

Daily Essential Activities



Health and Safety Awareness

Care Coordination

Transition Support

Social Well-being

Caregiver Quality of Life

JUNE 2017

CAREGIVING INNOVATION FRONTIERS

*Advancing technologies and improving solutions
for America's family caregivers, informal helpers,
and care recipients*

ARE YOU READY FOR THE NEXT CHAPTER IN CAREGIVING INNOVATION?

The number of people in need of care in the United States is expected to reach 117 million by 2020, according to AARP. Also growing are the responsibilities of their caregivers: managing daily tasks for a population that's living longer, monitoring health amid a boom of chronic conditions, planning for transitions while long-term care insurance rates continue to skyrocket, and helping care recipients stay connected to family, friends, neighbors, and health care professionals.

It all adds up. Research by AARP and Parks Associates forecasts that consumers will spend an average of \$509 per care recipient per year on caregiving solutions by 2021—a 69 percent increase from the \$302 spent in 2016. But these figures represent just one piece of the puzzle. According to a 2016 report by AARP, family caregivers are spending roughly \$7,000 per year (\$6,954) in all out-of-pocket costs related to caregiving: household expenses, medical expenses, and more.

Both startups and corporations have been recognizing the need and market opportunities. But many initial solutions have not fully realized their promises, hampered by market fragmentation, underdeveloped products, and low adoption and use.

If the earlier part of this decade was about recognizing today's market of caregivers with solutions for easing and improving their lives, its latter years will be about making these solutions even better and increasing adoption.

“I drove there every day after work to do her groceries, pay bills, maintain her home and monitor her eating and healthcare and medicines. Spent weekends looking for a condo near my home to move her.”

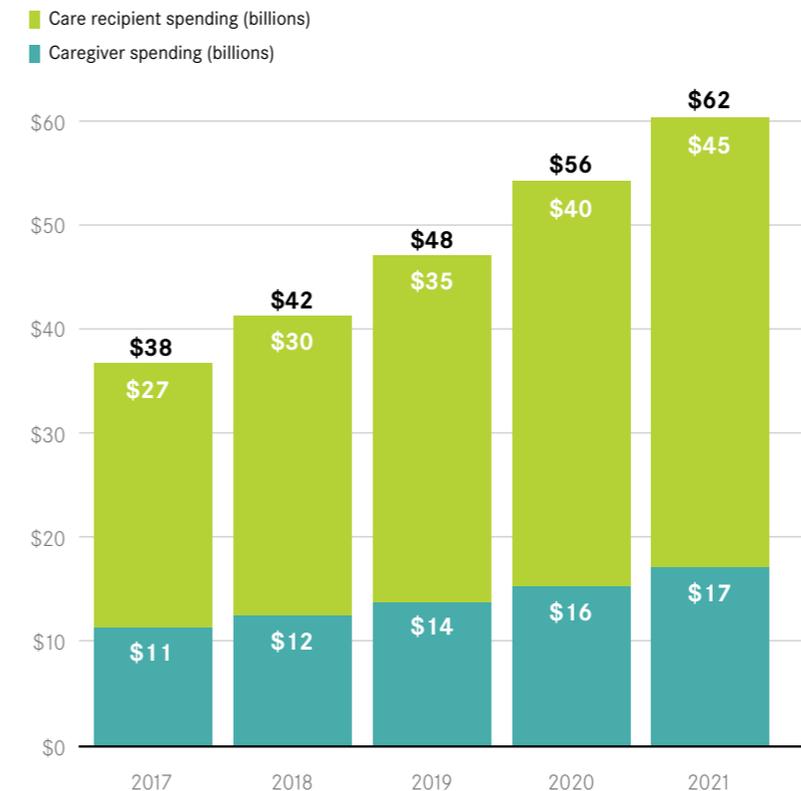
CLICK, SWIPE, OR SPEAK FOR SOLUTIONS

Like the marketplace in general, caregiving is going digital, with tech products and services driving growth. In fact, over half (53 percent) of projected market revenues are expected to be from digital solutions in 2017-2021, up from just 28 percent* in 2016. Just as consumers are increasingly able to manage life's many details from

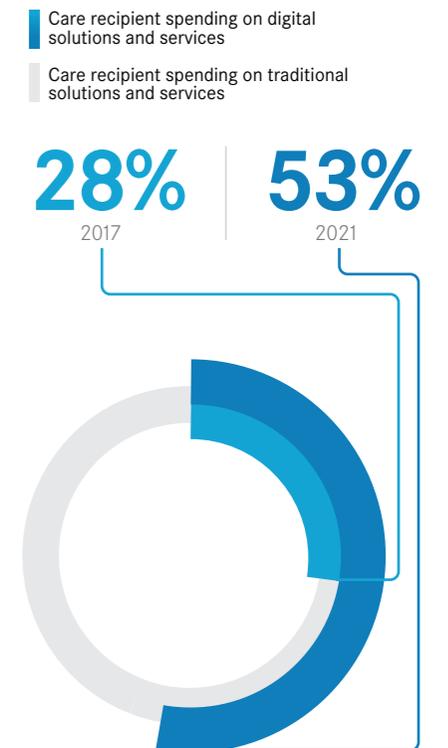
a smartphone or tablet, so too will caregivers. Today more than ever, the saying holds true: “There's an app for that.”

Innovators are building a lot of intelligence into existing caregiving products. Think voice-activated home assistants, virtual nurse avatars for routine checkups, and even sophisticated robotic home companions.

TOTAL CONSUMER SPENDING ON CAREGIVING SOLUTIONS AND SERVICES, 2017-2021



TRADITIONAL VS. DIGITAL



*All statistics are from Parks Associates research unless otherwise noted.

AMPLE ROOM TO GROW

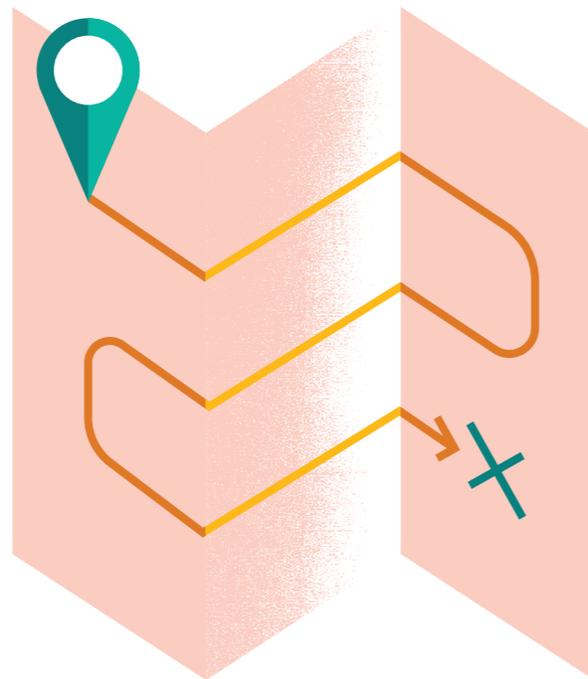
Concurrently, there's been an intensified focus on user experience—because even the most cutting-edge technologies are of limited value if users find them frustrating or inconvenient. Artificial intelligence (AI) and machine learning are making existing products more engaging and intuitive. But significant unmet needs remain in many market opportunity areas, such as social innovation, respite care, and caregiver training.

Meanwhile, innovators are starting to consolidate and integrate solutions old and new. Caregivers with already too many tasks to manage will be able to tap one interface for transportation services and home delivery, or social sharing and safety monitoring. Even if many aspects of healthcare remain fragmented, the solutions that help caregivers manage them don't have to be.

