

February 2015

Health Inequalities Among Older Adults In Developed Countries: Reconciling Theories and Policy Approaches

Amélie Quesnel-Vallée

McGill University, amelie.quesnelvallee@mcgill.ca


Andrea Willson

Western University, willson@uwo.ca

Sandra Reiter-Campeau

McGill University

Follow this and additional works at: <https://ir.lib.uwo.ca/pclc>

 Part of the [Demography, Population, and Ecology Commons](#), [Gerontology Commons](#), [Inequality and Stratification Commons](#), and the [Medicine and Health Commons](#)

Recommended Citation

Quesnel-Vallée, Amélie; Willson, Andrea; and Reiter-Campeau, Sandra (2015) "Health Inequalities Among Older Adults In Developed Countries: Reconciling Theories and Policy Approaches," *Population Change and Lifecourse Strategic Knowledge Cluster Discussion Paper Series/ Un Réseau stratégique de connaissances Changements de population et parcours de vie Document de travail*: Vol. 3 : Iss. 1 , Article 6.

Available at: <https://ir.lib.uwo.ca/pclc/vol3/iss1/6>

This Article is brought to you for free and open access by the Canadian Research Data Centre Network at Scholarship@Western. It has been accepted for inclusion in Population Change and Lifecourse Strategic Knowledge Cluster Discussion Paper Series/ Un Réseau stratégique de connaissances Changements de population et parcours de vie Document de travail by an authorized editor of Scholarship@Western. For more information, please contact tadam@uwo.ca, wlsadmin@uwo.ca.

HEALTH INEQUALITIES AMONG OLDER ADULTS IN DEVELOPED COUNTRIES: RECONCILING THEORIES AND POLICY APPROACHES

AMÉLIE QUESNEL-VALLÉE, MCGILL UNIVERSITY

ANDREA WILLSON, UNIVERSITY OF WESTERN ONTARIO

SANDRA REITER-CAMPEAU, MCGILL UNIVERSITY

Forthcoming as:

Quesnel-Vallée, A., A. Willson and S. Reiter-Campeau. 2016. "Health Inequalities among Older Adults in Developed Countries: Reconciling theories and policy approaches" In George, L. and Ferraro, K. (Eds). *Handbook of Aging – Social Sciences*. 8th Edition. Elsevier Academic Press.

KEY MESSAGES FOR POLICYMAKERS

- Policies that are meant to support elderly people might worsen health inequalities in this group. These policies exacerbate existing socioeconomic (dis)advantage that has accumulated over a lifetime.
- In Canada, there are two key initiatives that have the potential to worsen inequalities:
 - *The pension scheme:* The increasing ratio of private to public transfers results in higher polarization of incomes at retirement according to individuals' reliance on public funds. Older people with less retirement income are less able to access the care and support they need for healthy living, contributing to inequalities.
 - *Long term care:* There has been a shift towards supporting elderly people to stay in the community as long as possible instead of residing in institutions. The bulk of care for community-dwelling seniors is paid for out-of-pocket. Access to necessary support for healthy living is then limited by personal means, further embedding inequalities.
- Canada can use existing approaches to build policies that are more equitable for elderly people's health:
 - *Health in all Policies:* Outlined by the World Health Organization (WHO), this approach advocates building cross-sector policies that target a specific group of interest. Such policies are articulated around a common goal, like reducing inequalities, and reach goals through coordinated mechanisms involving different departments and government levels.
 - *Age-Friendly Environments Program:* Also developed by the WHO, this program includes a checklist of age-friendly community attributes, like proper housing, based on focus groups with elderly people and other stakeholders. Planning communities around this checklist can help to support elderly people's quality of life equitably and has benefits for non-elderly residents as well.
 - *Advantage Initiative Model:* Piloted in Washington State, this program performed targeted outreach to isolated and low-income adults to inform them of health and social service opportunities. Over 1 year, there was a 2.5 times increase in older people seeking help.
- Research to evaluate the impact of programs and to determine the best indicators to measure policies' impact can support designing initiatives that transcend existing socioeconomic inequalities in seniors, ultimately fostering more equitable health outcomes.

EXECUTIVE SUMMARY

Policies that are meant to support older people in Canada might worsen inequalities. Increasingly privatized pension schemes and lack of subsidized support services disproportionately reward those with the most social and economic means in old age. Those who benefit generally experience better health than those who are disadvantaged. Canada has opportunity to guard against such a skewed impact of programs for the elderly by drawing on approaches developed by the World Health Organization, international examples, and sociological theory and research. These approaches can to help design policies that transcend existing inequalities in older people, fostering more equitable health outcomes.

First, pension schemes can worsen health inequalities in old age through increased privatization and retirement age reforms. Worldwide there is a trend towards privatization or reforms of pay-as-you-go public pension schemes¹. In Canada, the shift towards supporting those with pre-existing means is evident, for instance, from income pooling for retirement income and the emphasis on tax-free savings accounts. Public transfers now supply less than 40% of a retiree's income, meaning only those wealthy enough to contribute to private pensions or savings accounts have adequate retirement income. Retirement incomes then become polarized according to pre-existing means. Other countries have adopted pay-as-you-go public pension schemes where reforms have included raising retirement age. But people in labour intensive jobs, who are typically from lower social classes, tend to experience a faster deterioration in health². If these groups are not be able to work until official retirement ages, they could miss out on equal retirement benefits which also worsens inequalities.

Second, long term care services can worsen inequalities for older people when access depends on personal means. Most countries provide universal access to acute care, but long term care is a much broader set of services that help to support older people³. Such services can help older people stay in the community longer rather than forcing institutionalization for necessary support. Informal carers, like family members, provide most of the care at home, while high demand has catalyzed the development of countless private and means-tested complementary support services⁴. As older people's needs increase, they generally spend more out-of-pocket rendering access to support services dependent on personal means. All but the wealthiest quintile spend more than 60% of their disposable income to meet these greater needs⁵, and

¹ OECD. (2013). Pensions at a Glance 2013: Retirement-Income Systems in OECD and G20 Countries. Retrieved January 23, 2014, from <http://www.oecd.org/pensions/pensionsataglance.htm>

² Lowsky, D. J., Olshansky, S. J., Bhattacharya, J., & Goldman, D. P. (2013). Heterogeneity in Healthy Aging. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences*, glt162. doi:10.1093/gerona/glt162

³ Sultz, H. A., & Young, K. M. (2009). Long-Term Care. In *Health Care, USA: Understanding Its Organization and Delivery* (pp. 279–315). Jones & Bartlett Publishers.

⁴ Wiener, J. M., & Tilly, J. (2002). Population ageing in the United States of America: implications for public programmes. *International Journal of Epidemiology*, 31(4), 776–781.

⁵ OECD. (2013). Pensions at a Glance 2013: Retirement-Income Systems in OECD and G20 Countries. Retrieved January 23, 2014, from <http://www.oecd.org/pensions/pensionsataglance.htm>

there is a high proportion of older people who are unable to do so. Health declines disproportionately faster in those with unmet needs contributing to observed inequalities⁶.

Canada can draw on existing approaches to initiatives for older people that provide targeted services while lessening inequalities. First the World Health Organization (WHO) has developed *Health in All Policies*. It promotes coordinated policy-making involving multiple levels of government and stakeholders working towards a common goal such as reducing inequalities⁷. Countries have mainly applied this approach to early life programs though Finland provides a strong case study of applying such coordination to policies for older people. Second, the WHO's *Age-Friendly Environments Programme* encompasses a checklist based on stakeholder consultations to design age-friendly communities. These communities have supportive social, economic and physical features that can reduce the health impact of inequalities⁸, and have benefits for residents that are not elderly as well. Finally, the *Advantage Initiative Model* from Washington State more specifically aimed to address those at a disadvantage by specifically targeting low-income older adults and running outreach to provide them with information about support services⁹. In practice policies aiming to provide targeted initiatives while also specifically aiming to reduce inequalities in older people are necessary.

Sociological theory frames the development of inequalities over time and policies' possible effect on these. There are two primary theories that sociologists use to explain the persistence and emergence of health inequalities. Fundamental cause theory describes how people in higher social positions have more flexibility and resources to protect themselves against health risks and pay for treatment, contributing better health¹⁰. Cumulative (dis)advantage theories are more explicitly linked to inequalities in older age¹¹. They suggest that relative advantage creates compounding returns over people's lives producing inequalities as an end product. For example, the ability to invest in education leads to even more advantage for those who are wealthy enough to afford it. Cumulative inequality theory is an extension that specifically links these life processes to unequal health outcomes. It describes how human agency can also mitigate against the cumulative effects of disadvantage while stressing the importance of social systems¹². From these theories, people's socio-economic position at old age is borne from lifelong accumulations of (dis)advantage. Policies where access aligns with these existing social fault lines, like privatized pension schemes and differential access to long term care, further pre-

⁶ Keefe, J., Légaré, J., & Carrière, Y. (2007). Developing new strategies to support future caregivers of older Canadians with disabilities: Projections of need and their policy implications. *Canadian Public Policy*, 33, S65–S80.

⁷ McQueen, D., Wismar, M., Lin, V., Jones, C., & Davies, M. (2012). Intersectoral governance for health in all policies. Structures, actions and experiences. Retrieved January 23, 2014, from <http://www.euro.who.int/en/publications/abstracts/intersectoral-governance-for-health-in-all-policies.-structures,-actions-and-experiences>

⁸ Plouffe, L. A., & Kalache, A. (2011). Making communities age friendly: state and municipal initiatives in Canada and other countries. *Gaceta Sanitaria*, 25, Supplement 2, 131–137. doi:10.1016/j.gaceta.2011.11.001

⁹ Hanson, D., & Emlet, C. A. (2006). Assessing a community's elder friendliness: a case example of The AdvantAge Initiative. *Family & Community Health*, 29(4), 266–278.

