COUNCIL ON SOCIAL WORK EDUCATION
GERO-ED CENTER
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GERIATRIC SOCIAL WORK INITIATIVE • *Funded by The John A. Hartford Foundation*

Technology and Aging Module

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Introduction

Competencies Addressed

- Assess and address values and biases regarding aging
- Respect and promote older adult clients' right to dignity and self-determination
- Apply ethical principles to decisions on behalf of all older clients with special attention to those who have limited decisional capacity
- Identify issues related to losses, changes, and transitions over the life cycle in designing interventions
- Identify the availability of resources and resource systems for older adults and their families
- Advocate with and for older adults and their families for building age-friendly community capacity (including the use of technology) and enhancing the contribution of older persons
- Promote use of research (including evidence-based practice) to evaluate and enhance the effectiveness of social work practice and aging-related services

Objectives

1. Understand the impact of the digital divide on older adults and on technological innovation
2. Identify a range of technology products and services for social connectivity, mobility, and health and safety monitoring
3. Understand potential concerns and desires of older adults and family members regarding technology-based services
4. Articulate a range of ethical aspects of remote monitoring technologies
5. Understand the importance and challenges of obtaining informed consent for use of remote monitoring technologies in elder care
6. Identify technology-based services that help address isolation and loneliness and identify ways that technology-based services could entrench isolation and loneliness
7. Identify ways in which technology-based health and home care services are changing professional-care work
8. Recognize that older adults' choices regarding technology use are often meaningful, motivated, and considered, and question dismissive language (e.g., generational incompetence, noncompliance, paranoia, "initial" vs. real resistance)

Summary

Among the 43+ million Americans who are older than 64, fewer than 4% live in nursing homes and nearly one in three lives alone (Ortman, Velkoff, & Hogan, 2014; Freedman &

Spillman, 2140; Vespa, Lewis, & Kreider, 2013). Social isolation and problems of accessible transportation are growing concerns, and the need to ensure the safety of older adults living alone in the community is widely recognized. Recent years have seen an influx of accessible, low-cost technologies for emergency alerts, personal health tracking, and remote monitoring. Some of these technologies to support least-restrictive housing are now covered by third-party payers. In this context of a growing aging population and focus on technological solutions, social workers will be in positions to assist in assessment of and referral to these interventions. They will be called on to assess appropriate use of these technologies and will require the tools to understand and articulate concerns and potential benefits from diverse perspectives. Social workers will want to be prepared to knowledgably mediate decision-making and conflicting views regarding technology use. At this point in time, ethical guidelines based on empirical studies are still needed to inform practice in a rapidly changing policy environment. The more familiar social workers are with the options and implications of a range of technologies, as well as frameworks for assessing them, the better equipped they are to serve older adults and their families.

This module contains materials that may be incorporated into lectures or presentations to help students understand how to assess and present to older adults and their families a range of health, monitoring, and connectivity technologies. It includes the following components:

- PowerPoint Lecture: "Technology and aging: An introduction to technologies to support older adults and their care networks"
- Bibliography of the following topics with brief introductions:
  - Overview and Scoping Resources
  - Digital Divide
  - Social Connectivity
  - Technology for Memory Loss
  - Remote Monitoring Technology and Telehealth
  - Ethics and Values in Technology Development and Use
  - The Meaning of Technologies for Care Work
- Web-based resource list of academic research centers and labs focusing on technology and aging
- Web-based resource list of centers, organizations, and advocacy groups working on technology and aging policy, reimbursement, and diffusion issues
- Three Classroom Activities:
  - Multimedia Small Group Discussion Exercise: In-Home Activity Sensors
    The goal of this exercise is to critically engage popular media depictions of monitoring technologies for older adults as a solution to care dilemmas. One of two news article options (from the *New York Times* or *Washington Post*) is examined in relation to the humorous video that illustrates the problems of invasion of behavioral autonomy and privacy in the use of sensing technologies. The video depicts active creative use and resistance that counters the stereotype

of older adults as passive users of home monitoring technology.

- Staged Debate Activity: Domestic Care Robots
  The goal of this debate exercise is to introduce students to the near-future of domestic robots to support older adults in a range of settings and to have them think deeply about the issues this raises. After reading two engaging articles about the future of robots in elder care, students are divided into two debate teams with a prompt to prepare their arguments for or against third-party payer coverage of elder care robots.

