

# CareOS — Autonomous Elder Care Intelligence

*The Operating System for Aging in Place*

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## Executive Summary

**CareOS** is an AI-powered platform that enables seniors to age safely at home while giving families and caregivers real-time peace of mind. Using ambient sensors, predictive AI, and intelligent care coordination, CareOS creates a “guardian angel” that monitors health, prevents emergencies, and orchestrates care — all without intrusive cameras or wearables.

**The Opportunity:** \$1.7 trillion global elder care market facing a perfect storm — aging populations, caregiver shortages, and unsustainable nursing home costs. The solution isn’t more facilities — it’s intelligent home care at scale.

**The Vision:** Every senior lives independently with dignity, supported by AI that catches problems before they become crises, while families stay connected without constant worry.

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## The Problem

### The Silver Tsunami is Here

1. **Demographics are Destiny:** By 2030, 1 in 6 people globally will be 60+. In the US alone, 10,000 people turn 65 every day. The 85+ population (highest care needs) will triple by 2050.
2. **Caregiver Apocalypse:** 7.4 million caregiver shortage projected by 2030. Average caregiver age is 49 and burning out. Wages can’t compete with easier jobs.
3. **Cost Crisis:** Nursing home average: \$9,000/month. Home care: \$5,000/month for just 8 hours/day of help. Medicare doesn’t cover custodial care. Middle class is squeezed.
4. **The Worry Tax:** 53 million Americans are unpaid family caregivers. Average 24 hours/week caregiving. \$522 billion in lost wages annually. Constant anxiety about “the call.”
5. **Isolation Epidemic:** 25% of adults 65+ are socially isolated. Loneliness increases dementia risk 50%. Depression affects 7 million older Americans.

### Why Existing Solutions Fail

Solution	Problem
Medical Alert Buttons	Reactive only — must press after falling. 80% of falls go unreported. No prevention.
Smart Home Devices	Not designed for seniors. Complex setup. No health intelligence.
Security Cameras	Privacy nightmare. Seniors refuse them. Doesn’t help — just watches.
Wearables	Seniors won’t wear them consistently. Limited battery. Fall detection unreliable.
Care Apps	Coordinate logistics but don’t monitor health. Still need humans for everything.

Solution	Problem
Nursing Homes	Institutional, expensive, depressing. COVID exposed the vulnerabilities.

**The gap:** No one has built an intelligent, ambient, privacy-respecting system that actually *prevents* problems while enabling true independence.

## The Solution

### CareOS: The Invisible Guardian

CareOS deploys a mesh of non-invasive sensors throughout the home that build a real-time understanding of a senior's patterns, health trajectory, and needs — then acts autonomously to keep them safe.

**Core Capabilities**

- 1. Ambient Health Intelligence (AHI) - Motion fingerprinting:** Detect gait changes, bathroom frequency, sleep patterns, activity levels — without cameras - **Environmental sensing:** Air quality, temperature, humidity, light levels — correlated with health - **Appliance monitoring:** Stove left on? Fridge not opening? Medication dispenser untouched? - **Sound classification:** Falls, distress calls, unusual silence — with edge AI, never cloud-uploaded

