Models for Building the Research Capacity Pipeline

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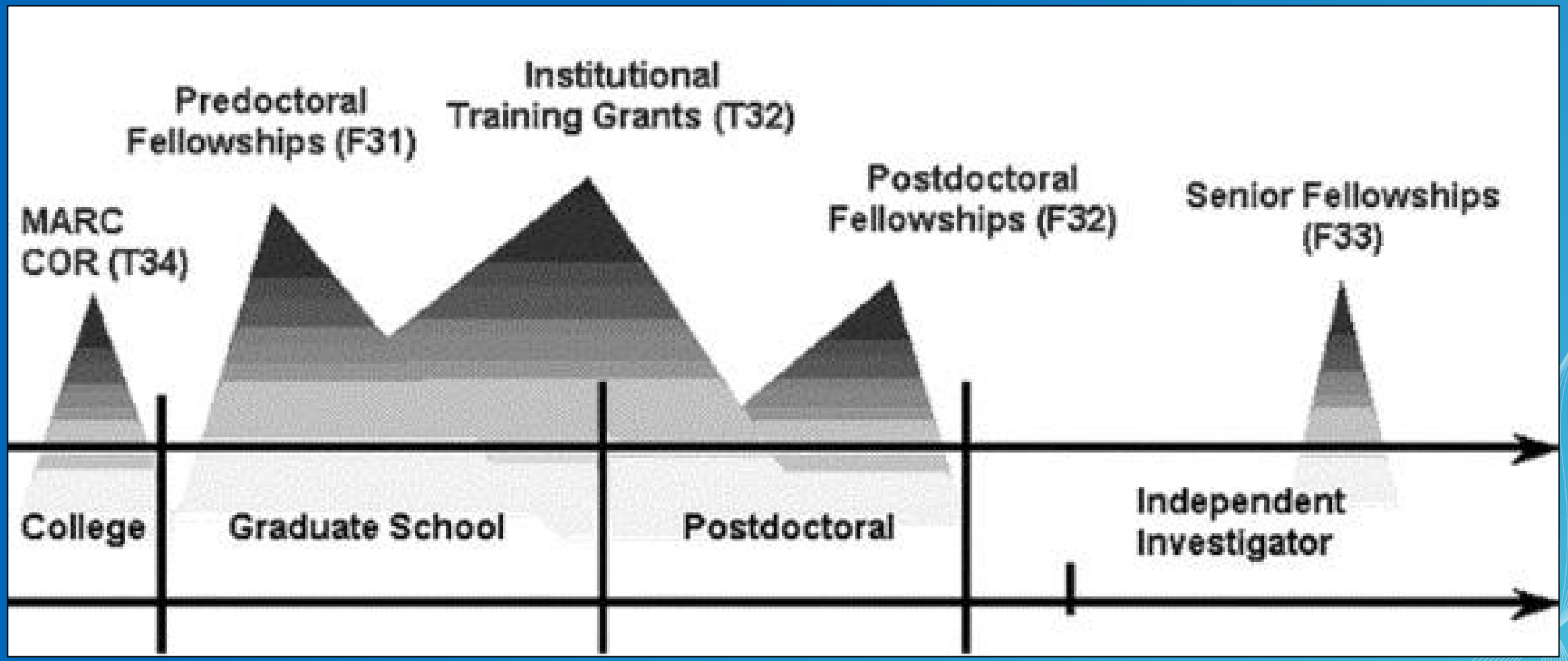
Presentation Objectives

