

Future Tech and Caregiving

An MIT AgeLab CareHive Research Note

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



CareHive

As the population ages, more Americans are expected to take on the role of caregivers; it is therefore anticipated that families will face greater demands and carry an increasing burden. At the same time, frontier technologies – such as artificial intelligence, sensors, and robotics – are increasingly entering people’s lives, and may be leveraged to support family caregivers. The domains of caregiving tasks that will be impacted by future technology will vary based on what sorts of tools will be widely available. The AgeLab surveyed a group of experts across caregiving-adjacent disciplines to glean a picture of how new technologies may impact family and professional caregivers by the year 2030.

Which Caregiving Domains Will Be Most Impacted by Future Technology?

Caregiving Task Domain	Most Impacted	Least Impacted
Communication and social interactions	63%	5%
Managing medication	61%	2%
Transportation	51%	2%
House management and arranging services	41%	2%
Shopping	37%	2%
Food preparation and nutrition management	24%	7%
Managing finances	12%	17%
Housework	7%	15%
Bathing and toileting	2%	73%
Transferring	0%	22%
Feeding	0%	63%
Dressing	0%	88%

Some technologies and products that the experts considered included:

-  Virtual assistants
-  Sensors
-  Smart home systems
-  Robots
-  Blockchain
-  Naturalistic user interfaces
-  Artificial intelligence
-  Cloud computing
-  Wearables

Experts expect that caregiving will be most impacted among tasks related to instrumental activities of daily living. Technologies that aid in social interaction are already widely available and should increase in distribution. Similarly, medication management technologies will have a significant impact as adoption increases. “Care recipients who can make good and reliable use of medication managers will sustain their health *and* give caregivers relief from this task,” one expert explained. Use of ride-hailing apps and the development of autonomous cars drove experts’ expectations of a high impact on transportation tasks.

On the other hand, the experts believed that “high-touch” activities such as feeding, dressing, and bathing are unlikely to be impacted. One expert noted, “The technology needed for helping in the physical space is not yet here and far off.” Others observed the prohibitive cost of any technology that could assist with highly physical tasks, as well as the personal and intimate nature of such tasks that makes them ill-suited for automation.

These results are derived from a panel of 41 experts from caregiving-related disciplines – engineering, data science, medicine, nursing, public policy, business, aging services and more – who participated in a modified Delphi study in 2019. The expert panel provided their opinions and insights about how various technologies and related systems may impact family and professional caregivers by the year 2030. The source for all data and graphics can be noted as (MIT AgeLab, 2020).



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