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Margaret J. Giannini, M.D.
Deputy ACMD for Rehabilitation and Prosthetics
Director, Rehabilitation Research and Development Service
Veterans Health Services and Research Administration
Department of Veterans Affairs

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The Journal of Rehabilitation Research and Development and its supplements are printed on acid-free paper, as of Vol. 25 No. 2 (Spring 1988).
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## ELECTRONIC PRODUCTION

The progress reports in this publication were organized with a multiuser database. The database manager was VA Fileman, running under Micronetics Multiuser Mumps (MSM) on a Dell PC AT. The database was used to compile the reports and to produce the table of contents, sponsor index, subject index, and author index. The database was also used to cross-reference progress reports. Voluntary technical support for the database operation was provided by John Bowman.
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350 A Study of Successful Deaf High School Students
350 A Social Cognition Program for Deaf Adolescents and Adults
351 Effects of Interpreter Training on Rorschach Scores
351 Linguistic Indicators of Thought Disorder Among Deaf Mental Patients
352 Identification of Organic Impairment Through Neuropsychological Assessment
352 Ethnography and Evaluation of DeafCAN: A Program for Minority Deaf College Students
353 Peer Counseling Programs for Deaf Clients
353 Therapeutic Preparation of Deaf Clients
354 Signaling Systems/Alternative Technologies for Deaf and Severely Hard of Hearing People
354 Innovative Technology for Deaf and Hard of Hearing People/Integrated Computer Workstation for Deaf Individuals
355 Feature Extraction Methods for a Video Telephone for Deaf and Hard-of-Hearing People
356 Adaptive Capabilities of Postural Stabilizing Reflexes
356 Cochlear Implant and Tactile Aid Studies with the Deaf

B. Speech Impairment
357 Computer-Assisted Speech Evaluation Expert System
357 Hierarchical Computerized Language Treatment for Aphasic Adults
358 Cortical Auditory-Evoked Potentials and Behavioral Measures of Aphasia
359 Development of Microcomputer and Clinician Treatment Procedures for Aphasia
360 The Influence of Topic and Listener Familiarity on Aphasic Language
360 Characteristics of Tracheoesophageal Voice in Four Prosthetic/Occlusion Conditions
361 Chest Wall Kinematics in Alaryngeal Speakers: A Pilot Study
362 Ideomotor Apraxia: Recovery and Treatment
363 Augmentative Communication for Intensive Care Unit Patients
363 Promoting Generalized Language Use: An Analysis of Treatment and Subject Variables
364 Neurogenic Communication Disorders in Remote Settings
365 Exploration of Simple Environmental Control Technology with Severely Multiply Disabled Students
366 Development of a Computer-Based Expert System for the Selection of Assistive Communication Devices
366 Evaluation of Voice Amplifiers
367 Developing the Role of Maxillofacial Prosthodontists in a Rehabilitation Team for Disarticulor Patients
368 Evaluation of Gestural Methods for Control of Computer-Based Communication Systems
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C. Vision Impairment

374 Motorized and Autofocus Control Systems for Telescopic Low Vision Aids
374 User Interface Environment for Visually Handicapped Computer Users: A Pilot Study
375 Development of the Family Training Program Curriculum in Low Vision
376 Environmental Information Needs for Wayfinding by Special Populations
377 Development and Validation of Criteria for Task Safety in Blind Mobility
378 Relationship of Auditory Skills to the Mobility of Blind and Visually Impaired Individuals
379 Development of an Objective Measure of Orientation Skill: A Pilot Study
379 Identification and Classification of the Career Transition Problems of Blind and Visually Impaired Youth in Transition from School to Work
380 Identification of Differential Costs and Time Usage of Blind and Visually Impaired Persons and the Vocational Rehabilitation Process
380 Differential Costs and Time Usage of Blind and Visually Impaired Persons and the Vocational Rehabilitation Process
381 Identification of Differential Characteristics of Sites Selected or Rejected by State Licensing Agencies for the Operation of the Randolph-Sheppard Business Enterprise Program
382 Enhancing the Productivity of Randolph-Sheppard Business Enterprise Program Facilities Through Personal Computers
383 Evaluation of Randolph-Sheppard Business Enterprise Program Facility Designs and Effects of Illumination and Color Contrast Considerations
383 Broad-Based Technical Assistance Documents and Agency Effectiveness Analysis to Enhance Competitive Employment of People Who Have Visual Disabilities
384 Workplace Visual Functioning Assessment
384 Assessment of the Need for a National Information and Referral Center for Partially Sighted Individuals
385 Development of Hemianopsia Glasses