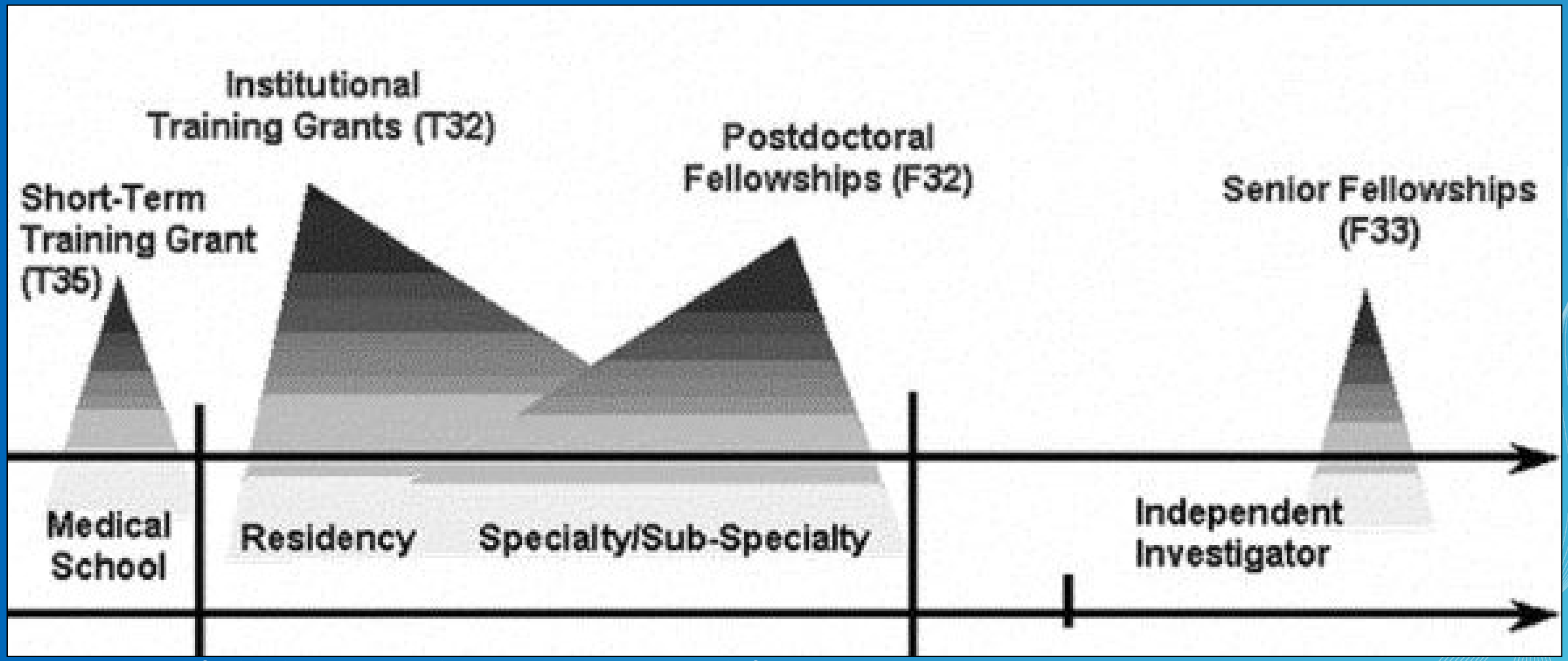
- Examine context and scope of research capacity building activities relevant to HCBS topics
- Describe NIDILRR's unique niche in research capacity building
- Discuss principles on which to focus discussion of research capacity building for HCBS

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



Heinemann A. Metrics of Rehabilitation Research Capacity. American Journal of Physical Medicine & Rehabilitation. 84(12):1009-1019, December 2005.

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



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Career Development Funding Available to Junior Faculty

Mechanism	Key Points
NIH K awards	Provide outstanding salary support ($75,000) for junior faculty and required mentorship for periods from 3 to 5 yrs
NIG T32 and NIDRR advanced rehabilitation research training grants	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
Local institution funds for start up faculty	May be politicized, generally limited funds
Individual postdoctoral fellowships	Available form agencies such as NIH, NIDRR, and NSF and from private foundations including the Paralyzed Veterans of America

Boninger M, Whyte J, DeLisa J, Zafonte R, Chan L. Building a Research Program in Physical Medicine and Rehabilitation. American Journal of PM&R. 88(8):659-666, 2009.

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

Teo A. The Development of Clinical Research Training: Past History and Current Trends in the United States. Academic Medicine. 84(4):433-438, April 2009.

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.