- Group Discussion: Cameras in Nursing Home Resident Rooms
  The goal of this exercise is to help students understand the nuances of an issue that most social workers who work is residential settings will encounter. Over the past few years, there has been renewed attention in the media to the use of cameras in resident rooms in nursing centers or assisted living facilities. Although no federal law addresses such usage, a number of states now have regulations allowing private individuals to install cameras in nursing center resident rooms. In most states, the policy is unclear, and to date, the Centers for Medicare and Medicaid Services have no policy on the issue. This makes it difficult for facilities to know how to act on their use and requests for use. This activity will allow them to understand a full range of potential risks and benefits to this practice.

Bibliography for Aging and Technology

This organized bibliography is meant to serve as a resource to instructors who wish to add readings to their syllabi. The topics are not exhaustive.

Overview and Scoping Resources

These articles and books provide a "big picture" or widely encompassing view of the range of technologies available for older adults and their caregivers.

Berridge, C. (2014). Seeing the social in technology for older adults: Making the implicit explicit through a multidisciplinary lens. In H. Vakalahi, G. Simpson, & N. Giunta (Eds.), *The Collective Spirit of Aging Across Cultures* (pp. 173-189). New York: Springer Science & Business Media.

Blackman, S., Matlo, C., Bobrovitskiy, C., Waldoch, A., Fang, M. L., Jackson, P., …Sixsmith, A. (2015). Ambient assisted living technologies for aging well: A scoping review. *Journal of Intelligent Systems*. doi: 10.1515/jisys-2014-0136

Ghosh, R., Lindeman, D., Ratan, S., & Steinmetz, V. (2014). *The new era of connected aging: A framework for understanding technologies that support older adults in aging in place.* Berkeley: Center for Information Technology Research in the Interest of Society, University of California, Berkeley http://www.techandaging.org/ConnectedAgingFramework.pdf

Joyce, K., & Loe, M. (2010) *Technogenarians: Studying health and illness through an ageing, science, and technology lens.* Oxford, UK: Wiley-Blackwell.

Lehoux, P. (2006). *The problem of healthcare technology: policy implications for modern health care systems*. New York: Routledge.

Oishi, M. M. K., Mitchel, I. M., & Loos, M. V. H. F. (2010). *Design and use of assistive technology: social, technical, ethical, and economic challenges*. New York: Springer.

Parker, S. G., & Hawley, M. S. (2013). Telecare for an ageing population? *Age and Ageing*, *42*(4), 424-425.

Schulz, R., Wahl, H. W., Matthews, J. T., Dabbs, A. V., Beach, S. R., & Czaja, S. J. (2014). Advancing the aging and technology agenda in gerontology. *The Gerontologist, 55*(5), 724-734. doi: 10.1093/geront/gnu071

Sixsmith, A., & Gutman, G. (2013) *Technologies for active aging.* New York: Springer. doi:10.1007/978-1-4419-83480

Digital Divide

The digital divide typically refers to internet access and use. It is not a static status; sustained inclusion in the digital world requires learning and the ongoing development of new skills (Jaeger, 2012). Use of the internet and information communication technologies (ICT) enables remote connection to people, information, commerce, and recreation. It is

important to remember that people use information communication technology differently, so marginalization matters to how these technologies are developed. Marginality in the Information Society means being excluded from processes that directly shape those services and practices (Jaeger, 2004). The digital divide also has consequences for older adults' financial well-being: one term that employers use to describe an appropriate job candidates is "digital native," which implies a young adult who grew up using ICTs. The resources listed here describe the digital divide using survey research and critically engage the representation of older adults and their needs in the design process, calling for more inclusive product development.

Gell, N. M., Rosenberg, D. E., Demiris, G., LaCroix, A. Z., & Patel, K. V. (2015). Patterns of technology use among older adults with and without disabilities. *The Gerontologist, 55*(3), 412-420.

Giang, V. (May 4, 2015). This is the latest way employers mask age bias, lawyers say. *Fortune*. Retrieved from http://fortune.com/2015/05/04/digital-native-employers-bias/

Jaeger, B. (2012). New frontiers in the digital divide: Revisiting policy for Digital inclusion. Paper presented at The European Group for Public Administration (EGPA) Annual Conference, Bergan Norway Sept 5-8. Retrieved from https://www.scss.tcd.ie/disciplines/information_systems/egpa/bergen.htm

Loe, M. (2010). Doing it my way: Old women, technology, and wellbeing. *Sociology of Health & Illness, 32*(2), 319–334. doi: 10.1111/j.1467-9566.2009.01220.x

Neven, L. (2010). 'But obviously not for me': robots, laboratories and the defiant identity of elder test users. *Sociology of Health and Illness, 32*, 335–347.

