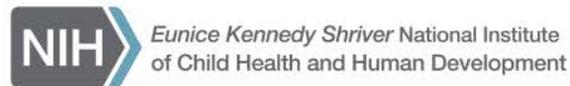


# Rehabilitation Research at NIH: Trends and Future Directions

January 18, 2018

Alison N. Cernich, Ph.D., ABPP-Cn

Director, National Center for Medical Rehabilitation Research





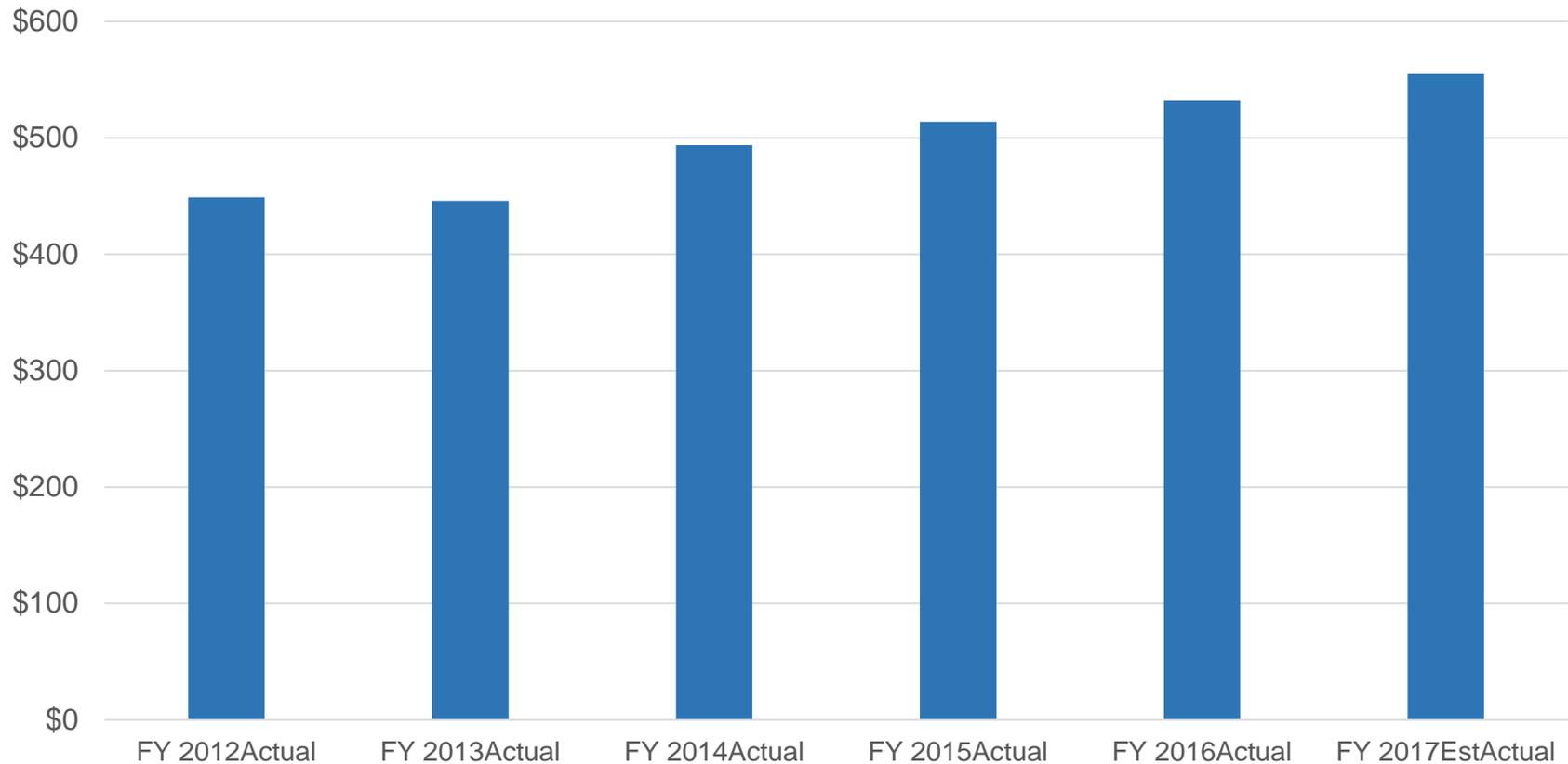
# Maintaining Momentum



- Continued collaboration with Trans NIH committee
- Cures Act
- Leadership and Participation in Trans NIH Initiatives
- Workshops (Primary and Co-sponsored)
- Interagency Collaboration
- International Efforts
- New Funding Opportunities



# Rehabilitation Funding at NIH



Funding data from [https://report.nih.gov/categorical\\_spending.aspx](https://report.nih.gov/categorical_spending.aspx); estimates are based on RCDC actual data, dollars reported are in millions and rounded.



