seventies. A number of alternative lines were studied and in 1972 a line was journalized by the Director of the Ohio Department of Highways (now ODOT). The line was subsequently encroached upon by development, necessitating a revision in the alignment. A new study, departing from the 1972 proposed alignment, was completed in 1983.

Three alternatives are presently under consideration.

The relocation alternative would consist of approximately 16 miles of four-lane, divided, controlled-access highway on new alignment. Access to the facility would be provided by 18 at-grade intersections and three interchanges, at the SR 4 Bypass, SR 747, and IR 75. Termini would be SR 4 on the west and IR 71 and Kings Mills Road on the east.

The upgrade alternative would consist of (1) widening existing SR 129 (Princeton Road) between SR 4 and SR 747, (2) continuing the widening of Princeton Road between SR 747 and IR 75 (where it is not presently a state route), (3) providing an interchange to utilize IR 75 between the SR 129 extension on Princeton Road and the existing interchange at Tylersville Road, and (4) utilizing a widened and also extended Tylersville Road between IR 75 and IR 71.

The no action alternative would involve no major improvements to the roads within the existing corridor between SR 4 and IR 71.

A preferred alternative will be identified in the draft environmental impact statement; however, the final selection of an alternative will be made after the draft EIS has been circulated and a public hearing held.

The proposed highway facility would provide a safe, efficient, high-capacity transportation link for east-west travel through the involved portions of Butler and Warren Counties, while connecting IR 75 and IR 71 north of the Cincinnati Outerbelt (IR 275). The proposed artery would provide for anticipated growth in population, households, and traffic volumes, relieve congestion on existing routes, and allow for the orderly implementation of current planning for the area.

A program of public involvement and coordination with Federal, State, and local agencies has been conducted. It is envisioned that involvement with the public and other agencies will continue throughout the development of the project and, therefore, it is not anticipated that a formal scoping meeting will be held.

To insure that the full range of issues related to this proposed action are addressed and that all significant issues are identified, comments or questions concerning this action and the EIS should be addressed to the FHWA at the address provided above.

(Catalog of Federal Domestic Assistance Program Number 20.205, Highway Planning and Construction. The regulations implementing Executive Order 12372 regarding intergovernmental consultation on Federal programs and activities apply to this program.)

Issued on: February 8, 1988.

Fred J. Hempel,

Division Administrator, Columbus, Ohio.

[FR Doc. 88-3342 Filed 2-16-88; 8:45 am]

BILLING CODE 4910-22-M

DEPARTMENT OF THE TREASURY

Office of the Secretary

[Supplement to Dept. Circ.; Public Debt Series No. 3-88]

Treasury Notes of Series A-1998

Washington, February 4, 1988.

The Secretary announced on February 3, 1988, that the interest rate on the notes designated Series A-1998, described in Department Circular—Public Debt Series—No. 3-88 dated January 28, 1988, will be 8⅛ percent. Interest on the notes will be payable at the rate of 8⅛ percent per annum.

Gerald Murphy,

Fiscal Assistant Secretary.

[FR Doc. 88-3249 Filed 2-16-88; 8:45 am]

BILLING CODE 4810-40-M

[Supplement to Department Circular; Public Debt Series No. 2-88]

Treasury Notes: Series R-1991

Washington, February 3, 1988.

The Secretary announced on February 2, 1988, that the interest rate on the notes designated Series R-1991, described in Department Circular—Public Debt Series—No. 2-88 dated January 28, 1988, will be 7⅜ percent. Interest on the notes will be payable at the rate of 7⅜ percent per annum.

Gerald Murphy,

Fiscal Assistant Secretary.

[FR Doc. 88-3248 Filed 2-16-88; 8:45 am]

BILLING CODE 4810-40-M

VETERANS ADMINISTRATION

Special Medical Advisory Group; Meeting

The Veterans Administration gives notice under Pub. L. 92-463 that a meeting of the Special Medical Advisory Group will be held on March 10 and 11, 1988. The session on March 10 will be held at the Capital Hilton Hotel, 16th and K Streets NW., Washington, DC 20036, and the session on March 11 will be held in the Omar Bradley Conference Room (10th floor) at the Veterans Administraton Central Office, 810 Vermont Avenue NW., Washington, DC 20420. The purpose of the Special Medical Advisory Group is to advise the Administrator and Chief Medical Director relative to the care and treatment of disabled veterans, and other matters pertinent to the Veterans Administration's Department of Medicine and Surgery. The session on March 10 (held at the Capital Hilton Hotel) will convene at 6 p.m. and the session on March 11 will convene at 8 a.m. All sessions will be open to the public up to the seating capacity of the rooms. Because this capacity is limited, it will be necessary for those wishing to attend to contact Lorri Fertal, Office of the Chief Medical Director, Veterans Administration Central Office (phone 202/233-3985) prior to March 3, 1988.

Dated: February 8, 1988.

By direction of the Administrator.

Rosa Maria Fontanez,

Committee Management Officer.

[FR Doc. 88-3331 Filed 2-16-88; 8:45 am]

BILLING CODE 8320-01-M

Sunshine Act Meetings

Federal Register
Vol. 53, No. 31
Wednesday, February 17, 1988

This section of the FEDERAL REGISTER contains notices of meetings published under the "Government in the Sunshine Act" (Pub. L. 94-409) 5 U.S.C. 552b(e)(3).

FEDERAL RESERVE SYSTEM BOARD OF GOVERNORS

TIME AND DATE: 10:00 a.m., Friday, February 19, 1988.

