

## Overview NIDRR Funding Opportunities, Award Process and New Developments

Presented at the 2<sup>nd</sup> Annual Intensive Workshop on Grant Writing, Preparation and Submission in Rehabilitation Research  
January 31-February 4, 2004

Sponsored by Enhancing Rehabilitation Research in the South (ERRIS), University of Virginia, and Mid-West Rehabilitation Research Network, Rehabilitation Institute of Chicago

National Institute on Disability and Rehabilitation Research  
*Margaret L. Campbell, Ph.D.*  
Program Specialist

[www.ed.gov/offices/OSER/NIDRR](http://www.ed.gov/offices/OSER/NIDRR)

## Overview

- **Part 1:** - Understanding NIDRR's mandate, mission and values
- **Part 2:** - Understanding NIDRR's Research Agenda and Priority Development Process
- **Part 3:** - Understanding growth areas in NIDRR's R&D allocations
- **Part 4:** - Understanding how NIDRR awards grants & new developments in research management
- **Part 5:** - New Developments in NIDRR's Management of R&D
- **Part 6:** - Where to go for further information?

## PART 1

- **Understanding NIDRR's mandate, mission and values**

## Who is NIDRR?

- **Organizational Details**
- **History**
- **Statutory Charge & Mission**
- **Scope of Mandate**
- **Domains of Research**
- **Values That Drive Research**
  - » Rigor & Relevance
  - » The Paradigm of Disability

N  
I  
D  
R  
R

## Organization Details

- **Location:** Office of Special Education and Rehabilitative Services (OSERS) includes:
  - Rehabilitation Services Administration (RSA)
  - Office of Special Education Programs (OSEP)
  - National Institute on Disability and Rehabilitation Research (NIDRR)
- **Legislative Authority:**
  - Title II, Rehabilitation Act, as amended
  - Assistive Technology Act of 1998

5

N  
I  
D  
R  
R

## NIDRR History

- 1954: Rehabilitation Research Program established, amendment to Vocational Rehab Act (Mary Switzer)
- 1978: National Institute of Handicapped Research (NIHR) established, amendment to Rehab Act
- 1980: NIHR moved from HEW to Department of Education
- 1986: National Institute on Disability and Rehabilitation Research (NIDRR) established, amendment to Rehab Act

6

N  
I  
D  
R  
R

## NIDRR's Statutory Charge

To support research to maximize the self-sufficiency of individuals with disabilities of all ages.

7

N  
I  
D  
R  
R

## Mission Statement

- To generate, disseminate, and promote the use of knowledge that will improve the ability of disabled *individuals* to perform *activities* in the community, and increase the capacity of society to provide full opportunities and supports for participation. (*Long-Range-Plan, 1999-2003*).

8

## Scope of NIDRR Mandate

- **Cross-Disability**
  - Physical & Mobility impairments
  - Sensory impairments
  - Cognitive impairments & Psychiatric disability
- **Cross-Lifespan**
  - Children & Youth
  - Working-Age Adults, and
  - Individuals “aging with” life-long and early onset disabilities and those “aging into” disability in mid- to later life

## Domains of NIDRR Research

Focus on the **WHOLE PERSON**  
interacting with **SOCIETY**  
and the **ENVIRONMENT**



## Values That Drive Research at NIDRR



## Basis of NIDRR's Research Agenda

- **The NIDRR Long-Range Plan**  
[www.ncddr.org/new/announcements/nidrr\\_lrp/index.html](http://www.ncddr.org/new/announcements/nidrr_lrp/index.html)
- **The New Freedom Initiative**  
[www.whitehouse.gov/news/freedominitiative/freedominitiative.html](http://www.whitehouse.gov/news/freedominitiative/freedominitiative.html)



## The New Paradigm of Disability

- ... maintains that *disability is a product of an interaction between characteristics of an individual* (e.g., conditions and impairments, functional status, or personal and socioeconomic qualities) *and characteristics of the natural, built, cultural, and social environments.*

13

## PART 2

- Understanding NIDRR's Research Agenda and Priority Development Process

14

## What NIDRR Funds?

- Core Areas of Research Agenda from the Long-Range Plan, 1999-2003
- Major Funding Mechanisms & Levels
- How NIDRR arrives at priorities
- New Long-Range Plan in process

15

## Five Core Areas of Research Agenda: NIDRR Long-Range Plan

- Health and Function
- Technology for Access and Function
- Employment Outcomes
- Independent Living & Community Integration
- Associated Disability Areas with emphasis on:
  - Disability Demographics & Measurement
  - Rehabilitation Outcomes Measurement

