Technology is touted as a means of achieving the triple aim in health care: to deliver better care to more people at lower costs (Kvedar, Coye, & Everett, 2014). The American Geriatrics Society Expert Panel on Person-Centered Care (2015)—although not mentioning health care technology explicitly—identified continual information sharing and integrated communication as essential to achieving person-centered care. This sharing and integration can only be accomplished via technological means. Technology is also put forward as the answer to workforce shortages, complex chronic illness home management, and historic health equity issues (e.g., rural and urban access to care) (Kvedar et al., 2014). Many of these issues disproportionately affect older adults, but does the push toward technology-based health care consider the needs or desires of older adults, the primary users of health care? Examining and implementing the principles of gerontechnology may help. Gerontechnology began in the late 1990s when gerontologists and technology experts met to design and develop technology that supported aging in place (Bouma, Fozard, Bouwhuis, & Taipale, 2007). Their stated goal was to facilitate goal attainment and improve life satisfaction for older adults using technology (Bouma et al., 2007). But what are the practical implications of this goal?

This question came to me as I had a recent opportunity to observe older adults using a tablet-based self-management application (app) during a pilot study. This was the second round of testing the app. The interprofessional development team was intentional during the design phase to account for normal aging limitations. Special considerations, such as vision, hearing, and physical limitations, were considered. The team developed a series of simple screen prompts and used large fonts and bright colors that carefully led a novel user through the app. An “Ikea®-like” hard copy manual was developed, which showed screenshots of the tablet with instructions in large size font. The team then created a 5-minute introductory video that showed an older adult using the tablet at home with voice-over directions. After a successful proof-of-concept trial (Lloyd et al., 2017), participants were interviewed and reported a positive experience with the technology and made suggestions for additional features (Buck et al., 2017). The team was then ready to test the intervention again in a
different part of the country, but two relatively minor changes were made: one was for pragmatic reasons and the second was required by the setting. To improve intervention scalability by decreasing cost, the decision was made to change from a 9.7- to 7-inch tablet. The new 7-inch tablet also had a two-factor authentication (i.e., two logins), as required by the new institutional review board. The change I observed in participants’ responses was striking. As in the earlier study, participants were motivated to participate after viewing the video. However, when given the tablets, things unraveled. Successfully logging in twice was onerous and several refused to participate further. For those participants who cleared this first hurdle—they reported not being able to see the information clearly despite the font size having been adjusted to match the size of the earlier testing. The technology did not meet gerontechnology benchmarks—neither participants’ goals nor life satisfaction was improved by the technology. The team was focused on developing technology that older adults would use but something went wrong. What were seemingly small changes were deal breakers to participants. So how do we make sure that we achieve different outcomes in the future?

Using gerontechnology’s system approach of examining person, environment, and user interfaces (Sixsmith, Mihailidis, Sixsmith, Fang, & Battersby, 2016), we are moving beyond our earlier exit interviews and conducting weekly interviews with participants using the current tablet to elicit feedback, and asking them whether the tablet is helping and how. We are intentionally using a co-designing model (Aidemark, Askenäs, Nygårdh, & Strömberg, 2015), which includes older adults in developing ideas, concepts, prototypes (e.g., the app), and final products in iterative and interactive cycles. Our older adult co-designers suggested features that we had not considered, such as dietary trackers and making the app more fun. We have moved from thinking of ourselves as experts to facilitators. We are helping older adults teach us how to design technology that they want to and can use. For technology to achieve the triple aim, we need the input of older adults to co-design technology that works for them.

REFERENCES


Harleah G. Buck, PhD, RN, FPCN, FAAN
JGN Editorial Board Member
Coordinator of Chronic Illness Initiatives
College of Nursing
University of South Florida
Tampa, Florida

The author has disclosed no potential conflicts of interest, financial or otherwise.

doi:10.3928/00989134-20170719-01