PLACE: Marriner S. Eccles Federal Reserve Board Building, C Street entrance between 20th and 21st Streets NW., Washington, DC 20551.

STATUS: Closed.

MATTERS TO BE CONSIDERED:

1. Personnel actions (appointments, promotions, assignments, reassignments, and salary actions) involving individual Federal Reserve System employees.
2. Any items carried forward from a previously announced meeting.

CONTACT PERSON FOR MORE INFORMATION: Mr. Joseph R. Coyne, Assistant to the Board; (202) 452-3204. You may call (202) 452-3207, beginning at approximately 5 p.m. two business days before this meeting, for a recorded announcement of bank and bank holding company applications scheduled for the meeting.

Date: February 12, 1988.

James McAfee,

Associate Secretary of the Board.

[FR Doc. 88-3399 Filed 2-12-88; 12:37 pm]

BILLING CODE 6210-01-M

FEDERAL RESERVE SYSTEM BOARD OF GOVERNORS

TIME AND DATE: 11:00 a.m., Monday, February 22, 1988.

PLACE: Marriner S. Eccles Federal Reserve Board Building, C Street entrance between 20th and 21st Streets NW., Washington, DC 20551.

STATUS: Closed.

MATTERS TO BE CONSIDERED:

1. Personnel actions (appointments, promotions, assignments, reassignments, and salary action) involving individual Federal Reserve System employees.
2. Any items carried forward from a perviously announced meeting.

CONTACT PERSON FOR MORE INFORMATION: Mr. Joseph R. Coyne, Assistant to the Board; (202) 452-3204. You may call (202) 452-3207, beginning at approximately 5 p.m. two business days before this meeting, for a recorded announcement of bank and bank holding company applications scheduled for the meeting.

Date: February 12, 1988.

James McAfee,

Associate Secretary of the Board.

[FR Doc. 88-3959 Filed 2-12-88; 3:28 pm]

BILLING CODE 6210-01-M

SECURITIES AND EXCHANGE COMMISSION

"FEDERAL REGISTER" CITATION OF PREVIOUS ANNOUNCEMENT: (53 FR 3979 February 10, 1988).

STATUS: Closed meeting.

PLACE: 450 5th Street NW., Washington, DC.

DATE PREVIOUSLY ANNOUNCED: Friday, February 5, 1988.

CHANGES IN THE MEETING: Additional.

The following additional items were considered at a open meeting scheduled on Tuesday, February 9, 1988, at 2:30 p.m.

Status report of judicial proceeding.
Discussion of internal operating practices.
Status report of investigation.

Commissioner Peters, as duty officer, determined that Commission business required the above changes.

At times changes in Commission priorities require alterations in the scheduling of meeting items. For further information and to ascertain what, if any, matters have been added, deleted or postponed, please contact: Alden Adkins at (202) 272-2014.

Jonathan G. Katz,

Secretary.

February 10, 1988.

[FR Doc. 88-3350 Filed 2-11-88; 4:33 pm]

BILLING CODE 8010-01-M

Corrections

Federal Register
Vol. 53, No. 31
Wednesday, February 17, 1988

This section of the FEDERAL REGISTER contains editorial corrections of previously published Presidential, Rule, Proposed Rule, and Notice documents and volumes of the Code of Federal Regulations. These corrections are prepared by the Office of the Federal Register. Agency prepared corrections are issued as signed documents and appear in the appropriate document categories elsewhere in the issue.

DEPARTMENT OF DEFENSE

GENERAL SERVICES ADMINISTRATION

NATIONAL AERONAUTICS AND SPACE ADMINISTRATION

48 CFR Parts 1, 32, and 52

[Federal Acquisition Circular 84-33]

Federal Acquisition Regulation; Ratification of Unauthorized Commitments and Prompt Payment

Correction

In rule document 88-2617 beginning on page 3688 in the issue of Monday, February 8, 1988, make the following correction:

On page 3688, in the third column, under **Contract Financing Payments**, in the fifth line, "through" should read "though".

BILLING CODE 1505-01-D

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

18 CFR Part 380

[Docket No. RM87-15-000; Order No. 486]

Regulations Implementing National Environmental Policy Act of 1969

Correction

In rule document 87-28894 beginning on page 47897 in the issue of Thursday, December 17, 1987, make the following correction:

§ 380.5 [Corrected]

On page 47912, in the third column, in § 380.5, in the first line, paragraph designation "(1)" should read "(a)".

BILLING CODE 1505-01-D

FEDERAL RESERVE SYSTEM

County Bancorporation, Inc., et al.; Application To Engage de Novo in Permissible Nonbanking Activities

Correction

In notice document 88-2385 appearing on page 3456 in the issue of Friday, February 5, 1988, make the following correction:

In the second column, under paragraph C, in paragraph 1, the third line should read, "real estate appraising pursuant to § 225.25(b)(13); mortgage banking and providing".

BILLING CODE 1505-01-D

DEPARTMENT OF THE INTERIOR

Bureau of Land Management

[OR-090-06-4212-13; GP8-052; OR 42315]

Realty Action—Exchange; Oregon

Correction

In notice document 88-1744 beginning on page 2543 in the issue of Thursday, January 28, 1988, make the following correction:

On page 2543, in the second column, under **Willamette Meridian, Oregon**, the first line should read "T. 14 S., R. 1 E.".

