



Therapeutic Vibration Technology To Help Reduce Falls

Wefunder Investor Presentation (Q4 2020)

Jeff Leismer, PhD
Founder & CEO
jeff@vibetechglobal.com

Ed Morgan, CPA
CFO
ed@vibetechglobal.com

Our Fall Reduction solution won the 2020 McKnight's Gold Award for Innovator of the Year!



Confidential

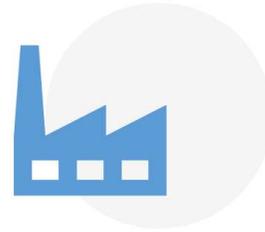
45% Fewer Falls
Stronger and More Mobile Patients

Who is VibeTech?

A medical device manufacturer

AND

A proprietary software licenser



Develops, manufactures & sells therapeutic vibration devices direct to payer and provider organizations



Ongoing device hardware and firmware upgrades to installed base



Creates & licenses smart software bundles to payer and provider organizations



Regular software version updates to installed base



Distribution partners move devices and software



Who We Serve

Our key customers are acute & long-term care providers to high fall risk patients

Highest risk: age 65+; physically and/or cognitively impaired; with fall history

Key Underlying Causes:

- Muscle loss/weakness from inactivity
- Disease-related weakness & instability
- Use of antipsychotics/antidepressants
- Stroke & neurological conditions
- Pain
- Cognitive impairment
- Fatigue (e.g., due to cancer)



What value does VibeTech bring to provider customers to address falls in the elderly

- **Supports improved patient outcomes/betterment of patient lives**
 - **Proven to improve underlying conditions contributing to falls**
- **Potential for a reimbursable service; incremental revenue**
 - **VibeTech treatments are reimbursable by CMS & insurance**
- **Device is simple to use – not labor intensive, leads to higher patient throughput**
- **Financial payback period is estimated at less than one year**



