Screening Instruments for Use in a Complete Geriatric Assessment

KIMBERLY S. McCLANE, PhD, RN

The rapid population growth of individuals 65 years and older in the United States is predicted to continue through 2050. As people age, the complexity of their healthcare needs increase and can be attributed to the normal aging process as well as an increased frequency of chronic illness with associated morbidity. There are many geriatric assessment instruments that can be used to evaluate the complex health needs of the older adult, but there is a need for a geriatric screening assessment process that can address the domains of the aging individual in a practical, holistic, and cost-effective manner. There are multiple quality-of-life instruments that can be used for this screening of health needs in the aging population, and 3 will be discussed, the LEIPAD instrument, the Medical Short Form-36, and the WHOQOL-BREF. The rationale for introducing a screening assessment into the clinical practice of the clinical nurse specialist for positive patient outcomes will be examined.

KEY WORDS: assessment, instrument, screening, gerontology

The rapid growth of the population 65 years or older is placing increased pressure on healthcare providers to meet their increased needs. Chronic illness and the aging process can negatively impact the aging individual's ability to remain independent and functional in the community setting. In keeping with the concept of promoting healthy behaviors and disease prevention, the clinical nurse specialists (CNS) with preparation in adult or geriatric care need to be leaders in providing high-quality and cost-effective care to the older adults. One practice that can enhance the CNSs practice is the integration of a quality-of-life (QOL) assessment tool into their clinical regime.

COMMUNITY-BASED ELDER'S HEALTH NEEDS

In 2003, there were approximately 36 million individuals over the age of 65 in the United States. In 2010 the "Baby Boomers" will begin reaching 65 years, and by 2050 there is expected to be 87 million individuals over the age of 65 or 20% of the total US population. Within the over 65 age group, the largest growth will be the middle-aged seniors in the 75 to 85 years bracket.[1] The National Center for Health Statistics[2]

From the California State University, Dominguez Hills, Carson, Calif.

Corresponding author: Kimberly S. McClane, PhD, RN, California State University, Dominiguez Hills, 1000 E. Victoria, Carson, CA 90747 (e-mail: kmcclane@csudh.edu).

identified the average life expectancy in the United States to be 77.2 years; 79 years for women and 72 for males.

In 2001, 36% of Medicare recipients were hospitalized with 26% admitted to skilled nursing facilities for a variety of needs and of lengths of stay. Primary care visits were estimated to be 13,685 with an additional 2,295 home healthcare services.[1] In comparison, Chappell et al[3] found that there was a savings of up to 50% of healthcare costs if the older adult client remains at home using appropriate resources. Without including prescriptive medication costs, care for community-dwelling elders accounted for 12% to 15% of the total healthcare budget. These statistics will continue to increase as the aging population increases. The White House's budget for healthcare in 2005 was 152 million dollars and with a possible growth of 315% by 2050.[4]

Chronic illness is estimated in 1 out of 3 individuals over the age of 65 years. The most common chronic illnesses include heart disease, cancer, cardiovascular disease, cerebrovascular accident, pulmonary disease, diabetes, cognitive impairment, and depression. Campbell et al[5] surveyed a sample of 8,765 individuals over the age of 65 years concerning their chronic illnesses and age-related physiologic changes. Eighteen percent reported visual changes, 33.2% reported hearing impairments, and approximately 34% of the total subjects reporting 1 or more alterations in their health negatively influence their daily functioning and QOL. The frequency and severity of chronic illness and disability increase as one's age increases. Factor and Parker[6] related that 70% of all deaths in individuals over the age of 65 years were attributed to chronic illness.

The symptoms of chronic illness are the elderly is insidious and often ignored by the client and their family, relating the changes to the normal aging process. A study[7] of community-dwelling elders reported that up to 26% of community-dwelling elders did not report changes in their health or functional status to their primary care providers until significant changes occurred, leading to an acute episode with significant morbidity or mortality.[8] The implications for the CNS in clinical practice to utilize a QOL screening tool in the geriatric examination are monumental.

It is evident that both healthcare providers and reimbursing agencies must find cost-effective innovative methods for providing cost-effective quality healthcare to the aging population. The American Nurses Association (ANA)[9] identified that an efficacious means of controlling the escalating healthcare costs was to utilize advanced practice nurses (APNs) to provide primary and preventive care to the aging population. The ANA established that 60% to 80% of basic healthcare needs can be provided by the APN at significant savings. If the CNS is integral in the care and treatment of elders, their clinical practice must meet a basic level of care and include a screening assessment.

