Healthcare Applications and Market Strategy for HCAS

This report outlines practical marketing directions for the Human Collision Avoidance System, or HCAS, with a focus on healthcare, aging-in-place, senior care, insurance, and wearable-technology partnerships.

The main goal is to help the developer decide:

1. Who could buy or partner around this product
2. Which use cases are most commercially promising
3. What message should be used for each customer group

HCAS should not be marketed only as a technical device. It should be positioned as a ***proactive personal safety platform*** that helps people move more safely by detecting hazards and giving real-time alerts before accidents happen.

1. Recommended Market Positioning

Currently, HCAS is described as a real-time human safety platform designed to prevent collisions, falls, and accidents through intelligent sensing and multi-layer actuation. The system uses a detection-to-action flow: sensing, processing, decision-making, and actuation through audio, haptic, and visual alerts. However, for a marketing position in healthcare, HCAS should be positioned as:

"A wearable active-safety platform that helps people detect nearby hazards and move with greater confidence in healthcare, aging, rehabilitation, and mobility environments."

Because many products already offer fall detection. However, to the best of my knowledge, HCAS is not only about detecting falls after they happen. It is about supporting safer movement before a fall, collision, or near-miss becomes an injury.

Other possible taglines you can use on your website:

- *"Before the fall. Before the collision."*
- *"A proactive safety layer for aging in place."*
- *"Helping people move with confidence."*
- *"From fall detection to hazard prevention."*

2. Main Product Story

The product story should be built around one clear idea: *Vehicles have collision-avoidance systems. Humans do not. HCAS brings active safety technology to people.*

3. Who Could Buy or Partner Around HCAS?

HCAS should be sold mainly through a B2B[1] or partnership model, not only direct-to-consumer.

Primary Customer Groups

Priority	Customer group	Why they may care	Best message
1	Senior living and retirement communities	Resident falls, collisions, mobility confidence, family reassurance	"A proactive safety layer for safer resident mobility."
2	Home care providers	Older adults want to remain safely at home; caregivers need reassurance	"Supporting safer *aging-in-place* through real-time hazard awareness."
3	Rehabilitation hospitals and clinics	Patients recovering after surgery or hospitalization need safe mobility support	"Helping patients regain mobility with confidence."
4	Insurers and benefits providers	Falls, injuries, and claims are expensive; prevention is attractive	"Moving from reactive claims to proactive risk prevention."
5	Smartwatch and wearable companies	HCAS could become a feature, sensor module, or safety algorithm	"Adding active environmental safety to wearable health platforms."
6	Municipalities and public safety programs	Pedestrians, cyclists, and scooter riders face collision risk	"A personal safety layer for vulnerable road users."
7	Industrial and workplace safety organizations	Workers in warehouses, construction, and logistics face collision hazards	"Reducing near-miss and collision risk in dynamic work environments."

4. Healthcare Use Cases

4.1 Aging in Place

Target users: Older adults living independently at home.

Problem: Older adults may face hazards such as furniture, stairs, poor lighting, pets, outdoor sidewalks, driveways, and icy conditions.

HCAS value: HCAS could provide real-time alerts when the person approaches a hazard or when movement patterns indicate instability.

Message: *"HCAS helps older adults move more safely and confidently at home and in the community."*

[1] Business-to-Business platform

Potential buyers or partners in Canada:

- NRC Aging in Place Challenge Program (link)
- CABHI: Centre for Aging + Brain Health Innovation (link)
- AGE-WELL (link)
- Home care organizations
- Retirement communities
- Municipal aging-in-place initiatives

The NRC Aging in Place Challenge Program specifically focuses on technology and innovation to help older adults live safely in their homes and communities, making it a strong target for Canadian pilots and partnerships. AGE-WELL also focuses on technology-based innovation to support older Canadians and caregivers.

4.2 Senior Living and Long-Term Care (LTC)

Target users: Residents in retirement homes, assisted living, memory care, and LTC.

