NIDRR Grantees on the Cutting Edge

Johns Hopkins University Burn Injury Rehabilitation Model System (JHU-BIRMS), Johns Hopkins School of Medicine (H133A020101) led by James A. Fauerbach, PhD. Theresa San Agustin, MD, Project Officer. Abstract: This project tests interventions targeting three common postburn secondary complications affecting health and function: generalized deconditioning, muscle atrophy, and acute stress disorder. The JHU-BIRMS includes several projects: (1) testing the efficacy of its augmented exercise program in rehabilitating people with generalized deconditioning, (2) testing the efficacy of enhanced cognitive-behavioral therapy in treating individuals with acute stress disorder and preventing the development of chronic posttraumatic stress disorder, (3) developing a new measure that quantifies the degree of social stigmatization experienced by burn survivors and its impact on emotional adjustment and integration into the workplace and the community, (4) a collaborative effort with the University of Washington on a workplace integration study identifying and quantifying those factors interfering with early and complete return to work, and (5) a collaborative study on health and function with the University of Texas. Find out more at: www.hopkinsmedicine.org/burn/research/index.html

Pediatric Burn Injury Rehabilitation Model System, University of Texas Medical Branch (H133A020102) led by David Herndon, MD. Theresa San Agustin, MD, Project Officer. Abstract: This program conducts independent and multi-center projects focusing on evaluating and improving the rehabilitation provided to the burned child, striving to decrease disability and improve reintegration into society. The project continues longitudinal assessments of patients, expanding the database that includes measures of cardio pulmonary function, physical growth and maturation, bone density, range of motion, activities of daily living, scar formation, reconstructive needs, and measures of psychosocial adjustment. This data is used to identify areas that require improvement and provide functional outcome measures that can be used in the evaluation of treatment methods. Research activities include: (1) a multi-center project assessing the efficacy of the long-term administration of oxandrolone in the treatment of burn injury with endpoints of improved strength, lean body mass, bone density, and growth; (2) improving rehabilitative outcomes for children by instituting and evaluating major modifications to current treatment for children with large burns; (3) evaluating the use of pressure garments in controlling scar following burn injury; (4) a multi-center study evaluating the relationship between treatment, injury, patient characteristics, and patient outcome in those patients sustaining full thickness hand burns; and (5) evaluating acute stress disorder and posttraumatic stress disorder, including its occurrence, predictive elements, and efficacy of treatment.

The Burn Model Systems Since 1993, NIDRR has funded model systems that focus on the rehabilitation of people with burn injuries and related complications. Their broad focus includes statistical research, community integration, rural services, and a myriad of support and recovery issues.

More than 45,000 burn injuries require hospitalization each year, with about half requiring care in a specialized unit. NIDRR research looks beyond immediate care, to getting back to life.

NIDRR model systems for burn injury rehabilitation child facts, figures and selected outcomes. NARIC Accession Number: O16455/O16456. Project Number: H133A020402. Abstract: Fact sheet presents data collected through August 2005 from burn centers participating in the Model Systems for Burn Injury Rehabilitation funded by NIDRR. Statistics regarding age, gender, risk factors, primary etiology of injury, and severity of injury are presented for 1,802 children treated at the centers. In one issue, results are presented from a study that used the WeeFIM to evaluate the influence of burn size on physical functioning and time to recovery in children. Fact sheets for additional years are also available. In the second issue, statistics regarding age, gender, primary etiology of injury, alcohol or drug use at time of injury, circumstances, and severity of injury are presented for 3,505 adults treated at the centers. Fact sheets for additional years are also available.

NIDRR Grantees (cont.)

Outpatient Social Skills Training For Distressed Adolescent Burn Survivors, University of Texas Medical Branch (H133G005079) led by Patricia E. Blakeney, PhD; Walter Meyer, MD. Bonnie Gracer, Project Officer. Abstract: This project (1) cross-validates previous findings that some social skills training program is beneficial to burn injury survivors, i.e. results in improved social competence and/or diminished behavioral problems, at one-year post-intervention; and (2) tests the hypothesis that beneficial effects can be maintained or amplified by modifying the format of the training to a schedule that more closely resembles the usual outpatient clinical schedule. The goal of this project is to develop and validate an efficient and relatively inexpensive intervention that can be utilized not only by burn-care teams but by health-care professionals in other specialties that are concerned with assisting adolescents who are stigmatized by marked appearance or functional impairment related to a medical condition.

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University of Washington Burn Injury Rehabilitation Model System, University of Washington (H133A020103) led by Loren H. Engrav, MD, Theresa San Agustin, MD, Project Officer.

Abstract: This model system conducts five research projects: (1) A New Approach to the Etiology of Hypertrophic Scarring; (2) Effect of Virtual Reality on Active Range-of-Motion During Physical Therapy; (3) Determination of Reasons for Distress in Burn-Injured Adults; (4) Barriers for Return to Work; and (5) Acute Stress Disorder Among Burn Survivors. Projects 4 and 5 are collaborative. In addition this project participates in the national database. University of Washington also supports a Field Initiated Grant: Efficacy of Pressure Garment Therapy After Burns (H133G050022) led by Loren H. Engrav, MD. This project conducts a randomized, controlled trial to determine the efficacy of custom-fit pressure garment therapy in the prevention of hypertrophic scarring in healed burns so that prescription of them may be based upon sound data or discontinue their use in burn care. The objective of this project is to determine the efficacy of this therapy in the prevention of hypertrophic scarring in healed burns so that prescription of them may be based upon sound data or discontinue their use. Find out more at: bms-dcc.uchsc.edu

North Texas Burn Rehabilitation Model System (NTRBMS), The University of Texas Southwestern Medical Center (H133A020104) led by Karen Kowalske, MD, Theresa San Agustin, MD, Project Officer. Project Number: H133A70023.