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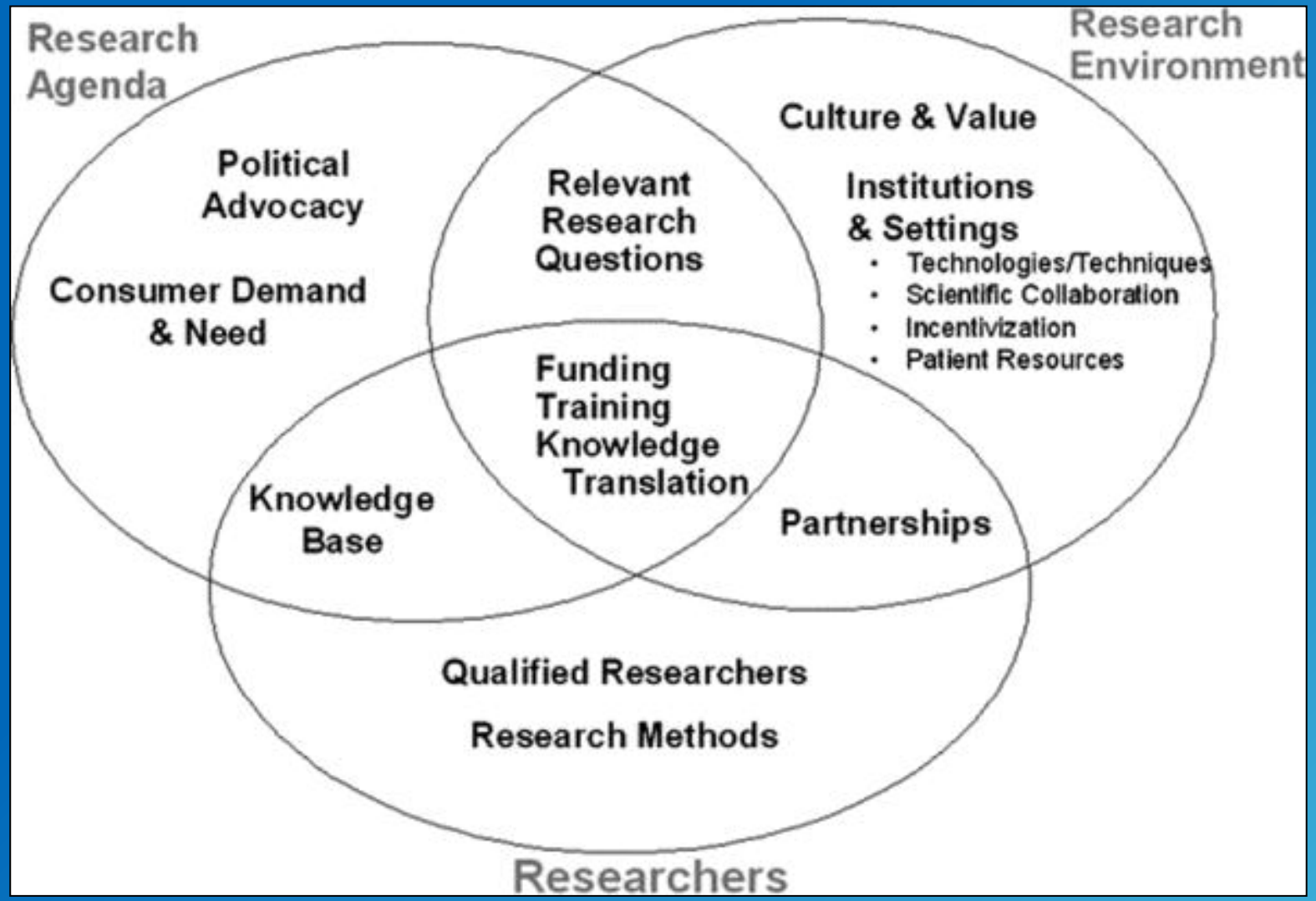
A Taxonomy of Research Capacity as a Guide for Knowing What to Measure



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

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Elements, Components, and Potential Metrics of Research Capacity

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

Heinemann A. Metrics of Rehabilitation Research Capacity. American Journal of Physical Medicine & Rehabilitation. 84(12):1009-1019, December 2005.

