



## Listen to Your Heart, and Let Your Lungs Breathe

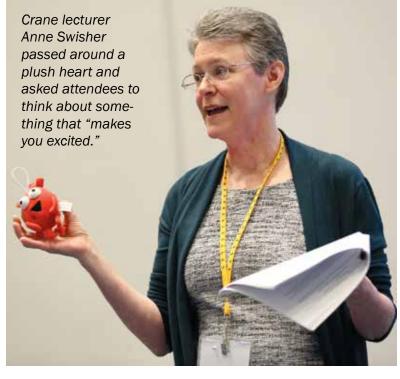
By Jenn Waters

ttendees at Thursday's presentation of the Linda Crane Lecture, hosted by the Academy of Cardiovascular and Pumonary Physical Therapy, were promised laughter, tears, dancing, singing, and inspiration. Speaker Anne K. Swisher, PT, PhD, FAPTA, delivered on every one during "Following Your Heart (and Lungs) as a Professional Development Plan."

Swisher illustrated her lecture theme by leading the audience through her own professional development. She spoke of her father, who she described as her inspiration to enter the medical sciences.

Her father introduced her to Sandy Burkhart, her next mentor, who showed her she could combine her loves of science and caring for people while also having a good family life.

After college graduation, she moved on to a position in the ICU. "I loved the cutting-



edge machines and techniques in the ICU, but I also loved being the advocate for seeing the whole person

who was connected to the machines," she said.

Her career path then took her to pursue a master's degree in exercise physiology. "I learned that exercise is a medicine that must be prescribed, just like pills are," she said.

Swisher later returned to her home state of West Virginia, where she joined the West Virginity University faculty and earned her PhD, while raising a daughter and son with her husband.

"There were many days when I felt like I wasn't doing anything well," she said. "We all take on more than we can handle, and we need to be kind to our heart and let our lungs exhale."

She then spoke about transitioning from clinician to academia. "Most of us in academics come from a clinical world," she said. "When your patients went home, or the documentation was completed, your work was done. The

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## How (and Why) to Include Older Adults in Clinical Trials and Research

By Donald E. Tepper

lder adults often are excluded from clinical trials. A panel of PTs provided CSM attendees with an array of suggestions and techniques to include more older adults in that

#### **Don't Miss!**

- Last chance to visit the exhibit hall and see the latest in products and services. Unopposed hours are 10-11 a.m. and 1-3 p.m.; the hall closes at 3 p.m. Don't forget to check out the APTA Pavilion in booth 1121.
- The Eugene Michels Research Forum addresses "infobesity": What's the impact of big data on clinical decision making? Participation is encouraged, so bring your questions and viewpoints to the forum at 3 p.m.

the Often-Excluded Older Adult in Clinical Research: Strategies for Recruitment, Enrollment, Retention, and Engagement," was presented by Margaret Danilovich, PT, DPT, PhD, Jennifer Sokol Brach, PT, PhD, FAPTA, Valerie Lea Shuman, PT, DPT, and Victoria Davila, PT, DPT.

The presenters acknowledged that designing studies that include older adults can be difficult. They pointed out that research often prioritizes precision, and older adults are scientifically "messy." They also pointed out that funding agencies often focus on a specific disease or injury. Older adults often have multiple conditions that can make it difficult to determine mechanisms. In addition, older adults can be difficult to recruit and manage.

The National Institutes of Health adopted the "Inclusion Across the Lifespan Policy" effective January 25, 2019. It explained at the time, "The purpose of the

research. The session, "Including policy is to ensure that the knowledge gained from NIH-funded research is applicable to all those affected by the conditions under study. The previous policy addressed concerns that children were not appropriately included in clinical research. The new policy aims to address similar concerns

regarding other age groups, including older adults. This group is also disproportionally absent in clinical research, likewise resulting in insufficient data regarding treatments and interventions for this population."