Elderly adult falls: a major issue for VibeTech's key customers

We reach high fall risk patients through our B2B provider customers



SKILLED NURSING
FACILITIES



ASSISTED LIVING



REHAB CENTERS



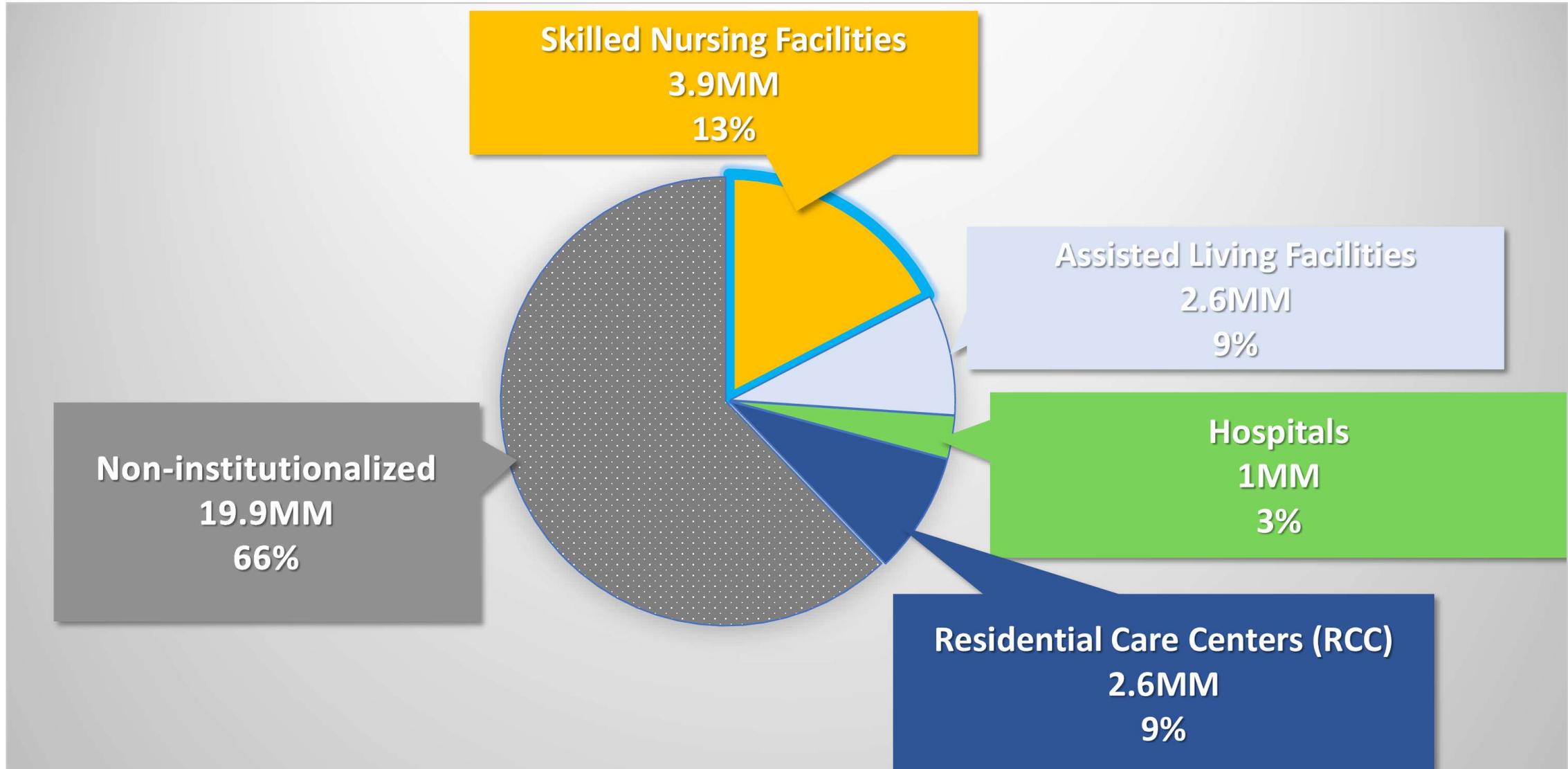
HOSPITALS &
CLINICS

CDC estimates SNFs at 2.6 falls/year/patient; the average nursing home logs 100-200 falls/year

Every 11 seconds, an older adult is treated in ER for a fall; every 19 minutes, an older adult dies from a fall

Which customers experience the most elderly adult falls?

30MM Falls/Year US Adults 65+



Financial impact of elderly adult falls is huge and growing

US Market: Direct Costs of Falls in Adults 65+ by Payer (per CDC)

\$68 Billion/Year:

Traditional Medicare & Medicaid \$33B

Medicare Advantage	\$17B
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Hospitals	\$ 7B
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Other	\$ 10B
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Indirect Costs Not Counted: Increased regulatory paperwork, increased nursing and personal care time, poor consumer survey results and pressures on STAR ratings, lawsuits, higher insurance premiums, caregiver burden, deteriorating patient attitudes



The VibeTech Solution to Falls:

Smart Dosing™ Therapeutic Vibration



An innovative new method of vibration-based therapy:

Patient specific Smart Dosing™ triggers leg muscles to automatically contract to “work out” without effort.

Safe, customized, effective therapy proven to reduce falls

Therapeutic vibration improves lower body muscle strength and function/balance, and relieves pain, to help reduce falls.

Stronger, more stable lower body can reduce falls

Smart Dosing™ Improves Fall Reduction Results

Current Fall Reduction Programs

- **Assess** risk factors for falls
- Encourage **exercise** to increase strength, balance, and mobility
- **Control environmental variables** (vision, lighting, grab bars, etc.)
- **Engage family caregivers** and seek **community support**
- **Reassess** outcomes regularly and implement CQI

Shortcomings

- Assessments do not accommodate non-ambulatory individuals
- Exercises not possible for low functioning patients
- Family members disengaged



VibeTech's Improved Approach

- Assessments designed for non-ambulatory individuals
- Exercises target low functioning patients
- Family members trained to participate in programming
- Community engagement helps deliver effective programming across the continuum of care

Introducing the VibeSit™ PRO with Smart Dosing™

Delivering Customized Effective Therapeutic Vibration

The VibeSit™ PRO

- Footplate transmits therapeutic level vibrations into lower body
- Smart Dosing™ - safe & effective custom therapy
 - Strength assessment
 - Design prevents overdosing
 - Resistance & vibration adjust automatically for each patient
- Small, compact, portable
- Simple, intuitive operation in seated position
- Works with dedicated or user's own wheelchair
- Performance data collected/reported



(Conceptual design – February 2020)



(Prototype with Smart Dosing™ - Oct. 2020)

VibeTech's body of scientific proof in underlying factors:

20,000+ Treatments

Immediate benefits

20% Leg Strength Gain

32% Range of Motion Gain

66% Pain Reduction

ZERO % Serious Adverse Events

VTE Overall Clinical Study Conclusions:

Therapeutic vibration **improves underlying conditions** of weakness and instability which cause falls