¹⁰ Link, B. G., & Phelan, J. (1995). Social conditions as fundamental causes of disease. *Journal of Health and Social Behavior*, 80–94.

¹¹ Pavalko, E. K., & Caputo, J. (2013). Social Inequality and Health Across the Life Course. *American Behavioral Scientist*. Retrieved from <http://abs.sagepub.com/content/early/2013/05/13/0002764213487344.abstract>

¹² Ferraro, K. F., & Shippee, T. P. (2009). Aging and cumulative inequality: How does inequality get under the skin? *The Gerontologist*, 49(3), 333–343.

existing divergent social trajectories, and thus inequalities. In contrast, these theories predict that policies where access cuts across the different social trajectories can prevent further divergence, or increased inequality.

Building on these theories, policy-oriented research can further support the development of effective policies for older people that guard against worsening health inequalities in Canada. There are several empirical and methodological challenges sociologists must try to address in this area. For instance, there are no control groups available to study the impact of population-wide policies since, by definition, everyone is affected. Short political cycles and the complexity of causal chains¹³ also make it difficult to study lifetime effects of inequalities to better understand manifestation in old age. To address these challenges, researchers can make use of natural policy experiments, methodologies specifically meant to study policy impact like difference-in-difference, contribute to harmonizing cross-country data to enable comparisons and participate in disseminating research results.

¹³ Exworthy, M. (2008). Policy to tackle the social determinants of health: using conceptual models to understand the policy process. *Health Policy and Planning*, 23(5), 318–327.

CONTENTS

1. Theories of Health Inequality in older age	2
1.1. Fundamental cause theory.....	2
1.2. Life Course Theories of Health Inequality.	3
1.2.1. Cumulative dis/advantage (CAD).....	3
1.2.2. Cumulative inequality theory	5
2. Welfare states and the interplay of social solidarity and equity.....	6
2.1. Pensions.....	8
2.2. Long-term care	9
2.3. WHO Health In All Policies.....	11
2.4. WHO Age-Friendly Environments Program.....	12
3. Promising avenues for sociological research	14
4. References.....	17

The extension in high-income countries of systems of income support and access to health care for large, if not all segments of the elderly population undoubtedly counts as one of major successes of public policy over the past century (OECD 2013). It is perhaps not surprising then to note that today's elderly find themselves in much better health than their parents and grandparents did in their older age (Crimmins et al., 2004). Indeed, relative to the past, older populations in developed countries have improved functioning and are afflicted with less disability on average (Wolf et al., 2005); however, these improvements may not have been equally gained across the elderly population (Taylor, 2008). Indeed, the body of literature regarding health inequalities among the elderly is growing, as the assumption that the older population is a rather homogeneous group in this regard is increasingly discarded (Grundy and Holt, 2001).

This notably raises the question of the current capacity of social policies to mitigate health inequalities among the elderly. Recent reviews of the impact of welfare state on health inequalities have been conducted elsewhere (Bergqvist, Åberg Yngwe and Lundberg, 2013; Brennenstuhl, Quesnel-Vallée and McDonough, 2012; Beckfield and Krieger, 2009). Among other findings, these show that 1. this field of research is small, but growing, 2. that these effects have seldom been studied among the elderly, and 3. that most of this discussion draws from political sociology theories (and other political science approaches), but rarely from other sociological theories on health inequalities. Thus, concerns were raised that some of these theoretical frameworks may not apply to the specific study of *health* inequalities (Brennenstuhl et al., 2012), least of all among the elderly.

As such, we propose here to review sociological theories that are most germane to health inequalities in older ages in developed countries, with an eye to their capacity to illuminate processes of social inequality driven by social policies. Then, we will critically examine the explicit intent and implicit capacity of current social policies to mitigate these inequalities among the elderly population. As other chapters in this Handbook address the question of early life influences on older adult health, our focus will bear on policy interventions targeted at the elderly. This critical examination will particularly focus on the contrast between “classical” welfare state strategies of pensions and health insurance and more contemporary policies salient to health inequalities generally and among the elderly specifically, namely the World Health Organisation (WHO) Health In All Policies and Age-Friendly Environments programs.

This juxtaposition will show that much could be gained from an intersection of the two areas. Indeed, while sociological theories of health inequalities make room for the impact of social policies, this has not been systematically assessed yet. Conversely, social policies fail to recognize that current inequalities among the elderly are the product of life course trajectories of cumulative dis/advantage that may have persistent effects even with receipt of universal benefits. Furthermore, policies are not static, and while some are in need of change to meet current and future needs to avoid further increases in health inequalities (e.g. long term care), others are changing in ways that will need monitoring, lest they contribute to these inequalities (e.g. pensions). Taking stock of these observations, we will end with suggestions for sociological research in this area. Our goal in this chapter is therefore not to provide an exhaustive review of the evidence on social inequalities among the elderly or on the impact of social policies on health inequalities; rather, it is to highlight where sociological research may fruitfully contribute

to this research field, and point towards questions that could move this research agenda forward.

1. THEORIES OF HEALTH INEQUALITY IN OLDER AGE

An abundance of research across multiple disciplines has now clearly established that socioeconomic resources stratify health at every level of the socioeconomic hierarchy, often referred to as the SEP-health gradient (e.g. Marmot 2004). Although the association between health and socioeconomic position is clear, the mechanisms that generate this association are not, and a number of theories have emerged to attempt to provide cohesive frameworks to explain these processes. We begin this section with one of the most commonly cited such theories, namely fundamental cause theory, though it has more rarely been associated with investigations of health inequalities among the elderly population, or even over the life course.

Then, we turn to more specific examinations of health inequality and aging, which have generally have taken two forms. The first approach draws upon the life course perspective to understand how health inequality unfolds over time and emphasizes the life course processes that culminate in health inequality in old age. Much of the goal of this research lies in understanding the social processes, especially those related to socioeconomic position, that affect health over the life course and lead to health inequality as cohorts age. The second, and relatively less common, approach focuses on the health of older people, and particularly on the elderly as a subpopulation who are at risk of deprivation relative to the working age population. Research in this vein, much of it comparative, examines the role of the welfare state and public policy as a major influence on the well-being of the older population in developed countries. The role of the welfare state as a mechanism of social stratification, its potential to reduce inequality produced by markets and redistribute income over the life course, and the effects of trends in welfare state restructuring on levels of inequality are addressed by this literature.

1.1. Fundamental cause theory.

Perhaps the most commonly cited sociological theory currently used to explain the role of social factors in shaping health, *fundamental cause theory*, proposes that efforts to improve population health and reduce health disparities by identifying and targeting individually-based risks will be ineffective in the long run because they do not address the social conditions that structure the determinants of disease (Link and Phelan 1995). According to fundamental cause theory, disparities in health have persisted in developed countries despite the reduction or elimination of risk factors that historically stratified health along socioeconomic lines (for example, poor sanitation and infectious disease).

Indeed, because high socioeconomic position offers a broad range of flexible and multi-purpose resources that can be used to ward off whatever particular threats to health exist at a given time, the elimination of risk factors that are proximally linked to disease does not eliminate the relationship between socioeconomic position and health (Link and Phelan 1995). The risk factors that mediate the relationship change over time—today high cholesterol has replaced poor sanitation—and greater resources allow individuals to more quickly learn about and protect themselves from new risks as they arise, as well as receive more successful treatment of diseases that do occur, even when those treatments are universally and publicly available.

A few studies have attempted to empirically evaluate the principles of this theory and assess the conditions under which it is valid for both research and policy. For example, Lutfey and Freese (2005) demonstrated that higher status individuals in the U.S. tend to have greater access to medical practitioners who also have greater resources and available information for making treatment decisions. Using U.S. mortality data, Phelan, Link and colleagues found that less preventable causes of death, those for which we know little about prevention and treatment, were much more weakly associated with SEP than more preventable causes of death (Phelan et al., 2004).

However, the theory's predictive power remains unclear and relatively untested outside the unique health context of the United States. Comparative analysis of the U.S. and Canada demonstrated that lower levels of SEP lead to a greater likelihood of experiencing a highly preventable disease in the U.S., but not in Canada, suggesting that social policies and level of economic inequality may buffer the relationship between socioeconomic resources and the incidence of preventable disease (Willson, 2009). Thus, while fundamental cause theory refers to deep-rooted, systemic, structural mechanisms of stratification, these specific effects have rarely been explicitly tested. As such, the theory is widely cited, but more generally to acknowledge the importance of social conditions as mechanisms generating health inequality, with "piecemeal" investigations of specific social determinants, in particular geographic locations and time periods. More research is needed to determine the generalizability of fundamental cause theory to other welfare state contexts and historical periods.

1.2. Life Course Theories of Health Inequality.

While fundamental cause theory remains essentially silent on life course processes that produce health inequalities, other theories have emerged from findings that the magnitude of health disparities resulting from SEP varies over the life course and that there is variation in the pace of health change experienced by individuals as they age (see Pavalko and Caputo 2013 for a review). Thus, many recent studies of health inequality in the social sciences focus on the individual and social patterning of health trajectories over time. Theories of cumulative dis/advantage and cumulative inequality are key frameworks informing studies of health inequality among older people, suggesting that inequality is generated by a process through which initial relative advantage associated with structural location and resources results in systematic divergence in life course processes across individuals or groups over time (Dannefer, 2003; Ferraro & Shippee, 2009; Merton, 1968; O'Rand, 1996).