Neven, L. (2014). By any means? Questioning the link between gerontechnological innovation and older people's wish to live at home. *Technological Forecasting and Social Change, 93*, 32-43. doi:10.1016/j.techfore.2014.04.016

Zickuhr, K., & Madden, M. (Jun 6, 2012). Older adults and internet use. Pew Research Center Internet, Science & Tech. Retrieved from http://www.pewinternet.org/Reports/2012/Older-adults-and-internet-use/Summary-of-findings.aspx

Zickuhr, K., & Smith, A. (April 13, 2012). Digital differences. Pew Research Center Internet, Science & Tech Retrieved from http://pewinternet.org/Reports/2012/Digital-differences/Overview.aspx

Social Connectivity

Social networks and high quality ties to others are important to one's well-being and health outcomes. Key ways in which technologies can support social participation are helping older adults to access opportunities (hobbies, volunteering), connect with a community, and use transportation. These technologies include video-enabled PC or mobile-app solutions to communicate with remote family caregivers, other relatives, or friends. Older adults use Skype, Google Hangouts, FaceTime, and other services to connect with others, as

well as reminder systems to keep up with appointments. Online support groups, such as for bereavement, proliferate. A number of companies have developed services specifically for older adults, such as AARP's social networking site (community.aarp.org), MyBoomerPlace.com, www.tapestry.net, as well as volunteering sites (SeniorCorp.org). A few examples of innovative programs that focus on engaging older adults in social participation through technology in the United States are the Virtual Senior Center (*http://seniorplanet.org/the-center*), OATS (*http://oats.org*), Senior Planet (*http://seniorplanet.org*) and Manhattan's Senior Planet Exploration Center (*http://seniorplanet.org/the-center*).

The Accessible Transportation Technologies Research Initiative (ATTRI): http://its.dot.gov/attri/attri_tech_areas.htm

Beringer, R., & Sixsmith A. (2013). Videoconferencing and social Engagement for older adults. In Sixsmith, A., & Gutman, G. (Eds), *Technologies for Active Aging* (pp. 189-199). New York: Springer.

Gardner, P. Netherland, J., & Kamber, T. (2012). Getting turned on: Using ICT training to promote active ageing in New York City. *Journal of Community Informatics, 8*(1), 1-16.

Reimer, B. (2014). Driver assistance systems and the transition to automated vehicles: A path to increase older adult safety and mobility? *Public Policy and Aging Report, 24*(1), 27-31. doi:10.1007/978-1-4419-83480

Zickuhr, K., & Madden, M. (Jun 6, 2012). Older adults and internet use. Pew Research Center Internet, Science & Tech. Retrieved from http://www.pewinternet.org/Reports/2012/Older-adults-and-internet-use/Summary-of-findings.aspx

Technology for Memory Loss

There is a full range of products for older adults with memory loss and their support networks. The technology that currently receives the most media attention is computer-based cognitive training games; however, the research is inconclusive as to their effectiveness in slowing memory loss. Social workers should be able to discern which research is sponsored and reported by product companies and focus on the way researchers report findings. These resources describe the current state of the research on cognitive training and other promising technologies that may be helpful for people with dementia and their families.

Ballesteros, S., Kraft, E., Santanac, S., & Tziraki, C. (2015). Maintaining older brain functionality: A targeted review. *Neuroscience and Biobehavioral Reviews, 55*, 453–477.

Blackman, S., Matlo, C., Bobrovitskiy, C., Waldoch, A., Fang, M. L., Jackson, P., … Sixsmith, A. (2015). Ambient assisted living technologies for aging well: A scoping review. *Journal of Intelligent Systems*. doi: 10.1515/jisys-2014-0136

Can technology ease the burden of caring for people with dementia? (2015). NPR: http://www.npr.org/sections/health-shots/2015/06/29/417205451/can-technology-ease-the-burden-of-caring-for-people-with-dementia?utm_source=facebook.com&utm_medium=social&utm_campaign=npr&utm_term=nprnews&utm_content=20150629

Leroi, I., Woolham, J., Gathercole, R, Howard, R., Dunk, B., Fox, C., …Ritchie, C. (2013). Does telecare prolong community living in dementia? A study protocol for a pragmatic, randomised controlled trial. *Trials, 14*(1), 1-9.