RELIEF FROM A CAREGIVER'S PERSPECTIVE

Addressing caregiver needs is a strategic focus of AARP. With the Caregiving Innovation Frontiers research, AARP and Parks Associates aim to:

- Guide entrepreneurs, investors, and businesses to clearly defined market segments
- Highlight the needs, wants, and challenges of unpaid caregivers, from the caregivers' perspective
- Call out examples of solutions already operating in these areas, including pitfalls, pain points, and lessons learned
- Identify gaps between existing solutions and solutions that are still needed
- Highlight opportunities for joining the caregiving marketplace, including unique technologies and solutions, disruptive business models, and areas with the potential for high growth



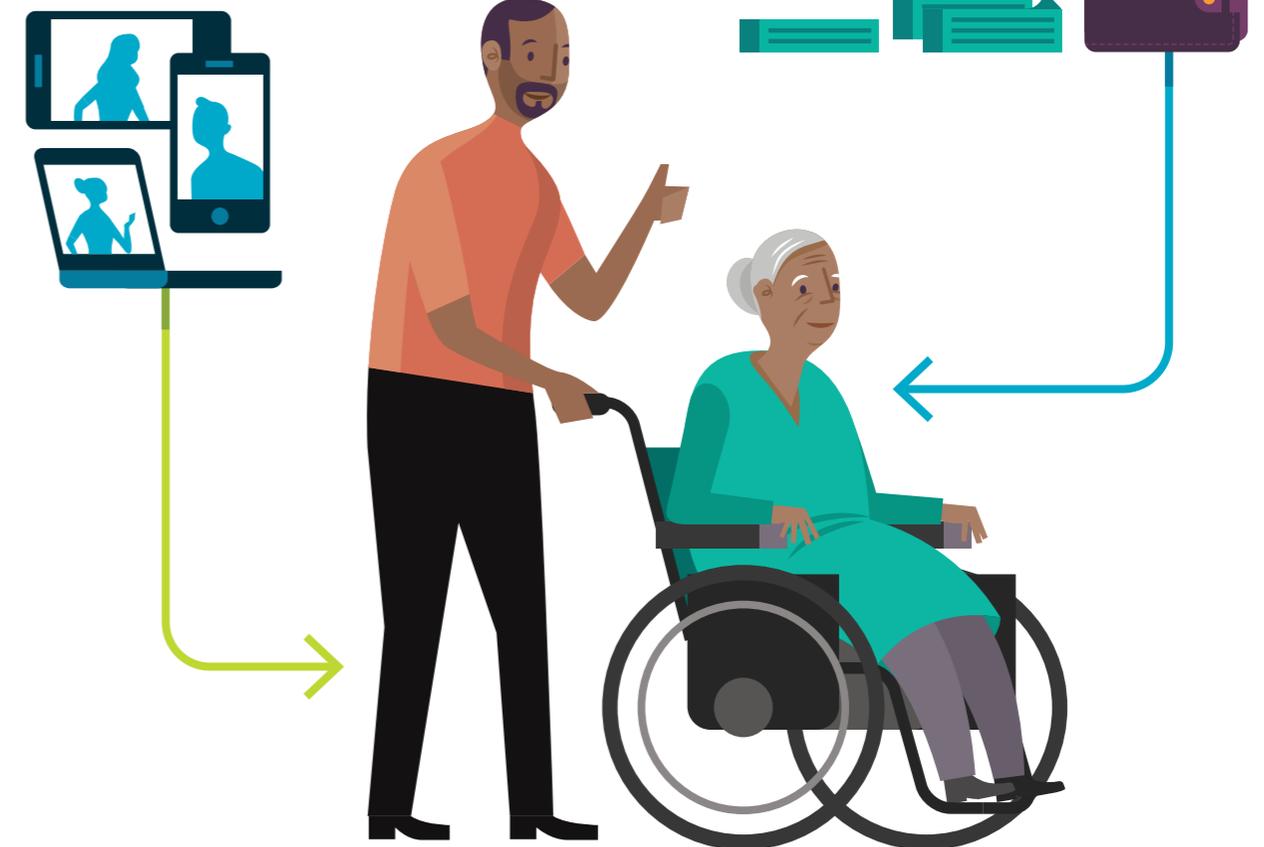
CALL FOR ACTION: BUSINESSES AND INNOVATORS NEED TO ADVANCE CAREGIVING SOLUTIONS TO THE NEXT LEVEL OF INNOVATION.

53%

OF CAREGIVING MARKET REVENUES ARE EXPECTED TO BE ENABLED BY DIGITAL SOLUTIONS IN 2021, UP FROM 28% IN 2016.*

AVERAGE YEARLY SPENDING ON CAREGIVING SOLUTIONS BY CONSUMERS (PER CARE RECIPIENT) EXPECTED FOR 2021, UP 69% FROM 2016.

\$509

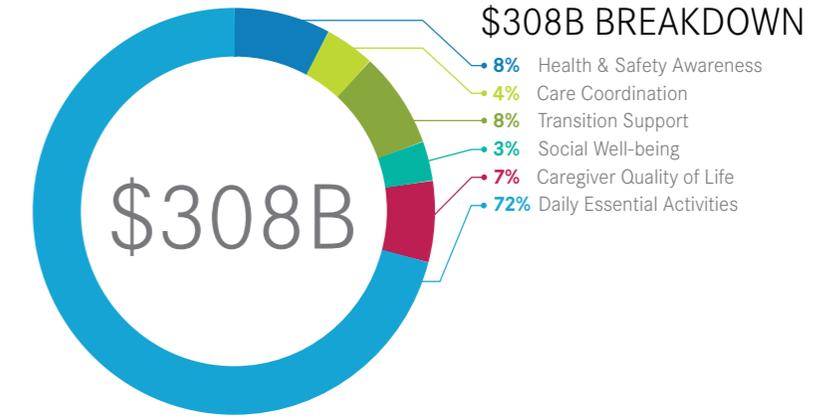


*All statistics are from Parks Associates research unless otherwise noted.

SIX AREAS OF OPPORTUNITY

To define the main market segments, AARP and Parks Associates started with AARP's own data—including survey data detailing consumer needs, interests, and behaviors—and an examination of services already in the marketplace. Assumptions were checked against existing industry research.

The following six market segments emerged:



DAILY ESSENTIAL ACTIVITIES [PAGE 12](#)

Meals, home and personal care, home repair, delivery, transportation services



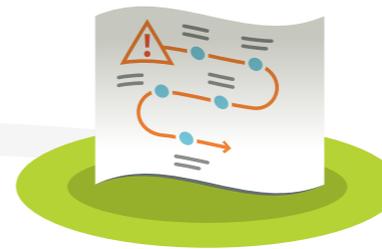
HEALTH AND SAFETY AWARENESS [PAGE 20](#)

Health vital alerts, diet and nutrition, medication management, personal safety monitoring, telehealth



CAREGIVER QUALITY OF LIFE [PAGE 52](#)

Respite and backup care, social support, health and wellness, financial/job security



CARE COORDINATION [PAGE 28](#)

Care planning, care professional engagement, records and benefits management, recovery support



SOCIAL WELL-BEING [PAGE 44](#)

Digital inclusion, life enrichment and empowerment, community networking, life companions



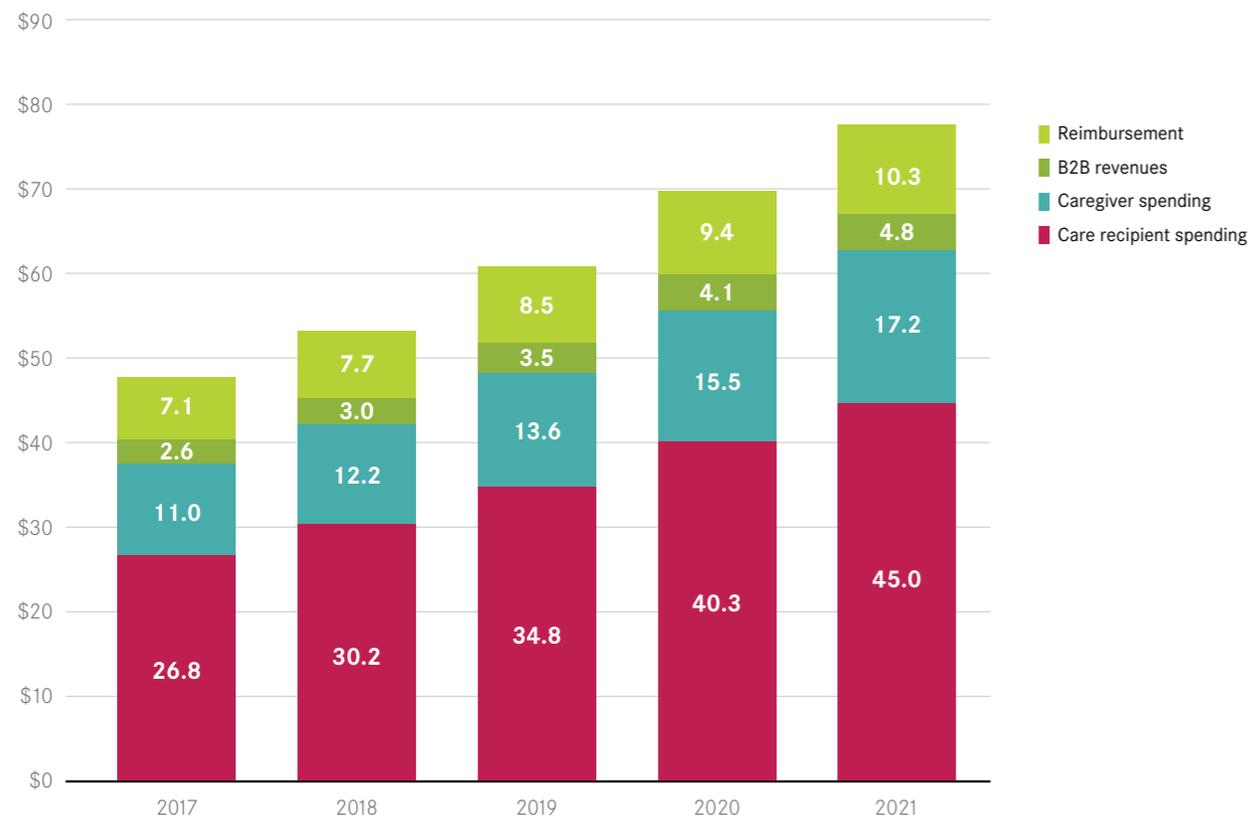
TRANSITION SUPPORT [PAGE 36](#)