1.2.1. Cumulative dis/advantage (CAD)

Cumulative dis/advantage (CAD) as a mechanism of stratification suggests that early advantages and disadvantages continue to grow over time. This process occurs through compounding returns to resources such as education, and results in systematic divergence in life course processes across individuals or groups over time (Dannefer 1987, 2003; Merton 1968; O'Rand 1996). Health is a form of life course capital that individuals preserve or deplete at varying rates as they age based on the interaction of structure, human agency, and chance (O'Rand and Henretta 1999; O'Rand 2006). Generally, the CAD framework conceptualizes health inequality within a population in later life as the end product of an accumulative process of exposure to risks and opportunities that operates across the individual life course.

Although CAD explains an individual-level process of resource acquisition and risk avoidance, it is a process that has population-level implications for changing levels of inequality with age. However, studying CAD as a mechanism of health inequality presents conceptual and methodological challenges that are related to the unique nature of this particular life course outcome, which was not the original focus of the theory. Thus, the accumulation of advantage slows the rate of health decline, rather than accelerates the rate of growth as it does for other outcomes, such as income and wealth. Furthermore, the health of individuals across positions of both advantage and disadvantage confronts forces of senescence and mortality over time. As such, a remaining question is whether the growing levels of inequality in health that CAD predicts is a process that continues indefinitely or slows upon reaching a particular critical age (Dupre 2007; Willson, Shuey, and Elder 2007), or is impacted by other social factors such as welfare state policy and health care institutions (Corna 2013; Quesnel-Vallée 2004). This has proven to be a challenge to studies investigating whether or not a systematic divergence in health occurs within cohorts over the life course and has led to conflicting findings.

Indeed, while CAD was substantiated in the U.S. (Taylor, 2008; Prus, 2007; Dannefer, 2003) as well as across eleven European countries (Huisman et al 2004), other studies have shown that these health inequalities are stable (Kelley-Moore and Ferraro, 2004; Schöllgen et al., 2010), or even that they decrease in later life (Schoeni et al., 2005; Herd, 2006; House et al., 2005). These latter findings led to the “age-as-leveler” hypothesis, and were originally viewed as competing with CAD; however, recent evidence has tended to show that they may not be mutually exclusive (Dupre, 2007). Indeed, the “age-as-leveler” hypothesis may operate through several pathways that mitigate CAD mechanisms, but do not negate them. Thus, decreasing health inequalities in later life could arise out of population-wise processes of biological frailty and senescence, of working conditions no longer having an influential effect on health as people retire, and/or of improvements in policies that support the old, essentially leveling out major effects of SEP differences (Dupre, 2007; Herd, 2006; House et al., 1994; 2005).

Furthermore, this research has highlighted numerous methodological issues with studies of health inequalities among older individuals that may be at the root of these conflicting findings. First, general population observational studies tend to exclude institutionalized individuals, and thus the sickest, most isolated and lowest SEP older adults (Robert et al., 2009). In addition, power issues have historically prevented a focus on the oldest old, where inequalities might become increasingly large again (Herd, 2006).

A second argument against the validity of the “age-as-leveler” findings is whether some of the SEP indicators used to assess inequalities in later life have a sufficient predictive power. Some have argued that the bearing of SEP on health may be considerably weaker in the elderly population (Robert et al., 2009), therefore, the choice of indicators used (or in many cases, the availability of certain indicators in a given survey) may condition the extent of inequalities observed. Although indicators such as income, education and occupation may be accurately predictive earlier in life, they may not be for older adults (Robert and House, 1996). For instance, it has been suggested that education is no longer as relevant as people age and retire, whereas income remains a successful predictor (Robert et al, 2009; House et al., 2005). Yet others have argued that income might also decrease in predictive strength in a similar manner as education, and financial assets might be a more important SEP indicator at older ages (Robert

and House, 1996). Finally, these effects may be contextually-specific. Indeed, Grundy and Holt (2001) examined the effectiveness of seven SEP indicators including social class, income, education to study health inequalities among the elderly in the U.K., and found that all were associated with self-reported general health status. However the best predictive power was attributed to social class or education used in combination with a measure of deprivation.

Finally, selective mortality is often brought forward in the literature as a contributor to the evidence supporting the “age-as-leveler” hypothesis (Dupre, 2007). Cumulative disadvantage over a life course might result in premature death, leaving only the strongest individuals from the disadvantaged groups (be it racial/ethnic groups or low SEP groups); consequently, when comparing the resilient survivors from the disadvantaged groups to the survivors from more advantaged groups, it appears as though inequalities among the elderly are diminishing relative to earlier in life (Ferraro, 2009). Although some studies have found that this indeed contributes to “age-as-leveler” findings, mortality selection cannot fully explain the reduction in health inequalities between low and high SEP groups (McMunn & al., 2009; Herd, 2006).

1.2.2. Cumulative inequality theory

Recently, cumulative inequality theory (CI; Ferraro, Shippee and Schafer 2009; Ferraro and Shippee 2009) integrated elements of CAD, life course principles (Elder 1998) and stress process theories (Pearlin 1989) to propose formalized axioms that specify the processes leading to accumulated inequalities in health. The synthesis of elements from these theories and the fact that CI was developed specifically for understanding processes generating inequality in *health* outcomes (as opposed to life course inequality more generally, as is CAD) are unique contributions of the theory.

The five axioms of CI theory are covered in depth elsewhere (Ferraro, Shippee and Schafer 2009; Ferraro and Shippee 2009); however, here we focus on several key aspects of the theory. First, CI theory emphasizes the importance of social systems in generating inequality, which leads to a focus on the influence of reproduction, genes and environment, and childhood conditions on adult health outcomes (Ferraro and Shippee 2009). The notion that early life socioeconomic environment initiates pathways or trajectories of health advantage or disadvantage that continue across the life course is not new (for review see Corna, 2013; Graham, 2002), but this emphasis urges researchers of inequality in later life to ask when and how accumulative processes begin and to focus on early life to understand later life outcomes. Life course research has increasingly focused on the effects of timing, duration, and change in childhood circumstances on adult achievement and health (e.g., McDonough, Sacker, and Wiggins 2005; Wagmiller et al. 2006), and CI theory also formalizes the importance of “magnitude, onset, and duration of exposures to advantage and disadvantage” (Ferraro and Shippee 2009) in order to better understand how multiple life domains interact and how risk factors accumulate.

Although CI theory heavily emphasizes that inequality in health is structurally generated, it also includes a principle of the life course perspective that is often neglected in research: the proposition that trajectories may change due to human agency and, in particular, the fact that people have the ability to perceive how they are doing, which influences their subsequent actions (Ferraro and Shippee 2009). CI theory draws upon symbolic interaction and social comparison theories to propose that perceptions of resources may be more important than

actual resources in shaping trajectories. It will be interesting to see how this plays out empirically, although research testing this proposition may be difficult to execute due to data limitations. There is some evidence that individuals' perceptions of health are influenced by social factors such as their socioeconomic position and age, but more research is needed to understand the role of perceptions of positions on health and certainly to disentangle the effects of structure and agency on health.

Finally, CI theory tackles the thorny subject of selective mortality and proposes that because cumulative inequality in health may result in early mortality, nonrandom selection leads to changes in the composition of cohorts (Ferraro and Shippee 2009). The loss of the most disadvantaged individuals in a population will give the appearance of decreasing health inequality in later life and leads Ferraro and Shippee (2009:336) to ask, "Stated plainly, should gerontologists study older people only?"

Today, most research on health inequality draws to some extent on the theories discussed above, and views health inequality in old age as an end-product of life-long processes. But life course theories of health inequality generally do not explicitly acknowledge that the social conditions shaping exposures to risks and opportunities shift rather dramatically in old age due to age-based requirements for access to welfare state entitlements such as income supplements and universal health care (particularly, though not exclusively, in the United States). We next discuss broad theories that address the role of the welfare state on inequalities in old age.

2. WELFARE STATES AND THE INTERPLAY OF SOCIAL SOLIDARITY AND EQUITY

Theories in the previous section highlight that individual advantages related to socioeconomic position in old age are linked to socioeconomic and health advantages across the life course, but this relationship is also mediated by public policy decisions and institutions (Crystal 2006). Policies that accentuate economic equality may buffer the effects of an earlier lack of social resources on health. It follows from fundamental cause theory that in societies characterized by less stratification of and competition for resources, health disparities at all ages will be lower than in societies with greater inequality (Willson 2009).

Early theories of the state's role in the provision of key social transfers and provisions to ensure a level of well-being for its citizens drew upon modernization theory and the "logic of industrialism" and concluded that population aging was a primary motivation for welfare state development (see Quadagno, Kail, and Shekha 2011 for a review). Industrialization disrupted the ability of families and communities to provide support in case of illness and/or later life, and, at the same time, contributed to economic growth and a surplus of funds that made it possible for this support to be shifted to governments.

Institution theory (for example, Scott 2001) provides a framework for understanding the role of the welfare state in shaping life course policy that affects levels of health inequality in old age. At the level of the state, institutions have the potential to "transform incalculable insecurity into calculable risks and shared meanings" as well as establish opportunity structures and incentives for promoting individual action that leads to collective benefits (Weymann 2009: 114). Thus,

welfare states notably attempt to mitigate unexpected and unavoidable risks such as sickness, unemployment, and old age (Briggs 2000).

