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; estimates are based on RCDC actual data, dollars reported are in millions and rounded.
# Implications of the 21st Century Cures Act (P.L. 114-255): Improving Medical Rehabilitation Research at the NIH

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

1,355 grants

$446.8 M
Research Type Analysis (Tier II Categories)

- Unable to Categorize: 1%
- Applied - Translational: 12%
- Applied - Clinical: 46%
- Infrastructure: 7%
- Basic: 8%
- Disease-related: 25%  

1,355 grants

- Unable to Categorize: 3%
- Applied - Translational: 14%
- Applied - Clinical: 53%
- Infrastructure: 3%
- Basic: 8%
- Disease-related: 23%  

$446.8 M
Number of Projects

Grants per funding mechanism

Research Projects 65%
Research Centers 7%
SBIR-STTR 6%
Training; Individual 5%
Other 3%

1,370 grants

Grants per IC (top 10 ICs)

NINDS
NIDCD
NICHHD
NIA
NCI
NIMH
NIAMS
NHLBI
NIGMS
NIBIB

Grants per RCDC term (top 30 terms)

Clinical Research 986
Neurosciences 817
Behavioral and Social Science 650
Bioengineering 558
Brain Disorders 524
Physical Rehabilitation 385
Assistive Technology 382
Aging 374
Prevention 340
Clinical Trials and Supportive... 285
Mental Health 245
Neurodegenerative 205
Stroke 184
Pediatric 173
Injury (total) Accidents/Adverse... 171
Basic Behavioral and Social... 171
Injury - Trauma - (Head and Spine) 134
Health Services 120
Cancer 115
Mind and Body 89
Pain Research 88
Spinal Cord Injury 86
Regenerative Medicine 79
Pain Conditions - Chronic 77
Patient Safety 76
Comparative Effectiveness... 76
Acquired Cognitive Impairment 74
Serious Mental Illness 69
Depression 68
Diagnostic Radiology 63
Total Funding ($M)

- Funding per funding mechanism:
  - Research Projects: 78%
  - Intramural Research: 3%
  - Research Centers: 2%
  - Other: 2%
  - Other Research-Related: 6%
  - SBIR-STTR: 9%
  - Total Funding: $461.8 M

- Funding per RCDC term (top 30 terms):
  - Clinical Research: 355
  - Neurosciences: 269
  - Behavioral and Social Science: 223
  - Bioengineering: 187
  - Brain Disorders: 179
  - Assistive Technology: 138
  - Aging: 135
  - Clinical Trials and Supportive: 115
  - Prevention: 114
  - Physical Rehabilitation: 104
  - Neurodegenerative: 79
  - Mental Health: 79
  - Stroke: 64
  - Basic Behavioral and Social: 62
  - Pediatric: 60
  - Injury (total) Accidents/Adverse: 60
  - Injury - Trauma - (Head and Spine): 49
  - Cancer: 49
  - Health Services: 49
  - Comparative Effectiveness: 40
  - Pain Research: 38
  - Cardiovascular: 37
  - Acquired Cognitive Impairment: 34
  - Spinal Cord Injury: 32
  - Mind and Body: 31
  - Pain Conditions - Chronic: 28
  - Patient Safety: 26
  - Heart Disease: 25
  - Rare Diseases: 24
  - Diagnostic Radiology: 24

- Funding per IC (top 10 ICs):
  - NINDS: 90
  - NIDCD: 80
  - NICHD: 75
  - NIA: 55
  - NCI: 40
  - NIMH: 40
  - NHLBI: 30
  - NIBIB: 30
  - NEI: 25
  - NIAMS: 24
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:
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
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