16

**Core Research Area -- 1  
with Examples of Topical Priorities**

**Health and Function**

- Medical Rehabilitation
- Health Care
- Health Promotion and Wellness
- Health Service Delivery & Policy
- Emerging Disabilities

17

**Core Research Area -- 1 (contd.)  
with Examples of Topical Priorities**

**What are Emerging Disabilities?**

- New disabling conditions and causes of disability – e.g., chronic fatigue syndrome, environmental sensitivities, and violence
- Secondary conditions and increased frequency of impairments associated with aging
- Health disparities and differential distribution *and* consequences of disability within the population

18

**Core Research Area -- 2  
with Examples of Topical Priorities**

**Technology for Access & Function**

- **Systems of Technology**
  - Assistive Technologies
  - Telecommunications
  - Interface & Information Technologies
  - Augmentative Communication
  - Accessible Medical Instrumentation
  - Robotics
  - Transportation Safety
  - Educational & Workplace Supports
- **The Built Environment**
- **Universal Design**

19

**Core Research Area -- 3  
with Examples of Topical Priorities**

**Employment**

- Federal policy and state policy
- Vocational rehabilitation strategies
- Technology
- Ergonomics
- Workplace supports
- Macroeconomic models

20

**N  
I  
D  
R  
R**

### Core Research Area -- 4 with Examples of Topical Priorities

- **Independent Living & Community Integration**
  - Strategies to support independent living, communication, participation in family and community life, and inclusion in society
  - Family and Cultural Aspects of Independent Living
  - Self-Determination
  - Personal Assistance Services & Caregiving

21

**N  
I  
D  
R  
R**

### Core Research Area -- 5 with Examples of Topical Priorities

- **Associated Disability Areas**
  - **Demographics**
    - secondary data analysis
  - **Outcomes Research**
    - measure development
    - measure validation

22

**N  
I  
D  
R  
R**

### NIDRR's Funding Mechanisms

- Research and Training Centers
- Rehabilitation Engineering Research Centers
- Model Systems
- Field-Initiated Projects (Research and Development)
- Disability Rehabilitation Research Projects
- Advanced Rehabilitation Research Training
- Fellowships
- Dissemination and Utilization Grants
- Small Business Innovative Research (*not described in presentation*)
- ADA Technical Assistance Centers (*not described in presentation*)

23

**N  
I  
D  
R  
R**

### Description of NIDRR Funding Mechanisms

- **Rehabilitation Research and Training Centers (RRTCs)**
  - Average \$750,000 per year
  - Five-year awards
  - Advanced programs of research
  - Focus on new knowledge
  - Affiliation with institutions of higher education
  - Research training, dissemination, and technical assistance
  - Announcements as needed

24

## Description NIDRR Funding Mechanisms (cont.d)

- **Rehabilitation Engineering Research Centers (RERCs)**
  - Average \$900,000 per year
  - Five-year awards
  - Advanced research of an engineering or technical nature
  - Affiliation with institutions of higher education
  - Emphasized technology transfer
  - Announcements as needed

25



## Description of Funding NIDRR Mechanisms (cont.d)

- **Disability and Rehabilitation Research Projects (DRRPs)**
  - Typically \$300,000
  - May be up to five years of funding
  - Projects that emphasize research, demonstration, dissemination, technical assistance, and innovation
- **Model Systems (MS):**
  - TBI – (17 + 1 data center)
  - SCI – (16 + 1 data center)
  - Burn – (4 + 1 data center)
  - Five-year cycles

26

## Description of NIDRR Funding Mechanisms (cont.d)

- **Field-Initiated Projects**
  - \$150,000 per year
  - Three-year awards
  - May be research or development
  - Decided by standing panels
  - Annual announcement, applications due in Fall

27



## Description NIDRR Funding Mechanisms (cont.d)

- **Advanced Rehabilitation Research Projects (ARRTs)**
  - \$150,000 per year
  - Five-year awards
  - Advanced rehabilitation research training at post-doctoral level
  - Award made to educational institutions only
  - Must be interdisciplinary
  - Annual announcements, competition in fall
- **Switzer Fellowship Program**

28

## Examples of Health & Function RRTCs, Re-Funded 2003

- Stroke Rehabilitation (*RIRC*)
- Arthritis (*UMO/Columbia*)
- Neuromuscular Disease (*UC Davis*)
- Secondary Conditions of Spinal Cord Injury (*UAB*)
- Multiple Sclerosis (*UWA*)
- Age-Related Changes in Impairment (*RLANRC*)
- Health and Wellness for Persons with Long-Term Disabilities (*OHSU*)