Thus, the first government-mandated social health insurance program was inaugurated in 1883 by Otto Von Bismarck, first Chancellor of the German Empire, under the moral underpinnings that workers, or perhaps more cynically, their work capacity, were deserving of social insurance (Briggs 2000). Thus, in this landmark piece of legislation that was subsequently widely copied and adopted around the world, Bismarck enacted a law requiring employer (1/3) and employee (2/3) contributions to a sickness fund, ensuring co-subsidizing and pooling of risk (World Health Organization 2000). Similarly, public pensions were also based on the concept of social insurance and would allow recipients to maintain the standard of living they had in their working years into retirement (Quadagno et al. 2011). Both flagship programs of the welfare states thus originally developed from this view of social solidarity extended to the “deserving” workers.

While the first part of the 20th century is marked by the extension of similar programs to larger segments of the population within countries (workers’ dependents, and former workers in the case of health insurance in old age) and to more countries around the world, the second part of this past century saw the emergence of new principles of social protection. Often linked to the seminal British Beveridge report (1942), reforms that followed broadened the focus of state protection from the worker to all citizens, and “from cradle to grave”. This led to a new wave of reforms promoting universal access on the basis of a principle of equity recognizing health and a decent standard of living as fundamental human rights (UN, 1948). However, following a period of rapid expansion of these programs, recent decades have seen a retrenchment of these universal welfare state entitlements in many countries (OECD, 2011). Thus, in most developed countries, Bismarckian and Beveridgian perspectives now co-exist through different programs, but are not necessarily integrated in a coherent framework with clear indications for health inequality, particularly among the elderly.

It is in the context of this framework provided by the welfare state that most of the population makes long-term plans for old age (Weymann 2009). The social rights associated with welfare state benefits reduce uncertainty and buffer the influence of the market; however, depending on the insurance structure of these entitlements, access to the privileges associated with social rights can mean inclusion for some individuals and groups and exclusion for others, for example, pension benefits that target very specifically defined groups according to work history and earnings (Weymann 2009). Consequently, welfare states are “mechanisms of social stratification” as social programs can reduce inequality produced by markets and even out income over the life course across class, gender, and racial lines (O’Connor, Orloff, and Shaver 1999).

Thus, the extent to which welfare states redistribute resources can have a significant effect on the well-being of older people and levels of inequality in various outcomes in old age (Myles and Quadagno 2002). Accordingly, in the next subsections, we will focus on the two flagship social policy programs that welfare states have developed to care for the elderly population, namely pensions and the health system. First, we will examine recent trends in pensions among OECD countries that raise some concerns for rising income (and by extension, health) inequality, if left

unchecked. In addition, we will also examine how health systems currently (fail to) respond to the needs for long term care of the elderly population.

Increasingly, however, there is also the recognition that even universal programs may not suffice to stem inequality, particularly when the focus of intervention is on average population effects rather than on the distribution, or level of inequality (Frohlich and Potvin, 2008). To respond to this need for targeted intervention, new policy models have been developed and strongly promoted by the World Health Organization (WHO) in the last decade that are salient for the question of social inequalities in health among the elderly, namely the Social Determinants of Health (SDH) and Age-Friendly Communities (AFC). We will review each of these policy models in turn and discuss their potential for limiting health inequalities among the elderly.

2.1. Pensions

With population aging leading to a need for increased pension expenditures, pension systems in high income countries are encountering the common challenge of balancing affordability of pension systems with supplying sufficient pensions to account for the retirement income of elderly populations. The Organisation for Economic Cooperation and Development (OECD) monitors the evolution of pension systems among its member countries (34 high and middle-high income countries). In its 2013 report, it highlights two major policy trends aiming to achieve this balance: a shift toward funded private pensions and reforms of pay-as-you-go public pension systems. Both of these trends are noted by the OECD as having substantial implications for increases in inequality, and, we argue, for potentially compounding existing inequalities as well.

The move towards a greater reliance on private pensions points to the retrenchment of the public pension system in many countries, and most notably in English-speaking countries. In Canada and the United States for instance, public transfers now supply less than 40% of a retiree's income, significantly below the OECD countries' average of 59%. While these private pensions may ensure a decent retirement income for their contributors, they typically do not lead to a pooling and redistribution to low-income contributors. Thus, these countries are likely to face an increasing polarization of incomes at retirement between those who rely almost exclusively on public pensions and those who rely on private pensions. Furthermore, as we know from CAD and CI theories, these different statuses in the face of retirement stem from life course trajectories of dis/advantage; thus a greater reliance on private pensions may in fact further compound these trajectories, in particular in the face of shrinking public pensions. Finally, private pensions also expose individual contributors to investment risk and individualize the cost of living longer, rather than mutualise it (OECD, 2012).

At the other end of the policy spectrum, some countries have steered away from private pensions, partly due to public dissatisfaction, and have tended toward the second trend, reforms of pay-as-you-go public pension systems. In these (mostly European continental and Scandinavian) countries, public transfers provide approximately 60% of retirees' incomes. In order to ensure the solvency of the public mutual insurance funds, reforms have instated, among other measures, the increase of retirement age. Accordingly, some countries, like the United Kingdom and the Czech Republic, have already increased the retirement age up to 68 or

69 years old, and it is expected that, by 2050, normal retirement age will be 67 years old in most OECD countries (OECD, 2013). However, as argued by Lowsky et al. (2013), using chronological age as a criterion for program entitlements may increasingly constitute an inaccurate proxy for need in the face of divergent life course trajectories. Again, then a divergence is to be expected, with some easily working to those ages and beyond, and others whose health will fail them well before reaching the age for entitlement. Few countries have enacted policies to address these anticipated disparities, with the notable exception of France. Indeed, one of the main innovations and most hotly debated measures of the pensions reform act voted in by the French Parliament in December 2013 is the *compte personnel de prévention de la pénibilité*. These personal accounts will monitor work-related hardships based on ten criteria such as noise levels, night shifts, painful postures, etc. over individuals' work life. On the basis of the "points" accumulated for work-related hardships, workers will then have access to the following mitigating measures: retraining for another job, a switch to part-time work with full-time pay in later years of their work life, or early retirement (as young as 60 years old) (Service Public, 2014).

Aside from the two trends highlighted above, the OECD (2013) also notes that entitlements have been shrinking and that individuals who do not contribute fully throughout their work life will increasingly struggle in the future to achieve a decent standard of living. This is true of both public and private pensions, as the latter do not redistribute to lower incomes groups. Furthermore, this means that future generations of retirees will likely contribute more towards lower pensions, raising the question of intergenerational equity. Among the groups particularly at risk of losing out in these reforms are the middle-income groups and women. As there are systems in place to protect workers with the lowest incomes, and those with the highest income have other sources of income and assets to supplement their public pension, it is those in the middle who are most likely to be lacking retirement income. In addition, as women are less likely to contribute to pensions over full careers, less likely to have sources of financial support other than public pensions and are more likely to live longer than men, they are also at greater risk of poverty in older ages. In sum, while pensions have had a significant impact on reducing poverty among the older population, as the OECD (2013) repeatedly highlights, they cannot in and of themselves stem income inequalities, particularly in light of current policy trends. Thus, access to other public services, and particularly to long term care, will prove essential in ensuring living standards among the elderly (OECD 2013). We turn to this issue in the next section.

2.2. Long-term care

Most health systems in high-income countries have implemented insurance systems that provide universal access to physician and hospital services for the elderly with minimal or no cost-sharing. However, with the epidemiologic transition to a bulk of chronic and degenerative diseases, this focus on curative care has long been deemed to only partially meet the needs of the elderly population, at least in terms of long term care services. Long-term Care (LTC) refers to a broad range of services encompassing skilled nursing care, assisted-living facilities, home care, hospice care, respite care, adult day care, and different in-home living arrangements (Sultz and Young 2009). These services provide a long-term response to chronic increases in disability brought about by functional limitations inherent in the process of individual aging (Feder 2000).

Even in the absence of comprehensive publicly-funded LTC services, this sector has experienced constant growth since the Second World War (Grabowski 2008). However, while the formal provision of these services was once concentrated in institutions, demand appears to be shifting towards assistance aimed at remaining in the community as long as possible: from 1994 to 2005, the 85+ age group showed a decrease of 9% in the report of at least one Activity of Daily Living (ADL) limitation for those living in institutions, while an increase of 3% took place among those living in the community (Lafortune, Balestat, and Disability Study Expert Group Members 2007). This suggests that there is an increasing proportion of those aged 85 and over who are in need of LTC services and now remain in the community.

This trend is probably not unrelated to the fact that governments across the board in developed countries have been, since the 1970s, championing a view of seniors as being more independent, more involved in their community and living as long as possible outside of institutional settings (World Health Organization 2002). However, this demand and the funding for it so far have been borne mostly by families and informal caregivers.

In fact, to this day, most LT caregiving is still undertaken by informal providers and paid for out-of-pocket, particularly with regards to care in the community. More recently, this informal care network came to be complemented by formal caregiving options, either through scarce and means-tested publicly-subsidized services and/or a plethora of private providers (Wiener and Tilly 2002). Thus, a shift has taken place where a privileged segment of the population can buy into the contemporary conception of individual aging in the private market; indeed, this is where elderly people, as consumers, can spend considerable amounts of money to receive the necessary support which enables them to remain active. Drawbacks to such a loose health sector include lack of information-sharing on available public services, an unstable workforce, little follow-up on elderly people's health and social issues, and greater inequities regarding access to these services (Rantz, Marek, and Zwygart-Stauffacher 2000). Indeed, the OECD reports that costs associated with greater needs (i.e. 25 hours/week), exceed on average 60% of the disposable income for all but the wealthiest quintile of the elderly population (OECD 2013).