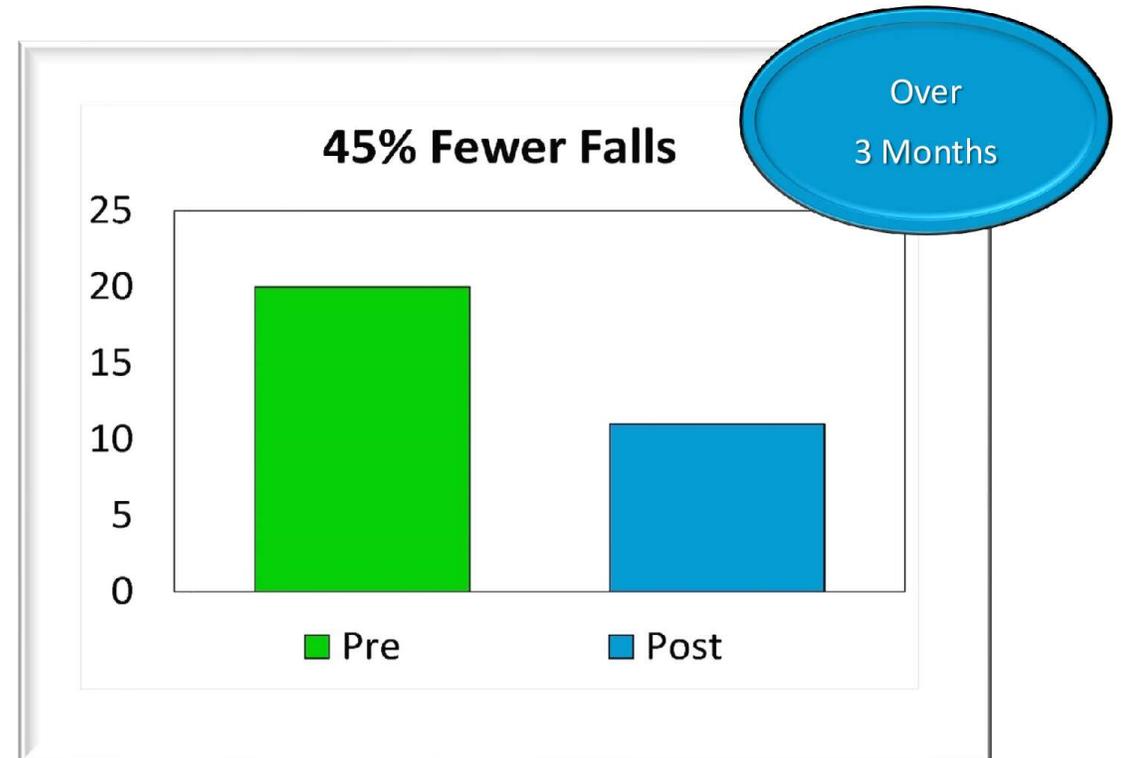
VTE Recent Pilot Study Findings:

Falls reduced 45% in cognitively impaired

Pilot study now being scaled to n =100 clinical study

VibeTech Smart Dosing™ Proof of Falls Reduction

N=6 Memory Care Pilot Study



VibeSit™ PRO Preliminary Pricing & Financial Information



Tentative MSRP \$25K based on competitive device benchmarking



Final pricing to be set after device ROI established by multi-site N=100 study (cost savings justification model)



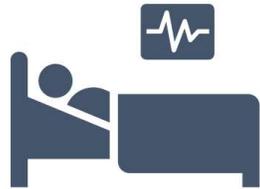
Will offer promotional pricing with market launch of VibeSit™ PRO; discount amount TBD; quantity discount under consideration



Software upgrade pricing TBD; to be explored during N=100 study

Financial Rationale for Investing in VibeSit™ PRO

Opportunity for Both Cost Avoidance and Incremental Revenue



Cost avoidance through fall reduction*

\$35K/fall with hospitalization (more than pays for itself by reducing 1 fall)

\$18K/fall with ER visit

\$4K/fall with no injury

Indirect

**Per CDC & Joint Commission data*



Revenue Generation (15-20 treatments per day per device)

Rehab patients

~\$30-40/treatment (97110, 97112, 97116)

PDPM (serves needs of most demanding patients for faster recovery with less pain)

Group Therapy (multiple devices administered by a single therapist)

Long term care residents

~\$4-6/day/resident per diem (restorative nursing – active range of motion)