BILLING CODE 1505-01-D

Federal Register

Wednesday
February 17, 1988

Part II

Department of Education

National Institute on Disability and Rehabilitation Research; Final Funding Priorities for Fiscal Year 1988; Notice

DEPARTMENT OF EDUCATION

National Institute on Disability and Rehabilitation Research

AGENCY: Department of Education.

ACTION: Notice of Final Funding Priorities for Fiscal Year 1988.

SUMMARY: The Secretary of Education announces final funding priorities for research activities to be supported under the Research and Demonstration (R&D) and Knowledge Dissemination and Utilization (D&U) programs of the National Institute on Disability and Rehabilitation Research (NIDRR) in fiscal year 1988.

EFFECTIVE DATE: These priorities take effect either 45 days after publication in the **Federal Register** or later if Congress takes certain adjournments. If you want to know the effective date of these priorities, call or write the Department of Education contact person.

FOR FURTHER INFORMATION CONTACT: Betty Jo Berland, National Institute on Disability and Rehabilitation Research (Telephone: (202) 732–1141). Deaf and hearing-impaired individuals may call (202) 732–1198 for TDD services.

SUPPLEMENTARY INFORMATION: Authority for the research programs of NIDRR is contained in section 204 of the Rehabilitation Act of 1973, as amended. Under these programs, awards are made to public and private agencies and organizations, including institutions of higher education, Indian tribes, and tribal organizations. NIDRR can make awards for up to 60 months.

The purpose of the awards is to support research, demonstrations, and related activities that have a direct bearing on the development of methods, procedures, and devices to assist in providing vocational and other rehabilitation services to individuals with handicaps, especially those with the most severe handicaps.

NIDRR regulations authorize the Secretary to establish research priorities by reserving funds to support particular research activities (see 34 CFR 351.32). A notice of proposed priorities was published for public comment in the **Federal Register** on November 10, 1987 at 52 FR 43300. The notice requesting transmittal of applications was also published in that issue of the **Federal Register**, and the closing date for receipt of applications was published as of February 16, 1988. This notice does not solicit applications, nor will NIDRR accept applications after February 16, 1988. These final priorities were established on the basis of the NIDRR initial planning process and public comments received during the comment period. The publication of these proposed priorities does not bind the United States Department of Education to fund projects in any or all of these research areas, unless otherwise specified in statute. Funding of particular projects depends on both the nature of the final priorities and the quality of the applications received.

The following sixteen final funding priorities represent areas in which NIDRR expects to support research and related activities through grants or cooperative agreements in two programs, the Research and Demonstration Projects Program (R&D), and the Knowledge Dissemination and Utilization Projects Program (D&U).

Analysis of Comments and Changes

NIDRR received eleven letters of comment from the public. A discussion of the requests for substantive changes and clarifications follows, with general comments first, and then comments on individual priorities.

Comment: One commenter questioned the absence of priorities relating to persons with chronic mental illness.

Discussion: NIDRR funds four Rehabilitation Research and Training Centers (RRTCs) and several discrete projects dealing with the rehabilitation of persons with mental illness. NIDRR also intends to undertake planning activities in 1988 to establish an agenda for future research in this area. Interested parties are also encouraged to seek support for research in this area through NIDRR's investigator-initiated programs—Field-Initiated Research, Innovation Grants, and Fellowships.

Changes: None.

Comment: Several commenters requested information about the process that NIDRR used to select these priorities and asked to be advised about the processes NIDRR would use in the future.

Discussion: NIDRR has used a variety of planning processes in the past, and is oriented toward increasing the scope and depth of public involvement in planning. Many of the current priorities relate to work not yet completed from NIDRR's original Long-Range Plan, submitted to Congress in 1981. However, there have been more recent planning activities in many of these areas. For example, NIDRR cosponsored a conference on arthritis rehabilitation with the National Institute on Arthritis and Musculoskeletal Disorders and the Arthritis Foundation, which led to the priority on arthritis rehabilitation. A similar planning meeting was held with a group of researchers and clinicians in cardiac rehabilitation and led to the development of that priority. The Department of Education has had an active Task Force on Traumatic Brain Injury over the last year, and from that group evolved the two priorities on brain injury and stroke. In response to congressional interest in the area of therapeutic recreation, the Director of NIDRR met with several leading professional associations and researchers in that field to develop the current priority. In response to new legislation concerning supported employment, NIDRR has met with representatives of the independent living movement and vocational rehabilitation administrators to develop the priority concerned with models for involving independent living centers as supported employment delivery agencies. The priority for public education in spinal cord injury is part of NIDRR's plan to undertake public education in several disability areas in which it is likely to be most effective; a public education project in traumatic brain injury was funded in 1987. The regional rehabilitation exchange priority furthers NIDRR's long-range dissemination plan to feature diffusion networks structured on a regional basis. NIDRR also held a constituent planning meeting in November 1986, involving representatives from research, service delivery, and consumer communities. Participants at this meeting recommended several cross-cutting priorities to NIDRR, including more emphasis on families in rehabilitation and more emphasis on dissemination of research results.

NIDRR is scheduling a number of planning activities for the next fiscal year, including state-of-the-art studies; work with the Interagency Committee on Handicapped Research and its subcommittees; and a planning conference on rehabilitation research priorities in the area of mental health. It is the goal of NIDRR to involve a broad constituency of researchers, service providers, consumers with disabilities, other Federal agencies, and policymakers at all levels in deliberations about future research directions. NIDRR intends to use a variety of approaches and processes to obtain the input of these constituent groups and expects to continually improve the process.

