

JRRD At A Glance Podcast Episode 27

Listen to the JRRD At a Glance Podcast Episode 27: Group treatment in supported housing, pressure ulcer risk, hearing aid training effectiveness, and more from JRRD Volume 50, Number 4, 2013.

[Johanna Gribble]: This is episode 27 of the JRRD podcast for issue 50-4, produced by the Journal of Rehabilitation Research and Development (JRRD) and the U.S. Department of Veterans Affairs. Today we're discussing a range of topics that have a direct effect on Veterans and the rehabilitation care and support they may receive. Hello, I'm Johanna Gribble.

[Ken Frager]: And I'm Ken Frager. You can find more information about the topics we are discussing today, along with detailed Power Point presentations on most of these topics, online at the Table of Contents page for issue 50-4 at www.rehab.research.va.gov.

[Johanna Gribble]: Continuing the celebration of JRRD's 50th year in publication, in this issue we look back at the remarkable progress made in rehabilitation research with our latest Then and Now commentary, contributed this issue by Ronald J. Triolo, Executive Director of the VA's Advanced Platform Technology Center and professor of Orthopaedics and Biomedical Engineering at Case Western Reserve University.

[Ken Frager]: Dr. Triolo's commentary reflects on the changes that have taken place over the last 50 years in the area of research and assistive technologies. This issue includes a reprint of an article from the 1964 volume of JRRD (then called the Bulletin of Prosthetics Research) titled "Bioengineering evaluation and field test of the stand-alone therapeutic aid," by Peizer and

Bernstock. We hope you enjoy our “Then & Now” contributions and we would really appreciate your feedback.

[Johanna Gribble]: This issue also includes a guest editorial related to improving the quality of care for patients with Amyotrophic Lateral Sclerosis, or Lou Gehrig Disease, from the Louis Stokes Cleveland VA and Case Western Reserve University.

[Ken Frager]: Basing their pilot study on a hypothesis that recovery of sensorimotor function following a traumatic brain injury is partially dependant on preinjury environmental factors and conditions, Dr. Ronald Reichers and colleagues studied similar conditions with rats subjected to sleep deprivation and other stressors. Their findings, included in their article “Prior housing conditions and sleep loss may affect recovery from brain injury in rats: A pilot study,” suggest future studies are needed to better understand the complexities associated with brain injuries common in returning servicemembers.

[Johanna Gribble]: Returning Veterans from Operations Iraqi/Enduring Freedom report worsening driving skills postdeployment, compared with an age- and education-matched civilian population, when both groups were tested on a virtual reality driving simulator. The results of the study, “Driving simulator performance of Veterans from the Iraq and Afghanistan wars,” led by Dr. Melissa Amick and her colleagues can be used to identify unsafe drivers and inform future treatments to improve driving safety.

[Ken Frager]: The Department of Housing and Urban Development-Department of Veterans Affairs Supported Housing, or HUD-VASH program, provides homeless veterans with a housing

voucher and intensive case management. This study examined national HUD-VASH data and found that HUD-VASH programs that offered group treatment programs more often had more contact with their clients and improved care for homeless Veterans. Findings are included in the article, “Use of group treatment among case managers in Department of Veterans Affairs supported housing program,” contributed by Drs. Jack Tsai and Robert Rosenheck.

[Johanna Gribble]: In the study “Patient repositioning and pressure ulcer risk—Monitoring interface pressures of at-risk patients,” Dr. Matthew Peterson and his colleagues looked at bedridden patients to determine whether regular repositioning might reduce the number and severity of pressure ulcers and if so, whether there might be ways to improve the repositioning process.

[Ken Frager]: “The role of sensory and motor intensity of electrical stimulation on FGF-2 expression, inflammation, vascularization, and mechanical strength of full-thickness wounds,” by Mohammad Reza Asadi and others, explores the effects of various wound healing techniques and timing to obtain optimal effects.

[Johanna Gribble]: In their study, “Muscle activity during the stance phase of walking: Comparison of males with transfemoral amputation with osseointegrated fixations to nondisabled male volunteers,” Drs. Annette Pantall and David Ewins focused on muscle function in patients with above-knee amputations, comparing a small number in the UK who had received direct skeletal fixations and others with conventional prostheses. The study found that the studied muscles retained similar levels of function in both populations.

[Ken Frager]: Elizabeth Halsne and colleagues looked at the effect of limb loss on the lives of those who experience it, in particular on their long-term levels of activity. Findings reported in the article “Long-term activity in and among persons with transfemoral amputation” showed that activities are greatly restricted in this group and daily activity levels were highly variable, changing by month and season.

[Johanna Gribble]: Individuals with a limb amputation lack the sensory information that used to be provided by their anatomical limb. The study “Bilateral electromyogram response latency following platform perturbation in unilateral transtibial prosthesis users: Influence of weight distribution and limb position,” by Dr. David Rusaw and colleagues, subjected transtibial prosthesis users to sudden movements of the surface they were standing on and measured how quickly they responded with the muscles of their lower limb. The results showed that this population responds slower than an age-matched nondisabled individual.

[Ken Frager]: The pilot study “Cycling exercise to resist electrically stimulated antagonist increases oxygen uptake,” led by Dr. Hiroo Matsuse, showed how a hybrid training system that combines electrical stimulation with volitional contractions might increase metabolic cost and increase oxygen uptake by using the combined stimulation and contractions as exercise resistance to voluntary muscle contractions.

[Johanna Gribble]: Dr. Anindo Roy and others used a 6 week training program with a new ankle robot to improve functionality of stiff ankle joints in patients who have had a stroke. Their findings are included in the article “Changes in passive ankle stiffness and its effects on gait function in people with chronic stroke.”

[Ken Frager]: Determining whether a Veteran actually has tinnitus, which the VA considers a service-connected disability, has always been left to a verbal report. This study, by Dr. James Henry and colleagues, evaluates an actual computer-automated tinnitus evaluation system comparing different measures of tinnitus between people and groups. The results are included in "Evaluating psychoacoustic measures for establishing presence of tinnitus."

[Johanna Gribble]: Finally, in their study "Hearing aid effectiveness after aural rehabilitation: Individual versus group trial results," Margaret Collins et al. discovered that group hearing aid fitting and follow-up visits were at least as effective as individual visits and that the group settings resulted in important cost savings.

[Ken Frager]: Today's discussion focused on articles in JRRD volume 50, issue 4. These articles and many others can be read online at www.rehab.research.va.gov/jrrd. Just a reminder that the *JRRD At a Glance* section is available online in English, Spanish, and Traditional and Simplified Chinese! You can submit your comments on this podcast or request articles for us to highlight at vhajrrdinfo@va.gov.

[Johanna Gribble]: Our thanks to JRRD's Rodney Baylor for his audio engineering, recording, and editing, and Dave Bartlinski, JRRD's Web master, for helping to make this podcast possible. We would especially like to thank all of our listeners for your support. We'd love to hear from you.

[Ken Frager]: For JRRD, thanks for listening. Don't forget to "Get Social" with JRRD by "friending" us on Facebook at JRRDJournal and following us on Twitter at JRRDEditor.