Traction to Date & Key Future Milestones



VT1, VT2, & VS-PRO registered with FDA as Class I Medical Devices



Patent protected intellectual property



Treatments reimbursable by Medicare / Insurance



Proof of safety & efficacy in treatment of underlying falls factors; early pilot study shows effectiveness in falls reduction; Q3 kickoff of multi-site clinical study with N of 100 to prove fall reduction



VibeSit™PRO device design/development underway at contract manufacturer; production to commence Q4 2020



Accepted for reveal of VibeSit™PRO at ACRM2020 as symposium presenter & exhibitor



Projected soft launch with 2 to 4 regional health care systems and several SNF's and long-term care facilities Q1 2021



For more information, please contact:



Ed Morgan – CFO
ed@vibetechglobal.com



Jeff Leismer, PhD – Founder & CEO
jeff@vibetechglobal.com

www.vibetechglobal.com

**Thank You
for your interest in
VibeTech**



A NASA Spinoff Company

Appendix

Meet Our Medical Industry Experts:



Where Business and Government Meet

Innovative Healthcare Solutions

The Healthcare Business Practice works with leading innovators across the healthcare delivery spectrum including payer/provider systems, medical device developers, chronic condition management solutions, and digital therapeutics to solve real-world healthcare issues.



ROLE: MBS is VTE's critical partner in executing a go-to-market strategy with Payers and Providers



Competitive analysis



Channel recommendations/value proposition



Sell-in recommendations/financial projections



KRISTINE SEYMOUR, PARTNER.

EXPERTISE: HEALTHCARE MARKET DEVELOPMENT, BUSINESS GROWTH STRATEGY, SALES & DISTRIBUTION, AND HEALTHCARE START-UPS AND INNOVATION

VibeTech's World Class Team

Team



Jeff Leismer, PhD Biomechanics – Founder & CEO; BOD; 10 patents issued; NSF proposal review panelist; Former UW faculty & R&D Lead for Kohler Consumer Experience Lab; ISO committee member



Ed Morgan, CPA – CFO; BOD; 30 years CFO public & private; EY Alum, Grad Kellogg Exec Development Program



Donna Rippin, MBA – Corporate Strategy & Branding
40 years GM, Strategy & Marketing; Launched \$100MM new business at Birds Eye; head of \$350MM unit at Lactalis



Linda Cates, MSW– BOD; Investor; Extensive experience in business management, public relations, strategic planning, marketing



Kermit Ellefson, CPA – BOD Chairman; Oversaw revenue growth \$7MM to \$50MM in 7 years as President-Schenck CPAs

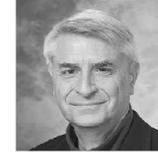


Deb Jacoby, CTRS, CPRP, BC-AP – Clinical Liaison; Retired Life Enrichment Director at Rocky Knoll Health Care Center



Tim Eylander – VP of Business Development; 40+ years successful account management and tactical sales to Fortune 500 companies and other channel networks

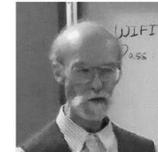
Clinical Advisors



Neil Binkley, MD (UW Madison)
Past President, Intn'l Society for Clinical Densitometry;
Assoc. Dir. UW Madison Institute on Aging



Martha Hinman, EdD, PT (Anderson University)
Past Chair of accreditation board for US physical therapy schools (CAPTE); Founding Chair - School of PT at Anderson University



Danny Riley, PhD (MCW – retired)
Past President, American Society for Gravitational and Space Research; Chair, North American Conference on Human Vibration



Bryan Heiderscheit, PhD, PT (UW Madison)
Director, Badgers Athletic Performance Research; co-Director, Neuromuscular Biomechanics Lab



Robert Limoni, MD (BayCare Clinic)
Board Certified Orthopedic Surgeon; Repeat BayCare innovation award winner

