Journal of Gerontology & Geriatric Research

Aydede, J Gerontol Geriatr Res 2016, 5:4
DOI: 10.4172/2167-7182.1000332

Letter to Editor Open Access

TeleHealth and Accelerated Aging in the World Population: Future Research Focus

Sema K Aydede *

School of Population and Public Health, University of British Columbia and Provincial Health Services Authority, Vancouver, Canada

***Corresponding Author:** Sema K Aydede, PhD, School of Population and Public Health, University of British Columbia, 700-1380 Burrard Street, Vancouver, BC, V6Z 2H3 Canada, Tel: +1-604-875-7351; E-mail: sema.aydede@ubc.ca

Rec date: Jul 12, 2016; **Acc date:** Aug 04, 2016; **Pub date:** Aug 06, 2016

Copyright: © 2016 Aydede SK. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Letter to the Editor

The origins of telehealth - "the use of electronic information and telecommunications technologies to support and promote long-distance clinical health care, patient and professional health-related education, public health and health administration" [1] dates back to late 19thcentury [2]. After a long period of stagnation, the interest in telehealth accelerated in the last couple of decades. This renewed interest is partly a result of substantial improvements in information and communication technology that made devices such as mobile phones and wearable monitoring systems more accessible for use in care delivery. The search for innovative strategies to achieve higher quality care at reduced costs while coping with emerging global challenges, such as the ones resulting from an aging world population, is another factor.

As is well known, the number of people 60 years of age and older has more than quadrupled since 1950's and older people's share of the world population reached 11.7 percent in 2013 [3]. The older population itself is also aging. In 2013, 14 percent of the older population consisted of those who were 80 years of age and older. The trend in aging is expected to accelerate in the next four decades [3].

In societies that experience accelerated aging, one of the issues that arise is the increasing prevalence of chronic conditions such as diabetes and coronary heart disease that are closely related to aging. Currently, a substantial amount of evidence about the benefits of telehealth and more specifically telemonitoring-"the process of using audio, video and other telecommunications and electronic information processing technologies to monitor the health status of a patient from a distance" [1] exists for these conditions [4,5]. To date, these studies exclusively focused on one chronic condition at a time leaving out multimorbidity the co-existence of two or more chronic conditions in one individual.

Multimorbidity is an important issue in societies that experience accelerated aging. It is estimated that multimorbidity is present among 70 to 77 percent of people 65 years of age and older [6,7]. In contrast, one study notes that a single chronic condition is present among 19 percent of older adults [6]. The proportion of people with multimorbidity is even greater when higher age brackets are considered, reaching as high as 82 percent among people 85 years of age and older [8]. Patients with multimorbidity are the main users of healthcare.

The mean number of consultations is almost 4 fold and healthcare costs are 5.5 times higher among older adults with multimorbidity when compared to those without multimorbidity [7]. Studies are needed to ascertain if part of the elevated utilization and costs are due to inefficiencies and adverse events that may result while healthcare professionals try to provide care to patients with multimorbidity in a healthcare system that is essentially designed for individual health conditions. Further, future research should examine the effectiveness of telehealth models in providing care to patients with multimorbidity that is integrated, timely, appropriate and safe.

The type of multimorbidity prevalent among older adults is another consideration in developing telehealth models. At 66 percent, multimorbidity consisting of only physical chronic conditions is the most common type [6]. Multimorbidity involving a mix of physical and mental health conditions is second in rank, making up about one-third of adults 65 years of age and older with multimorbidity. The prevalence of physical-only multimorbidity among least and most socioeconomically deprived groups of older adults is similar.

This is in contrast to the case of mixed physical and mental multimorbidity where the prevalence is higher among most socioeconomically deprived groups when compared to the least deprived ones [6]. Therefore, telehealth models that take into account these characteristics of multimorbidity are needed [5].

Future research on telehealth interventions for older adults should acknowledge the complex challenges that define our era. These investigations should consider (1) fully integrated models, not only telehealth models characterized by vertical integration but also those that will promote horizontal integration across disparate medical specialties, (2) flexible frameworks where care is personalized based on patient-specific chronic condition combinations, (3) mixed physical and mental multimorbidity, and (4) feasibility of applications for socioeconomically deprived groups.

References

1. http://www.hrsa.gov/healthit/toolbox/ruralhealthittoolbox/telehealth/glossary.html#t
2. Dinesen B, Nonnecke B, Lindeman D, Toft E, Kidholm K, et al. (2016) Personalized Telehealth in the Future: A Global Research Agenda. J Med Internet Res 18: e53.
3. United Nations, Department of Economic and Social Affairs, Population Division (2013) World Population Aging 2013. New York, NY: United Nations.
4. Bashshur RL, Shannon GW, Smith BR, Alverson DC, Antoniotti N, et al. (2014) The empirical foundations of telemedicine interventions for chronic disease management. Telemed J E Health 20: 769-800.
5. Totten AM, Womack DM, Eden KB, McDonagh MS, Griffin JC, et al. (2016) Telehealth: Mapping the evidence for patient outcomes from systematic reviews. Agency for Healthcare Research and Quality.
6. McLean G, Gunn J, Wyke S, Guthrie B, Watt GC, et al. (2014) The influence of socioeconomic deprivation on multimorbidity at different ages: a cross-sectional study. Br J Gen Pract 64: e440-447.

7. Bahler C, Huber CA, Brungger B, Reich O (2015) Multimorbidity, health care utilization and costs in an elderly community-dwelling population: a claims data based observational study. BMC Health Serv Res 15: 23.
8. Barnett K, Mercer SW, Norbury M, Watt G, Wyke S, et al. (2012) Epidemiology of multimorbidity and implications for health care, research, and medical education: a cross-sectional study. Lancet 380: 37-43.