Community Vitality and the Elderly

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Introduction

Life expectancy has increased significantly over the last hundred years. At the end of the 1800s, the average life expectancy in industrialized countries was approximately 40 years old (Repetto et al., 2001). Today, the percentage of people who live past 80 is on the rise. Indeed, for the period between 1960 and 2020, studies predict a 300 percent increase in the number of people living over the age of 80 (Camarinha-Matos & Afsarmanesh, 2002). In developed countries, the elderly population is currently the most rapidly expanding, primarily due to overall longer life expectancy and a decreasing birthrate. Over the next 30 years, the percentage of elderly people, in particular those over 85 years, is predicted to double (Repetto et al., 2001). A report by the Canadian Institute of Wellbeing (2010) highlights that Canadians are currently living longer than ever. In 2005, 13% of the Canadian population was 65 years of age and over. By 2026, this proportion is expected to increase to 22% (Canadian Institute of Wellbeing, 2010).

Social policies need to be creative in the coming years to meet the needs of the growing elderly population. New approaches and strategies are required to ensure the elderly have appropriate care and support that maintains a sense of freedom, independence and community and wherever possible, contributes to the maintenance of health and independence through enhancing autonomy, thereby reducing health care costs.

Community vitality and the well-being of the elderly are deeply interconnected: having access to a community, feeling connected to the rest of the world (both in terms place and virtually), being involved in community and leisure activities, participating in events, having access to green space and daylight, and engaging in physical activity all impact the well-being of the elderly. As well, the wisdom and knowledge of the elderly is a critical human capital that can be harnessed in novel ways to contribute to the vitality of a community, and to a community's overall capacity for social innovation.

This paper examines key elements related to community vitality and discusses how these elements impact the overall health and well-being of the elderly. These elements can be grouped into connectivity to people and community, accessibility to the built environment and accessibility to the natural environment. Let's turn now to the first connectivity issue, connectivity to people and community.

Connectivity to People and Community

Social capital refers to resources that are available to individuals and groups through community and social networks. Putman (2000) defines social capital as social networks and the norms of reciprocity and trustworthiness that arise from them. There is a general intuitive sense that social capital strengthens communities and specifically that it is a necessary ingredient for sustainable community development (Dale & Onyx, 2005) and community vitality (Dale et al. 2010). For the elderly, it may be even more crucial to their continuing vitality.

Access to social capital allows the elderly to maintain independent lives while staying in touch with the world around them. Social capital is becoming increasingly important as the elderly population increases throughout the world and as more senior citizens are living alone (Cannuscio et al., 2003). However, recent studies discuss how traditional forms of social capital are decreasing as civic engagement and volunteerism become less prevalent in modern society (Cannuscio et al., 2003). Widowed, divorced and single women living on their own have been among the more vulnerable groups of the elderly population due to lower income and less access to social capital (Myles, 2000). Innovative and sustainable forms of support for the elderly need to be developed to encourage access to social capital, ensuring their autonomy and agency.

Investments in creating vital communities that allow the elderly to age at home while staying connected and supported by the broader community can be enhanced through social capital. Networks in the community become even more important since a large percentage of elderly people prefer to stay at home rather than move to a care facility (Camarinha-Matos & Afsarmanesh, 2002). A recent newspaper article discusses how home care for senior citizens living with their autonomy is much more cost effective than hospital care and provides a better quality of life for seniors (Ottawa Citizen, October 25, 2011). Family members and friends are usually called upon to help with meals and cleaning to support the elderly who participate in home care. However, home care is primarily a solution for senior citizens who have access to diverse forms of social capital. Santropol Roulant is an innovative example of a community organization run by young people in Montreal that offers daily meals to seniors and individuals living with a loss of autonomy. Through their meals on wheels program, Santropol Roulant is helping to foster social capital and build intergenerational community by creating trust and building bridges between individuals in a city where isolation

among the elderly is the highest in Canada (Santropolroulant.org, retrieved October 2011). A multiplicity of housing arrangements also needs to be encouraged and supported, facilitating options for seniors and respecting the diverse interests and lifestyle choices of the elderly. Retirement residences can be a strong vehicle for creating social capital, if designed with the intention to build and support community. Next we turn to another key dimension to well-being among the elderly, access to the built environment.

Accessibility to the Built Environment

There are numerous aspects that affect the well-being of the elderly including fear of crime, traffic, noise pollution, air quality, access to daylight, community spirit, social interaction, access to public green space, trustworthiness of neighbors, mobility, access to public services, shops and facilities, and overall independence – elements that are all impacted directly or indirectly by urban form and the built environment. It is crucial to understand the relationship between the built environment and the needs and experiences of the elderly, the most rapidly increasing population in modern society.

The elderly can experience negative physical and mental health effects from the built environment impacted by urban sprawl. Mass public transit tends to be inaccessible or non-existent in areas of urban sprawl making it more difficult for the elderly to access services and community amenities. Clearly, such access is critical to sustaining connection to other people through day-to-day interactions, if only it means going to the neighbourhood store to buy a daily newspaper.