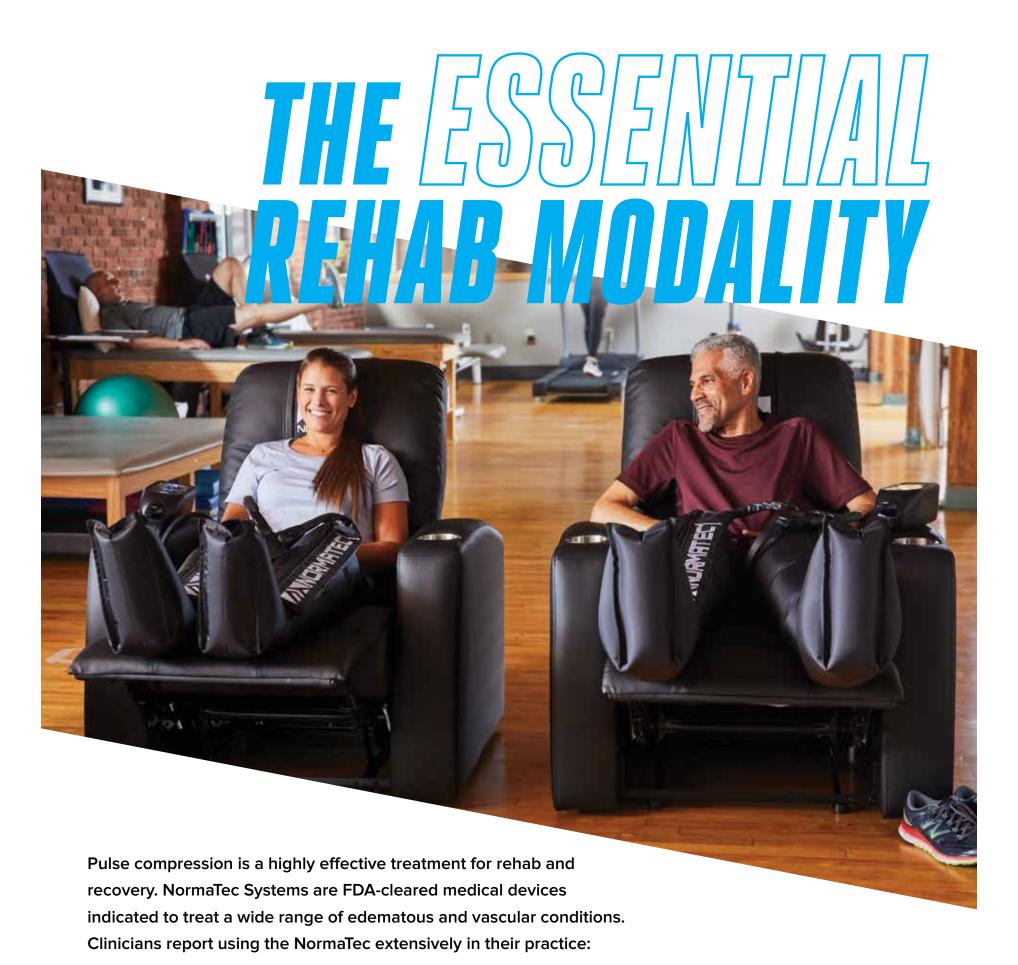
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Record CSM attendance meant a capacity crowd in the exhibit hall. Visitors had 804 booths, representing 511 companies, to choose from to see the latest in physical therapy products and services.







66 The top applications I would use NormaTec for in the clinical setting are post-surgical recovery (ACL reconstructions, meniscus repairs, total knee/hip replacements, rotator cuff repairs, ankle ORIFs,

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—Dr. Corey Samuelson PT, DPT, CSCS, EMT, SDN, CertMST "We have performed over 175 NormaTec treatments in our first two months of having the device. Clinician learning curve is minimal, patient satisfaction is high, and we now have an effective tool to treat edema."

—Bruce White, MPT Managing Partner of Business Development, Fyzical

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## Movement Evidence in Sports

By Deb Burrows, BS, MA, EMTP

Movement analysis, assessment of key impairments, errors, and clinical treatment were among the topics discussed Friday during "Sports Medicine Secrets: Evidence-Based Lower Extremity Sports Movement Analysis: Sprinting, Cutting, and Jumping," a session hosted by the Academy of Orthopaedic Physical Therapy. Marshall LeMoine, PT, DPT, Michael Wong, PT, DPT, Andrew Morcos, PT, DPT, ATC, Stephania Bell, PT, and Leigh Weiss, PT, DPT, ATC, MS, presented.

LeMoine, Wong, Bell, and Weiss are board-certified orthopaedic clinical specialists. LeMoine, Marcos, and Weiss are board-certified sports clinical specialists. Morcos is also a board-certified pediatric clinical specialist. LeMoine, Wong, and Morcos are fellows of the American Academy of Orthopaedic Manual Physical Therapists,

and Morcos and Bell are certified ceps strength can be measured strengthening and conditioning specialists.