VibeTech Clinical Studies

- CS0001 - Safety and Efficacy study on nursing home residents (n=6) (Northern Oaks, Abilene, TX)
- CS0002 - Sit-and-Reach Study (n=21) (Sheboygan, WI)
- CS0003 - Dosing effects on EMG and Involuntary Muscle Force Development (n=10) (Sheboygan, WI)
- CS0004 - Acceleration and EMG in response to PVT (n=3) (UW Madison)
- CS0005 - Ankle sprain feasibility (n=1) (Aurora BayCare Medical Center, Green Bay, WI)
- CS0006 - Acceleration and frequency effects on alternating load (product lab testing) (Sheboygan, WI)
- CS0007 - Early Adopter Partnership Program (n=147) (Milwaukee WI, Elizabethtown KY, Abilene TX)
- CS0008 - PT vs (PT+VT) study (n=23) (Northern Oaks, Abilene, TX)
- CS0009 - Blood flow, foot pressure shift with sit-to-stand and VT, and EMG pilot study (n=1) (UW La Crosse)
- CS0010 - Older adult jump height study (n=32) (UW Madison)
- CS0011 - Older adult tolerance study (n=32) (UW Milwaukee)
- CS0012 - Dosing / Artificial Intelligence study (n=14) (Spaceport Sheboygan, Sheboygan, WI)
- CS0013 - Achilles repair feasibility (n=1) (Sheboygan, WI)
- CS0014 - Dementia tolerance pilot study (n=5) (Rocky Knoll)
- CS0015 - Usability, tolerance, and benefits in an assisted living residence (n=2) (Heritage)
- CS0016 - Telemedicine validation study (n=2) (Kenosha, WI)
- CS0017 - VibeTech 2 validation study (n=52) (Sheboygan, WI)
- CS0018 - Dementia fall reduction pilot study (n=6 & growing) (Rocky Knoll)



THERAPEUTIC VIBRATION PILOT STUDY REDUCES FALLS AND IMPROVES MOBILITY AND CONFIDENCE IN RESIDENTS WITH DEMENTIA

Author(s)
Deb Jacoby and Jeff Leismer, PhD

Author(s) Disclosures
Jeff Leismer is the Founder and CEO of VibeTech and inventor of the VibeTech technology. Deb Jacoby is now retired from Rocky Knoll and has no financial interest in the research performed.

Objective
To study the effects of a seated therapeutic vibration system as an exercise alternative to accommodate the cognitive and physical function needs of memory care residents living with dementia.

Design
Baseline fall data and measures of strength and mobility were tracked in 6 memory care residents over a 3-month period followed by a 3-month intervention period.



Setting
Research was performed in the memory care unit at Rocky Knoll Health Care Center in Plymouth, WI.

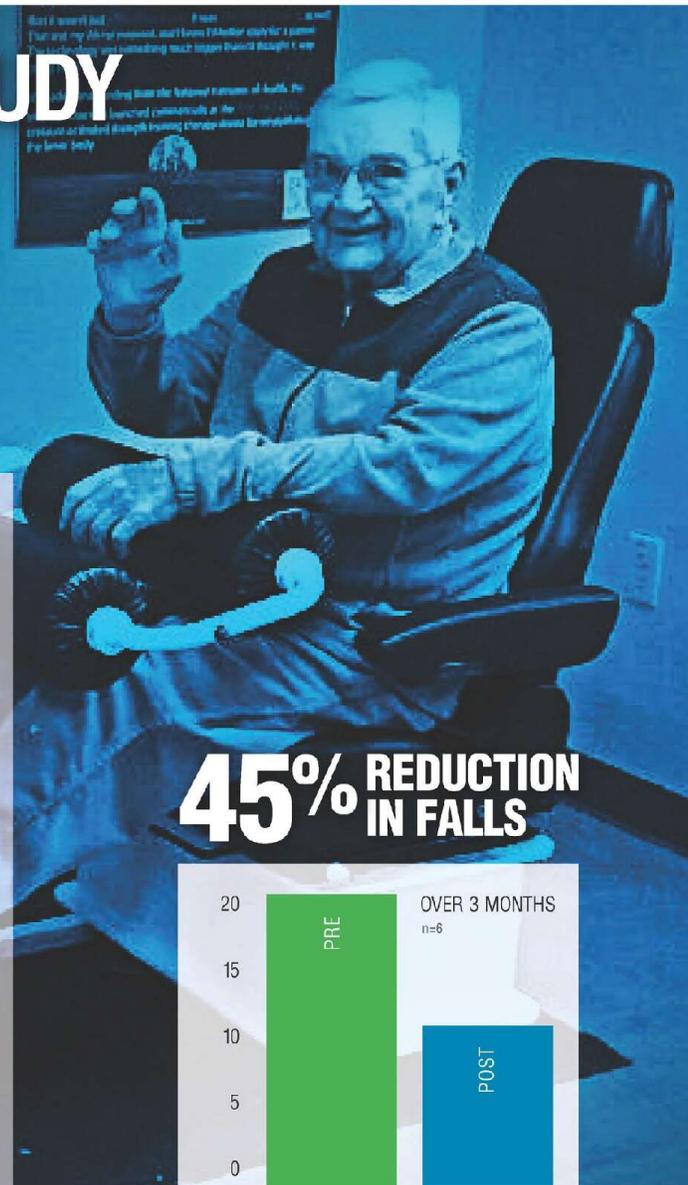
Participants
Study participants included 6 memory care residents (all wheelchair dependent) who experienced a decrease in mobility and an increase in falls.