Lack of access to public transportation creates barriers for low-income people, the elderly, as well as the disabled, if they cannot drive or afford an automobile (Jackson & Kochtitzky, 2010). The physical health implications for the elderly created by sprawl include less active lifestyles, respiratory issues and increased use of medication due to higher ozone levels and increased air pollution (creating large releases of carbon monoxide, carbon dioxide, particulate matter, nitrogen oxides and hydrocarbons into the air) and fatalities due to automobile accidents (Frumkin, 2002). Other impacts include mental and social capital implications due to increased isolation and weakened community networks. Isolation and lack of connectivity can also severely impact on the mental acuity of the elderly, creating a vicious circle of increasing loss of capacity—physically, psychologically, autonomy, mentally and finally spiritually.

Heat stoke can also be a severe problem for the elderly due to an increase in the urban heat island effect (Frumkin, 2002). Heat island effect stems from dark surfaces including roadways and rooftops absorbing heat from the sun and reradiating it as thermal infrared radiation (these surfaces can reach 50–70 degrees Fahrenheit warmer than the air). As urban sprawl areas tend to lack trees and vegetation to provide natural shading and cooling, on warm days, heat island effect can cause urban areas to be 6–8 degrees warmer than the

surrounding environment. The elderly are a high-risk population in terms of developing severe heat stroke, heat exhaustion, fainting, swelling or heat cramps during a heat wave, and consequently can be severely impacted by the heat island effect (Frumkin, 2002). Other dimensions that can impact the elderly's overall sense of well-being include physical barriers in the built environment.

Barriers in the built environment can impact the overall well-being of the elderly. For example, physical barriers can restrict the mobility of the elderly by creating unsafe conditions. These barriers can include the absence of ramps for wheelchairs, lack of ramped curbs, narrow doorways that cannot facilitate wheelchairs, walkers or scooters. Limited access to transportation and public services can impact the autonomy of the elderly. These barriers can restrict the elderly from getting physical activity as well as limit access to daylight and to a broader community. Access to public services, shops and facilities can help foster a sense of independence, freedom and connection to social networks. Inclusive well-informed planning can address and reduce inequalities that exist with regards to access to green space, public transportation and public services for different socioeconomic and vulnerable groups including the elderly (Barton, 2005, p.282).

As urban form and the built environment continue to shape and change, planners, architects and engineers need to design for the needs of all community members, especially vulnerable groups such as the elderly and the disabled. Inclusive design is fundamental to creating healthy, vibrant communities that promote social capital and meet the needs of vulnerable groups including the elderly and disabled: "it encompasses where people live and the public buildings they use, such as health centres, education facilities and libraries; and how they get around – neighbourhoods, streets, parks and green spaces and transport" (Commission for Architecture and the Built Environment, 2008, p.26). Consultation and participatory process is key to inclusive design to help ensure that the needs of all people are met (Ibid, 2008). Next we turn to accessibility to the natural environment.

Accessibility to the Natural Environment

As mentioned above, many different elements can impact the quality of life of the elderly, especially as they become more physically frail. Different studies emphasize how levels of comfort, sense of dignity, hope, enjoyment, self-esteem, life satisfaction and fulfillment are impacted by accessibility to the natural environment. As well, the third discussion paper on health emphasizes the link between autonomy and overall levels of health, and we anticipate this is particularly important with aging. Creating a flexible environment with outdoor views, gardens, courtyards, patios with rails, walkways able to accommodate walkers and wheelchairs, residential amenities, and areas for intergenerational activity including playgrounds, can all increase the quality of life of the elderly and help to encourage walking. Exposure to the outdoors has been linked to

increases in vitamin D intake (Rubin et al, 1998). The opportunity to observe wildlife and the outdoors is also fundamental to the regenerative experience, helping to encourage memoire of past environments, maintain mental activity and stimulation as well as decrease boredom (Morris, 2003).

The Oxford Institute for Sustainable Development completed a study focusing on the well-being of the elderly. The study discovered that overall satisfaction with one's neighbourhood as a place to live is greater where there is access to public green space (Burton et al., n.d.). Other recent studies have found that the use of public spaces increases with the presence of greenery, that social ties in a neighbourhood are positively impacted by the presence and views of green common space and that a positive link exists between the social integration of the elderly in a neighbourhood and their use of public green space (Health Scotland, 2008). The longevity of urban senior citizens has also been found to increase with access to walkable green space near their residence (Takano, 2002).

Encouraging physical fitness and exercise is key to increasing overall health of the elderly. Walking is a practical and easy method of exercise for the elderly; oxygen uptake and flexibility both increase with physical activity (Morris, 2003). Exercise has also been proven to increase psychological and spiritual health, "physical activity in the natural environment not only aids an increased life-span, greater well-being, fewer symptoms of depression, lower rates of smoking and substance misuse but also increases ability to function better at work and home" (Ibid, 2003, p.17). Participation in a weekly group exercise program can also improve balance and can help reduce the rate of falling (Barnett et al., 200e). However, there is a strong decline in physical activity as people age; this decrease is more pronounced for women than it is for men. Existing barriers that prevent the elderly from staying physically active include a lack of transportation or money, lack of time, as well as a perceived lack of public facilities and programs for the elderly (Morris, 2003). More attention needs to be paid to addressing these barriers and creating social policies that are designed to support the overall well-being of the elderly, that emphasize thriving rather than merely surviving and its connection to community vitality.

