

THE FUTURE OF HEALTHCARE is in the Home





THE CHALLENGE

In the next 8 to 9 years, the **U.S. will** face a shortage of up to 100,000 physicians and over 200,000 nurses while simultaneously experiencing an aging population wave that will reshape healthcare permanently. This aging population defies the traditional concepts of advancing age, living longer yet facing multiple chronic illnesses. Adding to this confluence of events is the pandemic which has been a catalyst for digital engagement driving more virtual healthcare and other digital transactions into the home. We now have the entire continuum of care to be addressed in non-traditional health settings.





We are designing technology to deliver more care at the home through virtual, AI, Robotics, and wearable devices that monitor behavior. Moreover, new technologies are emerging to use data to predict future symptoms. **These technologies allow healthcare providers to expand the boundaries of home health and use new care management strategies,** all leading to reduced hospitalizations and readmissions, better patient outcomes, and lower health care costs. Healthcare workers will be working more efficiently – "think hospital and SNF in the home."



"Own the Home" Healthcare will drive disruptive technologies which include physiological, patient function and emergency monitoring, safety and security management, social interaction technologies, and cognitive and sensory tools, all of which will need to rest on efficient and automated user-friendly platforms. The platform must manage more complex home health care, B2B and B2C interfaces, and functionality that will accommodate digital clinician / doctor-patient interactions, home tests and labs, device and medical equipment management, remote patient monitoring, collaborative technologies, and even services for nutrition, training and education, and transportation and home modification – "think Amazon for home health and aging in place."

Healthcare in the home and the surge in digital health technology will drive medical innovations for the next decade. COVID-19 has changed consumer behavior that is likely to stick. Policy changes, payments, provider / patient engagement, and many other variables will need to catch up to accommodate the momentum that is underway.



THE CHALLENGE

In about 8 years, all baby boomers will **be over age 65**, and 3 out of 4 of them have deep desires to age in their current home, or other age-in-place alternatives such as assisted living. Boomers' preoccupation with their parents' care is an indicator of the education, demands, and high expectations they will have as they themselves age.





HOSPITAL IN THE HOME

Patients receive MD, RN, home health aide, and telehealth visits.

IV infusions, O2, labs, ECG, x-rays, performed in the home.



WELLNESS

Regular physical activity—including endurance, muscle-strengthening, balance, and flexibility exercises—health education and disease management, food and nutrition education and preparation

Intergenerational programs linking youth and older adults

SKILLED NURSING IN THE HOME

In home skilled nursing can provide IVs for chemo, occupational, physical and speech therapy, catheters, line dressing changes, feeding tubes, Mediports, wound care, blood draws

HOME HEALTH

Home Health may include assistance with daily activities such as bathing, feeding, dressing; working with MDs and others to create treatment plans; cleaning and redressing wounds, measuring vitals, and monitoring patients

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SAFETY AND INDEPENDENCE

To ensure a safe home, smart technologies for emergencies, home medication, assistive technologies, smart pills, cams, vibrating soles, voice-activated technologies, smart locks

SMART HEALTH

Home health smart devices include intuition technologies, robotic pets, neuro-rehab VR, smart toilets, vital technologies for monitoring / tracking, bed technologies, movement tech **"Own the Home" Healthcare** will drive disruptive technologies, all of which will need to rest on efficient and automated platforms:

- Physiological, patient function, and emergency monitoring
- Safety and security management
- Social interaction technologies and cognitive and sensory tools

Platforms Opportunities:

- Complex home health care
- B2B and B2C interfaces
- Functionality that will accommodate digital doctor-patient interactions
- Home tests and labs
- Device and medical equipment management
- Remote patient monitoring
- Collaborative technologies
- Services for nutrition
- Training and education
- Transportation / home modification

Smart tech

CATCHING UP: Challenges and Barriers of Home Health Evolution

AFFORDABILITY

- In 10 years more than half of seniors will not be able to afford healthcare
- 74% of U.S. adults plan to work past age 65
- Median household income for seniors is \$43,000
- Annual median cost for private nursing home room = \$102,000
- \$48,000 for assisted living
- \$35,000 for 30 hours of home care

PHYSICIAN/CLINICIAN ADOPTION & BURNOUT

- Health technology, specifically EHR, is directly correlated to physician burnout: 70% reported health information technology stress
- EHRs built for compliance, not ease of use
- Payment concerns
- Perceived quality of care
- Complexity of technology

PAYMENT REIMBURSEMENT

- Many hospitals engaged in proof-ofconcept for hospital at home to build reimbursement business case
- Home health has lobbied for years for telehealth payment policy
- Limited Medicare payments for telehealth rural, local health facility

SAFEGUARDS COMPLIANCE

- Understanding and complying with individual federal and state regulations and restrictions, temporary mandates and directives, and expiration dates
- Train providers and staff on policies, practices, and protocols for using telehealth services

INDUSTRY PERSPECTIVE

- Home Health is a fragmented industry with top 10 owning 25% of market share
- Margin pressure due to cuts in Medicare reimbursements
- Improving patient / family / caregiver engagement capability
- No reimbursement for telehealth
- Growing shortage of clinicians / practitioners
- Changing documentation regulations
- EHR limitations

TELEHEALTH LIMITATIONS

- Interstate licensure challenges / regulatory issues
- When in-person visits are more appropriate due to urgency or inability to perform adequate physical exam
- Technology issues
- Patient discomfort
- Cultural acceptance



OPPORTUNITIES

In a very recent study McKinsey & Company projected that up to **\$250 billion of current U.S. healthcare spend could potentially be virtualized**.

Opportunities in home health are there for data companies, platform companies, HIT companies, nurse lines, and consumer health companies.

The challenge is timing as it is likely to move fast.

It is estimated the total annual revenues of U.S. telehealth players is about \$3 billion with much of that coming from the "virtual urgent care" segment helping folks with on-demand instant telehealth visits with a provider they have no relationship with.





The McKinsey study suggests:

20% of all ER visits could potentially be avoided via virtual urgent care offerings

24% of healthcare office visits and outpatient volume could be delivered virtually

And another **9%** near virtually (worksite clinics, retail, etc.) **35%** of regular home health attendant services could be virtualized