Mountain, G. (2013). Using technology to support people with dementia. In Sixsmith, A. & Gutman, G. (Eds), *Technologies for Active Aging* (pp. 105-121). New York: Springer. doi: 10.1007/978-1-4419-8348-0

Wigg. J. M. (2010). Liberating the wanderers: using technology to unlock doors for those living with dementia. *Sociology of Health & Illness, 32*(2) 288-303. doi: 10.1111/j.1467-9566.2009.01221.x

Remote Monitoring and Telehealth

A variety of technologies have been developed for the purpose of helping to meet challenges older adults face in obtaining heath care and monitoring their health and safety at home. Getting to health care appointments can be difficult for older adults in both rural and urban areas. Mobile devices and Internet-based services help them and their support networks access health care and connect them to providers, friends, and family caregivers. Telehealth refers to remotely provided health care, as well as remote communication between health care providers. Technologies are used for care coordination and to collect and transmit health data. Biometric monitoring devices can collect, track, and transmit blood pressure, heart rate, blood glucose, and other vital signs. Remote monitoring of activity in a living space, telecare, smart homes, and ambient assistive living (AAL) are a separate category from telehealth, though some products have multiple functions that cross these evolving boundaries. The terminology is also in flux. Most people are aware of the personal emergency response systems (PERS) that provide access to emergency services in the event of a fall and are infamous for the "I've fallen and I can't get up" commercials. The shift from these actively triggered emergency alarms to passive monitoring systems that monitor continuously represents a significant technological generational shift. The research is inconclusive regarding the effectiveness of fall detection, and particularly prevention devices, but this is a rapidly growing area of focus.

Barlow, J., Singh, D., Bayer, S., & Curry, R. (2007). A systematic review of the benefits of home telecare for frail elderly people and those with long-term conditions. *Journal of Telemedicine and Telecare*, *13*, 172-179.

Broderick, A., & Steinmetz V. (January 30, 2013). Centura Health at home: Home telehealth as the standard of care. Case Study. The Commonwealth Fund. Retrieved from http://www.commonwealthfund.org/publications/case-studies/2013/jan/telehealth-centura

Brownsell, S., Bradley, D., Blackburn, S., Cardinaux, F., & Hawley, M. S. (2011). A systematic review of lifestyle monitoring technologies. *Journal of Telemedicine and Telecare, 17*, 185-189.

Chaudhuri, S. Kneale, L., Le, T., Phelan, E., Rosenberg, D., Thompson, H., & Demiris, G. (2015). Older adults' perceptions of fall detection devices. *Journal of Applied Gerontology.* (online first) doi:10.1177/0733464815591211

Demiris, G., & Hensel, B. K. (2008). Technologies for an aging society: A systematic review of "smart home" applications (pp. 30-39). *IMIA Yearbook of Medical Informatics*. Stuttgart: Schattauer Verlagsgesellschaft.

Henderson, C., Knapp, M., Fernández, J. L., Beecham, J., Hirani, S. P., Beynon, M., … Newman, S. P. (2014). Cost-effectiveness of telecare for people with social care needs: The Whole Systems Demonstrator cluster randomised trial*. Age Ageing, 43*, 794-800.

Hirani, S. P., Beynon, M., Cartwright, M., Rixon, L., Doll, H., Henderson, C., …Newman, S. P. (2014). The effect of telecare on the quality of life and psychological well-being of elderly recipients of social care over a 12-month period: The Whole Systems Demonstrator cluster randomised trial. *Age and Ageing, 43*(3), 334-341.

Jaschinski, C., & Allouch, S. B. (2014). Ambient assisted living: Benefits and barriers from a user-centered perspective. AMBIENT 2014: The Fourth International Conference on Ambient Computing, Applications, Services and Technologies. Rome, Italy. Retrieved from https://www.thinkmind.org/index.php?view=article&articleid=ambient_2014_3_30_40019

Kidholm, K, Dinesen, B., Dyrvig, A. K., Yderstraede, K. B., & Rasmussen, B. S. (2014). Results from the world's largest telemedicine project. *EWMA Journal 14*(1), 43-50.