"When athletes are performing cutting maneuvers, I want them to have good lower limb control," said Wong. He said that common movement errors with cutting might include high center of mass. excessive knee valgus, and poor hip and core stability.

LeMoine said that the top three faults associated with injury are decreased dorsal flexion, quadriceps weakness, and fatigue. "If you lack dorsal flexion, the knees can't flex as much and hips try to control what is happening," he said. "This is common following ankle sprains, and research shows an increased risk of up to 29% of developing patellar tendinitis within a year of a sprain."

"Low quadriceps strength indicates 9% less knee flexion and 19% greater trunk angle," noted LeMoine. He added that quadriwith a dynamometer or with a knee extension machine. Using a dynamometer, the norm for males is 122 pounds and for females 106 pounds. "Gluteal strength is also important; poor strength can account for 16% less hip flexion."

LeMoine added that fatigue also plays a part in lower extremity motion patterns. "This can alter hip and knee kinematics, resulting in decreased hip flexion and increased hip and knee abduction."

He suggested giving movement corrections with both external and internal cues. "External cues might be 'land with your knees over your toes,' 'land like an egg,' 'land quieter,' or 'spread the floor away with your feet from the direction you are going.' We want a low center of mass for optimal deceleration. For optimal cutting we want good knee alignment in the frontal plane, with a lower center of mass."

Morcos said that when working in the clinic with athletes, PTs should look at the movements from a distance before narrowing down impairments. "You should know what normal versus abnormal looks like and look at each joint individually before looking bilaterally."

Morcos suggested filming the athlete's movements and then reviewing in slow motion, at multiple angles, to see how each area is flexed at landing. "Some joints are meant to move and some are meant to be stable," he said. The mobile joints are the ankle, hip, and thoracic area, and the stable joints are the knee, lumbar area, and neck. "Clinical symptoms often show up distal, but the real culprit is proximal. If it's a knee problem the ankle or hip may not be moving enough. You must look at the whole body to find the problem," he said.

## Physical Activity: The Common Denominator in Treating Delirium Depression, and Dementia

By Donald E. Tepper

Don't use the term 'exercise.' "If you ask them if they exercise, they'll say they don't."

The "3 Ds" of the older adult population are delirium, depression, and dementia. What they all have in common is that physical activity can help patients with those conditions. As movement experts, PTs must possess the ability to promote physical activity in any of the 3 Ds, according to Christine Childers, PT, MS, PhD. She spoke at the Home Health Section's session "D, DD, DDD: One Size Never Fits All!" on Friday.

Childers opened the session by distinguishing between the three conditions. For one thing, she said that delirium and depression are considered reversible, while dementia is not.

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CSM Daily News is published by the American Physical Therapy Association and produced by CustomNews Inc. Contributing editors and writers are Tim Mercer, CustomNews Inc; Deb Burrows, BS, MA, EMT-P, CustomNews Inc; Jenn Waters, CustomNews Inc; Don Tepper, APTA; and Lois Douthitt, APTA. Photographer is Jonathan Bachman unless otherwise identified.

Delirium is characterized by acute, sudden onset, sometimes from an acute illness. Attention and orientation are impaired, and the person may be hyperactive or hypoactive. Speech may be incoherent or slurred and accompanied by hallucinations and delusions. "We as PTs are in the prime position to prevent delirium," she said, using early mobilization and frequent mobility. If delirium already is present, quick identification and action are key to keep it from worsening, Childers said.

Depression is a mood disturbance, often manifested by sadness, crying, or both, and accompanied by fatigue and weight loss. Speech and memory are not affected. Studies have found that depression responds to physical activity, with the best response coming from voga, Childers reported, noting that exercise is now included in the American Psychiatric Association treatment guidelines for depression. Exercise should be customized to the patient and under the supervision of appropriate professionals, she said, citing one study that the best results that could be conducted by a PT. were found in patients supervised by PTs or exercise physiologists.

Dementia is a general decline in cognitive ability, often accompanied by delusion, irritability, memory loss, and decreasing executive function. Childers

said that physical activity reduces the risk of cognitive decline where none is present, and activity may reduce the risk of further decline in those with mild cognitive impairment. She cited a recommendation from the World Health Organization that physical activity should be recommended for adults with normal cognition to reduce the risk of cognitive decline. The recommended dosage is aerobic activity in bouts of at least 10 minutes, and meeting the 150-minute per week activity guideline. When adults of this age group cannot do the recommended guidelines due to health conditions, another WHO recommendation calls for them to be as physically active as their abilities and conditions allow.

