

September 2021

LANDSCAPE OF CAREGIVING INNOVATIONS

FINDINGS AND RECOMMENDATIONS

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Part 1

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Pivotal Ventures is an investment and incubation company created by Melinda French Gates to advance social progress in the United States. We believe that removing the barriers that hold people back improves life for all. Pivotal Ventures supports a range of partners that are advancing new ideas to help aging Americans, their families and caregivers.

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The Stanford Distinguished Careers Institute (DCI) offers highly accomplished individuals from all walks of life the opportunity to come to Stanford for a year-long residential program of personal renewal and community engagement. The program seeks participants who are ready and eager to pause, think, explore, develop and prepare for their future as citizens of their local, national, and global communities. The dcix initiatives were launched in 2018 to harness the talent and expertise of the DCI community, and DCI Fellows have contributed their expertise to the Landscape of Caregiving Innovations review described in this report

THE LANDSCAPE OF CAREGIVING INNOVATIONS

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SELECTED QUOTES FROM CAREGIVING EXECUTIVES - 2021

"It's hard to sell things to families, when every family is literally creating an entire delivery system, all by themselves, over and over again."

"Our typical member has 4.5 comorbid conditions, needs assistance with 4 ADLs, polypharmacy is about 11. It's very complex."

"What's the right way to communicate to the market? Family caregivers are not really a category. It's not like you can go to college students, or new moms; family caregivers are cross-cutting from a demographic perspective."

The challenge includes addressing a complex and outdated regulatory system."

"Family caregivers are interfacing with a fundamentally broken and disintegrated governmental system that is central to the financing of a lot of the care delivery system."

"It was brutal, the cost of acquisition doing AdWords and Facebook ads to get app downloads. It's like five times more expensive than what you read about."

"We don't think we can get consumers to pay for this directly. And trying is really detrimental to the product."

"It's a hard story. It's hard to tell a startup and investors that it's gonna take five years to get into the [health insurance] market."

"So when we open a state, we have worked it for 24 months. The barriers to entry to open a market are pretty high."

"Need to attract talent for those able to manage complex life situations with multiple actors."

"Challenge includes planning for a labor pool of insufficient size and necessary skill."

"I would just say the awareness thing is real. I mean, you go into a health plan, and you try to identify caregivers of members."

"The thing that's going to either drive us crazy or forward is willingness of those that own the risk to mainstream the family caregiver as part of care planning".

"Family caregivers are a free resource for the providers."

"There's institutional inertia across the system – 'It's not my problem' which leads to reduced risk-taking and job preservation."

"Why not pay people's families \$100k if they don't deviate from their palliative care plan (and not go into the hospital)?"

"Everyone overnight became a remote caregiver, it didn't matter whether you live next door to the person you're caring for, or you live 10,000 miles away."

"I think remote care is important to help re-energize the family caregiver demographic by creating a more inclusive definition."

"If you're an insurance company, and you always do things the way you do, the idea of managing somebody's care - you're a little bit afraid of that."

THE LANDSCAPE OF CAREGIVING INNOVATIONS

Section I: Introduction and Magnitude of the Challenges

“Family caregivers are interfacing with a fundamentally broken and disintegrated governmental system that is central to the financing of a lot of the care delivery system.”

For individuals who take on the responsibility of caring for another person due to illness, disability, or declining abilities, it can often be challenging, lonely, costly and exhausting. As the U.S. continues to address the impact of the unprecedented situation of COVID -19 on caregiving, the need to recognize and support family caregivers as the cornerstone of society has become even more important.

Today, more than one in five Americans (21.3 percent) are caregivers, defined as having provided care to an adult or a child with special needs at some time in the past 12 months. This totals an estimated 53.0 million adults in the United States, up from the estimated 43.5 million caregivers in 2015. The Caregiving in the US 2020ⁱ report issued by AARP and the National Alliance for Caregiving highlights that nearly 48 million unpaid caregivers are caring for someone over the age of 18.

The support needed by family caregivers of older adults and their recipients stems from several important sources: 1. Innovative companies with products and services that assist in the varied needs of the care recipient; 2. Employers who provide benefits and assistance in recognition of the caregiving challenges faced by their employees; 3. Public sector medical reimbursement and coverage programs (e.g. Medicare, Medicaid and Medicare Advantage); and 4 State and federal policies that address caregiving needs by providing financial incentives to all stakeholders.

Each of these are addressed in this report, along with an important landscape of the state of innovations for caregiving. This report is divided into five sections:

- I. Understanding the magnitude of the challenge in family caregiving for older adults in the U.S.
- II. Defining and mapping the pain points and challenges encountered by unpaid family caregivers and their caregiving journeys.
- III. The map of types of caregiving needs and solutions that are currently being developed.

IV. Assessment of the innovation journey and challenges startups and founders are facing.

V. Initiatives that could promote solutions to aid caregiving that will assist families who care for older adults.

The Stanford dcix Caregiving Innovations Group assembled data bases which include companies focused on solutions for caregiver challenges; reviewed and interviewed dozens of companies about their experiences in starting and growing their companies; and identified and analyzed the barriers that companies face and their ability to scale and reach the caregivers and recipients who would benefit from their products services, and interviewed caregivers to learn more about the obstacles they face.

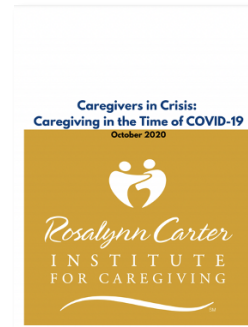
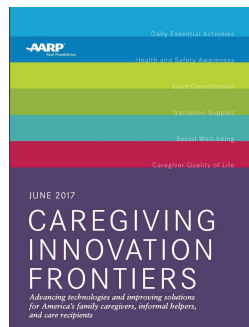
In collaboration with The Aging 2.0 Collective, we also held a Roundtable with leading CEOs in March 2021, to identify the barriers they collectively face and their recommendations to address them. We also evaluated the amount of capital invested in the past decade, the most active investors in supporting caregiving innovations, and identified market needs and gaps that would benefit from further innovation and investment support.

The growing challenges of supporting caregivers and their recipients as the U.S. population continues to live longer lives most of whom will need some type of caregiving as they age, also present growing opportunities for innovation. To understand these opportunities, we briefly review the well documented key demographic changes; its financial impact; as well as the impact on caregiver health.

National Resources: Major Reports

There are several important professional and industry reports on the state of caregiving in the United States. For this landscape review, we relied on three national reports for sources of key statistics defining the magnitude of the challenges associated with caregiving for older adults. We encourage the reader to review them as well, for new insights into the caregiving needs in the U.S.

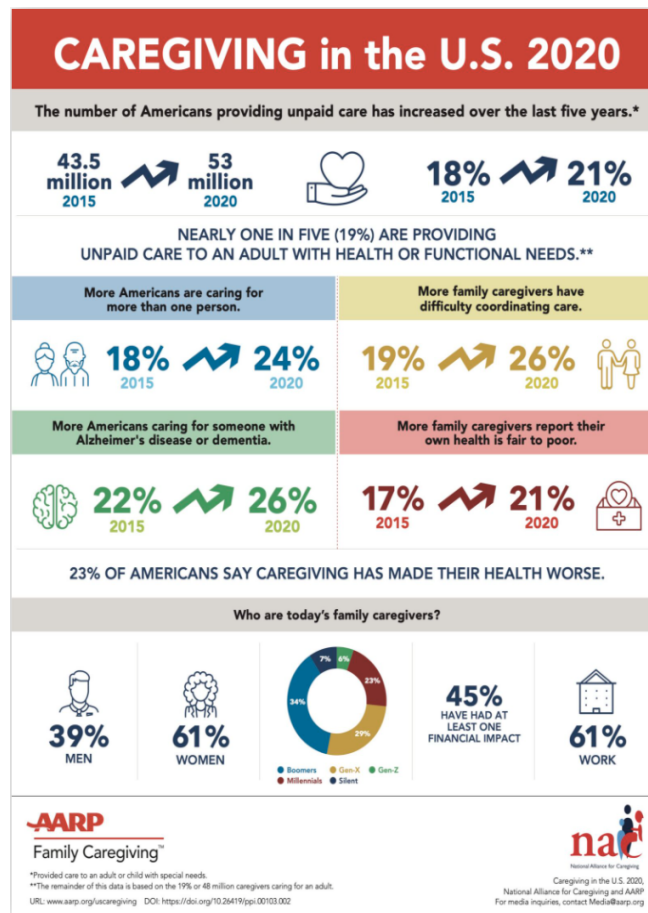
1. [AARP and National Alliance Caregiving: *Caregiving in the U.S. Report 2020*](#)
2. [AARP: *Caregiving Innovation Frontiers June 2017: Advancing technologies and improving solutions for America's family caregivers, informal helpers, and care recipients*](#)ⁱⁱ
3. [Rosalynn Carter Institute for Caregivers: *Caregivers in Crisis: Caregiving in the Time of Covid-19 - October 2020*](#)ⁱⁱⁱ



Key demographic findings include:

The number of people ages 65 and older in the United States has increased steadily during the past century. Growth has accelerated since 2011, when baby boomers first started to turn 65. Between 2020 and 2060, the number of older adults is projected to increase by 69 percent, from 56.0 million to 94.7 million. The number of people ages 85 and older is projected to nearly triple from 6.7 million in 2020 to 19.0 million by 2060.

- Nearly one in five (19%) are providing unpaid care to an adult with health or functional needs.
- More Americans (24%) are caring for more than one person, up from 18% in 2015.
- More family caregivers (26%) have difficulty coordinating care, up from 19% in 2015.
- More Americans (26%) are caring for someone with Alzheimer's disease or dementia, up from 22% in 2015.
- More Americans (23%) say caregiving has made their own health worse, up from 17% in 2015.
- Family caregiving spans across all generations, including Boomers, Gen-X, Gen-Z, Millennials, and Silent.
- 61% of family caregivers are also working.
- 47% of adults in their 40s-50s in the "Sandwich generation" are caring for both a parent who is 65+ and a child.



Financial Impact:

- 75% of family caregivers incur out of pocket costs with an average spend of \$7400 per year, and up to \$13,000 if they live one or more hours away.
- Of those who have paid work in addition to unpaid caregiving responsibilities, 37% report quitting their job or giving up hours.
- Those who do leave the workforce to care for an adult family member lose over \$300,000 in lifetime wages and retirement benefits.
- Women are three times as likely as men to quit their jobs to take care of a family member.
- Unpaid family caregivers deliver 34 billion hours of care to older adults in the US, valued at \$470 billion.
- The impact of Covid -19 increased the number of women who left the workforce to serve as an unpaid caregiver, forgoing salary and benefits.

Impact on Caregiver Health:

- There is a lower life expectancy for long-term caregivers.

- 40% feel emotionally stressed, with one in five reporting financial problems.
- The covid-19 pandemic exacerbated the family caregiving crisis - 31% of unpaid caregivers for adults reported having seriously considered suicide in the 30 days before completing a CDC 2020 survey.

These data points spotlight needs and opportunities that will continue to grow in the coming decades. To better understand the challenges and pain points of the unpaid caregiver, we identified three types of Caregiver Journeys, and the associated pain points experienced by most caregivers of older adults and their recipients. Section II provides those insights.

Section II. The Unpaid Caregiver Journey, Pain Points and Challenges

“Everyone overnight became a remote caregiver, it didn't matter whether you live next door to the person you're caring for, or you live 10,000 miles away.”

Who is a caregiver? Most will be an adult child who may not self-identify as a caregiver, assuming that label only refers to a paid professional trained in a range of tasks and skills. Yet, as we now know, there are over 48 million unpaid caregivers in the United States for older adults. Most consider what they are doing as part of their responsibility or duty as a daughter, daughter-in-law, son, son-in-law, grandchild, niece, nephew, friend.

According to the Rosalynn Carter Institute for Caregivers they define a caregiver “as a person who at any time in the last 12 months provided unpaid care to a relative or friend to help them take care of themselves, e.g. helping with personal needs or household chores, managing finances, arranging for outside services, or visiting regularly to see how they are doing”.

Caregiving involves a range of tasks and responsibilities, that can include financial caregiving; providing health care; as well as assisting with one or more activities of daily living. Any of these can create a variety of journeys the caregiver will experience in the course of their caregiving. We have identified three major types of journeys and pain points that the unpaid family caregiver for an older adult often faces, and the many journeys within each.

Types of Caregiver Journeys

1. **The Information Journey:** Finding helpful information and resources to understand the caregiving needs of their care recipient. This is often an exhausting process with

the myriad of different and uncured resources. There is simply no Yelp or Airbnb with ratings for unpaid caregivers to rely on.

2. **The Care Coordination Journey: Establishing a Care System:** Each family caregiver, will need to establish a care system for their care recipient that values the dignity and desire of the care recipient.

3. **Caregiver Quality of Life Journey:** Caregivers are frequently caught in the dilemma of attending to their own needs and responsibilities of their own lives, as well as those of their care recipient. Caregiving impacts the health, wealth and social networks of not only the care recipient, but the Caregiver. There is now the important recognition of the impact of these responsibilities on the Caregiver, and their own health and well-being needs.

Challenges Faced by Caregivers and Recipients:

"My sister and I spent weeks researching different types of resources and options for our father. It would have been great if there was a central resource to navigate this."

The Information Journey

The Caregiving Journey often begins with an Information Journey. Information and resources about caregiving that are available are currently siloed, residing in dozens of different websites, newsletters, resource centers, and organizations and local and national organizations. Although there are many excellent resources as we will discuss, knowing about them, and curating them are two key challenges.

Care recipients have varied needs and situations, which compounds the caregiver's Information Journey. Moreover, caregiver experiences and a varied knowledge base impacts their ability to access information and services successfully, to support the specific needs of their care recipient in different stages of care. Language barriers also can impact the Information Journey a caregiver may experience.

Unlike caring for children where there are a plethora of books and products to help as they enter ever increasing new stages of independence, no such comprehensive literature or platform exists for caregiving at the other end of life, where dependence increases over time. It is common to go from one new health and caregiving crisis to another, usually with new medical needs and different types of support and care needed. The primarily unpaid caregivers are not trained to handle this progression, nor to find the answers to the many questions and tasks they will have.

While there is excellent information and resources about the caregiving process and the needs related to a specific disease or condition, none of this is coordinated, curated, centralized or easily accessible. For example, the National Institutes on Aging and National Institutes of Health have excellent resources on their website, the average caregiver or care recipient would unlikely know about this, would not access these websites, and would not benefit from this information.

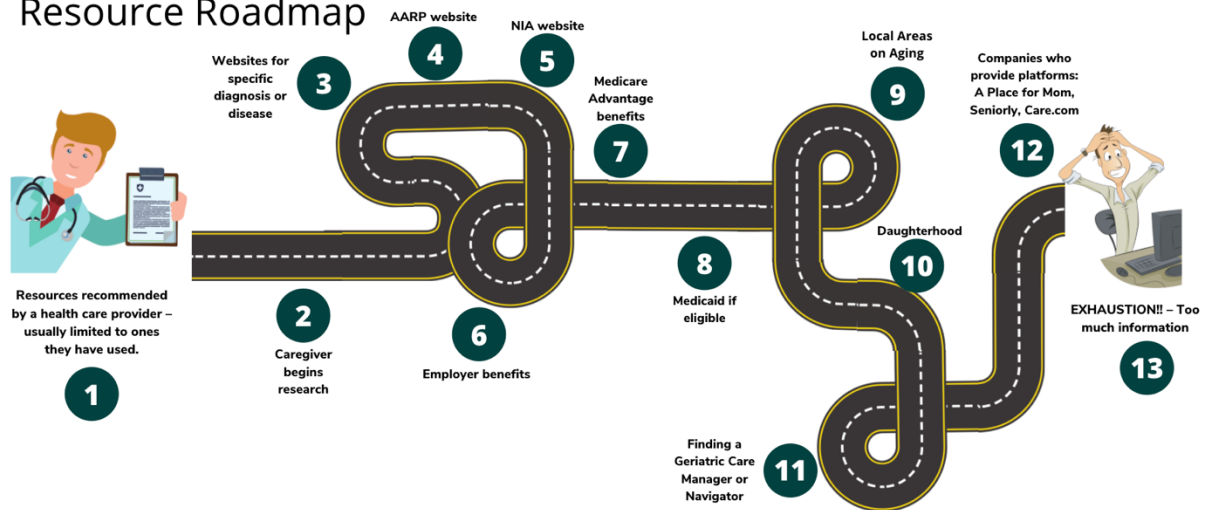
Here are examples of several of the many different types of free resources currently available that can assist a caregiver in their information journey:

- Disease specific resources: e.g., American Cancer Society; Parkinson's Disease; Multiple Sclerosis; American Heart Association
- The AARP Caregiving Resource Center
- State and Local Area Agencies on Aging
- Local hospital resource centers
- Local Church, Synagogue, and other community resource lists
- Family Caregiver Alliance: CareNav™
- National Alliance for Caregiving
- The Transition Network
- Caregiver Action Network
- Next Step in Care
- Social Service Agencies
- Next Avenue
- The Daughterhood

A range of companies such as Carely/Caring.com; Seniorly; A Place for Mom; Cake.com; Wellthy; Cariloop; HomeThrive; and others that are reviewed in this report, also provide extensive information to help caregivers in their Information Journey. In addition to the services and products they sell, these companies often serve as information platforms. Local initiatives offered by companies and organizations, such as The Daughterhood, have created a way for unpaid caregivers to share information in their local communities through the circles of care they establish.