Home retrofit services, long-term care insurance planning, long-term care provider referral, legal assistance, hospice/funeral planning

A MARKET WITH MANY “CUSTOMERS”

Total market revenues include out-of-pocket spending by caregivers and care recipients, reimbursements by payers (Medicare, Medicaid, private insurance, long-term care insurance), payment by social services, and payment by other third parties such as advertisers, care facilities, and employers.

CAREGIVING SUPPORT SOLUTION MARKET REVENUE BY SOURCES, 2017-2021



WHAT TO EXPECT IN 2017-2021

SERVICES CONSOLIDATE

When caregiving solutions move from siloed to integrated, everyone wins. Caregivers and care recipients enjoy a more streamlined, value-added experience, with one service taking the place of many. Meanwhile, businesses have customer-centric offerings that help grow their user base, relevance, and revenues.

Bloom is one example that addresses both social well-being and health and safety awareness. It connects family members through a platform for sharing memories and staying in touch and through a smart wristband for the care recipient that senses motion and delivers alerts in emergency situations.

Subscription service Patient PAL integrates planning support across the care continuum, offering services for short-term care coordination and long-term planning, like hospice care.

One step of this continuum, discharge from the hospital, is both complicated to

manage and critical for ongoing health. With Trustcircle, caregivers and care recipients get one platform to oversee the details, such as finding vendors for post-discharge health services and managing daily tasks.

USER EXPERIENCE EVOLVES

As consumers of all ages become more familiar with voice-activated assistants like Siri and Alexa, companies are recognizing the potential of voice technologies, AI, machine learning, and the internet of things in the caregiving marketplace.

Echo’s voice command, Alexa, now works with contractor marketplace Home Advisor to connect users to solutions for 3,000-plus tasks—no struggling with keyboards or print directories. The Jibo home robot also helps care recipients with physical limitations achieve more freedom in their households, assisting with everything

from finding recipes to communicating with family and visitors.

In the area of telehealth, “virtual nurses” like the ones offered by Sensely are reminding patients to take medications, measure vitals, and make appointments. It’s become a natural way to interact with a healthcare provider.

SPENDING SHIFTS

These innovations in products and technologies are impacting the purchasing landscape, shifting caregiving spending from “traditional” services to digital solutions that deliver efficiency and convenience.

Online solutions are supplanting traditional, siloed services for in-home care. Now caregivers have a convenient marketplace for finding qualified caregivers and agencies, and businesses have a one-stop tool for tracking and managing workers, processing payments, and communicating with families. In the world of

safety monitoring, traditional landline alert services are being replaced or enhanced by apps and sensors for data collection, cloud storage, and data analytics.

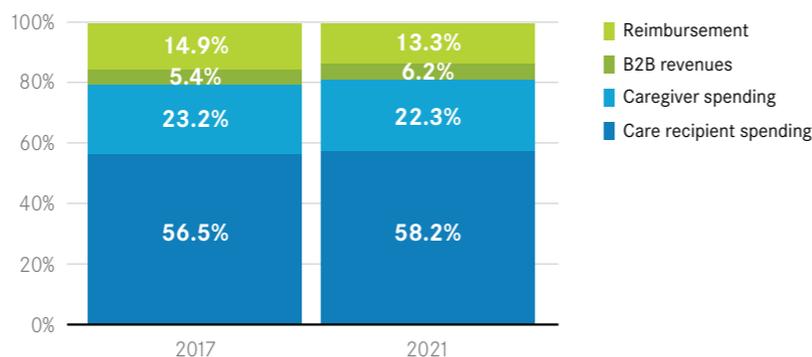
A new spending model is also emerging in the caregiving marketplace: the business to business to consumer (B2B2C) model.

Here companies sell solutions to care organizations and employers for use by their customers, patients, and employees. Examples include digital platforms for managing health and benefits records (CareLedger, SimplyInsured, and Benefitter) and care coordination services like Cariloop that use video, virtual

advisors, task reminders, and guided next steps.

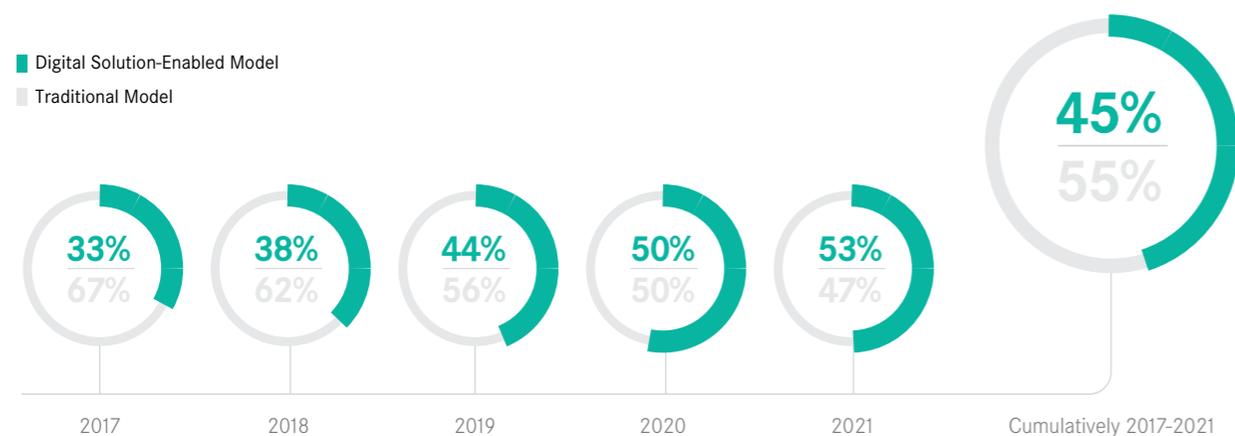
As incentives grow for keeping caregiving employees happy and productive and customers loyal, the B2B2C marketplace is expected to offer solid growth potential—a 17.1 percent compound annual growth rate (CAGR) from 2017-2021.

SHIFT IN SPENDING BY REVENUE SOURCES, 2017-2021



CAREGIVING SUPPORT SOLUTION REVENUE SPLIT BY DIGITAL SOLUTIONS VS. TRADITIONAL SOLUTIONS, 2017-2021

■ Digital Solution-Enabled Model
■ Traditional Model



HOW TO WIN

What paths will be most promising for organizations serving the caregiving market? Here are how the six market solution areas evaluated in 2015-2016 look for 2017-2021:

- **Daily essential activities** remains the largest market at \$220 billion, but with the second-to-lowest predicted rate of growth.
- **Health and safety awareness** falls in comparative market size, from second- to third-largest, but represents the second-highest potential for growth.
- **Care coordination** remains the second-to-smallest market, with business spending predominating.
- **Transition support** falls from second-largest to third-largest and shows the lowest growth potential.
- **Social well-being** remains the smallest market, but leads in growth potential with 30.9 percent CAGR forecast for 2017-2021.
- **Caregiver quality of life** remains fourth in market size and ranks fourth for growth potential as well.

Across solution areas, success in Caregiving Innovation Frontiers for 2017-2021 can be found in:

- Making existing products better through innovations such as voice-activated commands, AI, and machine learning.
- Improving user experience and boosting end-user adoption will be key, especially for the B2B2C marketplace.
- Tapping an underserved market segment. Social networks, caregiver training, and respite care are a few areas where businesses have room to grow.
- Finding cross-market opportunities, such as transportation and care management support from the same app, or social networking software and safety monitoring hardware in the same package.