Changes: None.

Therapeutic Recreation

Comment: One commenter suggested that the project on therapeutic recreation examine two additional issues: (1) how therapeutic recreation services contribute to the rehabilitation process; and (2) the benefits and

outcomes of therapeutic recreation services.

Discussion: The priority calls for an evaluation of the efficacy of therapeutic recreation as a rehabilitation modality, at one point specifically asking that applicants investigate the correlation between therapeutic recreation and rehabilitation outcomes. The Secretary believes that the priority implies that potential applicants should address these issues in some form and does not believe it is necessary to modify the priority.

Changes: None.

Comment: One commenter recommended that the state-of-the-art study required in the priority should also include the development of a long-term research agenda.

Discussion: NIDRR believes that the identification of future research directions is one of the major components of a state-of-the-art study or conference. For this reason, the Secretary does not believe it is necessary to modify the priority.

Changes: None.

Traumatic Brain Injury in Children

Comment: One commenter stated that defining children as persons under sixteen years of age for the purposes of this priority is too restrictive, and that older adolescents should be included.

Discussion: The Secretary agrees that any age cut-off, of necessity, is somewhat arbitrary. However, NIDRR funds considerable research and related activities in the area of traumatic brain injury. Most of the clients seen in these programs are adolescents and young adults. Therefore, NIDRR wants to focus this project on younger persons in order to develop new knowledge and service models relevant to a younger population.

Changes: None.

Cardiovascular Rehabilitation

Comment: One commenter suggested that several modifications be made to the priority on cardiovascular rehabilitation. The first of these was that the priority consider rehabilitation of individuals with other subsets of coronary disease beyond myocardial infarction, such as angioplasty, coronary bypass, or angiographic documented coronary heart disease. This commenter also urged that the priority specifically address individuals with coronary disease who also have neurological and/or musculoskeletal disability, and include elderly (aged 65 or older) coronary patients. Finally, this commenter recommended that the priority include research on detection of silent ischemia and consider its role in secondary prevention.

Discussion: The Secretary agrees that the research priority should be expanded to include individuals with additional forms of cardiovascular disability. Although researchers are not precluded from studying individuals who also have neurological or musculoskeletal impairments, the intent of the priority is to increase understanding of rehabilitation of cardiovascular impairments, and this should not be confounded by the presence of other disabilities. Elderly persons with disabilities are included in the general population of concern to NIDRR, but at this time NIDRR will not specify that all researchers must include definitive studies of an elderly population in this project. Studies of silent ischemia and secondary prevention are also important; however it is the judgment of NIDRR that these issues could not also be addressed within the time frame and resource level for this project. NIDRR will consider these issues for future priorities, and also suggests that interested researchers consider using the investigator-initiated program mechanisms to address some of these problems.

Changes: The priority has been changed to include individuals with other forms of cardiovascular impairments, such as angioplasty, bypass surgery, and angiographic document coronary disease.

Functional Electrical Stimulation (FES)

Comment: One commenter suggested that additional research projects on FES are not needed, but that a clearinghouse to catalog, correlate, and evaluate other FES studies is needed.

Discussion: NIDRR believes that there remains a need to develop additional clinical knowledge about the applications of selected FES regimens to specific impairments. However, the suggestion for a compilation and review of developments in the field is an interesting one and NIDRR will give it further consideration as a future priority. At the same time, the Secretary encourages those interested in a project of this type to consider submitting an application to one of NIDRR's investigator-initiated programs.

Changes: None.

Priorities for Research and Demonstration Projects (12)

Improving Job Retention for Disabled Small Business Employees

Early rehabilitation services at the worksite assist disabled individuals to continue as productive workers with a minimum of lost work time. More than half a million workers each year leave work for five or more months because of serious physical disabilities. However, only a very small percentage of these workers receive rehabilitation services to promote return to work. The average worker who becomes disabled is over fifty years of age, works for a small employer, and will receive a monetary benefit as a result of a disability.

Despite numerous obstacles, many of America's larger corporations have successfully implemented employee-based disability management programs. Observers have noted that early interventions at the worksite appear to have beneficial results for both workers and employers. These benefits include prevention of job loss; continued optimal worker performance; increased independence rather than dependence; efficient use of health resources; cost-control of expensive disability-related services; and improved coordination of community rehabilitation services. These large corporations can provide excellent employer-sponsored human resources programs, which have resulted in these advances in disability management.

However, the majority of the work force is employed in small businesses that have few resources to use for disability management at the workplace. Research and demonstration activities are needed to develop and test innovative models to address the problems of disability in a small business setting.

An absolute priority is announced for a research project to:

- Identify existing, and develop new, management approaches for job retention and return-to-work of employees who become disabled while employed in a small business;
- Investigate the feasibility of organizing consortia for the purchase of rehabilitation services; sharing the costs of rehabilitation for high risk employees; disability-management "health maintenance organizations"; or similar mechanisms to enable appropriate combinations of small businesses, business associations, labor unions, public employers, entrepreneurs, and self-employed individuals to join together to obtain job retention/return to work assistance for workers who become disabled while employed in small businesses;
- Explore possible roles for independent living centers, university extension programs, adult and continuing education programs, and related educational and information centers in advising employers and

employees in small businesses on work accommodations, counseling on disability programs and benefits, and related disability management components;

• Identify the financial impact on small businesses of lost productivity and worker separation due to sudden onset of disability or traumatic injury, and provide estimates of possible cost savings through disability management approaches;

• Identify financial and other obstacles to alternative private and public solutions to the problems of disability and the small employer and possible approaches to overcome these impediments;

• Conduct one or more tests or demonstrations, focusing on a specific industry, geographic area, or other discrete group, of innovative solutions that will reduce job separation for workers who become disabled while employed in a small business; and

• Disseminate project findings to small businesses, business and labor associations, universities, public agencies, and rehabilitation organizations.

