Mapping the Division of Labour in Long-Term Residential Care across Jurisdictions

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Abstract

Despite the international emphasis on care in private homes, the demand for long-term residential care is rising given the growing number of older persons and those living with severe disabilities. Rising acuity levels of residents have resulted in calls for more training for care providers and concerns have been raised about the supply of workers, drawing attention to the working conditions, pay, benefits and status attached to work in long-term residential care. This industry is a link in the international care chain, with wealthy countries seeking workers from poorer countries. Yet, cross-national data sources provide limited information on the long-term residential care labour force, reflecting the value attached to the sector and the level of concern about the well-being of the labour force. Data that are available indicate that care is prioritized, divided and measured in different ways in different contexts and that there are varying degrees of precariousness experienced by workers. The evidence from the data also suggests that the public not-for-profit sector and unionization are critical shelters for the mostly women providers. Using a feminist political economy approach, this thesis outlines data available from statistical sources in Europe and North America with a case examination of four countries: Canada, the United States, the United Kingdom and Sweden. It critically maps the comparative data on the supply of labour in this industry of health and social care, as well as on their locations and relations. It illustrates the extent to which the framing of care in conventional terms, influenced by both neoliberal and medical notions of care, limits the statistical infrastructure in terms of its capacity to adequately measure workforces involved in long-term residential care and to provide a basis for addressing the continuing supply of labour in this sector.

Table of Contents

List of Abbreviations

ADL – Activities of Daily Living

CA – Canada

CA LFS – Canadian Labour Force Survey

CHST – Canada Health and Social Transfer

CHT – Canada Health Transfer

CIHI – Canadian Institute for Health Information

CST – Canada Social Transfer

CPD – Comparative Perspectives on Precarious Employment Database

EU LFS – European Union Labour Force Survey

EU SILC – European Union Survey on Income and Living Conditions

FTE – Full-time Equivalent

GDP – Gross Domestic Product

GWD – Gender and Work Database

HCSA – Health Care and Social Assistance

HSC – Health and Social Care

IADL – Instrumental Activities of Daily Living

ISCO-88 – International Standard Classification of Occupations 88

LN – Licensed Nurse

LTC – Long-term Care

LTRC – Long-term Residential Care

NAFTA – North American Free Trade Agreement

NAICS – North American Industrial Classification System

NHS – National Household Survey

NOC-S – National Occupational Classification

OECD – Organization for Economic Co-operation and Development

PSW – Personal Support Worker

RN – Registered Nurse

SHA – System of Health Accounts

CA SLID – Statistics Canada Survey of Labour and Income Dynamics

SOC – Standard Occupational Classification System

SW – Sweden

UK – United Kingdom

US – United States

US CPS – United States Current Population Survey

List of Figures

List of Tables

Chapter 1: Introduction

Most high-income countries in the world share the pressures of aging populations and many governments are orienting health policy discussions to consider strategies for the care of older persons. Given the increasingly adopted vision of reducing public expenditures on health and social care, particularly in the current neoliberal context, much of the focus of these discussions is on costs. A common solution in many jurisdictions has been to decrease public expenditure by increasing privately funded care, either in for-profit long-term care facilities or in private homes with care delivered by home care workers or unpaid providers. In general, less attention has been paid to the care within facilities, even though much care continues to take place in long-term residential care, and even though the demand for residential care will increase over the next decades (Colombo et al., 2011). This shift to the emphasis on home care solutions can be attributed to their lower costs to governments, at least in the short run. Meanwhile, the neglect of focus on facility-based care partly stems from belief that long-term residential care is a last resort option reflecting failures of family, community and individuals to provide adequate care in family homes (Armstrong and Braedley, 2013; Armstrong et al., 2009; Braedley, 2013).

In Canada, approaches to care for older persons and the chronically ill have tended to focus on keeping recipients of care at home, out of more expensive facility care. This focus has been at the expense of thinking about both the work and the care that are taking place within long-term residential care facilities (Armstrong et al., 2009). And yet, long-term residential care

facilities house and employ vulnerable populations in Canadian society. Some argue these facilities are a reflection of society's concern for the vulnerable and disadvantaged, and in this sense the quality and accessibility of care within long-term residential facilities are indicative of the public's shared values for equity (Armstrong and Braedley, p. 12, 2013).

In general, the working conditions, skill levels, pay and benefits for the labour force in long-term residential care are largely invisible given that much of the data are not provided evenly by sub-industry in health and social care and that the main emphasis of health workforce planning is on mapping the availability of physicians, nursing professionals and various associate professionals (Armstrong, Armstrong, and Scott-Dixon, 2008). This thesis focuses on the largest groups of daily providers of care for older people who work in assisting occupations (such as personal support workers and care aides), support work (such as cleaners and food service staff) and in unpaid care (such as volunteers and family members). Further, this thesis aims to contribute to emerging discussions on long-term residential care by mapping the facility-based labour force, while using this exercise to raise larger empirical and theoretical questions about data collection and about the conditions of work in this sector.

The following questions, among others, are addressed: who works in long-term residential care? What are their skill levels and what sort of care do they provide? What are the conditions of work, pay and benefit levels? And what do the conventional methods of health workforce mapping reflect about the framing of care in these facilities? Starting from the perspective that "the conditions of work establish the conditions of care" (Armstrong et al. 2009, p. 13), this thesis examines the gaps in knowledge and in the statistical data on the labour force and how these gaps can be filled using existing resources of data to build portraits of the providers of care and their circumstances.

The statistical data available in North America and Europe are examined with a comparative focus on Canada in relation to three other countries: the United States, the United Kingdom, and Sweden. These four countries offer interesting possibilities for considering the opportunities and challenges of cross-national labour force comparisons in health and social care. They are different in their systems of health care. Sweden stands out as a social democratic state with a vision of universal care entitlements, and, on the other end of the continuum is the United States, where the politics of care are very different and most care is provided privately and for-profit. Moreover, the overall context for workers in terms of regulatory protections and employment standards is different in these four countries (Vosko, 2014). By setting Canada comparatively in relation to these three other countries, this thesis aims to examine the limitations to the statistical data infrastructure on health and social care workforces and the implications of these limitations for different contexts. The similarities and differences in the divisions of labour in each country are plotted with data that are available in order to explore what can be known about the work and what is missing from the data, restricting the possibilities for detailed analysis and reflecting both neoliberal and medical assumptions. The four countries selected for comparison differ in ways that demonstrate several of the key distinctions that are presented in this thesis – particularly in regard to definitions of and developments around public and private care within the context of neoliberalism and austerity that dominates throughout most high-income countries.

The comparative mapping undertaken within this thesis offers a unique approach to analyzing health and social care workforces that accounts for all occupation groups in care settings, including those typically excluded such as personal care providers in assisting occupations and support workers. Throughout, this thesis considers how the data on health and

social care labour forces are conventionally framed, particularly cross-nationally, and how this framing reflects specific political and economic interests that obscure developments of the labour force in long-term residential care. Nevertheless, through using harmonized measures of occupation developed for this thesis and by way of involvement with the *Comparative Perspectives on Precarious Employment Database*, differences in how care is divided in different contexts and the implications in terms of the precariousness experienced by different groups of workers, are explored.

Throughout, this thesis applies the lens of feminist political economy to evaluate and interpret the data in these contexts. This theoretical framework places the dynamics of gender, race and class centre-stage and allows for the analysis of care relationships as they unfold in the everyday and across several levels including the local, national, and international. Moreover, feminist political economy undertakes comparisons between contexts through a consideration of the historical, social, economic and political shifts with the understanding that different outcomes may arise in different contexts in spite of commonalities or similar pre-existing arrangements (Armstrong and Braedley, p. 11-12, 2013). A core legacy of feminist political economy is the connecting of production and reproduction, seeking to demonstrate that much of what is defined as productive in conventional economic terms is only possible through the caring for people. Assuming data are not simple reflections of objective reality, this theoretical framework encourages explorations of whose interests are served and whose are not by how work is counted and categorized. These themes will be further examined in Chapter 2 on theory.

The medical model of care

From the perspective of feminist political economy, data are assumed to reflect assumptions that ought to be exposed and examined in order to evaluate who is made visible and who is not (Waring, 1988; Picchio, 1992; Samers, 2001; Vosko, 2014). The dominant approach to measuring workforces in health and social care places emphasis on the professionalized occupations, including physicians, nurses, and other associate professionals, but which leaves out a wide array of providers including personal care and support workers (Armstrong, Armstrong and Scott-Dixon, 2008). In Canada, for example, the dominant approach is apparent with how the Canadian Institute for Health Information (CIHI) - an organization dedicated to the collection of data on health and health care workforces - houses databases on physicians, nursing professionals, and a selection of associate professional groups, but not on assisting providers or support providers such as personal support workers, cleaning and food service employees. CIHI also does not collect data on unpaid providers, whether volunteers or family members, nor does it collect data on the growing informal labour force in care that works both in facilities to supplement the care provided by the formal labour force, and in domestic settings. Gathering these data from Statistics Canada and other national and international statistical sources is also a challenge, particularly with regard to unpaid and informal providers.

This dominant approach of mapping health and social care workforces reflects a medical model for thinking about health care work, one that understands health care in terms of medical procedures, diagnoses, and pharmaceutical intervention, but not in terms of much of the direct attention involved in care such as bathing, feeding, changing, cleaning, and coordinating teams of care (Armstrong, Armstrong and Scott-Dixon, 2008). Of course, much care for older persons includes *social care* and what are sometimes referred to as *soft skills*, often left out of a medical

model framework, and, in long-term residential care, much of the labour falls into these other areas and is not defined as skilled (Armstrong, P., 2013). To understand and map care work in long-term residential facilities the realities of long-term care work can best be captured with a concept of care that is both material and relational, including medical and social aspects of care.

Neoliberalism and austerity

This thesis in part explores how the role of the state in providing for long-term care is changing and how these changes reflect the expansion of neoliberalism across high-income states, and in recent years, the spread of austerity measures. As an approach to governing, neoliberalism is not an accident (Harvey, 2007) but reflects specific interests with specific goals that have over the last couple decades been able to guide policy in many countries. Steered by the notion that human well-being is best served by enhancing the individual freedom to pursue unbridled entrepreneurship in a context of free trade and free markets (Harvey, 2007), those behind the neoliberal shifts underway aim to protect and enhance the rights of individuals to private property, reduced taxation, and increased profit through so-call efficiencies and innovations (Harvey, 2007; Albo et al., 2010). Neoliberal interests have gained tremendous strength since the 1980s when governments in the United States and the United Kingdom, under Reagan and Thatcher respectively, began to implement far-reaching changes to public and welfare state programs.

In Canada, similar changes took place under various federal and provincial governments, most notably beginning with the Mulroney progressive conservative government in the late 1980s and the Harris government in Ontario in the 1990s (McBride and Shields, 1997; Sears, 1999). Neoliberalism has gained more strength in very recent years in Canada under the federal

conservative government led by Harper, who since 2006 has implemented far-reaching changes to health and social care programs, along with changes to how the activities of Canadians are accounted for in national statistics. Among some of the early reforms made by the Harper government were the elimination of plans for a national childcare strategy that was replaced with the somewhat trivial Universal Child Care Benefit (Bezanson, 2010), the cuts to numerous women's programs and organizations, and the changes to unemployment insurance.

The impact of neoliberal reforms are experienced in the everyday lives of Canadians (Braedley and Luxton, 2010) and in the lives of those living in other high-income countries, particularly in the last few years where austerity measures have been implemented such as the United Kingdom. Neoliberal influence can be seen across many areas of social life such as employment standards (Thomas, 2010), border security (Cote-Boucher, 2010), and childcare (Bezanson, 2010). In health and social care the influences are numerous and this thesis aims in part to consider these in relation to the labour forces in long-term residential care in different contexts. In particular, this thesis endeavours to examine how the interests supporting neoliberalism can be seen in the design of data infrastructure on labour forces in health and social care, in how care work is configured differently in different contexts, and in how there are shifts underway in the division of labour in many jurisdictions.