Abstract: This project conducts five research projects, two collaborative and three site-specific: (1) Barriers to return-to-work following major burn injury; (2) long-term outcome following major burn injury; (3) Determination of Reasons for Distress in Burn-Injured Adults; (4) Barriers for Return to Work; and (5) Acute Stress Disorder Among Burn Survivors. Projects 4 and 5 are collaborative. In addition this project participates in the national database. University of Washington also supports a Field Initiated Grant: Efficacy of Pressure Garment Therapy After Burns (H133G050022) led by Loren H. Engrav, MD. This project conducts a randomized, controlled trial to determine the efficacy of custom-fit pressure garment therapy in the prevention of hypertrophic scarring in healed burns so that prescription of them may be based upon sound data or discontinue their use. Find out more at: bms-dcc.uchsc.edu

UCHSC Burn Model System Data Coordination Center (BMS/DCC), University of Colorado Health Sciences Center (H133A020402) led by Dennis C. Lezotte, PhD. Theresa San Agustin, MD, Project Officer. Project Number: H133A70023.

Abstract: The BMS/DCC provides a data management and analytical support facility for Burn Model Systems clinical and outcomes research projects. Objectives include: (1) to serve the clinical, research, and public communities to which it is responsible; (2) to serve the needs of good scientific procedure in multi-institutional outcomes research; and (3) to support the needs for patient safety and data confidentiality as required by Federal regulations when conducting collaborative clinical studies. The project offers support in four important areas: project management, data management, analytical support, and dissemination. Support is provided in developing appropriate integrated systems to affect national data collection, project management, data coordination, technical support, collaborative clinical projects, scientific conduct, scientific publication, and effective dissemination. The UCHSC BMS/DCC continues to accumulate and integrate a central repository of data from the Model Systems to enhance their abilities to make sentinel statements and change the way burn injury rehabilitation is done. In addition the DCC provides and coordinates statistical support among the clinical and statistical groups from each Burn Center. Find out more at: bms-dcc.uchsc.edu

More than 2 million people in the United States require treatment for burns each year, and between 3,000 and 4,000 die of severe burns. Older people and young children are particularly vulnerable. (source: Merck & Co.)

Where Can I Find More?
A quick keyword search is all you need to connect to a wealth of disability and rehabilitation research. NARIC’s databases hold more than 75,000 resources. Visit www.naric.com to search for literature, current and past research projects, and organizations and agencies in the US and abroad.

The Cochrane Library includes 33 systematic reviews of healthcare interventions for burns. In addition, there are 6 other reviews, 3 methods studies, 9 technology assessments, 46 economic evaluations, and 2036 clinical trials. Visit thecochranelibrary.org to review these resources.

Current Literature - Selections from REHABDATA


Abstract: Study analyzed data prospectively obtained from adults with major burn injury 2 months after hospital discharge and 12 months after injury to determine (1) how their quality of life (QOL) changed over time, and (2) what specific functional, emotional, and social variables are able to predict QOL. The Burn Specific Health Scale (BSHS) was used to assess QOL. The independent predictor variables were assessed using the Brief Symptom Inventory (BSI), the Functional Assessment Screening Questionnaire (FASQ), the Functional Independence Measure (FIM), the Pain Analog Scale (PAS), and the Community Integration Questionnaire (CIQ). BSHS global scores did not change across the measurement periods. Variables that predicted more favorable BSHS global scores were: (1) less emotional distress and pain at 2 months, (2) less emotional distress and pain and better community reentry at 6 months, and (3) less emotional distress and better community reentry at 12 months.


Abstract: The charts of 36 patients with large burn areas were examined to determine if successful burn care results from the patient's social support. Sixteen patients (44 percent) survived and 20 did not survive. Outcome data analyzed included age, weight, total burn size, full-thickness burn size, length of intensive care unit stay, length of hospital stay, comorbidity, inhalation injury, use of plasmapheresis, escharotomy, infection, wound coverage with a dermal template, and the presence of social support systems. There were no significant differences in age, total burn size, inhalation injury, or need for escharotomy between the 2 groups. Full-thickness burn size was significantly smaller for survivors than for non-survivors. Survivors were more likely than non-survivors to have social support.


Abstract: Two types of emotion-focused coping (venting and mental disengagement) were assessed in 76 patients with burn injury at baseline during acute hospitalization. Body image dissatisfaction (BID) was assessed at 1 week and at 2 months after discharge. Use of both venting and mental disengagement at baseline, compared with use of only one or neither of these methods, was associated was associated with a significantly higher BID and with a greater negative social impact of disfigurement at the 2-month follow-up.


Abstract: Article introduces a series of articles describing the state of the science in the fields of spinal cord injury, traumatic brain injury, and burn injury. An evidence-based approach was continued on back.