Interventions
Each resident received 10-minute treatments ~2x/week for 12-weeks consisting of therapeutic vibration plus isometric leg presses performed on a VibeTech 1 rehabilitation system (VibeTech – Sheboygan, Wisconsin).

Main Outcome Measure(s)
The primary outcome was the number of falls occurring during baseline and intervention periods. Treatment notes recorded comments on mood, increased leg sensation and improvements on ability to transfer or ambulate with assistance.

Results
Participants fell a total of 20 times during the baseline period and 11 times during the intervention period, representing a 45% reduction in the total number of falls while receiving VibeTech treatments. One participant went from being wheelchair bound to walking independently using a wheeled walker.

Conclusions
This pilot study demonstrated compelling implications for the use of seated therapeutic vibration to reduce falls in memory care residents. Future studies will include larger sample sizes and will incorporate new technologies translated from these findings.



45% REDUCTION IN FALLS



*Presented at the American Congress of Rehabilitation Medicine (ACRM) annual conference (Oct. 2019)
Published in Archives of Physical Medicine & Rehabilitation (Dec. 2019)*



VALIDATION OF A SEATED THERAPEUTIC VIBRATION SYSTEM THAT TREATS, ASSESSES AND TRACKS PATIENTS

Author

Jeff Leismer, PhD

Author(s) Disclosures

Jeff Leismer is the Founder and CEO of VibeTech and inventor of the VibeTech technology.

Objective

To evaluate the immediate effects of semi-recumbent therapeutic vibration on leg strength and range of motion (ROM).

Design

This intervention study was a before-after trial, with assessments being performed before and after each treatment provided.

The average number of treatments provided per person was 3.20 (SD=2.97) with treatments taking place at least 1-day apart.

Setting

Research was performed in a private treatment room within the R&D facility established by the manufacturer of the treatment equipment used for this study.

Participants

Study participants included all individuals desiring to partake in the study regardless of health condition or age. Fifty-two participants were recruited ranging in age from 13-93 with varying conditions and levels of physical function.

Interventions

Ten-minute treatments performed by participants seated in a VibeTech 2 robotic rehabilitation system (VibeTech – Sheboygan, Wisconsin) consisted of therapeutic vibration with resistance loading and lower extremity range of motion exercises – closed automatically to scale to each user's strength and ROM.

Main Outcome Measure(s)

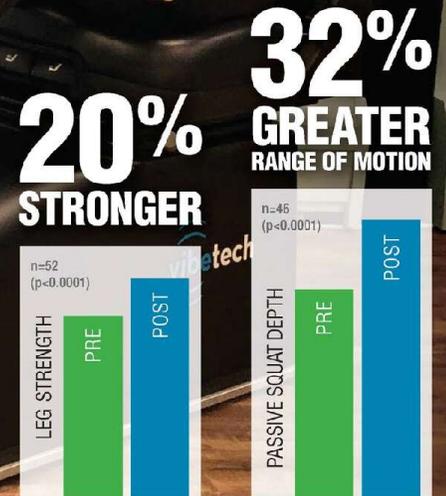
Isometric leg (press) strength and passive squat depth (ROM) assessments were performed while seated on the VibeTech 2.

Results

Treatments resulted in immediate gains in strength (mean=20%; SD=16%; n=52; p<0.0001) and range of motion (mean=32%; SD=28%; n=46; p<0.0001).

Conclusions

This study demonstrated statistically significant gains in strength and range of motion in participants both young and old as well as healthy and those with various conditions. Future studies will target the effects of treatment on specific conditions to help establish best practices for each population using this novel new technology.



*Presented at the American Congress of Rehabilitation Medicine (ACRM) annual conference (Oct. 2019)
Published in Archives of Physical Medicine & Rehabilitation (Dec. 2019)*



NEW BIOPHYSICAL STIMULATION MODALITY PROVIDES SIGNIFICANT STRENGTH GAINS TO DIABETIC NEUROPATHY PATIENT

Author

Jeff Leismer, PhD

Author(s) Disclosures

Jeff Leismer is the Founder and CEO of VibeTech and inventor of the VibeTech technology.

