Overview
The inaugural Global Aging & Technology Summit sponsored by the UNC Gillings School of Global Health, Cambridge University, MITAgeLab, and Carol Woods Retirement Community and held at Carol Woods, convened forty-six experts from around the world to:

- Share research and perspectives on how promising technologies can help older adults retain health, independence and social engagement throughout their lives while also compressing the period of frailty that many experience as they age.
- Address the opportunities and limitations to development and adoption of promising technologies.
- Energize development of a global aging and technology collaborative to identify potentially high impact packages of products and programs implementable on a global scale.

Through presentations and workgroup discussions, summit participants outlined focus areas for this new collaboration, generated ideas about how to structure the initiative, and identified areas of commitment moving forward. Topics covered included:

- **Global aging demographics** that point to the urgent need for cost-effective, transnational, and transdisciplinary strategies to help communities around the world thrive, even with the immense population shifts we are facing;
- Emerging **aging services technologies**, including why individuals, health systems, and communities have or have not harnessed their potential; and
- **Workforce implications** of an older global population, including implications for service delivery and academic preparation.

Next Steps
- Take action on three “big ideas” that emerged from the Summit by calling on relevant small groups to make specific proposals around developing:
  - Innovation hubs to test new technologies and adaptations of current technologies
  - Twenty-first century workforce training and education (including online courses/certificates)
  - Standards or “seals of approval” for selected technologies to help aging services professionals make wise investments in technology infrastructure and to help older adults and caregivers make informed decisions about appropriate solutions for healthy aging.
- Invite all participants to serve on steering committee and identify a subset of people to organize and drive specific follow-up activities.
- Publish a white paper on summit ideas, led by the organizers of the Summit.
- Develop goals and objectives for the collaborative, as well as an action and funding plan.

Summit Discussion Topics
Ideas discussed at the Summit supported the framing of a collaborative with future efforts focused on how to:

- Address complexities of global aging in the context of enormous social, ethnic, cultural and economic diversity within and between nations. This diversity manifests among older adults themselves and in the care services workforce, which is, in most countries, largely composed of immigrants and/or cultural and ethnic minorities.
• Capitalize on existing opportunities for innovation. Identify the role technologies can play in helping older adults maintain health, social connections, and independence. The majority of the 810 million individuals over age 65 (a number expected to triple by 2050) have a strong desire to age in a place that is best for their well-being, as well as manageable for society in terms of costs. Moreover, older adults are becoming more familiar with a variety of connected devices, including wearable ones.

• Facilitate social dialogue on: what aging-in-place means, whether it is a right, and what a society is prepared to invest to provide older adults with maximum choice; what an aging-friendly community looks like; the social and economic costs of such investments; and the value proposition and priorities for our decisions.

• Advance adoption of appropriate aging services technologies to extend individual health and function, improve population health, redress health inequalities, and reduce caregiver shortages. To do this, we must: integrate and adapt technology into complex adaptive systems and societies; engage payers and providers strategically; and use research to drive adoption change, policies and practices.

• Get technologies out of the laboratory and into living rooms (i.e., bring innovations to scale). To do this, we need to develop standards to evaluate products and services while also addressing ethical considerations in the application, use and distribution of aging services technologies. Moreover, these evaluations must be accessible to the public.

• Ensure that people are able to express their wishes in relation to reliable technology that works for them and can be used without stress and strain. That technology does what the person wants or needs. In this vein, we need to change our messaging, showing how our solutions engage, and are useful to, people of all ages by allowing them to achieve individual goals. Innovations that are contextually appropriate, engaging, and that foster social connections were seen as more likely to be widely adopted.

• Articulate appropriate educational training and develop a high quality workforce that is empowered and well-prepared to use technology to improve social connections, functionality and quality of life of aging people and their caregivers.

• Develop new types of jobs and career ladders that fully leverage new technologies to make working with older adults an attractive career choice.

• Recognize and leverage workforce and other economic opportunities that follow from solutions designed to help older adults and caregivers; those opportunities include affordable technologies, jobs, and postponement of higher-cost interventions.

• Support family caregivers in their ever-increasing and challenging role in caring for loved ones.

• Assure that older adults themselves are part of the adoption process and are involved at every stage.

• Mobilize the collective knowledge and ambition of a diverse group of experts, and identify the niche that this consortium can successfully occupy.

**Workgroup Discussions**

Promising technologies. Workgroup discussions of promising technologies helped define the critical need for:

• Technologies (products and services) that emphasize engagement and functionality, that enhance relationships and social connectedness, and are useful across the lifespan. The focus should be on what everybody wants and benefits from. Examples include Facebook and Wii, which were developed for a younger audience but have been taken up by older people. Aging isn’t attractive to large scale businesses, so a marketing effort aimed at only older adults is unlikely to penetrate very deeply (example: falls monitors only penetrate 1-2% of market). Focus on how people find technology, use it and can afford it.
• Knowledgeable, credible experts to help consumers understand technologies and how to make good selections and to help manufacturers understand how to adapt their products for older people and to market to all age groups.