Nai-Ching Chi, N. C., & Demiris, G. (2015). A systematic review of telehealth tools and interventions to support family caregivers. *Journal of Telemedicine and Telecare, 21*, 37-44. doi:10.1177/1357633X14562734

Pietrzak, E., Cotea, C., & Pullman, S. (2014). Does smart home technology prevent falls in community-dwelling older adults: a literature review. *Informatics in Primary Care, 21*(3), 105-12. doi: 10.14236/jhi.v21i3.64

Steventon, A., Bardsley, M., Billings, J. Dixon, J., Doll, H., Beynon, M., …Newman, S. (2013). Effects of telecare on use of health and social care services: Findings from the Whole Systems Demonstrator cluster randomized trial. *Age and Ageing, 42*(4), 501-508.

Ethics and Values in Technology Development and Use

Technologies for older adults and their support networks are remarkably diverse in purpose and form. Equal access is a consideration for many. Enhanced or diminished social contact is a benefit or a problem in the use of these technologies. Each category of

technology has its own set of values and ethical aspects and implications. For example, technologies that transmit data about activity or movement are increasingly used based on the assumption that diminished privacy, autonomy, human interaction, and other risks are outweighed by new efficient means of enhancing safety, reducing hospitalizations, and allowing people to remain living in the community. These goals have great value, yet two interconnected problems remain: these technologies are being deployed neither with robust evidence of benefit nor with an understanding of how to mitigate the associated risks to older adults that pose significant ethical problems (Novitzky et al., 2015).

Berridge, C. (in press). Selling passive monitoring to manage risk in independent living: Frontline workers in a bind. In R. Leenes, N. Purtova, & S. Adams (Eds.), *Under observation: The interplay between eHealth and surveillance*. Tilburg Institute for Law, Technology, and Society. Tilburg, Netherlands: Springer.

Berridge, C. (2015). Breathing room in monitored space: The impact of passive monitoring technology on privacy in independent living. *The Gerontologist.* (online first) doi:10.1093/geront/gnv034

Bose, L., Wild, K., Mattek, N., Ruhl, M., Dodge, H. H., & Kaye, J. (2013). Willingness of older adults to share data and privacy concerns after exposure to unobtrusive in-home monitoring. *Gerontechnology, 11*(3), 428-435.

Bowes, A., Dawson, A., & Bell, D. (2012). Ethical implications of lifestyle monitoring data in ageing research, *Information, Communication and Society, 15*(1), 5-22.

Darkins A., Ryan P., Kobb R., Foster L., Edmonson E., Wakefield B., & Lancaster A. E. (2008). Care coordination/home telehealth: The systematic implementation of health informatics, home telehealth, and disease management to support the care of veteran patients with chronic conditions. *Telemedicine Journal and E-Health, 14*(10), 1118-1126.

EFORTT (2011). *Deliverable 7: Final research report of ethical frameworks for telecare technologies for older people at home*. Submitted to the European Commission. Retrieved from http://www.lancaster.ac.uk/efortt/documents/Deliverable%207%20Final%20Research%20report.pdf

Essén, A. (2008). The two facets of electronic care surveillance: An exploration of the views of older people who live with monitoring devices. *Social Science & Medicine, 67*(1), 128-136.

Greenhalgh, T., Wherton, J., Sugarhood, P., Hinder, S. Procter, R. N., & Stones, R. (2013). What matters to older people with assisted living needs? A phenomenological analysis of the use and non-use of telehealth and telecare. *Social Science & Medicine, 93*, 86-94.

Lehoux, P. (2008). The duality of health technology in chronic illness: How designers envision our future. C*hronic Illness, 4*, 85-97.

Lorenzen-Huber, L., Boutain, M., Camp, L. J., Shankar, K., & Connelly, K. H. (2011). Privacy, technology, and aging: A proposed framework. *Ageing International, 36,* 232-252.

Mortenson, B., Sixsmith, A., & Woolrych, R. (2015). The power(s) of observation: Theoretical perspectives on surveillance technologies and older people. *Aging and Society*, *35*(3), 512-530. doi:10.1017/S0144686X13000846

Novitzky, P., Smeaton, A. F., Chen, C., Irving, K., Jacquemard, T., O'Brolcháin, F., …Gordijn, B. (2015). A review of contemporary work on the ethics of ambient assisted living technologies for people with dementia. *Science and Engineering Ethics, 21*, 707-765.

Oudshoorn, N. (2011). *Telecare technologies and the transformation of healthcare.* Palgrave Macmillan: New York.