Childers said that it's necessary to assess a person's cognitive level with any of the three conditions, to determine how best to manage the patient. She described each of the five cognitive impairment levels, as presented in the Allen Cognitive Scale, and how they related to appropriate interventions

Childers provided several tips for working with this population. First: Don't use the term "exercise." "If you ask them if they exercise, they'll

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"Sleep impairments

are a stronger and

more reliable

predictor of pain

than pain is of sleep

impairments."

## Zzzzz ... How to Help Your Patients Sleep Better

By Jenn Waters

For patients with pelvic pain, sleep might not be the first connection you think of, but during the Academy of Pelvic Health Physical Therapy session "Sleep Management and Persistent Pelvic Pain -Could This Be Your Missing Link?" on Friday, speakers looked at the importance of sleep and provided practical suggestions for attendees to take to their patients.

Presenters were Mark Shepherd, PT, DPT, Katie Siengsukon, PT, PhD, and Jennifer Stone, PT,

Stone spoke about the roles of the parasympathetic system, bowel and bladder functions, and sphincter control in working with patients who experience pelvic pain. "All of the other things we do are important, such as talking about pain management," said Stone. "But if we don't address sleep, we may not be giving patients all the tools they need."

Shepherd picked up on the importance of sleep as "one of the cornerstones to healthy well-being." He discussed how many different body systems are related to sleep

and the relationship between sleep and pain. "Sleep impairments are a stronger and more reliable predictor of pain than pain is of sleep impairments," he said. "The less sleep you get and the poorer quality you get contribute more to pain then the pain itself."

Siengsukon discussed social

determinants of health and their impacts on sleep. These factors include race and ethnicity, social support, availability of job opportunities, and the availability of affordable, healthy foods. "If a patient does not have

enough food to eat or can't pay their rent, sleep may not be their priority," she said. "Sleep can be seen as a luxury."

She cautioned that talking about sleep can be very personal for a patient. "They are inviting you into their bedroom, into their relationship with their partner."

Siengsukon shared some ways to screen patients, stressing that there is a need to screen all patients for sleep challenges. Screening a patient includes asking questions about sleep disruption, sleep quality, and perceived sleep issues, both on the individual level and looking at social determinants.

> It may also include conducting a further assessment using a questionnaire, and possibly referring a patient to a sleep specialist.

> Among the tips she provided was having the patient keep a sleep log. "It can be eye

opening for patients," she said. "It's an opportunity for more selfawareness about sleep duration and routines."

Stone shared a case study, introducing "Sarah," a 36-year-old female experiencing multiple health problems, feeling overwhelmed at home with two young children and

a full-time job, and struggling with sleep. Sarah had been experiencing bladder spasms for the past five months, has a six-year history of fibromyalgia, and had two Caesarean sections. Stone asked the audience to think about challenges Sarah may be experiencing that would make her feel that sleep is a luxury. Their answers included her babies, lack of support at home (her husband works nights as a police officer), and finding enough

Stone then asked attendees for suggestions that could be provided to Sarah, but she added some caution. "One thing I would encourage you to think about is all the lifestyle changes you may be asking them to make," she said. Suggestions from the audience included setting a bedtime alarm, developing a bedtime routine, getting up later in the morning, and looking for ways that exercise could be incorporated into her daily life, such as doing squats while picking up toys. Siengsukon added that there could be a discussion about her husband's overnight shift work and whether his routine could be disrupting her sleep.





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—list as of February 12

## The Future Is Now in Telehealth

By Deb Burrows, BS, MA, EMTP

Mark Milligan, PT, DPT, is excited about the possibilities in the telehealth market. For the Private Practice Section's Thursday session "Telehealth: How to Leverage Technology for More than Just Treatment," he began by defining basic terms. Milligan is a board-certified clinical specialist in orthopaedic physical therapy and a fellow of the American Academy of Orthopaedic Manual Physical Therapists.

"Telehealth as the application of technologies to help patients manage their own illness through improved self-care and access to education and support systems electronically. Telerehabilitation as the delivery of rehab services over telecommunication networks and the internet," Milligan said.

Milligan described the different models of

telehealth. These include synchronous or live video, and asynchronous, which includes prerecorded videos, emails, and photos. "Remote patient monitoring, which is reimbursable by Medicare, allows medical data collection from an individual in one location via electronic vehicle to the provider. Mobile health and public health practice education are supported by mobile devices such as cell phone or tablet and involve using an app."

