Using Evidence to Promote the Distinct Value of Occupational Therapy

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Providing best practice has always been at the forefront of occupational therapy. With the advent of health care reform in public and private sectors, the passage of the Patient Protection and Affordable Care Act (ACA; Pub. L. 111–148), and ongoing Medicare reforms, payers and health care systems are requiring more and more evidence-based practice (EBP), resulting in definable outcomes that will affect payment.

Since 1998, the American Occupational Therapy Association (AOTA) Evidence-Based Practice project has promoted best practice by developing and providing resources that enable occupational therapy practitioners to access and use research evidence that supports their practice. AOTA’s (2007) Centennial Vision includes and has strengthened the goal of using evidence and provides a clear path for occupational therapy practitioners working with all persons, groups, and populations by stressing excellence in service that is informed by evidence.

One of the primary purposes of EBP is the use of evidence to inform and guide clinical decision making. This framework follows the evidence-based philosophy of Sackett, Rosenberg, Gray, Haynes, and Richardson (1996) and requires the integration of information from three sources: (1) clinical experience and reasoning, (2) preferences of clients and their families, and (3) findings from the best available research. In a recent article, Lamb and Metzler (2014) stretched the boundaries of this framework to include policy implications and discussed the importance of linking the value of occupational therapy to the priorities of the health care system, one of which is managing chronic conditions.

According to Berwick, Nolan, and Whittington (2008), value can be determined through the model of the triple aim, a concept developed to frame better ways to provide health care while reducing costs (Beasley, 2009). Berwick and colleagues identified the goals of triple aim as “(1) improving the individual experience of care, (2) improving the health of populations, and (3) reducing the per capita costs of care for populations” (p. 760). The triple aim provides the mechanism to link existing evidence to occupational therapy’s role in improving quality of care, increasing the efficiency of the system, and reducing health care costs (Lamb & Metzler, 2014).

The AOTA Practice Guidelines series provides a major evidence resource for occupational therapy practitioners. Practice guidelines provide clinicians and educators with a concise summary of the existing evidence on a given topic and use clinical examples that demonstrate how to integrate the research findings into practice. Current evidence for AOTA’s practice guidelines is based on findings from systematic reviews that cover key concepts of interventions within the scope of occupational therapy practice. Content experts with experience in critically appraising, synthesizing, and summarizing the research literature.

MeSH TERMS
- chronic disease
- evidence-based practice
- health services for the aged
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- patient care management
- practice guideline

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conduct the systematic reviews. In addition to the practice guidelines, summaries of evidence can be found in Critically Appraised Topics (CATs), located in the Evidence and Research section of the AOTA website (http://www.aota.org/en/Practice/Researchers.aspx) and in the American Journal of Occupational Therapy.

In all practice guidelines, recommendation tables summarize the results of the systematic reviews and provide information on the strength of the evidence for specific occupational therapy interventions. The strength of the evidence is based on the criteria of the U.S. Preventive Services Task Force (2012). The designation of strong evidence includes consistent results from well-conducted studies, usually at least two randomized controlled studies (RCTs). A designation of moderate evidence may be made on the basis of one RCT or two or more studies with lower levels of evidence. In addition, some inconsistency of findings across individual studies might preclude a classification of strong evidence. The designation of limited evidence may be based on few studies, flaws in the available studies, and some inconsistency in the findings across individual studies. A designation of mixed evidence may indicate that the findings were inconsistent across studies in a given category. A designation of insufficient evidence may indicate that the number and quality of studies is too limited to make any clear classification. The recommendations that follow were developed from the AOTA Practice Guidelines series tables and include those designated as strong or moderate evidence.

If occupational therapy is to advance in conjunction with the health care system to achieve the triple aim, evidence must be used to pave the way to new roles and areas of practice. The changes proposed by the ACA, such as moving Medicare toward a more controlled payment system through entities such as accountable care organizations, mean that the parameters of occupational therapy can be flexed to help the system achieve its goal of attaining patient well-being and health in a cost-effective way. An emphasis on a new and expanded form of primary care (Metzler, Hartmann, & Lowenthal, 2012) will also expand opportunities for occupational therapy. As Bodenheimer and Smith (2013) noted, practitioners such as occupational therapists are “highly skilled professionals [who] are seriously underused in their capacity to fill roles generally performed” by physicians or physician extenders (p. 1882). But to fill these roles and take advantage of expansions in scope of practice and recognition, occupational therapy practitioners must be mindful of existing evidence as the foundation of what practitioners can do and how they can contribute to the interprofessional team and health care system.

Health Through Living Independently

For older adults and people with disabilities, health can be enhanced and promoted through support for independent living. Occupational therapy practitioners have a major role in enabling independent living and continued activity in older adults as a means to better health and reduced costs (Clark et al., 1997; Hay et al., 2002; Knapp, Iemmi, & Romeo, 2013). Occupational therapy practitioners understand how acute and chronic medical conditions affect the ability to live in the community. Integrating occupational therapy into systems attempting to achieve the triple aim can focus on issues such as aging in place and home-based primary care. These new objectives for occupational therapy can be advocated with a full body of supporting evidence.

