

President's Council of Advisors on Science and Technology

Aging and Technology: Keeping lives intact through connections and support



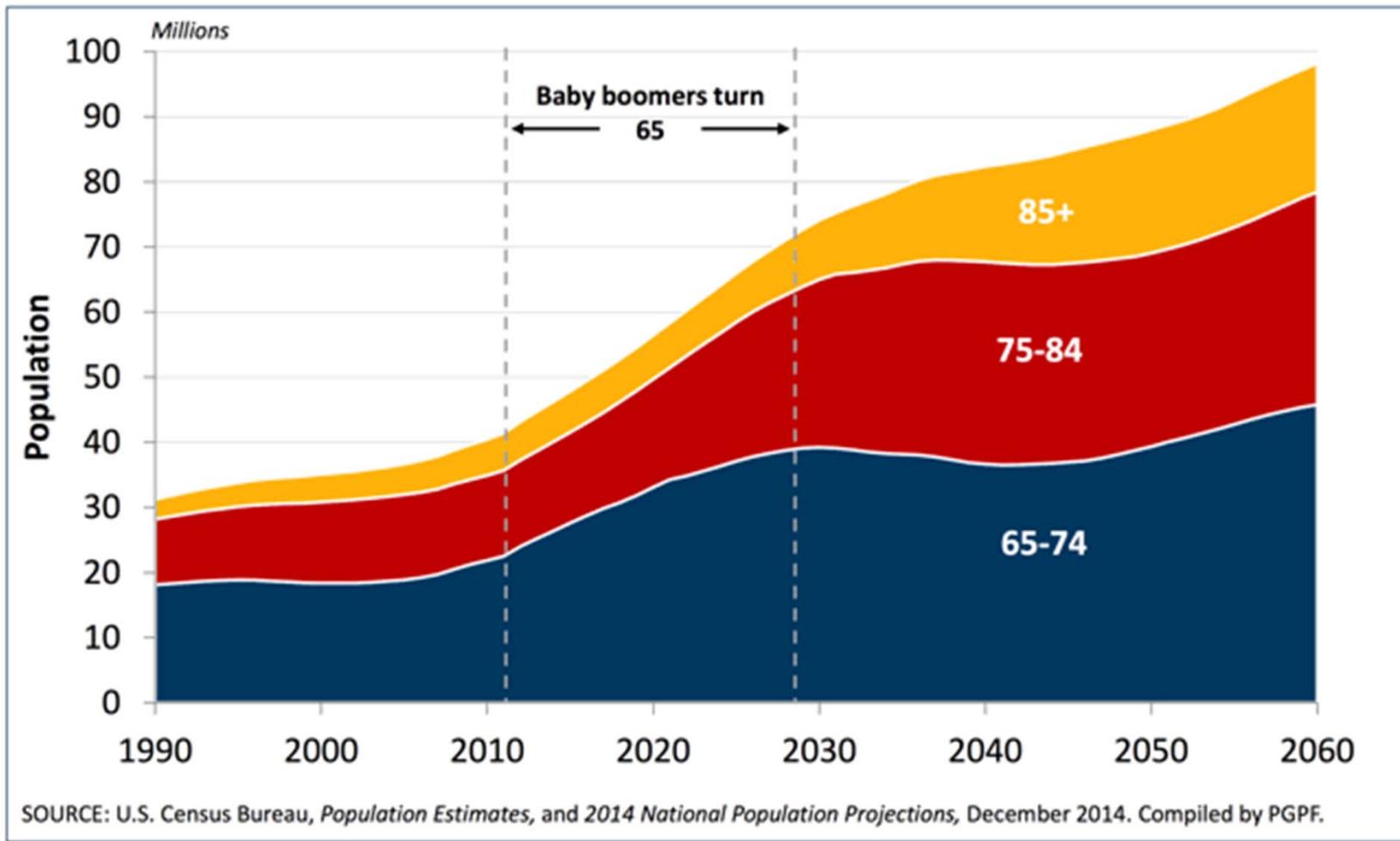
January 2016

PCAST Study on Aging and Technology

- **Overview and motivation**
- Cross-Cutting
- Social Connectivity and Health
- Cognitive Ability
- Physical Ability



Americans Living Longer



Motivation and Study Focus

- Age can bring complex health problems, functional declines, and risk for diseases.
- Study focus on helping older adults remain independent and have high quality of life.
 - Special consideration of disparities
- Report focused on technologies applicable in short term that have greatest potential impact.



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Cross-Cutting Issues

- Heterogeneity in population and policies needed
- Foundation of internet connectivity
- Monitoring
- Interface and interoperability standards
- Need for more research



PCAST Cross-Cutting Recommendations

Recommendation 1. Integrating Federal action

Optimizing Federal support for independent aging requires coordinated action in health, housing, transportation, communications, energy, education, environment and public safety.