This generates unmet needs which, at the individual level, accelerate the deterioration of health and promote institutionalisation which could have been otherwise prevented with efficient and integrated LTC coordination (Keefe, Légaré, and Carrière 2007). In the United States, a Commonwealth Fund study reported that 58% of the elderly respondents of a 1999 cross-state survey declared having unmet needs (Komisar, Feder, and Kasper 2005). In Canada, a Statistics Canada study drawing on the 2003 wave of the Canadian Community Health Survey showed that 42% of seniors requiring help with moving about in their home did not receive any help and that even among those who received a mix of formal and informal home care, 19% of seniors expressed unmet home care needs (Carrière 2006). This sheds light on the fact that even limited and fragmented public provision of LTC services may not be sufficient to ameliorate or even maintain patients' health status.

Finally, there is substantial evidence that elderly people and their families—especially those from lower socio-economic classes without an informal caregiving network—do not possess sufficient resources or control over their long-term care needs (Feder 2000; Messinger-Rapport 2009). Indeed, while a vast array of private care options exist, ranging from home care services

to high-end retirement communities or elder care centres (Grabowski 2008), many elderly persons lack the means to consume the variety of LTC products offered by the market and yet fall above the stringent requirements to access publicly-covered, means-tested LTC services.

2.3. WHO Health In All Policies

According to Marmot and Wilkinson (1999), the social determinants of health encompass individuals' material and psychosocial circumstances, and range from the more micro-level of health behaviors and social support to the more macro-level of unemployment rates and policies regarding food and transportation. Social policies can impact each of these levels, but up until very recently, assessments of the impact of social policies on health inequalities tended to take a "patchwork" approach, reviewing select policy domains as they pertain to major social determinants, such as education, employment, housing, etc. (e.g. Quesnel-Vallée and Jenkins 2008).

Increasingly, however, the recognition that social inequalities in health stem from multiple and intertwined areas of social intervention has led to the development of a new policy approach to curb social inequalities in health, termed "Health in All Policies". As several chapters in this handbook review some of the most important social determinants of health inequalities among the elderly in great depth, we focus here more specifically on those intersectoral policies and their potential impact on health inequalities among the elderly.

The "Health in All Policies" approach was developed and advocated by the WHO, notably under the impetus of the Finnish Presidency of the European Union in 2006. It favors intersectoral policies that attempt to overcome traditional governmental "silos" and rely on the participation of different levels of government (from the local to the supra-national). Aside from an explicit commitment to reducing health inequalities, the establishment of adequate governance structures allowing for this action is critical (McQueen et al., 2012). Finally, as it is fundamentally an evidence-based policy approach, it relies quite heavily on Health Impact Assessment (HIA), defined as "a combination of procedures, methods and tools by which a policy, programme or project may be judged as to its potential effects on the health of a population, and the distribution of those effects within the population." (EHP, 1999).

Taken together, this integrated policy approach should be more effective at reducing inequalities by offering coordinated mechanisms for action that are articulated around a common goal (McQueen et al., 2012). For instance, if the reduction of health inequalities is explicitly deemed a national priority, provided the appropriate governance structures are in place, an economic policy such as the reduction of income tax for the highest incomes could undergo a health impact assessment, and be reassessed accordingly. Similarly, if the reduction of inequalities in health among the elderly were a focus of intervention, changes to pensions funding systems might have to undergo an HIA as well.

As of yet, few countries have adopted such integrated policies. Accordingly, it is too early for empirical population research to tell whether the countries that have adopted such policies fare better than those that did not in terms of the control or reduction of health inequalities. However, we might still begin to examine these policies critically in terms of their potential to address social inequalities in health among the elderly.

Australia, Finland, New Zealand, Norway, Sweden, and the U.K. stand out as leaders in this policy area. In a recent report, the *Institut national de la santé publique du Québec* (INSPQ 2014) reviewed the integrated policies of each of these countries. In turn, we searched for information in these policies pertaining to either health inequalities within the elderly population or the elderly as a vulnerable population. All these countries have explicitly targeted early life and childhood as life course periods of intervention, which indicates sensitivity to life course processes producing health inequalities. However, while that perspective focuses on preventing the further development of health inequalities for future cohorts of elderly, it does very little to address health inequalities and the potential divergent trajectories that they both stem from and may further compound among *current* elderly cohorts.

Finland is the only exception in this regard (Ministry of Social Affairs and Health, Finland, 2008). Indeed, in their National Action Plan to Reduce Health Inequalities 2008-2011, Finland adopted the dual perspective of recognizing the elderly both as a population in need of targeted action relative to other groups as well as reducing health inequalities within the elderly population. The twin foci of promoting functional health in the community (notably through the expansion of social, rather than curative services) and the reduction of health inequalities among the elderly provide in our opinion an example of best practices. Finland would therefore constitute a good test case against other countries for testing our theories and monitoring the impact of policies that are mindful of existing and persisting health inequalities among the elderly.

Meanwhile, the WHO made progress on the Social Determinants of Health more generally, with the adoption on May 26 2012 by the World Health Assembly of resolution 65.8 endorsing the Rio Political Declaration on Social Determinants of Health (WHO, 2014). This entails that member countries agree that tackling Social Determinants of Health is a fundamental approach to the work of WHO and a priority area for action. It suggests that further policy changes may be afoot in many other countries.

2.4. WHO Age-Friendly Environments Program

The previous sub-section highlighted the dearth of elderly-specific policies with regards to health inequalities. Thus, we turn next to another integrated policy approach that could be salient in this context as well, which now focuses explicitly on the elderly, namely the WHO Age-friendly Environments Programme (WHO, 2014b). A recurring theme in the age-friendly community literature is the concept of “ageing in place”, which captures the social and policy goals of age-friendliness (Hooyman and Kiyak, 1996; Hanson & Emlet, 2006; Lui & al., 2009). In a national survey by the AARP concerning housing and home modification issues, over 90% of adults 65 and over indicated that they wished to remain in their homes as long as possible (Bayer & al., 2000). Hooyman and Kiyak (1996) explain that being capable of ageing in one’s own home is greatly facilitated or hindered by the policies and services that support older individuals in a community, who begin to experience cognitive and physical limitations, leading to reduced independence. Furthermore, age-friendly communities enhance older people’s quality of life but would also benefit all of their residents, regardless of age and functional capacity (Alley & al., 2007).

Thus, in recognition of these stated needs, the WHO has pursued “healthy” or “active” aging initiatives for a number of years (WHO, 2002). A central component of the WHO Age-friendly

Environments Programme is the “Global Age-Friendly Cities Guide”, which was developed based on focus groups with lower and middle class older adults 60 years and older, caregivers of older individuals and service providers. The project was partly funded by the Public Health Agency of Canada (PHAC) (Plouffe & Kalache 2011) and included a total of thirty-five cities in both developed and developing countries, thirty-three of which participated in the focus groups (WHO, 2007).

Based on the evidence gathered in these focus groups, the WHO created a checklist of interacting determinants of active ageing in a community. These include the essential features of eight domains: outdoor spaces and buildings; transportation; housing; social participation; respect and social inclusion; civic participation and employment; communication and information; community and health services (WHO, 2007). Programs connected to the WHO Global Network of Age-Friendly Cities and Communities have emerged in Canada, France, Ireland, Portugal, the Russian Federation, Slovenia, Spain and the USA (WHO, 2012).

The WHO Global Age-Friendly Cities Guide recognizes that the older population is a heterogeneous group in terms of needs and functional capacity, and that inequalities in health and functioning increase with age. Social, economic and physical features cause differences in life expectancy, functional capacity and health among older adults (Plouffe & Kalache, 2010) and, therefore, policy should aim to mitigate these disparities (WHO, 2007). Indeed, the physical environment’s impact on health and healthy lifestyle choices has been widely explored in recent literature (Menec & al., 2011). A study by Dunn (2002) found that disparities in housing conditions played a role in the creation of health inequalities, consistent with the WHO finding that appropriate housing influenced access to services in the community and therefore impacts the older adult’s quality of life (WHO, 2007). Policy measures and age-friendly services may assist in reducing these inequalities; some have already been put in place, such as in Ponce, where free transportation to medical appointments is provided from seniors’ centres (WHO, 2007).

Another example of an age-friendly initiative contributing to shrinking inequalities among the elderly is the Advantage Initiative Model, which was used to assess age-friendliness in a community in Western Washington (Hanson & Emlet, 2006). Following the assessment, the community’s Senior Information and Assistance program increased the distribution of information and outreach to isolated and low-income older adults; between 2003 and 2004, there was an increase of two and a half times the amount of older people seeking help through this program. In addition, the Advantage Initiative led to the development of a guide indicating free or low-cost exercise programs available to the older population as well as to the creation of biweekly walking groups for seniors. However, Hanson and Emlet (2006) emphasize that in the case of the AdvantAge Initiative, assessing livable income would be required as part of the model, because in Western Washington it was found that older adults who had incomes under twice the Federal poverty level had poorer outcomes on many different indicators compared to older adults above 200% of the Federal poverty level (Hanson and Emlet, 2006).

In sum, while the Global Age-Friendly Cities Guide was originally developed with middle and low income individuals, and presumably then, also emphasizes the specific needs of these subgroups of elderly, these policies might still have to explicitly assess the level of inequalities in their

populations and the differential impact of these population interventions. In the same vein, a lack of certain services in a community can raise inequalities in health; the WHO project found that many cities have nonexistent or poorly organized home care services that are too expensive and too difficult to access due to limiting criteria for eligibility (WHO, 2007), consequently many elderly in need of these services will not be provided with care and might see their health further deteriorate.

