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## OCCUPATIONAL THERAPY RESEARCH AGENDA

The Occupational Therapy (OT) Research Agenda identifies the major research goals and priorities for occupational therapy research. The goals and priorities span 5 categories: Assessment/measurement, **Intervention**, Basic Research, **Translational Research**, and **Health Services Research**. A 6th related category, Research Training, addresses capacity building to accomplish the research goals and priorities.

Three of the 5 research categories -- **Intervention, Translational Research, and Health Services Research** -- are recognized as being of paramount importance for the next decade because it is imperative that the efficacy and effectiveness of occupational therapy interventions be ascertained; that the optimal dose, frequency, duration, and location of occupational therapy interventions be determined; and that the salient elements (or active ingredients) of occupational therapy interventions be identified. The study of occupational engagement and participation, problems in engagement and participation, and interventions to restore, prevent or compensate for problems in engagement and participation is complex and requires the collaboration of scholars from various disciplines, thus placing occupational therapy research in an interdisciplinary context.

This emphasis on **intervention/prevention, translational, and health services** research is consistent with the American Occupational Therapy Association's Centennial Vision of occupational therapy as "a powerful, widely recognized, science-driven, and evidence-based profession." It is also consistent with the NIH Roadmap, the Initial National Priorities for Comparative Effectiveness Research put forth by the Institute of Medicine of the National Academies (June, 2009), the Testimony of the Disability and Rehabilitation Coalition before the Interagency Committee on Disability Research (August 13, 2008), the Effective Health Care Program of the Agency for Healthcare Research and Quality (AHRQ) (2008), and the comments by Senator Baucus (D-Mont) on Introduction of The Comparative Effectiveness Research Act of 2008 (August 1, 2008). Simply stated, our clients (patients) want the most effective interventions for their performance problems and occupational therapy practitioners want to provide them with these interventions. However, for practitioners to provide the most effective interventions, occupational therapy interventions must be defined, described, and tested, so that practitioners know what is effective for which clients. **Treatment effectiveness** takes into account considerations such as: what mixture (e.g., interesting task + progressive grading of cognitive components of task + modeling) of occupational

therapy is needed to promote positive change (can be delivered in a reproducible manner -- is manualized); how strong must the intervention be to promote positive change (dose), how often must clients (patients) participate in the intervention to promote positive change (frequency); how long must the intervention be delivered to promote change (duration), and where (location) is the best place (hospital, school, home, workplace, community) for the intervention to occur. Likewise, **prevention** activities extend the role and function of occupational therapy into community activities aimed to promote occupational engagement and participation of the total population and to prevent secondary conditions among those already living with disabling conditions. Prevention research generally addresses a particularly vulnerable, but as yet unaffected, segment of the population with an emphasis on promoting occupation and preventing secondary conditions. This area, also, is in its infancy in occupational therapy and requires efficacy and effectiveness studies, but may require a more population-based approach to methodology.

The intent of placing a priority on **intervention**, **translational**, and **health services** research is to stimulate research on occupational therapy interventions. In examining occupational therapy interventions priority is given to interventions that are client-centered, occupation-based, theory-driven, and manualized. Recognizing that the science of occupational therapy practice is in its infancy, the priority is broadly defined to include preliminary work leading to efficacy (research under tightly controlled conditions) or effectiveness (research under real-world conditions) trials, that is, it includes “proof of concept” studies of interventions (including quantitative, qualitative, and mixed methodologies); pilot, feasibility studies of interventions; and, single-subject intervention studies.

Research Categories	Major Research Goals	Research Priorities
Assessment/ Measurement.	<ul style="list-style-type: none"> <li>*Develop screening instruments to determine functional ability across the lifespan, with acceptable sensitivity and specificity.</li> <li>*Develop outcome instruments sufficiently responsive to measuring change in daily life activities, including activity and participation.</li> <li>*Develop and evaluate strategies for identifying and/or measuring the health impact of environments on activity engagement and participation in daily life.</li> <li>*Develop and evaluate strategies for identifying and/or measuring the influence of activity engagement in daily life on health.</li> </ul>	<ul style="list-style-type: none"> <li>*Screening instruments to identify performance deficits in persons of all ages with chronic disorders and disability.</li> <li>*Instruments for simultaneously evaluating person-occupation-environment (context).</li> </ul>

