Enhancing Geriatric Health Care: PARO for Biofeedback Therapy

- FDA Class II Biofeedback Medical Device since 2009
- Alternative for Live Animals in Therapy, Activities, and Support
- CPT Codes for Reimbursable “Biofeedback Therapy with PARO”
- CMP Funds Available
- GSA Approval in the SAM.GOV of the US

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PARO Improved Moods, Anxiety, Loneliness, etc. Beaufont Towers, Richmond, VA (2017)

What Is PARO?

1.Introduction

- Advanced interactive therapeutic robot designed to look like a baby harp seal.
- Developed by Dr. Takanori Shibata. Hand-made production in Japan for Quality.
- FDA cleared Class II Medical Device in the US since 2009.
- Global Presence (8,000 PAROs in more than 30 countries)
- Clinical Evidence by Clinical Trials (including RCTs and their Meta-Analysis)
- GSA Approval in the SAM.GOV of the US - Defense Logistics Agency CAGE # 77XU0

2.Key Features

- Psycho-physiological Biofeedback Therapy
- Responds to touch, light, sound, temperature, and posture.
- Simulates emotions and behaviors by Embodied Artificial Intelligence
- Battery-operated with 5-8 hours of use per charge.
- Available in white, gold, pink, and grey fur.

3.Safety, Cleaning and Disinfection

- No cameras nor data transmission—ensures privacy.
- Autonomous Embodied AI device—no subscription needed.
- Fur consists of silver-ion (Ag+) to kill bacteria and viruses gradually.
- Wipe down cleanable using disinfectant wipes for 2 min.
- Accelerated Hydrogen Peroxide (AHP) wipes, UV light, and high-concentration alcohol can be used.

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therapeutic robot

Benefits of PARO

User engagement and interaction with PARO Artificial Intelligence generated behaviors can stimulate the same types of neurological responses that produce positive physiological and psycho-social outcomes that are common in live Animal Assisted Activities (AAA) and Therapies (AAT) without the risks of live animals.

PARO improved Agitation in 20 mins and Pain in 60 mins of elderly with Delirium and/or Dementia at the Penn Presbyterian's Acute Care Unit, Univ. of Pennsylvania (since 2019)

1. Emotional and Psychological Support

- Reduces anxiety, stress, and loneliness.
- Provides comfort and companionship.

2. "Biofeedback Therapy with PARO" (Reimbursable CPT codes)

- Dementia, Cancer, PTSD, Brain Injury, Neurocognitive and Developmental disorders, and Delirium
- Improve pain, anxiety, depression, agitation, insomnia, etc.
- Non-pharmacological therapy to reduce the dosage of medications.
- Promotes positive behaviors and emotional responses.

3. Advantages of Rehabilitation

- Improves fine motor skills, speech, swallowing, and hemispatial neglect.
- Stimulates cognitive functions.
- Encourages social interaction.

4. Healthcare Support

- Assists healthcare staff in calming patients.
- Reducing the Burden of Care for the Elderly with Dementia.

paro therapeutic robot

A Veteran with PTSD and Dementia
VA Hospital, the US

Solund Denmark-Assisted Living, Copenhagen, Denmark

Dementia Care, Siena, Italy

Parkshore Senior Living Community, Seattle, WA (Nov. 2022)
CMP funds covered 48 PAROs for 30 facilities in WA, US in 2021

Chelsea and Westminster Hospital NHS and Imperial Collage, London, the UK (Aug, 2020)

PARO Case Studies and Practical Uses

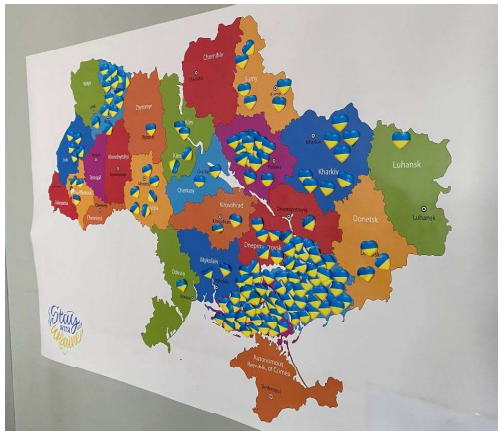
- PARO in Geriatric Hospitals and Care Facilities
  - Example: Univ. of Pennsylvania Presbyterian's Acute Care Unit [technical.ly]
  - Example: Helps Kūpuna with Dementia at Kahala Nui [youtube.com]
  - Outcomes: Improved pain, anxiety, agitation, depression and insomnia.
  - No problems in infection control (Swab and ATP tests & practical uses)
- PARO in Mental Health Settings
  - Example: CAMH (Canada) Centre for Addiction and Mental Health.
  - Outcomes: Enhanced patient engagement and emotional well-being.
- Global Applications
  - Usage in various countries (e.g., Australia, UK, EU, HK, Singapore).
  - Broad range of applications from children to elderly care.
  - Analog Space Missions: Improve Stress, Isolation and Socialization
- Supporting Videos [youtube.com]
  - PARO User Testimony from Parkshore Senior Living Community, Seattle, WA
  - PARO's Therapeutic Effects at BlueCross Aged Care in Australia
  - This robotic therapy seal is revolutionizing elderly care, Stones End Day Centre, UK
  - The Impact of PARO Robot on Health and Well-being
  - PARO Robots Free Training Video of How PARO Can Be Used

PARO at the Penn Presbyterian's Acute Care Unit Univ. of Pennsylvania since 2019

PARO for Analog Astronauts HI-SEAS, Hawaii, USA (May 2023 - current)

Mental Health and Psychosocial Support (MPHSS) during Emergencies and beyond

PARO has been incorporated in the MPHSS Programs of the UNICEF and the UN IOM for Ukrainian Refugees in Poland since July 2023



PARO Related Research Papers

- The Lancet: Dolphins, dogs, and robot seals for the treatment of neurological disease (2013)
- Trends of Robot Therapy with Neurological Therapeutic Seal Robot, PARO (2014)
- Effectiveness of a social robot, "Paro," in a VA long-term care setting (2016)
- The Utilization of Robotic Pets in Dementia Care (2017)
- Use of a Robotic Seal as a Therapeutic Tool to Improve Dementia Symptoms: A Cluster-Randomized Controlled Trial (2017)
- PARO: An Important Solution for Symptom Control (Reimbursement for PARO Treatment CPT Code Guide) (2018)
- Pet robot intervention for people with dementia: A systematic review and meta-analysis of randomized controlled trials (2019)
- Review of outcome measures in PARO robot intervention studies for dementia care (2020)
- Touching the social robot PARO reduces pain perception and salivary oxytocin levels (2020)
- The effect of a social robot intervention on sleep and motor activity of people living with dementia and chronic pain: A pilot randomized controlled trial (2021)
- PARO as a Biofeedback Medical Device for Mental Health in the COVID-19 Era (2021)
- PARO Robot Interaction Decrease Pain and Agitation Scores in Hospitalized Older Adults with ADRD and/or Delirium (2023)
- The effectiveness of a therapeutic robot, 'Paro', on behavioural and psychological symptoms, medication use, total sleep time and sociability in older adults with dementia: A systematic review and meta-analysis (2023)

Thank you!

For more details and paper requests of Clinical Trials of PARO, please contact sales@parorobots.com

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