The Information Journey often results in too much information and exhaustion. There is currently no curated national, centralized resource for a caregiver or recipient to learn about the resources available, and be able to easily enter their diagnosis, functionality, or care needs. Some local Area Agencies on Aging, or specific states who have developed Healthy Aging Cities approaches such as California, Massachusetts, New York, have established resource centers. One of the recommendations detailed in Section V is how some local community and state efforts have been able to address this challenge for caregivers, and ways to extend this approach nationwide.

Resource Roadmap



Common Responsibilities of an Unpaid Caregiver

An important component of the Information Journey are the many types of caregiving needs that an unpaid caregiver either coordinates, provides, or hires professionals to do for their care recipients. These include activities of daily living; health and safety; care coordination and transportation for the care recipient (e.g. doctor visits); transition support; running errands, meal planning and food preparation, managing the finances and health insurance; and increasingly providing medical care as telehealth has brought care delivery into the home.

There are specific daily tasks that persons must be able to do in order to maintain their full independence. These daily living activities are frequently broken into two groups: *Activities of Daily Living (ADLs)* and *Instrumental Activities of Daily Living (IADLs)*. The capability to perform IADLs independently generally declines prior to their ability to perform ADLs independently.

ADLs are basic self-care activities that persons must perform on a day-to-day basis in order to live independently and include:

1. Mobility
2. Dressing
3. Eating
4. Personal Hygiene

5. Toileting

By contrast, IADLs are tasks that do not necessarily have to be done every single day.

1. Shopping

2. Meal preparation

3. Housework

4. Money management

5. Transportation

6. Medication Management

7. Communication

As people age and enter different stages, it is common that their ability to independently complete their ADLs and IADLs begins to diminish. This may be the result of the natural progression of aging, be related to a health condition, or be caused by the cognitive and physical decline associated with Alzheimer's disease and other forms of dementia. There are several different types of ADL and IADL assessments used by providers to determine eligibility for certain types of benefits with Medicare and Medicaid, and for determining the type of caregiver tasks that will be needed. [Appendix A](#) contains a list of seven assessment tools commonly used. Traditionally, it is recommended that someone who has two or more ADL limitations is in need of caregiving.

Each caregiver will be faced with many tasks over the course of their caregiving experience, many of which occur on a daily or weekly basis. We have included this list to illustrate the magnitude of and range of responsibilities and needs that defines the caregiving experience. In some families these tasks are distributed, in others it often becomes the role of one person - not always by choice or design. For those able to afford it, professionals and companies can be hired to assume some of these:

- **Daily Essential Activities:** Meals and food preparation, home and personal care, home repair, delivery, transportation services, errands.

- **Health and Safety Awareness:** Health vital alerts, diet and nutrition, medication management, personal safety monitoring, telehealth, and increasing healthcare at home.
- **Care Coordination:** Care planning, care professional engagement, records and benefits management, recovery support.
- **Transition Support:** Home retrofit services, long-term care insurance planning, long-term care provider referral, legal assistance, hospice and end of life care planning; funeral and burial planning.
- **Social Well-Being:** Digital inclusion, life enrichment, and empowerment, community networking, life companions.
- **Financial Caregiving:** Caregivers may be responsible for helping to manage the finances of their care recipient, often contributing their own funds to pay for food, medication, and services needed.

Each of these challenges presents opportunities for solutions to be developed by innovators, and each represents large market opportunities as outlined in Section III. Hundreds of companies have already been developed to address one or more of these challenges; few comprehensively thus far. As we will describe, there is a huge missed opportunity to connect these products and services to the caregivers and their care recipients who would benefit from them due to the lack of effective and cost-effective channels for distribution.

2. Care Coordination Journey: Establishing a Care System:

Each family caregiver or ideally the family will need to establish a care system for their care recipient that values the dignity and desire of the care recipient. This involves a significant amount of care coordination, as it will often be a combination of services they may provide as well as identifying paid and unpaid assistance. This care system can change frequently, as the needs of the care recipient will change as a result of different health and medical conditions. An essential component of this journey is to preserve the dignity and wishes of the care recipient.

In many ways there are three parts to the Care Coordination Journey:

- Understanding the health, medical, functional needs of the care recipient - albeit knowing that it will change often over time;

- Determining who will be the providers for these varied services and the need to integrate and manage the older adult's/ patient's health directives and wishes; and
- Identifying who will be the payors for the services, products, equipment, food and supplies provided.

The Caregiving and Disease or Serious Illness Journey:

The caregiver embarks on understanding the specific needs of their care recipient. This can involve understanding their health, medical and mobility needs, and developing a caregiving system for that person and family. This is an iterative process, as conditions may change. The caregiver may also need to be involved with:

1. Characterizing and quantifying care needs from:
 - a. discharge planners
 - b. physician and healthcare providers
 - c. Internet research
2. Documenting daily care/progress
3. Aggregating medical records
4. Caregiver communication with family members
5. Care navigation/coordination
 - a. Caregivers
 - b. Treatments
 - c. Medicines
 - d. Doctor visits
 - e. When to go to the ER
6. Disease specific information
 - a. Nature of the condition
 - b. Problems one may encounter and what to do
 - c. What to expect
 - d. Potential timeline
 - e. Benchmarks for improvement and decline
 - f. How to avoid ER visits

7. Checklist of equipment, including advantages and disadvantages
8. Directory of resources
9. How to evaluate caregivers
10. Doctor/provider visits:
 - a. Telehealth
 - i. How to prepare
 - ii. How to maximize time
 - b. Transportation to office visits
11. Safety precautions due to Covid-19

In addition to researching resources about caregiving and needs of the care recipient, a caregiver/ family member will also need to research which types of services are available and how they will be paid for. Among the resources that a caregiver may need to research during this stage of the Caregiving Journey are:

- Resources recommended by a healthcare provider (often limited to those used by or familiar to the provider)
- The “chemistry” between a caregiver and the person being care for. Experience shows it can take time to find the right “match”.
- For 24-hour care, finding a team of caregivers, which will require coordination and patience.
- Employer benefits of the caregiver (at times of the care recipient as well)
- Medicare benefits
- Medicare Advantage benefits
- Medicaid eligibility
- Other supplemental insurance benefits
- Long term care insurance
- Local Areas on Aging and local resources for caregiving
- Finding a Geriatric Care Manager or Care Navigator

The Discharge Diagnosis Journey: Chronic Pulmonary Obstruction Disease (COPD)

To illustrate this further, each different condition or disease or serious illness diagnosed requires the caregiver to assist with a myriad of tasks that may be new to them, and often for which they are untrained. For example, an older adult who has Chronic

Pulmonary Obstruction, has difficulty breathing. They may have one or more of the following needs that their caregiver will need to assist with:

- a. Oxygen administration - needs instructions for caregiver on how to use equipment
- b. Ordering oxygen tanks and equipment: Who will provide this and who will pay for it?
- c. Cooking meals or meal delivery away in safe fashion
- d. Bathing assistance
- e. Toileting assistance
- f. Accessing walker to aid mobility
- g. Night care in case care recipient can't breathe

The complex components for each care recipient's needs changes over time. A fall can require rehab, mobility challenges, that may improve over time or it may lead to a spiraling of readmissions to the hospital and decline. This complexity requires a tailoring and curated approach to both understanding the needs as well as identifying the solutions.

3. Caregiver Quality of Life Journey:

In addition to the needs of the care recipient, increasingly there is the important recognition of the impact of these responsibilities on the Caregiver and her own health and well-being needs. Caregivers are frequently caught in the dilemma of attending to their own needs and responsibilities of their own lives, as well as those of their care recipient. Caregiving impacts the health, wealth and social networks of both the care recipient and the caregiver.

Sustaining and preserving the health, wellness, and financial and job security of the unpaid caregiver is critical to the care the recipient will receive. There is a growing need to address the social isolation of the caregiver, the need for respite and back up care, social support, and time to sustain their own financial wellness, health wellness, and mental health wellness. Companies are emerging to address these needs, as well as employer benefits to support these solutions.

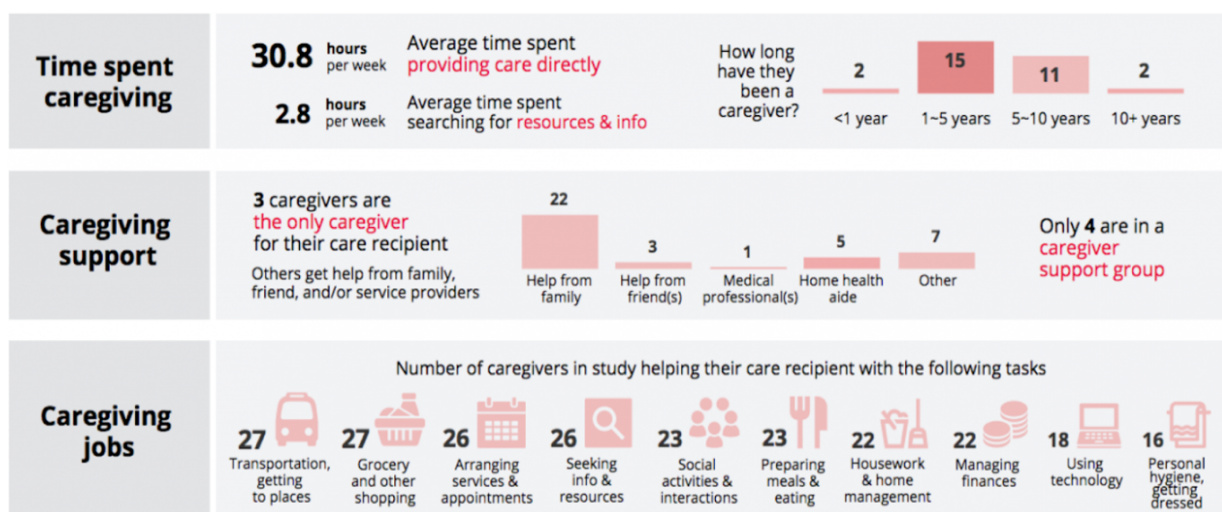
A Day in the Life of a Caregiver:

To further understand some of the pain points and challenges associated with family unpaid caregiving, we reviewed some of the research documenting this. The MIT AgeLab^{iv} undertook a study of 29 employed family caregivers providing unpaid care to an adult family member over a period of three months, to better understand what is the day in the life of a caregiver. What caregiving jobs, tasks, and responsibilities pose the biggest burden? and how does caregiving affect an individual's health and wellbeing, and where do caregivers need help?

Information was obtained from one month of daily surveys, two months of weekly surveys, and phone interviews. The surveys and interviews covered various aspects of caregiving (e.g. daily tasks, well-being, time management, communication, and the effects of caregiving on work and family life, and domains including transportation, technology, finances, medication management, personal care, and social network.

The MIT map of the caregiver journey illustrates that among the 29 individuals surveyed, 30.8 hours per week were spent providing care directly; 2.8 hours per week, searching for resources and information. The range of tasks these family caregivers provided were transportation, grocery and other shopping, arranging services and appointments, seeking information and resources, social activities, preparing meals, housework and home management, managing finances, tech assistance, and personal hygiene and dressing. This is consistent with the findings of other researchers, and helps to paint the portrait of the range of assistance unpaid family caregivers would benefit from.

Mapping the Caregiver Journey

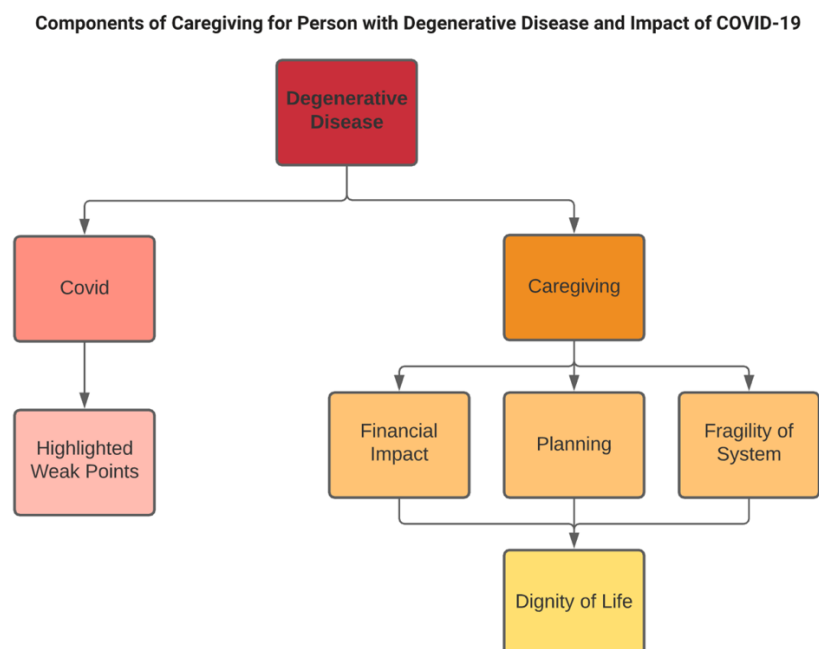


Special Impact of COVID -19 on the Caregiving Journey: The impact of the pandemic of Covid-19 added another dimension and complication to providing care. Caregivers were suddenly faced with the quandary how to protect their care recipient from the disease, as well as themselves. For those who manage different caregiver assistance in home, this became at times impossible choices.

In their research on Caregivers in Crisis conducted in 2020 by the Rosalynn Carter Institute for Caregivers, the impact of COVID-19 on caregiving was assessed. They found that 83% experienced increased stress related to caregiving since the start of the pandemic. Those surveyed expressed a need for more support than they are getting related to five specific areas:

- Respite and Day care
- Financial Assistance
- Social Interaction
- Peer support and self-care
- Clinical and in-home care services

The following map illustrates several of the pain points of the caregiver to establish a personalized caregiving ecosystem:



We include attending to the needs of the caregiver and quality of their life, as an important domain for market attention and innovation. Mapping the current landscape of caregiving innovations begins with identifying the many different domains related to these pain points and needs, and evaluating the solutions that have been developed. By understanding what is available in the current inventory of solutions, how they have been utilized or not, how to help establish a better care ecosystem that enables access to solutions and spurs further innovation, is the focus of the next section of this review.

Section III. Current Market Mapping of Innovations Landscape

“What’s the right way to communicate to the market? Family caregivers are not really a category. It’s not like you can go to college students, or new moms; family caregivers are cross-cutting from a demographic perspective.”

Caregiving encompasses products and services to assist the caregiver, the care recipient, as well as products and services for the companies which employ caregivers and provide home care. Our review indicates that there are over 300 companies that have been developed (or have developed a new focus on caregiving) in the last decade to serve the needs of caregivers and their recipients. These companies target many different subdomains related to family caregiving needs and the broader Caregiving domain.

There are different approaches to segmenting this market, and various ways to map the landscape of innovations that exist and those that will be needed. Among the many different needs and subdomains associated with caregiving are:

- Care Navigation and Transition Services
- Care Coordination
- Caregiver Quality of Life
- Daily Essential Activities for the Care Recipient
- Health and Safety Awareness
- Social Well Being
- Isolation/Loneliness
- Wellness/ Smart Home
- Wearables

- Fall Prevention, Detection, Mobility
- Fitness
- Sensory Aids
- Transportation
- Medication Management
- Tech Enabled Home Care
- Financial Caregiving
- End of Life care and planning
- Insurance and Reimbursement: Medicare; Medicare Advantage; Medicaid; Long Term Care

Most companies focus on one or two of these needs. A few companies have begun to provide more integrated and curated approaches to assist care recipient needs as well as the needs of the caregivers, with a multipurpose strategy and platform to create a coordinated solution.

We reviewed four leading sources of different approaches taken to segment the market of caregiving needs, and to both assess trends and highlight opportunities:

AARP: Six Areas of Opportunities

Aging 2.0: The Eight Grand Challenges^v

The Gerontechnologist- Age Tech^{vi}

The Techstars Future of Longevity Accelerator^{vii}

AARP Six Areas of Opportunities:

In their landmark report on Caregiving Innovation Frontiers in 2017, AARP and Parks Associates developed six market segments and a framework for market segmentation for Caregiving Innovation. They examined services already in the marketplace, and surveyed data detailing consumer needs, interests and behaviors. The following six market segments emerged and their corresponding estimated market sizes:

- **Daily Essential Activities:** Meals, home and personal care, home repair, delivery, transportation services. It remains one of the largest markets - \$220 billion.

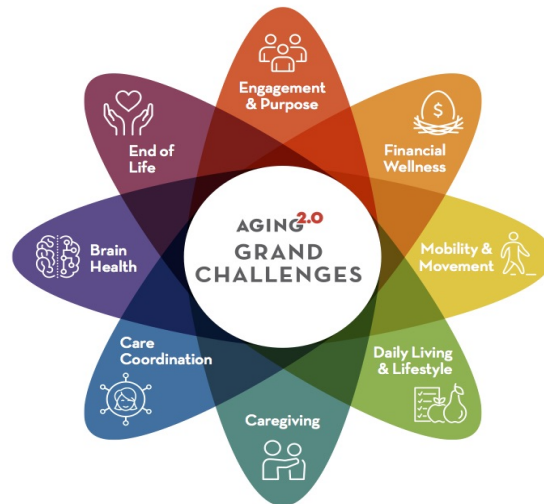
- **Health and Safety Awareness:** Health vital alerts, diet and nutrition, medication management, personal safety monitoring, telehealth – \$126 billion.
- **Care Coordination:** Care planning, care professional engagement, records and benefits management, recovery support – \$11.9 billion market
- **Transition Support:** Home retrofit services, long-term care insurance planning, long-term care provider referral, legal assistance, hospice/funeral planning - estimated market size: \$23 billion
- **Social Well-Being:** Digital inclusion, life enrichment, empowerment, community networking, life companions- Estimated market size \$8 billion
- **Caregiver Quality of Life:** Respite and backup care, social support, health and wellness, financial/job security – Estimated market size: \$20.9 billion

Six Areas of Opportunity



AGING 2.0: Eight Grand Challenges

This company was co-founded in 2012 by Katy Fike and Stephen Johnston to accelerate innovation to address the biggest challenges and opportunities in aging, and now has a global network of 50 chapters, over 14,000 affiliates and accelerators in 24 countries. Each year they have hosted a variety of pitch events, workshops and accelerators to help promote innovations for successful aging. Aging 2.0 created a platform to showcase innovations and challenges for successful aging, and they take deep dives into specific domains to both identify the needs and focus areas for opportunities and solutions.