Abstract

Jeff Leismer, PhD (Founder & CEO – VibeTech)

Objective

To investigate the effects of a novel robotic rehabilitation system with therapeutic vibration stimulation on leg strength in a patient with diabetic neuropathy, declining strength and mobility, and a fear of falling.

Design

This case study tracked subject progress over a 12-week period as they started a new intervention for strength and mobility.

Setting

The study took place in an R&D facility established by the startup company that produced the equipment used in this study (VibeTech – Sheboygan, WI) to translate clinical research into new technologies and best practices.

Participants

The study participant was a 72-year-old female with diabetic neuropathy, foot-drop, hip repair after a fall/fracture, and a fear of falling, who used a walking aid 100% of the time during ambulation.

Interventions

Ten-minute treatments were performed ~1x/week for 12 weeks and consisted of therapeutic vibration plus leg presses or passive range of motion exercises performed on a VibeTech 2 semi-recumbent robotic rehabilitation system.

Main Outcome Measure(s)

Isometric leg (press) strength was consistently assessed on each leg immediately before and after each treatment using the VibeTech 2.

Results

The subject demonstrated a 3x gain in left leg strength (+174 lbf) and 2x gain in right leg strength (+118 lbf), resulting in equal strength in each leg (~300 lbf), stopped using a walking aid, and no longer had a fear of falling at study completion.

Conclusions

The intervention contributed to significant strength gain and mobility improvement for the subject. Larger sample sizes are necessary to confirm the repeatability of the study results for others with diabetic neuropathy.

Reduced fear of falling

3X STRONGER

NO MORE DEPENDENCE ON A WALKING AID



Presented at the American Congress of Rehabilitation Medicine (ACRM) annual conference (Oct. 2019)
Published in Archives of Physical Medicine & Rehabilitation (Dec. 2019)



Author

Jeff Leismer, PhD

Author(s) Disclosures

Jeff Leismer is the Founder and CEO of VibeTech and inventor of the VibeTech technology.

Objective

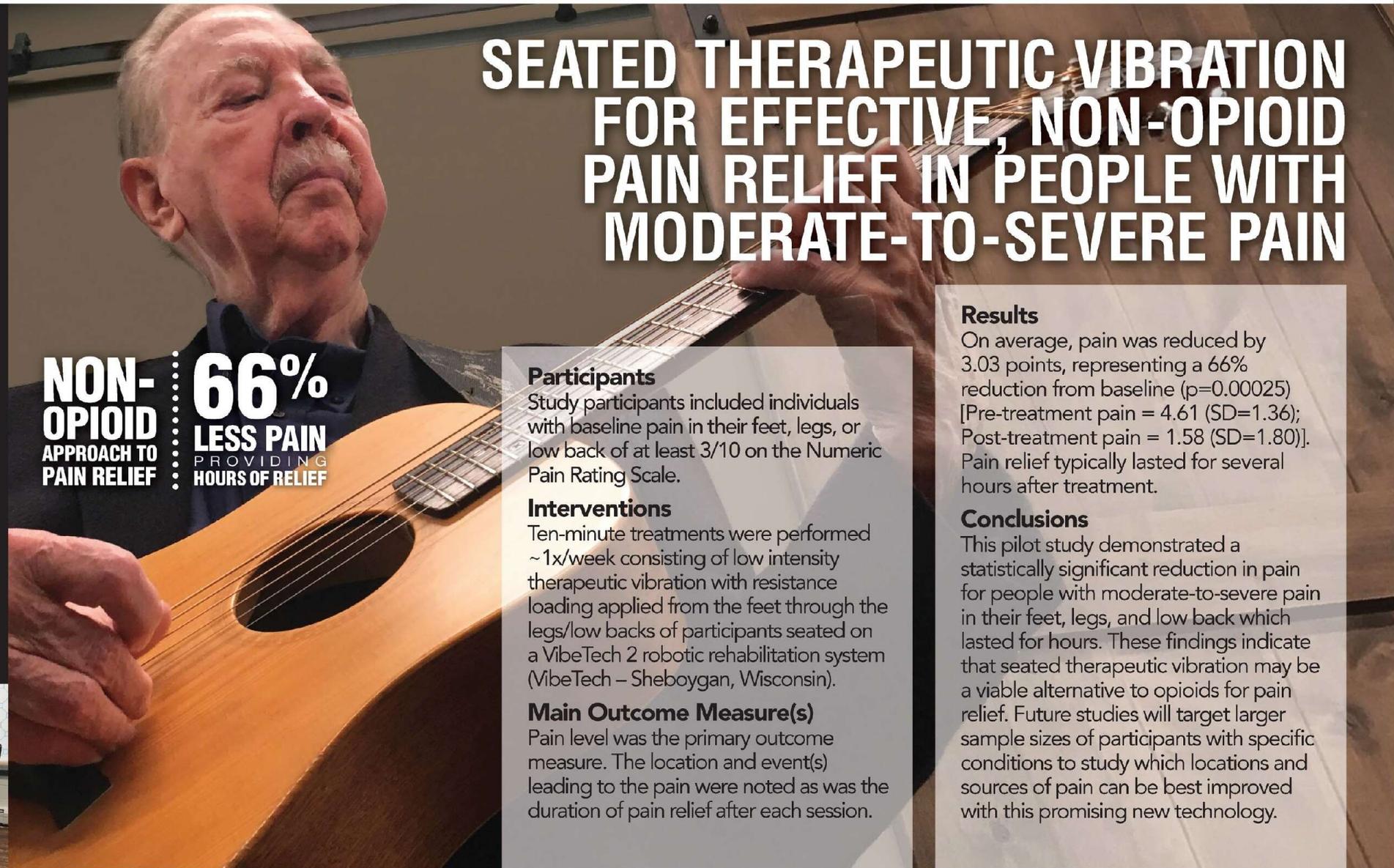
To evaluate the capabilities of a seated robotic rehabilitation and therapeutic vibration system as a means of reducing pain in people with moderate-to-severe pain.

