

The Degenerative Aging Process and Its Impact on the Social Environment

Statement of Issue: The current lack of preventative pharmaceutical and other treatments for the degenerative aging process and the diseases it produces has a broad impact on the social environment. According to the CDC, by 2030, the number of U.S. adults aged 65 years or older will more than double to about 71 million, and Medicare spending will increase by 25% (\$9 billion). In the last 25 years, the growing needs of the aging population has placed unprecedented demands on the entire U.S. healthcare system, resulting in a nine-fold increase in Medicare spending (from \$37 billion in 1980 to \$336 billion in 2005). [i]

- **Early detection and preventative treatment** of aging-related diseases can reduce the effects of disability, chronic conditions, diminished quality of life, and increased costs for health care and long-term care for the aging population.
- Due to the degenerative aging process, over 80% of older adults have at least one chronic condition (50% have two), **resulting in loss of social and/or bodily function for victims.**
- Persons with neurological disabilities report the lowest levels of mental well-being of all. [ii]
- Surprisingly, despite experiencing the highest levels of disability [iii], the oldest members of the aging population report high levels of well-being, **when these conditions do not affect personal independence.** [iv - viii]
- The strongest determinant of high levels of well-being in all sectors of the aging population around the world **is the ability to remain in the workforce and generate income.** [ix]
- **Increasing productive longevity in the developed countries is likely to reduce healthcare costs, boost employee productivity and lead to substantial economic growth** [x], while the inability to increase productive longevity quickly may result in economic collapse [xi, xii].

Policy Recommendation:

A mandate for the inclusion of *Degenerative Aging as a recognized and treatable medical condition*. This includes the systemic factors that contribute to disease and frailty.

- **Advantages:** Would enable new funding mechanisms to support treatment of Degenerative Aging.
 - Funding for new research and development of pharmaceuticals and therapeutic treatments can ensure continued workforce participation and economic contribution for the aging, reducing healthcare costs and maximizing economic sustainability.

- Loss of social function and overall mental and physical health and well-being in the aging can be approached collaboratively by public officials, healthcare practitioners, and pension funds from a single, targeted definition of aging.
 - Workforce opportunities and treatment for common physiological and psychological ailments can be addressed through preventative care.
- Preventative care for systemic, underlying and long-term factors that lead to aging-related diseases and frailty can be prioritized for younger Americans, reducing long-term costs.
- Overall effect of improving quality of life and economically productive longevity for an aging public that represents 1 in 7 Americans. [xiii]

Sources:

[i] National Center for Chronic Disease Prevention and Health Promotion. 2009. Healthy Aging Improving and Extending Quality of Life Among Older Americans
http://www.cdc.gov/nccdphp/publications/aag/pdf/healthy_aging.pdf

[ii] Steffens DC, Fisher GG, Langa KM, Potter GG, Plassman BL, 2009. Prevalence of depression among older Americans: the Aging, Demographics and Memory Study. *International Psychogeriatrics* Oct; 21(5): 879–888.
<http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2747379/>

[iii] Ferrucci L, Guralnik, JM, Simonsick E, Salive ME, Corti C, Langlois J. 1996. Progressive versus catastrophic disability: a longitudinal view of the disablement process. *Journal of Gerontology*. 51A(3):M123-M130.

[iv] Strine TW, Chapman DP, Balluz LS, Moriarty DG, Mokdad AH. 2008. The associations between life satisfaction and health-related quality of life, chronic illness, and health behaviours among U.S. community-dwelling adults. *Journal of Community Health* 33(1):40-50.

[v] Appleton S, Song L. 2008. Life satisfaction in urban China: Components and determinants. *World Development* 36(11):2325-2340.

[vi] Statistics Canada 2008. Health Indicators – Fact Sheets: Life satisfaction.
<http://www.statcan.gc.ca/pub/82-221-x/2009001/tblstructure/2nm/2pr/pr2lsx-eng.htm>

[vii] Gagliardi C, Marcellini F, Papa R, Giuli C, Mollenkopf H. 2008. Associations of personal and mobility resources with subjective well-being among older adults in Italy and Germany. *Archives of Gerontology and Geriatrics* 50:42-47.

[viii] Ferring D, Balducci C, Burholt V, Wenger C, Thissen F, Weber G, Hallberg I. 2004. Life satisfaction of older people in six European countries: Findings from the European Study on adult well-being. *European Journal of Ageing* 1:15-25.

[ix] Smith J, Fleeson W, Geiselman B. *et al.* Sources of well-being in very old age. In: Baltes PB, Mayer KU, eds. 1999. *The Berlin aging study. Aging from 70 to 100.* Cambridge: Cambridge University Press, 1999:450–471.

[x] Zhavoronkov, A., and Litovchenko, M., 2013. Biomedical progress rates as new parameters for models of economic growth in developed countries. *Int. J. Environ. Res. Public Health* 10, 5936–5952.

<http://journal.frontiersin.org/article/10.3389/fgene.2015.00326/full#B115>

[xi] Zhavoronkov, A., Debonneuil, E., Mirza, N., and Artyuhov, I. 2012. Evaluating the impact of recent advances in biomedical sciences and the possible mortality decreases on the future of health care and Social Security in the United States. *Pensions International Journal* 17, 241–251. doi: 10.1057/pm.2012.28

<http://journal.frontiersin.org/article/10.3389/fgene.2015.00326/full#B114>

[xii] Zhavoronkov A and Bhullar B, 2015. Classifying aging as a disease in the context of ICD-11. *Frontiers in Genetics* 6:326. doi: 10.3389/fgene.2015.00326

<http://journal.frontiersin.org/article/10.3389/fgene.2015.00326/full>

[xiii] Administration on Aging (AoA). 2013. *Aging Statistics*

http://www.aoa.acl.gov/Aging_Statistics/index.aspx