In 2018, Aging 2.0 created Grand Challenges, a global initiative to drive collaboration around the biggest challenges and opportunities in aging. They identified eight domains, to help segment the markets they deemed priorities for business innovations (Ref: Aging 2.0 Annual Report 2018-19):

- Engagement and Purpose
- Financial Wellness
- Mobility and Movement
- Daily Living and Lifestyle
- Caregiving
- Care Coordination
- Brain Health
- End of Life

Engagement and Purpose: Helping older adults get and stay meaningfully engaged is critical for their health and health of our communities. Among the focus areas and solutions, they recommend are: Digital Divide; Social Inclusion; Lifelong Learning; Encore Careers; Disrupting Retirement; Volunteering; Meaning; Legacy

Financial Wellness: Traditional models of work and retirement have not kept pace. To finance this increasing longevity, new opportunities for later life employment, new models for planning for and financing care, as well as better ways of preventing scams and fraud are needed.

Mobility and Movement: Everyday objects, homes and communities not originally designed with longevity in mind, often become obstacles to movement, safety, independence and socializing. There is a need for products, programs and services that enable people to maximize their safety, strength, balance, fitness, independence and mobility as they age.

Daily Living and Lifestyle: One third of people over the age of 65 need assistance with at least one activity of daily living. Yet two thirds do not. Products and services needed to support older adults' basic daily activities, but to foster and support their ability to thrive, pursue their passions, and engage with their chosen lifestyles.

Caregiving: Care for older adults is provided by informal unpaid and formal paid caregivers, both of which increasingly care for people with higher levels of acuity and complex conditions. Family caregivers – who are often juggling other family and work responsibilities while living remotely from the care recipient need better support, training, resources and tools to support their loved ones and themselves.

Care Coordination: The healthcare journey can be particularly complex and fragmented for older adults, two thirds of whom have at least two chronic conditions. Desire to care for people in the least restrictive, most cost-effective setting possible. New tools and new models to support care transitions, clinical collaboration, medication management, and remote care delivery are needed.

Brain Health: Maximizing cognitive ability and brain health is a priority for aging societies as the number of people with cognitive limitations and mental health issues continues to rise. New approaches, tools, and services are needed to enhance treatment and support caregivers.

End of Life: Too often the way people experience the end of life fails to honor how they have lived their lives. By leveraging emergent technologies and encouraging collaborations, expand the range of possibilities for the end-of-life experience.

AgeTech Market Landscape



The Gerontechnologist was started by Keren Etkin, trained in gerontology in Israel, to provide a platform to connect technology related innovations for the aging market for innovators. For the past four years, a Market Map that details a growing number of domains and subdomains has been issued, reflecting the growth in this market.

In their most recent 2021 Market Map, fifteen separate domains and categories of innovation are identified, with an additional 13 subdomains for Health, Wellness, and Independence. New this year is the category of Housing. Of note, is that the category of Age-Tech for Caregivers lists 14 companies, several of which are based out of the United States, yet nearly all of the 150+ companies on the Age-Tech 2021 Market Map could benefit caregivers and their care recipients. The leading categories of Age-tech innovation identified are:

1. Health: Rehab; Medication Management; and PERS
2. Wellness: Smart Homes; Wearables; Fall Prevention and Detection; Fitness

3. For Senior Living
4. Independence: Everyday assistance; sensory aids; mobility; transportation; finance; ADL
5. For Home Care Providers
6. Social and Communications
7. Cognitive Care
8. For Healthcare Providers
9. Tech-Enabled Home Care
10. End of Life Planning
11. For Caregivers
12. Legacy
13. InsureTech
14. Housing
15. Retirement 2.0

TechStars Future of Longevity Accelerator:

Launched in 2020, the new Future of Longevity Accelerator is devoted to supporting companies who address one or more of the needs of caregivers and older adult care recipients. Run in partnership with Pivotal Ventures, an investment and incubation company created by Melinda French Gats, focuses on innovative solutions to address the unmet needs of older adults and their caregivers. The market segments and program themes that are being focused in for the upcoming 2021-2022 cohort of companies that will be selected for the Accelerator include:

- **Caregiver Support:** Support for family caregivers including education, tools, respite care, and social support; and solutions for formal caregiving to address staff shortages, training, and care management tools.
- **Care Coordination:** Solutions that address the complex and fragmented nature of the healthcare system, particularly for older adults who have multiple health conditions. These include care transition, clinical collaboration, medication management, remote care delivery, and care navigation.
- **Aging in Place:** Solutions that make it easier for seniors to remain in their homes as they age, including home retrofitting and accessibility, smart home devices, assistive robotics, fall prevention, homecare, health monitoring, digital accessibility, meal prep and delivery, emergency response systems, inclusive design of everyday devices, and general support for daily living.
- **Financial Wellness:** Solutions for financial security through longer lifespans including financial planning, later-life employment, retirement planning, fraud and scam prevention, longevity insurance solutions, financial monitoring, and end-of-life planning.
- **Preventive Health:** Solutions to support fitness, nutrition, wellness, behavior change, physical therapy, cognitive health, chronic disease management, digital health, and wearables.
- **Social Engagement:** Solutions that address purpose, fulfillment, and community engagement for older adults including social connection, social determinants of health, and overcoming isolation and loneliness.

A comparison of these four leading approaches to market assessment of the caregiving needs and innovation opportunities, shows the following trends:

AgeTech	Aging 2.0	AARP Six Areas of Opportunity	Techstars
Independence	Engagement & Purpose	Health and Safety Awareness	Aging in Place
Wellness	Financial Wellness	Care Coordination	Caregiver Support
Health	Mobility and Movement	Transition Support	Care Coordination
For Senior living communities	Daily living and Life Style	Social Well-Being	Financial Wellness
Social and communication	Caregiving	Caregiver Quality of Life	Preventive Health
End of Life Planning	Care Coordination	Daily Essential Activity	Social Engagement
For Healthcare Providers	Brain Health		
Cognitive Care	End of Life		
Retirement 2.0			
For Home Care Providers			
Tech Enabled Home Care			
InsureTech			
For Caregivers			
Legacy			
Housing			














As you can see, there are certain subdomains related to the needs and opportunities associated with caregiving that are common to all four market segmentation approaches, and in fact most could be categorized in one of several major bucket areas. There is no right or wrong here. The goal is to understand the complexity of needs, the vastness of the market opportunities for innovative and integrated solutions, and the myriad of investment and business opportunities.

Domains, Subdomains, and Buckets:

Because caregiving needs vary among a diverse population of care recipients with different needs at different stages of their caregiving journey, it is important to develop frameworks for creating effective strategies for solutions. These apply both to

business, policy, and funding. After reviewing hundreds of companies that are focused on one or more caregiving needs and solutions, we developed a list of subdomains that integrates the varied approaches to market segmentation and subdomains in Caregiving:

Recommended Caregiving Subdomains for Market Segmentation:

-  • Care Navigation and Transition Services
-  • Care Coordination
-  • Caregiver Quality of Life
-  • Daily Essential Activities for the Care Recipient
-  • Health and Safety Awareness
-  • Diet and Nutrition
-  • Medication Management
-  • Personal Safety Monitoring
-  • Social Well Being
-  • Digital inclusion, access, and literacy
-  • Life enrichment and empowerment
-  • Life companions
-  • Isolation/Loneliness
-  • Wellness/ Smart Home



- Wearables



- Fall Prevention, Detection, Mobility



- Fitness



- Sensory Aids



- Transportation



- Tech Enabled Home Care



- Financial Caregiving



- End of Life care and planning



- Insurance and Reimbursement Navigation: Medicare; Medicare Advantage; Medicaid; Long Term Care.



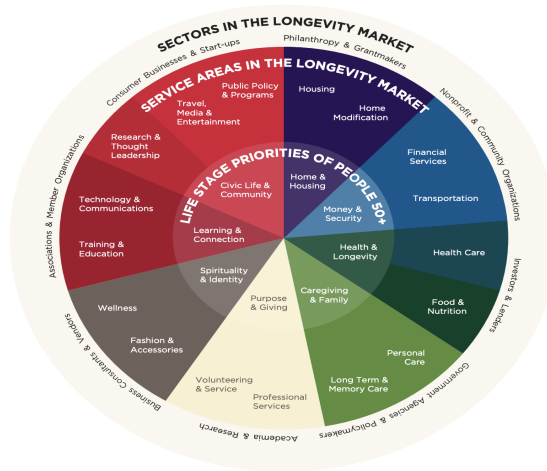
- Telehealth for Older Adults

Caregiving Domains vs Longevity Domains: A Caveat

There is a difference in focusing on the needs, domains and subdomains associated with caregiving for older adults, and the broader opportunities and needs associated with the new longevity and living one hundred-year long lives. While Caregiving is an important part of Longevity, there are many additional implications and business opportunities associated with living to 100 and beyond.

- Money and Security
- Health and Longevity
- Purpose and Giving
- Spirituality and Identity
- Lifelong Learning

- Community
- Fashion and Accessories
- Training and Education
- Travel
- Media
- Entertainment
- Working Longer
- Unretirement



Stria News^{viii} published a helpful map in 2018 that illustrates that caregiving, and its associated needs is just part of the longevity opportunity. While this report focuses on support for caregivers and their care recipients during the Caregiving Stage of life, ideally, we also want to support their ability to thrive during that time as well. Although Stria News is no longer operational, their market segmentation remains illustrative of the range of longevity market opportunities, caregiving being one of many significant service areas and life stages that needs innovation. For additional insights into the longevity market opportunities, the reader is referred to Stage Not Age^{ix}.

Buckets for Innovation Opportunities:

The concept of Aging in Place basically covers a broad range of needs to enable the over 90% of older adults who want to age in their own home or a different home, without entering an assisted living community, or group living setting.

With that desire, comes the need to create a variety of infrastructure and ecosystems to support their life course at different needs and stages that an older adult will face until they die. If you go to live in a nursing home or assisted living community you are provided from the moment you enter their doors a Care Assessment and a Care Plan, as well as a physical building that has infrastructure and systems such as meal preparation, housekeeping, laundry, transportation, social connections, activities, entertainment and caregiving to name just a few.

All of these services have to be replaced for those who want to age in place or often referred to as “thriving in place” or “aging at home” or “aging on the go”. More creativity and innovation will be needed to address the challenges of aging in place and accommodating evolving needs and providing an infrastructure and care systems that do not exist in each individual home. Therefore, using Aging in Place as a “bucket” for understanding caregiving needs, is not as helpful, since that is where all

care recipients of the unpaid family caregiver reside. However, understanding that the caregiver and the care recipient will have broader needs and innovations will be needed to support this stage of life.

Taking the growing list of subdomains in caregiving and trying to put them in a number of different categories or “buckets” to help build innovation platforms and solutions to address the broad range of needs of care recipients and their unpaid caregivers, is helpful in understanding the complexity of caregiving. Here are fourteen buckets that we think will be useful for assessing and promoting opportunities for caregiving innovations for the next 5-10 years each of which addresses one or more of the various subdomains of caregiving needs:

Care Coordination Platforms and Navigators:

The healthcare, eldercare and longevity systems are hard to navigate. Navigators and advocates will become critical partners in healthy aging and caregiving, and help provide continuity of care, and reduce hospitalizations and readmissions.

Caregiving Tools and Management:

Caregiver training; care management tools for medical information and medication management, are needed to facilitate the role of the caregiver.

Caregiver Quality of Life:

Solutions are needed to support caregivers to maintain their personal wellness to include health, mental health, financial health and social health. Telling a caregiver to exercise more or do yoga is not a solution. Identifying ways for respite care; reimbursement for wellness services, and providing layers of support are all part of valuing the caregiver. Employer based solutions, and behavioral health solutions.

Cognitive Health:

Preventing cognitive decline is an ever-increasing priority, with new assessment and wellness tools in development. Integrating such tools into comprehensive digital health systems would allow Caregivers the ability to assess and monitor older adults’ functionality at home, potentially identifying trends to prevent crises and institute steps promoting safety and a higher quality of life.

End of Life Care and Planning:

This sector involves over five subdomains, including: Legal Documents; Advanced Care Planning; Palliative and Hospice Care; Funeral and Burial Planning; and Legacy.

Financial Caregiving:

Paying health care bills, insurance and reimbursement navigation, Fintech Solutions to prevent Financial Elder Exploitation. Caregivers, on average, pay for over \$11,000 in un-reimbursable out-of-pocket expenses. Transparency about powers of attorney and financial oversight are important tools that need to be part of any caregiving system.

Healthy Aging:

Nutrition, wellness, fitness, medication management, wearables; digital health and wellness tools and assessment will all be essential to healthy aging.

Housing Alternatives and Transportation:

We will need more housing alternatives, including intergenerational options, that will enable older adults to age successfully. That must include the ability to receive caregiving in the home of their choosing. Emerging components include integrated concierge services in apartments, roommate matching services, and intergenerational living.

Information Platforms and Digital Accessibility:

In addition to the need to integrate caregiver information and resources, digital literacy and access to broadband is increasingly important. There is also a need for a trusted source to evaluate tech-driven “aging in place,” “longevity health services,” and digital health and wellness tools.

Insuretech:

New Longevity Insurance products; navigating and choosing the Medicare/Medicare Advantage/Medicaid plan best suited to individual health needs.

Intergenerational Engagement:

Roommates; social engagement with different generations. Most older adults do not want to be segregated by age.

Safe Aging and Home Accessibility:

This includes personal safety as well as home modifications to improve access, prevent accidents. How can we reconfigure access in homes? What are simpler/less costly solutions – the new “drone” of stairway access? What are essential modifications that all seniors should consider? How can construction and renovation companies supply creative solutions? Preparing homes to be longevity-ready is one of many business opportunities. AARP provides a Home Fit Guide and checklist, but few caregivers and

recipients know about it. This bucket also includes smart home products, including wearables.

Social Well Being and Social Determinants of Health:

Life enrichment; purpose; community; isolation and loneliness all need to be identified and addressed so that care recipients and caregivers can thrive during the caregiving stages of life.

Telehealth and Health Care in the Home:

“Hospital at home” and “Healthcare at Home” will become more prevalent. Tailoring these concepts to caregiver and care recipient needs, is both an innovation gap and market opportunity. Caregivers often become health providers in the home. We will see an acceleration of virtual care delivery - both telehealth and remote monitoring. Digital at-home diagnostics will increase, as will adherence solutions. Telehealth tool kits will become common.

Understanding the Caregiving Customer and Distribution Channels

It is important to understand who the caregiving customer is. As in much of health care, the customer is not always the end user of the product or service, and the payor for the service or product is similarly not always the care recipient or caregiver. Defining and understanding the payor, the customer acquisition strategy, and the channel challenges is critical to the success of any innovation that addresses the caregiving needs of older adults.

While the end user of all caregiving products and services is most often either the care recipient or the unpaid family caregiver, the payor may be one or more of the following:

1. Health care plans
2. Medicare Advantage plans
3. Medicare and Medicaid Services
4. Employers and Benefit programs
5. The Caregiver
6. The Family
7. The care recipient
8. Healthcare providers

The United States does not have universal health insurance. The U.S. healthcare system is a mix of public and private, for-profit and non-profit insurance plans and health care

providers. The federal government funds Medicare (for adults 65 and older and some persons with disabilities), Veterans Administration health benefits. Medicaid, for qualifying low-income persons, is funded by federal-state partnerships. There is no universal coverage for long-term care services.

Private insurance is the most common form of coverage, accounting for two-thirds of Americans (67%). The majority of private insurance (55%) is employer sponsored. Public and private insurers set their benefit packages and cost-sharing structures in compliance with federal and state regulations. Employers commonly contract with private health plans to administer benefits.

Medicare beneficiaries are entitled to traditional Medicare, a fee-for-service program that provides hospital insurance (Part A) and medical insurance (Part B). Since 1973, beneficiaries have had the option to receive their coverage through either traditional Medicare or Medicare Advantage (Part C), whereby people enroll in a private health maintenance organization or managed care organization. In 2003, Part D, a voluntary outpatient prescription drug coverage option provided through private carriers, was added to Medicare coverage. Importantly in 2017 public spending accounted for 45 percent of total health care spending, or approximately 8 percent of GDP. This rose to 16.9% in 2018. Medicare covers short-term post-acute care, such as rehabilitation services in skilled nursing facilities or in the home, but not long-term care.

Medicare Advantage: In 2018 and 2019, the Centers for Medicare and Medicaid services (CMS) expanded supplemental benefits that Medicare Advantage organizations can offer enrollees. This became a significant factor in the increased role of Medicare Advantage as one of the key payors, and hence a key customer, for caregiving services and products.