29

## Examples of Health & Function RERCs, Funded 1998-99

- Tele-Rehabilitation (*NRH*)
- Prosthetics and Orthotics for Adults (*Northwestern*)
- Child Orthotics (*Rancho Los Amigos*)
- Hearing Enhancement (*Gallaudet*)
- Communication Enhancement (*Duke*)
- Low Vision & Blindness (*Smith-Kettlewell*)
- Wheeled Mobility (*Univ. of Pitt*)
- Land Mine Survivors (*PALM*)

30

## How NIDRR Arrives At Priorities?

- President & Administration interests, directives and initiatives – e.g., *NFI*, *EO # 12137* implementing *Olmstead Decision*
- NIDRR Director's initiatives
- Scientific, cultural, and social trends
- Consumer and other constituent input
- NIDRR Long-Range Plan (LRP), 1999-2003, and internal strategic team initiatives
- Statutory provisions

31

## NIDRR's New Long-Range Plan

- Currently under development
- Input received
- Document being drafted
- For public comment early 2004
- Incorporates President's management agenda

32

## PART 3

N  
I  
D  
R  
R

- Understanding growth areas in NIDRR's R&D allocations

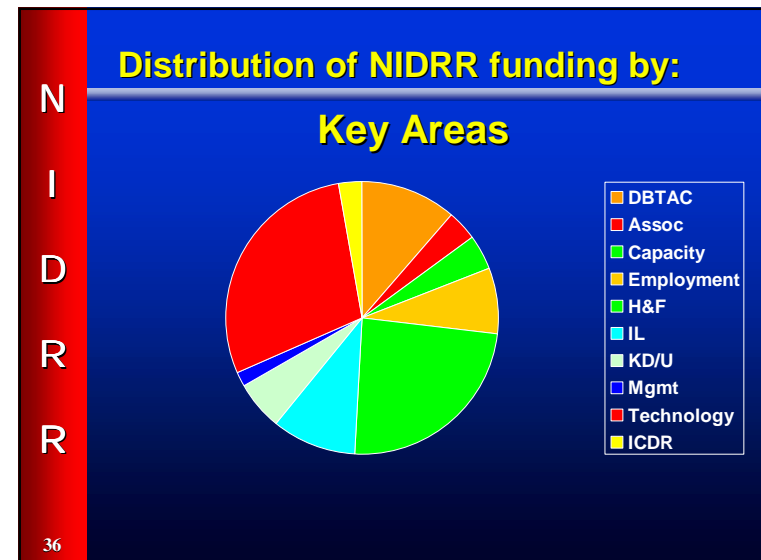
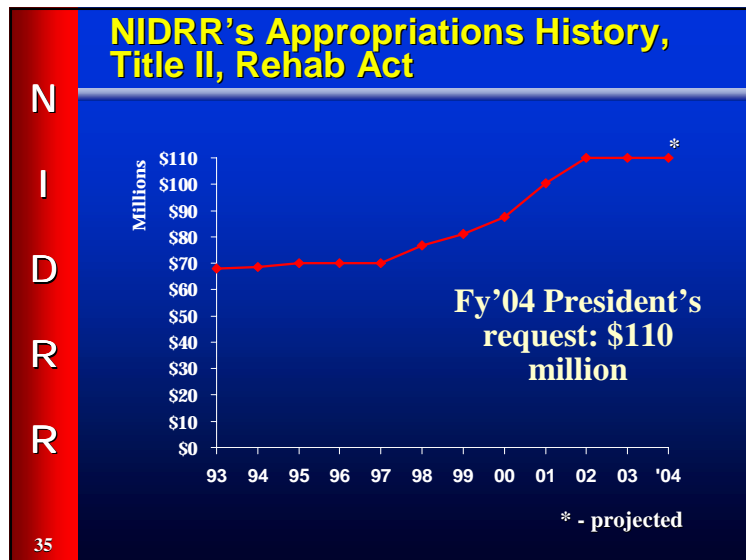
33

## Growth Areas & New Developments at NIDRR

N  
I  
D  
R  
R

- Recent increases in NIDRR's history of appropriations
- Factors driving interest in disability and rehabilitation research
- New Administration initiatives promoting R&D & NIDRR's response