Design

Pain was assessed before and after each treatment and averaged over the number of treatments each participant received (n=11; mean=4.18; SD=3.54).

Setting

Research was performed in an R&D facility established by the startup company which created the equipment used for this study.



SEATED THERAPEUTIC VIBRATION FOR EFFECTIVE, NON-OPIOID PAIN RELIEF IN PEOPLE WITH MODERATE-TO-SEVERE PAIN

NON-OPIOID APPROACH TO PAIN RELIEF **66%** **LESS PAIN PROVIDING HOURS OF RELIEF**

Participants

Study participants included individuals with baseline pain in their feet, legs, or low back of at least 3/10 on the Numeric Pain Rating Scale.

Interventions

Ten-minute treatments were performed ~1x/week consisting of low intensity therapeutic vibration with resistance loading applied from the feet through the legs/low backs of participants seated on a VibeTech 2 robotic rehabilitation system (VibeTech – Sheboygan, Wisconsin).

Main Outcome Measure(s)

Pain level was the primary outcome measure. The location and event(s) leading to the pain were noted as was the duration of pain relief after each session.

Results

On average, pain was reduced by 3.03 points, representing a 66% reduction from baseline (p=0.00025) [Pre-treatment pain = 4.61 (SD=1.36); Post-treatment pain = 1.58 (SD=1.80)]. Pain relief typically lasted for several hours after treatment.

Conclusions

This pilot study demonstrated a statistically significant reduction in pain for people with moderate-to-severe pain in their feet, legs, and low back which lasted for hours. These findings indicate that seated therapeutic vibration may be a viable alternative to opioids for pain relief. Future studies will target larger sample sizes of participants with specific conditions to study which locations and sources of pain can be best improved with this promising new technology.

Presented at the American Congress of Rehabilitation Medicine (ACRM) annual conference (Oct. 2019)

Published in Archives of Physical Medicine & Rehabilitation (Dec. 2019)

FACULTY



Jeff Leismer, PhD

Founder and CEO
VibeTech



**Deb Jacoby, CTRS, CPRP, BC-AP, Music & Memory Certification,
WI Dementia Care Specialist**

Clinical Liaison
VibeTech



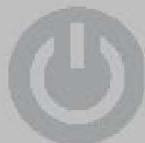
Dawn Wittig, BSN

Founder
Tender Hearts Senior Care

2020 REVISION OF HOME HEALTHCARE AND TELEMEDICINE: NEW COST-EFFECTIVE TOOLS FOR FALL PREVENTION AND CAREGIVER ENGAGEMENT TO IMPROVE CARE FOR INDIVIDUALS LIVING WITH COGNITIVE IMPAIRMENTS

CME/CEUS

THU 22 OCT
4:45 PM – 6:00 PM



ACRM
AMERICAN CONGRESS OF REHABILITATION MEDICINE



How serious/costly are falls in elderly adults?