Evaluation of Therapeutic Interventions in Arthritis Rehabilitation

There are over thirty-one million arthritic patients in the United States, and one million new cases of arthritis appear each year. The economic impact of the total number of arthritis patients per year is $13 billion, accounting for lost wages, hospitalization, and physicians' fees. More than five percent of the U.S. population, aged 25–74, has had to change job status due to arthritis with a loss of $4 billion in wages.

Arthritis includes more than 100 diseases and syndromes. The possibility of developing arthritis increases dramatically with age. Approximately one-fourth of those between the ages of 45 and 64 and 40 percent of those 65 and older have arthritis.

An absolute priority is announced for a project to:

• Investigate and evaluate current techniques to reduce and control pain resulting from arthritis;

• Identify the causes of weakness and fatigue associated with arthritis and determine the most effective intervention strategies available to reverse these effects;

• Investigate the potential benefits of exercise, if any, for certain types of arthritic conditions;

• Determine the efficacy of dry and moist heat as well as cold in therapeutic regimens for various types of arthritic conditions; and

• Identify and evaluate various therapies that could retard the progression of arthritis and prevent more severe disability.

• Identify approaches for job placement, retention, and return-to-work for individuals with arthritis.

Functional Electrical Stimulation (FES) To Control Bladder and Bowel Incontinence

Millions of people are affected adversely by the loss of voluntary control of bladder and bowel functions, resulting in either urinary or fecal incontinence or both. Incontinence is a major cause of institutionalization of elderly and disabled persons and seriously impedes rehabilitation and restoration to full functioning. Among the impairments that may result in this loss of control are neural injury, bladder imbalance, and stress incontinence. Functional Electrical Stimulation (FES) has been proven to be somewhat effective in helping persons with weakened pelvic floor muscles to improve voluntary control. The efficacy of FES for incontinence resulting from neurogenic dysfunction has not been as clearly demonstrated, but improved diagnostic methods and the development of FES systems to control bladder and bowel function hold great promise.

An absolute priority is announced for a project to:

• Develop and evaluate microcomputer-controlled diagnostic systems for simplified and precise diagnosis of bladder and bowel loop function and evaluation of the effects of FES on these loop functions;

• Conduct studies of methods for using FES on pelvic floor musculature; and

• Design and develop new applications of functional electrical stimulation based on the range of bladder and bowel dysfunctions defined by the new diagnostic systems.

Cardiovascular Rehabilitation

Cardiovascular diseases comprise a major group of medical problems in the U.S. Currently, four million persons are disabled by some manifestation of coronary heart disease, and 1.3 million suffer an acute myocardial infarction annually. Some of the 600,000 survivors will return to work after a normal convalescence, others will have to be retrained for new occupations, and the vast majority will experience complications that will curtail or hinder their successful rehabilitation. Additional numbers of persons have cardiovascular disabilities resulting from angioplasty, bypass surgery, or angiographic documente l coronary disease.

The problem is magnifi d by the fact that the majority of the survivors of infarctions are under age sixty-five, and thus would be expected to have additional years of productive work, family responsibilities, and community activities. Unfortunately, the number of persons disabled by cardiovascular disease who are receiving rehabilitation services is small in proportion to the seriousness of the disease.

Clinical application of exercise physiology, accompanied by exercise stress testing, is a promising approach to enhance rehabilitation for this population.

An absolute priority is announced for a project to:

• Study and evaluate quantitative methods to assess myocardial performance and functional outcomes, and develop techniques to measure the functional capacity of the heart that can be used in vascular rehabilitation programs;

• Conduct normative studies to quantify the demands made upon cardiac capacity by various kinds of vocational and avocational physical activities and psychological stresses; and

• Develop, evaluate, and disseminate an effective intervention model to reduce impairment and enhance comprehensive rehabilitation of cardiovascular disability due to coronary infarction, angioplasty, bypass surgery, or angiographic documented coronary disease.

Functional Electrical Stimulation and Pressure Sores

Several million persons have reduced resistance to ulceration of the skin and soft tissues as a result of impaired circulation and concentrated external pressures. Among those who often acquire these debilitating conditions are those who are elderly or paralyzed. Recent preliminary studies, without control groups, have indicated that the application of electrical stimulation across severe wounds has led to the healing of these wounds in surprisingly short times without surgical or other interventions. There is also fairly clear evidence that paraplegic subjects participating in research studies to develop the capacity to stand and walk have experienced greatly reduced incidence of pressure sores. Research is needed to investigate these observations, which, if accurate, will reduce debilitation and other costs resulting from pressure sores.

An absolute priority is announced for a project to:

- Investigate the effects of electrical stimulation by both pulsed and direct current across pressure sore wounds to determine the efficacy of electrical stimulation for wound healing;
- Identify possible mechanisms and techniques to determine optimal quantities of FES to achieve good wound healing results; and
- Investigate the short-term dynamic effects of electrical stimulation, tissue undulation, shape reconfiguration, pressure variation, and increased blood circulation in relation to the prevention of pressure sores.