Reforms over the last few decades in Canada have included wide-ranging changes to delivery of health and social care including privatization and contracting out of support services, the use of private sector managerial practices and managed competition, increased private and for-profit care - particularly in long-term residential care, and the shifting of care out of institutions into community and home settings. All of these changes have contributed to the casualization of employment relationships, deskilling, and the intensification of care work

(Armstrong and Armstrong, 2001; Armstrong and Armstrong, 2010). Privatization, in particular, has been found to increase the precariousness experienced by support workers who have been contracted out (Armstrong and Laxer, 2011), some to multinational corporations that provide facility support labour to many establishments outside of health and social care. Indeed, multilateral trade agreements influence the delivery of care for older persons in Canada and elsewhere, so that multinational companies are increasingly involved in providing health services including in the area of long-term residential care (Armstrong, P., 2013). The underlying political and commercial interests represented by trade agreements, such as the North American Free Trade Agreement (NAFTA), depict these aspects of globalization as unavoidable while supporting health delivery that is increasingly private and for-profit. However, little is inevitable about these developments, which reflect particular interests and are the product of policy put in place by those with political influence (Navarro, 1998; Sassen, 2002; Harvey, 2007).

Despite of the spread of privatized care and neoliberal approaches to governing, there are jurisdictional differences in health and long-term care delivery models. This thesis examines those differences through cross-national and sub-national Canadian provincial comparisons with a focus on the influence of different models of care on the labour force and its measurement. For example, there are differences in how care is valued in different contexts. Liberal welfare states such as Canada differ from Scandinavian social democratic states in how long-term care is framed with most Canadian jurisdictions framing long-term care as a private responsibility and Sweden framing care as a universal right. Nevertheless, the framing of care is shifting across high-income countries, so that countries like Sweden are pressured to adopt the values and practices typical of neoliberalism.

The value placed on care influences delivery. The family has been, and continues to be, the main provider for long-term care in most OECD countries (Twomey, 2013; Lethbridge, 2010). Very few countries have envisioned long-term care as a universal entitlement except Scandinavian countries, which began taking this approach in the 1940s. Though countries face similar challenges with an aging population, these are addressed in different manners. The converse is also observed, where governments adopt similar approaches for different reasons, as is shown in a recent case examination of Germany and Japan. In both countries, neoliberal strategies were adopted but through different avenues. This research on long-term residential care demonstrates how the market and informal sectors are increasingly sought in many contexts as solutions to supplement care (Twomey, 2013).

The delivery of long-term care in the market and informal sectors coincides with a restructuring of collective values pertaining to the rights and choices of individuals. For example, Esping-Andersen (1999) has argued that a notion of consumer choice is used to justify the adoption of a mixed economy of care with less public provision. But, choices of individuals and families are deeply rooted in contextual circumstances including the availability – or lack – of social supports and financial resources. Indeed, choice cannot be separated from material and social circumstances. Further, choice is challenging to define or determine for individuals grappling with complicated conditions including illness and limited resources (Sousa, 2013; Campbell, 2013; Vosko, 2009). There are grim consequences for conceiving of choice as boundless when it comes to appropriate long-term care. Individuals often have very narrow choice if they lack social reinforcement such as family members who are available to provide attention, economic resources, and support.

Among the numerous structural determinants that influence the choice context of aging individuals is the availability of accessible community resources. Individuals cannot be held entirely responsible for planning or providing for their own health needs. Nevertheless, the choosing recipient of care remains centre stage in the neoliberal framing of long-term care that promotes a notion of *person-centred* care. For example, in Ontario and other jurisdictions such as the United Kingdom, governments are privatizing delivery of care for older persons and the chronically ill, motivated to reduce public expenditure, and, save money through the assumed efficiencies of the private for-profit sector. In these contexts, person-centred care has arisen as a policy inclination that focuses responsibility on the individual instead of the public (Smele and Seeley, 2013). These themes will be further developed in Chapter 2 on feminist political economy.

Choice as a concept in care is reserved for recipients of care with no coinciding notion of choice for the majority of those providing the care, undermining both recipients and providers who are less able to engage in more suitable relational care. As Smele and Seeley (2013) point out, both formal and informal care providers are excluded from the choice making narrative in health and social care policy. Indeed, those providing care in long-term residential facilities, particularly in contexts where neoliberalism is more deeply entrenched, are largely invisible providers with few choices, as is discussed in several areas of this thesis. Choice is difficult to measure, but it is critical to consider since providers need autonomy to be able to influence their work in order to respond appropriately in varied and complicated situations of care. Furthermore, choice and autonomy for providers allows for better treatment of residents' particular needs while maintaining dignity and respect for everyone (Armstrong et al., 2009, p. 12). Existing research suggests that some workers in long-term residential care have more

choices than others (e.g., Daly and Szebehely, 2012). In keeping with a feminist political economy critique, this thesis examines where workers have choice in long-term residential care, how this might be measured with the available statistical data, and the impact on the quality of care.

Work intensification and deskilling

The distinction between medical and social care, and the exclusion of those who provide social care, makes little sense in the wake of neoliberal health care reforms taking place in the contexts under study. The impression that long-term residential care only involves social care and soft skills is misleading since in recent years patients with higher acuity levels have been shifted out of expensive hospital care into family homes and long-term care facilities. The latter has involved a parallel shift in the labour being done in these contexts to accommodate patients requiring interventions commonly defined to be medical, often by care providers who have not typically done this sort of work, nor have necessarily been trained formally to provide this level of care. As Struthers (2013) points out, this shift has not involved a change in how we define the work of care in these contexts, so that providers typically defined as unskilled, including family members, are now often performing medical tasks such as inserting feeding tubes and intravenous drips, giving injections, and operating medical equipment including ventilators (p. 167). Moreover, as Duffy (2011) notes, this medical work that was once seen as highly skilled and part of the professional qualifications of hospital nursing staff, is increasing seen as "easily done by unskilled workers or family members with minimal instruction" (p. 91).

This movement of work into family homes, and often into the realm of the unpaid work done mostly by women for the care of their family, is related to how workers are valued and

compensated for their contributions to care within a neoliberal framing. As a result, the work is defined as social and/or custodial and is seen as part of the normal daily work that women are accustomed to provide in the home. So, even though health care needs of residents' are intensifying, the working conditions, pay and narrow authority of workers in facilities mirror the beliefs about the unskilled nature of the work (Armstrong and Braedley, 2013) while also reflecting neoliberal transitions underway that prioritize the search for profit.

Residents in long-term residential care have complex needs. For example, many have some form of dementia and can exhibit problematic behaviours that are more challenging to manage (Lexchin, 2013; PriceWaterhouseCooper, 2011). Lexchin (2013) argues that the intensification of work, particularly in for-profit facilities where staffing ratios are low, is linked to prescribing psychotropic drugs as a form of chemical restraint and has to do with factors other than dementia (p. 118). Referencing a study conducted by PriceWaterhouseCooper (2011), Lexchin notes that pharmaceutical solutions are used in place of psychosocial interventions and is related to the lack of adequate staffing levels of qualified personnel. He concludes that staff and facility characteristics, which are linked, are critical factors in the prescribing practices in long-term residential care and, in turn, influence the work and the skills required. Hence, work intensification combined with inattention to the training needs of staff has important consequences for care practices.

Ownership matters in this work intensification. While evidence shows that for-profit privately owned facilities are associated with lower staffing ratios (McGregor et al., 2005; McGregor and Ronald, 2011), within a context of marketized care, the managerial practices in the for-profit sector are spreading to the not-for-profit and public sectors through approaches such as managed competition as a means to reduce costs. The substitution of skilled and

professional workforces with workers defined as less skilled and lacking professional representation and credentials, a characteristic approach of for-profit management, is being deployed by employers of both for-profit and not-for-profit facilities in order to reduce expenditures and as a means to control labour. Further, approaches to reduce costs include adopting flexible work arrangements such as part-time and on-call scheduling, and these work arrangements are more easily implemented in some contexts such as Ontario where workers in some sub-industries and occupations in care have fewer rights that are protected through employment standards legislation than do other workers. Indeed, one motivation for moving care from hospitals to home care and other forms of care may be the opportunities for savings that arise from the special rules and exceptions to employment standards that apply to workers. Nevertheless, though the search for "efficiencies" and profit is spreading across the sectors of care delivery, evidence suggests the public not-for-profit sector remains a critical shelter for both providers and residents in long-term residential care (Laxer, 2013; see also Chapter 4).

In order to explore the implications of the shift in care and of ownership practices, this thesis examines the data to assess how sector of delivery impacts the workforce in terms of skills, training, working conditions, pay, and employment security. Research demonstrates that groups of workers from particular social locations are more impacted by work intensification and deskilling stemming from neoliberal reforms to care. As some workers carve out their professional territory, they also limit access to their domain of work and contribute to divisions in labour. For example, as nurses professionalized "the ring of protection drawn around nursing, and the hospital's need for a divided and cheap work force, kept…aides from such advancement. Nursing's 'success' in its quest for greater control was built on the limiting and degrading of others" (Reverby, p. 195, 1987). As Duffy (2011) points out, these sorts of divisions are not

accidental but represent specific interests. On the one hand, they represent the interests of nurses, and on the other hand, they represent those of management in hospitals wanting to reduce costs with less expensive labour (p. 137). Though there are these distinct processes and interests behind work intensification and deskilling, they converge to disproportionately impact specific groups of workers in society such as women, racial and ethnic minorities, and immigrants.

Gendered, racialized and migratory workforces

Given the feminized nature of caring professions and occupations, it is not surprising that the largest share of providers in care, both paid and unpaid, are women. In Canada, over 80 percent of paid workers in health and social care are women (Laxer, 2013; see also Chapter 4). Care has long had a feminized nature and the gendered division of labour shows larger shares of men in professional occupations associated historically with more status, more power, higher pay and superior working conditions. In the last few decades women have moved into these professional roles in medicine (Riska, 2001; Riska, 2008) at the same time as they have also fought to professionalize occupations like nursing (Clark and Clark, 2003; Armstrong and Silas, 2009) and midwifery (Bourgeault, 2006; Bourgeault, 2005).

Women have been less successful at improving the status and conditions of work in long-term residential care where concentrations of women are especially high at over 85 percent (Laxer, 2013; see also Chapter 4). Further, much research has shown that when higher paid skilled care is substituted with less skilled and lower paid care, it is women providers who are most affected (Duffy, 2011). It is assumed that women are naturally capable of providing care, particularly social and custodial care, that this work is not skilled and hence not deserving of good pay and recognition. These assumptions are deeply rooted in the long history of women

being *conscripted* (Armstrong, H., 2013) into unpaid care and social reproduction. Domestic, private life along with economic and socially embedded values, intertwine with the centrality of women as the largest group of recipients of long-term care, so that this area of care is highly gendered.

Canadian data reveal that women from racialized groups and immigrant populations from non-dominant ethnic communities have disproportionately large concentrations among the providers of care in this sub-industry (Laxer, 2013; see also Chapter 4). The racialization of the labour force is entrenched in historical patterns of exploitation in care, where especially precarious women, whether due to their status of citizenship (Bakan and Stasiulus, 1997) and their lack of economic and social resources, end up in care work that few others are willing to take on (Duffy, 2011). Furthermore, credentials attained in other countries may not be recognized and it is assumed that women are naturally capable of providing this care (Armstrong, P., 2013). Indeed, women from subjugated racialized groups are pressured into care work in such a way that privileged women are released from the burden of providing care (Braedley, 2013; Glenn, 2010; Das Gupta, 2002; Das Gupta, 2009; Duffy, 2011). Inequitable segregation in care work, including concentrations of disproportionate shares of immigrants and ethnic minorities, is not a new occurrence and in part reflects continuities in inequalities between people from different classes and social locations (Duffy, 2011).