Research Categories	Major Research Goals	Research Priorities
<p><b>Intervention - Preventive, Restorative, Compensatory:</b> to promote function/wellness in people of all ages -- those without disabilities, those with (or at-risk for) disabilities, and/or chronic health problems.</p>	<p>*Devise a taxonomy of occupational therapy/ rehabilitative interventions (so that the content of occupational therapy can be uniformly described).</p> <p>*Evaluate the <i>efficacy</i> of occupational therapy interventions (in controlled conditions).</p> <p>*Create novel, theory based interventions for promoting activity/participation/occupation and improving quality of life.</p> <p>*Determine a means of evaluating the outcomes of occupational therapy interventions and prevention strategies in an interdisciplinary and translational context.</p>	<p>*Application of interventions that:</p> <p>(1) Are client-centered (i.e., Personalized).</p> <p>(2) Manipulate an occupational therapy modality/method (i.e., use as the method of change):</p> <ul style="list-style-type: none"> <li>(a) Occupation (i.e., activity/participation based)</li> <li>(b) Cognitive, sensory, motor, and/or affective functions (i.e., impairment-oriented)</li> <li>(c) The environment (i.e., lived-in, virtual; technology, including splints).</li> </ul> <p>(3) Are theory driven (e.g. motor learning theory, self-efficacy theory).</p> <p>(4) Are manualized (i.e., structured, and hence replicable).</p> <p>(5) Involve a priority population: defined as a subpopulation of concern both to society and to the field of occupational therapy and its interventions (see Addendum)</p>

Research Categories	Major Research Goals	Research Priorities
<b>Translational Research</b>	<ul style="list-style-type: none"> <li>*Evaluate the <i>effectiveness</i> of occupational therapy interventions (under conditions of usual care).</li> <li>*Examine the implications of novel developments in sciences related to occupational therapy (e.g., medical/biopsychosocial/occupational/environmental) for the science and practice of occupational therapy.</li> <li>*Examine change processes, whereby new ideas are diffused and adopted in theory and practices.</li> </ul>	<ul style="list-style-type: none"> <li>*Examine the effects of stem cell transplantation, neural implants and other novel and developing medical therapies on functional recovery (e.g., when is the best time to intervene to promote recovery of body structures/functions, activity, or participation).</li> <li>*Apply the methods of computational modeling to predict functional recovery (e.g., mathematical modeling of how hand function will improve following hand surgery and rehabilitation services).</li> </ul>
<p>Basic Research:  (1) The experience of disability and/or chronic health problems for individuals and their families across the life span.  (2) Examination of body structures and functions supporting performance in daily life.</p>	<ul style="list-style-type: none"> <li>*Examine relationships among impairment (body-structures and functions), activity (activity limitations), and participation (participation restrictions).</li> <li>*Delineate how productive occupation promotes lifelong health and reduces the risk of chronic disease and disability and maintain quality of life in people of all ages.</li> <li>*Identify determinants of healthy lifestyles.</li> <li>*Examine the response of individuals and their families to changes in functional independence.</li> <li>*Examine intrinsic mechanisms [e.g., genetic, physiological, psychological (sensory-perceptual-motor, cognitive)] and how they support performance in daily life</li> </ul>	<ul style="list-style-type: none"> <li>*Examine brain-behavior relationships in daily life activities.</li> </ul>

Research Categories	Major Research Goals	Research Priorities
	<p>*Examine extrinsic mechanisms (e.g., technology, social support, culture, social policies) and how they support performance in daily life</p>	
<p><b>Health Services Research</b></p>	<p>*Evaluate performance outcomes for diagnostic groups based on type of occupational therapy intervention, site of service delivery, professional training, and/or team composition.</p> <p>*Evaluate performance outcomes for racial/ethnic groups based on type of occupational therapy intervention, site of service delivery, professional training, and/or team composition.</p> <p>*Design and implement community-based participatory research to “increase the relevance, acceptability, and usefulness of evidence-based scientific findings in improving” occupational therapy (rehabilitation)</p>	<p>* Develop and implement a database for use in outcomes research and quality improvement studies.</p> <p>*Identify quality indicators for evaluating occupational therapy services and outcomes.</p> <p>*Design and implement studies comparing the effectiveness of different treatment options, including different occupational therapy approaches and different rehabilitation approaches.</p> <p>*Examine the effects of evidence-based evaluation and intervention guidelines on occupational therapy practice.</p> <p>*Identify where practice lags behind practice guidelines to provide evidence of need for quality indicators.</p> <p>*Identify, develop, and evaluate occupational therapy’s role in community preparedness.</p>

Research Categories	Major Research Goals	Research Priorities
Research Training	*Increase occupational therapy’s research capacity  *Socialize occupational therapy educators to preparing occupational therapy scientists.  *Expand occupational therapy’s knowledge and skills in using population-based research for the purpose of prevention and promotion of occupation.	*Prepare Program Directors in research universities to support early career (< 5 years post doctoral degree) occupational therapist scientists *Prepare doctoral students to conduct intervention research. *Financially support intervention research of early career (< 5 years post doctoral degree) occupational therapist scientists and doctoral students

Addendum: Priority Populations; including individuals desiring to enhance their occupational function and health, and those who live with:

1. Developmental disorders – e.g., autism spectrum disorders, cerebral palsy, intellectual disabilities
2. Physical impairments – e.g., stroke, obesity, cancer, spinal cord injuries, hand injuries, work injuries
3. Cognitive impairments – e.g., dementia, traumatic brain injury, stroke
4. Mental disorders - e.g., depression, posttraumatic stress disorder, persistent mental illness
5. Chronic health conditions – e.g., arthritis, diabetes
6. People with preventable secondary conditions – e.g., diabetic neuropathy, decubitus ulcers, social isolation, sedentary lifestyle