"Virtual reality in telerehabilitation is one of the newest tools available," said Milligan. "Computer technology allows the development of three-dimensional virtual environments that make it fun and engaging for the patient."

"Many companies provide telehealth physical therapy platforms that you can use to provide care, but whatever platform you use, make sure that it is HIPAA-compliant," cau-

tioned Milligan. He gave examples of many that can be downloaded and used for free, but HIPAA-compliant versions may require a subscription.

"Know the rules and treat the person the same way as if they were seeing you in the clinic," he said. "They must sign the same papers and a digital policy as well. It is your due diligence to maintain your patient's privacy." He said that HIPAA violation fines range from \$100 to \$4 million. "There were over 800 million attempts to break into health records in 2018. Every record is worth over \$400 on the black market."

"Medicare does not consider physical therapists as one of their approved telehealth providers, and many states adopt Medicare language," Milligan said. "Legislatively we need to change this."

## **#PTValentines Take Over the Internet**

In recognition of CSM occurring on February 14, members have been sharing Valentine's Day poetry on Twitter. Enjoy!

Roses are red, Love is hypnotic Physical therapy makes you feel better Than those pain-killing narcotics. Jason R. Falvey

Roses are red Violets are blue If you leak when you sneeze Pelvic PT is for you. Whitney Meyer

Roses are red Surprising but true That babies can get Physical therapy, too! Katie Lammers

Roses are red Violets are blue #ChoosePT first It's the smart thing to do! **MNPTPAC** 

Roses are red PT is the glue Multidisciplinary care Getting you back to you. Celeste Cheek

Roses are red Love is intoxicating I lose my balance And recover with you. Jennifer Hale



Roses are red Violets are for nobility, Acute care PT does more Than just basic hospital mobility. Suzanne River

> Roses are Red Violets are Blue Patients need to..... Take the power back. Jerry Durham

There once was a doc from Toledo Vhose patient said, "Pills will be vetoed!" He chose PT, smartly Realizing that, partly Narcotics destroyed his libido! Roy Film

Roses are Red Violets are Blue If you treat kids who toe walk I want to hear from you! Sue Migliore

Roses are red Geriatrics aren't weak Grab some weights and a kettlebell And we'll get you back on your feet! Stephanie

Roses are red Arteries are too PT gets your heart pumping So you don't turn blue. PT/AT Barbie

Roses are red-ish Violets are violet Fixing function's a fetish or physios, so try it (first) Aaron Perez

Roses are red, Violets are blue #Sleep is a pillar of health So #PTfam needs to address that health behavior too. Katie Siengsukon

Roses are red, Your patient's face is blue Tell him to breathe When he goes through his exercise program. Steph Weyrauch

Roses are red Don't let PDGM get you down Therapy is still important So please smile, don't frown Sean Hagey

Roses are red PT can help many We put the fun in functional From baby to granny. Sean Hagey

Roses are red Violets are blue In PT, the mind and spirit Are treated just like the body is too! Domenic Fraboni

Roses are red A violet always fades Stay away from those unreliable MMT grades. **Timothy Hanke** 

Roses are red PTs need help too Gotta tell me what hurts So I know what to do Kelly Clark



### Wearable Sensor Technology Can Reduce "Epidemic" of ACL Injuries

Demographic risk factors for ACL injuries include the athlete's age, gender, sport, BMI, previous orthopedic history, and history of concussion.

By Donald E. Tepper

Calling the number of ACL injuries "an epidemic," Trent Nessler, PT, DPT, MPT, led a session on the "Use of Wearable Sensor Technology to Assess Return to Sport Following ACL Reconstruction." He cited figures of more than 200,000 anterior cruciate ligament injuries in the United States annually at a direct annual cost of approximately \$5 billion. Of those experiencing ACL injuries, 79% develop osteoarthritis within 12 years. Among professional athletes, Nessler continued, pro football players in the NFL fared the worst with decreased performance and career lengths shortened by up to two years. NBA basketball play-

ers experienced decreased performance in the season following return to play and returned to baseline performance in the second season.

Demographic risk factors for ACL injuries include the athlete's age, gender, sport, BMI, previous orthopedic history, and history of concussion. Meanwhile, core strength not only improves an athlete's performance but it also reduces the risk of injury. Another risk factor is an athlete's fatigue. Citing a study that found that fatigue mostly affected joint angle at landing and peak angle at landing, Nessler indicated that training to resist fatigue is an underestimated aspect of prevention programs.