In Spring 2019 CMS further expanded the flexibility of Medicare Advantage benefits by allowing plans to offer special supplemental benefits for the chronically ill.

The following nine services were allowed: adult day care services; home-based palliative care; in-home support services; support for caregivers of enrollees; medically-approved non-opioid pain management (e.g. therapeutic massage); a stand-alone memory fitness benefit; home and bathroom safety devices; home modifications; transportation; and over-the counter benefits. Thus, beneficiaries must consider the value of these supplemental benefits when choosing a Medicare plan, adding to the complexity of that decision.

More than one in three Medicare beneficiaries in 2019 opted to receive their coverage through a private Medicare Advantage health plan. These changes have spurred increased efforts for businesses in the caregiving space to design innovations that would be of interest to the growing number of Medicare Advantage plans. In turn, new businesses are being developed to serve those who need to choose which Medicare Advantage plan would be most advantageous to them, such as e-Health, Chapter, and FairStreet.

Medicaid: This is our nation's largest insurer, covering 72 million Americans. While it is a needs-based healthcare program for persons of all ages, it uniquely covers the costs of long-term care for seniors and the disabled individuals who meet their state's eligibility requirements. The program's expansion has impacted state economies and budgets. Traditionally, Medicaid's coverage for long term care was restricted to institutional care, often referred to as institutional Medicaid or nursing home Medicaid. In this setting, Medicaid covers the cost of room and board, assistance with activities of daily living, skilled nursing, and medication administration. Nursing home Medicaid, which must be provided in a certified nursing home facility, is an entitlement for anyone who meets the eligibility criteria.

Over the years, Medicaid's coverage of long-term care has expanded to include long term services and support (LTSS) via Home and Community Based Services (HCBS). Nearly all 50 states offer long term care through HCBS Medicaid Waivers, which enables them to receive in home personal care assistance, homemaker services, adult day care, respite care to relieve unpaid primary caregivers, home modifications, and home health care. These programs are not entitlements, as the number of potential program participants is capped. Once the allotted number of participant slots have been filled, a waitlist forms, and eligible persons wait to receive services.

Practical Implications Concerning Reimbursement Process: There is growing demand for the adoption of promising value-based payment approaches in Medicare and Medicaid that enhance accountability for health care cost, quality and equity. Part of the impetus to accelerate the adoption is the growing recognition that Medicare faces insolvency as soon as 2024, and Medicaid accounts for an increasing share of state budgets. Thus, any new product and service that desires coverage and reimbursement by Medicare or Medicaid should be incentivized to demonstrate value for payment and metrics to support that.

Employers and Employee Assistance Plans: Companies have begun to face the growing threat to their worker productivity, employee retention, and ultimately

competitive advantage: the needs of employees who are caregivers. Factors such as an aging population, an increasingly female workforce, and a competitive job market, made supporting caregivers a critical talent management issue even before the Covid-19 pandemic.

An important report, *The Caring Company: How Employers Can Cut Costs and Boost Productivity by Helping Employees Manage Caregiving Needs*^x advocates for more caregiving benefits. The authors highlight the rise in recognition of the need to provide support for employees who are also caregivers. They projected that 2021 will usher in a new type of benefit package, as more employers create a hybrid workforce. Similarly, the 2021 Future of Benefits Report^{xi}, released by Care.com, a platform for finding and managing family care, revealed how COVID-19 has influenced employers to change, and potentially expand, the benefits they offer to employees in the future.

These changes are leading more caregiving companies to see their customers as the employer benefit plans that control the purchase of services from companies such as Wellthy, Cariloop, and SeniorLink to help coordinate caregiving needs for employees.

Some providers of Employee Benefit Plans, such as Cigna, are developing their own at-home care strategies to provide resources and coaches for a family caregiver who is employed. Within their behavioral health division, they have created an innovation unit with a caregiver product line. This includes caregiving coaching, closing gaps in care, support services such as cognitive behavioral therapy and peer coaches. They have also developed a strategic partnership with Senior Link, which provides access to caregiving coordination services.

The Family Caregiver and Care Recipient: While these are the most obvious customers for products and services, they are the most challenging customers to acquire. With over 48 million unpaid caregivers for older adults in the U.S. and over 10,000 people turning 65 each day, it would seem that all you need to do is go to any grocery or pharmacy and run into them. But from a business strategy perspective, this is the hardest customer to identify and acquire in a cost-effective manner.

There is no single profile of a caregiver and no fixed age range for a care recipient. Caregivers range in age from 20-80 or older. Care recipients can be employed, retired, and age 50 - 100+. It is therefore not age, but the stage of care needs that best identifies both caregiver and recipients. Most businesses in the caregiving industry begin with a direct-to-consumer approach to reach customers. Often, after a period of time and considerable expense, they find that identifying customers through

other channels is a more scalable strategy. This is discussed in great detail in the review of the Roundtable of Caregiving Innovators described in Section IV.

Other channels for direct to consumer can be through existing organizations where the target market interacts. For example, the YMCA organization in New York City has over 500,000 members, many of whom are caregivers or care recipients. While we discuss the YMCA approach to caregiving later in the next section, it is noteworthy for its example of how it is a channel to customers who need support services.

Customer Acquisition and Channel Challenges

Acquiring the Medicare Advantage customer/payor or the Employer and Employee Assistance Plan customer/ payor, may involve a long sales cycle, with a unique time sequence.

Selling into Medicare Advantage usually begins well in advance of their Fall enrollment periods and requires developing relationships with the plan administrators. While these types of caregiving products and services were a means to distinguish their Medicare Advantage plan from others, plans are increasingly looking for metrics to demonstrate their ROI.

Similarly, selling to Employer Assistance Plans may require a long sales cycle, and companies are increasingly turning to benefit brokers for assistance. Organizations typically start discussing their new benefits in June or July for January 1 effective dates of the following year. By contrast, many non-medical benefit offerings can be introduced into organizations throughout the year.

Employers are beginning to offer more caregiving benefits as a way to recruit and retain talent, and to increase employee wellness, productivity, and presenteeism. These metrics differ from those that a customer/payor such as Medicare Advantage would seek. While employers will look to measure the impact on the health status of the caregiver, the Medicare Advantage plan will most likely look at the impact on the care recipient and their renewal/purchase of their plan.

Both employers and Medicare Advantage offer a channel to reach a large number of end-users. The most challenging method of customer acquisition, without any effective channels, is the direct to consumer. Facebook ads can be expensive as this is a diffuse and varied demographic. It is not solely age related. Increasingly, companies can serve as platforms for a range of solutions for a variety of needs, such as End of Life Care and planning, have successfully been able to scale their companies using the

direct-to-consumer approach. Cake.com discussed later, is an excellent example of this approach.

Metrics: Many employers who offer caregiving benefits to support caregivers of older adults, are looking at certain metrics to justify and measure the impact of these types of expenditures, traditionally between \$3.50 - \$4.50 per employee per month. Among these metrics are the health and wellness status of the caregiver employee. It is well documented that over 40% have comorbidities themselves, suffer from depression, and have 8% higher healthcare costs than employees who do not self-identify as a caregiver of an older adult. Employee caregiver metrics may include paid or unpaid leaves of absences; healthcare costs; wellness; behavioral health utilization; use of caregiving coaches.

Medicare Advantage metrics are more targeted towards the care recipient health care utilization costs, including emergency department visits, hospital admissions and readmissions, as well as enrollment and renewal data.

Understanding the characteristics of the payor as well as end-user of a product or service is essential in both developing an effective business strategy for innovations, as well as meeting the needs of older care recipients and their caregivers. We explore these needs and challenges in Section IV and strategies that different companies are employing to reach the range of customers and payors for these needed services and products.

Section IV: The Innovator Journey and Pain Points

"It's a hard story. It's hard to tell a startup and investors that it's gonna take five years to get into the [health insurance] market."

To better understand the successes and challenges some innovators have faced, we conducted three initiatives: Data Gathering; Identification and Analysis of Challenges and Barriers that innovators encounter; and held a Convening of Caregiving Innovators to garner their perspectives.

Data Gathering: First we set out to understand which companies are serving the needs of caregivers and their care recipients in the United States. We reviewed six data sets:

- AARP
- Aging 2.0 The Collective: data set of US and international companies focused on eight grand challenges in aging
- Pitchbook News
- Techcrunch
- The Gerontechnologist
- The Longevity and Tech Report

We assembled a database and found nearly 800 companies devoted to assisting older adults in the United States, about 300 of which focus on one or more aspects of caregiving needs. In addition, there are dozens of non-profit organizations, government agencies on the local and state level, and community-based programming which support older adult needs and caregivers. Many provide valuable and needed services. However, many do not scale or reach enough of their intended target audience. [Appendix B](#) contains links to these data bases.

Analysis and Identification of Challenges: We conducted an extensive review of the companies, programs, and providers of innovative solutions to address the multitude of needs related to caregiving outlined in Sections II and III. We set out to find those that had achieved scale and those that had not, with the hope that the information would inform future innovators, and to determine whether there were any trends or systemic barriers that could be addressed. We inquired about products, services, customers, customer acquisition strategies, sales and growth histories, and common obstacles in the caregiving sector.

Interviews with dozens of companies identified several major obstacles, including

1. Customer acquisition challenges-difficult to identify family caregiver
2. Distribution channel challenges - No direct-to-consumer marketplace
3. Funding challenges from early-stage investors
4. Fragmented healthcare channels
5. Payor system complexity
6. Lack of accessible platforms or marketplaces
7. Policy and regulatory limitations











Convening of Caregiving Innovators: To develop frameworks for solutions and recommendations for innovators, entrepreneurs, and policy makers, a Roundtable was convened in collaboration with The Aging 2.0 Collective in March 2021, with fifteen leading caregiving executives. The goal was to have a candid conversation about the



















challenges they face, discuss what they would recommend to future innovators, and identify support and solutions for the next gen products and services. We asked a simple question:














As a community who cares about supporting family caregivers, what can we do to help your business grow?

Spotlight on Caregiving Innovators

We reviewed over 300 companies in the caregiving domain, that address a range of subdomains and buckets we described earlier in Section III. Many have been able to scale, finding their business and customer acquisition strategy through multiple efforts. These are the companies that were reviewed or interviewed from which we gained valuable insights.

 <p>Aloe Care Health</p> <p>DESCRIPTION We believe that technology can do a better job of keeping older adults safe and connected to their caregivers. And when it does, ...</p> <p>URL https://get.aloecare.com/</p> <p>LOCATIONS New York</p> <p>STARTUP STAGE Series A</p>	 <p>Carallel You care, we help.</p> <p>DESCRIPTION Carallel offers a caregiver support solution that combines digital tools with personal guidance from senior care experts.</p> <p>URL https://carallel.com/</p> <p>LOCATIONS Lake Forest</p> <p>STARTUP STAGE Seed</p>	 <p>Care3</p> <p>DESCRIPTION Care3 is a HIPAA-compliant mobile communications and tracking platform for people impacted by the social determinants of health and ...</p> <p>URL https://www.care3.co/</p> <p>LOCATIONS Culver City</p> <p>STARTUP STAGE Seed</p>	 <p>CareAcademy</p> <p>DESCRIPTION CareAcademy is a B2B platform providing evidence-based online classes to help direct care workers provide excellent care and improv...</p> <p>URL https://careacademy.com/</p> <p>LOCATIONS Needham</p> <p>STARTUP STAGE Series A</p>	 <p>CareAngel</p> <p>DESCRIPTION CareAngel is caregiving reinvented. ANGEL is an Automated, Intelligent, monitoring & Caregiving platform. A family's virtual caregiving assistan...</p> <p>URL www.careangel.com</p> <p>LOCATIONS Miami Beach</p> <p>STARTUP STAGE Seed</p>
 <p>CareApp</p> <p>DESCRIPTION CareApp provides a reassuring window into the care and wellbeing of your loved one by placing seniors and families at the heart of an ...</p> <p>URL https://www.careapp.com.au/</p> <p>LOCATIONS Adelaide</p> <p>STARTUP STAGE Early (pre-Series A)</p>	 <p>CareLinx</p> <p>DESCRIPTION CareLinx is a nationwide network of home care professionals that includes all levels of caregivers from visiting nurses, home care ...</p> <p>URL https://www.carelinx.com/</p> <p>LOCATIONS San Francisco</p> <p>STARTUP STAGE Growth (post-Series A)</p>	 <p>Carely</p> <p>DESCRIPTION Carely supports and improves the care experience by simplifying communication and facilitating engagement for the patient's carin...</p> <p>URL https://www.care.ly</p> <p>LOCATIONS Columbus</p> <p>STARTUP STAGE Series A</p>	 <p>Carewell THE CAREGIVERS SHOP</p> <p>DESCRIPTION Carewell is a Charlotte-based, family-founded e-commerce company with a mission to improve the lives of caregivers and their ...</p> <p>URL https://www.carewell.com/</p> <p>LOCATIONS Charlotte</p> <p>STARTUP STAGE Early (pre-Series A)</p>	 <p>Cariloop</p> <p>DESCRIPTION Digital platform that helps senior care and service providers to easily and cost effectively connect with patients, caregivers, and healthcar...</p> <p>URL http://cariloop.com</p> <p>LOCATIONS Dallas</p> <p>STARTUP STAGE Early (pre-Series A)</p>

<div></div> <div>Tending</div> <div>DESCRIPTION</div> <div>A convenient, easy to use, one stop shop for family caregivers, supporting and caring for loved ones</div> <div>URL</div> <div>https://www.starttending.com/</div> <div>LOCATIONS</div> <div>San Francisco</div> <div>STARTUP STAGE</div> <div>Early (pre-Series A)</div>	<div>The Helper Bees your home. your choice.</div> <div>The Helper Bees</div> <div>DESCRIPTION</div> <div>The Helper Bees is an InsurTech successfully improving the home care experience for the payer and care-recipient. They work with ...</div> <div>URL</div> <div>https://www.thehelperbees.com/</div> <div>LOCATIONS</div> <div>London</div> <div>STARTUP STAGE</div> <div>Series A</div>	<div></div> <div>True Link</div> <div>DESCRIPTION</div> <div>True Link protects seniors from becoming victims of fraud, identity theft, and scams by providing financial tools for older adults and ...</div> <div>URL</div> <div>https://www.truelinkfinancial.com/</div> <div>LOCATIONS</div> <div>San Francisco</div> <div>STARTUP STAGE</div> <div>Growth (post-Series A)</div>	<div></div> <div>Vesta Healthcare</div> <div>DESCRIPTION</div> <div>Vesta Healthcare is an industry-leading technology and clinical services organization, dedicated to connecting caregiver insights to t...</div> <div>URL</div> <div>https://vestahealthcare.com/</div> <div>LOCATIONS</div> <div>New York</div> <div>STARTUP STAGE</div> <div>Early (pre-Series A)</div>	<div></div> <div>Wellthy</div> <div>DESCRIPTION</div> <div>At Wellthy, we dream of the day when taking care of the sick and the elderly becomes seamlessly human and tech powered. We're working ...</div> <div>URL</div> <div>https://www.wellthy.com/</div> <div>LOCATIONS</div> <div>New York</div> <div>STARTUP STAGE</div> <div>Growth (post-Series A)</div>
<div></div> <div>Homage</div> <div>DESCRIPTION</div> <div>Homage is a complete solution that combines technology and the best care professionals to enable seniors to age at home with dignity.</div> <div>URL</div> <div>https://www.homage.sg/</div> <div>LOCATIONS</div> <div>Singapore</div> <div>STARTUP STAGE</div> <div>Growth (post-Series A)</div>	<div></div> <div>Homethrive</div> <div>DESCRIPTION</div> <div>Homethrive is a family elder care coordinator that reduces the work, worry, and stress on employee family caregivers who support agi...</div> <div>URL</div> <div>https://www.homethrive.com/</div> <div>LOCATIONS</div> <div>Chicago</div> <div>STARTUP STAGE</div> <div>Series A</div>	<div></div> <div>Honor</div> <div>DESCRIPTION</div> <div>Honor is a home-care technology company that partners with local agencies to provide reliable, high-quality in-home care. The compan...</div> <div>URL</div> <div>https://joinhonor.com</div> <div>LOCATIONS</div> <div>San Francisco</div> <div>STARTUP STAGE</div> <div>Growth (post-Series A)</div>	<div></div> <div>KindlyCare</div> <div>DESCRIPTION</div> <div>Elder care marketplace with over 100k vetted caregivers and service providers like geriatric care managers, home care agencies, ...</div> <div>URL</div> <div>https://www.kindlycare.com/</div> <div>LOCATIONS</div> <div>San Francisco</div> <div>STARTUP STAGE</div> <div></div>	<div></div> <div>Kinto</div> <div>DESCRIPTION</div> <div>Kinto is here to help you care better. Caregivers with Kinto are given the support they need through a set of useful digital tools and access to a...</div> <div>URL</div> <div>https://www.kinto.care</div> <div>LOCATIONS</div> <div>Cambridge</div> <div>STARTUP STAGE</div> <div>Series A</div>
<div></div> <div>Mon Ami</div> <div>DESCRIPTION</div> <div>Scale community based support forseniorusingMon Ami'sintuitive software solutions, designed specifically for use bysenioragencies and nonprofits.</div> <div>URL</div> <div>https://www.monami.io/</div> <div>Locations</div> <div>US</div>	<div></div> <div>Seniorly</div> <div>DESCRIPTION</div> <div>Find the best assisted living and other senior living like nursing homes, memory care, respite care, CCRC, skilled nursing facilities, independent living and more.</div> <div>URL</div> <div>https://www.seniorly.com/</div> <div>Locations</div> <div>San Francisco, CA</div>	<div></div> <div>Silvernest</div> <div>DESCRIPTION</div> <div>Silvernestis a roommate finder and all-in-one homesharing platform. We match homeowners and housemates based on compatibility, and all our listings and . .</div> <div>URL</div> <div>https://www.silvernest.com/</div> <div>Locations</div> <div>Denver, CO</div>	<div></div> <div>Tembo Health</div> <div>DESCRIPTION</div> <div>Seniors deserve the very best care, no matter where they live.Tembo Health partners with nursing homes to provide residents with high quality telemedicine . .</div> <div>URL</div> <div>https://tembo.health/</div> <div>Locations</div> <div>US</div>	
<div></div> <div>Tomorrow Health</div> <div>DESCRIPTION</div> <div>Tomorrow Healthis developing the future of home-based care, starting with home medical equipment.</div> <div>URL</div> <div>https://home.tomorrowhealth.com/</div> <div>Locations</div> <div>New York, NY</div>	<div></div> <div>Umbrella</div> <div>DESCRIPTION</div> <div>Umbrella builds products and services that empower older adults to live with independence and purpose.</div> <div>URL</div> <div>https://www.askumbrella.com/</div> <div>Locations</div> <div>US</div>	<div></div> <div>Vital Link</div> <div>DESCRIPTION</div> <div>Vital Link makes medical alert devices for in home and on the go, helping olde radults stay safe while giving their families peace of mind.</div> <div>URL</div> <div>https://vital-link.com/</div> <div>Locations</div> <div>Oakland, CA</div>	<div></div> <div>Wider Circle</div> <div>DESCRIPTION</div> <div>Connects health plan members with like-minded neighbors to inform, support and motivate one another, empowering them to be more proactive about their . .</div> <div>URL</div> <div>https://www.widercircle.com/</div> <div>Locations</div> <div>Redwood City, CA</div>	