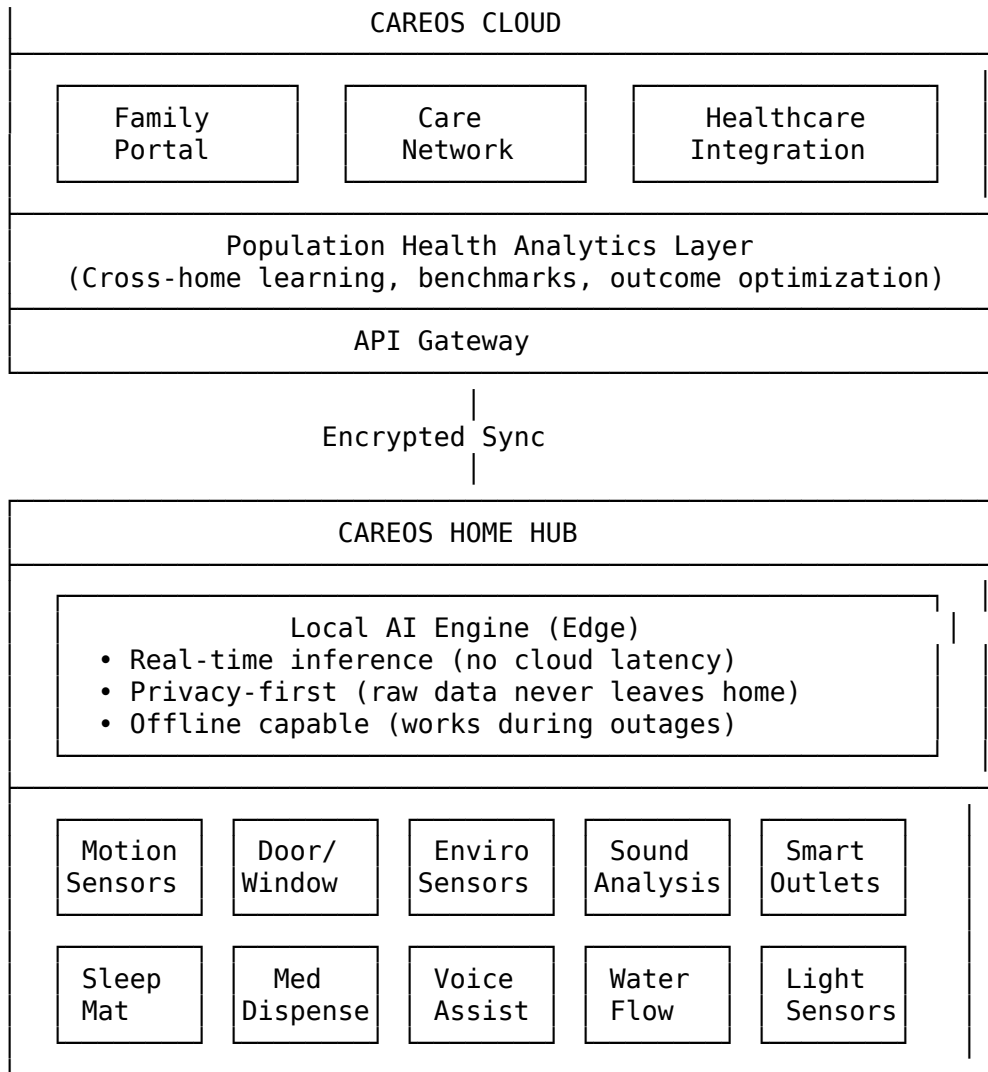
- 2. Predictive Care Engine - Fall prediction:** Detect gait deterioration 2-3 weeks before falls occur. 73% of falls are preventable with early intervention. - **UTI detection:** Bathroom pattern changes predict UTIs 48-72 hours before symptoms. #1 cause of senior hospitalizations. - **Cognitive decline monitoring:** Subtle changes in routine, sleep, and activity patterns flag early dementia progression. - **Depression indicators:** Social isolation, reduced activity, sleep changes — flagged for family and care team.

- 3. Autonomous Response System - Graduated alerts:** Not every anomaly needs 911. Smart escalation from check-in texts → family calls → professional response. - **Two-way communication:** Voice-first interface throughout the home. "CareOS, I don't feel well" triggers appropriate response. - **Emergency orchestration:** Falls detected? CareOS assesses severity, contacts right responders, unlocks door, shares vitals. - **Care team coordination:** Automatic updates to family, doctors, home health aides. Everyone on same page.

- 4. Companion Intelligence - Daily check-ins:** Conversational AI that actually knows the person. Their history, preferences, family. - **Medication reminders:** Context-aware, not annoying alarms. Confirms taking, flags missed doses. - **Social connection:** Facilitates video calls, reminds of birthdays, encourages social activities. - **Cognitive engagement:** Personalized puzzles, reminiscence therapy, news briefings — keeps minds active.

- 5. Family Peace of Mind Dashboard - Daily wellness score:** 0-100 score synthesizing all health indicators. Trend over time. - **Activity feed:** Non-intrusive updates. "Mom had a good day — active, ate well, slept 7 hours." - **Predictive insights:** "Dad's sleep quality declining — consider doctor visit this week." - **Care coordination:** Manage schedules, share updates with siblings, coordinate with professionals.