34

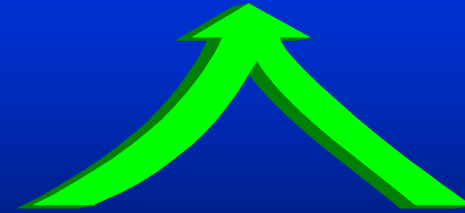


## Distribution of NIDRR funding by: Funding Mechanisms



37

## Factors Driving Interest in Disability & Rehabilitation Research



Biomedical and  
technological  
breakthroughs and  
increased longevity

Independent living  
and civil rights  
advocacy by and  
for persons with  
disabilities

38

## New Initiatives Promoting Funding in Disability and Technology R&D

- **2001**, President Bush unveils his *New Freedom Initiative (NFI)* to further the goals of the ADA, and promote increased access to AT, employment, and opportunities for full participation in community life.

39

## New Freedom Initiative and NIDRR

- Commitment to tear down the remaining barriers to independence and community integration
- Selected Provisions
  - Assistive technology and universal design
    - Workforce integration
    - Full access to community life
    - Enforce the ADA

40

## NIDRR's Response to NFI

- **NFI Calls for** -- Increasing *Access* to Assistive and Universally Designed Technologies through research & funding
- **NIDRR Response:**
  - FY01 & FY02 – Funded **seven new RERCs** and expanded an existing eighth center
  - FY02 –Increased funding for the Alternative Financing Program, under the AT Act (Title III) to \$35 Million, allowing states to make **low-interest loans** for the purchase of AT.

41

## New RERCs Funded Under NFI FY 2001 & 2002

- **RERC on Technologies for Successful Aging**  
University of Florida, Gainesville
- **RERC on Recreational Technologies & Exercise Physiology**  
University of Illinois, Chicago
- **RERC on Rehabilitation Robotics & Telemanipulation Systems (Stroke)**  
Rehabilitation Institute Research Corp.
- **RERC on Spinal Cord Injury – Keep Moving** – Rancho Los Amigos Medical Center

42

## New RERCs Funded Under NFI FY 2001 & 2002 (contd.)

- **RERC on Mobile Wireless Technologies**  
Georgia Institute of Technology
- **RERC on Wheelchair Transportation Safety**  
University of Pittsburgh
- **RERC on Accessible Medical Instrumentation**  
Marquette University
- **RERC on Work Place Accommodations**  
Georgia Institute of Technology

43

## NIDRR's Response to NFI (contd.)

- **NFI Calls for** -- Promoting Private-Public Partnerships
- **NIDRR's Response:**
  - Funded \$5 Million of **new small business innovation research (SBIR)** projects to support innovate private sector research on new technologies for people with disabilities of all ages.

44

**PART 4**

**N**  
**I**  
**D**  
**R**  
**R**

- **Understanding how NIDRR awards grants & new developments in research management**

45

**Legislative Requirements of Award Process**

**N**  
**I**  
**D**  
**R**  
**R**

- Grants shall be made on a competitive basis;
- Applications shall be submitted at such time, in such manner, containing such information as the Director may require;
- The Director shall establish a system of peer review of applications for grants.

46

**What Peer Review Ensures:**

**N**  
**I**  
**D**  
**R**  
**R**

- Activities supported by NIDRR are of the highest scientific, administrative, and technical quality
- Activity results may be widely applied to appropriate target populations and rehabilitation problems

47

**Composition of Peer Review Panels**

**N**  
**I**  
**D**  
**R**  
**R**

- **Scientists and other experts**
  - Who work in rehabilitation or related fields
  - Who are qualified on the basis of training, knowledge, or experience and to give expert advice on the applications under review
- **Persons with disabilities, family members and/or disability advocates**

48

## Factors Considered in Selecting NIDRR Reviewers

N  
I  
D  
R  
R

- Level of formal scientific or technical education
- Scientific, technical, or administrative activities appropriate to applications to be reviewed
- Roles of potential reviewers in those activities
- Quality of those activities

49

## Factors Considered In Selecting NIDRR Reviewers (contd.)

N  
I  
D  
R  
R

- Awards and honors from scientific and professional agencies and organizations outside the Department
- Knowledgeable individuals with disabilities, or parents, family members, guardians, advocates, or authorized representatives of individuals with disabilities
- Individuals from diverse populations

50

## NIDRR's Basic Selection Criteria

N  
I  
D  
R  
R

- Importance of the Problem
- Design of Research & Development Activities
- Plan of Operation
- Plan of Evaluation
- Project Staff