 <p>Lifted</p> <p>DESCRIPTION</p> <p>Lifted only accept the best Carers.They equip Carers with innovative technology so they can focus on delivering amazing care. ...</p> <p>URL</p> <p>https://www.liftedcare.com/</p> <p>LOCATIONS</p> <p>London</p> <p>STARTUP STAGE</p> <p>Early (pre-Series A)</p>	 <p>Papa</p> <p>DESCRIPTION</p> <p>Papa connects College Students to Older Adults who need assistance with transportation, house chores, technology lessons, companionshi...</p> <p>URL</p> <p>https://www.joinpapa.com</p> <p>LOCATIONS</p> <p>Miami</p> <p>STARTUP STAGE</p> <p>Growth (post-Series A)</p>	 <p>Roobrik</p> <p>DESCRIPTION</p> <p>Roobrik provides online tools to help aging adults and their families make more informed and empowered health and care ...</p> <p>URL</p> <p>http://roobrik.com/</p> <p>LOCATIONS</p> <p>Durham</p> <p>STARTUP STAGE</p> <p>Series A</p>	 <p>SeniorLink</p> <p>DESCRIPTION</p> <p>Seniorlink provides services, support and technology that engages family caregivers.</p> <p>URL</p> <p>https://www.seniorlink.com/</p> <p>LOCATIONS</p> <p>Boston</p> <p>STARTUP STAGE</p> <p>Growth (post-Series A)</p>	 <p>TCare</p> <p>DESCRIPTION</p> <p>TCARE's Medicaid-approved, SaaS platform reduces caregiver burnout and delays nursing home placement. TCARE's evidence-...</p> <p>URL</p> <p>https://www.tailoredcare.com/</p> <p>LOCATIONS</p> <p>St Louis</p> <p>STARTUP STAGE</p> <p>Early (pre-Series A)</p>
 <p>A Place for Mom</p> <p>DESCRIPTION</p> <p>A Place for Mom, provides personal and professional assistance to families in the search of senior care options.</p> <p>URL</p> <p>https://www.aplaceformom.com/</p> <p>Locations</p> <p>Seattle, WA</p>	 <p>Best Buy Health</p> <p>DESCRIPTION</p> <p>Best Buy Healthis focused on providing exceptional senior care and elder care technologies by using tech-enabled human interactions.</p> <p>URL</p> <p>https://healthcare.bestbuy.com/</p> <p>Locations</p> <p></p>	 <p>Bold</p> <p>DESCRIPTION</p> <p>Bold Health is a digital therapeutic platform that leverages evidence-based cognitive behavioural and stress reduction...</p> <p>URL</p> <p>https://www.bold.health/</p> <p>Locations</p> <p>US</p>	 <p>cake</p> <p>DESCRIPTION</p> <p>Cake's end-of-lifeplanning tool guides you to create or upload documents like living wills, advance directive forms, and estate planning documents...</p> <p>URL</p> <p>https://www.joincake.com/</p> <p>Locations</p> <p>US</p>	
 <p>Caring.com</p> <p>DESCRIPTION</p> <p>Caring.com exists to help family caregivers like you make better decisions, save time and money and feel less alone.</p> <p>URL</p> <p>https://www.caring.com/</p> <p>Locations</p> <p>US</p>	 <p>Gather</p> <p>DESCRIPTION</p> <p>Gather Health develops mobile health technology for healthcare providers, patients, and their family members</p> <p>URL</p> <p>https://gatherhealth.com/</p> <p>Locations</p> <p>Hong Kong</p>	 <p>intuition robotics</p> <p>DESCRIPTION</p> <p>Intuition Robotics, the digital companion company, is redefining the relationship between humans and machines with cognitive AI agents.</p> <p>URL</p> <p>https://www.intuitionrobotics.com/</p> <p>Locations</p> <p>US</p>	 <p>Iris Plans</p> <p>DESCRIPTION</p> <p>Iris Healthcare is the premiere provider of Advance Care Planning(ACP) services that reduce costs, improve health outcomes and enhance member ...</p> <p>URL</p> <p>https://www.irishealthcare.com/</p> <p>Locations</p> <p>Austin, TX</p>	

Lessons from Companies and Innovators:

Some lessons from the companies we interviewed and reviewed include:

- Don't over engineer your product initially – it will undoubtedly undergo several iterations.

- Know which customer you want to acquire and recognize that not all 75- or 85-year-olds are the same. This is a very heterogeneous market. The adage, if you have seen one 85-year-old, you have seen one 85-year-old is true.
- Recognize that the payor of the product or service is not always the end user, and you may need to pivot your business and customer acquisition strategy to the payors.
- You may need to pivot to sell your technology to other organizations/ companies in order to service the end user, and that direct to consumer can be difficult initially.
- The long sales cycle within health care organizations is real. You will need a champion.
- The older population under 75 is very amenable to using technology, but over 75 they are not as fluent – yet. This is likely to evolve as the tech educated population ages, highlighting the importance of digital literacy in older adults throughout their aging years.

We used these insights to help formulate the questions we asked of companies when they were interviewed for profiles as well as for the Roundtable in March 2021.

Lessons from Companies that Did Not Scale:

Those companies that were not able to scale also provide valuable insights. We reviewed Tending, Mavis, Grace, Lively and dozens of home care companies that folded. They echoed the importance of the market opportunity to provide products and services for older adults, and that often they started with a personal experience and mission. Yet, these types of businesses can be very challenging when initially starting and marketing direct to consumers. Finding the family caregiver is hard, as it can be as well to find the care recipient. Regulatory issues were challenging, as was finding investors.

The experience of Tending, which provided support services for care transitions from the hospital to the home for Medicare patients, is instructive. They found it was hard to get hospitals to pay for that type of service; needed stakeholders in the hospital to get in the door; it was hard to scale; and Medicare Advantage had a long sales cycle. Yet the families who needed the platform and support, liked it. This is a common

experience. Going direct to consumer was hard, and it was not easy to find the individual caregiver or care recipient - even through Facebook.

One CEO, although passionate about the mission, even advised young entrepreneurs not to go into this business – “there are too many barriers”. We include this to highlight that there are barriers that many companies have faced. Yet we are now optimistic by identifying and naming these barriers, we are on a path to facilitate more innovation and entrepreneurship in this important need.

The following companies and corresponding subdomains of caregiving needs were noteworthy for their iterations in business strategy, customer focus and acquisition strategies, and their ultimate success in scale. [Appendix A](#) contains more details on each company.

[Aloe Care Health](#) (Safe homes): Utilizing advanced voice activated medical and caregiver support platforms, they found multiple customers including private duty home care providers, insurance companies and direct to consumer online sales.

[Cake](#) (End of Life Planning and Post Loss Support): Offers a complete range of services and products that may be needed to plan for all end of life needs and addresses the fragmented market with a unique platform. Have added post loss support and incorporate both B2B and B2C strategies.

[Care.com](#) (Care support): Considered one of the largest online two-sided marketplaces for care, connecting families to on-demand and back up care, expert assistance to find a caregiver, and trained navigators, sold to employers.

[Carely](#) (Care Navigation and Information Platform): Owns and operates three platforms: Caregiving.com; Carely Family App; and Carely Community. Their customers include Medicare Advantage Plans; Long Term Care providers; and healthcare providers.

[Daughterhood](#) (Care information and navigation): Connects women to content, resources and a community to assist in their work as caregivers to parents and spouses. Created circles of care in local communities to support the caregivers.

[Devoted](#) (Healthcare navigation and Insuretech): Sells Medicare Advantage plans and offers a concierge style of service to help navigate the complexities of the health care system. Identified the important pain point of older adults facing too many choices and too little information and integrates this coverage with their healthcare needs.

Grandpad (Digital Accessibility; Isolation; Care Management): Uses a complex smart pad device simplified for the older adult user. Preprogrammed to simplify transactions inside and outside the family. Acquire customers both in B2B and B2C.

Home Thrive (Care Navigation): Develops personalized plans and provide 24/7 digital and human concierge services provided by Care Guides. Provide infrastructure to those who are aging in their own home, selling B2B to employers.

Honor (Back End Support for companies providing in home paid caregivers): Pivoted from initial D2C strategy, to selling their technology support to other providers of home care services. Acquisition of Home Instead in August 2021 is a significant new strategy.

Iris Plans (End of Life and Advance Care Planning): While they sell into healthcare plans and physician practices, they work directly with families on advance directives and medical care planning using expert guides via a telehealth model.

Kinto (Care Navigation and Caregiver Training): Tech enabled care coaching service to train and support family caregivers. Their paying customers are Medicare Advantage plans, large employers, and pharmaceutical companies.

Mon Ami (Technology SaaS support for senior services and Non-Profit Agencies): Pivoted from providing in home respite care for caregivers, to selling their technology platform to governments, non-profit agencies who support senior services, using their software as a solution.

Papa (Social Isolation; Respite care; Care Concierge; Telehealth): Initially Papa Pals provide companionship and help with everyday tasks, and have expanded product offerings to include Papa Health - comprehensive health management and virtual primary care. Targeted payors/customers are Medicare Advantage and Insurance plans.

Seniorly (Information Platform and Housing Alternatives Navigation): Online platform which enables search by location, type of care, living situation needed. Expanded their product offering to provide a trusted resource for a range of services.

Tomorrow Health (Wellness/Smart Safe Homes; Transition Support): Streamlines ordering and access to home medical equipment and supplies and provides monitoring devices for communications and safety. "Care Advocates" are navigators for transition support, and pivoted from B2C to B2B

Vesta Healthcare: (Care Coordination and Navigators; Telehealth): Pivoted from their initial strategy, to include aides and family caregivers to form a “Care Team” and circles of care. Introduced technology to provide 24/7 telehealth support for caregivers.

Vynca: (End of Life Care Planning): They identified that establishing a champion within hospitals and healthcare providers to sell their technology to support greater access to POLST and advance directives

Wellthy: (Care Coordination and Navigation): Caregiving concierge support for families of employers. Connects employees with their own Care Coordinator, to support care of older adults as well as family members with special needs.

Wider Circle: (Social Isolation and SDOH): Their “Connect for Life” program was designed to bring together neighbors to exercise, socialize and improve their well-being. Services expanded to provided transportation, meal delivery and virtual support. Payors are Medicare Advantage plans.

The Value of Existing Community Organizations:

YMCA and TTN

While we enthusiastically reviewed a wide array of for-profit innovative products and services in the caregiving space, there are a number of existing not-for-profit organizations with members, scale, community roots and a track record for delivering a variety of quality caregiving services. These organizations could be leveraged to address challenges of customer acquisition that most startups face. In fact, they are distribution channels that could provide potential for product testing and partnerships as well. Two such organizations are profiled.

The YMCA of Greater New York

Serving approximately 500,000 New Yorkers of all ages, the YMCA of Greater New York is the largest branch of a national non-profit and one of New York City’s leading social service organizations. Focused on health equity and maximizing the potential of individuals, the YMCA is committed to building stronger and healthier families and communities by identifying and mitigating root causes that lead to disparities and inequalities in health outcomes. Their expertise includes preventive health, education, youth development, social cohesion, and community building.

The Y operates 23 facilities across all five boroughs, serving the full spectrum of NYC residents. In addition to their signature fitness and swimming programs, they have a

long history of providing a variety of caregiving services including diabetes prevention and management for individuals and caregivers; and social and fitness programs for seniors to address aging and isolation.

With 2700 local branches across the country serving 22 million people annually, the YMCA of the USA serves people of all ages and walks of life. Like most non-profits, the Y's revenue model has been hit hard by the pandemic. As a result, there may be unique opportunities to leverage and expand the capabilities of the Y as a distribution channel for caregiving services.

Although Y facilities were closed for regular programming during the COVID-19 pandemic, their staff regularly checked in on their senior members who were now housebound and at particular risk. Among New Yorkers age 65+, 60% are pre-diabetes, 50% are overweight; and 35% live alone. When ten facilities were allowed to open at 25% capacity in September 2020, there were waiting lists for pool time and exercise facilities. The Y also became instrumental in distributing vaccines in predominantly black and brown neighborhoods.

This important national organization could become both a laboratory for innovation evaluations, and a new type of distribution channel for direct to consumers. For example, the Y recently just completed an engagement with the startup, NYForever, in which they raised over \$200K to help send Y kids to day camp. The Y partnered in promoting through print and social media, events and merchandise, and did additional corporate outreach.

The process for a new company to partner with this Y would involve a well-established vendor qualification process. This involves a questionnaire related to the history, size and type of business, and details on key personnel. The process would also require both programmatic and budgetary reviews, including:

- How a company could enhance the services currently provided by the Y or were uniquely positioned to expand services in a priority area
- Potential ROI/Impact (all levels)
- Delivery methodology and compatibility with Y requirements
- Cost and potential to scale

Partnerships with existing networks and community organizations is often an untapped resource for customer acquisition in caregiving.

The Transition Network (TTN): The Caring Collaborative

The TTN was founded 20 years ago by two women facing life transitions as they neared the end of their careers. Staffed largely by volunteers, TTN chapters now operate in 14 large cities providing resources to women age 50+, including workshops on personal and professional life transitions, healthcare, and special interest groups. For a modest annual fee, members can access this community and a platform of information, resources, and services that have enabled them to thrive and age in their own homes.

Ten years ago, the New York City chapter of TTN created The Caring Collaborative. Members are organized into neighborhood groups committed to supporting each other during health care challenges. They do not provide hands on care, but they may escort a member to/from a medical procedure, take notes during a medical appointment, pick up and deliver prescriptions or supplies, provide a meal or check in daily during a recuperative period.

A robust set of online resources offers up-to-the-minute healthcare resources, member-sourced physician recommendations, vaccine availability, etc. The pandemic has highlighted this highly effective model of community and neighbor-to-neighbor support. Participation is voluntary, but requires a two-hour training session. Since the pandemic, TTN services have been delivered online. As a result, they have expanded to offer national memberships to women helping women in fourteen metropolitan chapters. TTN provides a scalable customer base and a model of community engagement which could attract innovators in the caregiver market.

The Value of Community in Service Innovation:

The creation of community is seen as a component of many for-profit companies as well. For-profit Wider Circle creates “circles of care” among their members, who check in on each other and similarly assist with some of the daily needs. Amava and Gather have created a platform for communities of learning and next-stage life planning and activities. These companies address the important concern of social isolation and loneliness, and in so doing highlight the value of community.

Perspectives from Innovators: Review of Roundtable

The urgent needs of family caregivers - exacerbated by the global pandemic - are finally gaining more attention. At the same time, we are seeing tremendous activity by innovators developing new solutions to support caregivers. However, few such solutions have reached critical mass and families are struggling more than ever.

There is no easy fix: systems-wide barriers exist that prevent the growth of these innovative solutions. These systems-wide barriers are multifaceted and include:

- Cultural: the need for recognition of the value of family caregiving
- Technological: the need for greater integration and digitization
- Commercial: missing direct channels to consumers
- Legislative and Policy: need for family leave provisions

All of these are interconnected and caused us to want to hear from some of the leading executives in Caregiving to help identify the growth barriers they faced in their innovation journey and hear their recommendations for solutions and action steps we can take to alleviate the challenges of family caregivers. In partnership with The Collective, a division of Aging 2.0, we convened an invitation only small Roundtable of Caregiving startups and “scaleups” company founders and executives, to gain their insights, and to have a deep and candid conversation amongst peers.

Pre-event one on one interviews were conducted with the innovators to garner their top-of-mind concerns. These insights were synthesized into a framework of growth barriers used as a starting point of the Roundtable held in March 2021.