D. Deaf-Blind

385 Microcomputer Software for Blind and Partially Sighted People
386 Smith-Kettlewell Rehabilitation Engineering Center
389 Pictures for Persons Who Are Blind: A Study with Raised Line Drawings
390 Fast Motion in Unknown Environments with NavBelt: A Sophisticated Electronic Travel Aid for the Blind

XV. Spinal Cord Injury

A. General

395 Accelerometric Body Segment Motion Analysis During Spinal Injury Patient Handling: A Pilot Study
396 Factors Influencing Joint Compliance and Reflex Mechanisms Following Spinal Cord Injury
397 The Corticospinal System
398 Colorado Comprehensive Spinal Cord Injury Surveillance Program
399 Psychosocial Adjustment of Persons with Combined Spinal Cord Injury and Traumatic Brain Injury: A Longitudinal Investigation
399 A Longitudinal and Cross-Sectional Analysis of Well-Being in Persons with Spinal Cord Injury and Their Caregivers
400 Long-Term Costs of Spinal Cord Injury
401 Aging in Relation to Spinal Cord Injury
401 Life Status Study of Persons with Spinal Cord Injury
402 Comparative Rehabilitation Outcomes for Women and Men as Reflected by the National Spinal Cord Injury Database
403 A Comparative Longitudinal Study of Rehabilitation Outcomes for Women and Men with Spinal Cord Injury
403 Collaboration Between Model Spinal Cord Injury Systems and Independent Living Centers in Facilitating Independent Living by Persons with Recently Incurred Spinal Cord Injury
404 Direct Approach to Synaptic Organization of Nociception
404 Spinal Somesthetic Pathways (Monkeys)
405 Rehabilitation Technology Needs Assessment of Farmers and Ranchers with Spinal Cord Injuries
405 Physiological Mechanisms of Spinal Cord Plasticity
406 Electrophysiological Basis for Contraction in the Bladder
407 Intrathecal Baclofen for Intractable Spinal Spasticity
407 Health and Functional Status of Aging SCI Persons
B. Treatment and Rehabilitation