3. PROMISING AVENUES FOR SOCIOLOGICAL RESEARCH

While the study of social inequalities in health has thrived since the 1970s, it is only in the past two decades that governments have begun enacting policies that explicitly tackle health inequalities and the unequal distribution of their social determinants (Graham and Power 2004). Thus, public health policy in many countries now has broadened its mandate from a concern with population health to the protection of health equity. This is particularly true in Europe, but can also be found in the United States with the *Healthy People* focus on reducing disparities, or in Canada with its definition of population health as “an approach to health that aims to improve the health of the entire population and to reduce health disparities among population groups” (Health Canada 2008).

Yet, Graham and Power (2004) contend that these initiatives conflate the (social) determinants of health and the social processes that create an unequal distribution of those determinants in society. This confusion has led to policy perspectives that wrongly assume that addressing health determinants will also de facto reduce inequalities. Thus, while recent decades have seen improvements in determinants of health (e.g., rising living standards, higher average education, lower smoking rates), with concomitant benefits in population health, health inequalities have persisted or even increased. In line with Link and Phelan’s (1995) fundamental cause perspective, many have therefore come to recommend that, to truly address health inequalities, policy agendas will have to tackle not only the social determinants of health, but also the determinants of social inequality that shape the myriad ways in which social advantage cumulates over the life course and across generations (Coburn 2004; Graham and Power 2004).

Exworthy (2008) identifies seven challenges inherent to a social determinants of health approach to policymaking that compound the conceptual difficulties highlighted by Graham and Power (2004). Among those, the demanding task of enacting policies in the face of multifactorial exposures and complex causal chains that summon concerted initiatives across many governmental departments and beg better data collection. In addition, the life-course perspective that underlies much of this research poses the additional problem that the policy cycle is ill-equipped to deal with such long-term processes (since most electoral processes follow timelines measured in years, not decades). While issues relating to the need to rethink policy in the face of new risks across the life course have recently been addressed by policy makers at the request of the OECD (2007), Exworthy (2008) argues that part of the solution to these challenges may come from researchers, through the development of conceptual models and appropriate methodologies that better conform to the subtleties of the social determinants of health approach in a policy setting. It is in recognition of these challenges that we have highlighted the policy initiatives that seem most promising in this regard, namely the WHO Health In All Policies approach and the Age-friendly Environments Programme. As we noted,

much remains to be done in evaluating the impact of these programs, and we would argue that a sociological theoretical lens would illuminate important facets of these processes.

However, this research is evidently fraught with empirical challenges. First is the lack of variation in the population's exposure to universal programs in a given country and point in time. Yet, as we highlighted, natural policy experiments are happening everywhere around the world. These could be exploited empirically to understand how the policy context shapes the structure of opportunity of individuals. Again, all the theories we review, from fundamental cause to cumulative inequality, would provide fruitful frameworks for the study of these effects. We have highlighted in this chapter how, for the most part, policy reforms such as those pertaining to pensions are still being enacted without much consideration for their ramifications on inequalities (and by extension health inequalities), even though both a policy analysis by the OECD and all the theories we highlighted point to a risk for increasing inequalities as a result of these changes. There are therefore many opportunities for research arising from these policy variations, particularly with methodological approaches drawn from the counterfactual account of causality, such as difference-in-difference models for instance (See Schlotter, Schwerdt and Woessmann, 2010, for a review of some of these causal approaches to policy evaluation).

Furthermore, the shared issues we have uncovered in this chapter across developed countries mean that we can learn from one another, and that cross-nationally comparative research could prove to be a particularly advantageous strategy in this regard. Here, the sociological imagination can make a distinct contribution. Indeed, the focus in evaluating the impact of those policy interventions (to the extent that there is any evaluation at all) is often towards health outcomes, which obscures the existence, persistence, or even development of social inequalities. Yet, as Foner (2000) reminds us, sociologists are uniquely poised (and tooled) to uncover those processes, particularly as it pertains to aging.

Of course, this line of research comports its own trials, chief among which data harmonization and the measurement of policy context. Fortunately, headway is being made on both counts. On data harmonization, major cross-national initiatives such as the Survey of Health, Ageing and Retirement (SHARE), as well as the English Longitudinal Study of Ageing (ELSA), are harmonized with the Health and Retirement Study (HRS), and are increasingly bearing fruits (e.g. Banks et al. 2006; Crimmins, Kim and Solé-Auró, 2011). In addition, further resources are being developed to assist in the dissemination of these data initiatives: See the Chicago Core on Biomarkers in Population-Based Aging Research (CCBAR) list of other international longitudinal surveys on aging (CCBAR, 2014), as well as the Integrative Analysis of Longitudinal Studies of Aging (IALSA) network and the for post-hoc harmonization initiatives of other aging surveys (IALSA, 2014), and finally the Healthy Ageing across the Life Course (HALCyon) Network (HALCyon, 2014) on British cohort studies.

In terms of policy indicators, one strategy is to focus on particular policies, which has the advantage of seeing a plausible impact on very specific outcomes (e.g. Garcia and Crimmins, 2013 for cancer screening policies). Conversely, cross-national assessments of the impact of broader social policies will meet with the challenge of lack of specificity in the outcome, given that these are policies with diffuse effects: where would we expect to see the health effects of changes in pensions policies for instance? Lundberg et al. (2008) provide a compelling example

of research making headway in this area, notably by using specific policy indicators that are congruent with the outcome (i.e. family policies and infant mortality, and pensions policies and life expectancy at 65). Thus, the most promising research in this area relies on indicators of the policy context that precisely measure entitlements, such as those provided by initiatives like the Welfare State Entitlements Data Set (Scruggs, Jahn and Kuitto, 2013) and the Social Citizenship Indicator Program (SCIP, 2014) for general welfare state entitlements, as well as the Comparative Family Policy Database (Gauthier, 2014) for family policies and the Health Insurance Access Database for health insurance policies (Quesnel-Vallée et al. 2012).

In sum, we have hoped to show in this chapter that much could be gained from an intersection of sociological theories of health inequalities and the study (and evidence-informed development) of social policies. When social policies fail to acknowledge that current inequalities among the elderly are the product of life course trajectories of cumulative dis/advantage, even universal benefits may fail to mitigate health inequalities. We highlighted that considerable change occurs in policies that could be fruitfully studied sociologically, using the right theories, methods, micro-data and contextual data. With this, we hope to have pointed towards questions that could move this research agenda forward.

4. REFERENCES

- Alley, D., Liebig, P., Pynoos, J., Banerjee, T., & Choi, I. H. (2007). Creating Elder-Friendly Communities. *Journal of Gerontological Social Work*, 49(1-2), 1–18. doi:10.1300/J083v49n01_01
- Banks, J., Marmot, M., Oldfield, Z., & Smith, J. P. (2006). Disease and disadvantage in the United States and in England. *JAMA: The Journal of the American Medical Association*, 295(17), 2037–2045. doi:10.1001/jama.295.17.2037
- Bayer, A.-H., Management, A. K., Harper, L., & Group, A. P. G. (2000). Fixing to Stay: A National Survey on Housing and Home Modification Iss... AARP. Retrieved December 7, 2013, from <http://www.aarp.org/home-garden/housing/info-2000/aresearch-import-783.html>
- Beckfield, J., & Krieger, N. (2009). Epi + demos + cracy: Linking Political Systems and Priorities to the Magnitude of Health Inequities—Evidence, Gaps, and a Research Agenda. *Epidemiologic Reviews*, 31(1), 152–177. doi:10.1093/epirev/mxp002
- Bergqvist, K., Yngwe, M. Å., & Lundberg, O. (2013). Understanding the role of welfare state characteristics for health and inequalities - an analytical review. *BMC Public Health*, 13(1), 1234. doi:10.1186/1471-2458-13-1234
- Brennenstuhl, S., Quesnel-Vallée, A., & McDonough, P. (2012). Welfare regimes, population health and health inequalities: a research synthesis. *Journal of Epidemiology and Community Health*, 66(5), 397–409. doi:10.1136/jech-2011-200277
- Briggs, A. (2000). The welfare state in historical perspective. *The Welfare State Reader*, 2. Retrieved from [http://books.google.ca/books?hl=en&lr=&id=OdWdQs8RT1QC&oi=fnd&pg=PA16&dq=Briggs+\(2000\)+Welfare+States+&ots=BjCwQeWoL7&sig=PkZud4akyFR-tXghynNAE8IJVTO](http://books.google.ca/books?hl=en&lr=&id=OdWdQs8RT1QC&oi=fnd&pg=PA16&dq=Briggs+(2000)+Welfare+States+&ots=BjCwQeWoL7&sig=PkZud4akyFR-tXghynNAE8IJVTO)
- Carrière, G. (2006). Seniors' use of home care. *Health reports/Statistics Canada, Canadian Centre for Health Information= Rapports Sur La santé/Statistique Canada, Centre Canadien D'information Sur La Santé*, 17(4), 43.
- CCBAR. (2014). Chicago Core on Biomarkers in Population. *The University of Chicago NORC Center on Aging*. Retrieved January 31, 2014, from <http://biomarkers.uchicago.edu/chicagocoreonbiomarkers.htm>
- Coburn, D. (2004). Beyond the income inequality hypothesis: class, neo-liberalism, and health inequalities. *Social Science & Medicine*, 58(1), 41–56.
- Corna, L. M. (2013). A life course perspective on socioeconomic inequalities in health: A critical review of conceptual frameworks. *Advances in Life Course Research*. Retrieved from <http://www.sciencedirect.com/science/article/pii/S1040260813000038>
- Crimmins, E. M. (2004). Trends in the health of the elderly. *Annu. Rev. Public Health*, 25, 79–98.
- Crimmins, E. M., Kim, J. K., & Solé-Auró, A. (2011). Gender differences in health: results from SHARE, ELSA and HRS. *The European Journal of Public Health*, 21(1), 81–91. doi:10.1093/eurpub/ckq022
- Crystal, S. (2006). Dynamics of late-life inequality: Modeling the interplay of health disparities, economic resources, and public policies. *Aging, Globalization and Inequality: The New Critical Gerontology*, 205–213.
- Dannefer, D. (1987). Aging as intracohort differentiation: Accentuation, the Matthew effect, and the life course. In *Sociological Forum* (Vol. 2, pp. 211–236). Springer. Retrieved from <http://link.springer.com/article/10.1007/BF01124164>

