Models for Building the Research Capacity Pipeline

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Presentation Objectives

- Examine context and scope of research capacity building activities relevant to HCBS topics
- Describe NIDILRR’s unique niche in research capacity building
- Discuss principles on which to focus discussion of research capacity building for HCBS
National Research Service Act Fellowships and Training Grants for Individuals Earning a Research Doctorate

National Research Service Act Fellowships and Training Grants for Individuals Earning a Health-Professional Doctorate

Career Development Funding Available to Junior Faculty

<table>
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<tr>
<th>Mechanism</th>
<th>Key Points</th>
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<tr>
<td>NIH K awards</td>
<td>Provide outstanding salary support ($75,000) for junior faculty and required mentorship for periods from 3 to 5 yrs</td>
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<tr>
<td>NIG T32 and NIDRR advanced rehabilitation research training grants</td>
<td>Provide salary support as a postdoctoral fellow (approximately equal to PGY% salary). These are awarded to institutions who offer them to fellows at the institution</td>
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<td>Local institution funds for start up faculty</td>
<td>May be politicized, generally limited funds</td>
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<tr>
<td>Individual postdoctoral fellowships</td>
<td>Available form agencies such as NIH, NIDRR, and NSF and from private foundations including the Paralyzed Veterans of America</td>
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Suggested Components of an HCBS Research Training Program

- Core didactic curriculum
- Seminars and small groups
- A practicum including protocol writing and actual research
- Individual mentorship
- Supplementary workshops on research tools (e.g., EndNote, PubMed)
- Certificate or degree

Recommendations for Promoting HCBS-Relevant Research Careers

1. Allow grant budgets to include salary support and provide “protected time” for research and mentorship.

2. Offer training opportunities at several stages of a potential researchers career with a special emphasis on early career.

3. Offer clinical research training opportunities of several different levels of depth.

4. Encourage involvement of people of different academic backgrounds.

5. Expose students to the concept and examples of clinical research as part of their educational curriculum.

6. Provide financial and institutional support for well-matched faculty mentorship of potential clinical researchers.

7. Furnish rewards/awards for accomplishments of both research trainee and mentor.

8. Accentuate to policy makers the link between better clinical research training and better health for the population.

A Taxonomy of Research Capacity as a Guide for Knowing What to Measure

Frontera W; Fuhrer M; Jette A; Chan L; Cooper R; Duncan P; Kemp J; Ottenbacher K; Peckham P; Roth E; Tate D. Rehabilitation Medicine Summit: Building Research Capacity. American Journal of Physical Medicine & Rehabilitation. 84(12):913-917, December 2005.
Problem Identification

- Researchers
- Research environment, infrastructure, culture
- Funding
- Partnerships
- Metrics

## Elements, Components, and Potential Metrics of Research Capacity

<table>
<thead>
<tr>
<th>Elements</th>
<th>Components</th>
<th>Potential Metrics</th>
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<tbody>
<tr>
<td>Research mentors</td>
<td>Training</td>
<td>Level, duration</td>
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<tr>
<td></td>
<td>Mentoring</td>
<td>Level, number, placements of trainees</td>
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<td></td>
<td>Recruitment</td>
<td>Number, selectiveness, role(s)</td>
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<td></td>
<td>Retention</td>
<td>Persistence</td>
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<td></td>
<td>Value of research center</td>
<td>Career Satisfaction</td>
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<td></td>
<td>Incentives</td>
<td>Promotion, recognition, awards</td>
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<tr>
<td>Research culture</td>
<td>Environment</td>
<td>Number, type, variety of laboratories</td>
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<tr>
<td></td>
<td>Infrastructure</td>
<td>Equipment, administrative support</td>
</tr>
<tr>
<td>Funding</td>
<td>Source</td>
<td>Federal, foundation industry</td>
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<tr>
<td></td>
<td>Mechanism</td>
<td>Career development level, eligibility</td>
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<tr>
<td></td>
<td>Application opportunities</td>
<td>Frequency, time commitment, duration</td>
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<tr>
<td>Partnerships</td>
<td>Disciplines</td>
<td>Number and type of consumer groups</td>
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<tr>
<td></td>
<td>Consumer groups</td>
<td>Tyle and nature of influence provided</td>
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<tr>
<td></td>
<td>Industry</td>
<td>Goals of partners</td>
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<td></td>
<td>Purpose of partnership</td>
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Solutions and Recommendations

- Coalition building
- Training
- Career paths
- Partnerships to conduct research
- Infrastructure
- Message to funding agencies

Research Capacity Metrics Considerations

- Trainees (how many, qualifications)
- Size of the needed HCBS research cadre
- Productivity
- Federal agency expenditures