New Technologies To Address Problems of Low Vision

According to a 1977 household survey administered by the National Center on Health Statistics, 1.4 million Americans are unable to read ordinary newsprint at a normal viewing distance without some form of visual aid. Fewer than ten percent of these individuals are totally blind. The vast majority, however, have sufficient visual impairment to affect significantly their ability to perform everyday tasks.

The major causes of low-vision are macular degeneration, cataracts, glaucoma, and diabetes. Three-fourths of the population with low vision problems are over fifty years of age. The low-vision population will significantly increase in number as the population grows older. Assuming no change in the efficacy of medical treatment for sight-threatening diseases, the number of individuals with low-vision is projected to increase by 78 percent to about 2.5 million by the year 2000.

New technologies can provide the means whereby persons with low-vision disabilities can improve their functional sight substantially. A critical element of any project to be funded under this priority is the involvement of individuals with low-vision in the planning and assessment of the research and its products.

An absolute priority is announced for a project to:

- Design an improved macrofocusing monocular with a larger field of view, automatic focus, and more acceptable appearance;
- Design and develop new illumination devices that are portable, compact, and cool, require minimum energy, have variable beam size, variable illumination capability, and vertical polarization features; and
- Design and develop a valid vision assessment device to measure spatial resolution, contrast sensitivity, visual field, binocular function, and glare sensitivity.

Psychological and Social Adjustment After Stroke

Stroke is the third leading cause of death in the U.S., accounting for 169,000 deaths in 1980. There are an estimated 1.7 million persons who have cerebrovascular disease. Each year there are 400,000 new strokes and 100,000 recurrences. Although stroke remains the fifth-leading cause of death in persons aged 45 to 54 years, the number of persons in that age group who are surviving strokes has increased dramatically.

However, innovations in rehabilitation have not been sufficient to provide optimal independent functioning and maintenance of productive life style for the younger stroke survivor. The prognosis for these stroke survivors varies. It is estimated in the professional literature that ten percent will return to work, forty percent will have a residual mild disability, forty percent will require moderate assistance with activities of daily living, and ten percent will need long-term residential care. The goals of comprehensive rehabilitation should be to maximize the functional independence and productivity of the stroke patient by minimizing residual functional impairment, preventing secondary medical complications, treating psychological and social adjustment problems, and reducing vocational displacement.

An absolute priority is announced for a project to:

- Study and evaluate new approaches and techniques to enable achievement of optimal psychological and social adjustment following stroke, with emphasis on the adjustment needs of stroke survivors who are in the ages for working and rearing families;
- Identify and describe those characteristics that maximize the family's ability to cope successfully with the challenge imposed by a stroke, including strokes occurring to young or middle-aged members of the family; and
- Develop and evaluate new methods designed to promote the high degree of motivation necessary for successful cooperation of the patient and family in a rehabilitation program.

Efficacy of Therapeutic Recreation as a Treatment Modality

A large increase in the number of rehabilitation programs following World War II resulted in a proliferation of various types of therapeutic recreation services with diverse approaches and techniques but no coherent or commonly accepted guidelines or theoretical perspective. Since that time, therapeutic recreation has continued to gain acceptance as an apparently useful activity. However, there has been no systematic collection of data that assess the contribution of recreational therapy to the physical and mental functioning of persons with disabilities.

There are varying schools of thought concerning the types of benefits that can be derived from therapeutic recreation. One perspective is that recreation is purely diversionary, and has only peripheral benefits that are not absolutely necessary to the successful rehabilitation of disabled individuals. Others believe that therapeutic recreation can have a significant and positive impact on both the physical and psychological rehabilitation outcomes for disabled individuals and should be an indispensable factor in the rehabilitation process.

NIDRR proposes to assess definitively the merits of therapeutic recreation, and to measure its impact on the rehabilitation of disabled persons. This announced priority is designed to produce scientific data on the potential benefits of therapeutic recreation as a treatment modality in the rehabilitation process.

An absolute priority is announced for a project to:

- Determine the correlation between therapeutic recreation and successful rehabilitation outcomes in order to establish the effectiveness of this activity in rehabilitation;
- Investigate the impact of various types of therapeutic recreational activities on the physiology of persons with disabilities, including such variables as heart rate, oxygen intake, ventilatory volume, and blood pressure, and on psychological well-being, including such variables as self-esteem, emotional stability, internal control, and interpersonal adjustment;
- Assess the effectiveness of recreational activity in reducing and preventing secondary disability and readmittance to medical and rehabilitation facilities;
- Assess the effect of therapeutic recreation on the disabled individual's length of stay in a hospital or rehabilitation facility;
- Investigate the comparative effects on the psychological well-being of participants in recreational programs that integrate disabled individuals with those who do not have disabilities; and
- Conduct a state-of-the-art meeting in the final year of the project to promote consensus on the benefits of therapeutic recreation in rehabilitation.

Studies on Traumatic Brain Injury (TBI) in Young Children

"Few crises in life are as devastating as an illness or sudden trauma of a child that results in brain injury. Whether eighteen months or eighteen years, the child's life is drastically changed." (Hutzler, 1985) The child from birth to adolescence may experience major cognitive, emotional, and behavioral changes that severely alter his or her prior levels of functioning. These changes necessitate adjustments in the educational programs, family interactions, and social relationships of the child.

From the time of injury, families must learn to cope with a new set of economic, emotional, and psychological problems. In addition, families must learn to communicate with medical caregivers, to locate needed community services, and to identify and manage financial support and insurance reimbursement provisions.