• An interdisciplinary, multi-country, and pragmatic collaborative (our niche) focused on making an impact in global healthy aging through selection and scale-up of promising innovations. Specifically, this group could develop and set standards, leading to a “seal of approval” or “Kitemarks” for adopting and evaluating new technologies for goods and services. Those (packages of) technologies receiving the “seal” would foster engagement and would be consumer driven, financially and cognitively affordable, and relevant to multiple groups. This group could also create natural experiments for messaging and scale up of promising technologies, while also setting up global learning laboratories.

**Education and workforce training.** Workgroup discussions of education & workforce training identified the need to:

• **Integrate technology into training opportunities as well as informal and formal care settings,** focusing on technologies that empower and value direct care workers and help them do their jobs more effectively. A new category of worker may be on the horizon.

• **Develop an interdisciplinary curriculum that integrates high impact technologies.** Create opportunities to train the current workforce through “just in time” training, while preparing the future workforce at the community college, bachelor’s and graduate levels.

• **Include consumers and informal and family caregivers in technology training.** Build on people’s interest in their own health, education and self-management.

• **Explore development of online courses, certification programs, and continuing education** on technology matters at professional meetings. Include organizations, universities and businesses to sponsor, develop and market the work.

• **Design and disseminate modules that meet the needs of diverse population** (e.g., cultural and ethnic minorities, those living in rural areas), recognizing that caregivers themselves may be from a different cultural or ethnic background than those they are caring for.

• **Train the workforce to respond to those going through transitions in the aging process,** focusing particularly on injury (and even frailty) prevention training.

**Overarching Considerations**

Members of this collaborative recognize that, to be successful, we must:

• Have a clear vision and discipline, working towards achievable, affordable, and measurable goals.

• Operationalize the understanding that aging in place is not a one-size-fits-all concept. Different contextual meanings of aging in place should guide design and dissemination of inclusive and person-centered products and services.

• Build upon existing networks (e.g., social, health care, and community networks) and expertise (aging services, technology transfer, research, implementation, evaluation, business) to move the initiative forward.

• Carve out a niche that leverages our strengths. We have a strategic opportunity to develop an innovations hub to facilitate successful aging in place. This hub would have the capacity to create a clearinghouse to assess progress and build the research and evidence-base, mobilize collective ambition, leverage intellectual capital, establish a new venture creation laboratory, create a social innovation fund, and engage in succession planning.
Presenters

Majd Alwan, PhD, Senior Vice president of Technology and Executive Director, LeadingAge Center for Aging Services Technologies

Jane Barratt, PhD, Secretary General, International Federation of Ageing, Canada

Carol Brayne, MD, MSc, FFPH, FRCP, FRSA, Director, University of Cambridge Institute of Public Health; Professor of Public Health Medicine, Department of Public Health and Primary Care, Institute of Public Health

Joseph Coughlin, PhD, Director, Massachusetts Institute of Technology (MIT) AgeLab

Peggye Dilworth-Anderson, PhD, Professor of Health Policy and Management, Gillings School of Global Public Health, and Interim Co-Director of UNC’s Institute on Aging

Peter Gore, MEng, Professor of Practice (Ageing and Vitality), Newcastle University; Founder of ADL Smartcare, Newcastle Initiative on Changing Age

Jim Johnson, PhD, Distinguished Professor of Strategy and Entrepreneurship, UNC Kenan-Flagler School of Business; Director, Urban Investment Strategies Center, Frank Hawkins Kenan Institute of Private Enterprise

Mike Kafrissen, MD, MSPH, Chief Executive Officer, STE Health International LLC; Research Scientist, Massachusetts Institute of Technology (MIT) AgeLab

Leslie Lytle, PhD, Chair and Professor of Health Behavior, UNC Gillings School of Global Public Health

Tom Ricketts, PhD, Professor of Health Policy and Management, UNC Gillings School of Global Public Health

Barbara K. Rimer, DrPH, Dean and Alumni Distinguished Professor, UNC Gillings School of Global Public Health

Katie Sloan, MPA, Chief Operating Officer and Senior Vice President, LeadingAge; and Executive Director, International Association of Homes & Services for the Aging

Patricia Sprigg, MS, President and Chief Executive Officer, Carol Woods Retirement Community

Participant Organization

Participants represented a wide range of expertise from the public and private sectors, including the academic, provider, advocacy, government, payer, philanthropic and business fields. Many more potential partners will be included in subsequent meetings and discussions:

Aalborg University
Blue Cross Blue Shield North Carolina
British Consulate-General
Carol Woods Retirement Community
Consumer Electronics Association Foundation
Duke University
Grantmakers in Aging
Int’l Assoc. of Homes & Services for the Ageing
International Federation on Ageing
LeadingAge CTR. for Aging Services Technology
Massachusetts Institute of Technology AgeLab
Newcastle University
North Carolina Div. of Aging & Adult Services
Northeastern University
The Duke Endowment
The John A. Hartford Foundation
UNC Gillings School of Global Public Health
UNC Institute on Aging
UNC Kenan-Flagler Business School
UNC/NCsu Dept. of Biomedical Engineering
UnitedHealthcare
University of Cambridge
University of North Carolina at Chapel Hill
University of Sheffield
Wells Fargo Bank

For more information about the Global Aging & Technology Collaborative, please contact Heather Altman at hkalmtan@live.unc.edu or (919) 918-2609