Many workers in care from racialized backgrounds or minority ethnic groups are migrant workers caught up in global care chains (Yeates, 2009), leaving their own countries to provide low paid care in wealthier countries. Not only does this outmigration create a deficit of care providers in the countries of origin, it again suggests that all women are capable and innately skilled to provide care, regardless of where they come from or their personal backgrounds. This

then reinforces notions that social care work is unskilled or low skilled and that it is deserving of low pay (Armstrong, P., 2013, p. 106). Care delivery models adopted by governments influence the degree to which migrant workforces are drawn upon (Lethbridge, 2010). In Germany, for example, there has been an increased reliance on unregulated migrant caregivers as a consequence of the implementation of a cash benefit system for recipients. Since the 1990s, care is being replaced with care of lower quality performed by providers who lack formal credentials. This is also occurring in other European states that rely on mostly women migrant workers from nearby countries such as Poland, Czech Republic, and Hungary (Twomey, 2013).

Prompted by existing research and using a feminist political economy lens, this thesis examines concentrations of workers in long-term residential care from various social locations to explore the differing dynamics of gendered and racialized care in different contexts. Concomitantly, it explores the challenges to mapping the social locations of workers due to statistical limitations that reflect choices about who counts in care. Before proceeding to the next section, it is critical to note that while racial, ethnic and immigrant minorities are well overrepresented in some jobs in care, so too are white women, which suggests that the hierarchies and configurations in care work cannot be explained by "examining only the impact of race-ethnicity and citizenship; our analysis must include socioeconomic inequality as well" (Duffy, p. 137).

Precarious care

Precariousness is a defining aspect of many care workers' working conditions. Research in recent years has pointed to the unique characteristics of precarious employment for health and social care workers (see, for example, Armstrong and Armstrong, 2009). Generally, precarious

employment has come to be associated with labour market insecurity, less regulatory protection, low income and benefit coverage, diminished control and autonomy – particularly among non-unionized and non-professional workforces, and high risks of ill-health (Vosko, 2006; Vosko, 2014). For care providers, precariousness has its own specific dimensions (Armstrong and Armstrong, 2009; Armstrong and Laxer, 2011). For example, health and safety risks are of particular concern among health and social care workers in general, but especially among workers in long-term residential care and in assisting occupations such as personal care work where rates of absenteeism are very high relative to all other workers in the Canada (Laxer, 2013; see also Chapter 4; Daboussy and Uppal, 2012).

Workers in long-term residential care are more precarious than other workers in paid care, as data from Canada reveal (Laxer, 2013; see also Chapter 4). The work is associated with low wages, poor benefits, casualization of employment relationships, and unsafe working conditions. As noted, health and safety is of particular concern for workers in this sub-industry of care who have reported rates of injury that are much higher than the general working population and also higher than for other health care workers (Campbell, 2013; Daboussy and Uppal, 2012). Further, there is strong evidence that hazards are linked to work organization and not to other factors, such as the aging of the labour force (Armstrong and Laxer, 2012). Unique to work in long-term residential care are the disproportionate shares of workers employed in atypical scheduling, particularly on-call and split shifts (Laxer, 2013; see also Chapter 4). New managerial practices, including the increases to on-call scheduling in some contexts such as long-term residential care, intensify the impact of these atypical schedules by allowing for even less choice and control among workers (Armstrong and Armstrong, 2009). In Ontario where workers in some forms of long-term care have fewer employment standards rights, the shifting of

more acute care out of hospitals and into family homes directly increases the share of the labour force exposed to hazardous conditions of work related to scheduling. These arrangements are risky to care providers, particularly for women, given that such schedules are disruptive to unpaid care commitments outside of paid employment (Armstrong and Armstrong, 2009) and to their personal health (Geiger-Brown et al., 2004; Wong, McLeod and Demers, 2011).

Workers in long-term residential care are also more likely to experience violence from residents, much of which is embedded in, and a reflection of, structural aspects of care (Armstrong et al., 2011; Banerjee et al., 2012). Care providers have little recourse to address these hazards, especially if they are not unionized, and though employment standards may regulate protection against some unsafe working conditions and provide the appearance of protection, enforcement of existing standards is often lacking or weak (Vosko, 2009; Campbell, 2013). Often, workers will continue to go to work when sick or injured, referred to as *presenteeism*, creating additional hazards within facilities that are largely invisible (Armstrong et al., 2011; Campbell, 2013). Furthermore, hazards in long-term residential care are particularly invisible because of the gendered normalization and individualization of injury and illness (Campbell, 2013) demonstrating as other scholars have that gender affects how risk is defined and measured (e.g., Messing, 1998; Messing et al., 2000; Messing et al., 1995). While working conditions and shifting work arrangements may create hazards and risks for workers in long-term residential care, risks are often hidden by prevailing beliefs about women and care work (Campbell, 2013; Armstrong and Jansen, 2000; Armstrong et al., 2011; Daly et al., 2011).

Workers in long-term residential care facilities are not equally precarious and contextual factors such as jurisdiction and facility characteristics influence the insecurity and hazards experienced by workers. Precariousness is also related to gendered and racialized dynamics

(Vosko, 2006) that differ according to occupational segregation. For example, the wage gap between men and women in long-term residential care is much higher in some provinces in Canada than in others – a possible reflection of differing pay equity and union representation practices (Laxer, 2013; see also Chapter 4), but also likely associated with more deeply entrenched managerial practices related to the spread of neoliberal values under particular governments such as the Harris conservatives in Ontario (Sears, 1999). To address this issue, this thesis uses the available statistical data to map how different care configurations in different contexts have an influence on precarious employment in long-term residential care. These care configurations – portrayed in this thesis through examining the industrial and occupational division of labour (and also the international division of labour, though this is less of a focus due to data limitations) – point to where care gets divided as a way to reduce costs, while simultaneously increasing precariousness across providers. Through divisions, precariousness spreads to affect more workers in more types of work arrangements in care, indicating what Vosko (2006) refers to as the "feminization of employment norms" and the "gendering of jobs", and what Armstrong (1996) characterizes as "harmonizing down".

Who counts in care?

Statistical data are critical for assessing precariousness, racialized and gendered dynamics, work intensification, and deskilling. This thesis interprets what can and cannot be mapped according to these themes as they relate to the labour force in long-term residential care. It examines the challenges to cross-jurisdictional comparisons, which have the potential to shed light on the implications of various approaches to care for work organization and working conditions. The dominant focus on health workforce planning on physicians, nursing professionals and associate

professionals cannot capture either the bulk of direct care involved in looking after older persons or the extensive shifts underway in the health and social care industry where workers in facilities are now responsible for their traditional domain of social and custodial care, in addition to more tasks typically defined as acute and medical care. Hence, the conventional approach to measuring health and social care workforces is inadequate for understanding and planning for the labour force dedicated to the greater part of care for older persons, which involves considerable social and relational care, and for the increasingly blurred lines between these forms of care and medical care. The ensuing discussion examines the extent to which the framing of care in conventional terms, influenced by both medical and neoliberal notions of care, limits the statistical infrastructure in terms of its capacity to adequately measure the workforces involved in long-term residential care. Policy decisions are partly shaped by statistical information and the statistics that are constructed have power and are enduring in public and private data infrastructure (Armstrong, H., 2013; Curtis, 2001).

The invisibility of the labour force in long-term residential care is a reflection of both the limitations to public national and cross-national data infrastructure, and of the gap in research exploring existing data. This thesis addresses these two areas, first by evaluating the public statistical infrastructure on health and social care workforces, and second by using available data to shed light on themes identified above including the skills, working conditions, pay, status, and social locations of workers in long-term residential care and how these are shaped by approaches to care in different jurisdictions. This is an era of alleged *big data* and *data mining* but the data available and/or accessible to academic researchers to assess the relationship between the working conditions in long-term residential care and the conditions of care are limited. This thesis facilitates a discussion about data infrastructure, both public and private, to consider who

designs and has access to the data for analysis, and who gets counted in the data. In recent years in Canada, for example, public national datasets are being restructured or eliminated with serious implications for how care workforces get counted. This thesis fits within a long tradition in sociology of understanding data as socially constructed, reflecting values as much as facts (Curtis, 2001).

Building on, yet advancing previous research, this thesis finds that the reforms to public data are a reflection of the neoliberal tendency to measure what generates profit, "efficiencies", and "wealth" with less focus on measuring what contributes to a "more just and caring society for all" (World Health Organization, 2005, p. 2). Even with the collection of statistical data on the size and education levels of those defined as health professionals, their conditions of work are also often absent in the statistical data. Counting is one means through which the important relationship between working conditions and the conditions of care can be assessed. It is also a means to demonstrate structurally embedded exploitation, unfairness and discrimination. A central emphasis in this thesis is to explore how statistical data in this area are constructed and used as they are and how a feminist political economy framework unveils how the data design reflects an agenda of neoliberalism.

Chapter outline

This thesis is divided into five additional Chapters, along with three appendices and a bibliography of sources. Chapter 2 is a consideration of the theoretical framework of feminist political economy. It includes a discussion of this lens along with its feasibility as a framework for the research in this thesis. It provides some historical context of the development of feminist political economy and then considers its approaches to research in the areas of health care and

social care, both paid and unpaid. This thesis is a methodological intervention aimed at discussions as to how to best map health and social care workforces in order to improve care. Hence, much of Chapter 2 reviews the important linkages between theory and methodology, with a focused consideration of feminist methodologies and their legacy of challenging essentials, liberating methods, and unsettling the record. Chapter 2 ends with a section illustrating how data are socially and politically shaped by ideology through a brief review of Smith's 1983 essay on the textual analysis of ideological practice, relating this to the measure of full-time equivalent (FTE) commonly used to map paid workforces in health and social care. Overall, the objective of this chapter is to demonstrate that statistical data are socially constructed, that they represent particular interests, and that insights from feminist political economy and feminist methodologies help to illuminate – and to intervene in – the process of statistical design as it relates to labour forces in long-term residential care.

Chapter 3 details the methods of research used for this thesis. It begins with a description of the quantitative data sources and why they were chosen. The mapping design is then described, including the process of variable harmonization for the key measures developed for this thesis research. The precise details for the harmonization of measures are included in Appendix A and Appendix B. Some practical data limitations are described at the end of Chapter 3, of which some are further addressed in parts of this thesis that critique the design of statistical data infrastructure in the area of health and social care workforces. What is emphasized most in the methods of this thesis is the exploratory nature of this mapping endeavour – that the harmonization of data across surveys and jurisdictions was a novel task with many challenges, and that the goal has not been to produce "perfect" data, but instead to present new and alternative depictions of workforces in health and social care and in long-term residential care.

The shifting industrial division of labour in care in Canada is examined in Chapter 4. It begins with a review of the sectors in health and social care in Canada and then describes the four main industries of care along with the key developments since 1993 within the sub-industries of care. The occupational division of labour within the sub-industries is then examined to show how they differ in their roles in the Canadian system of health and social care and how these roles are evolving and reflect a pattern of downward substitution where less expensive providers with fewer credentialed skills are replacing the work of the professionalized occupations groups. Chapter 4 then turns to a consideration of who works in care, in what jobs, and how care work is highly gendered and racialized, demonstrating continuities in inequitable segregations in care that have long existed in Canada. Locating precarious care through the mapping of several indicators is then undertaken and described. Finally, before concluding Chapter 4, the new politics of national data in Canada are examined and interpreted within the context of neoliberalism and through the lens of feminist political economy to consider some of the implications for mapping and understanding health and social care workforces, particularly those in support and assisting occupation groups. By mapping all occupation groups in health and social care and by comparing across the sub-industries of care over time, Chapter 4 demonstrates that the industrial division of labour in care is shifting dramatically in Canada and that this is related to neoliberal changes in health and social care funding and the expansion of provincial autonomy in this area.