1. OSTP should create a one-year Task Force of the National Science and Technology Council that will identify technologies vital to an aging population, focused on enhancing work between agencies.
2. HHS should support a standing private/public Council, with private sector leaders from industry, academia, and advocacy organizations to advise on sector wide ways to advance technology in the service of improving quality of life for older people.



PCAST Cross-Cutting Recommendations

Recommendation 2. Engagement and social connectivity

Access to internet communications is essential to health, social engagement and well being.

1. HHS (ACL) and Commerce (NTIA) should create a national plan to ensure all older people have access to broadband
2. FCC should ensure that older adults are included, as are school children, in all negotiated agreements for federal telecommunications approvals.
3. FCC and NTIA should create a plan, including a matching program with private support, to support training centers in accessible distance for all older people.



PCAST Cross-Cutting Recommendations

Recommendation 3. Monitoring technology for frail and vulnerable elders

Monitoring holds great promise for predicting problems and enhancing safety of people at risk, and the government could promote the needed frameworks and standards to encourage innovation and access to this service.

1. NIST, in collaboration with private sector, should develop guidelines for marketing and instructional materials to ensure that consumers understand the operational requirements, benefits and risks of various monitoring technologies.
2. NIST, in collaboration with private sector, should develop guidance to identify privacy and security risks in a way that doesn't pose undue barriers to innovation and adoption.



PCAST Cross-Cutting Recommendations

Recommendation 4. Research is needed to spur further innovation

NIH, AHRQ, NSF, VAH, DOD and DARPA should support interdisciplinary and translational research including robotics, advanced mobility technologies, communications technology with special emphasis on emergency situations, cognitive training, and home monitoring.



Facilitating Engagement through Technology

- Social participation and virtual communities
- Employment and volunteerism
- Information and resources
- Challenges in emergencies



PCAST Focused Recommendations

Recommendation 5. Education and training in online technologies

The Administration should support ongoing reauthorization of the Older Americans Act, and build on the provisions on Section 415 to ensure access to online services and protection from scams and fraud, tailored to the learning needs of older adults. Corporation for National & Community Services (CNCS) should expand Senior Corps to include older people with technology capabilities



PCAST Focused Recommendations

Recommendation 6. Emergency response and communications

Older people are especially vulnerable in disaster and emergency situations.

1. FEMA should advance national strategies to create effective communications systems that reach isolated and vulnerable older people.
2. ASPR, ONC, and CMS should promote more rapid interoperability of medical information to ensure timely access whenever and wherever a patient may appear.
3. FEMA, ASPR and CMS should advance policies that make medical device interfaces more consistent and interoperable to ensure timely access to people who depend on these devices.



Changes in Cognitive Ability

Both normal aging and neurodegenerative diseases more prevalent with aging create risks of vulnerability to fraud and financial mismanagement, endangering financial security.



PCAST Focused Recommendations

Recommendation 7. Financial services

The Federal Government should encourage the banking and financial services to offer monitoring services to protect assets from fraud and exploitation.

1. Signatories to the 2013 Interagency Guidance on Privacy Laws and Reporting Financial Abuse of Older Adults should accelerate expectations of banks to offer a range of available protective services.
2. The Executive Office of the President should convene state governors to ensure that reports of suspicious activity are reported to relevant adult protective services agencies.

Recommendation 8. Cognitive training

The FTC should continue to enforce regulatory review and guidelines for commercial cognitive training products.



Changes in Physical Ability

Multiple physical challenges can limit independence and quality of life. There is great promise in technological solutions, but some Federal policy barriers need to be addressed.



PCAST Focused Recommendations

Recommendation 9. Improve regulation and payment to reflect innovation in telehealth.

HHS should convene FSMB and the National Governors Association to accelerate reciprocal state licensure policies. CMS should use the full capacity of the innovation center to advance payment policies that support innovation in telehealth.

Recommendation 10. Home design to sustain independence

HHS should work with HUD to streamline and strengthen regulations and payment policies that govern home accessibility standards, in order to promote uniform standards allowing efficient use and changes in technological support systems. This is especially important for retirement communities.



PCAST Focused Recommendations

Recommendation 11. Improving product design for older adults needs

The Consumer Product Safety Commission (CPSC) should work with AARP and other relevant groups to accelerate better design guidelines for senior-friendly packaging, especially of technology and essential products like food and medical supplies.

Recommendation 12. Future role of assistive and robotic technologies

Advances have been made in wheelchairs and other mobility-necessary technologies, but Medicare payment policies inhibit access and market innovation.

1. CMS should examine current payment policies and implement changes that allow people to buy higher functioning products with some government support.
2. A multiagency and industry task force, led by VHA, DOD, DARPA and HHS should recommend a ten year roadmap for improving wheelchair functional capabilities .



Summary

- Aging population is an opportunity and a challenge.
- Report focuses on near-term actions with broad applicability.
- Targeted Federal action can spur development and adoption of effective technologies.