Pay attention to who's paying. Increasingly, consumers will be picking up the tab for caregiving services, with a projected 12.8 percent CAGR for B2C opportunities in 2017-2021. However, as new distribution models like B2B2C emerge, entrenched

revenue models will remain steady. The social well-being market will continue to derive revenues from advertising, for example, and providers will continue to fund care coordination services. In fact, revenue from reimbursements is anticipated to have a 9.4 percent CAGR.

WHAT LIES AHEAD?

With a \$308 billion cumulative market opportunity between 2017 and 2021, up from AARP's January 2016 projections of \$279 billion for 2016-2020, caregiving continues to represent a vast, multifaceted frontier of opportunity. Whether integrating current solutions and making them better or addressing gaps in underserved areas, great needs persist for helping caregivers tame daily tasks, navigate the health system, and deliver a high quality of life for their loved ones while caring for themselves.

Technology entrepreneurs, and investors have recognized this need. Now it's time to refine and expand upon solutions that make life easier and more rewarding for the providers of unpaid care.

DAILY ESSENTIAL ACTIVITIES



“She is getting to the point now where she is having some kind of panic attacks and more dependent on me to help with dressing.”

Transportation, home delivery, household repairs, in-home care—demand for outside support is increasing, especially as many older Americans live longer and independently and the sheer number of caregivers and care recipients keeps rising.

The good news: Caregivers are becoming more comfortable asking for help, pressed to simplify their overburdened lives and increasingly adept in using technology to do so. Businesses and policymakers are paying attention. They're offering multi-tasking digital solutions, improving wages and benefits for home health workers, expanding insurance coverage for daily tasks, and more.

MARKET REVENUE FORECASTS 2017–2021

Total market revenue includes out-of-pocket spending from both care recipients and caregivers, as well as reimbursements from private and public insurers and business-to-business spending.

CAREGIVER OUT-OF-POCKET SPENDING

 **\$185B**

TOTAL CAREGIVER SUPPORT MARKET

 **\$220B**

KEY TAKEAWAYS

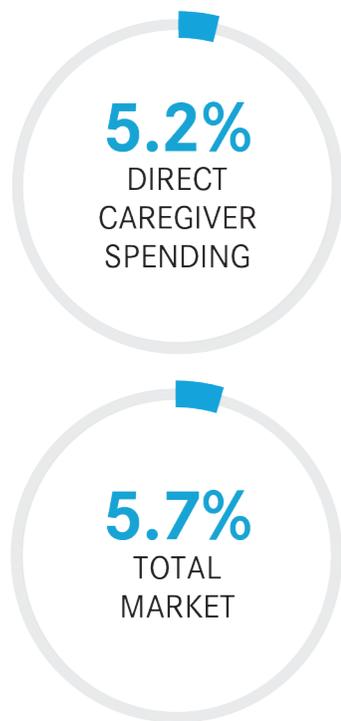
- Reflecting today's app-enabled, convenience-seeking marketplace, services are consolidating and moving online.
- Even with price inflation, consumer spending will drive growth.
- Support for daily essential tasks remains the largest of the six solution categories.
- Yet its CAGR of 11.6% puts it second-to-last in terms of growth.

SOLUTION
MEALS, HOME, AND PERSONAL CARE

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Home care aides, social workers, aide-to-hire apps (dressing, bathing, combing, feeding, and personal hygiene), digital recipes, home cooking instruction videos (meal preparation), home chore service providers, and home maid hiring apps (cleaning, vacuuming, laundry, and gardening)

EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

Fair Pay rules have improved wages and benefits for roughly one-third of all home health aides.



SOLUTION
HOME REPAIR

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Plumbing, appliance repair/installation, electrical, painting, and remodeling services

EXAMPLES IN THE MARKET



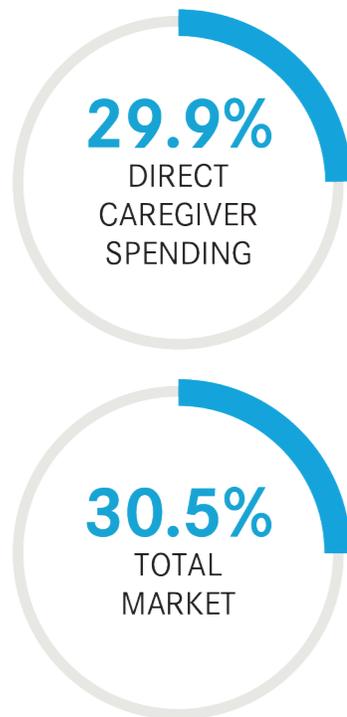
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SOLUTION
HOME DELIVERY

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Delivery services for essential home items such as groceries, home supplies, meals, and general merchandise

EXAMPLES IN THE MARKET



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DID YOU KNOW?

With UberEATS, Uber now connects a caregiver to takeout as well as transport for a loved one.

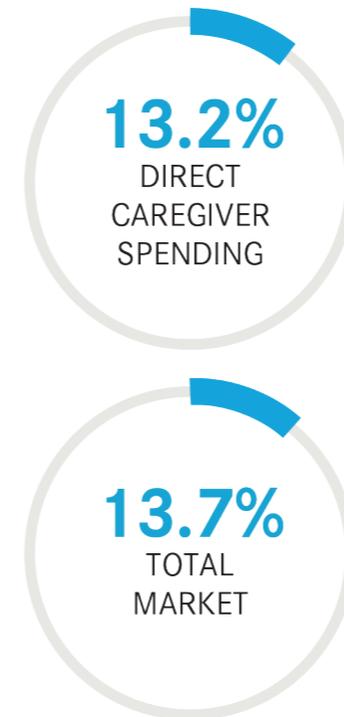


SOLUTION
TRANSPORTATION SERVICES

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

E-hailing and ride-sharing apps

EXAMPLES IN THE MARKET



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LABOR RULES SPUR A HOME CARE SHIFT



In 2016, home care workers began to see the benefits of the Fair Pay rules enabled by the Department of Labor in 2015. As these minimum wage and overtime pay protections took hold, five states—Massachusetts, California, New York, Washington, and Oregon—representing about one-third of all home health aides phased in pay raises toward minimum wages of \$10-\$15 per hour.

As more home care workers choose to work as independents, full-service agencies are gaining

competitive ground, with Fair Pay and other changes strengthening their ability to attract, retain, and incentivize workers. Meanwhile, the platforms connecting caregivers to independent contractors may feel the impact, as working as a home care agency employee becomes more appealing for many care professionals.

Online caregiving marketplaces are also feeling pressure to change their employee strategies. Many are now making their caregiving professionals full employees.

CAREGIVERS GET COMFORTABLE WITH DIGITAL DELEGATION

Install an Echo device for daily tasks? Use Lyft partner SPLT to coordinate Mom's ride to the doctor?

Despite ongoing price inflation, caregivers are responding "yes" to these questions, lured by the

convenience of digital services (through HomeAdvisor, Echo alone can help administer 3,000-plus tasks), an improved user experience (enabled by voice-based UI design and AI engines), and the desire and

growing need to reduce their workloads.

If insurers expand coverage to personal care, meal preparation, and delivery services, the incentive to delegate uncompensated care tasks may build even more.

ONE-STOP SOLUTIONS BRIDGE SERVICE SILOS

In the beginning, San Diego-based service SPEDSTA focused on transportation and ride-sharing. Today, it has added customized software to its offerings for managing care options.