Chapter 5 sets the analysis of Canada in a comparative perspective by considering the division of labour across countries, including the United States, the United Kingdom, and Sweden. Reasons for choosing these countries are further explained and the milieu of long-term care in each country is described. A study comparing working conditions in Canada and

Scandinavia is used to frame the overall analysis of the chapter by showing that context matters and has implications for how workers experience their roles in care. Chapter 5 then follows a similar approach to Chapter 4 by detailing the occupational division of labour in care, the gendered and racialized segregation in care work, how sector and unionization matter, and where precarious care can be located. The international division of labour is considered to show that though countries may have their own unique characteristics when it comes to how care work is divided and accounted for, they are situated within a global context of care labour migration (Yeates, 2012; Abu-Laban and Gabriel, 2002). There is increasing demand for information on the movement of people across borders to provide health and social care but the data are limited, particularly for examining the specific nature of precariousness experienced by migrating workforces. Finally, Chapter 5 briefly raises some issues related to the diverse politics of national data with particular attention to differing approaches to collecting statistical data on race, ethnicity, and migration. The mapping approach of Chapter 5 deepens the approach taken in Chapter 4 by comparing Canada to other countries in order to demonstrate the specificity of context and how this influences pay, benefits, skills, and working conditions for providers, particularly in terms of precariousness.

The majority of the data presented and analysed in Chapter 5 are original data designed by the author of this thesis and gathered through research with the *Comparative Perspectives on Precarious Employment Database*. The most unique contribution of this thesis is the detailed cross-national comparisons of the occupational division of labour in health and social care, particularly for workforces in assisting occupations and support provider roles. No other cross-national statistical data sources, including databases housed with the Organization for Economic Cooperation and Development (OECD) and Eurostat, provide this sort of detailed data on

assisting occupations and support occupations in health and social care - the main providers in long-term residential care (and among the main providers in other sub-industries of health and social care). It is in Chapter 5 where the harmonized measures for occupation described in Chapter 3 and detailed in Appendix A, are deployed through the guidance of feminist political economy to unveil an original comparative mapping of workforces in health and social care.

In the conclusion to this thesis in Chapter 6, key arguments are elevated to consider who counts in care, how this reflects the agenda of neoliberalism, and how feminist political economy aids as a framework to unveil neoliberal priorities within existing statistical data infrastructure. The main findings of this thesis are summarized, such as the influence of context on working conditions for providers in long-term residential care, the impact of ongoing reforms to data for future mapping of care in Canada, and how the industrial, occupational, and global divisions of labour in health and social care are no accident and represent particular interests. A primary conclusion of this thesis is that exploratory comparative mapping through the use of harmonized variables – though challenging – offers opportunities for new understandings while pointing to areas for further research. Chapter 6 considers areas for future research that emerge out of the exploratory quantitative mapping research in this thesis. For example, there is a need to further interpret distinctions like medical and non-medical home care, a need to examine the segregation of immigrants into less desirable forms of employment within care including types of schedules that can be deleterious to workers' health and well-being, and also a need to reflect on the burgeoning divide between public and private data infrastructure and the implications for research on workforces health and social care.

Details on variable harmonization for the cross-national mapping are presented in Appendix A and Appendix B, along with additional country-specific information on measures

developed by the OECD for tracking the formal labour force in long-term care presented in Appendix C.

Chapter 2: Theory

Feminist political economy

The insights of feminist political economy assist the evaluation of how care is conventionally measured and the resultant implications for understandings of care processes. This thesis mobilizes these insights to undertake a conceptual dialogue with the statistical data (Vosko, 2006) on health and social care workforces and how this dialogue supports a multiple method research design. Numbers are not innocent, as noted by American feminist Stone (1988, p. 130) but some are less guilty and feminist political economists recognize their value and power in helping to shape understandings of women's work and care work. Stone was pointing to the influence of context and political agenda on statistical analyses and that measurements are designed and chosen in relation to specific priorities (1988). The theoretical lens of feminist political economy points to political power and priorities and emphasizes the importance of gender relations in understanding the dynamics that underlie socioeconomic conditions, the shape of labour forces, and the design of statistical data. This framework is informed by Marxist analysis and feminist critique, and provides a perspective that seeks to uncover what, historically, has been less visible to dominant economic frameworks such as classical economics and malestream political economy. Classical economics and malestream political economy (Vosko, 2002) tend, for example, to ignore or drastically underestimate the importance of social

reproduction, paid and unpaid work in the domestic sphere, and the role of women in the paid and unpaid labour forces. Meanwhile, feminist political economy emphasizes the importance of the interrelationship between production and reproduction in shaping lives while asking whose interests are being served.

Since the 1970s, feminist political economy has successfully documented, quantified and explained the various economic roles of women, focusing attention to inequalities, labour market segregation and marginalization, along with co-existing and intersecting class dimensions. It is a heterogeneous framework with internal tensions and debates (Vosko, 2002), some centrally related to the area of care work. For example, the last two decades of feminist political economy scholarship has seen the emergence of debates about race and ethnicity in relation to class, production and social reproduction and how these social locations interrelate with sex/gender (Vosko, 2002). Such debates continue, but stemming from these has been an emphasis on applied and theoretically grounded research (Briskin, 1989; Vosko, 2002) in areas such as care work and women's work (Reiter, 1991; Luxton 1980, 1983; Das Gupta, 1996). Intersectional analysis is increasingly adopted through feminist political economy scholarship and has helped demonstrate the interrelationships among citizenship statuses, migration, race, ethnicity and language, and social reproduction and production in high-income countries (Vosko, 2002). Applied research on care providers demonstrates the racialized segregations and inequities in care work and how these are distinct from the segregations and inequities faced by non-racialized groups in society (Das Gupta, 1996; Duffy, 2011). The work of feminist political economists, in the Canadian context and beyond, has been pivotal to efforts addressing inequities faced by women and other marginalized workers such as racial and ethnic minorities, immigrants, the young and the old.

The analysis of intersecting forms of oppression and marginalization, such as those related to ethnicity, race and immigrant status, have not always been a central or even peripheral focus of feminist political economy. In recent years, however, the focus of feminist political economy has shifted to include intersectional analyses (Vosko, 2002) so that researchers in this area are now at the forefront of interpreting the longstanding and complicated relationships between social locations such as gender and race and how these interact with class. As Duffy promotes "feminists must include race-ethnicity, class, and other inequalities in their analyses of gender, and recent interest in exploring connections between racial-ethnic stratification and paid care work is critically important…in particular, linking the privileges of some groups of women to the exploitation of other groups of women is the kind of analysis that feminists must not shy away from" (Duffy, 2011, p. 5).

In the process of challenging both dominant, malestream political economy along with the silences within feminist political economy related to other marginalized social locations, feminist political economists have confronted the categories in statistical data and exposed many of the assumptions embedded in them (Vosko, 2014; Vosko, 2006; Armstrong et al., 2007). For example, scholars have pointed to the absence of data on unpaid work, on nonstandard forms of employment (Vosko, 2006), and on the gender-blindness of measures for occupational health (Messing, 1998; Le Jeune, 2009; Le Jeune et al., 2008). This scholarship has encouraged researchers across many disciplines of the social sciences to acknowledge the economic and social significance of unpaid work performed mostly by women, particularly in caregiving roles. Further, it has pointed to ongoing segregations of women and other marginalized groups into less secure forms of employment with high risks of ill health. The lens of feminist political economy

sustains a wide-ranging focus and the tools typically deployed by scholars informed by this approach often involve multiple methods for supporting empirically based analysis.

This framework is appropriate for mapping and analyzing dynamics of the labour force in long-term residential care given the centrality of women in this area of care work. Furthermore, feminist political economy has been drawn upon in research and analysis of similar and related contexts such as the domestic sphere, childcare, public sector employment, and health care (Armstrong and Connelly, 1989; Bezanson and Luxton, 2006; Riley, 2008; Vosko, 2002). Insights from these research areas and their respective use of the feminist political economy framework lend focus to understanding analogous configurations of labour in long-term residential care and on expanding notions of what should be defined as skill and as health care work. Feminist political economy is useful for analysing at multiple levels, including for example the micro, meso and macro levels (Bakker, 1994; Bakker, 1996). As Daly (2013) suggests, thinking about each of these levels permits researchers to explore the interrelationship between micro-level policies directing work organization in long-term residential care and developments such as labour migration and multilateral trade agreements at the macro level. Statistical data can inform each of these levels of analysis, and this thesis undertakes to examine how the existing infrastructure speaks to understandings of day-to-day care processes, policy debates about care configurations and industry divisions, and global care worker and recipient migration patterns. The attention drawn to each of these levels of analysis through the framework of feminist political economy exposes critical gaps in data that are sustained by dominant economic analytical approaches.

A recent volume of collected scholarship on long-term residential care (Armstrong and Braedley, 2013) demonstrates how researchers from multiple disciplines can apply feminist

political economy to discover and probe the connections between the practices of care, working conditions for care providers and developments in macro level neoliberal policy. This theoretical approach can also shed light on dynamics of paid and unpaid care work and how the unpaid social reproduction work provided mostly by women influences our understandings of skilled and unskilled work in paid care. For example, Armstrong (2013) demonstrates how power, gender, context, technology, control and time each matter in the construction of what is commonly defined as skilled and unskilled work. Through applying a lens of feminist political economy, she shows how skills are demarcated by those with influence and how unpaid care work intertwines with power in this process of defining (Armstrong, P., 2013, p. 103). Indeed, the work of feminist political economists has demonstrated that women's unpaid and paid roles unjustly mesh so that women continue to be limited in their choices (Grant et al., 2004; Armstrong and Armstrong, 2004; Baines, 2006). Further, feminist political economy research on care work has shown how women are conscripted (Armstrong, H., 2013, p. 194) into unpaid roles through moral and social pressures and that this work has little or no recorded economic value.

Insights from feminist political economists have contributed to a conceptualizing of care that focuses on the relational aspects of health care work. Though care in long-term residential homes is evolving to include more medical tasks, much of the care continues to call upon what are sometimes referred to as soft skills which are particularly invisible and which feminist political economists have worked to have recognized as *learned rather than innate* to women's natural, feminine capacities. It is work that involves emotional labour such as sensitivity, patience, interpersonal skills, adaptive learning, among other qualities. These skills are particularly invisible and are typically depicted as personality traits rather than learned

competencies (Armstrong, 2013; Hochschild, 1997, 2000). The reframing of concepts of care and of understandings of skills through the lens of feminist political economy offers the capacity to interpret differences in work organization and the quality of care, particularly in how this lens allows for sophisticated understandings of care and skill.

Related also is the issue of choice and care. For example, recent scholarship on long-term residential care by Smele and Seeley (2013) advances a notion of care that is *relationship-centred* as opposed to person-centred, pointing to the reality that nearly all choices about care are made within social contexts. For appropriate care to be provided, care choices need to be conceptualized as *interdependent* and occurring within such networks of relationships (Smele and Seeley, 2013, p. 145; Nolan et al., 2004). Sousa's research (2013) also takes up the importance of relationships in an examination of the growing reliance on information technologies in care, a practice that assumes recipients to be independently capable of making choices using these emerging technologies. She suggests, as have other scholars, that autonomy is not individual but instead relational and that independence is not a choice (Sousa, 2013, p. 134).