Problem: Residents may experience mobility limitations, frailty, poor balance, low vision, cognitive impairment, or difficulty navigating shared spaces.

HCAS value: HCAS can be positioned as a wearable safety-support tool for residents at elevated risk of mobility impairment.

Message: *"HCAS gives residents an added layer of safety while helping care teams better understand mobility-risk patterns."*

Potential Canadian targets:

- Sunrise Senior Living (https://www.sunriseseniorliving.ca/)
- Chartwell (https://chartwell.com/)
- Amica Senior Lifestyles (https://www.amica.ca/)
- Sienna Senior Living (https://www.siennaliving.ca/)
- Extendicare (https://www.extendicare.com/)
- Schlegel Villages (https://schlegelvillages.com/)

Potential U.S. targets:

- Brookdale Senior Living (https://www.brookdale.com/en.html)
- Argentum members (https://www.argentum.org/)

Argentum is a major U.S. national association for professionally managed senior living communities, which makes it useful for market access, networking, and credibility-building. Brookdale and Sunrise are examples of large U.S. and Canadian senior-living operators that already serve independent living, assisted living, memory care, and related senior-care markets.

4.3 Dementia and Cognitive Impairment

Target users: People living with dementia, mild cognitive impairment, or spatial-awareness challenges.

Problem: Some individuals may have difficulty noticing hazards, responding quickly, or navigating unfamiliar spaces.

HCAS value: Simple haptic alerts may be more intuitive than complex app notifications.

Message: *"HCAS provides simple, intuitive movement cues for people who may need extra spatial-awareness support."*

Important caution: This use case should be tested carefully. The message should not claim that HCAS prevents wandering or prevents dementia-related falls unless there is evidence.

CABHI may be a strong partner here because it focuses on innovation for older persons, people living with dementia, caregivers, and healthcare providers.

Important point: Dementia and cognitive impairment are significant potential use cases for HCAS because this population may experience challenges with spatial awareness, attention, judgment, wayfinding, balance, and responses to environmental hazards. From a market and healthcare perspective, there is strong interest in technologies that can support safer aging in place, reduce caregiver anxiety, and help individuals with cognitive impairment remain mobile and independent for longer. However, this use case should be approached with particular caution. People living with dementia or cognitive impairment may have more difficulty interpreting alerts, responding quickly, remembering how the device works, or distinguishing between real hazards and system notifications. Therefore, any false alarm, missed alert, confusing signal, delayed warning, or device failure could cause significant harm, including panic, unsafe movement, falls, increased risk of wandering, or loss of trust among caregivers and care providers.

4.4 Low Vision and Visual Impairment

Target users: People with low vision or blindness.

Problem: Existing mobility supports, such as canes and guide dogs, are useful, but they may not detect all dynamic hazards, especially from the side or behind.

HCAS value: Directional vibration could alert users to nearby obstacles or movement risks without requiring visual attention.

Message: *"HCAS extends environmental awareness through intuitive, directional haptic feedback."*

This use case is especially aligned with HCAS's haptic-first design. The system documents describe directional placement of vibration motors and haptic feedback for front, back, left, and right alerts.

4.5 Insurance-Supported Prevention

Target users: Health insurers, life insurers, workplace insurers, auto/mobility insurers, and benefits providers.

Problem: Insurers pay after injuries happen. They may be interested in prevention if the product can reduce risk, support safer behavior, or generate objective event data.

HCAS value: HCAS can generate data on near-misses, impacts, unsafe movement patterns, or risk-relevant events.

Message: *"HCAS helps insurers move from reactive claims management to proactive risk prevention."*

The insurance value proposal already identifies three insurer-relevant areas: reducing incident frequency through proactive alerts, mitigating severity through early detection and feedback, and supporting claims validation through objective timestamped evidence.