As a prerequisite to developing new strategies and service programs to assist children with brain injuries and their families, it is necessary to understand thoroughly the scope and dimensions of the problem, and to document an effective role for families in the rehabilitation process.

This priority would have a positive impact on the family and is consistent with the requirements of Executive Order 12606—The Family. This priority would strengthen the authority and participation of parents in the rehabilitation of their children who are disabled.

An absolute priority is announced for a project to:

- Study the social, economic, and psychological impact of TBI on families of children up to age sixteen; and
- Develop and evaluate techniques for family involvement as part of the treatment/education/rehabilitation team in the re-entry process and study incentives and disincentives to family involvement.

English Language Acquisition in Deaf Children

There are persistent problems inhibiting successful transition into post-secondary school activities for deaf youth. Frequently, efforts to provide training for employment or career advancement require extensive supplementary training in basic English language skills before any meaningful instruction can proceed. The problem is not new, but has generated increased concern over the past decade.

In an effort to gain clearer understanding of the current trends in teaching English language skills to deaf students, particularly very young deaf children, NIDRR proposes to fund a project that will examine the methods currently used in selected schools, classes, and programs throughout the United States. The study will also assess the availability of various types of support services, including educational interpreters, and develop a comprehensive state-of-the-art document setting forth action steps for implementation at the national, state and local levels and also, additional research needs.

An absolute priority is announced for a project to:

- Analyze current processes used in teaching English language skills to deaf children in selected nationally representative schools, classes, and programs for deaf students;
- Assess English language competency levels of deaf youth leaving these programs over the past five years, differentiating among students with various levels of hearing impairment, numbers of additional disabilities, and primary family languages;
- Analyze the English language acquisition methods and techniques used in various training programs for teachers of deaf students;
- Analyze certification requirements related to instruction in English language skills for various local, State, and national bodies involved in awarding certificates to teachers of deaf youth;
- Analyze the literature on language acquisition in general, and its application to persons with deafness in particular; and
- Provide an authoritative report on the current state-of-the-art in teaching English language skills to deaf children, involving nationally recognized experts as well as deaf youth and their families, and including recommendations for future research.

The Therapeutic Effects of Functional Electrical Stimulation on Persons With Paralysis or Vascular Insufficiency

Several million persons who are either paralyzed or have severe vascular insufficiency that compromises their ability to perform physical tasks may benefit from the application of Functional Electrical Stimulation (FES). It is important that the effects of the use of FES on those populations be evaluated in the context of improving tissue viability and general physical condition.

An absolute priority is announced for a project to:

- Investigate therapeutic effects of the use of FES to promote standing and walking, using loop control modes with natural and implanted biosensors;
- Investigate the effects of FES on persons with vascular insufficiency when used as a therapeutic intervention to improve local or general physical conditioning that has been compromised by ischemia and peripheral neuropathy; and
- Develop and evaluate new FES techniques to increase blood flow and bone strength in paralyzed extremities.

Research in Adventitious Hearing Impairment

Most research on adult onset hearing loss has focused on diagnostic and amplification technologies and on neurological, anatomical and physiological changes in the cochlea, auditory nerve, brain stem, and cortex. Aural rehabilitation models have been published. However, despite the prevalence of hearing loss, and despite abundant anecdotal accounts of its human and economic costs, there has been surprisingly little research to examine the psychosocial effects of hearing loss in adulthood.

In 1986, NIDRR convened a conference on aging and rehabilitation; in one segment of that conference, a number of research scientists, health care professionals and persons from service-delivery agencies met to discuss priorities for collaborative research on adult onset hearing loss. This priority is based on research needs identified at that conference.

An absolute priority is announced for a project to:

- Analyze characteristics of adults who have adjusted successfully to hearing impairment, including such variables as personality factors, nature and severity of the hearing loss, communication styles, support networks, and interventions with professionals;
- Identify successful rehabilitation strategies, emphasizing professional attitudes and behaviors that may impede or facilitate adjustment;
- Investigate interactions between biological and psychosocial phenomena, with an emphasis on assessing the extent to which these interactions exacerbate disability caused by hearing loss in middle and later life; and
- Evaluate existing databases on health status, psychological characteristics, and behavioral patterns to determine their value in providing information about the effects of adult onset of hearing impairment.

Priorities for Knowledge Dissemination and Utilization Projects (4)

Development and Management of Supported Work Programs by Consumer-Directed Independent Living Centers

The Rehabilitation Act Amendments of 1986 authorize the Rehabilitation Services Administration (RSA) to make grants to assist State rehabilitation agencies to develop collaborative programs with appropriate public agencies and private nonprofit organizations for traditionally time-limited post-employment services leading to supported employment for individuals with severe handicaps. Independent living centers (ILCs) are eligible, although at present few ILCs operate these programs. Independent Living Centers may represent an untapped resource for supported employment, since the Centers already have contact with many of the disabled individuals in the targeted group, have networking capabilities in local communities, and have some experience at providing some of the support services necessary for supported work programs. Many ILCs are interested in expanding their services to two of the major target groups of supported work—those considered mentally retarded and chronically mentally ill. Many of the services provided by ILCs to eligible clients enable disabled individuals to live in community settings and in many cases enable disabled people to undertake employment. However, these services have not been developed and managed in a manner to constitute supported work. This project is designed to explore the potential value of ILCs as developers and managers of supported work projects, to develop models for effective ILC implementation of these programs, and to explore the value of supported work programs in assisting ILCs to expand their service bases to all eligible clients, including underserved populations.