Solutions and Recommendations

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

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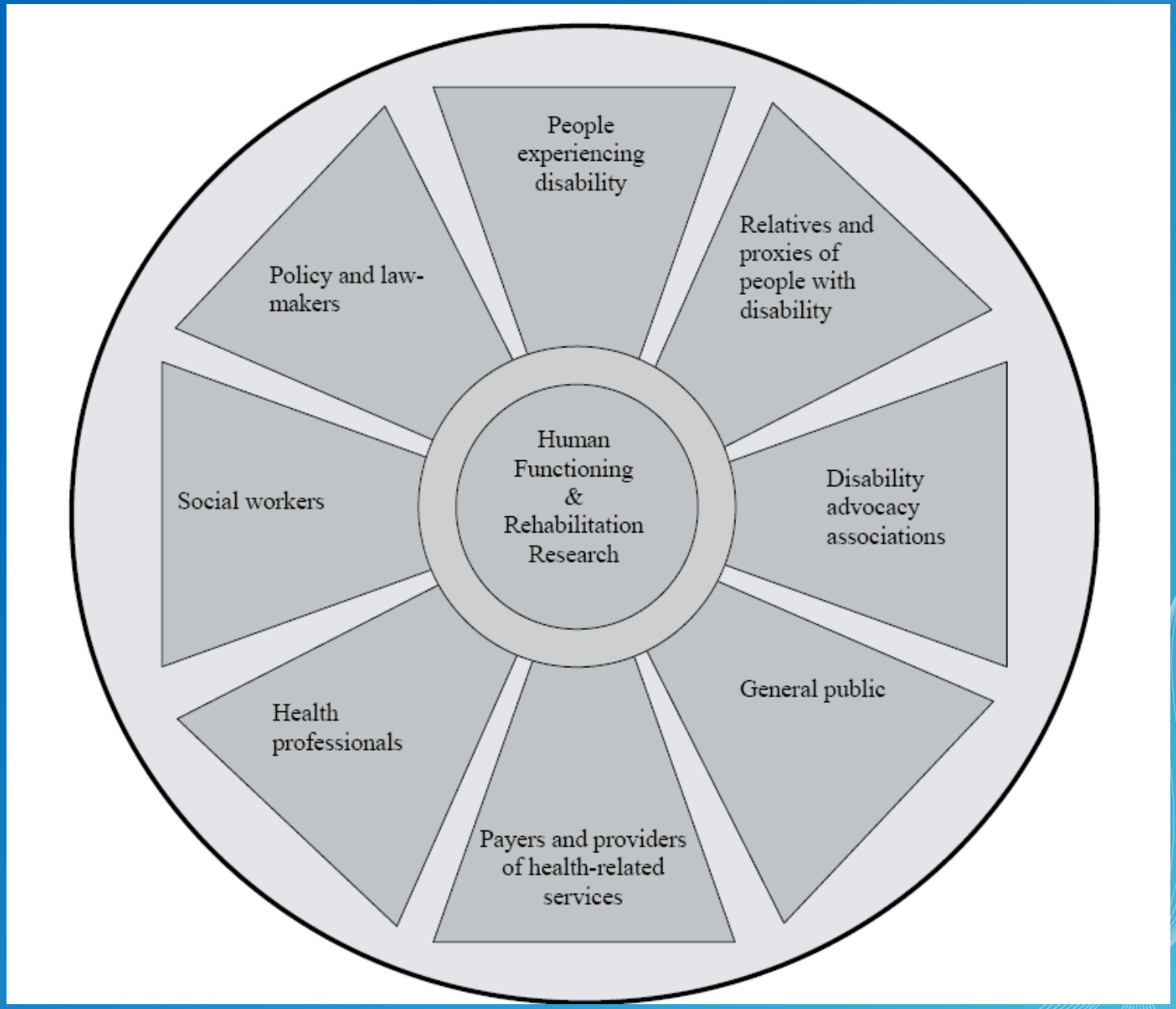
Research Capacity Metrics Considerations

- 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

	Health condition Biology Molecular Medicine	
Body functions and structures Anatomy and Physiology Exercise, Applied and Transitional Physiology Movement and Sports Science Neurobiology Molecular and Genetic Biology	**Activities** Biomedical Rehabilitation Sciences and Engineering Integrative Rehabilitation Sciences	**Participation** Integrative Rehabilitation Sciences
Personal factors Anthropology Behavioural Science Neurobiology Psychology	**Overarching perspective** Epidemiology Health Sciences Human Development Human Functioning Science Philosophy, History and Ethics Public Health	**Environmental factors** Economics Sociology Cultural and social Anthropology Political Science Health and Social Law Environmental Rehabilitation Engineering Ergonomics