THE SCREENING QUALITY-OF-LIFE SCREENING ASSESSMENT

The CNS uses a combination of objective clinical data and subjective information obtained from the client or their proxy in completing a comprehensive geriatric assessment. These data can then be used in the evaluation and diagnosis of the health needs in the aging patient. The assessment can be completed in 1 or more patient visits, and is usually focused on the clinical aspects of the patients' disease, the disease process, or the functional status of the elderly client.

The most frequently used screening instruments in the care of the aging client include tools that measure cognitive function; delirium, dementia, and depression[9,10]; nutrition[11]; chronic illnesses; and hypertension, cardiac disease, and diabetes. With the understanding of the purpose and process of incorporating a QOL screening tool to all older patients over the age of 65 years, the CNS will have a more holistic view of the individual.

The utilization of a screening QOL assessment tool by the CNS provides data in both clinical and nonclinical domains that can significantly impact the aging individual's health status and QOL. The screening instrument would be implemented when the client turns 65 years, then annually for comparison to the original baseline assessment, or if there is inpatient status. The most important element of this instrument is that it goes beyond the clinical evaluation of the met and unmet needs of the patient to assess the client in a holistic manner. Before discussing the instruments and their content, the domains of the community-dwelling elder need to be identified.[12]

THE DOMAINS OF AGING AND CLINICAL HEALTH ASSESSMENT TOOLS

Identifying aging well or successful aging is a challenge for the CNS in relation to the individual elder's diverse beliefs and life experiences. Many primary care providers (PCPs) base the evaluation of the ability to perform activities of daily living (ADLs) and instrumental activities of daily living (IADLs) to evaluate the status of the individual and their ability to remain independent and safe in the community while coping with chronic illness.[13]

The physical and mental domains of aging are universal and the socialization domain is related to self, significant other or family, and activities within the community that are important to the elder. The remaining 3 domains of aging are present in each culture and include personal environment, the residence, and resources available to the aging elderly; finances or means to maintain their health, personal needs, and their residences; and spirituality, which is reflected by both personal and cultural beliefs (Table 1). These 6 domains influence the day-to-day existence of the aging individual and the determinants of the overall status of the individual.[12]

The Physical Domain

The assessment of the physical domain is correlated strongly with functionality and disease morbidity. The first functional QOL assessment, the Katz Activities of Daily Living Scale (ADLS), was developed in the 1960s to meet the needs for an instrument that related directly to function.[14] The ADLS can be replicated and used as a baseline measure of function. Repeated administration of the ADLS can monitor the progress of the client. Following the ADLS tool, Lawton and Brody[15] developed the IADLS to evaluate both the

Table 1. Domains of Aging

Domain	Criteria
Physical	Focuses on individual function and disease morbidity
Mental	Focuses on mental status, depression, and substance abuse
Social	Focuses on relationships within family, social groups, and the community
Spiritual	Focuses on individual beliefs in God, a Higher Being, and the comfort gained from these values
Financial	Focuses on the ability to provide for daily needs
Environmental	Focuses on personal safety, the maintenance of the residence, and safety of the community

function and ability of the person to provide self-care and self-maintenance in a safe manner. Other common elements of the physical domains, such as nutritional status, falls, pain, and continence, can be evaluated by specific tests and monitored.

As the lifespan lengthens and the number of individuals over 65 years increases, the complexities of the needs of the aging population should be recognized. The CNS can be instrumental in the process of maximizing the personal abilities and promoting positive health behaviors to improve or maintain individual health and independence. The integration of a QOL screening instrument provides for a holistic view of the patient that is frequently not addressed during a clinical examination. The results of the screening can direct the CNS to the actual or unmet needs of the individual and their successful aging.