An absolute priority is announced for a project to:

- Develop appropriate models and training and technical assistance materials to enable ILCs to develop and sponsor supported work programs;
- Test models and materials to ensure they are appropriate to rural and urban ILCs;
- Evaluate the effectiveness of ILCs as providers of supported work services and programs; and
- Disseminate materials to ILCs and State vocational rehabilitation agencies and provide training and technical assistance on their use.

Public Education in Spinal Cord Injury

Traumatic injuries to the spinal cord are among the most catastrophic of all disabling conditions. The annual incidence of spinal cord injuries has been estimated at 30–50 new injuries per million persons per year. There are estimated to be as many as 900 persons with spinal cord injury for every million persons in the population. Epidemiologic and demographic data indicate that spinal cord injury affects mainly young adults. More injuries occur in the 16 to 30 year old age group than all other groups combined. The overwhelming majority of people affected is male (82 percent). This is largely related to the high risk activities engaged in by young males.

Motor vehicle accidents cause nearly half of these injuries; falls and being hit by falling objects account for twenty percent; acts of violence and sports/recreation injuries each account for about fifteen percent of these injuries. Diving and football accidents are the two most common forms of sports injuries. Most injuries are sustained on weekends, and the incidence of injuries increases in summer months, and during daylight hours.

A public education effort is needed to inform young people, parents, and others about the prevention of spinal cord injury through protective sports equipment, seat belts, and safe driving and recreational practices, and to provide information on emergency procedures that can reduce the possibility of secondary complications.

An absolute priority is announced for a project to:

- Develop a program of public education materials for the general public, especially young people, emphasizing primary and secondary prevention, early intervention, and resources for information and treatment;
- Develop materials on prevention of spinal cord injuries, to include print and audiovisual training materials, posters, and pamphlets, that can be used by both the general and the special media; and
- Devise a plan for the dissemination of the materials developed in this project.

Investigations of Patterns of Research Utilization

To maximize the value of applied research, NIDRR and other agencies have sponsored programs to promote and ensure the use of new disability-related knowledge by consumers and service providers. These efforts include information centers, clearinghouses, bibliographic databases, networks, publications in various media, information brokers, technical assistance, and training. While many of these projects have had significant achievements, there has been no systematic assessment of the most effective methods to promote knowledge utilization by various target populations.

In order to develop a reliable knowledge base for planning and implementing future utilization programs, NIDRR proposes to evaluate various strategies and practices of information dissemination. Not enough is known about how professionals, service providers, and disabled consumers define their information needs and what types of products and services they expect. Even less is known about the extent or manner in which recipients of rehabilitation-related information actually use information and what value they attribute to research-based knowledge.

An absolute priority is announced for a project to:

- Conduct an inventory and substantive review of existing research on information utilization, particularly new research-based knowledge, in a variety of selected fields, including examinations of both conceptual and practical literature, and determine its applicability to the rehabilitation field;
- Review the use of existing rehabilitation information services and databases according to volume of users, characteristics of users, and types of requests and compare the findings to uses of selected other information systems (e.g., medicine, education, aging);
- Investigate the use of information by disabled consumers and their families, and assess the relative effectiveness of various strategies for reaching this audience;
- Develop and test techniques to reach segments of the disabled population that are less likely to access information, including elderly persons, disadvantaged persons, residents of rural areas, minorities, and individuals whose primary language is not English; and
- Develop programs to train individuals with disabilities in the skills of effective information access and to train consumer organizations in the best methods to reach their target audiences in their dissemination efforts.

Regional Information Exchanges

There is a need to promote the widespread use of new, validated rehabilitation practices and exemplary rehabilitation programs in selected priority areas in order to improve the service delivery system for disabled

individuals. NIDRR proposes to address this need by establishing one or more regional information exchanges similar to the regional diffusion networks which are now operating in the East (Federal Regions I and II). NIDRR believes that these exchanges will be most effective if they focus on facilitating the adoption of program models developed locally or within the same region. Also, NIDRR believes that this information exchange will be strengthened by the inclusion of expert consultants available to provide specific technical assistance aimed at rehabilitation agencies.

Priority areas for diffusion efforts during the period of this priority will include the use of rehabilitation technology in vocational rehabilitation, barrier-free environments, transitional employment programs, and other topic areas which are of concern to the specific region or which are agreed upon by NIDRR and the recipient of the award.

An absolute priority is announced for one or more projects to:

- Develop criteria for identifying exemplary rehabilitation programs, and develop information collection instruments which include measurements related to the identified criteria;
- Solicit nominations of exemplary programs in the priority areas from program operators, consumer organizations, and other relevant parties in the selected region;
- Develop and implement a procedure to select the most promising programs for further consideration and arrange independent peer reviews of those programs to determine exemplary programs for diffusion purposes;
- Develop public relations and marketing approaches to make the wide audience of rehabilitation service providers and special educators aware of the exemplary programs and stimulate their interest in adopting or adapting similar models, assisted by the diffusion network;
- Facilitate the exchange of technical assistance between the exemplary program and the requesting adopter program through onsite demonstrations, training materials, and direct consultation;
- Develop and maintain a referral system of expert consultants in these priority areas of the project to facilitate the linkage of service providers and disabled consumers to knowledgeable resources; and
- Maintain appropriate data on the diffusion network to support an evaluation of its effectiveness.

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Secretary of Education.

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