Frontera W; Fuhrer M; Jette A; Chan L; Cooper R; Duncan P; Kemp J; Ottenbacher K; Peckham P; Roth E; Tate D. Rehabilitation Medicine Summit: Building Research Capacity. American Journal of Physical Medicine & Rehabilitation. 84(12):913-917, December 2005.
Stakeholders in Human Functioning and Disability Research

Stucki Reinhardt Grimby Melvin. Developing “human functioning and rehabilitation research” from the comprehensive perspective. JRM 2007;39;665-671
# Selected Scientific Disciplines Related to Human Functioning and Disability Research

Stucki Reinhardt Grimby Melvin. Developing “human functioning and rehabilitation research” from the comprehensive perspective. JRM 2007;39;665-671

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<tr>
<th><strong>Health condition</strong></th>
<th>Biology</th>
<th>Molecular Medicine</th>
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<tr>
<td><strong>Body functions and structures</strong></td>
<td>Anatomy and Physiology</td>
<td>Exercise, Applied and Transitional Physiology</td>
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<td>Movement and Sports Science</td>
<td>Neurobiology</td>
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<td>Molecular and Genetic Biology</td>
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<td><strong>Activities</strong></td>
<td>Biomedical Rehabilitation Sciences</td>
<td>Integrative Rehabilitation Sciences</td>
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<td>Ergonomics</td>
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<td><strong>Overarching perspective</strong></td>
<td>Epidemiology</td>
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<td>Health Sciences</td>
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<td>Human Development</td>
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<td>Human Functioning Science</td>
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<td>Philosophy, History and Ethics</td>
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<td>Public Health</td>
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Status of HCBS Research Capacity

- Journals
- Impact factor
- Growth of research
- Varying foci of research
Changing Context of Disability and HCBS Research

- Demand-side issues
  - Aging population
  - Growing SSI and SSDI populations
  - Public emphasis on economic self-sufficiency

- Supply-side issues
  - Diminished public enthusiasm for federal investment in research and training
  - Privatization of public-funded social, employment and health services
NIDILRR’s Mission and Purpose

- Mission
  - “Generate new knowledge and promote its effective use to improve the abilities of people with disabilities to perform activities of their choice in the community, and also to expand society’s capacity to provide full opportunities and accommodations for its citizens with disabilities.”

- Unique Role
  - “NIDILRR plays a unique role in that its target population includes all disability types and all age groups. While other federal research entities fund prevention, cure, and acute rehabilitation research, NIDILRR also invests in rehabilitation research that is tied more closely to longer-term outcomes, such as independence, community participation, and employment.”

Portfolio Balance Considerations for Capacity Building

- NIDILRR’s major life domains
  - Health and function
  - Employment
  - Participation, community living
- Demographics
- Technology
NIDILRR Logic Model: Targeted Outcome Arenas


Contextual Factors: Variable funding; scientific and technological advancements; societal attitudes; economic conditions; changing public policies; coordination and cooperation with other government entities.
Long Range Plan: Capacity Building

- NIDILRR seeks to ensure that the field of disability, independent living, and rehabilitation research has well-trained research personnel as well as tools and methods to support high-quality research activities that result in new knowledge and products.

- Title II of the Rehabilitation Act, as amended, authorizes NIDILRR to build capacity for conducting high-quality disability, independent living, and rehabilitation research by providing for advanced training in disability and rehabilitation research, including people with disabilities and underserved populations.
NIDILRR Capacity Building Funding Mechanisms

- Switzer Fellowship Programs
- Advanced Rehabilitation Research Training
- Rehabilitation Research and Training Centers
- Rehabilitation Engineering Research Centers
- Section 21 funding for minority-serving institutions
NIDILRR’s Challenge in Research Capacity Building

- Disability and rehabilitation spans a wide range of fields, disciplines and settings
- NIDILRR’s mission encompasses varied disability groups and needs
- Where to invest limited resources?
  - Breadth vs. depth
  - How to build a coherent and integrated program of research capacity building
Principles on which to Focus Discussion of Research Capacity Building for HCBS

- Develop partnerships with relevant stakeholders
- Identify key research themes and topics relevant to HCBS
- Identify relevant disciplines
- Define need for HCBS research capacity
- Define core competencies of trainees
Summary

- NIDILRR’s budget is severely limited
- Capacity building is one of several priorities
- Encouraging future scientists to consider issues of disability and HCBS through a continuum of research funding opportunities helps engage a cadre of investigators and scientific leaders and assures capacity to maintain and enhance excellence in HCBS investigation and delivery.
Discussion