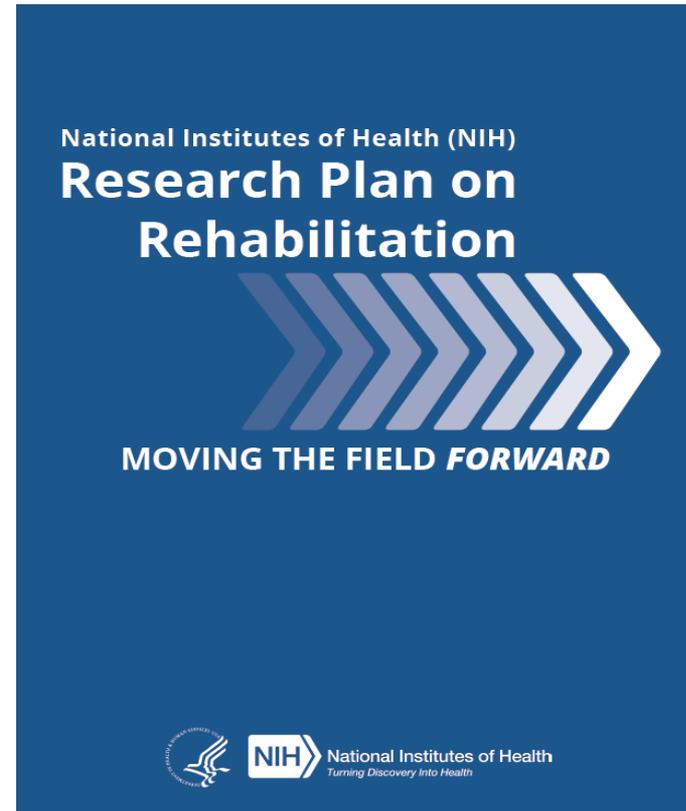
# Implications of the 21<sup>st</sup> Century Cures Act (P.L. 114-255): Improving Medical Rehabilitation Research at the NIH

1990 Law	2016 Law	Progress
Research plan required within 18 months, with updates as appropriate	Revised research plan not less than every five years; NCMRR Director annually reports to Coordinating Committee and Advisory Board, identifying resources for research	✓
Coordinating Committee makes recommendations for research priorities	Coordinating Committee makes recommendations for research priorities; Committee periodically hosts scientific workshop	✓
Establishes Advisory Board with specified membership	Reauthorizes Advisory Board with updated, specified membership; Adds DPCPSI Director	✓
	Review and coordination/prevent duplication	✓
	Secretary may enter into Interagency Agreements	✓
	New definition of medical rehabilitation research	



# NIH Research Plan on Rehabilitation

- 1) Rehabilitation Across the Lifespan
- 2) Community and Family
- 3) Technology Use and Development
- 4) Research Design and Methodology
- 5) Translational Science
- 6) Building Research Capacity and Infrastructure



[https://www.nichd.nih.gov/publications/pubs/Documents/NIH\\_ResearchPlan\\_Rehabilitation.pdf](https://www.nichd.nih.gov/publications/pubs/Documents/NIH_ResearchPlan_Rehabilitation.pdf)