As new approaches are developed in Medicare and in private insurance, occupational therapy’s role may move from being considered a rehabilitation service to being an essential component of any well-designed, effective, and efficient health care system. Areas in which occupational therapy practitioners may be involved with healthy as well as frail community-dwelling older adults include several fully supported by the evidence.

Interventions to Reduce Falls

In the area of fall prevention and home modification, moderate to strong evidence supports occupational therapy’s role through the use of interventions (Leland, Elliott, & Johnson, 2012; Siebert, Smallfield, & Stark, 2014) including

- Multicomponent or multifactorial interventions that address multiple risk factors to reduce falls,
- Occupational therapy assessment of the client and home followed by home modifications to reduce falls for clients with a history of falls,
- Home modification and adaptive equipment provided by occupational therapy practitioners to reduce functional decline and improve safety,
- Physical activity (regardless of type) to decrease fall risk and prevent falls, and
- Home modification for older adults aging with a disability to reduce perceived difficulty with activities of daily living (ADLs) and instrumental activities of daily living (IADLs).

Programs addressing falls and involving occupational therapy can be promoted as part of overall prevention and wellness efforts and can be melded into home health, skilled nursing care, and virtually all facility discharge planning. The evidence supports promotion of programs that reduce the costly incidence of falls by integration of targeted occupational therapy programs.

Interventions for Instrumental Activities of Daily Living

Aging in place, reducing rehospitalization, and promoting independence are all critical areas that occupational therapy can address. Research findings of moderate to strong levels of evidence support a variety of approaches to effectively address IADLs essential to healthy independent living and can affect long-term health and health care costs. Evidence supports the ability of occupational therapy to address executive function, quality of life, and general health outcomes (Leland et al., 2012) through interventions including

- Client-centered occupational therapy promoting improved activity levels, such as the Lifestyle Redesign® program;
- Exercise programs involving functional activities for older adults to improve IADL performance; and
• Progressive resistance strength training to improve community mobility and meal preparation.

This evidence can be marshalled to promote and enhance occupational therapy’s role through health care systems and in nonhealth settings such as community centers or assisted living facilities. Health care in the future will not be limited to the provision of strictly defined health care services but will be expected to address the comprehensive and continuing needs of patients to achieve real health goals and savings. Occupational therapy practitioners use their skills in therapeutic use of self, clinical reasoning, and activity analysis to accomplish these objectives.

**Interventions for Health Management**

Management of chronic conditions is key to achieving the triple aim. Strong to moderate evidence supports the following health management interventions provided by occupational therapy practitioners (Leland et al., 2012):

- Client-centered occupational therapy targeting health management in frail older adults and older adults with osteoarthritis or macular degeneration to improve physical functioning and occupational performance
- Individually tailored self-management health programs coordinated by health professionals
- Group health education programs led by educators and other health professionals
- Peer-led self-management programs that include diagnosis-specific information, medication management, and problem-solving skills.

**Interventions for Older Adult Driving**

Moderate to strong evidence suggests that the following interventions provided by occupational therapy practitioners improve driving performance and community mobility for older adults, enabling them to remain living in the community (Stav, in press):

- Combining in-class sessions with individual on-road training improves driving knowledge and on-road driving performance.
- Physical retraining improves skills of older drivers.
- Cognitive–perceptual training reduces at-fault crashes, delays driving cessation, and improves driving performance in clients with stroke and right hemisphere lesions.
- Standardized driver simulation training improves on-road driving performance after a stroke.
- Driving cessation support groups for clients with dementia and their caregivers reduce depression and improve acceptance of circumstances and preparedness for transition from driving.

**Chronic Care Management**

Because of the increasing incidence and cost of chronic conditions, using the evidence to support the role of occupational therapy practitioners as leaders of care management makes perfect sense. It is estimated that 48% of Medicare beneficiaries have at least three medical conditions and that 21% have five or more conditions (Partnership for Solutions, 2004). In a review of the consequences of comorbidity, Gijsen et al. (2001) indicated that multiple chronic conditions may result in increased mortality and complications of treatment as well as decreased functional status and quality of life. According to Backman and Hentinen (1999), performance of self-care is not just a rational way to maintain health but also indicative of a person’s attitude toward health care, illness, and the way in which he or she lives.

Occupational therapy practitioners have the education and knowledge to provide occupational therapy interventions to many older adults with various diagnoses and chronic clinical conditions. These interventions enable clients to restore and maintain participation in a variety of occupations and can be incorporated into comprehensive care systems. Integrating evidence into the process of service delivery will help move occupational therapy into the forefront of primary care and care management and positively influence the system of care.