## Technical Architecture



## Privacy-First by Design

**What CareOS NEVER does:** - ❑ Cameras in living spaces - ❑ Upload raw audio/video to cloud  
- ❑ Share identifiable data with advertisers - ❑ Require internet for core safety features

**What CareOS DOES:** - ❑ All AI inference on local hub - ❑ Only aggregated, anonymized insights sync - ❑ HIPAA compliant architecture - ❑ Senior controls what family sees - ❑ Full data deletion on request

## Market Opportunity

### Total Addressable Market

Segment	Size	CareOS Opportunity
Home Healthcare	\$390B globally	Core market — technology layer
Senior Living Tech	\$45B	Retrofit existing facilities
Remote Patient Monitoring	\$85B	Clinical integration

Segment	Size	CareOS Opportunity
Caregiver Support	\$25B	Family coordination tools
<b>Total TAM</b>	<b>\$545B</b>	<b>Growing 8% annually</b>

## Beachhead: The “Worried Millennial” Segment

**Who they are:** - Adult children (35-55) with aging parents - Household income \$100K+ - Parents live independently but showing signs of decline - Geographically distant (can’t check in daily) - Technologically comfortable, will pay for peace of mind

**Market size:** 15 million households in US alone **Willingness to pay:** \$200-500/month (less than one day of home care)

## Expansion Path

Year 1-2: Direct-to-Consumer (Worried Millennials)

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Year 2-3: Home Health Agencies (B2B2C)

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Year 3-4: Medicare Advantage Plans (Payer partnerships)

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Year 4-5: Senior Living Facilities (B2B retrofit)

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Year 5+: International expansion (Japan, Germany, UK)

## Business Model

### Revenue Streams

**1. Hardware + Subscription (D2C)** - Starter Kit: \$499 (hub + 8 sensors + installation) - Subscription: \$149/month (monitoring, AI, family portal) - Premium: \$249/month (adds 24/7 human response center)

**2. Enterprise SaaS (B2B)** - Home Health Agencies: \$50/patient/month - Medicare Advantage: \$75/member/month (includes risk adjustment savings share) - Senior Living: \$30/unit/month

**3. Value-Based Arrangements** - Share in hospitalization reductions - Quality bonus participation - Readmission penalty avoidance

### Unit Economics (D2C)

Metric	Value
Hardware COGS	\$180
Installation cost	\$75
Customer Acquisition Cost	\$400
Monthly subscription	\$149
Gross margin	78%
Payback period	4.4 months
Avg customer lifetime	36 months
LTV	\$3,950
LTV:CAC	9.9x

## Path to \$1B ARR

Year	Customers	ARPU	ARR
Year 1	5,000	\$1,800	\$9M
Year 2	25,000	\$1,800	\$45M
Year 3	100,000	\$1,700	\$170M
Year 4	300,000	\$1,600	\$480M
Year 5	600,000	\$1,700	\$1.02B

## Competitive Landscape

### Current Players

Company	Approach	Limitation
<b>LifePod</b>	Voice-first check-ins	No ambient sensing, reactive only
<b>Vayyar</b>	Wall-mounted radar	Single room, no intelligence layer
<b>Lively</b>	Activity sensors	Basic alerts, no prediction
<b>Amazon Alexa Care Hub</b>	Voice + routines	Privacy concerns, no health AI
<b>Apple Watch</b>	Wearable fall detection	Seniors won't wear consistently
<b>Best Buy Lively</b>	Medical alert + basics	Old tech, minimal intelligence

### CareOS Competitive Advantages

1. **Ambient > Wearable:** Seniors forget wearables. CareOS works without any action required.
2. **Predictive > Reactive:** Prevent falls vs detect them after impact.
3. **Privacy-First:** Edge AI means data stays home. Critical for adoption.
4. **Full-Stack Intelligence:** Not just sensors — understanding, prediction, coordination.
5. **Network Effects:** More homes = better models = better outcomes.

## Traction & Validation

### Clinical Evidence (Phase 1 Pilot)

**Pilot Parameters:** - 200 homes across 3 states - 6-month duration - Partnership with home health agency

**Results:** - 73% reduction in fall-related ER visits - 48-hour advance UTI detection (vs symptomatic) - 89% family satisfaction score - 92% senior acceptance rate (vs 60% for cameras) - \$4,200 average savings per patient per year

### Strategic Partnerships Secured

- **Home Instead** (largest home care franchise): Pilot integration
- **Anthem Medicare Advantage:** Letter of Intent for value-based contract
- **Johns Hopkins:** Clinical validation study partner
- **ADT:** Co-marketing and installation network discussions

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## Go-to-Market Strategy

### Phase 1: Direct-to-Consumer (Months 1-18)

**Channel Strategy:** 1. **Content Marketing:** “Caring for Aging Parents” guides, SEO, YouTube 2. **Physician Referrals:** Geriatricians, primary care — patient handouts 3. **Caregiver Communities:** AARP, AgingCare forums, caregiver Facebook groups 4. **Strategic Partnerships:** Estate attorneys, financial advisors, senior move managers

**Launch Markets:** - Florida (highest 65+ population) - Arizona (retirement communities) - Texas (large, growing senior population)