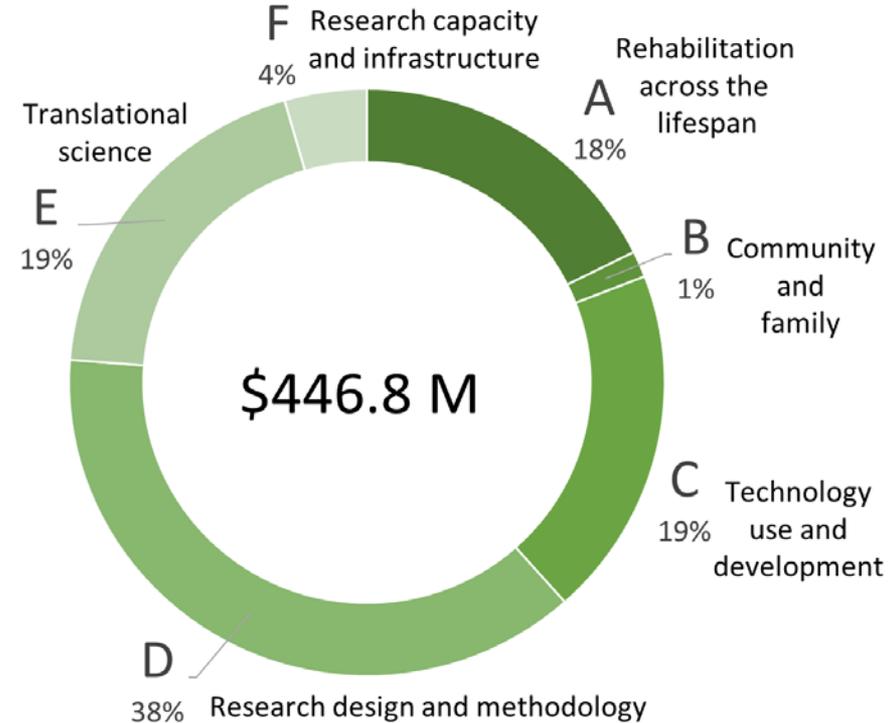
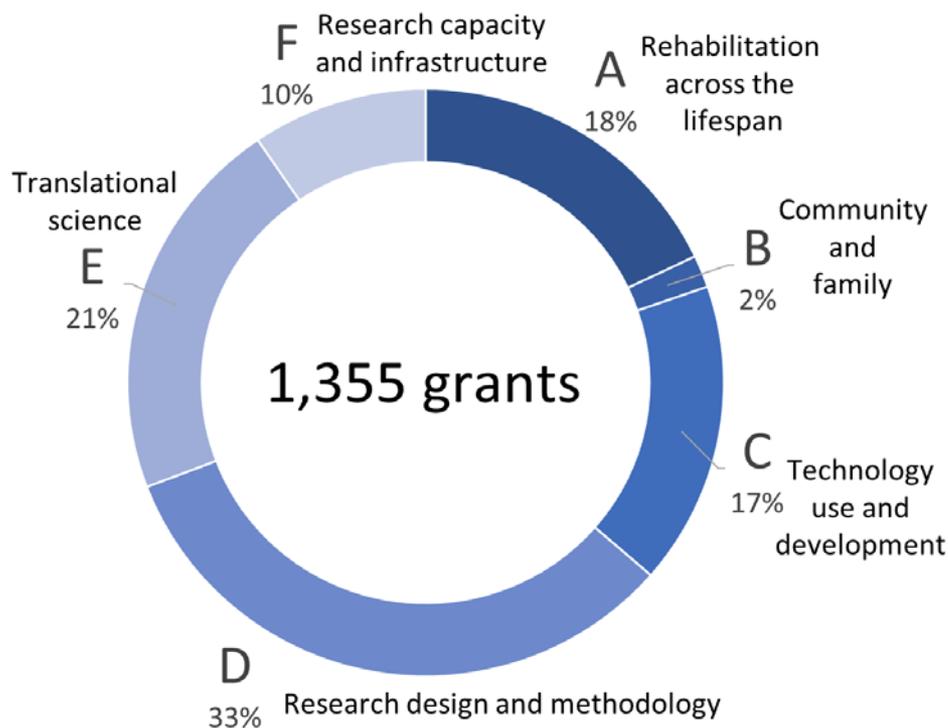


# Overarching Strategy: Analysis

- Baseline data taken from 2015 portfolio
  - Prior to plan publication
  - Allows for the year prior to serve as an “as is” for the rehabilitation portfolio
- Using only the Rehabilitation Research, Condition and Disease Category (RCDC)
  - Official categories that are verified by the Institutes and Centers
  - Lists of projects available to the public
  - Official dollars verified by Financial Management at NIH
  - Contains the Physical Rehabilitation Category
- Removed Intramural projects
- Each project categorized in two “Tiers”
  - Tier 1 – Based on a keyword approach for the 6 categories within the Rehabilitation Research Plan; primary and secondary codes are based on the primary and additional aims of each project
    - Rehabilitation Across the Lifespan (A)
    - Community and Family (B)
    - Technology Use and Development (C)
    - Research Design and Methodology (D)
    - Translational Science (E)
    - Research Capacity and Infrastructure (F)
  - Tier 2 – This is the phase of research for each project: basic, disease-related basic, or applied (translational or clinical)