The companies which were able to participate in the Roundtable were:



A brief description of each company is included in [Appendix B](#). Below, the companies participating are profiled by who their paying customer is, and which channels they use to acquire them.

INNOVATOR PROFILES - BY PAYING CUSTOMER

	CARE RECIPIENTS	FAMILY CAREGIVERS	ADVISORS & INTERMEDIARIES	HOME CARE PROVIDERS	SENIOR HOUSING	EMPLOYERS	MEDICAID	MEDICARE ADVANTAGE	OTHER HEALTH PLANS
ALOE CARE HEALTH	•	•		•					
Care.com	•	•		•		•			
care3	•	•		•			•		•
CareLinx	•	•			•	•		•	•
carely, inc.					•				
Carewell	•	•		•					
cariloop		•				•			
Ceresti								•	•
Daughterhood									
Kinto						•	•	•	•
popo	•	•						•	•
roobrik					•				
SENIORLINK						•	•	•	•
True Link		•	•						
Vesta				•			•	•	•
Wellthy		•				•			

INNOVATOR PROFILES - BY CHANNEL

	CARE RECIPIENTS	FAMILY CAREGIVERS	ADVISORS & INTERMEDIARIES	HOME CARE PROVIDERS	SENIOR HOUSING	EMPLOYERS	MEDICAID	MEDICARE ADVANTAGE	OTHER HEALTH PLANS
ALOE CARE HEALTH	•	•		•					
Care.com	•	•		•		•			
care3	•	•		•			•		•
CareLinx	•	•			•	•		•	•
carely, inc.		•			•				
Carewell	•	•		•					
cariloop		•				•			
Ceresti								•	•
Daughterhood		•							
Kinto		•				•	•	•	•
popo	•	•						•	•
roobrik		•			•				
SENIORLINK						•	•	•	•
True Link		•	•						
Vesta	•	•		•			•	•	•
Wellthy		•				•			

Next, we summarize the findings of these three initiatives to assess the innovator journey in caregiving, define the pain points of those who have succeeded in scaling their businesses as well as those who did not, and recommendations to assist innovators and investors going forward.

Common Obstacles to Growth:

These executives identified key pain points and obstacles that affect the industry of caregiving and their ability to grow and scale:

- Distribution/ Channels
- Health System Design
- Market Awareness
- Market Maturity
- Policy
- Funding
- Product Mix
- Staffing

Included here are highlights of their discussion that is affecting growth and provide important insights for any new entrepreneur and innovator who wants to address the growing needs of family caregiving:

1. DISTRIBUTION/ CHANNELS

- We are missing direct-to-consumer channels.
- People who are caregivers or receiving care are in different phases of life, there is no obvious channel to reach them.
- Compounding the lack of channels are negative stereotypes and language.
- Even if selling to systems (e.g. Medicare Advantage plans, other healthcare plans, employers, etc.), startups can find themselves driving enrollment themselves and facing the same issue of finding individuals with the need which is very costly.
- Fragmented Channels: They discovered in their innovation journey that health plans and government programs generally administered at the State level so not a common market. The varying state, municipal and local legislative and health policies, practices and channels can paralyze scalability and growth and affect distribution, customer acquisition and sales, among others.

“What’s the right way to communicate to the market? Family caregivers are not really a category. It’s not like you can go to college students, or new moms; family caregivers are cross- cutting from a demographic perspective.”

“It was brutal, the cost of acquisition doing AdWords and Facebook ads to get app downloads. It’s like five times more expensive than what you read about.”

“We don’t think we can get consumers to pay for this directly. And trying is really detrimental to the product.”

“It’s a hard story. It’s hard to tell a startup and investors that it’s gonna take five years to get into the [health insurance] market.”

"So when we open a state, we have worked it for 24 months. The barriers to entry to open a market are pretty high."

2. HEALTH SYSTEM DESIGN

- Family Caregivers are often not part of health care teams: This results in a lack of integration and data sharing among solutions. Vendors are generally siloed and not used to collaborating with others to create a holistic, whole-person solution. This is changing in some systems, for example in CA and NY, Medicaid dollars are being used to pay family members to deliver care. Vesta Healthcare's business strategy is to include the family caregiver as an essential component of the care team, and developed products and services to assist them.
- Misaligned incentives: The health system benefits from free caregivers. Plans haven't wanted to advertise services that are too good for fear of attracting too many people with a specific condition. Most of the \$3.7 trillion health care industry is sick care not health care - nobody's responsible for keeping people healthy at home.

"I would just say the awareness thing is real. I mean, you go into a health plan, and you try to identify caregivers of members."

"The thing that's going to either drive us crazy or forward is willingness of those that own the risk to mainstream the family caregiver as part of care planning".

"Family caregivers are a free resource for the providers."

"There's institutional inertia across the system – 'It's not my problem' which leads to reduced risk-taking and job preservation."

"Why not pay people's families \$100k if they don't deviate from their palliative care plan (and not go into the hospital)?"

3. MARKET AWARENESS

- Limited Recognition of the Value of Family Caregiving: Family caregivers are not identical and too busy (often exhausted) to share their perspectives about what their challenges are, which means that innovators may end up working on incorrect or non-essential problems.

- Data generated in the home setting is not being captured and leveraged, missing an opportunity for clear feedback loops.
- Hard to access insights and data about the customer
- Family caregiving is generally not seen as valuable, pushing the burden and costs on caregivers (often women).

"What's happening at home is structured data that can be used to deliver better care, whether it's interactions or even interventions to avoid poor outcomes, but it's a blind spot right now."

"It's challenging to track environmental conditions, undocumented events like hidden falls, and key data points, which we need to provide preventative care."

- Difficulties of identifying caregivers: People generally don't self-identify as caregiving, and hospital stays are counted as GDP but caregiving isn't. As such the space doesn't attract sufficient government or investor attention.
- The term 'caregiver' has many meanings. Few people self-identify with the term, while in today's connected world, members of the care team can easily be remote.
- The tasks are often unclear and ill-defined. As such it's hard to engage caregivers in the healthcare continuum and help them be more effective.

"There's a huge gap in how do you find a caregiver, there is no direct path. Identifying who the caregivers are felt like a big barrier for all of us that are trying to work in this space."

"There is a lack of one definition. That's also problematic for people who are caregivers themselves and don't self-identify as caregivers."

"People don't identify themselves as a caregiver. They say I'm a daughter. I guess I'm doing caregiving, but I'm a daughter."

"It's important and impactful work. We think that they deserve a lot more recognition for that."

4. MARKET MATURITY

- Missing impact metrics: Lacking good data makes it hard to prove results, which are needed in particular from Medicare Advantage plans looking for cost savings and employers showing the impact of employee programs.

- The dearth of metrics and ROI metrics creates inertia and slows innovation and partnerships due to uncertain impact and outcomes.

“The concrete ROI is still being worked out; there's still pilots and experiments being run - which benefit represents the biggest ROI and gets the best feedback from members.”

“We need to show significant cost savings the way pharmaceuticals need to show the drug efficacy.”

- Lack of digital infrastructure: Every family caregiving situation is complex, unique and personal.
- Tech entrepreneurs can deliver complex, personalized solutions, but that requires digitization. Many of the things that matter most in caregiving are not digital.
- The recent rapid rise in 'remote caregiving' suggests is a roadblock that can help stimulate the market.

“Everyone overnight became a remote caregiver, it didn't matter whether you live next door to the person you're caring for, or you live 10,000 miles away.”

“I think remote care is important to help re-energize the family caregiver demographic by creating a more inclusive definition.”

5. POLICY

- Missing family leave and caregiver support legislation: Funding for programs with government and employer support would ensure there is more demand for family caregiving solutions.
- Institutional and legislative policies can “raise all boats” and fast-track financial bolstering to increase business opportunities and ensure quality support to family caregivers.

“It would be tremendous for families to help them balance their lives, because they're already challenged as is - to have additional regulatory changes would be really helpful.”

“If we can align technology innovation with policy changes, we would tailor platforms and messages to what's being passed or lobbied for, even.”

- Missing longevity insurance models: Missing government support for long-term care, and the struggles with private long-term care providers mean there is little funding available for support services other than individuals and their families.
- The institutions facilitating care must be similarly assisted to provide long-term sustainable improvements in the space.

"If you're an insurance company, and you always do things the way you do, the idea of managing somebody's care - you're a little bit afraid of that."

"The challenge includes addressing a complex and outdated regulatory system."

"Family caregivers are interfacing with a fundamentally broken and disintegrated governmental system that is central to the financing of a lot of the care delivery system."

6. FUNDING

- Availability of Capital: Family caregiving is not well understood compared to other tech sectors and not always seen as relevant for (young) entrepreneurs and investors. Success begets success, and funding begets success.
- Too little 'patient' capital is committed compared to the scale of the challenges to be overcome.

"It really doesn't come down to a lot of funding support for caregiving specific products. There's less shiny, fascinating objects like robots or other gadgetry."

"We need really consistent, long-term backing. There is a level of steadiness that needs to be applied."

7. PRODUCT MIX

- Every Solution is Complex: With caregiving, every situation is unique and requires a personalized set of providers, so every family ends up creating their own system. (Contrast this with the more 'standardized' childcare industry.)
- Further it is episodic - periods of crisis are mixed with periods of calm, undermining subscription business models.

"It's hard to sell things to families, when every family is literally creating an entire delivery system, all by themselves, over and over again."

“Our typical member has 4.5 comorbid conditions, needs assistance with 4 ADLs, polypharmacy is about 11. It’s very complex.”

8. STAFFING

- Attracting and Retaining Talent: Staffing is a multifaceted challenge; finding front-line professional caregivers as well as those in the rapidly growing care coordination roles that require expertise in managing complex, dynamic situations.
- There is insufficient supply for ever increasing demand.
- Dynamic ambitious entrepreneurs tend to flock together and follow each other to new opportunities. Several of the companies interviewed that did not scale found hiring the needed talent to be a barrier to their growth.

“Need to attract talent for those able to manage complex life situations with multiple actors.”

“Challenge includes planning for a labor pool of insufficient size and necessary skill.”

This Summary of Barriers helps to capture the pain points of the innovation journey that both current companies and future startups may face which focus on the important and growing Caregiving economy.

DOMAIN	BARRIER	DESCRIPTION
DISTRIBUTION/ CHANNELS	Missing direct-to-consumer channels	As people are in different phases of life, there is no obvious channel to reach them. Compounding the lack of channels are negative stereotypes and language. Even if selling to systems (e.g. MA Plans) startups can find themselves driving enrollment themselves and facing the same issue of finding individuals with the need.
	Fragmented Health Channels	Plans and government programs generally administered at the State level so not a common market. The varying state, municipal and local legislative and health policies, practices and channels can paralyze scalability and growth and affect distribution, customer acquisition and sales, among others.
HEALTH SYSTEM DESIGN	Family caregivers are often not part of health care teams	This results in a lack of integration and data sharing among solutions. Vendors are generally siloed and not used to collaborating with others to create a holistic, whole-person solution. This is changing in some systems, for example in CA and NY Medicaid dollars are being used to pay family members to deliver care.
	Misaligned incentives	Health system benefits from free caregivers. Plans haven't wanted to advertise services that are too good for fear of attracting too many people with a specific

		condition. Most of the \$3.7tn health care industry is sick care not health care - nobody's responsible for keeping people healthy at home.
MARKET AWARENESS	Hard to access insights and data about the customer	Family caregivers are not identical and too busy (often exhausted) to share their perspectives about what their challenges are, which means that innovators may end up working on incorrect or non-essential problems. Data in the home is lacking and needs to be leveraged to support a clear feedback loop.
	Limited recognition of value of family caregiving	Family caregiving is generally not seen as valuable, pushing the burden and costs on caregivers (often women). Further people generally don't self-identify as caregiving, and hospital stays are counted as GDP but caregiving isn't. As such the space doesn't attract sufficient government or investor attention.
	Difficulties of identifying caregivers	The term 'caregiver' has many meanings. Few people self-identify with the term, while in today's connected world, members of the care team can easily be remote. Further the tasks are often unclear and ill-defined. As such it's hard to engage caregivers in the healthcare continuum and help them be more effective.
MARKET MATURITY	Missing impact metrics	Lacking good data makes it hard to prove results, which are needed in particular from MA plans looking for cost savings and employers showing the impact of employee programs. The dearth of metrics and ROI metrics creates inertia and slows innovation and partnerships due to uncertain impact and outcomes.
	Lack of digital infrastructure	Every family caregiving situation is complex, unique and personal. Tech entrepreneurs can deliver complex, personalized solutions, but that requires digitization. Many of the things that matter most are not digital. The recent rapid rise in 'remote caregiving' suggests is a roadblock that can help stimulate the market.
POLICY	Missing family leave and caregiver support legislation	Funding for programs with government and employer support would ensure there is more demand for family caregiving solutions. Institutional and legislative policies can "raise all boats" and fast-track financial bolstering to increase business opportunities and ensure quality support to family caregivers.
	Missing longevity insurance models	Missing government support for long-term care and the struggles with private long-term care providers mean there is little funding available for support services other than individuals and their families. The institutions facilitating care must be similarly assisted to provide long-term sustainable improvements in the space.
FUNDING	Availability of capital	Too little 'patient' capital is committed compared to the scale of the challenges to be overcome. Family caregiving is not well understood compared to other tech sectors and not seen as relevant for (young) entrepreneurs and investors. Success begets success, and funding begets success.
PRODUCT MIX	Every solution is complex	With caregiving, every situation is unique and requires a personalized set of providers, so every family ends up creating their own system. (Contrast this with the more 'standardized' childcare industry.) Further it is episodic - periods of crisis are mixed with periods of calm, undermining subscription business models.

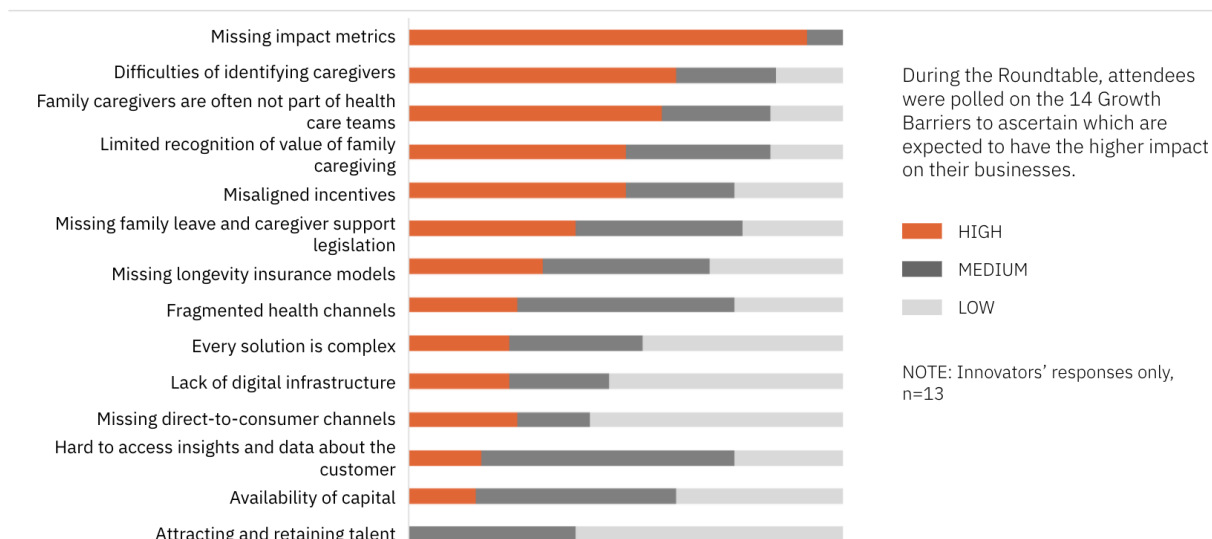
STAFFING	Attracting and retaining talent	Staffing is a multifaceted challenge; finding front-line professional caregivers as well as those in the rapidly growing care coordination roles that require expertise in managing complex, dynamic situations. Also, dynamic ambitious entrepreneurs tend to flock together, and follow each other to new opportunities.
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Relative Importance to Your Business Growth:

We then asked the executives attending the Roundtable to evaluate the impact of each of the eight barriers on their business over the next 5 years. The vast majority indicated three top concerns:

1. Missing impact metrics.
2. Difficulties identifying caregivers.
3. Family caregivers are often not part of healthcare teams.

Poll: What is the impact of each barrier on your business over the next 5 years?



Opportunity Areas and Recommendations from the Roundtable:

Discussion among the participants also focused on what are the opportunity areas to address the barriers to growth identified, and how might we go about it. What was particularly interesting in the conversation, was that for those who have found a successful and scalable customer acquisition model through either selling into Medicare Advantage or Employer plans, they would not want to pivot to direct to consumer.

As one CEO stated, *“It costs me money after the third family member I have to speak with. It is just too hard. I need to meet them where they are – through their employer”*.

Of course, that does not adequately address the needs of the millions of unpaid caregivers who have had to leave the workforce, or whose employers do not yet provide benefits in this area, or whose Medicare Advantage plan does not provide or cover the types of support they need. The following opportunity areas may help to alleviate this conundrum. Five key opportunities were identified among the participants. The [appendix](#) includes specifics on several of the opportunity areas with actionable steps.