Wearable technology can assess such

items as the ability when performing planks and side planks to stabilize within eight degrees in rotation and flexion and extension. It can analyze elements of a squat including lateral shift and degree of lumbar flexion. It also can assess stability of frontal plane motion, control of speed of motion, depth of motion, and pelvic control.

Nessler addressed the benefits of wearable sensor technology. In a study of 65 Division I football players, a corrective three-times-a-week exercise program based on the technology's findings reduced knee injuries by 80%, lower leg injuries by 67%, foot injuries by 71%, and ankle injuries by 48%. Nessler is the founder and developer of a wearable sensor technology.

#### Crane Lecture

>> from page 1

biggest surprise to a clinician entering academics is that the work is never done."

She described academics as a three-legged stool consisting of reaching, research, and service.

Related to teaching, she said, "What happens in the classroom with our students is magic, but it is also hard work. Strive to be creative in how you teach." She added that she also makes sure students know they must put in the work of learning. "Our role is to guide learning," she said, "not spoon-feed it to passively open mouths."

Research, the second leg of the stool, "can be the most exciting and frustrating part of your career," she said. "There is an expectation in academia that we contribute to our profession."

She encouraged the audience to take time to just let their minds wander. "Listen to when your heart beats faster – it's a good indication," she said. "If you have a question that is exciting you, others will get excited too. Don't get weighed down by



Anne Swisher had attendees perform the "ECG dance" during her presentation of the Linda Crane lecture on Thursday.

the need to publish or perish. Share the work and frustration."

The third leg of the stool, service, is particularly relevant to the physical therapy profession. "PTs are doers and task-oriented people," she said, encouraging the audience to explore different types of community service activities — including with their professional association. "The people you meet will enrich both your personal and professional lives," she said.

Passing around a plush heart, she asked the audience to think about things that make them excited. She then did the same with a set of plush lungs. "The lungs are your chance to take a deep breath and think about diving in."

Also as promised, she led the room in doing the "ECG dance" — a series of dance moves created to teach electrocardiogram rhythms — as well as a rousing chorus of "Take Me Home, Country Roads."



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#### Research

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The presenters listed traits that make it more challenging to include older adults in research, and then provided strategies to address those issues. For example, in dealing with people with sensory deficits — particularly hearing and vision — the panelists suggested:

- · Allow additional time.
- Minimize background noise. "If you're in a community space where they're calling Bingo in the next room," Brach noted, "you might need to find a quieter space."
- Lower your voice or rephrase the question or statement.
- Visually use high contrast and large print.
- Get assistance from study staff.
- Consider the mode of administration, such as in person, mail, or phone, rather than electronic means, which may be challenging for older adults.

In working with people with mobility limitations, the panelists' strategies included:

Provide transportation or reim-

## Check Out the APTA Centennial Historical Display and Enter for a Chance to Win a Centennial Giveaway

In 2021, we will celebrate 100 years as a member association — and launch our next century as the largest community for physical therapists, physical therapist assistants, and students. On this landmark occasion we want to embrace our rich history and generate momentum toward our exciting future. Don't miss the chance to see the contents of APTA's recently opened time capsule, part of the historical display at the center of the APTA Pavilion, booth 1121 in the exhibit hall.

While you're there, browse our recently debuted centennial-branded merchandise! Get your badge scanned at the center of the APTA Pavilion and you will receive a promo code for a 10% discount to new centennial gear. Plus, you'll be entered into a drawing for 100 giveaways: 80 water bottles, 10 Under Armour quarter-zip pullovers, and 10 Under Armour backpacks.

burse travel.

- Conduct research in locations convenient to them, even if they are more inconvenient to you.
- Minimize walking during study visits.
- Account for peoples' use of assistive devices.
- Train staff to anticipate when issues may occur.

The presenters also provided "lessons learned" reviews of specific projects. For example, to gain greater acceptance by stakeholders — in this case community-dwelling older adults from independent living facilities, senior apartment buildings, and senior community centers — the researchers helped create two com-

"If you're in a community space where they're calling Bingo in the next room," you might need to find a quieter space."

**CSM DAILY NEWS** 

munity advisory boards to provide ongoing engagement. The board met twice a year, both for two-way engagement and to provide ongoing input into the execution and translation phases of the project.

Another project—involving residents of a nursing home—included the creation of a research advisory board made up of the residents. The

purpose was to empower the nursing home community. The board met monthly, providing two-way engagement and driving new initiatives for the organization.