**Interventions for Alzheimer’s Disease and Related Disorders**

An area of particular need is for special services for clients with Alzheimer’s disease and related dementias, which affect 5 million adults age 65 and older (Alzheimer’s Association, 2013). These conditions cost $9.1 billion in 2012 (Alzheimer’s Association, 2013) and affect the health system’s ability to achieve good health not only for the clients but also for their caregivers.

Moderate to strong evidence supports the following occupational therapy interventions for clients with dementia and their caregivers (Schaber, 2010):

- Client-centered occupational therapy can identify occupational performance issues and help clients implement compensatory and environmental strategies.
- Client-centered activities (e.g., leisure) tailored to people with dementia improve participation in and satisfaction with activities.
- Compensatory and environmental strategies that include cueing and step-by-step instructions improve participation in activities and reduce caregiver burden.
- Caregiver education, including problem-solving strategies and technical skills (e.g., task simplification, communication), simple home modifications, and stress management, reduces caregiver burden and increases caregiver self-efficacy.
- Strategies to manage the physical environment (e.g., multifaceted interventions including removal of physical restraints, fall alarms, exercise) promote participation in daily activities.
- Sleep routines and sleep hygiene strategies to manage daytime activities and nighttime sleeping, including voiding strategies for toileting, help prevent sleep disturbances.

**Interventions for Parkinson’s Disease**

Parkinson’s disease is yet another significant chronic condition for which proper management can improve quality of life, health and function, and long-term costs and consequences. Moderate to strong evidence supports the following occupational therapy interventions for people with Parkinson’s disease (Preissner, 2014):

- Caregiver education, including problem-solving strategies and technical skills (e.g., task simplification, communication), simple home modifications, and stress management, reduces caregiver burden and increases caregiver self-efficacy.
- Strategies to manage the physical environment (e.g., multifaceted interventions including removal of physical restraints, fall alarms, exercise) promote participation in daily activities.
- Sleep routines and sleep hygiene strategies to manage daytime activities and nighttime sleeping, including voiding strategies for toileting, help prevent sleep disturbances.
• Individualized interventions focusing on participant wellness, lifestyle modification, and personal control improve quality of life.
• Client-preferred external cues during ADLs improve motor control.
• Complex and multimodal activity (e.g., tango dancing) improves functional movement on a short-term basis.
• Multisession, repetitive physical exercise tasks improve diaphragmatic motor and sensory–perceptual performance skills.
• Environmental cues, stimuli, and objects improve task and occupational performance.
• Auditory rhythmic external cues are more effective than visual, tactile, or other forms of cues to help regulate walking in clients with Parkinson’s disease.

**Interventions for Stroke**

Provision of services for clients with stroke has been a longstanding area of occupational therapy practice. Evidence suggests perhaps a broader and continuing role for occupational therapy to achieve the triple aim for these clients. Occupational therapy can be important and effective at all stages of recovery to achieve optimal function in home, community, work, education, and other life activity sectors. Strong to moderate evidence indicates that the following occupational therapy interventions are effective for adults with stroke (Stroke Critically Appraised Topics, http://www.aota.org/Practice/Rehabilitation-Disability/Evidence-based.aspx):

- ADL-specific home-based interventions improve ADL performance.
- Repetitive task practice improves occupational performance.
- Constraint-induced movement therapy improves upper-extremity function and occupational performance.
- Cognitive rehabilitation improves global cognitive function and improves ADLs for clients with apraxia.
- Strengthening and exercise improve upper-extremity function, balance, mobility, and occupational performance.
- Problem-solving techniques and motivational interviewing reduce depression following stroke.

- Home-based leisure programs improve participation in and satisfaction with leisure pursuits.

**Interventions for Older Adults With Low Vision**

Low vision results in barriers to a person’s ability to carry out routine ADLs independently and safely, increasing health care costs and negatively affecting health outcomes. These limitations to performance occur in the home and across the continuum of health care settings. Occupational therapy’s focus on engagement in valued occupations and roles promotes participation through adaptation and compensatory strategies and can be argued to affect falls, independence, rehospitalization, and general well-being.

The following interventions have moderate to strong evidence to support their use with older adults with low vision (Kaldenberg & Smallfield, 2013):

- Problem-solving strategies increase participation in ADL and IADL tasks.
- Problem-solving strategies increase leisure and social participation.
- Multicomponent patient education and training improve occupational performance.
- Patient education programs improve self-regulation in driving and community mobility.
- Increased illumination improves social participation.

**Conclusion**

As can be seen by the evidence discussed in this column, occupational therapy practitioners provide evidence-based interventions to older adults to address a wide range of challenges in many settings. It is the responsibility of occupational therapy practitioners to be effective players on their interprofessional team of colleagues and be mindful of the need to provide quality care to older adults and others with acute and chronic health care needs. By incorporating interventions that have strong and moderate evidence such as those listed in this article, occupational therapy practitioners fulfill the goals of the triple aim, providing effective and cost-effective services. ▲

**References**