- Dannefer, D. (2003). Cumulative advantage/disadvantage and the life course: Cross-fertilizing age and social science theory. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 58(6), S327–S337.
- Dunn, J. R. (2002). Housing and inequalities in health: a study of socioeconomic dimensions of housing and self reported health from a survey of Vancouver residents. *Journal of Epidemiology and Community Health*, 56(9), 671–681. doi:10.1136/jech.56.9.671
- Dupre, M. E. (2007). Educational differences in age-related patterns of disease: reconsidering the cumulative disadvantage and age-as-leveler hypotheses. *Journal of Health and Social Behavior*, 48(1), 1–15.
- ECHP. (1999). *Gothenburg Consensus: Health Impact Assessment* (Report). HIA Gateway, West Midlands Public Health Observatory, hia@wmpo.org.uk. Retrieved from <http://www.apho.org.uk/resource/item.aspx?RID=44163>
- Elder, G. H. (1998). The life course as developmental theory. *Child Development*, 69(1), 1–12.
- Exworthy, M. (2008). Policy to tackle the social determinants of health: using conceptual models to understand the policy process. *Health Policy and Planning*, 23(5), 318–327.
- Feder, J., Komisar, H. L., & Niefeld, M. (2000). Long-term care in the United States: An overview. *Health Affairs*, 19(3), 40–56.
- Ferraro, K. F., & Shippee, T. P. (2009). Aging and cumulative inequality: How does inequality get under the skin? *The Gerontologist*, 49(3), 333–343.
- Ferraro, K. F., Shippee, T. P., & Schafer, M. H. (2009). Cumulative inequality theory for research on aging and the life course. *Handbook of Theories of Aging*, 413–433.
- Foner, A. (2000). Age integration or age conflict as society ages? *The Gerontologist*, 40(3), 272–276.
- Frohlich, K. L., & Potvin, L. (2008). Transcending the Known in Public Health Practice. *American Journal of Public Health*, 98(2), 216–221. doi:10.2105/AJPH.2007.114777
- Garcia, K., & Crimmins, E. M. (2013). Cancer Screening in the U.S. and Europe: Policies, Practices, and Trends in Cancer Incidence and Mortality. In N. Hoque, M. A. McGehee, & B. S. Bradshaw (Eds.), *Applied Demography and Public Health* (pp. 125–154). Springer Netherlands. Retrieved from http://link.springer.com.proxy2.library.mcgill.ca/chapter/10.1007/978-94-007-6140-7_9
- Gauthier, A. (2014). The Comparative Family Policy Database. *Max Planck Institute for Demographic Research*. Retrieved January 31, 2014, from <http://www.demogr.mpg.de/cgi-bin/databases/fampoldb/index.plx>
- Grabowski, D. C. (2008). The market for long-term care services. *Inquiry*, 45(1), 58–74.
- Graham, H. (2002). Building an inter-disciplinary science of health inequalities: the example of lifecourse research. *Social Science & Medicine*, 55(11), 2005–2016.
- Graham, H., & Power, C. (2004). *Childhood disadvantage and adult health: a lifecourse framework*. Health Development Agency London. Retrieved from http://www.gserve.nice.org.uk/niceMedia/pdf/childhood_disadvantage_health.pdf
- Grundy, E., & Holt, G. (2001). The socioeconomic status of older adults: How should we measure it in studies of health inequalities? *Journal of Epidemiology and Community Health*, 55(12), 895–904.
- HALCyon. (2014). Health Ageing Across the Life Course. *HALCyon*. Retrieved January 30, 2014, from <http://www.halcyon.ac.uk/>

- Hanson, D., & Emlet, C. A. (2006). Assessing a community's elder friendliness: a case example of The AdvantAge Initiative. *Family & Community Health, 29*(4), 266–278.
- Herd, P. (2006). Do Functional Health Inequalities Decrease in Old Age? Educational Status and Functional Decline Among the 1931-1941 Birth Cohort. *Research on Aging, 28*(3), 375–392. doi:10.1177/0164027505285845
- Hooyman, N. R., & Kiyak, H. A. (2008). *Social gerontology: A multidisciplinary perspective*. Pearson Education.
- House, J. S., Lantz, P. M., & Herd, P. (2005). Continuity and change in the social stratification of aging and health over the life course: evidence from a nationally representative longitudinal study from 1986 to 2001/2002 (Americans' Changing Lives Study). *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 60*(Special Issue 2), S15–S26.
- House, J. S., Lepkowski, J. M., Kinney, A. M., Mero, R. P., Kessler, R. C., & Herzog, A. R. (1994). The Social Stratification of Aging and Health. *Journal of Health and Social Behavior, 35*(3), 213. doi:10.2307/2137277
- Huisman, M., Kunst, A. E., Andersen, O., Bopp, M., Borgan, J.-K., Borrell, C., ... Mackenbach, J. P. (2004). Socioeconomic inequalities in mortality among elderly people in 11 European populations. *Journal of Epidemiology and Community Health, 58*(6), 468–475. doi:10.1136/jech.2003.010496
- IALSA. (2014). Integrative Analysis of Longitudinal Studies of Aging (IALSA). IALSA. Retrieved January 31, 2014, from <http://www.ialsa.org/?q=Home>
- Keefe, J., Légaré, J., & Carrière, Y. (2007). Developing new strategies to support future caregivers of older Canadians with disabilities: Projections of need and their policy implications. *Canadian Public Policy, 33*, S65–S80.
- Kelley-Moore, J. A., & Ferraro, K. F. (2004). The black/white disability gap: persistent inequality in later life? *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 59*(1), S34–S43.
- Komisar, H. L., Feder, J., & Kasper, J. D. (2005). Unmet long-term care needs: an analysis of Medicare-Medicaid dual eligibles. *Inquiry, 42*(2), 171–182.
- Lafortune, G., Balestat, G., & Disability Study Expert Group Members. (2007). Trends in severe disability among elderly people: Assessing the evidence in 12 OECD countries and the future implications. *Health Working Papers, (26)*.
- Link, B. G., & Phelan, J. (1995). Social conditions as fundamental causes of disease. *Journal of Health and Social Behavior, 80–94*.
- Lowsky, D. J., Olshansky, S. J., Bhattacharya, J., & Goldman, D. P. (2013). Heterogeneity in Healthy Aging. *The Journals of Gerontology Series A: Biological Sciences and Medical Sciences, 68*(1), 162. doi:10.1093/gerona/glt162
- Lui, C.-W., Everingham, J.-A., Warburton, J., Cuthill, M., & Bartlett, H. (2009). What makes a community age-friendly: A review of international literature. *Australasian Journal on Ageing, 28*(3), 116–121. doi:10.1111/j.1741-6612.2009.00355.x
- Lutfey, K., & Freese, J. (2005). Toward Some Fundamentals of Fundamental Causality: Socioeconomic Status and Health in the Routine Clinic Visit for Diabetes. *American Journal of Sociology, 110*(5), 1326–1372.