Evidence supports the theory that relational and relationship-centred care leads to better outcomes for residents in long-term care facilities. For example, Lexchin (2013, p. 126) points to a study of resident medication use conducted by Voyer et al. (2005) that revealed that the receipt of less than 16 hours of visits per month was the third-most important predictor of whether residents received an antipsychotic drug. In other words, the time to care well does not simply include tasks such as feeding, bathing and medicating, but also includes *relating* – communicating and collaborating to coordinate suitable care, in addition to visiting which can alleviate isolation that impedes health and well-being. However, with the focus on reducing

costs in many contexts, increasingly to raise a profit, aspects of care that are not regarded or understood to be critical to health are dispensed with, or simply no longer possible, because increasing demands do not allow the time and flexibility required for this approach to care. The research of Sousa (2013), Smele and Seeley (2013) and Lexchin (2013) are suitable and timely demonstrations of scholarship guided by feminist political economy in research in the understudied area of interpreting changes underway in long-term residential care, pointing attention to who and what is missing in the statistical data.

This thesis draws upon several key insights from feminist political economy in its development of an approach for mapping workers in long-term residential care in Canada and cross-nationally using available statistical data, in its analysis of the silences in the data, and in the analysis of the circumstances of providers in this sub-industry of care in different contexts. In particular, feminist political economy is used to point to the importance of gender in care generally and its specific significance in the area of long-term care where skills are undervalued and reflect the power disadvantage of women and racialized groups who are segregated into this work. Furthermore, the recent emphasis in applied research adopting this lens on intersecting forms of marginalization along with a return to analyzing social reproduction's relationship to production (Vosko, 2002), offers constructive models for how to undertake research to expose silences and biases in objectified knowledge (i.e., statistical data), while using this knowledge to point to inequality, insecurity and hazard faced by providers.

Given the emphasis on multiple interrelating factors in the feminist political economy framework, and drawing upon debates on methodology and feminist research (DeVault, 1999; Fonow and Cook, 1991; Harding, 1987; Hesse-Biber et al., 2004; Jayaratne and Stewart, 1991; Kirby, Greaves and Reid, 2006; Reinharz, 1992), the next section explores how multiple method

research surfaces as an effective evidence gathering approach for research using this theoretical lens. Quantitative analysis is an important constituent element of multiple method research and is supported by other methods, including qualitative research, which can inform both the design of statistical measures and analysis of trends uncovered using these measures. There are debates within feminist scholarship about the relative merits of quantitative and qualitative research. A great deal of feminist research has pointed to the need for – and sometimes the superiority of – qualitative approaches given the built-in biases and gender-blindness commonly found in quantitative tools. Quantitative research has been critiqued by feminist scholars for reflecting the normative classical economic approach of accounting for and objectifying "facts" (Smith, 1983) in ways that distort the realities of everyday human activities. Too often these tensions are cast as a divide among feminist scholars but some researchers have made great efforts to bridge this divide and point to the strengths of both quantitative and qualitative methods (Jayaratne and Stewart, 1991).

Though the approach in this thesis is largely quantitative, in addition to statistical mapping, this thesis engages theoretically and conceptually with the existing quantitative measures. The quantitative focus in this thesis is undertaken in using the existing data infrastructure to comparatively map the divisions of labour and precariousness of workers in long-term residential care. The theoretical and conceptual engagement with the data seeks to evaluate existing statistical infrastructure in relation to other research to assess its suitability, relevance and meaningfulness. It is asserted throughout that statistical measures are powerful tools that shape social and economic understandings and that have the potential to unveil very real patterns of marginalization that are unjust and ought to be collectively addressed. Furthermore, this thesis research is affiliated with the international research project *Re-imagining*

Long-term Residential Care: A Study of Promising Practices directed by Pat Armstrong. This project involves several streams of study which each draw upon quantitative and qualitative methods in different ways with the goal being a thorough examination of varying approaches to long-term residential care in different contexts. Most closely aligned with the endeavours of the work organization stream and the mapping theme of this project, this thesis aims to assist in expanding understandings among co-researchers of common comparative measurements used to account for the labour forces in health and social care and in long-term care.

Feminist methodologies

This section uses examples from the field of research on care workforces to highlight feminist methodologies while considering how feminist political economy and its approaches to research are suitable for cross-jurisdictional mapping of labour forces in long-term residential care. The significance of feminist methodologies for research in general and for the specific application to research on care work is examined. Themes covered include the significance of the relationship between theory, methodology and method, epistemological approaches, the interrelationship between qualitative and quantitative research, and the value of using multiple methods in research design. In providing examples drawn from recent research on care and women's work, the associations among gender, social location, context, and action are highlighted.

The area of research on care work is ideal to explore and analyze the inequalities, segregation and marginalization faced by paid and unpaid providers, most of whom are women. It is an area suitable for considering how class affects lives, gendered and racialized social relations and how research approaches need to be shaped to account for these aspects. Feminist political economists researching care have pointed to the layered nature of marginalization,

suggesting an interdisciplinary and/or multiple method approach to research in order to examine intersecting factors. This thesis underscores the significance of contributions from feminist scholars as demonstrations of combined theory, research and action that can help bring about both awareness and practical change towards improving peoples' lives. It probes a few of the key theoretical and methodological concerns in feminist scholarship while exploring specific instruments of research and the relationship to theory. In part, this thesis aims to engage in thinking judiciously about research both in action and as a form of action.

Examples of applied research on care providers and their work illustrate the theoretical and applied themes of this thesis. Though there is a distinctive and extensive character of feminist research, there are also vast variations in approaches to methodology and method. Feminist researchers emphasize the importance of including gender as a central lens of analysis in social relations. Beyond this, however, they differ in their approaches to methods or "particular tools of research," to methodology or "theorizing about research practice," and to epistemology or "the study of how and what we can know" (Harding, 1987). Many feminist scholars underscore the value – and challenge – of using multiple methods in research design. Though it is beyond the scope of this chapter to cover the full range of thought in these areas, a few of the relevant debates are reviewed using some illustrations based on recent scholarship on women's work.

Challenging essentials

Feminist scholarship has a legacy of challenging academic approaches to truth, objectivity and subjectivity. Indeed, feminist research can in part be characterized as attempts at "producing less partial and distorted descriptions, explanations, and understandings" (Harding, 1987, p. 12).

There is a common theme of exploring the invisibility of marginalized groups in society and how thinking about women and gender requires more attentiveness than simply adding sex and gender as variables equivalent to others such as class or race. This has facilitated the progress of academic notions of bias in research so that it is understood that when we are thinking about gender and women, we are thinking about multiple experiences, some intersecting with other forms of marginalization, inequality or oppression.

Feminist scholars sometimes refer to the flawed approach of merely "adding women" or "add women and stir", including for example Harding (1987) and Kelly-Gadol (1987), since adding gender and sex is about rethinking social structures and frameworks for understanding. This has been demonstrated in much recent scholarship on sex and gender (Le Jeune et al., 2008; Balka et al., 2009; Duffy, 2011). Further, the simple addition of women may not be possible given the practical reality that common instruments of measurement used in the social sciences may be gender blind or may not take account of sex or women at all (Le Jeune, 2009; Le Jeune et al., 2008; Messing, 1998; Messing et al., 1995; Balka et al., 2009).

A closer look at methods themselves and how these are deployed within particular feminist scholarship reveals the diversity of feminist research design. Methods used by feminist scholars range from interview techniques, focus groups, participant observation, discourse and content analysis, documentary and archival research and survey research. Feminist approaches include biography/narrative, phenomenology, grounded theory, ethnography, and case study, among others. Feminist research methods range from "listening to/interrogating informants", "observing behaviour", and "examining historical traces and records", all evidence-gathering techniques described and reviewed by Harding (1987). The aim is not to cover these in detail but instead to understand that there is a range of methods and approaches and that opportunities and

challenges arise with each. Feminist scholars often emphasize the need for adapting and inventing new instruments when it comes to specific methods due to the gender-blindness in research. Harding's range of methods is not dissimilar from conventional methods used within the social sciences, but their specific application to feminist research has often been adapted so that gender is accounted for throughout.

A commonly adopted approach often advocated by feminist methodologists is that of multiple method research – or triangulation. This approach is posited as a means of capturing greater detail to scrutinize intersecting and complicated relationships. While challenging to conduct, triangulation offers the possibility of more nuanced understandings. Reinharz (1992) notes in her text on feminist methods, that multiple method research is a commitment to thoroughness. She writes "feminist researchers combine many methods so as to cast their net as widely as possible in the search for understanding critical issues in women's lives. The multiple method approach increases the likelihood that these researchers will understand what they are studying, and that they will be able to persuade others of the veracity of their findings. Multiple methods work to enhance understanding both by adding layers of information and by using one type of data to validate or refine another" (p. 201). This commitment to thoroughness, stemming partly from the marginalization of feminist scholarship itself and a recognition of the need to standout with excellence, has the capacity to capture "lived messiness", a concept put forth by third wave feminists Heywood and Drake (1997) about the complexity of research related to gender. Thoroughness through multiple method research can also capture "all the little things", a reference made by a health care worker in a study conducted by Messing et al. (2008) referring to the challenge of singling out a single cause for ill health outcomes for workers in health care settings.

Liberating method

The notion of liberating method comes from DeVault's book entitled *Liberating Method: Feminism and Social Research* (1999). Of course, the phrase has two meanings. On the one hand, liberating method refers to freeing methods from traditional, mainstream or conventional research practices within social science. On the other, methods are devices themselves for liberating people or institutions from confining or oppressive conditions. Aspects of moving method beyond mainstream approaches have been addressed earlier in this chapter. The concept of method as a tool of liberation in and of itself is focused upon in this section of Chapter 2. Borrowing the terminology *intimate critique,* also put forth by DeVault (1999, p. 47) who uses this expression to describe Smith's critique of the ideological character of standard practice in sociology, this expression is adapted to refer to how methods can change the consciousness of the individuals with whom they come in contact. In this way, methods can be firsthand instruments that raise awareness about overlooked or ignored realities. For example, the pioneering question on unpaid work activities that existed for a short period in the Canadian Census elevated recognition for the unpaid contributions made mostly by women that are critical for broader social and economic success in Canada.

Messing et al. (2008) present in their research findings a case where the use of body maps as an indicator of physical pain among crab processing workers in Quebec and Newfoundland is demonstrated to have helped workers become more conscious of the connection between their work activities and physical pain symptoms. The researchers note "as the intervention progressed, ergonomists observed that the workers, who were primarily women, became more aware of bodily sensations and more expert at associating their pain with specific working

conditions. They also became more aware of the gestures and methods they used and were therefore better able to describe them during meetings with the ergonomists" (p. 40). Messing et al. go on to assert that epistemologically, body maps used in this way is unique from how they are conventionally used in epidemiological investigations. Furthermore, they show that the success of this use of the body map as a method to negotiate change is conditional on the acceptance by all involved – including research participants – that the analysis of the body map findings provides an accurate portrait of risks in the workplace. Thus, it is not the level of statistical significance of the associations that matters but how the collective findings from the body maps establish novel insights of associations (p. 40). As this study progressed, the objective evolved so as to aim the research instrument of the body map questionnaire towards workers themselves in order for them to derive direct benefit from involvement in the research. The transformation of workers' awareness is an outcome itself - an intimate one – that requires their support and commitment to the approach and method.

In continuing a consideration of feminist methodology as means for liberation from marginalization, the approach of *immanent critique* raised by Mykhalovskiy et al. (2008) is examined. These scholars make a case for not blindly following the path of evidence based decision-making in health care, arguing that the ideological underpinnings of evidence based inquiry influence research outcomes in ways that reflect a limited range of understanding of what constitutes good and bad health care and management. Thus, an immanent critique attempts to move beyond the conventionally adopted methods and seeks "to write the politics of method in ways that demonstrate how the particularities of research practice are consequential for the broad political character of the knowledge produced. This approach emphasizes the performativity of

knowledge and views knowledge as an active constituent of social relations" (Mykhalovskiy et al. p.197).