The panel advised the attendees to maximize going out to the older adult. "Choose assessment tools that can 'travel.' And work with sites to find spaces and times that limit interference with other programming." If the participants must travel, the panel said, "consider additional reimbursement for the types of transportation that cost the individual extra money."

The presenters had similar tips in addressing health literacy, decisional capacity, and adherence and retention.





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#### **Product News**

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#### NormaTec Launches the Next Generation of Compression Recovery Systems

The PULSE 2.0 Series offers advanced recovery features

NormaTec, the industry leader in compression recovery technology, has launched the newest version of their world-class PULSE Series Recovery Systems, the PULSE 2.0 and PULSE PRO 2.0. Reflecting three years of research and development, the NormaTec PULSE 2.0 Series pairs NormaTec's patented technology with a host of sophisticated updates.

Specifically, the NormaTec PULSE 2.0 Series systems are:

- 27% smaller while maintaining all the same power and more functionality than previous models.
- Equipped with enhanced robustness and durability including chemically enhanced glass and ergonomic upgrades.
- The first connected compression devices with a Bluetooth® wireless technology enabled app.

The NormaTec Mobile App enables cutting-edge connectivity for the user. The app allows users to control the PULSE 2.0 Series systems seamlessly from their smartphones, create and save favorite settings for future sessions, and access recovery statistics. Users can also expand athletic performance tracking by uploading recovery data to other fitness tracking apps, including Strava and TrainingPeaks, as well as email recovery data, directly from the app.

"The PULSE 2.0 Series advancements will enable athletes to train smarter, harder, and better, and provide valuable insights for sports medicine professionals, physical therapists, and chiropractors," said Gilad Jacobs, CEO at NormaTec. "The introduction of PULSE 2.0 Series provides an optimized user experience that enables a holistic view of training and recovery.

The PULSE 2.0 and PULSE PRO 2.0 are the latest devices in the NormaTec PULSE Series, which leverages compression technology to increase circulation, rejuvenate muscles, and reduce pain and soreness. In addition to these benefits, studies have shown NormaTec to increase range of motion and decrease inflammation.

You can learn more about NormaTec and the new PULSE 2.0 Series Recovery Systems at: www.NormaTecRecovery.com.

#### 3 Ds

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say they don't," she said, even though they walk, take stairs, or bend to attend to a garden. And they may shy away from instructions to exercise but willingly will engage in dancing, walking, boxing moves, and other physical activity that's characterized as something other than "exercise." Childers also recommended that clinicians must "step into their world; don't try to pull them into ours." For example, she uses jitterbug dancing for aerobic activity. Additionally, she said, "everything takes longer because you have to engage them first." It will get easier as they become familiar with the movements, accompanying music or props, and your instructions, she indicated, "and then you can focus on specific interventions."

On that last tip, Childers commented that clinicians often indicate that a patient is unable to cooperate when, in fact, "what they're really saying is that they don't know how to teach them."

The profession needs to ensure that clinicians are trained appropriately to engage with these patients, she said.

She cited several strategies in promoting physical activity in those with dementia. These include goal setting, social support, and a credible source; or combined use of all three, which could be more effective than other behavior change attempts to increase physical activity. Another approach, selfdetermination theory, incorporates the themes of competence, autonomy, and relatedness/ connectedness with others. The more effective approach with self-determination involves using intrinsic motivators, allowing individuals to achieve competence and self-determination.

Childers interrupted her presentation often to have the audience engage in cardiovascular physical movements such as boxing moves, tossing and catching a ball, dancing, and stretching — all of which, she said, have a rationale around them that PTs and PTAs can use with patients.



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#### University of St. Augustine for Health Sciences Offers Quality Classroom and Distance Education

The University of St. Augustine for Health Sciences is a graduate institution that emphasizes health science education through innovative quality classroom and distance education. Founded in 1979, USAHS has locations in San Marcos, California; St. Augustine, Florida; Austin, Texas; Dallas, Texas; and Miami,

USAHS offers flexible approaches to health professional education utilizing web-based, classroom, and laboratory learning activities. Each of our academic programs focuses on foundational sciences and concepts, sound decision-making, and strong technical skill development. USAHS delivers contemporary, flexible, evidence-informed programs that present students with many enriching and exciting learning opportunities designed to meet their professional goals.

The mission of USAHS' doctor of physical therapy (full-time and flexible) program is to graduate proficient and caring physical therapists who are prepared to work collaboratively in interprofessional settings to guide patients and clients to achieve optimal movement.