409 Development and Testing of New Spinal Implant Systems
409 Management of the Musculoskeletal Complications of Spinal Cord Injury
410 Compression and Ischemia As It Affects Spinal Cord Injury
411 Electric Field Distribution in Experimentally Injured Spinal Cord: Improved Function After Electrical Stimulation of Injured Spinal Cord
412 Wheelchair Graded Exercise Test for Patients with Lower Limb Disabilities
414 Interactive Videodisk Training for Self-Care Skills
415 Effect of Exercise on Upper Extremity Recovery Following Quadriplegia
416 Control of Perioperative Hemodynamic Instability in Quadriplegia
417 Evaluation of Virginia Regional Spinal Cord Injury System Follow-up Care
417 Pathologic Effects of Recurrent Bacteriuria in Patients with Spinal Cord Dysfunction
418 A Comprehensive Approach to Management of Infertility in Males with Spinal Cord Injury
419 Medical and Psychological Considerations Regarding the Surgical or Pharmacological Treatment of Impotence in Males with Spinal Cord Injury
420 Influence of Age on Rehabilitation Outcome of Persons with Spinal Cord Injury
421 Ultrasound for Urinary Tract Surveillance of Persons with Spinal Cord Injury
422 A Clinically-Derived Protocol for Changing Condom Catheters in Males with Spinal Cord Injury
422 Histopathology of Denervated Skin Following Spinal Cord Injury
423 Natural History and Clinical Course of Skin Complications (Excluding Pressure Ulcers) in Persons with Spinal Cord Injury
424 Natural History and Clinical Course of Urinary Tract Complications in Patients with Spinal Cord Dysfunction
425 Disuse Osteoporosis in Spinal Cord Injured Patients
426 Standard versus Low Molecular Weight Heparin in the Prevention of Thromboembolism in Spinal Cord Injury
427 Managing Urinary Tract Infection in Spinal Cord Injury
428 Expiratory Muscle Training in Spinal Cord Injury: A Randomized Controlled Clinical Trial
428 Treatment of Spasticity with Electrical Stimulation in Spinal Cord Injured Men and Women
429 Voice-Augmented Telephone Access for Quadriplegics
429 Treatment of Infertility Among Spinal Cord Injured Males Using Vibratory Stimulation
430 Neuromuscular Plasticity: Recovery After Spinalization
430 Movement Deficits Following Spinal Cord Lesions (Macaques)
431 Fundamental Studies in Spinal Cord Injury
431 Clinical Research Center for Acute Spinal Cord Injuries

432 Evaluation of Neural Implantation for Recovery from Spinal Injury
432 Microstimulation of the Sacral Spinal Cord (I)
432 Microstimulation of the Sacral Spinal Cord (II)
433 The Role of Weightbearing and FES-Induced Exercises on Bone Loss After Acute Spinal Cord Injury
434 Bladder Reinnervation by Anastomosis of L4 VR to L6 VR While Leaving Intact L4 DR as Starter of Micturition
434 Prophylaxis for Deep Vein Thrombosis in Acute Spinal Cord Injury Comparing Two Doses of Low Molecular Weight Heparinoid in Combination with External Pneumatic Compression
435 Spinal Cord Monitoring Using Adaptive Matched Filters
435 Magnetic Resonance Imaging (MRI) Changes Associated with Chronic Post-Traumatic Myelopathy
436 Comparative Long-Term Evaluation of Urologic Management Methods
436 Comparative Effectiveness of Two Methods of Weaning Quadriplegics From a Ventilator

C. Spinal Cord Regeneration

437 Toward Better Methods of Nerve Repair and Evaluation
438 Axonal Regeneration in Artificial Nerve Graft Model
439 Artificial Nerve Graft: Union of Cellular and Noncellular Components
440 Regeneration and Functional Recovery in Neural Tissue
440 Recovery and Regeneration After Spinal Neuron Injury
441 Center for Acute Spinal Cord Injury
441 Spinal Cord Injury Research Center
442 Mechanisms of Recovery After Spinal Cord Injury
442 Recovery of Function After Spinal Cord Injury
443 Spinal Cord Injury and Repair
444 Novel Cell Lines for Spinal Cord Transplantation
444 Repair of Injured Nervous Tissue with Foreign Grafts
445 Muscle Function Recovery After Peripheral Nerve Injury Enhanced by Chronic Direct Current Stimulation

XVI. Wheelchairs and Powered Vehicles

A. General

446 Adaptation of Wheelchair Standards for VA Policy and Purchasing Requirements
447 Comparative Study of 19 Wheelchairs
447 Costs and Benefits Associated with Limiting Deep Discharge of Wheelchair Batteries
448 International Wheelchair Standards: A Study of Costs and Benefits
449 Toward Further Development of a Modular Wheelchair Tray for the Physically Disabled
450 Ergonomics of Manual Wheelchair Propulsion
450 Functional Assessment of the Performance Capacity of the Wheelchair-User Combination in the Course of Rehabilitation
451 Wheelchair Evaluation
451 Rehabilitation Engineering Center for Personal Licensed Transportation for Disabled Persons
452 Research on Improving Wheelchair Frame Durability
A Wheelchair for Exercising Paralyzed or Paretic Limbs of Paraplegics
An Italian Consumer Survey of Wheelchairs
Investigations into the Influence of Wheel Position on the Propulsion Capabilities of Wheelchair Users
Comparative Evaluation of Chargers for Wheelchair Gel Cell Batteries