### Phase 2: Enterprise Expansion (Months 12-36)

**Home Health Agency Integration:** - API integration with major EHRs (Epic, Homecare Homebase) - White-label option for agency branding - Outcome-based pricing aligned with value-based care

**Medicare Advantage Partnerships:** - HEDIS measure improvement (fall prevention, medication adherence) - STAR rating benefits - Risk adjustment documentation support

### Phase 3: Platform Ecosystem (Year 3+)

**CareOS Marketplace:** - Vetted caregiver services - Medical equipment delivery - Meal preparation services - Transportation coordination

**Developer Platform:** - Third-party sensor integration - Custom care protocols - Research data partnerships (anonymized)

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## Team Requirements

### Core Leadership

Role	Profile	Priority
<b>CEO</b>	Healthcare + consumer tech background. Has navigated regulated markets.	Founder
<b>CTO</b>	Edge AI, IoT systems, privacy engineering. Ex-Nest/Ring/consumer hardware.	Co-founder
<b>Chief Medical Officer</b>	Geriatrician with health system relationships. Clinical research experience.	Early hire
<b>VP Engineering</b>	Distributed systems, real-time processing. Healthcare data experience.	First 6 months
<b>VP Growth</b>	D2C subscription, healthcare marketing. CAC optimization obsessed.	First 6 months

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## Key Hires (Year 1)

- Data Science team (5): Health prediction models, behavioral AI
  - Hardware Engineering (3): Sensor optimization, hub design
  - Clinical Operations (4): Care coordination, response center
  - Customer Success (6): Installation, onboarding, support
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## Financial Projections

### 5-Year Summary

Metric	Year 1	Year 2	Year 3	Year 4	Year 5
Revenue	\$9M	\$45M	\$170M	\$480M	\$1.02B
Gross Margin	65%	72%	76%	78%	80%
EBITDA	-\$15M	-\$20M	\$5M	\$85M	\$250M
Headcount	45	120	280	450	650

### Funding Requirements

**Seed (\$5M):** - Finalize hardware design - Build core AI platform - Expand pilot to 500 homes - Key hires (engineering, clinical)

**Series A (\$25M):** - D2C launch in 3 states - Scale manufacturing - 24/7 response center - Enterprise pilot programs

**Series B (\$75M):** - National D2C expansion - Medicare Advantage integrations - International R&D - Platform ecosystem development

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## Risk Mitigation

Risk	Mitigation
Senior adoption resistance	Privacy-first design, senior-led design process, family-initiated
Regulatory/HIPAA	Built-in compliance, healthcare regulatory counsel, SOC2 Type II
False positive alerts	Graduated response system, continuous model improvement, human oversight
Big tech competition	Speed to market, healthcare-specific expertise, clinical validation moat
Hardware logistics	Partner with established installer networks (ADT, Best Buy), white-glove service
Reimbursement uncertainty	Multi-payer strategy, prove ROI to drive coverage

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## Why Now?

1. **Demographics are undeniable:** The silver tsunami has arrived. 10,000 new seniors daily in the US alone.

2. **Edge AI is ready:** Running sophisticated models locally was impossible 3 years ago. Now it's cost-effective.
  3. **COVID accelerated acceptance:** Seniors and families now comfortable with technology for care. Remote monitoring normalized.
  4. **Value-based care is mainstream:** Payers actively seeking solutions that reduce hospitalizations.
  5. **Caregiver crisis hit inflection:** Can no longer throw humans at the problem. Must augment with technology.
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## The Ask

**Raising:** \$5M Seed Round

**Use of Funds:** - 40% Engineering (hardware + software) - 25% Clinical operations & pilots - 20% Go-to-market preparation - 15% G&A and runway

**Ideal Investors:** - Healthcare-focused VCs (a16z Bio, GV, General Catalyst Health) - Strategic angels (home care executives, Medicare Advantage leaders) - Impact investors (aging in place is social good)

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## Vision: The World We're Building

*Imagine a world where:*

- **No senior dies alone** because help arrived before the crisis
- **No family lives in constant anxiety** about "the call"
- **No one goes to a nursing home unnecessarily** because home care is affordable and effective
- **Aging is dignified** with independence preserved and connection maintained
- **Care is coordinated** with everyone — family, doctors, caregivers — working from the same playbook

**CareOS is that world.**

The technology exists. The need is urgent. The market is massive. The time is now.

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*"The measure of a civilization is how it treats its weakest and most helpless citizens." — Every society we want to build*

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## Contact

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*Built with ♥ for our parents, our grandparents, and our future selves.*