The Mental Domain

The assessment of the aging individual's mental status is classified into 3 specific areas: mental status, depression, and substance abuse. The evaluation of mental status, especially relating to mental function for medical and legal reasons, is the Mini-Mental Status Examination (MMSE). Developed by Folstein et al,[16] few changes have been made to the initial tool. The MMSE is a short verbal test for cognition that can serve as a baseline or as an ongoing serial screening. The Beck Depression Inventory (BDI) was originally a 21-question assessment, but has also been revised to a 13-question format that is easily administered in the clinical setting to assess depression. It is a self-administered format, but may be difficult or inaccurate if an elder is suffering from an altered mental status.[17] The Geriatric Depression Scale (GDS) is also used as the 30-question responses are yes or no.[18] Another component to depression is poor self-esteem. Rosenberg's Self Esteem Scale (SES) is a 10-question tool that has been administered both in written or interview formats.[19] The suspicion of the practitioner or family member of substance abuse in the aging patient is initially evaluated using the 4-item CAGE tool. Affirmative responses on the CAGE generate the need for further evaluation.[20]

The Social Domain

Assessing the social domain of the older adult is often conducted during an evaluation for depression, and includes personal, family, social support, and coping.[21] One of the generic tools, the Norbeck Social Support Questionnaire (NSSQ), can be self-administered by the patient prior to their first visit to the CNS. The General Perceived Self-Efficacy Scale is a short 20-question tool that is self-administered relating to an elder's coping with life. Although more sensitive, the Elder Life Adjustment Interview Scale (ELIAS) is available, but it is a 230-question tool. The ELIAS has 14 subscales in a Likert response tool but the length can lead to inaccurate findings related to fatigue or confusion of the elderly patient.[22] Elder abuse is another area of actual or potential social issues that should not be neglected in caring for the aging population.

The Spiritual Domain

The spiritual domain may not be relevant to all elders as it is a personal choice. The assessment goes beyond the belief in the presence or absence of God or a higher being to include comfort gained through their belief. The CNS needs to confirm the spirituality of the client before assessing that component of the client's life. One tool that can lead to a more formal assessment is the HOPE Questions[23] for a spiritual assessment during the complete geriatric assessment (CGA). The 4 interview questions include sources of hope, participation in organized religion or spiritual activities, personal beliefs and practices, and the effects of his/her personal beliefs relating to medical care up to and including end-of-life care.[24] If the CNS is not comfortable discussing the client's beliefs, there are several quantitative instruments available such as the 31-question Spiritual Health Inventory (SHI).

The Financial Domain

Finances are very important to the health and QOL in the older adult in relation to providing for their daily needs, and it is often difficult to assess. Some aspects of the financial domain include the ability to provide a safe and functional residence, adequate food and medications, and personal transportation. Some indicators may be discovered during the CNSs CGA, particularly when evaluating IADLs, but often a referral for a home visit by a home health nurse or a geriatric social worker is recommended.[12]

The Environmental Domain

Issues of community and personal safety, the maintenance of personal residence, and the ability to safely provide for personal needs often lack in the overall geriatric examination. The need for an environmental assessment will be identified from the elder's responses to specific assessments in the other domains. The best assessment for this concern is for the CNS to request a home visit by either a home health nurse, a social worker, or if there is extreme

concerns by the CNS, Adult Protective Services need to be advised.[25]

QUALITY OF LIFE SCREENING INSTRUMENTS

The concept of QOL in the aging individual has been defined in a variety of ways, including satisfaction with life, personal environment, and the achievement of personal goals and standards. McClane[12] identified the 6 domains of aging as measurement objectives for QOL.

Utilizing a screening QOL assessment can provide the CNS with information on the elder's QOL beyond the clinical scope and can identify met and unmet needs that should be addressed. Three QOL assessment tools will be discussed here (Table 2).

The LEIPAD

The LEIPAD [LEIden (Netherlands), PADua (Italy), and Helsinki (Finland)] QOL assessment was developed by De Leo et al,[26] in conjunction with the World Health Organization (WHO) European office, specifically to incorporate the current world environment and the biopsychosocial changes associated with the aging process. Included in the tool are the domains of physical, social, and cognitive function; finances, spirituality, environmental domains, and sexuality. During the development and testing of the instrument, De Leo et al established reliability and validity of the tool in several languages, including English, and evaluated it for cultural competency. It is a 49-question format that can be completed in 15 to 20 minutes with questions that are relevant in the lives of the aging individual. LEIPAD is an age-specific tool that can be used as a screening assessment or in a specific population of aging clients with diagnosis of cancer, hepatic disease, and substance abuse and is being used in the US, Italy, Finland, the UK, and Australia.[12]