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von Shomberg, R. (2011). Introduction: Towards responsible research and innovation in the information and communication technologies and security technologies fields. The European Commission's Science in Society Initiative EFORTT Project. Retrieved: http://www.synbioproject.org/process/assets/files/6613/_draft/mep-rapport-2011_en.pdf

Sanders, C., Rogers, A., Bowen, R., Bower, P., Hirani, S., Cartwright, P., … Newman, S. P. (2012). Exploring barriers to participation and adoption of telehealth and telecare within the Whole System Demonstrator trial: A qualitative study. *BMC Health Services Research 12*, 220.

Sorrell, T., & Draper, H. (2012). Telecare, surveillance, and the welfare state. *American Journal of Bioethics, 12*(9), 36-40.

The Meaning of Technologies for Care Work

Much has been written about this topic as it pertains to nurses and physicians, particularly around electronic health/medical records and telehealth. As technology-based services alter roles and the geography of care provision, this area of inquiry leads researchers to ask questions such as what is care and what should it be? The ways in which new technology-based services change the work and role of social workers is an area that is ripe for research.

Coughlin, J. F. (2014). Technology, innovation, and developing a NexGen aging services workforce. *Public Policy & Aging Report, 24*(1), 6-9.

Mort, M., Roberts, C., & Milligan, C. (2011). Telecare and older people: Re-ordering social relations. In von Schomberg, R. (Ed), *Towards Responsible Research and Innovation in the Information and Communication Technologies and Society Technologies Fields* (pp. 150-164). The European Commission's Science in Society Initiative EFORTT Project. Retrieved from http://www.synbioproject.org/process/assets/files/6613/_draft/mep-rapport-2011_en.pdf

Pols, J. (2012). *Care at a Distance: On the Closeness of Technology.* Amsterdam: Amsterdam University Press.

Rogers, A., Kirk, S., Gately, C., May, C., & Finch, T. (2011). Established users and the making of telecare work in long term condition management: Implications for Health Policy**.** *Social Science & Medicine*, 72, 1077-1084.

van Hout, A., Pols J, & Willems, D. (2015). Shining trinkets and unkempt gardens: On the materiality of care. *Sociology of Health and Illness*. (online first) doi: 10.1111/1467-9566.12302

Web Resources

A number of advocacy and policy organizations are working on issues related to technology use for and by older adults, primarily in the area of health care. Academic research centers frequently update their lists of publications and are a good resource for information about current research. This list of resources is divided into two categories: University research centers and national centers. They are not exhaustive.

University Research Centers and Labs Focused on Technology and Aging	
OHSU: Oregon Health & Science University ORCATECH	http://www.ohsu.edu/xd/research/centers-institutes/orcatech/index.cfm
Georgia Institute for Technology's Human Factors and Aging Laboratory	http://hfaging.gatech.edu
CREATE: a multidisciplinary, collaborative center that develops and evaluates interventions and design solutions to promote successful technology adoption among older adults. A consortium of three universities: The University of Miami, Florida State University, and Georgia Institute of Technology	http://www.create-center.org
MIT AgeLab	http://agelab.mit.edu
Center for Information Technology Research in the Interest of Society	http://citris-uc.org/about-citris
The Center For Health and Technology (UC Davis)	http://www.ucdmc.ucdavis.edu/cht

National Centers, Advocacy, and Membership Organizations	
LeadingAge Center for Aging Services Technology	http://www.leadingage.org/cast.aspx
Center for Technology and Aging	http://www.techandaging.org/
Center for Connected Health Policy	http://cchpca.org/
American Telemedicine Association	http://www.americantelemed.org/
Aging in Place Technology Watch	http://www.ageinplacetech.com/
The Office of the National Coordinator for Health Information Technology	http://healthit.gov/
International Society for Gerontechnology	http://gerontechnology.info/index.php/journal/pages/view/isghome
The Home Care Technology Association of America	http://www.hctaa.org/
President's Council of Advisors on Science and Technology (see report on aging)	https://www.whitehouse.gov/administration/eop/ostp/pcast
Technology Gear Guide. AARP	http://www.aarp.org/home-family/personal-technology/info-2014/gadgets-tech-reviews-tablets-photo.htm...html#slide15

Three Classroom Activities

1. Multimedia Small Group Discussion Exercise: In-Home Activity Sensors

Summary: The goal of this exercise is to critically engage popular media depictions of monitoring technologies for older adults as a solution to care dilemmas. One of the two article options from the NY Times or Washington Post is examined in relation to the humorous video that illustrates the problems of invasion of behavioral autonomy and privacy in the use of sensing technologies. The video depicts active creative use and resistance that counters the stereotype of older adults as passive users of home monitoring technology.

