

# The Safer Seat

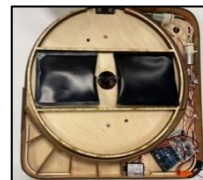
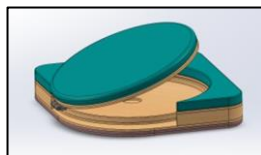
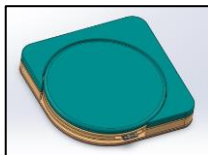
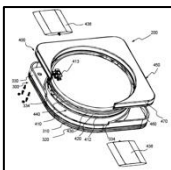
Rehabilitation    Fall Prevention    Healthy Aging    Community Mobility

**For individuals living with decreased strength, balance, or mobility, and their caregivers, University of Pittsburgh researchers have developed a vehicle seat overlay to facilitate safe transfers into and out of vehicles.**

The Safer Seat utilizes a novel design to facilitate easy execution of safe transfer techniques into and out of a vehicle through a low resistance 45° turn and a tilt function. Available low-tech devices that are currently used to aid in vehicle transfers, include the Tip-Up Plate, XL-Board, Sharper Image 360° Swivel Cushion, and the Stander EZ Swivel Seat Cushion, do not facilitate a controlled turn or aid in the sit-to-stand components of safe vehicle transfers. Alternatively, available costly high-tech solutions such as the BraunAbility Turny® Evo seat and Adapt Solutions XL-Base are designed for a niche user population, require modifications to the actual vehicle, and pair with a limited number of vehicle makes and models. Therefore, these existing solutions do not holistically meet the needs of individuals with decreased functional strength, balance, and mobility, our target consumer group.

## Indications

- There is an average of 37,000 vehicle boarding and exiting injuries that require emergency room care among older adults (≥65 years) each year in the United States.
- Typical age-related decline in strength and balance can increase risk of falls and injury with vehicle entry/exit.
- Numerous degenerative conditions lead to increased risk of fall and injury with vehicle transfers, these include:
  - Multiple sclerosis
  - Alzheimer’s disease and related dementias
  - Amyotrophic Lateral Sclerosis
  - Parkinson’s disease



## Advantages

- Provides controlled turn range specific to safe transfer methodology, diverging from alternative low-tech options.
- Provides automatic tilt feature to facilitate sit to stand portion of transfer without need for caregiver lifting or pulling, not available in alternative low-tech options.
- Does not require vehicle modifications, as compared to alternative high-tech options.

## Invention Readiness

**We have built a minimally viable product and through the University of Pittsburgh have filed a provisional patent (full patent submitted). While the initial prototype has been developed, we are seeking funding to build a second iteration with refined materials and several design upgrades over the summer (2024) in preparation for safety and usability testing.**

### IP Status:

Provisional Patent application #: 63/431,155  
Patent Pending #: PCT/US2023/082929

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### Related Publications:

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