Potential Canadian targets:

- Sun Life
- Manulife
- Canada Life
- GreenShield
- Desjardins Insurance
- WSIB Ontario
- WorkSafeBC

Potential U.S. targets:

- UnitedHealthcare / Optum

- Humana / CenterWell
- CVS Health / Aetna
- Elevance Health / Carelon
- Kaiser Permanente
- SCAN Health Plan
- Alignment Health

Which types of claims could people make, and how could HCAS reduce them?

For example, Sun Life lists several claim categories, including health and dental, life insurance, critical illness, disability insurance, accidental death, and long-term care claims. HCAS is most relevant to the following:

Claim type	Example claim after a fall/collision	How HCAS could reduce risk
Health/ Extended Health claims	Physiotherapy, chiropractic care, crutches, braces, medical equipment, ambulance, nursing, home care, medication, rehabilitation	By warning the user before a collision, obstacle, or unsafe movement, HCAS may reduce injuries that lead to treatment claims.
Paramedical claims	Physiotherapy, occupational therapy, massage therapy, and chiropractic care after a fall or mobility injury	Fewer preventable falls or collisions could mean fewer rehab-related claims.
Disability claims	Short-term or long-term absence from work due to fracture, concussion, back injury, hip injury, chronic pain, or mobility limitation	HCAS could help prevent incidents that lead to work absence, especially for high-risk workers or older employees.
LTC/home care-related claims	After a serious fall, a person may need home support, nursing, or assisted living services	Preventing severe falls may help delay loss of independence or reduce the need for home-care support.
Accidental death claims	Fatal fall, severe head injury, unsafe outdoor mobility incident	This is a lower-frequency but high-severity claim. HCAS would be framed as a severe-incident prevention tool.
Caregiver-related indirect cost	Not always a direct insurance claim, but family caregivers may miss work or need support after an older adult's injury	HCAS could support aging in place and reduce caregiver stress by preventing avoidable incidents.

Falls are a major health and cost issue in Canada. Public Health Agency of Canada data show that falls among older adults lead to emergency department visits, hospitalizations, loss of independence, and death. Parachute Canada reports that falls are the number one cause of

injury-related death, hospitalization, and emergency department visits for older adults in Canada, costing about $5.6 billion in 2018.

This gives HCAS a strong value proposition: "Sun Life (or other insurance companies) and their employer clients are already paying for the downstream consequences of injuries. HCAS can be positioned as an *upstream prevention tool* that helps reduce avoidable mobility-related incidents before they become claims."

Best marketing message for insurance companies like Sun Life:

I would not position it as "smart wearable technology." I would position it around claims prevention, aging in place, and disability reduction.

The message could be: *"HCAS is a wearable prevention platform designed to reduce preventable collision- and fall-related incidents before they become health, rehabilitation, disability, or long-term care claims. For insurers and plan sponsors, the value is not only user safety, but also lower downstream costs, fewer severe incidents, improved independence, and better support for aging-in-place and return-to-work strategies."*

The best strategy is: **Start with a small employer or aging-in-place pilot (item 4.2?)**, generate evidence, then approach Sun Life with a proposal framed around:

"We can help your plan sponsors reduce fall-related injuries, mobility-related disability claims, and aging-in-place risks through a preventive wearable safety platform."

The best entry points would be Sun Life's Group Benefits, Health Strategy, Absence and Disability Management, Lumino Health, or Innovation / Digital Health partnerships teams.

What evidence would they probably ask for?

At this stage, I think you need a credible concept package at least with the following items:

Item	What to prepare
1-page insurance value brief	Explain how HCAS may reduce falls, collisions, injury severity, and disability-related claims.
Target population	Choose one clear group: older adults aging in place, workers at mobility risk, rehabilitation patients, or senior-living residents
Use-case story	Example: "An older adult receives a vibration alert before colliding with an obstacle or entering an unsafe movement situation".
Pilot proposal	8–12 weeks, small pilot with 20–50 users.