Evidence based medicine is critiqued by Mykhalovskiy et al. (2008) for being almost entirely quantitative in nature and having the core objective of reducing public expenditure on health care. It is an approach that weaves together the medical model of framing health and social care with neoliberal initiatives. The authors provide examples of methods that depart from this normative approach. Their methods are primarily drawn from the discipline of sociology and implement collaboration with alternative knowledge keepers (in this case, trade union representatives), along with qualitative research methods (focus groups and interviews). The authors aim "to trouble claims immanent in private sector health care reform and their evidentiary warrant by generating counter-discursive accounts of such reforms based on the experiences of marginalized health care workers" (p.197).

The experiences recounted in Mykhalovskiy et al. (2008) raise the many challenges of conducting an immanent critique approach. Because evidence based medicine and decision-making is the standard, funding of research may be tied to research proposals that are fluent in the vocabulary and methods used by this standard. Often, though this is changing, quantitative measures are the accepted means of understanding, and funding is typically directed to those proposing research using the generally established statistics and indicators. In cases where researchers are able to secure resources in order to use approaches outside the standard approach, there is the hurdle of translating findings in ways that can at least reach out to present-day scholars in order to encourage changes to methods based on novel insights. The authors demonstrate that marginalized voices may be too entrenched in standard practices and wary of involvement in research that could potentially undermine their own interests.

Unwillingness on the part of management to partake in new approaches to research in health and social care may also be guided by the practices of evidence based decision-making and is understandable given that careers may be built on methods established within this framework. Immanent critique is challenging and requires courageous inside research participants along with considerate researchers willing to undertake these sorts of studies. As Mykhalovskiy et al. (2008) posit, immanent critique expands debate by providing marginalized perspectives "an alternative discursive ground with which to enter policy discussions and challenge managerial and evidence-based representations of reform initiatives" (p. 202). The insights of Mykhalovskiy et al. are drawn upon in this thesis to inform the appraisal of existing statistical infrastructure by recognizing how neoliberal, medical and managerial concerns are embedded within this infrastructure. Further, their analysis assists in thinking creatively to consider how to both draw upon the existing infrastructure while simultaneously critiquing its design as a means of pointing discussions in new directions that include marginalized perspectives.

It is important to consider the research experience from the perspective – or soul – of the researcher (terminology borrowed from Harding, 1987). Many feminist scholars underscore the importance of being reflective about the research experience. Critical, groundbreaking research can be lonely, and may involve risks with ethical considerations, particularly for research participants. Research is an attempt not only at uncovering new truths and insights but also at engaging in thinking in new ways. Scholars need to place themselves within the process to consider their intention, whether to develop knowledge or to change policy or practice. For women and feminist scholars, the process of research can have unique challenges – or "fault lines" as Smith (1987) puts it – where contradictions might exist in their research identities vis-à-

vis their lives beyond academia. Through the use of key insights of feminist political economy, the goal of the mapping undertaken in this thesis is to elevate the often invisible and drastically undervalued role of central providers of long-term care. To make more visible the contributions of these providers, and to point to how different contexts value and account for their contributions, are key objectives in this thesis. The central aim throughout is to draw attention to workers whose lives – particularly in some contexts – are often shaped in ways so that they have little control over their circumstances, whether in relation to where they live and work, to the time they have to care for their own families, or to their opportunities for economic and social advancement.

Unsettling the record

On one end of the range of approaches feminist research takes is that of *setting the record straight*: addressing the conventional methods for understanding and attempting to improve or tweak these methods. This is a well-founded approach in the tradition of feminist methodology and setting the record straight has helped to uncover the biases, central flaws, and ideological character of mainstream research. On the other end is the approach of *unsettling the record* by moving beyond conventional methods to adopting new techniques for understanding and truth gathering. In regard to research on care work, the approach of unsettling the record requires an acknowledgement of conventional frameworks and methods – such as the medical model and the typical mapping of health and social care workforces – while underscoring shortcomings and suggesting alternative methods. The methodological approach of unsettling the record urges scholars of workforces in health and social care to think outside the traditionally adopted perimeters in order to develop more accurate understandings of care processes.

The conventional approach to measuring health care workforces focuses on professional and associate professionals including physicians and nurses (Armstrong, Armstrong, and Scott-Dixon, 2008). This, hence, is the standard record created and maintained to support the mandates of a medical, evidence-based and neoliberal orientation in mainstream health workforce policy. There are several problems with this model for mapping and recognition of these problems has led researchers to probe other approaches with particular attention to gender and social location. However, in most cases, researchers are dealing with existing datasets built on outdated, conventional or medical understandings of care work. Data infrastructure provides an indicator of the objectives of who is measuring but can often be mismatched with the research priorities of those aiming to develop more accurate understandings of care work processes, the division of labour, social location and relationships to precariousness recognized through the examination of uneven pay, benefits, skills, and working conditions.

In the case of health and social care workforces, indicators need to capture the array of work including the relational features of care work, the care team configurations that include all groups of workers both paid and unpaid, the diversity of patient and resident needs, along with the financial implications for the health and social care system over the long run. For example, there is very little statistical data on the actual work tasks of labour forces in health and social care. As already mentioned, most accounts of care configurations leave out support workers and sometimes workers in assisting occupations such as personal care providers. Settings are also poorly accounted for in the data in terms of their more specific characteristics. There may be some information on establishment size and sector, but in sources with detailed data on labour forces there is often little data on employers (and vice versa). Indeed, the lack of data sources that could link working conditions and characteristics of the workforce to detailed facility

characteristics in part led in this thesis research to a more focused mapping on only the workforce.

Involving workers themselves and allowing time for an iterative process and triangulation leads to better indicator design. Multiple methods research can include a range of approaches that are both quantitative and qualitative in order to capture the full context and the diverse nature of health and social care workplaces including their particular hazards. Attending to gender and racialization through the lens of feminist political economy allows for power inequities and differences of social location to be understood at multiple, intersecting levels and multiple methods best capture this detail (e.g., Balka, Messing and Armstrong, 2006; Armstrong and Armstrong, 2008). Unsettling the record may require thoroughness, triangulation and conscientious collaboration, but also new methods – or instruments – for evidence gathering.

No one is FTE

In 1983, Dorothy Smith published an essay "No One Commits Suicide: Textual Analysis of Ideological Practices" (Smith, 1983), regarded as a core contribution to feminist sociological theory. In this piece, Smith uses the example of suicide to point to how sociologically relevant events are often taken up in textual and social scientific discourses in such a way that meaning is "attenuated and occluded" (p. 310). She argues that the usage of different terminologies in different discourses "have their specific work, their specific usages which are not necessarily descriptive or referencing usages at all" (p. 310). Her examination of suicide, in particular, points to how the "subject is discarded" in the textual discourse of the intelligentsia of her time and that by naming the action of killing oneself "committing suicide", this general term and category has lost the "name of action" (p. 313). Smith's analysis points to how the accounting

for a type of death gets coded into categories based on specific bureaucratic and professional terminologies that are part of an "operation of the state and professional extensions of state interest" (p. 315). Through this process, suicide is accounted for in medical records which in turn are used in various legislative and administrative processes that "maintain, articulate and regulate" the work of organizations.

Through juxtaposing accounts of suicide, Smith carefully unveils how naming and classifying actions is an ideological process with a complex division of labour. She traces the process of how the "particularities of experience in the everyday world" – in this case suicide – "are worked up into data" (p. 316) while becoming embedded through the "transformative normalizing language of ideology" (p. 317). As Smith notes, "the phrase 'she committed suicide' gives us entrée to that ideological process; the phrase 'she killed herself' does not" (p. 317). Here, Smith is speaking directly to social scientists' involvement in the mental division of labour. She is holding social scientists accountable for their own role in upholding the ideological relations of ruling through the maintenance of various objectified forms of knowledge. Via an "encoding-account" process, social scientists, along with other influential groups in society with "specialized forms of talk", enter in accounts of everyday actualities "for the record" (Smith, 1983).

Smith points to the "ideological circle" that is formed through this process, so that "the factual accounts generated…are organized in ways which articulate the lived actualities of people to the practices by which they are ruled" (p. 358). Garfinkel's (1967) use of the notion of the documentary method of interpretation is presented by Smith as a parallel to the notion of the ideological circle, and as an illustration she quotes Garfinkel on the conversation process as "the everyday necessities of recognizing what a person is 'talking about' given that he does not say

exactly what he means" (Garfinkel, 1967, p. 78). The ideological circle is something that people do, according to Smith (p. 331), and is the process whereby "the diverse and particular can then be treated as instances of the same 'for all practical purposes'. Thus the ideological circle must be seen not merely as a method but as an active process of conversion from what is there to a factual account organized by the ideological schemata of discourse or formal organization" (p. 331). Smith's example of suicide helps to demonstrate how society accounts for itself – or does not account for itself. This accounting process establishes the particular social ordering of events at the same time as it substantiates the existence of a social ordering.

The ideological circle supports the relations of ruling in part through objectified forms of knowledge. Of course, statistics are an obvious example of objectified forms of knowledge that are designed to support particular interests – most often those of the state and whoever controls the state. For the purposes of this thesis, Smith's analysis helps illuminate part of the process of construction behind statistics. A suitable and parallel illustration of objectified forms of knowledge that relates to workforces in long-term residential care is the use of statistics on full-time equivalents (FTEs) that is so prevalent within conventional accounts of labour in this area. Indeed, at the initial stages of research for this thesis, several datasets, including provincial and institutional, were examined to see if they could yield information on the working conditions and work organization of providers in long-term residential care facilities. However, most of these datasets have very limited statistics on the workforces. Frequently, an indicator used is the FTE. The FTE is also one of the two statistics on long-term care workers used by the OECD (the other being "head counts").

Of course, the FTE – a statistic that lumps all workers together whether full- or part-time and regardless of other work arrangements or conditions – is designed to provide economic

accounts to ascertain the supply of labour in terms of how many FTEs it takes to do the job. It is a universal indicator, used across settings, that provides some entrée into the ideological process behind the gathering of data on "human resources" in health and social care, and specifically in long-term residential care, by pointing to how workforces are accounted for in these settings.

There are many obvious critiques that can be made of the FTE, some that are presented elsewhere in this thesis, but the main point being made here is to illustrate that the conventional indicators used for workforces in health and social care are sometimes so limited that very little can be said about the "subject" and the "action". Working conditions and work arrangements are invisible and whether workers are employed full- or part-time, on a permanent or temporary basis, at night or during the day, on-call or for longer shifts, are all erased by the indicator. Who is doing the work and how they are compensated are also erased – are they women, men, immigrants, racialized, young, old? These factors all influence the experiences of workers – and residents – in different ways in different settings. Most importantly, the indicator of the FTE tells nothing about what is actually done by those getting counted. This thesis in part aims to unsettle the record by providing numerous statistical depictions of labour forces in health and social care and in long-term residential care that plot well beyond the FTE. Using Smith's terms, this thesis situates itself as a methodological intervention in the "ideological circle" – it points to whose interests are served by the conventional statistical depictions while elevating findings through the existing infrastructure of data that offer new understandings of care workforces – their configurations and their conditions and how these might be influenced by context and differing values.

Conclusion

To summarize, the framework of feminist political economy provides an ideal lens through which to examine the paid and unpaid labour forces in long-term residential care. Quantitative measures are powerful tools that often intervene in policy analysis and debate. These measures are designed within the standard medical model framework and under the contemporary orientation of neoliberalism in high-income countries. This thesis draws upon feminist political economy so as to both understand the standard medical framework and its design, and to move understandings beyond this framework to expand the capacity to make more appropriate interventions in long-term residential care that are related to the labour force. Feminist political economy emphasizes the need to consider other factors, outcomes and interventions. Furthermore, it provides the foundation for alternate conceptualizations centrally related to the field of long-term residential care – concepts of what constitutes work, what shapes health and well-being, what skills are required for appropriate care, and what contributes to inequality, marginalization and invisibility. It is a theoretical framework with its own methodological legacy that invites scholars in the areas of health and social care workforces to question existing data infrastructure and standard methods of research while using existing resources to develop as accurate a portrait of care work possible.