The articles:

McFarland, Matt. (November 19, 2014). When an algorithm helps keep an eye on you beloved grandparent. Washington Post. Retrieved: http://www.washingtonpost.com/news/innovations/wp/2014/11/19/when-an-algorithm-helps-keep-an-eye-on-your-beloved-grandparent/

Gustke, Constance. (July 25, 2015). Technology, while not a fountain of youth can make aging safer. New York Times. Retrieved: http://www.nytimes.com/2015/07/25/your-money/technology-while-not-a-fountain-of-youth-can-make-aging-safer.html?_r=2

Discussion questions for articles:

1. What are the potential benefits of remote sensing technologies described in the article?
   What potential risks are raised?
2. Does this article present a complete picture of the issue?

The 5 minute video, *Uninvited Guests*

Available here: http://www.superflux.in/work/uninvited-guests

Discussion questions for video:

1. Older adults who choose not to use technologies that have purported health benefits are sometimes described as paranoid, "old curmudgeons," "incompetent," or "noncompliant." In what ways does this video challenge those notions? Do this actor's resistance and creative adaptations surprise you? Why or why not? Why might it be important to take seriously the ways older adults choose to interact with home care technologies?
2. Who do you think conceptualizes and designs these devices for older adults? How might the positionality of the designers/engineers of these devices for older adults and their caregivers help shape the products they design?

3. Who is this technology directly benefiting? What ways could older adults be engaged in designing solutions to meet their needs? How might this apply to social work practice with older adults and their caregivers?

Additional questions that have been raised by the film makers at Superflux Lab:

1. "As physical objects in the home become embedded with increasing smartness and autonomy, what relationships do we form with them?
2. "What role does human agency play in a world where mundane objects and environments begin to gain a level of agency and autonomy?
3. "How will smart objects and devices influence the rhythms and routines of our lives, and ours to theirs, and how will this in turn change our cultures, beliefs and preferences?"

2. Staged Debate Activity: Domestic Care Robots

Have students read these two articles prior to class (the second piece is written in response to the first):

Aronson, L. (July 19, 2014). The future of robot caregivers. Opinion. T*he New York Times*. Retrieved: http://www.nytimes.com/2014/07/20/opinion/sunday/the-future-of-robot-caregivers.html

Tufekci, Z. (July 22, 2014). Failing the third machine age: When robots come for grandma. *The Message*. Retrieved: https://medium.com/message/failing-the-third-machine-age-1883e647ba74

Ask students to identify the most compelling points each author makes. Divide the class into two debate teams. Give them the following prompt:

> Domestic robots for elder care is a hotly debated topic at the (hypothetical) newly-created Long-Term Care Commission. The members of the commission are interested in your view on the issue because they are tasked with deciding if robots will be allowed and paid for by Medicaid long-term services and supports. You have been assigned to the team that is going to present a strong argument for coverage / You have been assigned to the team that is going to present a strong argument against coverage.

Additional questions to deepen the analysis:

1. Imagine that the care robots described in the articles were used as care robots for children. What might this thought exercise reveal about how we view older adults in need of services and supports and the status of elder care?
2. Discuss the potential ethical issues involved in allowing older adults with dementia to believe a non-human robot friend or caregiver mutually "cares" for them.
3. Ask students to report the national average wage of a direct care worker. In 2012, the median hourly wage for all direct-care workers was $10.63. By contrast, the median wage for all U.S. workers was $16.71. Personal Care Aides earned $9.57 and Home Health Aides $10.01; Nursing Assistants earned $11.74 (http://phinational.org/sites/phinational.org/files/phi-facts-3.pdf). Take this opportunity to discuss the status of direct care work and job projections. Use this tool developed by PHI to look up the average wage in your state: http://phinational.org/blogs/new-phi-tool-shows-direct-care-worker-wages-every-state

3. Group Discussion: Cameras in Nursing Home Resident Rooms

Background knowledge:

In the past few years, there has been renewed attention in the media on the use of cameras in resident rooms in nursing centers or assisted-living facilities. There is no federal law, but Texas, New Mexico, Maryland, Oklahoma, Washington, and Illinois now have regulations allowing private individuals to install cameras in nursing center resident rooms, and a number of states have similar bills in process. In most states, the policy is unclear, and to date, the Centers for Medicare and Medicaid Services have no policy on the issue. This makes it difficult for facilities to know how to act on their use and requests for use. This is not just an emerging issue in the United States. In the United Kingdom, similar debates are taking place where there is also increasing media attention but no clear legal position.* We have no solid national estimate regarding how widespread use of cameras in resident rooms is. We also don't know very much about the practical issues (i.e., how requests for cameras are handled by facilities, or how staff feel about cameras observing their behavior). Nursing center and assisted-living facilities, family members, and policy makers are grappling with questions without the benefit of sound research.