That's one example of how companies are crossing silos to offer busy caregivers a more intuitive, convenient experience for home services. Others include Amazon's

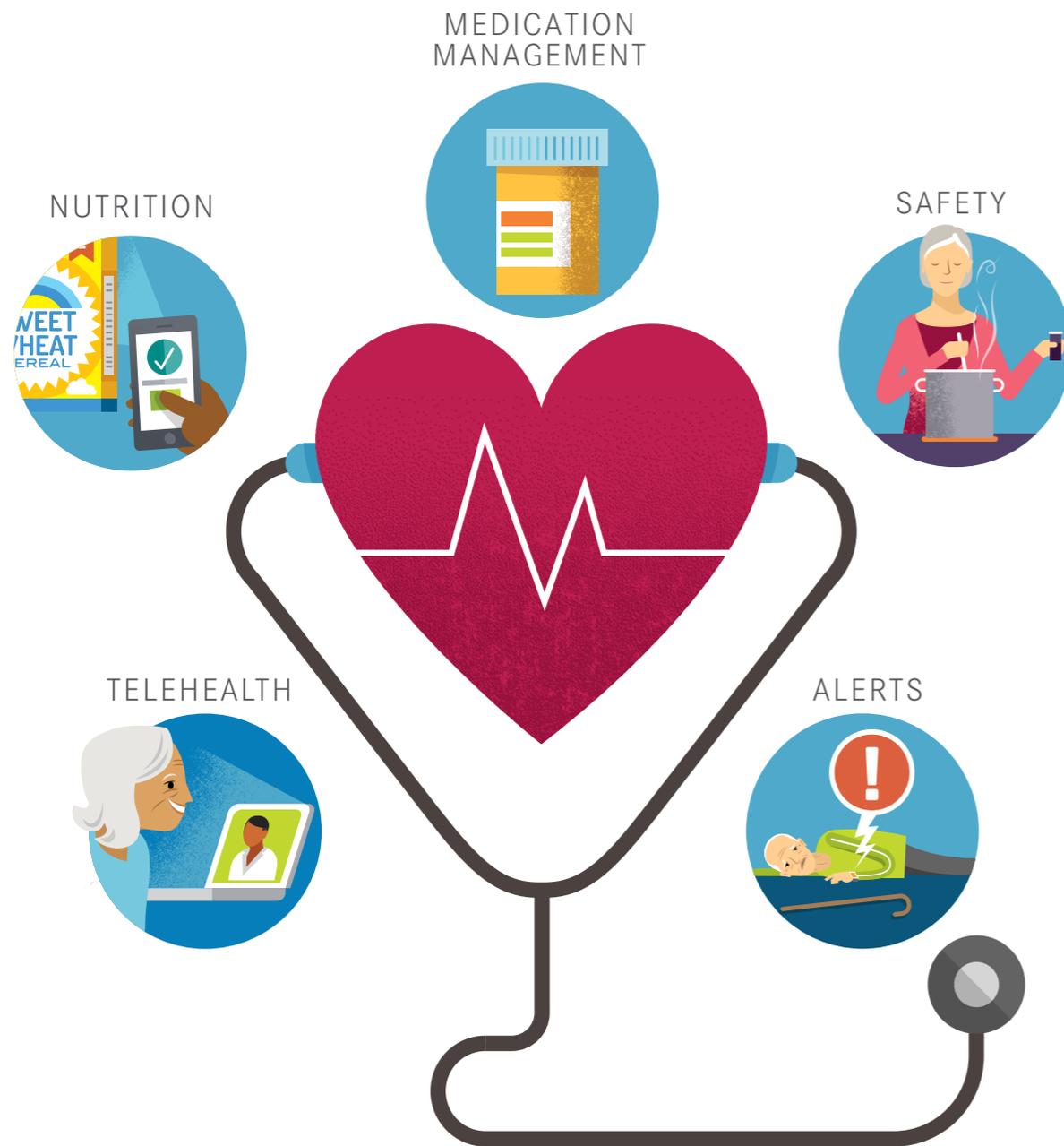
expansion into food delivery with AmazonFresh, GrubHub's acquisition of LAbite, and Uber's addition of UberEATS.



MARKET TRENDS

-  Cross-vertical integration offers caregivers a potential one-stop shopping experience with a trusted brand.
-  Caregivers are becoming more aware of intuitive voice command for ordering home services, and this experience will become even simpler as voice-based UI design and AI engines improve.
-  The new pay raise and labor protections that cover employees and not contractors incentivize home care professionals to work as employees. The independent contractor-based home care service model has become less appealing.

HEALTH & SAFETY AWARENESS



Chronic health conditions like COPD, diabetes, and dementia remain as concerning as ever for caregivers entrusted with maintaining the health, wellness, and safety of their loved ones. What’s changing is the health management approach. A preventative, home-based model is rising to the fore that makes monitoring—of medications, of meals, of health vitals—a priority.

The increased availability of, reimbursement for, and comfort with virtual technologies are expected to spur a boom in telehealth (although in 2018-2019, rather than 2015-2016 as previously predicted). Investors and entrepreneurs should also watch for solutions that integrate chronic condition management with home care as technologies become easier to use and the reimbursement environment becomes more accommodating.

MARKET REVENUE FORECASTS 2017-2021

Total market revenue includes out-of-pocket spending from both care recipients and caregivers, as well as reimbursements from private and public insurers and business-to-business spending.

CAREGIVER OUT-OF-POCKET SPENDING

 **\$22.4B**

TOTAL CAREGIVER SUPPORT MARKET

 **\$23.1B**

KEY TAKEAWAYS

- The third-largest solution category, health and safety awareness is exceeded only by daily essential activities and transition support.
- With a CAGR of 18.3%, this market ranks second for projected growth.
- As the medical industry shifts to preventative and home-based care, consumer spending will drive growth.
- Solutions are moving from traditional and siloed to digital and integrated.

“ Finally, she refused to eat at all. This was a challenge for me. I watched daily as she became so weak.”

SOLUTION
HEALTH VITAL ALERTS

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Connected home medical devices to report blood pressure, glucose, SpO2, temperature, weight

EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

Companies like Philips are adding predictive analytics to their classic alert services.

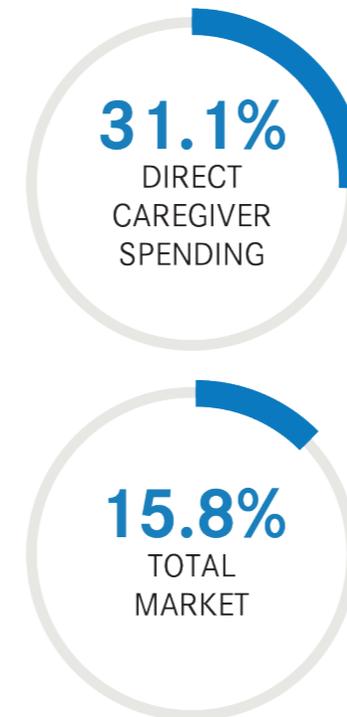


SOLUTION
DIET AND NUTRITION

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Apps or messaging tools to check ingredient information or alert to symptoms such as dizziness, headache, fatigue

EXAMPLES IN THE MARKET



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DID YOU KNOW?

Some diet and nutrition apps are custom-tailored for chronic conditions like diabetes.



SOLUTION
MEDICATION MANAGEMENT

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Reminder apps, monitored pill boxes, or pharmacy apps to manage medication timing and dosages, adherence, refill records

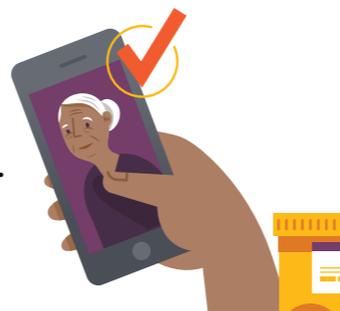
EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

With products like AiCure, patients snap a selfie to “prove” medication adherence.

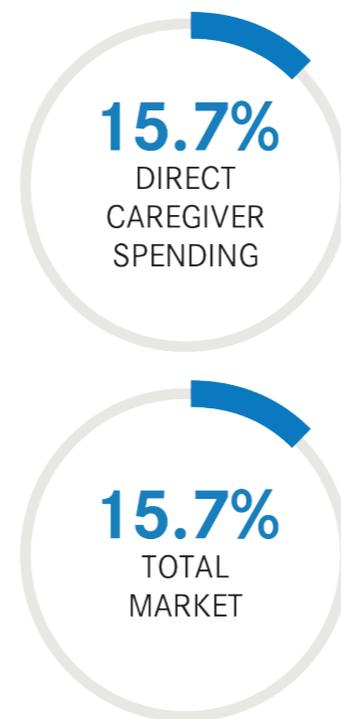


SOLUTION
PERSONAL SAFETY MONITORING

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

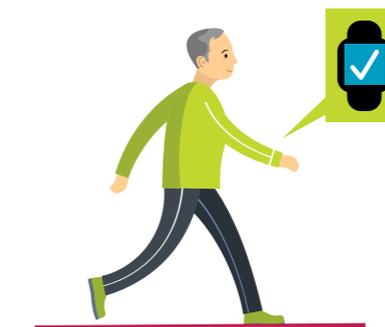
Devices for hazard prevention and emergency response

EXAMPLES IN THE MARKET



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DID YOU KNOW?