The Medical Outcome Study—Short-Form 36

The Medical Outcomes Study 36-Item Short-Form Survey (SF-36) was developed by Stewart and Ware[27] to incorporate into one assessment tool the content of the more common tools used in evaluating function and QOL. The content of the tool focuses on 3 of the elders' domains: the physical and mental health domains, and the social domains. The 36 responses to the questions can be computer or hand scored, and have been translated or tested in 45 countries. In 1996, a revision of the SF-36 was completed to improve the format of the instrument and the accuracy of responses in the translation into other languages.[27] The SF-36 is the assessment tool used in the HEDIS Medicare Health Outcomes Survey[28] to evaluate managed care organizations.[29] Although generic, the 36-item tool has established validity, reliability, and cultural competencies in individuals over the age of 14 years in over 45 languages. Since the early 1990s, there have been some issues raised regarding the appropriateness of using the SF-36 in older adults. The issues include the potential for the older client to incorrectly mark or skip answers, the relevance of the topics of the questions to an aging individual, and the location of administration can interfere with accurate data collection.[30] The time span is specific to experiences in the last 6 months and the expectations of QOL for the future 6 months. The SF-36 is a generic QOL instrument that is not specifically designed for the elderly. It remains the "gold standard" of QOL instruments related to the applicability to a variety of populations, the track record of the tool, and the ease of administration and scoring of the responses at a reasonable cost.

Table 2. Comparison of Assessment Tools Using Domains of Aging

Domain of Aging	LEIPAD	SF-36	WHOQOL-BREF
Physical	X	X	X
Mental	X	X	X
Social	X	X	X
Spiritual	X		
Financial	X		
Environmental	X		X

The World Health Organization Quality of Life

The World Health Organization Quality of Life (WHOQOL) is a 100-item assessment tool developed in 29 research sites throughout the world. Several subsets of tools have been identified within the WHOQOL, including the WHOQOL-BREF, a 26-item version for assessing the elders. The domains evaluated in this tool include the physical and mental health domains, social domain, and the environmental domain. Saxena and O'Connell[31] commented that the cross-cultural competency of this instrument is a major feature and supports the premise that this instrument can be used as a screening tool. The WHOQOL-BREF is a generic tool that can be used in either the aging population or in a population of a specific disease. It is being used throughout the United States and in other industrial nations in populations of chronic liver and pulmonary disease to collect data on health and QOL, and as a QOL screening assessment.

In 1998, the World Health Organization supported the development of 2 QOL assessment tools, the WHOQOL-BREF and the LEIPAD. Both have been developed to holistically evaluate the aging individual in the 21st century. The SF-36 is older but it is established as an assessment in generic populations. Each evolution of QOL assessments incorporates more sensitive and applicable data to realistically evaluate an elder's QOL.

IMPLEMENTATION OF THE SCREENING PROTOCOL

The CNS is educationally prepared to implement the screening assessment process which can be divided into 3 phases. Initial preparation will be a review of evidence-based practices and patient outcomes that are significant to that particular practice. Then a screening QOL instrument can be chosen, and the protocol developed.

Developing the Screening Protocol

Once the screening tool is selected, the CNS must identify the method of administering and scoring the assessment tool in a manner that provides the PCPs accurate and timely results. The 2 alternatives are a written survey format or a computerized one. Both should be a font of 14 or larger and must be easily readable in clearly identifiable selections. More elders are using computers, and with easy access and simple instructions, might do best with the electronic version.

Staff Development

The CNS will be responsible for educating the staff to the new process of assessment. The training will not be limited to PCPs, but to a variety of levels in relation to the employees interaction with elders. This will provide the patient with several resources if there are questions or issues while participating in the screening assessment.

Administration of the Assessment Tool

There are several factors regarding the administration of the tool that the CNS needs to focus on for the assessment screening to be successful. Each of the 3 instruments, the LEIPAD, the SF-36, and the WHOQOL-BREF, are designed to be self-administered by the individual and should be completed in 20 to 40 minutes. With the potential change of abilities with chronically ill elders, the designation of a proxy may be necessary. Dewey and Parker[32] compared the reliability of direct client response to those of a proxy. In a sample of 12,500 subjects over the age of 65 years comparing self-rated assessment and proxy information, information regarding past or current health status was similar. The closer the relationship between the individual and their proxy, the more accurate the information.