*Additional comparative policy resource: For information about the policy environment in the U.K., see the Care Quality Commission's recent report (2014), *Using Surveillance: Information for providers of health and social care on using surveillance to monitor service.* Newcastle upon Tyne: CQC. Retrieved from https://www.rbsab.org/UserFiles/Docs/surveillance_information.pdf

Exercise:

Have students read a popular media article on the topic, such as the 2013 *New York Times* article, "Watchful Eye in Nursing Homes," by Jan Hoffman, or a more recent publication. Have students respond to the question: Why is the use of cameras in residents' rooms an issue of interest today? Have students turn to the person next to them. Ask them to write down as many potential benefits to the use of a camera in resident rooms as they can think of. Then, have them write down as many potential risks of this practice. Have pairs fill in their notes on a classroom board, instructing them to make a mark next to issues already written on the board in order to assess frequency. Ask pairs with issues that do not have additional marks to explain their issue to the class. Ask if this is the full picture or if other considerations have not yet been discussed. Invite students to consider each of the following, as provided by Barbara Phair at the Abrams Law website: http://www.abramslaw.com/video_surveillance_in_a_nursing_home_publication_media_id_1043

Issues	Claim	Response
Complaints	* Substantiate complaints * Inhibit false allegations	* Event may be misinterpreted, increase complaints
Litigation	* Potential for increased lawsuits due to misinterpretation of events * Evidence in civil or criminal proceeding	* Discourage false allegations * Evidence may vindicate caregiver
Insurance costs	* Increased insurance costs (i.e., increase lawsuits)	* Insurance costs may actually decrease due to proactive risk management and the effect of inhibiting false allegations
Peace of mind of families	* Families would be able to monitor their loved ones care	* Invasion of resident's privacy * Families are not equipped to interpret what they may see
Virtual visitation (for web-based cameras)	* Increase residents contact with family	* Family may use video as substitute for personal contact, reduce visits to facility
Security and safety	* Awareness of surveillance will deter incidents of abuse, neglect, and/or theft	* After the fact information, does not prevent event from occurring
Staff recruiting and retention	* Weed out potential abusers * Non-abusing staff would like to work in such an environment	* Difficulty recruiting because of surveillance

Issues	Claim	Response
Staff issues	* Stressful working environment with 24-hour surveillance	* No expectation of privacy in workplace
Quality of care	* Improved quality of care	* Chilling effect on resident-staff relationships, fosters distrust
Staff	* Protect workers from false allegations	* Event may be misinterpreted
Privacy issues (common areas)	* No expectation of privacy in common areas	* Common areas do not include restrooms, shower/bath areas, changing rooms, locker rooms
Right to privacy [1] (accommodations)	* Issues of privacy and dignity during bathing, dressing, etc. * Inadvertent use or disclosure of video	* Informed consent of resident (or authorized representative), resident should have option to turn off camera * Resident would have access to video, security protections for video access will be in place
Privacy issues [2]	* Monitoring violates right of privacy and dignity of roommate * Monitoring violates right of privacy of visitors	* Consent will be obtained from roommate before implementing * No expectation of privacy for visitors if notice given
Cost	* Residents will bear expense of installation, maintenance and operation	* If residents bear expense, only residents who can afford it will have camera * If facility bears expense, any resident who would want monitoring could have it

Phair notes, "Even after all of these issues have been discussed and decided, there are still other questions, such as: will the video camera be monitored twenty-four hours a day; who will have access to tapes, if there is an internet connection, what protections are in place to ensure privacy concerns; will the resident be able to turn off the camera during private moments (i.e., bathing, dressing, etc.); who should pay the cost of surveillance, etc."

Notes:

1. 42 CFR § 483.70. (2006) (" Personal privacy includes accommodations, medical treatment, written and telephone communications, personal care, visits, and meetings of family and resident groups, but this does not require the facility to provide a private room for each resident."). *See also*, Health Insurance Portability and Accountability Act of 1996 (HIPAA), 42 CFR Parts 160, 162, and 164 (2006).

2. Ibid.