QMedic bracelets can route health alerts to preferred care teams.

SOLUTION
TELEHEALTH

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Online “house call” apps to connect patients and doctors for post-discharge follow-ups, video consultations

EXAMPLES IN THE MARKET



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DID YOU KNOW?

Slower-than-expected telehealth adoption is expected to ramp up in 2018-2019.



AI IMPROVES THE USER EXPERIENCE

In health monitoring and management, extensive device setup, cumbersome processes, and uncertain data verification have hindered the adoption of many new technologies. AI and machine learning are transforming this picture. The AiCure app, for example, lets patients report

(and care providers validate) medication adherence “selfie-style”—via a front-facing phone camera powered by AI software. In the short term, such user-friendly tools promise to reduce the caregiver burden by saving time and encouraging better health outcomes. In the long term,

the data collected by these devices may deliver even more valuable insights—especially as home and health solutions become more integrated. Philips is one company pursuing this path, integrating its Lifeline medical alert system with its CareSage predictive analytics.

MARKET TRENDS

- Because of AI and machine learning, consumer-friendly technologies are being used in personal health and safety solutions to drive better user engagement.
- Better patient (care recipient) engagement means better outcomes—reducing caregivers’ burden to check on loved ones frequently, lessening their stress level.
- Hospital and health system adoption of on-demand doctors visits will expand service availability and make care access more convenient for caregivers and care recipients.

TELEHEALTH GAINS TRACTION

Though telehealth adoption was slower than originally forecast in 2015-2016, recent data forecasts a boom in 2018-2019.

For the care providers who will be paying the bill for telehealth services, such solutions enable expanded

care in high-demand service areas such as ambulatory care, discharge follow-up, and chronic care management.

The sustainability of this expansion depends on caregivers and care recipients using the technology. Solution developers are using avatars and AI to

increase comfort levels. The Sensely app, for example, uses virtual nurse “Molly” to chat with patients, instruct vital sign measurements, and give appointment reminders—delivering a healthcare experience that feels natural and intuitive.

CARE COORDINATION



As a greater number of caregivers navigate the complex medical marketplace, they're finding more resources to help them coordinate care activities and benefits across providers and payers. Incentivized by Accountable Care Organization and value-based models of care, providers are intensifying their focus on the caregiving marketplace, and employers and insurers are following suit.

Meanwhile, solution developers are aiming to make the care coordination experience streamlined and intuitive for caregivers accustomed to apps, avatars, and mobile platforms. This involves working across the siloes of the medical system to develop solutions that serve multiple needs and phases of care coordination.

MARKET REVENUE FORECASTS 2017-2021

Total market revenue includes out-of-pocket spending from both care recipients and caregivers, as well as reimbursements from private and public insurers and business-to-business spending.

CAREGIVER OUT-OF-POCKET SPENDING

 **\$4.3B**

TOTAL CAREGIVER SUPPORT MARKET

 **\$11.9B**

KEY TAKEAWAYS

- Although this is the second smallest solution category, it ranks third for growth potential, with a CAGR of 15.5%.
- New offerings are trending toward multipurpose, familiar solutions.
- Businesses, particularly providers, will continue to lead spending.
- Yet demand exists for affordable, direct-to-consumer offerings.

“Daily calls while at work to her doctors, arranging rides to them—it still continues and gets more intense every month. I am working, planning my daughter’s wedding, taking courses for work, and caring for her.”

SOLUTION
CARE PLANNING

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Planning, creating, reminding, coordinating, updating care tasks

EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

Two-thirds of hospital CIOs consider care team coordination for treatment planning an investment priority.



SOLUTION
CARE PROFESSIONAL ENGAGEMENT

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Reviewing, scheduling, communicating with doctors and hospitals

EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

2-3%

Very few consumers with chronic conditions say they receive support from a care coordinator.

SOLUTION
RECORDS AND BENEFITS MANAGEMENT

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Verifying benefits, filing claims, paying medical bills, resolving disputes, storing and managing personal health records

EXAMPLES IN THE MARKET



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DID YOU KNOW?

Payers are adopting enterprise solutions for records and benefit management.



SOLUTION
RECOVERY SUPPORT

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Managing the care transition process, coordinating referrals and medications, securing medical equipment and supplies, hiring and managing home health nurses and therapists

EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

Discharge planning—managing the transition from hospital to home—is a key area of focus for care providers.



INTEGRATED, INTUITIVE SOLUTIONS KEEP THINGS SIMPLE

To streamline the complexities of care coordination, providers are developing solutions with familiar digital experiences. TrustCircle, for example, is a peer networking platform akin to Facebook and LinkedIn. Here caregivers can “find people like you” for sharing ideas and inspiration. Meanwhile, Carely, which helps members of caregiving families communicate and

coordinate activities, functions through a smartphone app.

As in other caregiving markets, companies are moving toward multipurpose solutions. Subscription-based care concierge service Cariloop, for instance, offers guidance on care planning, customized facility review and research, questions for doctors and lawyers, and collaboration via video and text.



VALUE-BASED CARE DRIVES PROVIDER ACTION

From 2016 MACRA guidelines to positive Medicare payment adjustments in 2017, incentives for value-based care are putting care coordination on providers’ radar.

To bring caregivers into the loop and help reduce their burden, providers have begun investigating digital care concierge services, patient advocacy tools, and community support offerings. This focus

on caregiver engagement represents a shift; many provider-offered solutions were originally designed to streamline clinical workflow, not enhance the caregiver experience.

DIRECT-TO-CONSUMER SERVICES REMAIN LIMITED



Yet care coordination services marketed directly to consumers remain limited, with the most common being price transparency tools and calendars for coordinating care tasks.

In an environment dominated by provider-sponsored offerings, caregiving families may

benefit from affordable services developed with their interests in mind. Such offerings are emerging. Tele-advocate subscription offering Patient PAL’s tele-advocate subscription service helps caregivers navigate care planning and coordination issues.

MARKET TRENDS

- 
 Growing adoption of value-based care payment models will incentivize more frequent care coordination efforts between providers and between providers and the families of care recipients.
- 
 By more frequently reaching out about care coordination, providers can improve patient care and reduce caregiver burdens.
- 
 Coordinated activities with a care recipient’s care team would reduce caregiver burdens.

TRANSITION SUPPORT



Major life transitions spur big decisions for caregivers and their loved ones, and businesses across sectors are offering support with varying degrees of success.

As long-term care insurance rates continue to rise and millions of care recipients prefer to live independently, home retrofit services remain popular. What's new in this solution area: consumer adoption of telehealth concierge services and digital tools for long-term care, life transition, and hospice/funeral planning.

Yet only a fraction of employers are offering transition support, despite recent growth, and the market overall currently lacks new catalysts.

MARKET REVENUE FORECASTS 2017–2021

Total market revenue includes out-of-pocket spending from both care recipients and caregivers, as well as reimbursements from private and public insurers and business-to-business spending.

CAREGIVER OUT-OF-POCKET SPENDING

 **\$17.2B**

TOTAL CAREGIVER SUPPORT MARKET

 **\$23.3B**

KEY TAKEAWAYS

- Although this is the second largest solution category, it has the lowest potential for growth, with a 9.3% CAGR.
- The use of digital tools is rising, especially in areas like hospice and funeral planning.
- Although employers are beginning to offer benefits in areas like eldercare referral services, consumer spending still predominates.
- New catalysts—like linking transition support to employee productivity—will be key to boosting growth.

“My mom was in rehab for a month, and during this period, I had to take over the family finances, which included my mom’s business. I now recognize the importance of sharing this information. It was challenging to figure out the status of everything.”

SOLUTION
HOME RETROFIT SERVICE

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Information, products, services that make independent living easier and safer

EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

Rising insurance rates in many states are driving a shift toward independent living and in-home care.



SOLUTION
LONG-TERM CARE INSURANCE PLANNING

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Resources, purchase guides, quote services

EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

As long-term care insurance rates rise, services are emerging to help caregivers research additional financial resources.





SOLUTION
LONG-TERM CARE PROVIDER REFERRAL

OPPORTUNITY 2017-2021



DIRECT CAREGIVER PORTION

None



TOTAL MARKET OPPORTUNITY

\$870M | \$1.3B
2017 | 2021

CAGR



THIS INCLUDES

Guides for comparing nursing homes, placement services

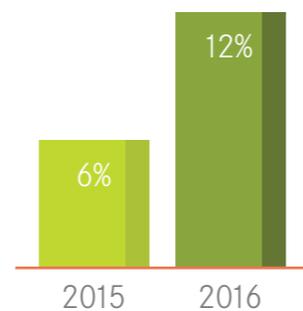
EXAMPLES IN THE MARKET



*Examples provided are selective representations of the ecosystem and do not imply endorsement.