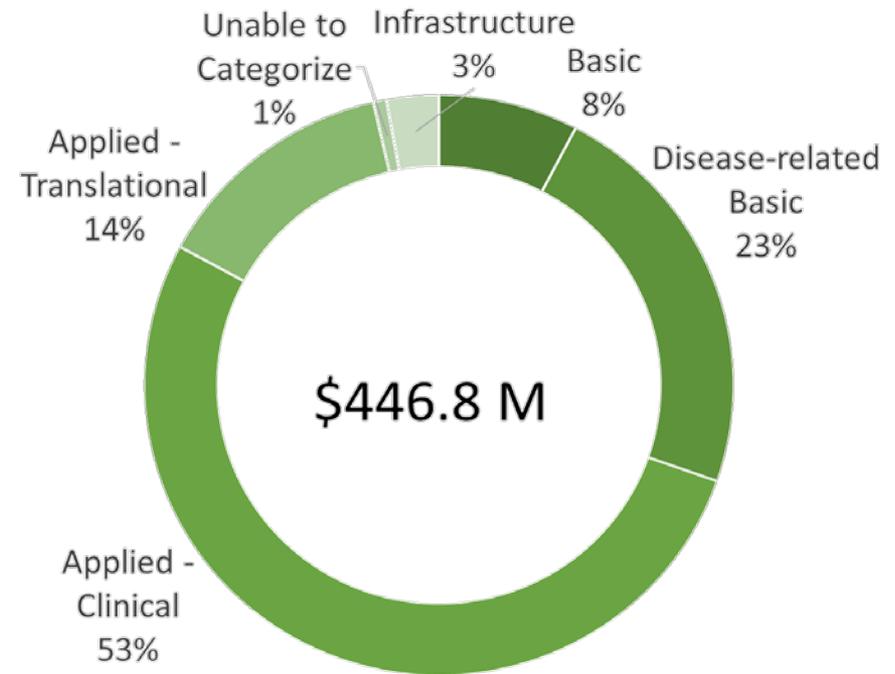
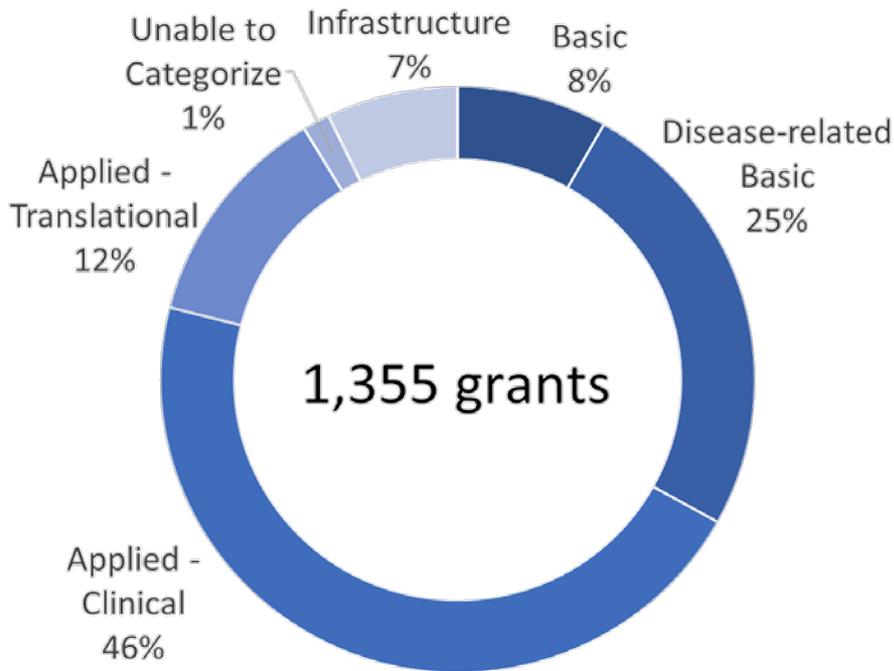