The consideration in this chapter of approaches to mapping and measuring care work, guided by insights from feminist political economy, draws together lessons stemming from debates related to feminist methodologies. In particular, it demonstrates the importance of challenging essentials by moving beyond taken-for-granted notions about care work and relationships to context at multiple levels, gender and social location. Feminist scholars have unveiled blind spots related to women's work, highlighting historical invisibilities linked to

gender in the field of care work research. They have shown how these invisibilities arise from values in the dominant evidence-based methods of the medical framework of research. Addressing data gaps pertaining to women and gender is more challenging than simply adding in women. Gender analysis, and analysis of gendered and racialized dynamics, involves rethinking entire frameworks (Vosko, 2006). Several approaches and methods can help challenge prevailing methodologies to uncover new knowledge and in some cases, feminist research methods influence contexts in which they are deployed to raise awareness among research participants or to challenge standard ways of thinking.

The use of multiple methods to capture the range and nuance of experiences, though complicated, is critical to effective feminist research on care work. Also challenging but equally important is the methodological practice of including voices on the margins in the design of research. Relationships between academics and research participants can be fraught with tension, requiring examination of ethical guidelines and the enhancement of researchers' skills and thoughtfulness. The methodology of this thesis sets itself within the approach of multiple method research by understanding how quantitative analysis is an important constituent element of triangulation – that it speaks within the standard framework of the medical model while at the same time engaging the data conceptually to ascertain what is missing and invisible within the existing infrastructure. In illustrating approaches to mapping and researching care work and women's work, the goal in this chapter has been to examine ways to think critically and creatively about research design practices and how insights from feminist political economy and feminist methodologies are invaluable to producing comprehensive and careful scholarship in the area of health and social care workforces. Guided by feminist political economy and feminist methodologies, this thesis undertakes to expose the gaps, limitations, and biases of conventional

depictions of the labour force in long-term residential care and how these differ by context and are influenced by neoliberalism. Finally, this framework steers the development of harmonized measures of occupation, along with other harmonized variables, to elevate new understanding through the existing data infrastructure.

Chapter 3: Methods

For the purposes of this thesis, the mapping of the labour force in long-term residential care in Canada, the United States, the United Kingdom, and Sweden draws on available quantitative measures while identifying what is absent in the data. The aim in part is to elevate the silences found through a conceptual examination of the data. Any process of mapping is necessarily exploratory and iterative, which involves returning to the data to critically interpret findings using other research. The method of mapping used in this thesis builds on approaches advocated by feminist political economists who recognize the importance of empirically grounded research and also the importance of the material and economic realities of labour force dynamics (Vosko, 2006; Armstrong and Armstrong, 2009; Duffy, 2011; Pupo and Thomas, 2010; Duffy and Pupo, 1992). Furthermore, mapping concentrations of workers from varying social locations supports the feminist political economy approach of recognizing and analyzing inequitable segregations in society, including segregated divisions of labour that are gendered and racialized (Cranford and Vosko, 2006).

This thesis documents the work of mapping to make the process visible, since quantitative measures are often not explained but instead taken for granted as factual depictions.

In keeping with feminist political economy, it addresses statistical literacy[1] by drawing attention to the socially constructed nature of data and statistical mapping, going beyond current categories to take the full range of care into account.

The mapping in this thesis involves four key components. Firstly, it involves identifying available sources of national and cross-national statistical data on health and social care labour forces with specific attention to where data exist on workforces in long-term residential care. Secondly, the mapping approach taken in this thesis includes uncovering comparable variables that can be mapped across the sub-national jurisdictions within Canada and across the national jurisdictions of Canada, Sweden, the United Kingdom and the United States. This second component of mapping encompasses the harmonization of variables so that they can be used in comparisons – a process that is described in this chapter and further detailed in Appendix A and Appendix B. The third feature of mapping in this thesis involves exploring the harmonized and comparable data to locate patterns, exceptions, expected and unexpected findings, in relation to precariousness as identified through poor working conditions, low pay, low benefit coverage, and deskilling, and for providers from different social locations. This feature in part includes organizing the data findings in analytical visualizations and tables. Finally, the last component of mapping in this thesis entails pinpointing and characterizing the gaps in the statistical data.

Data sources

The ensuing analysis relies upon several sources of statistical data. To map care in Canada in Chapter 4, data from the 2006 Canadian long-form Census[2] along with data from the Statistics

[1] The notion of statistical literacy refers to the aptitude for grasping statistical data. It requires basic numeracy abilities along with the capacity to interpret the presentation of data in various publications such as academic journals and news sources. It might also include proficiency in the critical evaluation of statistics.

Canada Survey of Labour and Income Dynamics (CA SLID) are used. The SLID data presented in Chapter 4 are based on health and social care multidimensional statistical tables of the *Gender and Work Database* (GWD) housed at York University. The methods of this thesis are in part informed by involvement in the development of this database and the process of designing the multidimensional tables including the reasons for the indicators selected for analysis such as those measuring precariousness.

For the Canadian mapping in Chapter 4, the 2006 Census has been chosen because of its breadth of statistical labour force data and the reliability of the large sample size of the mandatory long-form Census survey, representing approximately 20 percent of the Canadian population. The 2006 Census offers excellent sub-national and sub-industry detail for workforces in health and social care and specifically in nursing and residential care where long-term residential care is classified. It also provides reliable detail on immigrant and racialized workforces that is missing in other statistical sources in Canada. The Gender and Work Database is used to profile Canadian workforces with data extracted from the SLID. The GWD CA SLID source was ideal given the involvement of the author of this thesis with the updating of data within the *Gender and Work Database* that was ongoing at the time of developing this thesis, which allowed for improvements in the multidimensional table designs of the GWD CA SLID tables while also providing data that could be drawn upon for examining workforces in long-term residential care. The CA SLID, though now discontinued, was an excellent source for statistical data on the income and material well-being of paid labour forces. The CA SLID also provided somewhat detailed information on visible minorities and immigrant populations – though in the public use files only for populations of 500,000 or more. The CA SLID had a

[2] At the time of collecting data for this thesis, publically available files of the 2011 Canadian Census had not been released. Limits to the 2011 Canadian Census are discussed elsewhere in this thesis.

sample size of approximately 17,000. Its discontinuation is discussed elsewhere in this thesis in relation to the new and evolving politics of national data in Canada.

For the cross-national mapping in Chapter 5, this thesis relies primarily upon uniquely harmonized data drawn from the *Comparative Perspectives on Precarious Employment Database* (CPD) housed at York University, in addition to some review and profiling of statistics on long-term care compiled by the OECD. The CPD is a sister database to the GWD and is similarly designed. Both databases are directed by Leah Vosko and house uniquely designed multidimensional tables using carefully selected variables to examine precarious employment in relation to gender, other social locations, industry, and occupation. The CPD emerges out of the GWD which was designed by several experts from Statistics Canada and academic institutions across Canada. The process of creating the GWD was highly interactive, involving numerous workshops and consultations. The GWD and CPD are intended in part as teaching tools, and both make available a wide array of statistics so that they can be easily used by researchers and students.

The cross-national mapping is in part informed by research gathered from involvement in the design of the harmonized variables in the CPD, which help facilitate cross-national comparison for 33 countries using seven different surveys. The surveys drawn upon from the CPD, and included within the cross-national mapping in this thesis, are: the Statistics Canada Survey of Labour and Income Dynamics (CA SLID – described above in relation to the sources for Chapter 4), the Statistics Canada Labour Force Survey (CA LFS), the United States Current Population Survey (US CPS), the European Union Labour Force Survey (EU LFS), and the European Union Survey on Income and Living Conditions (EU SILC).

The CPD and its source surveys were ideal for the statistical mapping undertaken in this thesis. Access to the data within the source surveys was readily available through involvement with the CPD. This allowed for direct and sustained involvement not only in the design of the Health and Social Care module of the CPD, but also in the harmonizing of all CPD variables included within all of the database tables. Involvement with the design of the CPD was beneficial on a practical level and aided tremendously in the gathering of critical knowledge about existing national and cross-national statistical infrastructure relating to labour forces, health and social care, and precariousness. The source surveys within the CPD include principal and reliable cross-national sources of data that are regularly drawn upon for labour force analysis in high-income countries, such as those developed and maintained with Eurostat (EU LFS and EU SILC).

The Statistics Canada Labour Force Survey (CA LFS) is a monthly, cross-sectional survey covering the civilian, non-institutionalized population 15 years of age and older and has a sample size of approximately 54,000 households and 100,000 individuals. Data are collected directly from survey respondents and participation is mandatory. It is designed to provide estimates of employment, unemployment, hours of work, work arrangements, union coverage, earnings, industries and occupations. The data drawn upon in this thesis from the CA LFS via the CPD is from 2011, however this source is regarded as one of Canada's best long term surveys on employment and was first developed in the period following the Second World War in order to address national economic and employment priorities (Statistics Canada, 2014c). Though the main objective of the survey is to examine employment, unemployment and the size of the active paid labour force, the survey also provides some information on public and private sector workforces – however, the design of the sector variable is critiqued elsewhere in this

thesis. The CPD harmonizes several years of data from the CA LFS from available public use microdata files prepared by Statistics Canada. The data from the CA LFS is relied upon for research and policy development by different levels of government and is also regularly used by academic and non-academic researchers.

The US CPS provides the source data for the CPD for the United States and is also regarded as a key survey for detailed and reliable statistical data on workforces, income and well-being, along with contingent and precarious employment. Developed and conducted by the United States Bureau of the Census, the US CPS is a monthly household sample survey with a core labour force survey conducted every March and supplemental surveys collecting additional information in other months. The CPD draws upon the March survey data of the US CPS and hence does not contain the supplemental data on other topics including contingent work, immigration, and marital history, fertility and birth expectations. Like the CA LFS, the US CPS provides detailed demographic data that are representative of the non-institutionalized civilian population. It has a sample size of approximately 60,000 household units.

The Eurostat surveys are based upon statistical data samples collected from nationally conducted surveys prepared by national statistical institutes and sample sizes depend on the size of the country. Eurostat processes the commonly coded data results centrally and prepares data products for policy and research, including the anonymised microdata that are harmonized within the CPD. The European Union Labour Force Survey (EU LFS) is a large household sample survey conducted of civilian non-institutionalized persons 15 years and over living in the 28 Member States of the European Union, 2 candidate countries and 3 countries of the European Free Trade Association. The CPD harmonized data from 1983 onwards from the EU LFS, however, the mapping in this thesis primarily includes data from 2011. Advantages of the EU

LFS include the use of common concepts and definitions that adhere to guidelines set out by the International Labour Organisation. The use of common classifications for industries, occupation and education allows for straightforward and meaningful comparisons across national jurisdictions in the European Union. However, some data differ by country and this was one of the challenges in harmonizing variables from the EU LFS for the CPD. The EU LFS has a quarterly sample size of approximately 1.5 million individuals and is designed similarly to the CA LFS and the US CPS to collect data on employment and unemployment, along with demographic, industry, occupation, and work arrangements data.

Eurostat is also responsible for the design, maintenance and distribution of data products from the European Union Survey on Income and Living Conditions (EU SILC). The EU SILC is somewhat similar to the CA SLID in its aim at collecting data on income in relation to well-being, poverty, living conditions and social exclusion. Though the EU SILC provides longitudinal data, the CPD draws upon only the cross-sectional samples and covers persons 16 years and older. The central aim of the EU SILC is to comply with the Joint Assessment Framework of the Europe 2020 strategy by assisting in monitoring and reducing poverty and social exclusion across the EU (Eurostat, 2014a).