- Marmot, M., & Wilkinson, R. G. (1999). *Social determinants of health*. Oxford University Press, Oxford. Retrieved from <http://www.canadian-nurse.com/images/pdf/2008/cnj-sept-2008/files/assets/downloads/page0026.pdf>
- Marmot, Michael. (2004). Status syndrome. *Significance*, 1(4), 150–154.
- McDonough, P., Sacker, A., & Wiggins, R. D. (2005). Time on my side? Life course trajectories of poverty and health. *Social Science & Medicine*, 61(8), 1795–1808.
- McMunn, A., Nazroo, J., & Breeze, E. (2009). Inequalities in health at older ages: a longitudinal investigation of the onset of illness and survival effects in England. *Age and Ageing*, 38(2), 181–187. doi:10.1093/ageing/afn236
- McQueen, D., Wismar, M., Lin, V., Jones, C., & Davies, M. (2012). Intersectoral governance for health in all policies. Structures, actions and experiences. Retrieved January 23, 2014, from <http://www.euro.who.int/en/publications/abstracts/intersectoral-governance-for-health-in-all-policies.-structures,-actions-and-experiences>
- Menec, V. H., Means, R., Keating, N., Parkhurst, G., & Eales, J. (2011). Conceptualizing Age-Friendly Communities. *Canadian Journal on Aging/La Revue Canadienne Du Vieillessement*, 30(03), 479–493. doi:10.1017/S0714980811000237
- Merton, R. K. (1968). Social theory and social structure. Retrieved from <http://www.citeulike.org/group/14777/article/8898545>
- Messinger-Rapport, B. (2009). Disparities in long-term healthcare. *Nursing Clinics of North America*, 44(2), 179–185.
- Ministry of Social Affairs and Health (Finland). (2008). National Action Plan to Reduce Health Inequalities 2008-2011. Retrieved January 23, 2014, from <http://pre20090115.stm.fi/pr1227003636140/passthru.pdf>
- Myles, J., & Quadagno, J. (2002). Political theories of the welfare state. *Social Service Review*, 76(1), 34–57.
- O'Connor, J. S., Orloff, A. S., & Shaver, S. (1999). *States, markets, families: Gender, liberalism and social policy in Australia, Canada, Great Britain and the United States*. Cambridge Univ Press. Retrieved from <http://journals.cambridge.org/production/action/cjoGetFulltext?fulltextid=6273056>
- O'Rand, A. M. (1996). The cumulative stratification of the life course. *Handbook of Aging and the Social Sciences*, 4, 188–207.
- O'Rand, A. M. (2006). Stratification and the life course: Life course capital, life course risks, and social inequality. *Handbook of Aging and the Social Sciences*, 145–62.
- O'Rand, A. M., & Henretta, J. C. (1999). *Age and inequality: Diverse pathways through later life*. Westview Press. Retrieved from <http://psycnet.apa.org/psycinfo/1999-04196-000>
- OECD. (2007). Life Risks, Life Course and Social Policy. Retrieved January 23, 2014, from <http://www.oecd.org/els/soc/seminarontheliferiskslifecourseandsocialpolicy.htm>
- OECD. (2007). Modernising Social Policy for the New Life Course. *OECD*. Retrieved January 31, 2014, from <http://www.oecd.org/social/soc/modernisingsocialpolicyforthenewlifecourse.htm>
- OECD. (2012). OECD Pensions Outlook 2012. Retrieved January 30, 2014, from <http://www.oecd.org/daf/fin/private-pensions/oecd-pensions-outlook-2012.htm>
- OECD. (2013). Pensions at a Glance 2013: Retirement-Income Systems in OECD and G20 Countries. Retrieved January 23, 2014, from <http://www.oecd.org/pensions/pensionsataglance.htm>

- Pavalko, E. K., & Caputo, J. (2013). Social Inequality and Health Across the Life Course. *American Behavioral Scientist*. Retrieved from <http://abs.sagepub.com/content/early/2013/05/13/0002764213487344.abstract>
- Pearlin, L. I. (1989). The sociological study of stress. *Journal of Health and Social Behavior*, 241–256.
- Phelan, J. C., Link, B. G., Diez-Roux, A., Kawachi, I., & Levin, B. (2004). “Fundamental causes” of social inequalities in mortality: a test of the theory. *Journal of Health and Social Behavior*, 45(3), 265–285.
- Plouffe, L. A., & Kalache, A. (2011). Making communities age friendly: state and municipal initiatives in Canada and other countries. *Gaceta Sanitaria*, 25, Supplement 2, 131–137. doi:10.1016/j.gaceta.2011.11.001
- Prus, S. G. (2007). Age, SES, and health: a population level analysis of health inequalities over the lifecourse. *Sociology of Health & Illness*, 29(2), 275–296.
- Quadagno, J., Kail, B. L., & Shekha, K. R. (2011). Welfare states: Protecting or risking old age. In *Handbook of Sociology of Aging* (pp. 321–332). Springer. Retrieved from http://link.springer.com/chapter/10.1007/978-1-4419-7374-0_20
- Quesnel-Vallee, A., & Jenkins, T. M. (2009). Social Policies and Health Inequalities. In W. C. Cockerham (Ed.), *The New Blackwell Companion to Medical Sociology* (pp. 455–483). Oxford: Blackwell Publishing.
- Quesnel-Vallée, A., Renahy, E., Jenkins, T., & Cerigo, H. (2012). Assessing barriers to health insurance and threats to equity in comparative perspective: The Health Insurance Access Database. *BMC Health Services Research*, 12(1), 107. doi:10.1186/1472-6963-12-107
- Quesnel-Vallee, Amelie. (2004). Is it really worse to have public health insurance than to have no insurance at all? Health insurance and adult health in the United States. *Journal of Health and Social Behavior*, 45(4), 376–392.
- Rantz, M. J., Marek, K. D., & Zwygart-Stauffacher, M. (2000). The future of long-term care for the chronically ill. *Nursing Administration Quarterly*, 25(1), 51–58.
- Robert, S. A., Cherepanov, D., Palta, M., Dunham, N. C., Feeny, D., & Fryback, D. G. (2009). Socioeconomic Status and Age Variations in Health-Related Quality of Life: Results From the National Health Measurement Study. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 64B(3), 378–389. doi:10.1093/geronb/gbp012
- Robert, S., & House, J. S. (1996). SES differentials in health by age and alternative indicators of SES. *Journal of Aging and Health*, 8(3), 359–388.
- Schlotter, M., Schwerdt, G., & Woessmann, L. (2010). *Econometric Methods for Causal Evaluation of Education Policies and Practices: A Non-Technical Guide* (No. 4725) (p. 39). Retrieved from <http://ftp.iza.org/dp4725.pdf>
- Schoeni, R. F., Martin, L. G., Andreski, P. M., & Freedman, V. A. (2005). Persistent and Growing Socioeconomic Disparities in Disability Among the Elderly: 1982–2002. *American Journal of Public Health*, 95(11), 2065–2070. doi:10.2105/AJPH.2004.048744
- Schöllgen, I., Huxhold, O., & Tesch-Römer, C. (2010). Socioeconomic status and health in the second half of life: findings from the German Ageing Survey. *European Journal of Ageing*, 7(1), 17–28.
- SCIP. (2014). Social Citizenship Indicator Program (SCIP). *DSPACE at Stockholm University: Social Citizenship Indicator Program*. Retrieved January 31, 2014, from <https://dspace.it.su.se/dspace/handle/10102/7>

- Scott, A. J. (2001). *Global City-Regions: Trends, Theory, Policy: Trends, Theory, Policy*. Oxford University Press. Retrieved from <http://books.google.ca/books?hl=en&lr=&id=mHE0b45cEEUC&oi=fnd&pg=PR8&dq=Scott+2001+institution+theory&ots=MySpDqYmk-&sig=HSybVRPC6k492DPhy2dSmMymjR8>
- Scruggs, L., Kuitto, K., & Detlef, J. (2013). Comparative Welfare Entitlements Dataset 2 (CWED 2). *CWED*. Retrieved January 31, 2014, from <http://cwed2.org/>
- Service Public. (2014). Réforme des retraites : la loi est publiée au Journal officiel. *Service Public*. Retrieved January 30, 2014, from <http://www.service-public.fr/actualites/002825.html>
- Sultz, H. A., & Young, K. M. (2009). Long-Term Care. In *Health Care, USA: Understanding Its Organization and Delivery* (pp. 279–315). Jones & Bartlett Publishers.
- Taylor, M. G. (2008). Timing, Accumulation, and the Black/White Disability Gap in Later Life A Test of Weathering. *Research on Aging*, 30(2), 226–250. doi:10.1177/0164027507311838
- Wagmiller, R. L., Lennon, M. C., Kuang, L., Alberti, P. M., & Aber, J. L. (2006). The dynamics of economic disadvantage and children's life chances. *American Sociological Review*, 71(5), 847–866.
- Weymann, A. (2009). The Life Course, Institutions, and Life Course Policy. In *The Life Course Reader: Individuals and Societies Across Time* (pp. 139–58). Frankfurt: Campus Reader.
- Wiener, J. M., & Tilly, J. (2002). Population ageing in the United States of America: implications for public programmes. *International Journal of Epidemiology*, 31(4), 776–781.
- Willson, A. E. (2009). Fundamental Causes' of Health Disparities A Comparative Analysis of Canada and the United States. *International Sociology*, 24(1), 93–113.
- Willson, A. E., Shuey, K. M., & Elder Jr, G. H. (2007). Cumulative advantage processes as mechanisms of inequality in life course health1. *American Journal of Sociology*, 112(6), 1886–1924.
- Wolf, D. A., Hunt, K., & Knickman, J. (2005). Perspectives on the recent decline in disability at older ages. *Milbank Quarterly*, 83(3), 365–395.
- World Health Organization. (2000). *The world health report 2000: health systems: improving performance*. Geneva: WHO. Retrieved from <http://books.google.ca/books?hl=en&lr=&id=luqgKK2euxoC&oi=fnd&pg=PR7&dq=World+Health+Organization+2000+&ots=sKq3469Ive&sig=LcgiKBg6GT1ncsMFwlbZsrzVMuQ>
- World Health Organization. (2002). Active ageing: a policy framework. *WHO*. Retrieved January 23, 2014, from http://whqlibdoc.who.int/hq/2002/WHO_NMH_NPH_02.8.pdf?ua=1
- World Health Organization. (2007). Global age-friendly cities: a guide. *WHO*. Retrieved January 23, 2014, from http://www.who.int/ageing/publications/Global_age_friendly_cities_Guide_English.pdf
- World Health Organization. (2012). Good health adds life to years: Global brief for World Health Day 2012. *WHO*. Retrieved December 5, 2013, from http://whqlibdoc.who.int/hq/2012/WHO_DCO_WHD_2012.2_eng.pdf
- World Health Organization. (2014a). Mandate by Member States on Social Determinants of health. *WHO*. Retrieved January 30, 2014, from http://www.who.int/social_determinants/implementation/en/
- World Health Organization. (2014b). WHO Age-friendly Environments Programme. *WHO*. Retrieved January 30, 2014, from http://www.who.int/ageing/age_friendly_cities/en/