# Research Category Analysis (Primary Categories)





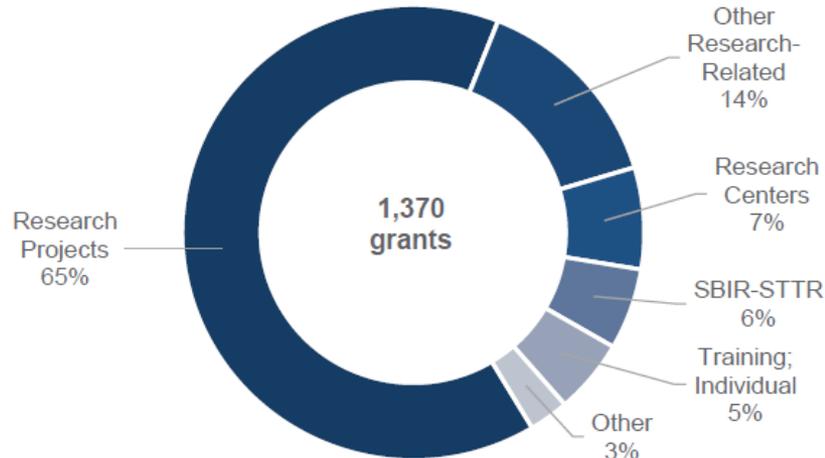
# Research Type Analysis (Tier II Categories)



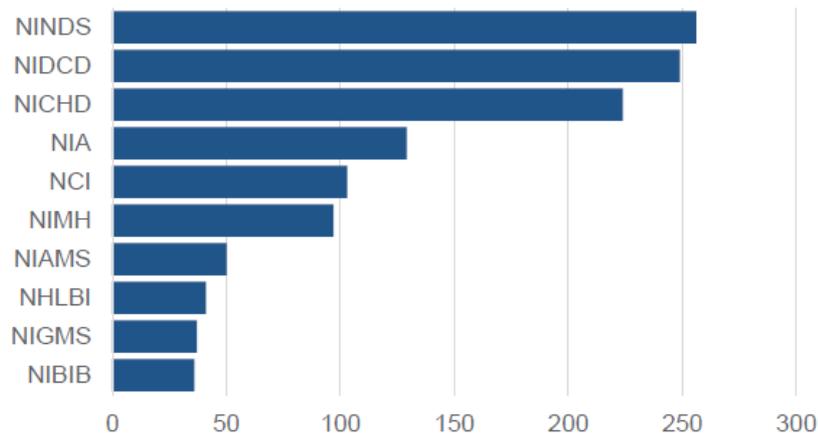


# Number of Projects

### Grants per funding mechanism



### Grants per IC (top 10 ICs)



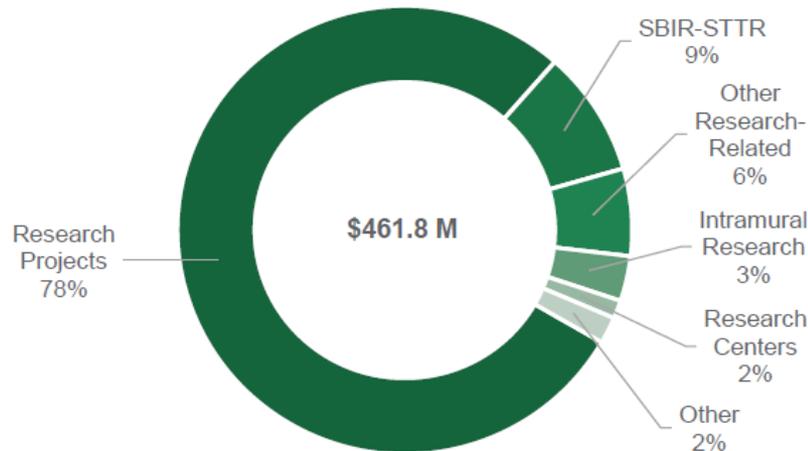
### Grants per RCDC term (top 30 terms)



