normal	25-30
21-26	MNCD*	20-24
1-20	Dementia	1-19

\* Mild Neurocognitive Disorder

SH Tariq, N Tumosa, JT Chibnall, HM Perry III, and JE Morley. The Saint Louis University Mental Status (SLUMS) Examination for Detecting Mild Cognitive Impairment and Dementia is more sensitive than the Mini-Mental Status Examination (MMSE) - A pilot study. *Am J Geriatr Psychiatry* 14:900-910, 2006.

## APPENDIX F

Stepped Approach to Depression Interventions Source; Nice Clinical Guidelines, 2009

**Step 1: All known and suspected presentations of depression**

- Assessment, support, psychoeducation, active monitoring and referral for further assessment and interventions

**Step 2: Persistent subthreshold depressive symptoms; mild to moderate depression**

- Low-intensity psychological and psychosocial interventions, medication and referral for further assessment and interventions

**Step 3: Persistent subthreshold depressive symptoms or mild to moderate depression with inadequate response to initial interventions; moderate and severe depression**

- Medication, high-intensity psychological interventions, combined treatments, collaborative care and referral for further assessment and interventions

**Step 4: severe and complex depression; risk to life; severe self-neglect**

- medication, high-intensity psychological interventions, electroconvulsive therapy, crisis service, combined treatments, multiprofessional and inpatient care

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