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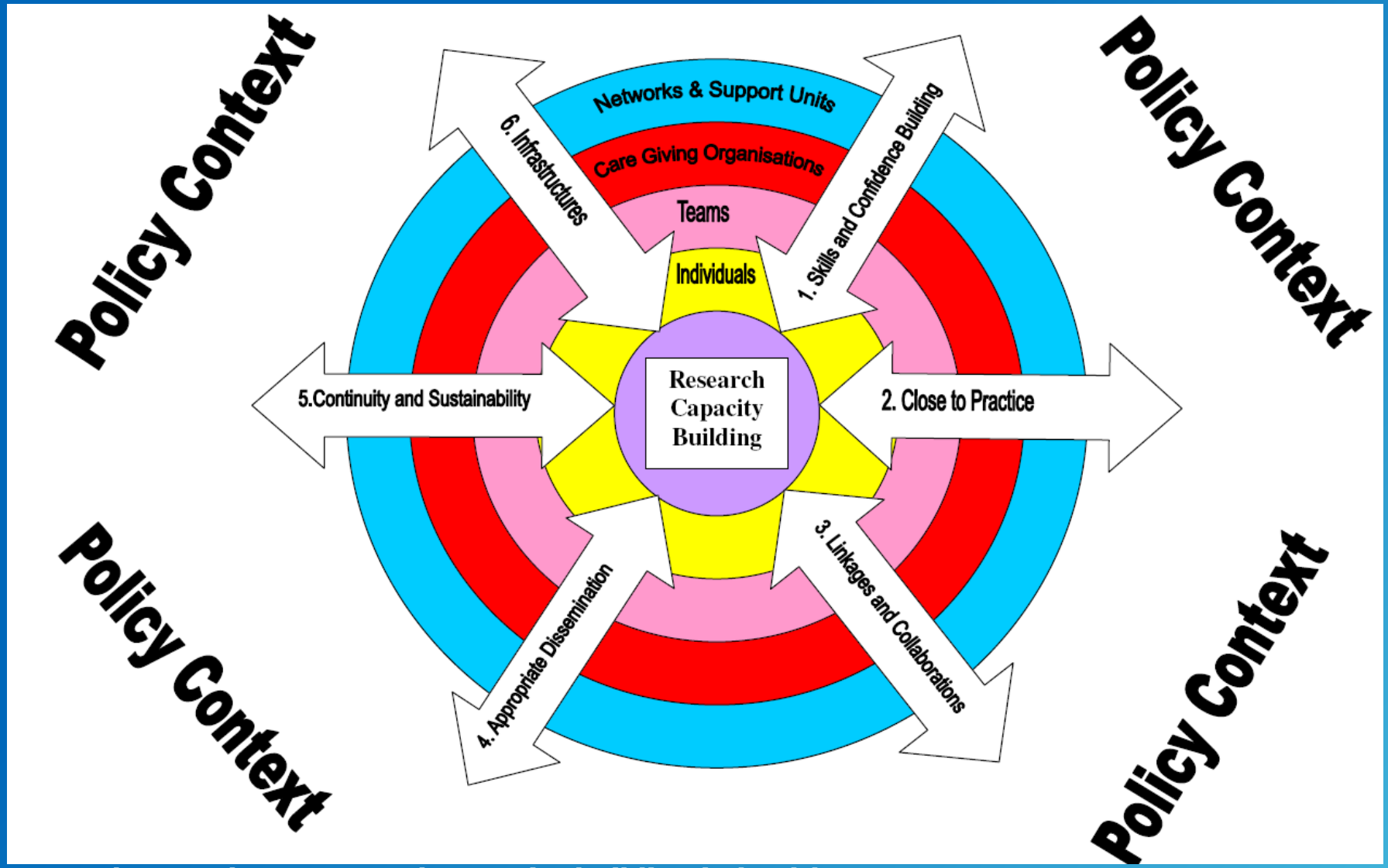
Research Capacity Building: Cooke's Evaluation Framework



Cooke, J. (2005). A framework to evaluate research capacity building in health care. *BMC Fam Pract, 6*, 44.