51

## How Funding Decisions Are Made at NIDRR?

N  
I  
D  
R  
R

- The Secretary considers field-initiated applications that rated 80% or more of the maximum possible points that meet one or more of the following conditions:
  - Represents a unique opportunity to advance rehabilitation knowledge to improve the lives of individuals with disabilities
  - Complements research already planned or funded by NIDRR or addresses the research in a new and promising way

52

**PART 5**

N  
I  
D  
R  
R

- **New Developments in NIDRR's Management and Evaluation of R&D Performance**

53

**Changes in NIDRR's Priority Announcements**

N  
I  
D  
R  
R

- Priorities are **less prescriptive** in terms of the research problems or questions to be addressed and methods to be used
- Priorities are **more topically-oriented** (see **FY2002 NIA** for RERC Competition)
- More priorities are identified than will be awarded
- Priorities place **greater emphasis on** establishing the **importance of the problem** to be address and **identifying anticipated outcomes**

54

**Characteristics of NIDRR's New Review Process**

N  
I  
D  
R  
R

- Larger panels
- Rotating terms of service
- Emphasis on narrative evaluation
- Discussion based on evaluation criteria
- Consensus is **NOT** expected
- Score all proposals after discussion

55

**Changes in Evaluation and Reporting Requirements**

N  
I  
D  
R  
R

- Consistent with the government-wide shift in accountability reflected in the 1993 Government Performance and Results Act (**GPRA**), the 2002 President's Management Agenda (**PMA**) and OMB's Program Assessment Rating Tool (**PART**), and the **Department's Strategic Plan**, greater emphasis is being placed on :
  - **Accountability for results** – i.e., outputs and outcomes
  - **Performance measurement**
  - **Evidence-based strategic planning**
  - **Performance-based budgeting**

56

**What is the Government-Wide Shift in Accountability?**

**N**  
**I**  
**D**  
**R**  
**R**

- Shift from primary focus on:
  - **Dollars** (how much is spent & on what)
  - **Activities & processes** (what you are doing to/with whom and how well you are doing it)
  - **Productivity** – (how much are you doing)
- To an expanded focus on:
  - **Performance** -- (are you meeting stated objectives and standards of rigor, relevance & timeliness), and
  - **Results** – (what and how much you are producing and who's benefiting)

57

**Shift in Accountability is Not An "Either- Or" Situation**

**N**  
**I**  
**D**  
**R**  
**R**

- Rather it amounts to an added dimension of accountability for **results**
- NIDRR Grantees must also meet accepted standards of practice for:
  - Research management and quality assurance
  - Conducting high-quality scientific research, engineering design and/or product development, and
  - Involving consumers and persons from diverse and underserved populations

58

**What Does "Accountability for Results" Mean?**

**N**  
**I**  
**D**  
**R**  
**R**

- In general, "accountability for results" refers to accomplishments that are under the direct or indirect influence of project resources and activities & occur within the boundaries of a funding/budget cycle.
- Within the NIDRR context, this translates into accountable for three types of results:
  - **Outputs** – planned and produced to date
  - **Short-Term Outcomes** – anticipated and actual, and
  - **Intermediate Outcomes** – anticipated or actual, if applicable

59

**Objective of Outcomes Planning**

**N**  
**I**  
**D**  
**R**  
**R**

- To identify a limited number of high-priority, problem-focused, reasonably ambitious and measurable outcomes-oriented performance goals that:
  - **Respond** to NIDRR priorities or statutory requirements
  - **Reflect** scientific productivity (i.e., peer reviewed publications), and
  - **Capture** the anticipated effects and benefits of project activities & outputs for identified target systems or sub-groups within broader systems.

60

## What Are Outputs?

- **Outputs:** Are the direct results of R&D related activities and consist of findings, publications, products, devices, and services disseminated to external audiences, and user satisfaction (perceived usefulness) of same.
  - An output measure is a **tabulation, calculation or recording** of activity or effort and can be **expressed in a quantitative or qualitative manner** -- e.g., # of new discoveries, manuscripts published, students trained, patents filed, and nature of new findings.
  - Outputs have the advantage over outcomes in that they are **directly observable**.

61

## More On Outputs

- Outputs are important in their own right as **indicators of productivity**, but they are also the essential **building blocks of outcomes**.
- Outputs combined with dissemination activities lead to outcomes. However, not every output will have a corresponding outcome, nor should it.

62

## What are Outcomes?

- **Outcomes:** Are the anticipated or actual effects of R&D activities and outputs, and constitute changes or improvements in the target population/system being served. Although GPRA & PART both emphasize “predicting” outcomes, outcomes may also occur as unexpected changes.
  - **Outcomes are the most complex component of performance measurement** and are difficult to define outside of the context of a specific program and target system.