Defining Caregiving

- This is about bringing family caregivers - who keep society running - out from the shadows. It involves creating new ways to identify who caregivers are and of enabling the creation of a standard language to describe caregiver roles and tasks.
- We need to redefine what makes a caregiver in today's post-nuclear-family world in which caregivers are often miles away. And we need to better capture the contributions (tangible and intangible) that make up the role.
- It should be easy and rewarding for caregivers to share this information, and in turn get support. Compensation can be used to incentivize and reward.

Measuring Impact

- Need to agree on metrics, and measure how new innovations impact customers/payors and care recipient.
- Individual startups face high bars to not only build differentiated solutions, but also prove efficacy in terms of cost savings and broader societal impact.
- Many family caregiving startups have pivoted away from B2C solutions due to high customer acquisition costs but are asked by B2B customers (in particular health insurance plans) to prove cost savings, and articulate clear impact metrics.
- Few organizations are willing to spend on solutions with unclear financial or impact ROI, or to invest in enabling the space to make it easier for companies to prove value.
- Every family caregiving startup is in effect conducting a pilot research study, but mostly in a vacuum. They would be better off leveraging collective insights - identifying market needs, measuring the return on investment (ROI), and

sharing best practices. This will de-risk the space for new entrants and help established players prove their value.

- Will require a way to securely share market results.
- Creating collaboratives to assist with clinical partners for value-based care demonstrations.

Fixing B2C

- The majority of family caregiving is inherently local - centered around the home - fragmenting both demand and supply.
- The majority of startups that were interviewed had pivoted away from B2C channels as the costs were too great and the market too fragmented.
- As a result, most startups target health insurance or employer channels to gain access to volume, but this comes with its own channel costs and complications.
- Moreover, not everyone has access to these B2B channels.
- As people are in different stages of life, there is no obvious channel to reach them. – not just one bucket, e.g. college students; new moms; cross cutting from a demographic perspective.
- To stimulate a vibrant 'longevity market' the innovators and the end users need to have more options to connect directly.
- A properly functioning consumer marketplace would connect families and innovators directly. To do this we need to facilitate both demand and supply.
- There is also a vital role for public-private sector partnerships in building the marketplace infrastructure, with better government investment in aging services infrastructure to aggregate the customer base.

Solutions Marketplace

- There are multiple barriers that stifle the B2C market.
- First, every family caregiving situation is unique, with bespoke needs and solutions.
- Second, they are mostly very localized - centered around the home.
- Third, a patchwork of healthcare providers, community organizations and informal care providers is involved, all 'owning' pieces of the puzzle.
- And fourth, there is no easy way to find out what's available in my location for my specific needs (and not e.g. just the preferred choice of a health plan case manager).
- Comprehensive directory of locally available services tailored to an individual's needs are needed.
- A resource that lists all solutions available in a particular area that can be filtered by the families based on their unique needs.

- The solutions providers will be incentivized to own their organization profiles and keep their service availability up to date.
- There is plenty of innovation, but lack of an overall system to support family caregiving.

"It's hard to sell things to families, when every family is literally creating an entire delivery system, all by themselves, over and over again"

Longevity Insurance: Insurance as a service to promote independence

- Older adults who are looking to age successfully in their homes save the health system significant expense yet face significant out-of-pocket costs themselves.
- Medicare doesn't routinely cover these costs (Medicare Advantage does in very limited circumstances) and private insurance options are generally unavailable or unaffordable.
- New 'longevity insurance' models would combine services to keep people healthy and independent as long as possible with an insurance payout that covers community-based services.
- One product could be an "aging in place insurance" that rewards people to live independently. Customers could pay premiums while still in the workforce, and after a certain age, have access to products (e.g. smart home IoT devices, home modifications) services (e.g. home caregiving or care coordination) or a financial payout based on longevity.
- While no country has achieved an ideal solution, Germany, Japan and Taiwan offer lessons in providing low-cost, universal coverage, with good user satisfaction and community support.

NEXT STEPS IN THE INNOVATOR JOURNEY

The Roundtable helped to both validate the pain points and challenges we identified in our review of companies that have failed, as well as some of the struggles of those that are thriving. It served as a prototype for future roundtables we could hold, and create a "YPO" type of forum for entrepreneurs in this space. Collaborative opportunities among all who are trying to solve the challenges of family caregivers was of great interest among the executives who participated in the Roundtable, as well as to those interviewed.

Clearly addressing this enormous challenge facing virtually every family in America today requires innovation. It will also require a public-private partnership, and we are cautiously optimistic with the announcement of the Biden Administration's focus on caregiving and elder care as part of the new human infrastructure proposals. At the

time of writing this report, we have not yet heard whether the proposed allocation of up to \$400 billion will be approved, but it certainly starts a dialogue on the recognition of the need to provide dignity and care for all older adults.

In Section V we delve into some of the policy innovations and initiatives that would assist family caregiving, as well as some ideas for solutions to explore including developing a Caregiving Hub that could be an entry point into an infrastructure for family caregivers of older adults, as well as serve as a national information platform, solutions marketplace, and foster new collaboratives. A critical part of these solutions will be having robust support of investors, and public-private partnerships.

Section V: Moving Forward: The Future of Caregiving Solutions

“Caregiving startups are like companies selling ornaments for Christmas trees that do not exist”. We need to create the Christmas Tree”.

“Family caregivers are interfacing with a fundamentally broken and disintegrated governmental system that is central to the financing of a lot of the care delivery system”.

Stakeholders

We do not yet have a national care ecosystem for caregiving in the United States. That has led to a complex approach to addressing the needs of older adults and their caregivers. In turn, there are multiple stakeholders and customers in the caregiving journey and within the caregiving marketplace, all of whom could contribute to a future caregiving infrastructure and ecosystem that is sorely needed.

As we have described in this report, each family embarks on a complicated information journey, followed by an iterative process of creating their own caregiving ecosystem for their family members, all of which impacts the quality of life of the care recipient and the caregiver as well.

The stakeholders also include a diverse set of players: the actual providers and coordinators of care for both paid and unpaid caregivers; the recipient of that care; the family member who may be an influencer or actual decision maker /purchaser of the product and services needed to support the caregiver; the healthcare providers; the payors for those services including insurance, employers, Medicare, Medicaid, and Medicare Advantage plans.

Segmentation of the caregiving customer is also complicated: it involves services purchased directly by the care recipient; services purchased on behalf of the care recipients; and services paid for by society including government sponsored plans. The customer base is very heterogeneous, and often misunderstood. Customer acquisition is challenged by few direct-to-consumer channels.

Some of the challenges commonly faced by companies and entrepreneurs that we identified include:

- Selling into Medicare Advantage can have a long sales cycle – beginning in January with approvals/offerings not until October – December of each calendar year.
- Increasing number of Medicare Advantage plans, therefore many to sell to, and often want an exclusive service/product to distinguish their offering.
- Medicare and Medicare Advantage are likely payors. How many different points of service will they embrace is yet to be determined. Does a beneficiary get a choice of 5-10 products/ services, or an unlimited amount going forward? Will employers do the same?
- Selling to employers to offer product/ services as an employee benefit has a unique sales cycle. We are encouraged that we are now seeing Elder Care and Longevity benefits increasingly being offered by employers, and the recognition of their value to the employee as well as the employer.
- Each new company needs to validate its product in either a clinical or home environment. There is no central database of ways to find clinical partners or older adults willing to “try” and provide feedback on new products/ services.
- Finding the “Care Recipient” and their “Caregiver” is challenging. There are no central databases or platforms to identify those in need of products and services.

- There are also no obvious direct to consumer channels for distribution of products and services for caregivers and their recipients.
- Health care providers often have limited knowledge of the array of products for specific needs, as there are limited marketing opportunities
- There is a wide range of need in this very heterogeneous market.

Caregiver Needs

There is currently no singular place for a consumer/ caregiver to find companies, products, or services to assist them in the many different stages of caregiving and the many different needs of care recipients.

The caregiving and elder care ecosystems in the U.S. are particularly fragmented and exacerbated by a complex health care system. There are some platforms for specific disease needs, e.g., Solaria lists most products and services for people living with diabetes. Several of the Associations for specific diseases such as the American Heart Association, Alzheimer's Association, Parkinson's Association, also provide helpful information, as do hospitals and medical research centers.

Yet for the myriad and changing needs of older adults who will have different stages of needs and its associated different stages of caregiving, there is no one stop shopping for the multitude of products and services and information that caregivers need access to.

While there is a relatively new service industry of Patient Advocates, Geriatric Care Managers, Care Navigators and Concierge services emerging to assist caregivers and their care recipients help identify services, products and solutions, we believe a marketplace could help expand on this concept.

Here are examples of the range of information and solution sources that currently exist that address some of the many subdomains related to Caregiving, several of which integrate the use of these types of navigation services.

- a. Locating assisted living communities and housing alternatives, e.g., Seniorly, A Place for Mom, Care Academy.
- b. New companies are also emerging which offer navigation services to employers and consumers such as Home Thrive, Wellthy,

Cariloop, and Vital Links.

- c. Companies that integrate platforms and services for end-of-life care planning such as Cake, FreeWill, and Iris Plans.
- d. New platforms are emerging for resources and support for family caregivers of adults with chronic physical or cognitive conditions such as CareNav provided by the Family Caregiver Alliance^{xii}.
- e. *The Nursing Home Resource Center*^{xiii}, a new online platform that the Centers for Medicare and Medicaid Services announced in 2020 to serve as a centralized hub bringing together the latest information, guidance, and data on nursing homes that is important to frontline providers, residents and their families, and facilities.

These types of resources and solutions for specific needs are a great beginning and underscores the recognition of the disparate sources of information people need to seek, but often do not know about or can easily locate. They are not integrated into a central resource that can be easily accessed by families and caregivers of older adults.

To address these concerns, we believe there is value in thinking audaciously about creating more infrastructure for caregiving. We would all benefit from infrastructure to support families and caregivers, as well as to support innovators. Consumers need personalized curated and timely information, insights on relevant products and services, as well as help navigating the complexities of care. Innovators need help connecting with families who need their products and services, and the ability to connect with other entrepreneurs, investors, and clinical and strategic collaborators.

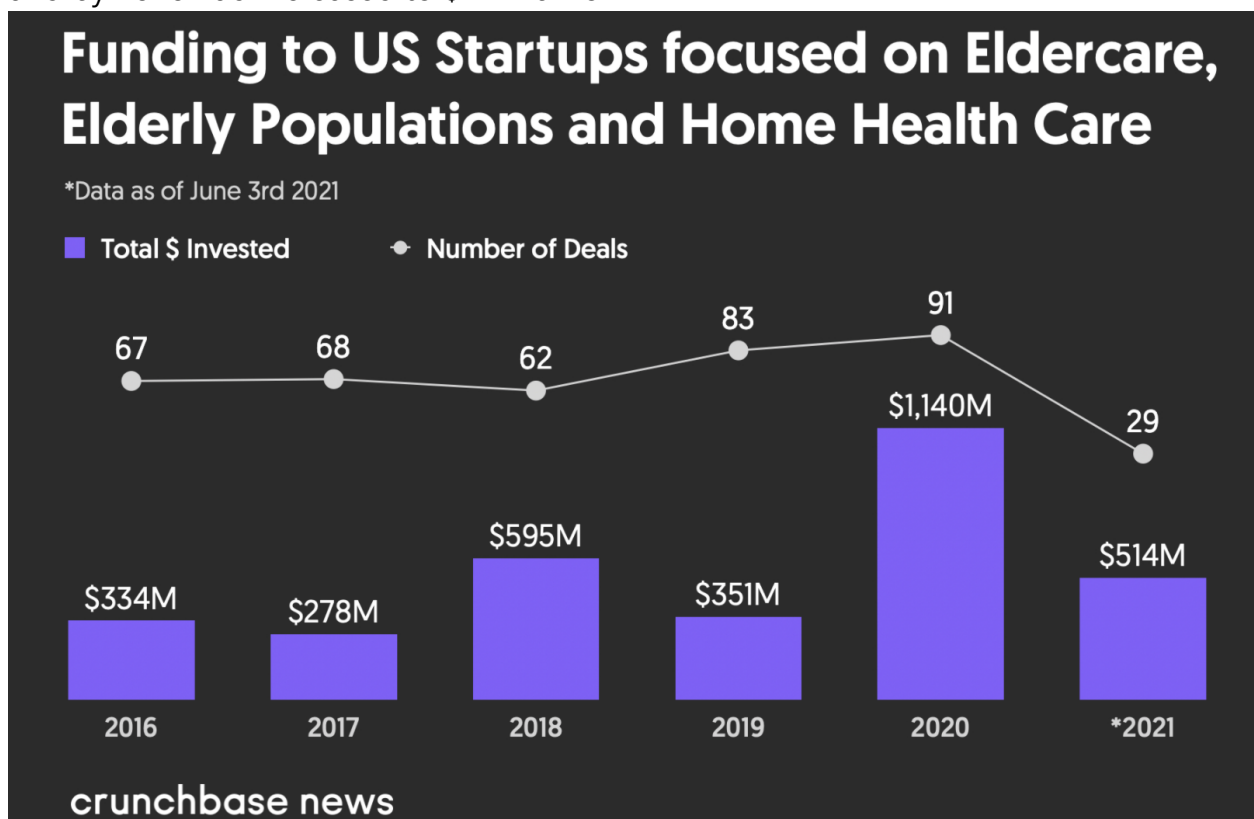
We propose there would be value in creating a Caregiving Information and Solutions Marketplace, as well as a Caregiving Innovations Marketplace, to serve the needs of older adults and their caregivers. We also recommend the need to help support a National Education Campaign on the value of caregiving, and developing a platform to crowdsource ideas for innovations and new initiatives including policies, that would support these goals. These are likely to be separate entities, or perhaps under the umbrella of a type of “Caregiving Hub”.

We also recognize the importance of the business opportunity and public private partnerships to help support the creation of more caregiving infrastructure. We delved

into these ideas, as we engaged our community to think about the future of caregiving solutions.

The Business Opportunity and Public Private Partnerships

With 48 million unpaid caregivers taking care of an ever-increasing number of older adults – 10,000-11,000 turning 65 each day – caregiving is an enormous business opportunity. We have seen an increase in over the past 5 years of investment in elder care by early-stage investors, as shown in the chart below published by Crunchbase^{xiv}. In 2011, the total invested in elder care companies was estimated to be \$39 million, and by 2020 had increased to \$1.14 billion.



There are many, many early-stage investors, but relatively few who fully understand the opportunity associated with caregiving. Hence, they are reluctant to be the first and lead, and often delay entering until some “known” investor commits. There is a huge educational mission here, as well as cultivating investors who are seeking to enter this emerging and growing market.

Increasingly venture investors, both within companies and independent funds, are recognizing this enormous investment opportunity. Andreessen Horowitz (A16z); Blue Fund Ventures; Kaiser Ventures, Khosla Ventures, Maverick Ventures; Oak HC/FT

Ventures, to name a few have invested in this space. Specialized funds also exist for senior housing. Importantly, several new venture funds have been established specifically targeting a range of aging innovation market opportunities such as Cake Ventures, Generator Ventures, Magnify VC, Pivotal Ventures, Primetime Partners, Springbank Collective.

Listed below are venture funds associated with the major caregiving related investments made in the past ten years. While many of the venture funds who have invested in this space have an investment thesis around digital health and healthcare, some new entrants to this space are beginning to form their own longevity innovation and aging care thesis.

Investor	Company	Stage
7wire Ventures	Homethrive	Series A
a16z	Honor	Series D
a16z	Tomorrow Health	Seed
a16z	Bold	Seed
Battery Ventures	A Place for Mom	Buyout
Battery Ventures	ClearCare	Series C
Blue Venture Fund	Wider Circle	Series A
Canaan Ventures	Papa	Series B
Comcast Ventures	Papa	Series B
Generator Ventures	Active Protective	Seed
Generator Ventures	CareLinx	
Generator Ventures	Caremerge	Series B
Generator Ventures	True Link	Series B
Generator Ventures	Vynca	Series B
Go Ahead Ventures	Cake	Seed
GSR Ventures	Cherry Labs	Series A
Kaiser Ventures	Vesta Health	Series B
Lightspeed Ventures	Curve Health	Seed
Magnify Ventures	Papa	Series B
Maverick Ventures	Mon Ami	Seed

NEA	SafeRide Health	
Oak HC/ FT	Vesta Health	Series A
OCA Ventures	Cake	Seed
Pillar VC	Cake	Seed
Pivotal Ventures	Papa	Series B
Portfolia	Chronicle	Seed
Portfolia	Envoy	Seed
Primetime Partners	Bold	Seed
Primetime Partners	Carewell	Seed
Primetime Partners	Tembo Health	Seed
Thrive Capital	Umbrella	Seed
Thrive Capital	Honor	Series D
Town Hall Ventures	WelbeHealth	Series C
Town Hall Ventures	Signify Health	
Two Lanterns Ventures	Cake	Seed
Ziegler Linkage Longevity Fund	AllyAlign Health	
	Arena	
	Bluestar SeniorTech	
	CareLinx	
	Caremerge	Series B
	CityLife Health	
	Cosan	
	Embodied Labs	
	Forefront Telecare	
	Healthpro Heritage	
	IncludeHealth	
	Ingenios Health	
	K4 Connect	
	LifeSite	
	Minka	
	OnShift	
	PayActiv	

	Prodigo Solutions	
	PS Lifestyle	
	Socially Determined	
Ziegler Linkage Longevity Fund	Strategic Health Care	
	Third Eye Health	
	True Link	
	VirtuSense	
	VitalTech	
	Vynca	

While some venture funds search exclusively for unicorns, this market has ample opportunity for market rate of returns and enormous societal impact. In years forward, impact investors will likely be engaging in these opportunities as has the Emerson Collective in recent months with their investment in Tembo Health. Aloe Care raised a round in 2021 from mission driven investors such as City Light, Million Lives Fund, Springbank Collective, Drumbeat Ventures, and Innovations for Impact Fund.