Our unique learning model com-

bines state-of-the-art facilities, career-centered learning technologies, online teaching and learning best practices, and the expertise of USAHS faculty members who are practitioners as well as exceptional educators from across the country. Our pioneering efforts in physical therapy education have established an environment of excellence in our DPT programs. We strive to offer the highest-quality classroom instruction and online courses while taking pride in making the entire educational experience accessible and interactive for students.

If you earned your physical therapy degree and license to practice in a location outside the United States, USAHS offers a comprehensive catalog of courses focused on competencies often required by the Foreign Credentialing Commission on Physical Therapy. These courses are designed specifically to meet the needs of non-degree-seeking students, particularly foreign-trained physical therapists. USAHS also offers specialty certifications and more than 100 CEU options online and in-person across the U.S. and internationally. Visit www.usa.edu to learn more or stop by our booth 1805.

#### Biodex and Simbex Partner to Add Perturbation Training to Biodex GT3 Treadmill

Simbex and Biodex are proud to announce their partnership to incorporate Simbex's ActiveStep Fall Prevention technology (activestep.simbex. com) into the Biodex Gait Trainer 3 treadmill. ActiveStep was designed and developed by Simbex to facilitate dynamic perturbation training and fall simulations for physical therapy clinics and biomechanics researchers. The recently published results of the RACE study¹ demonstrate ActiveStep's effectiveness in reducing injurious fall rates in older adults. The Gait Trainer 3 is a rehabilitation treadmill with biofeedback and neurologic music training. The addition of ActiveStep technology will add a dimension of perturbationtraining capabilities, utilizing rapid changes in belt speed to simulate the motion of slips and trips, making the Gait Trainer 3 an even more powerful and versatile therapy tool.

"Over the past five years, we've seen a proliferation of perturbation training research and products.

'We're excited to add a clinically proven and cost-effective tool for fall prevention into our GT3 treadmill," said Ed Behan, SVP Market Development, Biodex Medical Systems.

"It is exciting to see our perturbation training technology being made available to therapists throughout the world through this partnership with Biodex," said Rick Greenwald, CEO, Simbex.

#### **About Simbex**

Simbex is an experienced medical device and consumer health product design and development partner that excels in transforming the most complex ideas into game-changing commercial solutions. Simbex brings together a diverse team with cutting edge knowledge of product development, science, data, and analytics for tackling complex ideas and creating commercially successful products. Learn more at Simbex.com or email info@simbex.com

#### About Biodex Medical Systems,

Biodex Medical Systems, Inc. uses science and technology to drive treatment innovation across physical medicine, nuclear medicine and medical imaging categories. With a history of manufacturing and engineering excellence that spans more than 60 years, the Biodex mission is to provide innovative solutions and customer-driven support to medical facilities and wellness centers around the globe. Learn more at www.biodex.com.

<sup>1</sup> Lurie et al (2020). doi: 10.1093/ptj/

#### **Driving Patient Outcomes and Staff** Efficiencies with Intuitive Therapy and Rehabilitation Equipment

To help provide therapists with counter-weight mechanism to provide cost-effective, outcomes-driven treatment interventions, Medline offers the Medline NeuroGym® line, key to its therapy and rehabilitation portfolio in the U.S.

initiate the movement within Neuro-Gym products. This active participation helps improve functional mobility to drive faster outcomes. Furthermore, NeuroGym helps therapists work with patients who were previously viewed as falling outside the traditional therapy spectrum.

"Because of how NeuroGym is intuitively designed, a patient's own weight and strength may only require one therapist," says Brian Garner, director of sales, therapy and rehab division, Medline.

Two of the most popular products in the line are the Sit-to-Stand Trainer and the Bungee Mobility Trainer.

The Sit-to-Stand Trainer uses a

graduated support of the standing and sitting motion, and enables an individual to initiate the motion of standing up.

The Bungee Mobility Trainer is Residents and patients themselves a versatile graduated body-weight support system that helps patients improve practice and mobility. The system helps retrain protective reactions, like sidestepping and one-leg

> "NeuroGym was a contributing factor in helping a patient dance with his wife for the first time after being reliant on a wheelchair for nearly two decades. These are moments you never forget, and that's why Medline is proud to bring these solutions to therapists and their patients," said Garner.

> Stop by booth 1605 to demo NeuroGvm and visit www.medline. com/neurogym to learn more about the NeuroGym technology.

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