The CNS must also identify the most reliable means of collecting completed assessments from the aging client. Smeeth et al[33] administered a screening assessment for individuals over the age of 65 years by mailing the forms to the client's residence to be returned before or at the time of the scheduled appointment. The findings indicated that there was a decreased level of self-reported morbidity, higher proportions of inaccurate or missing information, with an 83.5% response rate. If the surveys were mailed and returned before the appointment, the results of the screening assessment could be easily entered into the client's medical record. Wasson et al[34] explored a fourth option. It was to provide the assessment tool to the patient after their clinical examination. This can provide a level of increased accuracy of self-assessment data, but requires that the CNS, or other trained medical personnel, review and contact the clients regarding the results and client needs that are identified from the assessment. The trial on this was limited, and the authors identified that this methodology did increase the cost of the client's care.

A preferred method of administration is to utilize an electronic format prior to their appointment with the CNS. In the clinical setting, it would allow for moderate waiting times and aid the patient in remembering issues they want to address with the CNS. The electronic format would also provide the medical staff with rapid and accurate results of the instrument. An alternative to a computer-generated tool is for the CNS to provide the link to the clinic and have the assessment completed and returned before the appointment.

The last requirement in completing the set-up for the QOL screening assessment is the designation of a testing area for the clients that is quiet, well-lit, and comfortable to allow the client to have an environment that is conducive to completing the tool. This designated area is necessary for either a written or computerized format. Small grouped areas are preferred to long and cluttered spacing.[12]

THE RISKS AND BENEFITS OF A SCREENING ASSESSMENT

There are minimal risks to individuals over the age of 65 years to participate and complete the screening assessment tool in an accurate and truthful manner. There may be personal distress if the client is unable to complete the tool themselves, are unable to read or comprehend the questions, or perceive the assessment as an intrusion or threat to themselves or their independence.[12]

Unmet Needs of the Elders

Often the unmet needs of the elderly are masked by clinical symptoms or functional decline. In utilizing the screening assessment to diagnose hidden or unmet needs, it is necessary for the client to participate in the data collection to their maximum abilities, followed by a collateral source or proxy to assist. Stuck et al[35] identified the lack of self-reported unmet health needs and adopted a screening health assessment to be utilized with their aging clients so that actual changes in the health or function can be identified and treated to reduce the morbidity associated with aging and the chronic disease processes. The major unmet needs should be included in a screening assessment tool that is based on the 6 domains of aging.

The Economics of Caring for the Elderly

Seshamani and Gray[36] identified that the collection of comprehensive and relevant data on the patient, their function, and their needs leads to a decrease in the cost of healthcare for the aging. In addition, Berkman et al[37] also confirmed that a screening assessment that evaluates the domains of the aging in elder community residents can indicate the need for a referral to a geriatric social worker or other disciplines that can intervene and facilitate the unmet needs of the individual, their lifestyle, function, and independence. The annual administration of the QOL instrument will provide the CNS with a view of the patient at the current time and a comparison to previous assessments. These data can provide the CNS with data relating to a reduction of outdated, unnecessary, or duplicate services often overlooked during a clinical examination. The assessment also provides the clinician valuable data to provide patient-centered care rather than the "one size fits all" practice to identify cost-effective patient outcomes in managed care environments.

Patient Education

The CNS is in a position not only to assess the aging patient for health and functional met and unmet needs but also to educate the client to report health issues in a timely manner. Many individuals over the age of 65 years expect changes in function as normal in the aging process and need to educated about what is and what is not normal, especially related to chronic illness, depression, and the 6 domains of aging. The results of the QOL screening instrument will guide the CNS to other educational opportunities with the aging client, including physical, emotional, or personal needs.[12]

RECOMMENDATIONS

Incorporating a QOL assessment into the healthcare of community elders can have significant positive impacts on quality and cost-effective care provided by the CNSs. No matter how accurate the clinician is, the usual 15-minute clinical visit does not provide enough data relating to the actual and unmet needs of community-dwelling elders. By having geriatric-specific data that can provide clinical evidence-based practice, the CNS can provide cost-effective and appropriate care to the aging client.

The QOL screening assessment can also be administered on an as-needed basis if there are suspected changes in health or function that are so insidious or subtle that they may not be identified during the clinical examination. The incorporation of a screening tool can also serve as a means to clearer communication and understanding of aging individuals.

The SF-36 has been shown to be both practical and efficient in evaluating the QOL in the aging community member as well as in providing accurate information for HEDIS. Although the WHOQOL-BREF and LEIPAD provide more information on more domains than the SF-36, the actual utilization of any of the QOL tools will serve as a very important and necessary positive change of the CNS's practice. The implementation of the screening assessment tool is no longer the issue; rather it's a choice of which one.

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