B. Powered Controllers
Linear Synchronous Motors for Power Wheelchairs
Ultrasound Head-Controlled Wheelchair and Interface
Electric Wheelchair Controllers: Effect of Speed and Acceleration on Driving Performance
Isometric Joystick versus Displacement Joystick for Simulated Wheelchair Control
Evaluation of the MANUS Wheelchair-Mounted Manipulator in the Home, Work, and School Environment
Adaptive Speed Control for Electric Wheelchairs
An Improved DC-DC Converter
Brushless DC Motor Evaluation
Reliable, Available, and Safe Electric Wheelchairs
Research on Wheelchair Frame Modeling
The MIT Damped Joystick: A Control Interface for Tremor-Disabled People
Development of a Smart Wheelchair
Identification of Desirable Features of a Smart Wheelchair
Further Development and Clinical Testing of a Multifunction Vehicular Interface Unit for Quadriplegic Drivers
Effects of Flexible Passive Standing in Patients with Spinal Cord Injuries

C. Seating Systems
Computerized Shape Reproduction for Custom Contoured Wheelchair Seating Systems
Development and Clinical Evaluation of an Adjustable Modular Postural Seating System for Persons with Mild to Severe Physical Involvement
Toward Development of a System for Safely Transporting Physically Disabled Children in Passenger Cars
Functional and Clinical Evaluation of the Short- and Long-Term Effects of Anteriorly Tipped Seating in Children with Cerebral Palsy
Development and Evaluation of an Advanced Pressure-Mapping System for Prescription of Seating Wheelchair and Positioning Systems
Research and Development to Improve Seating Design
Research and Development on Assessing Wheelchair Ride Quality
Development of a Tilting Backrest for Wheelchairs
Biomechanical Analysis of Wheelchair Propulsion for Various Seating Positions

XVII. Wound and Fracture Healing

A. Pressure Sores
Electrical Muscle Stimulation for the Prevention of Pressure Sores
Enhancement of Wound Healing Using Synthetic Skin, Electric Stimulation and Hyperbaric Oxygen Therapy
Identification and Evaluation of a Comprehensive Skin Care Program to Prevent Skin Breakdown in Spinal Cord Injured Patients
Treatment of Pressure Ulcers
Use of Direct Current Stimulation in Pressure Sore Healing
Therapeutic Intervention for Healing Pressure Sores with Electrical Stimulation on Persons with Spinal Discontinuities
An Analytical Service Demonstration of the Role of Biochemical and Behavioral Indicators in the Prevention of Recurrent Pressure Sores
Pressure Sore Prevention: An Effective Stepped Care Approach
Bedsore Biomechanics

B. Fracture Healing
Enhancement of Union of Segmental Defect Fractures II
Periosteum as a Functional Membrane
Enhancement of Femoral Head Fracture Healing by Means of AC and DC Electrical Stimulation
Biomechanics of External Fixation of Tibial Fractures
Effect of Acetoazolamide on Fracture Healing

C. Other
Morphologic and Ultrasonic Analysis of Normal and Ischemic Human Wounds
Diabetic Foot Ulcers: Quantifying the Effects of Nonsurgical Treatments
Bone-Derived Cells Produce a Chemotactic Factor

XVIII. Miscellaneous
Development of a DHCP Database and Quality Assurance Information System for Audiology and Speech Pathology: A Pilot Study
National Invitational Conference on the Development of a Health Services Research Capacity in Physical Disability and Rehabilitation
A Model for the Production of Low Demand Assistive Devices
Health Insurance Coverage of Disability Beneficiaries