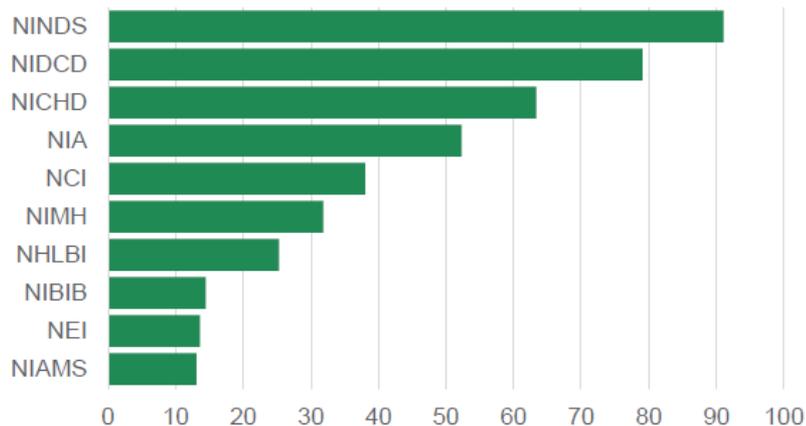


# Total Funding (\$M)

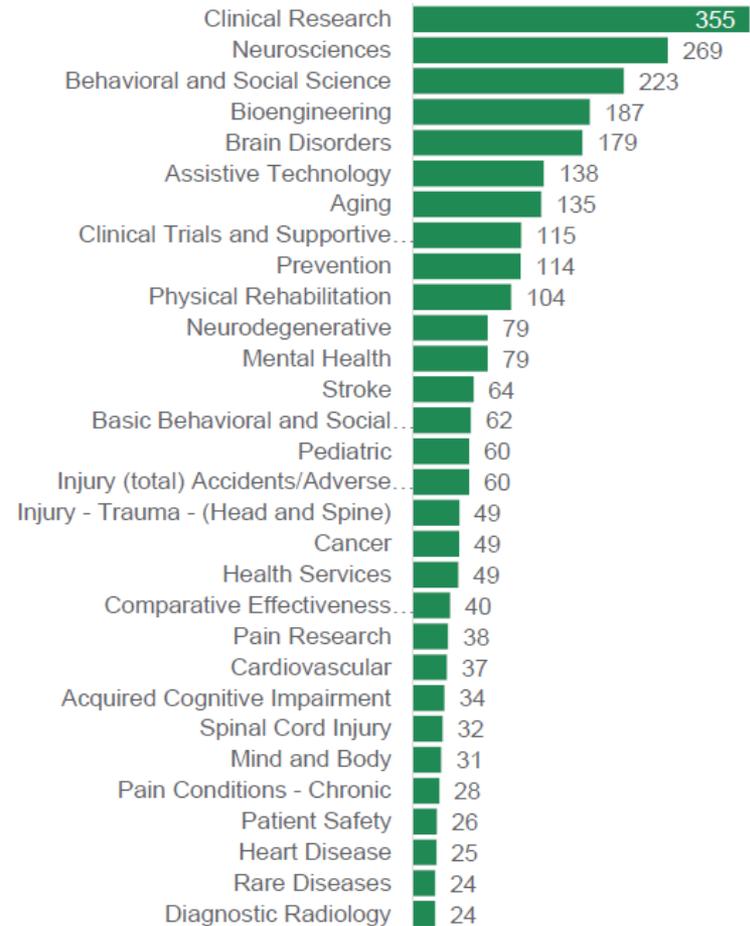
### Funding per funding mechanism



### Funding per IC (top 10 ICs)



### Funding per RCDC term (top 30 terms)





# Optimizing the Investment in Medical Devices for Rehabilitation (May, 2017)

- Diverse group of scientists, payor organizations, venture capitalists, and industry and representatives from federal research funding, regulatory and coverage agencies
  - Approximately 100 in person attendees; 102 live streams
  - Proceedings pending publication
- Federal Roundtables sponsored by NIDILRR for workshop planning and follow-up work



- Videocast available:
  - Day1: <https://videocast.nih.gov/summary.asp?Live=22155&bhcp=1>
  - Day2: <https://videocast.nih.gov/summary.asp?live=22159&bhcp=1>



# Interagency Collaboration



- Joint Funding Announcements
  - VA-DoD-NIH Pain Initiative
- Interagency Committees & Workgroups
  - Interagency Committee on Disability and Rehabilitation
- Participation in Reviews
- Review and Analyses of Portfolios
- Interagency Agreements
  - Limb Loss & Preservation Registry



# International Work

- World Health Organization effort focused on catalyzing the implementation of and research on rehabilitation in Low and Middle Income Countries (LMICs)
- Includes a focus on priority assistive products
- Research agenda in development and NIH is involved for physical and sensory disability

## REHABILITATION — 2030 — a call for action



leadership





# Research Infrastructure

## Centralized research infrastructure in specific domains:

- Analysis of large data sets
- Biomechanics and modelling of movement
- Technology assessment and product development
- Clinical trial design
- Regenerative Medicine
- Neuromodulation: clinical applications

## Sites offer:

- State-of-the-art research facilities
- Courses and workshops
- Mentorship and consultations
- Pilot grants
- Other collaborative opportunities





# Questions & Comments