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

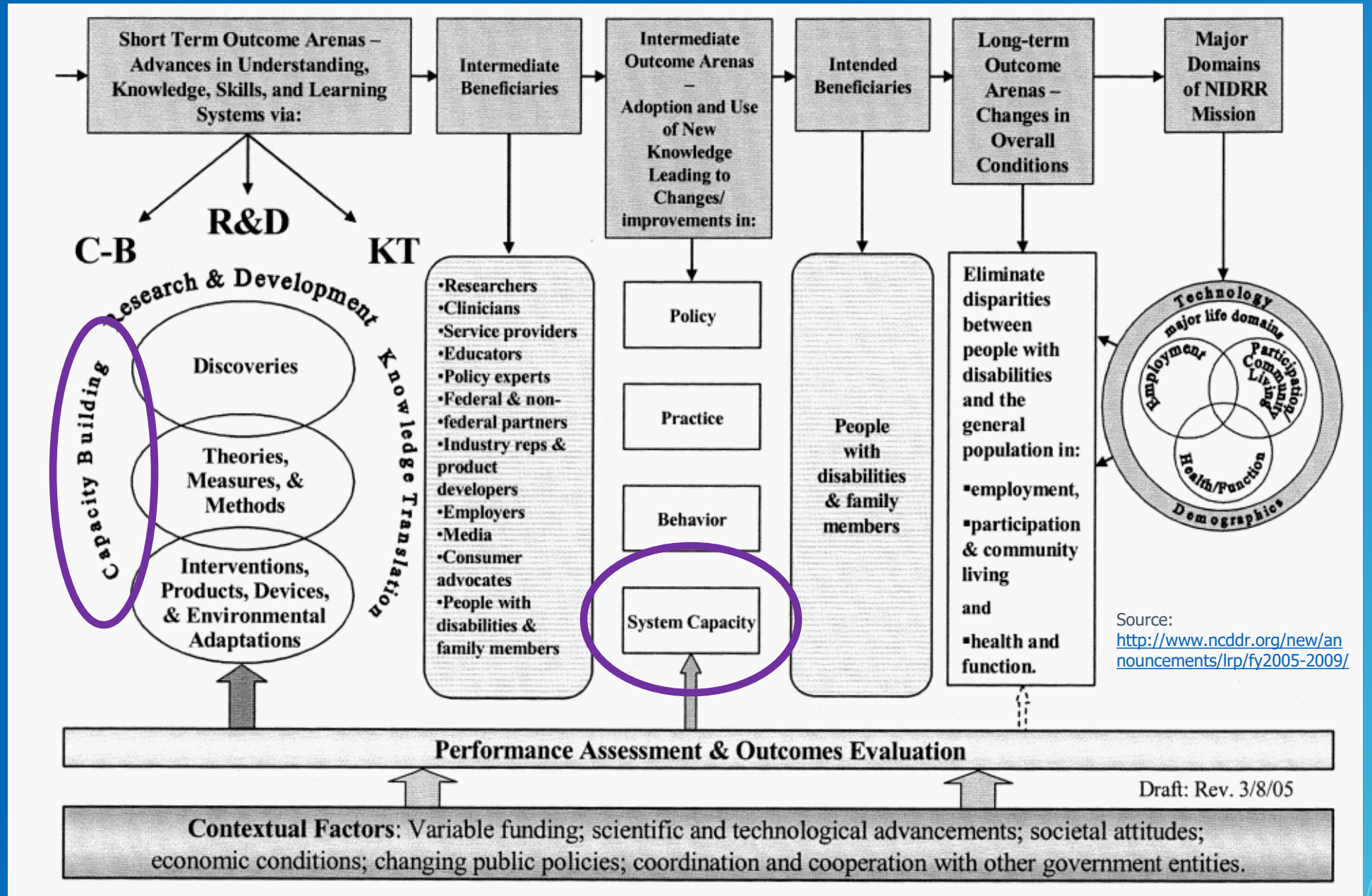
- Mission
  - "Generate new knowledge and promote its effective use to improve the abilities of people with disabilities to perform activities of their choice in the community, and also to expand society's capacity to provide full opportunities and accommodations for its citizens with disabilities."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

Source: National Research Council. Review of Disability and Rehabilitation Research: NIDILRR Grantmaking Processes and Products. Washington, DC: The National Academies Press, 2012.

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



Source: http://www.ncddr.org/new/announcements/lrp/fy2005-2009/

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

Shirley Ryan Abilitylab