DID YOU KNOW?

In 2016, 12% of employers offered eldercare referral services, up from 6% in 2015.



SOLUTION
LEGAL ASSISTANCE

OPPORTUNITY 2017-2021



DIRECT CAREGIVER PORTION

\$109M | \$200M
2017 | 2021



TOTAL MARKET OPPORTUNITY

\$109M | \$200M
2017 | 2021

CAGR



THIS INCLUDES

Power of attorney, advance directive, living will, estate planning documentation

EXAMPLES IN THE MARKET



*Examples provided are selective representations of the ecosystem and do not imply endorsement.

DID YOU KNOW?

Direct-to-consumer services will drive growth in the transition support market.





SOLUTION

HOSPICE/FUNERAL PLANNING

OPPORTUNITY 2017-2021



DIRECT CAREGIVER PORTION

\$74M | **\$108M**
2017 | 2021



TOTAL MARKET OPPORTUNITY

\$74M | **\$108M**
2017 | 2021

CAGR



THIS INCLUDES

Provider evaluation, funeral planning, will/trust management

EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

Solutions like Grace—a planning tool for hospice and funeral arrangements—put end-of-life expertise in one place online.



EMPLOYERS STEP UP FOR TRANSITION SUPPORT

More and more companies are recognizing the need to support their employees with transition planning. In 2015, 6 percent provided eldercare referral services; in 2016, that number doubled.

Employers are expanding their offerings: three percent

of companies in 2016 provided geriatric counseling services, 2 percent offer on-ramping programs on eldercare issues, and 1 percent provide assessments of assisted living facilities. Yet needs still exist, specifically for good decision support

tools for mapping caregiving scenarios and associated costs.

Transition support services vary by employer and industry sector, and linking these benefits to employee productivity gains will be key to increased adoption.

MEDICAID DRIVES SPENDING SHIFT

Among the 39 states that deliver long-term care benefits through managed care organizations, 23 provide some or all services and supports through

Medicaid arrangements. Not only does this give families (particularly those with lower incomes) an alternative to increasingly costly private long-term

care insurance, it's accelerating the spending shift from traditional nursing home facilities to home and community-based care models.

MARKET TRENDS

- Linking eldercare benefits to gains in employee productivity is key to gaining employer support.
- The market still lacks good decision support tools to help caregivers plan and map their eldercare needs based on scenarios and associated options/costs.
- Employers' progress in this area is good news for caregivers, but such offerings vary by employer and industry sector.

SOCIAL WELL-BEING



“ Soon it became evident Mary needed a program to occupy her days. Fortunately, we learned of an innovative program in our community that offered persons with early onset dementia a place to exercise, do arts and crafts, and socialize with others who were at a similar stage in the disease. Mary loved going.”

As digital literacy and comfort levels rise and technologies evolve in areas like AI and machine learning, caregivers have more options than ever for connecting with their loved ones and keeping them socially active.

The life companion area is one area of particular note, with the emergence of home robotics and digital pets strengthening market projections. Another trend to watch is integration toward a more streamlined user experience, as products combine functions for social well-being with those for health and safety, daily essential tasks, and care coordination.

MARKET REVENUE FORECASTS 2017-2021

Total market revenue includes out-of-pocket spending from both care recipients and caregivers, as well as reimbursements from private and public insurers and business-to-business spending.

CAREGIVER OUT-OF-POCKET SPENDING

 **\$3B**

TOTAL CAREGIVER SUPPORT MARKET

 **\$8B**

KEY TAKEAWAYS

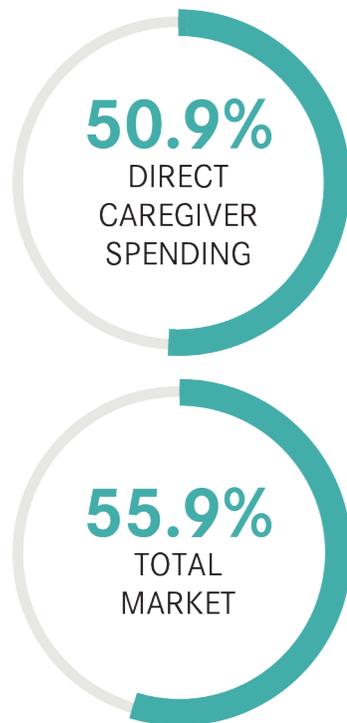
- Although social well-being is the smallest solution category, it leads in growth potential, with a CAGR of 30.9%.
- Business spending, like advertising for social networking platforms, continues to predominate.
- Brands are differentiating themselves through offerings more specifically targeted toward older users.
- Products are integrating hardware and software and with other opportunity areas, such as health and safety, daily activities, and care coordination.

SOLUTION
DIGITAL INCLUSION

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Photo/video sharing, messaging, video chat, virtual reading, games

EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

Equipped with an online platform for posting videos and photos and a smart wristband, Bloom helps family members share memories and watch out for a loved one's safety.

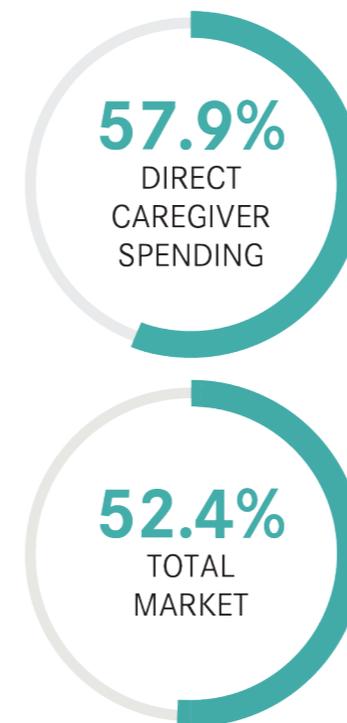


SOLUTION
LIFE ENRICHMENT AND EMPOWERMENT

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Mood-sensing apps, self-organization tools, personal enrichment apps

EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

According to the Administration on Aging, almost half of women age 75 and above live alone.





SOLUTION
COMMUNITY NETWORKING

OPPORTUNITY 2017-2021



DIRECT CAREGIVER PORTION

None



TOTAL MARKET OPPORTUNITY

\$590M | \$846M
2017 | 2021

CAGR



THIS INCLUDES

Social networks, digital meetup bulletins, neighborhood apps

EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

From sophisticated community service apps and family calendars to private neighborhood portals, networking options are getting more specialized.



SOLUTION
LIFE COMPANION

OPPORTUNITY 2017-2021



DIRECT CAREGIVER PORTION

\$142M | \$986M
2017 | 2021



TOTAL MARKET OPPORTUNITY

\$142M | \$986M
2017 | 2021

CAGR



THIS INCLUDES

Digital companion services, online support groups for care recipients

EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

Joy for All digital pets respond to petting, hugging, and motion like real animals.



SOCIAL CONNECTIVITY GETS SPECIALIZED

As caregivers and their loved ones go online to stay connected, they typically start with the most commonly used social networks and apps: Facebook, Instagram, WhatsApp. Now more targeted solutions are

emerging tailored to their specific needs.

GreyMatters, a free app with a premium subscription service, lets people with dementia and their caregivers create a personalized memory storybook, complete with

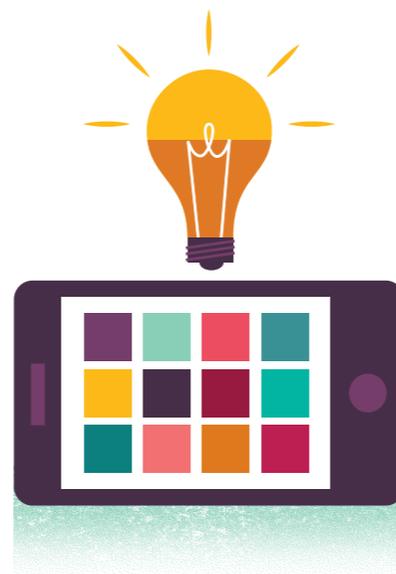
music and games. Bloom, another app that lets families record and share everyday moments, also features a smart wristband for activity tracking and emergency alerts—and caregiver peace of mind.