In discussions with investors, we often find some hesitation to invest because they are unsure of exit strategies for these types of investments. To date, there have only been 11 exits in this market:

Company	IPO / Acquiror / Lead Investor	Year	Valuation	Transaction
Home Instead	Honor Technology	2021	\$2.1B	Acquisition
Current Health	Best Buy	2021	\$400 million	Acquisition
InnovAge	Apax Partners	2020	\$950 million	IPO*
True Link	Khosla Ventures	2020	\$135 million	Series B
Silver Nest	Incenter (Finance of America)	2020	\$Undisclosed	Acquisition
Pillpack	Amazon	2018	\$750 million	Acquisition
Great Call	Best Buy	2018	\$800 million	Acquisition

CareLinx	Generali Global Assistance	2017	Undisclosed	Acquisition
Ingenios	Almost Family	2015	\$13.4million	Acquisition
Care.com*	-	2014	\$550 million (\$17/share)	IPO*
Living Independently Group	GE Healthcare	2009	Undisclosed	Acquisition
SilverSneakers	Tivity Health	2006	\$450 million	Acquisition
*Care.com was acquired by IAC in 2019 for \$500 million (\$15 per share). Source: Stage Not Age				

We see an opportunity to educate investors about the needs for caregiving innovations, about the marketplace opportunities, and how best to approach supporting entrepreneurs committed to developing solutions for the 48 million unpaid caregivers and their recipients. Education of investors and the business community could occur through special Roundtables with Investors such as the one held in March 2021 for CEOs of Caregiving companies, as well as through a new Caregiving Innovations Marketplace that would be available to entrepreneurs and investors. This type of innovator marketplace would be able to consolidate market data on startups seeking funding, metrics and outcome data of successful solutions, and identification of new needs and changing innovation gaps.

Policy Innovations and Initiatives

Policy recommendations and potential federal legislation that are being promoted from the Biden Administration for a more expansive federal approach to caregiving, is exciting and encouraging to the caregiver innovation community. Among the features it includes are:

- \$400 billion over a decade to address the fragmented care system for older adults.
- Approaches the care economy in a holistic way including both paid and unpaid caregivers.
- Addresses the importance of a national paid family leave for 12 weeks- the current Family and Medical Leave Act only mandates unpaid leave.
- Social Security credits for the time caregivers spend out of the workforce caring for loved ones.

- Proposes a \$5000 caregiver tax credit to reimburse families for expenses associated with unpaid caregiving for older adults including:
 - Household expenses
 - Paid help
 - Home modifications
 - Remote devices to monitor safety
 - Equipment - e.g. hearing aids
- Medicaid to cover care at home, not just in nursing homes as is current practice, and provide federal contributions to allow states to develop more community alternatives.

The importance of these policy initiatives cannot be overstated. Having federal leadership recognizing the current failures in our caregiving system, and that every family is affected by this, is significant. If caregivers received financial compensation in a variety of ways to care for loved ones, that will be the start of truly valuing the family caregiver. Similarly, the availability of and sufficient supply of a paid workforce of caregivers, with adequate training, will continue to be an important policy imperative. Melinda French Gates has eloquently advocated for the need for a Caregiving Czar^{xv}, and the importance of paid family leave.

The recent submission of the Credit for Caring Act of 2021^{xvi}, which would provide up to \$5000 federal tax credit for eligible working family caregivers, and these types policy initiatives, could help to alter the landscape of caregiving innovations, and translate into economic incentives that innovators could utilize. The role of business here is significant, to both support paid family leave and these policy innovations.

The question of who pays for senior and long-term health care is essential. Since Medicare does not pay for most long-term care costs, most middle-income older adults will not be able to afford all of their fees if and when they need assistance. In 2019, legislation in Washington State created a new payroll assessment to fund a first in the nation program to provide financial assistance for long-term care. The legislation, H.B. 1087, establishes a new 0.58% tax on employee wages beginning in January 2022 to fund long-term care assistance. This will help to offset the needed savings to prepare for longer lives. Those employees with long-term care insurance are exempt. The trust program will provide long-term care for a lifetime maximum of \$36,500 per person, and qualified family members acting as family caregivers are eligible to receive payments as well for their services, defining caregiving; open aging data; and developing longevity insurance.

Several states have embarked a state-wide initiative that comprehensively evaluates the needs of their aging population. California recently released their Master Plan for Aging's Five Bold Goals for 2030 with five significant goals:

"California has the nation's largest aging population, the largest population of those living with Alzheimer's and other dementias, and the largest population of those caregiving for these growing and disproportionately diverse communities," said Maria Shriver.

1. *Housing for All Ages and Stages:* We will live where we choose as we age in communities that are age-, disability-, and dementia-friendly and climate- and disaster-ready. Target: Millions of New Housing Options to Age Well.
2. *Health Reimagined:* We will have access to the services we need to live at home in our communities and to optimize our health and quality of life. Target: Close the Equity Gap in and Increase Life Expectancy.
3. *Inclusion and Equity, Not Isolation:* We will have lifelong opportunities for work, volunteering, engagement, and leadership and will be protected from isolation, discrimination, abuse, neglect, and exploitation. Target: Keep Increasing Life Satisfaction as We Age.
4. *Caregiving That Works:* We will be prepared for and supported through the rewards and challenges of caring for aging loved ones. Target: One Million High-Quality Caregiving Jobs.

Several Foundations, and advisory firms are spearheading policy innovation for caregivers. The SCAN Foundation, The John A Hartford Foundation, Family Caregiver Alliance, The Commonwealth Fund, and AARP are important advocates in the policy arena. The *Milken Institute Center for the Future of Aging*^{xvii} led by Paul Irving, serves as another important influencer in policy and developing needed solutions for caregiving, such as their Alliance to Improve Dementia Care.

Anne Tumlinson, founder of the Daughterhood and leader of the *ATI Advisory*^{xviii}, advocates for how to pay for care, and identifies policy solutions that will be critically important to each family. ATI has worked to outline how to advance non-medical supplemental benefits through Medicare Advantage.

The importance of policy to alter the landscape for caregiving has also been highlighted by the *National Caregiver Summit* held at Stanford University Clinical Excellence Research Center in May 2021^{xix} in partnership with Health Leads where representatives of the business community, caregiving industry, policy convened to identify additional ways to support caregivers.

There are many more such policy solutions that can have an impact on the challenges facing our health care and care systems in this country. We believe there would be value in creating a type of Caregiving Innovations Marketplace and hub that could serve as a center point in which to connect the different initiatives around policy innovation and crowdsource ideas for simple and efficient ways to improve the policies affecting the lives of caregivers and their recipients.

For example, a type of policy initiative that could make an impact on the quality of life for older adults, would be simple ways to address advance care directives. Less than 1/3 of the population has them, and virtually every adult age 18 and older should have one. In our group discussions, we have identified a few simple and elegant ways to approach this, to avoid pain and suffering, unnecessary care, and conflict. One approach would be to require that every Medicare enrollee have an advance directive completed and reviewed with each new enrollment period. Another simple approach would be to require all driver's licenses to include a chip with an advance directive.

An infusion of public funding will alter the landscape of caregiving innovations. We eagerly await more details of the Biden infrastructure plan, and how that will translate into economic incentives that innovators can utilize to design better solutions.

The Need for Caregiving Infrastructure:

Creating Caregiving Marketplaces, Hubs, and Collaboratives

We would all benefit from creating marketplaces for caregivers that includes curated and timely information; a solutions marketplace that includes payors; a hub for caregiving innovation and investors; a hub for creating collaborations with clinical and strategic partners to enable evaluation and impact metrics; and for crowdsourcing ideas.

We recommend next steps will include examining the landscape, feasibility, and specifications of a marketplace (or marketplaces) to help both families and innovators, as well as supporting necessary policy and educational campaigns to continue to raise the profile and importance of this topic among decision makers and families. These include:

1. **Caregiving Information and Solutions Marketplace:** An investigation in to how best to provide personalized access to the many different excellent resources and curated sources of information based on a family's needs, diagnosis, and stage of care. A key requirement is that this would be made available free to any caregiver, care recipient or family member.
2. **Caregiving Innovations Marketplace:** Developing the parameters of a Marketplace to include payors such as employers, providers, and startups and scaleups, where companies and organizations who have products, services and solutions are listed. Features of this marketplace should also include access to clinical trials, evaluation, impact metrics, strategic partnerships, collaborations and an investor platform (e.g., enabling crowdsourcing of ideas for innovation gaps and solutions).
3. **Policy and Educational Initiatives:** The recent media coverage of the crisis caregiving offers an opportunity to increase awareness in public forums and to support policy initiatives. A national education campaign on the value of caregivers and caregiving, would enhance support for the implementation of local, state, and federal policy initiatives. Educational initiatives around

Designing a Caregiving Information and Solutions Marketplace:

Caregivers and their families would benefit from a centralized resource center in which to find information about the caregiving requirements for a particular disease, serious illness, or situation a care recipient faces. As described in Section II, while there is an abundance of information, it is not centralized nor curated, and not easily known or accessible to the majority of families and caregivers. It is also not available in multiple languages, impacting the immigrant communities in this country.

The advent of machine learning and AI should enable creating a data set of resources that is able to be continually updated and have features for search that will provide curated information sources. This exists in medicine through platforms such as UpToDate, a tool to receive the latest medical research and clinical practice guidelines for different symptoms, conditions, diseases, and illnesses.

There is also a need for a more efficient marketplace in which to sell the range of products and services for caregivers and their recipients. Word of mouth is too often the way people have found out about products and services to help the care recipient, or a piece of paper upon discharge with a nurses or social workers recommendations. Netflix solved this for movies, Wayfair for furniture. We need to solve this for caregiving and healthy aging. New types of platforms will help to coordinate and integrate these solutions for the varied types of caregiving products and services that should be based on different needs and categories of care.

In our review we found a few important models for information platforms that could also serve as a type of marketplace exchange.

- New York State launched an excellent information platform in concert with the [New York Academy of Medicine^{xx}](#). Created to inform older adults in the New York City area of where they could find resources near where they live, this interactive map is a prototype of what could be helpful. In smaller countries, such as Denmark and Singapore, these types of platforms are available nationwide.
- An excellent report of resources is issued each year by New York State Senator, Liz Krueger since 2011. [The Senior Resource Guide^{xxi}](#), a 90-page report, is a comprehensive guide to resources for older adults in New York State. She sends it to every one of her constituents, and it is available online as well. What if that type of information was widely available in every state and able to be accessed online with ease?
- The Family Caregiver Alliance has created this type of platform for family caregivers through their Services by State tool, to help locate public, non-profit and private programs^{xxii}. Existing platforms such as CareNav could be integrated to these types of Caregiving Hubs.
- Cake, Seniorly, Free Will, are all innovative companies that include platforms that serve as important models to include in this Caregiver Information and Solutions marketplace.
- The advent of the Alexa Caregiving Hub sponsored by Amazon, is also a prototype of a voice activated platform for individual home use.

Not only are the caregivers and recipients disadvantaged by trying to identify products and services to meet their needs, but they also don't always know their needs. What if a platform would also enable you to input the stage of caregiving needs for a particular person such as discharge diagnosis, limitations on mobility, medication needs, housing challenges, all the subdomains we can describe, and it would then identify which products and services would meet your needs?

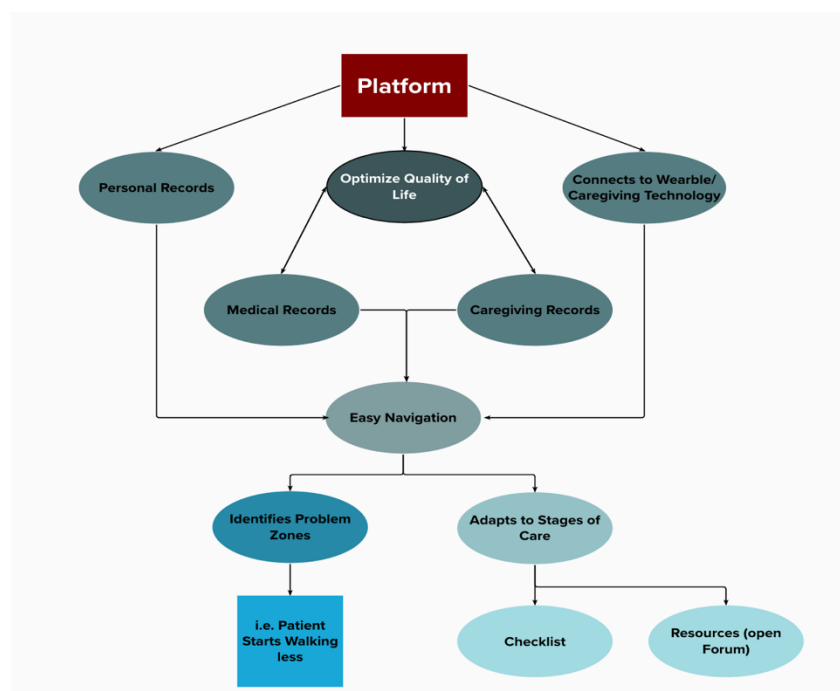
Companies struggle with identifying their customers – the caregiver, the influencer/ family member, the care recipient, the Medicare Advantage plan, the Human Resource officer – What if a two-sided marketplace was available which could enable access to those who may be searching for your product or service? We currently envision this would be free to all consumers, caregivers, and care recipients to enhance their care and provide a solution to the fragmented care system.

There are many resources that need to be centralized and curated for easy access at different stages of caregiving. For example:

- o National Platforms/ Registries
- o Private and Public Companies
- o Medical Diagnostic Platforms
- o Disease Specific Platforms

The following flowchart illustrate the types of information that could be analyzed and provided for use by caregivers, who would benefit from a central source for information related to caregiving needs, resources and solutions.

Sample: Curated Information for a Caregiver



Questions and topics that would need to be addressed in the design include:

- a. Identifying the types of information about a care recipient that would be needed and how to protect confidentiality and conform with HIPAA requirements.
- b. Identification of the myriad of existing platforms and sources of information available and how to integrate into a marketplace and platform.
- c. Curation capabilities for the information resources that are accurately matched to the care needs of the older adult.

- d. Developing the criteria for eligibility and willingness of a company, organization, resource to be listed as a solution in this marketplace.
- e. What can we learn from search and SEO experts how to establish this, and enhance the search functions based on caregiving needs, discharge diagnoses, stage of life, etc. to optimize the caregiver needs vs the care recipient needs?
- f. What type of organization should host the marketplace, and who will curate and evaluate the information included?
- g. What type of sustainable business model will fund the marketplace? We will look to how other marketplaces are constructed for ideas and believe an advisory board from the different stakeholders we identified earlier would be an important component in developing this design and blueprint.

Designing a Caregiving Innovations Marketplace

Another pain point identified by companies thus far, is their need to find clinical partners to test their products/services. Innovators will also need access to clinical partnerships and opportunities to evaluate their products for impact metrics and product market fit. It could be worthwhile to have a database established of those hospitals, health plans, community organizations that would be interested to serve as avenues for such research and evaluation. A caregiving innovations marketplace could provide access for startups for that as well.

There are also a number of community groups of older adults, who are interested in helping to evaluate new products and services that they may benefit from, but few entrepreneurs are aware of them. *The Longevity Explorers*, *Avenidas Lab*, and the *MIT Agelab: Lifestyle Leaders* are specific communities of older adults willing to “try” and provide feedback on new products/ services. *Brookdale Senior Living* has an entrepreneur in residence program. Community based organizations, such as Y’s and other local networks through the Village Movement, can serve as focus groups for user feedback and iteration.

Another component of a Caregiving Innovations Marketplace would be the capability to crowdsource of ideas for innovation gaps and solutions. Creating a way to both crowdsource ideas for new product and service concepts, and a hub which facilitates collaboration, would accelerate the development of novel solutions. This could involve engaging caregivers themselves as part of the solutions development teams and helping to establish product market fit.

Policy, Education and Collaboration

We also identified a series of educational priorities that would accelerate caregiving solutions and innovations. These include educating innovators about the challenges in the marketplace, educating investors about the opportunity and the challenges, and educating the public about the value of the family caregiver.

It may be worthwhile to institute a series of Roundtable events for leaders from each of these groups and launch educational initiatives to accelerate informing these stakeholders. For example, The Aging 2.0 Collective has recommended several such Opportunity Areas included in the [Appendix A](#): Section IV for consideration, e.g.,

Next Steps: Implementing Solutions and Recommendations

Among our next steps will be identifying those stakeholders who will want to design approaches to creating a caregiving ecosystem for older adults that would include new marketplaces, platforms, and collaboratives that integrate existing resources, solutions, companies and organizations. We also will continue to evaluate the landscape of new solutions that could assist all stakeholders committed to supporting caregivers and their families, that would enable them to live with dignity

We are encouraged by the momentum of recent initiatives by Pivotal Ventures, Times Up! and The Holding Company's Investors Guide to the Care Economy report issued in 2021^{xxiii}, and the growing care innovator community. These help to highlight the enormous need and opportunity for innovations in caregiving.

We look forward to developing solutions as the next phase of the Stanford DCI- dcix Landscape of Caregiving Innovations initiative.

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