Conclusion

Connectivity to social capital and community, and access to the built and natural environment are key dimensions that affect the quality of life for the elderly. Access to transportation, public services, amenities and facilities can help maintain a sense of autonomy, freedom and a connection to people and place contributing to both the vitality of the elderly person and the community in which they live. Access to green space and wildlife can increase physical activity and stimulate memories, as well as provide space for reflection and connectivity to diverse groups of people coming together. Well-informed, inclusive planning can help to address environmental barriers experienced by the elderly as well as

reduce inequalities that exist with regards to access to green space, public transportation and public services. Social policies designed to support the needs and overall well-being of the elderly, while building community are critical in order to encourage community vitality. Finally, the wisdom and knowledge of the elderly is a critical human capital that needs to be valued, supported and encouraged, helping to optimize their contribution to social innovation and the overall vitality of communities everywhere.

References Cited

Barnett, A., B. Smith, S. Lord, M. Williams and A. Baumand. (2003). Community-based group exercise improves balance and reduces falls in at-risk older people: a randomized controlled trial. *Age and Ageing*, 32(4), 407–414

Barton, H. (2005). Healthy Urban Planning: Setting the Scene. *Built Environment, 4*, 281–287

Bray, R., C. Vakil and D. Elliott. (2005). *Report on Public Health and Urban Sprawl in Ontario.* Environmental Health Committee, Ontario. College of Family Physicians

Burton, E., L. Mitchell and N. Dempsey. (n.d.). *Urban Form and the Wellbeing of Older People.* Oxford Institute for Sustainable Development.

Cannuscio, C., J. Block, and I. Kawachi (2003). Social Capital and Successful Aging: The Role of Senior Housing. *Annals of Internal Medicine*

Camarinha-Matos, L. and H. Afsarmanesh. (2002). *Design of a Virtual Community Infrastructure for Elderly Care.* IFIP Working Conference on Infrastructures for Virtual Enterprises, Sesimbra, Portugal

Commission for Architecture and the Built Environment. (2008). *Inclusion by Design: Equality, Diversity and the Built Environment*. London, U.K.

Commission for Architecture and the Built Environment. (2009). *Future Health Sustainable Places for Health and Well-Being.* London, U.K.

Dale, A., C. Ling, C. and L. Newman. (2010). *Community Vitality: the role of community-level resilience, adaptation and innovation in sustainable development.* Royal Roads University

Dale, A. and J. Onyx (eds.). (2005). *A Dynamic Balance: Social Capital and Sustainable Community Development.* Vancouver: UBC Press

Frumkin, H. (2002). Urban Sprawl and Public Health. *Public Health Reports*, *117*, 201-217

Greenwood, D. et al. (1996). Coronary heart disease: A review of the role of psychosocial stress and social support. *Journal of Public Health Medicine,*18, 221–231

Health Scotland. (2008). *Health Impact Assessment of Greenspace.* Stirling, U.K.: Scottish Natural Heritage and Institute of Occupational Medicine

Jackson, R. and C. Kochtitzky. (2010). *Creating a Healthy Environment: The Impact of the Environment on Public Health.* Centers for Disease Control and Prevention. Sprawl Watch Clearinghouse Monograph Series.

Jackson, L. (2002). The relationship of urban design to human health and condition. *Landscape and Urban Planning, 64*: 191–200

Morris, N. (2003). *Health, Well-being and Open Space.* OPENspace: the Research Centre for Inclusive Access to Outdoor Environments. Edinburgh College of Art and Heriot-Watt University

Myles, J. (2000). *The Maturation of Canada's Retirement Income System: Income Levels, Income Inequality and Low-Income among the Elderly.* Statistics Canada and Florida State University

Ottawa Citizen (2011). *Home Care Not Health Care.* Retrieved October 2011 from:
http://www.ottawacitizen.com/life/Home+care+health+care/5600177/story.html

Putnam, R. (2000). *Bowling Alone: The Collapse and Revival of American Community.* New York: Simon & Schuster

Repetto, L., Ausili-Cefaro, G., Gallo, C., Rossi, A. & Manzione, L. (2001). Quality of life in elderly cancer patients. *Annals of Oncology, 12* (Suppl. 3), S49–S52.

Rubin, H., A. Owens and G. Golden. (1998). *Status Report: An Investigation to determine whether the built environment affects patients' medical outcomes.* Quality of Care Research, Johns Hopkins University.

Santropol Roulant .(2011). Retrieved October 2011 from:
http://santropolroulant.org/2009/E-home.htm

Takano, T., K. Nakamura, K., and M. Watanabe. (2002). Urban residential environments and senior citizen's longevity in megacity areas: The importance of walkable greenspaces. *Journal of Epidemology and Community Health, 56*: 913–918