TABLETS GET CREATIVE

Even the most innovative technology solution won't be effective if it's too frustrating or complicated to set up and use, especially by busy caregivers and less tech-savvy care recipients. Solution providers are responding with integrated tablet-software packages. The grandPAD tablet comes pre-loaded with apps for photos, music, weather, games, and more. The Clarus

Companion is another example of a no-hassle tablet in which “everything just appears.”

And that definition of “everything” is expanding. The Breezie tablet interface lets care providers integrate their own content into the experience—social connection tools, appointment requests, medication reminders, and more.



HOME ROBOTICS ENTER THE PICTURE

A household robot that sets reminders, updates schedules, shares photos, and makes video calls. A digital cat that looks, feels, sounds, and responds like a live animal. This isn't science fiction, this is reality, thanks to innovators like Hasbro, ASUS, and MIT's Robotics group.

Driven by advances in and adoption of facial recognition software, voice recognition technology, AI, and machine learning, the concept of home companion robotics has gained market interest, with emerging products like the Jibo, Zenbo, Buddy and Nadine social robots, the

RoBoHon social robot phone by Sharp, and Hasbro's Joy for All Companion Pets.

For caregivers, they provide relief by aiding with simple tasks. For their loved ones, they provide companionship and help facilitate connections to friend, family, and the outside world.

MARKET TRENDS

-  • A richer app experience with more interactive features would increase seniors' usage and keep caregivers close to their loved ones.
-  • Initially targeted to home-bound care recipients, in-home robotic companions use interactive features and communications tools to strengthen family connections and provide some caregiver relief by performing simple tasks.
-  • Products on the market/to be launched still have room for improvement.

CAREGIVER QUALITY OF LIFE



“Each afternoon, Pop would take a trip to the supermarket just to take a little break from his 24-7 caregiving shift. Shopping was his respite, and bread, milk, butter, and eggs were his go-to ingredients whether he needed food or not!”

A caregiver’s job is neither easy nor short-lived. Caregivers have long known this, and increasingly, entrepreneurs, businesses, and policymakers are recognizing it, too, delivering support to help caregivers maintain their health, stay resilient, and improve their own quality of life.

Health plans and employers are boosting their investment in caregiving communities, work-life balance programs, and other caregiver services, as well as adding dependent care to pre-tax spending accounts. Meanwhile, self-care tools and respite care options are expanding in response to rising caregiver needs.

MARKET REVENUE FORECASTS 2017–2021

Total market revenue includes out-of-pocket spending from both care recipients and caregivers, as well as reimbursements from private and public insurers and business-to-business spending.

CAREGIVER OUT-OF-POCKET SPENDING

 **\$15.3B**

TOTAL CAREGIVER SUPPORT MARKET

 **\$20.9B**

KEY TAKEAWAYS

- This solution category ranks fourth of six for both size and growth potential, with a CAGR of 12.4%.
- Offerings are becoming more sophisticated in technology and scope.
- Training, classes, and gift registries reflect a broadening definition of caregiver needs.
- Despite increased awareness among employers, consumer spending will drive growth in this sector.



SOLUTION
RESPIRE AND BACKUP CARE

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Respite care such as home companion services, adult daycare services, proxy caregivers

EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

More and more employers are offering pre-tax spending accounts for services like adult daycare.



SOLUTION
SOCIAL SUPPORT

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Caregiver support groups, social networks, knowledge-sharing platforms

EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

Giftster works like a wedding or baby registry—only for caregivers.



SOLUTION
HEALTH AND WELLNESS

OPPORTUNITY 2017-2021



CAGR



THIS INCLUDES

Wellness programs, DIY tools

EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

meQuilibrium uses behavioral science to help users cope with caregiving challenges.



SOLUTION
FINANCIAL/JOB SECURITY

OPPORTUNITY 2017-2021



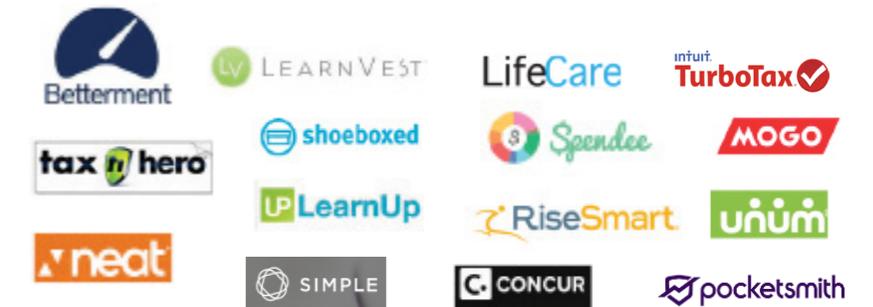
CAGR



THIS INCLUDES

Personal budgeting/financial planning, work-life balance programs

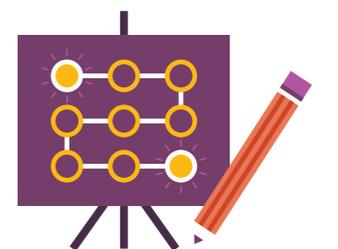
EXAMPLES IN THE MARKET



**Examples provided are selective representations of the ecosystem and do not imply endorsement.*

DID YOU KNOW?

Caregiver training classes have joined the roster of employee perks at an increasing number of companies.



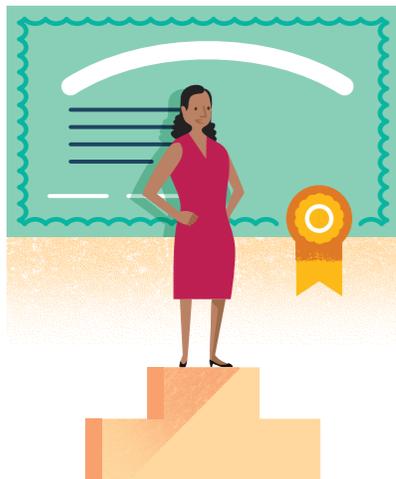
SUPPORT EXPANDS FOR RESPITE SERVICES

In 2015, caregivers faced limited options for respite and backup care. In 2016, the marketplace started to recognize their need for short-term relief—and the financial assistance to cover this relief. Employers began to expand family

care benefits, making adult daycare expenses eligible for pre-tax health savings accounts. Meanwhile, charities and local businesses launched “respite” programs with vouchers and gift certificates.



TRAINING AND RECOGNITION TOOLS GAIN TRACTION



Caregiving doesn’t come with a manual, and many caregivers would appreciate training on how to fulfill their role more effectively. Hospitals, employers, and businesses are responding with practical classes and tools. Seniorlink offers caregiver coaching services, and its Vela platform connects a caregiver with a loved one’s care team for learning,

training, and collaboration. Caregivers also want to feel appreciated—another area that’s growing among solution providers. One example, “freemium” app Giftster, operates like a wedding or baby registry. The difference: It’s a platform for family members to express appreciation for each other’s contributions through gift lists and purchases.

SELF-CARE GETS MORE SOPHISTICATED

How can caregivers best take care of themselves? Based on solutions in the marketplace in 2015, “eat better” and “work out more” were the secrets.

The following year brought a more multifaceted definition of well-being, with a growing emphasis on stress, sleep, happiness, and resilience. meQuilibrium, for instance,

uses behavioral science to help employees beat stress and cope with life challenges.

This shift found employers broadening the scope of their wellness programs, and wellness solution providers partnering with others on integrated programs to help caregivers tackle their responsibilities and achieve life balance.



MARKET TRENDS

- Caregivers would appreciate support that includes practical tools, training classes, and social/family recognition of their dedication and sacrifice.
- Market solution vendors and employee wellness programs are putting greater emphasis on overall well-being to help caregivers cope with their responsibilities and achieve work-life balance.
- The market still calls for a greater selection of respite care experiences.



AARP is a nonprofit, nonpartisan organization, with a membership of more than 37 million, that helps people turn their goals and dreams into real possibilities, strengthens communities, and fights for the issues that matter most to families such as healthcare, employment security, and retirement planning.

AARP's vision is to catalyze innovation and entrepreneurship in the marketplace around breakthrough products, experiences, and business models for health technologies benefiting the 50+.

At AARP we are collaborating with industry in the following areas:

- **MARKET AWARENESS:** Raising awareness of the market opportunity, needs, and wants of the 50+
- **MARKET DEVELOPMENT:** Influencing ecosystem development for consumer-centric health tech for the 50+
- **INNOVATION SHOWCASE:** Creating platforms for showcasing innovative technologies
- **MEMBER INVOLVEMENT:** Engaging AARP members in providing early feedback on emerging trends and innovation