63

## What are Outcomes?

- More on Outcomes
  - **The basic outcomes equation is:**
  - **Outcomes** = change/improvement in the target system or subgroup, which is a function of:
    - » Outputs + Dissemination + Documented External Use
  - **Outcomes** occur sequentially over time and as a result typically affect more than one target system. Because of this, we refer to “**chain of outcomes**,” starting with short-term and progressing to intermediate and longer-term outcomes.

64

## Types of Outcomes

N  
I  
D  
R  
R

- **Short-term outcomes** are expected or actual changes/improvements in the identified target system/population that are under the direct influence of center activities. Short-term outcomes represent the first level of change that must occur in order to bring about intermediate outcomes. **Typically, short-term outcomes are focused on changes/improvements in the learning & knowledge system at the individual or environmental level of analysis.**

65

## Types of Outcomes

N  
I  
D  
R  
R

- **Intermediate outcomes** are the “gold-standard” in terms of accountability for results. They consist of **anticipated or actual changes or improvements in the “action” system – i.e., changes in practice, policy and/or behavior -- that occur in part as a result of the use or adoption of project outputs**. Because they involve changes in use, intermediate outcomes take longer to achieve than short-term outcomes and typically are the result of multiple factors occurring within and external to a given R&D program.

66

## Types of Outcomes (cont.d)

N  
I  
D  
R  
R

- **Longer-term outcomes** are the desired end-results of an R&D program at a societal level, and constitute changes or improvement in the overall condition of a target system or population. Given their scope, long term outcomes usually take several funding cycles to achieve, and therefore are not required under the NIDRR “accountability for results” umbrella. Their primary function is to serve as critical anchor points in the planning process.

67

## Common Difficulties Encountered in Specifying Anticipated R&D Outcomes

N  
I  
D  
R  
R

- **Lack of specificity in “what”** is changing or improving and “where” or “for whom” the change is occurring (i.e., what target populations or subgroups within larger population).
- **Too many outcomes expressed too narrowly** so as to be trivial or **too broadly** so as to be unmeasurable.
- **Outcomes expressed as speculations** (“wish lists”) vs. as **expectations of planned activities**.
- **Confusion between activities and the effects of activities** in generating outputs and outcomes.
- **Insufficient “causal” connections** or sequencing among, activities, outputs, dissemination activities and outcomes.
- **Missing evidence of progress** towards outcomes.

68

**PART 6**

N  
I  
D  
R  
R

- Where to go for further information on NIDRR?

69

**Information on Priorities:  
Past, Present & Future**

N  
I  
D  
R  
R

- Website:
  - <http://www.ed.gov/about/offices/list/osers/nidrr/index.html>
  - Click on “Grants & Funding,” then:
    - ✓ Click on “Grants Forecasts for NIDRR” for information on discretionary grant competitions for new awards for year
    - ✓ Click on “Grants Application Announcements” for access to grant program announcements in the Federal Register, including “Proposed” and “Final” regulations and priorities.

70

**Key Web Sites**

N  
I  
D  
R  
R

- ❖ NIDRR home page:
  - <http://www.ed.gov/about/offices/list/osers/nidrr/index.html>
- ❖ National Center for the Dissemination of Disability Research home page:
  - <http://www.ncddr.org>
- ❖ National Rehabilitation Information Center home page:
  - <http://www.naric.com>

71

**For additional information**

N  
I  
D  
R  
R

Presenter:

- Margaret Campbell, Ph.D.
  - telephone (202) 260-0672
  - email: [Margaret.Campbell@ed.gov](mailto:Margaret.Campbell@ed.gov)

For information regarding technical issues related to submissions, priorities, etc.:

- Donna Nangle
  - telephone (202) 205-5880
  - email: [Donna.Nangle@ed.gov](mailto:Donna.Nangle@ed.gov)
- NIDRR Main Number
  - (202) 205-8134

72

## For additional information

For further contact with NIDRR staff:

- **Richard Melia, Ph.D**
  - Director, Research Division
  - telephone (202) 205-9400
  - email: [Richard.Melia@ed.gov](mailto:Richard.Melia@ed.gov)
- **Joel Myklebust, P.E., Ph.D.**
  - Director, Policy, Planning, Budget and Evaluation Division
  - telephone (202) 401-2071
  - email: [Joel.Myklebust@ed.gov](mailto:Joel.Myklebust@ed.gov)