These source surveys described above and harmonized within the CPD all have large sample sizes and provide somewhat detailed and reliable profiling of labour forces in health and social care, however, the sample sizes of the European surveys are not large enough to provide detailed information on the sub-industries within health and social care, a significant limitation. Furthermore, the public use microdata files of both the CA SLID and CA LFS harmonized within the CPD do not provide detail on the sub-industries of health and social care. The only source survey of the CPD that includes this sub-industry detail – but which is not harmonized –

is the US CPS. Nevertheless, given the opportunities offered by the harmonization of data within the CPD for exploring comparisons of health and social care labour forces across national jurisdiction, the CPD and its source surveys were considered the ideal sources for the mapping research undertaken in this thesis.

Finally, the other main source of statistical data drawn upon in this thesis on labour forces in long-term residential care is OECD data, which are very limited. A review of OECD data is included in Chapter 5 (with additional detail provided in Appendix C) and is included in order to point to the contemporary, comparative statistical framing of long-term care and its gaps.

Mapping design

To map paid labour forces in health and social care across the four countries, this thesis relies upon an occupation variable designed for the CPD that harmonizes data from three occupation classifications: the ISCO-88 (EU LFS and EU SILC), the SOC 2000 (US Current Population Survey) and the NOCS 2001 (Statistics Canada Labour Force Survey and Statistics Canada Survey of Labour and Income Dynamics). Keeping in mind the need to include all workers in care settings in order to best understand the labour force (Armstrong, Armstrong and Scott-Dixon, 2008) the health and social care occupation variable divides the entire health and social care labour force into six occupation categories. These categories are: managers, physicians and other professionals, nursing professionals (including midwifery), technical and associate professionals (including licensed practical nurses), assisting occupations (including care aides and personal support workers), and support providers (including all other workers in health and social care but who are not elsewhere classified, such as clerical, cleaning, food services and other support). This thesis draws upon information gathered from the design of indicators,

particularly for the module on health and social care, undertaken with the CPD, and describes aspects of the process of harmonization of data for making meaningful comparisons for this area of research.

The approach of mapping all paid workers in health and social care across all occupation groups is somewhat unique and has not been undertaken comparatively in any other existing labour force research in this area. Specifically, the approach of including workers in assisting occupations and support provider occupations is particularly lacking in cross-national examinations of workforces in health and social care. Furthermore, mapping these occupations groups *in relation* to the other occupations groups such as managers, professionals and associate professionals, to ascertain their relative sizes and hence importance in the configurations of care in different contexts is an entirely unique approach to mapping in this area.

Research in Canada serves as a model for this mapping (Armstrong, Armstrong, and Scott-Dixon, 2008; Armstrong and Laxer, 2011), however, harmonizing the data on industry and occupation for the purposes of cross-national comparison is an original contribution of this thesis. In Canada for example, the classification of "health occupations" in the NOCS includes only physicians and other professionals, nursing and midwifery professionals, associate professionals, and providers in assisting occupations. Not included, and hence not obviously regarded as part of health and social care, are workers in support occupations. In order to capture these workers, industry data must be cross-coded with occupation data so that the size of the support occupation segment of the paid labour force can be mapped within the industry of health and social care (please see Appendix A for more detail). This cross-coding of industry and occupation also allows for a comparison of the relative size of the "manager" workforce in each country. This approach has been taken in Canadian research (Armstrong and Laxer, 2011;

Laxer, 2013) but not in any cross-national comparative research. Through using the Canadian research as a model and by harmonizing statistical data for cross-national comparisons, this thesis research sets up a framework for examining the differing care configurations and divisions of labour in different contexts. Setting Canada comparatively in this way helps point to the influence of context on how care work is divided and prioritized differently in different places. This is a key finding in this thesis that relates to ongoing discussions on configurations of care (see for example, Lyon and Glucksmann, 2008).

This thesis does not use statistical modeling such as regression analysis. Though modeling can be extremely useful for determining potential causal relationships between specific variables, the goal of the quantitative analysis in this thesis is to interpret the "noises and silences" (Vosko, 2014; Armstrong et. al, 2006) in the data infrastructure in relation to broader mapping approaches in health workforce research. Areas of research where regression analysis would be particularly useful would be to ascertain the relationship between, for instance, the working conditions of providers and the health outcomes for residents in long-term residential care facilities. This sort of research was not undertaken in part because no accessible sources of data linking sufficient working condition variables with outcome variables in long-term residential care were found during the initial stages of research for this thesis. Also, and most significantly, there is very little existing research that simply maps the labour force in long-term residential care, either in Canada specifically, or cross-nationally for comparison. The mapping that does exist is very limited, with meager information on pay, benefits, skills and working conditions for this workforce. Hence, this thesis in part aims to fill the gap of knowledge on basic things like pay, benefits, working conditions and education levels for those workers in

long-term residential care. This sort of socioeconomic information and data is of particular interest to political economists.

The approach taken in this thesis aims to contribute to methodological discussions on mapping health and social care workforces comparatively, particularly in understudied areas such as long-term residential care. The unique challenge in this thesis was to map all workers in health and social care which is not possible using any cross-national sources of data other than the newly developed CPD. This thesis further fills this gap by providing a model – gathered from designing variables for the CPD – for how to harmonize occupations in health and social care so as to include as many paid workers in all their varied roles as possible. Finally, the mapping of labour forces in long-term residential care and in health and social care included in Chapters 4 and 5 include numerous data visualizations. Visualization was one method used to spot similarities and differences among the countries and categories under examination. Further, visualizations aid in the demonstration of findings, some of which are very complex and draw out the importance of context in creating differences, while also pointing to similarities that reflect the pressures of neoliberal forces. For example, in Chapter 5, several bar visualizations are presented and many include numerous groups for comparison, such as for work schedules, job tenure and reasons for absences. These visualizations allow readers to quickly see critical evidence upon which key findings in this thesis are based.

Variable harmonization for cross-national mapping

For the cross-national mapping of labour forces in health and social care presented in Chapter 5, this thesis draws upon data from the newly designed CPD. The author of this thesis was involved in the design of each of the three modules of the CPD, including Forms of Precarious

Employment (see Vosko et al., 2014), Temporal and Spatial Dynamics (see Walsh et al., 2014), and Health and Social Care (Laxer and Armstrong, 2014). To harmonize variables from the source surveys for the cross-national comparative database of statistical data, principles were collectively developed by a group of researchers to guide the process. Numerous experts from across Canada and from other countries were involved in designing these principles and in setting out the main objectives and key concepts for the three modules of the CPD. Several workshops and conferences were held over a series of years as part of the development of this database, which was conceived out of the initial *Gender and Work Database* project.

Five principles of harmonization were agreed upon by the researchers involved in the development of the CPD, which include: "practicality", "comparability – but not at any price", "meaningful classifications", "maintaining the smallest level of granularity", and "pointing to the silences and invisibilities in the data" (Vosko, 2014). The overall objectives of harmonization have involved ensuring that suitable and available sources of data are used, that the data are somewhat comparable across the source surveys, that the indicators developed are meaningful in some or all contexts and that exceptions are identified, that the most detail possible is maintained while meeting national guidelines for reliability and suppression, and finally, that the gaps in the data are noted, particularly as they relate to measuring gender, social location, and precariousness. These principles of harmonization were used in developing all variables for the CPD, including those for the health and social care occupation groups that are used in cross-national mapping this thesis.

Health and social care occupation groupings

Harmonization of health and social care occupations across surveys and national jurisdiction was a daunting task and is one of the central contributions of this thesis in terms of mapping the division of labour presented in Chapter 5. It was not possible to align categories of occupations perfectly and some compromises had to be made. For example, in the case of assisting occupations, which are an important occupation group in long-term residential care, some survey classifications include more occupation groups than only assistive personnel such as care aides or personal care workers (PSWs). Childcare workers are included and some medical aides/assistants depending on the survey. Also, it was not possible to distinguish between facility-based and home-based assisting occupations using any of the surveys except for the US CPS, so for the purposes of cross-national comparisons, a common harmonization was maintained without detail on sub-industries in health and social care (i.e., facility care or home care). Where possible, a more detailed variable for health and social care occupations is used where nurses are separated out into a category distinct from physicians and other professionals. The harmonization for this variable is very similar to the basic health and social care occupation harmonization, using the same occupation classifications, and was possible using the CA LFS, the EU LFS and the US CPS. Additional details for the harmonization of the health occupation variables used in Chapter 5 can be found in Appendix A.

Many occupations groups included in the harmonized categories are not obviously relevant to health and social care, however, in harmonizing these occupations, the variable for occupation was coded to apply only to the variable for the industry of health and social care, meaning that only those workers employed within the health and social care industry are included. As an illustration, while the category "personal and protective services" for the EU

SILC is the main category where workers in assisting occupations are found, this category also includes "police officers" and "astrologers". However, given that the variable for occupation is coded to include only those in health and social care, most workers in policing occupations and astrology occupations would not be included (unless, of course, they are employed by an health and social care establishment or self-identify as working within the health and social care industry).

Indicators of precariousness and social location

In framing precariousness in relation to health and social care workforces, the approach taken in this thesis borrows from the multidimensional approach developed for the CPD by Vosko (2014, 2000, 2006) and other researchers. This approach sees precarious employment as not related specifically to form of employment such as full- and part-time or permanent and temporary, but instead, as related to multiple other factors (Vosko, 2014). These other factors are grouped into four main dimensions, which include degree of certainty, regulatory protection, control over the labour process, and income level (Ibid.). This thesis adopts a similar approach to the CPD by considering indicators of precariousness that fall within each of these dimensions. For example, to consider degree of certainty, job permanency is mapped. For regulatory protection, data on benefit coverage is considered. Union coverage data are used to map aspects of control over the labour process since research has demonstrated that unionized workers have more autonomy and control than non-unionized workers (Jackson, 2003; Anderson et al., 2006). Finally, income is measured through hourly wage and annual income data, particularly in terms of gaps between different groups of workers. A considerable body of research supports this approach to mapping precariousness in relation to these dimensions, referred to as "dimensions of labour market

insecurity" by the CPD (for examples, Rodgers and Rodgers eds., 1989; Vosko, MacDonald and Campbell eds., 2009; Laparra et al., 2004). This thesis, along with the Health and Social Care module of the CPD, also examines the public and private sectors and data on occupational health and safety given their unique relevance elsewhere explained in relation to precariousness and social location.

The CPD includes over 70 harmonized variables. Several of these variables are used in this thesis including variables for income and wages, sector, union coverage, education, immigrants, recent migrant**s**/immigrants, reasons for absence and absenteeism, work schedules, job tenure, and forms of employment such as self-employment, temporary employment and part-time employment. The author of this thesis was directly involved in the harmonization of all CPD variables, and was the lead on harmonizing several of these variables including work schedules, reasons for absence, and sector. General detail on harmonization of these variables is included here with specific details for harmonization entered in Appendix B for this thesis and included also in the *CPD Harmonized Codebook and Data Diction*ary (CPD, 2014).

To measure income as part of the examination of precariousness (the indicators for which are explained further in Chapters 4 and 5), two CPD variables are used, including one measuring personal annual income and one measuring personal hourly wages. Income and wages are reported in the currency of the country. Income is defined as the total monetary earnings received from employment, farm labour, or self-employment, government transfers, benefits, pensions, and investments. This CPD harmonized variable reports the personal annual income of respondents. The average figures report the gross value and are in the currency of their respective countries during the time period when the survey was conducted. US CPS data

indicate each respondent's total pre-tax personal income from all sources for the previous calendar year, and represent the sum of several different types of income.

Hourly wage data in the CPD are defined as the money earned through employment and report the personal hourly wage of respondents. The average figures report the gross value and are, again, in the currency of their respective countries during the time period when the survey was conducted. CA LFS and CA SLID data include tips, commission and bonuses. For the purposes of comparison, and because income and wage data in the CPD are reported in national, unadjusted currencies, this thesis maps these data in terms of relative gaps between different groups. For example, the percentage gap between men's and women's earnings are presented for many groups of workers, as are gaps between highest and lowest earners. Earnings gaps are a particularly useful indicator of precariousness as they can impact workers' self-worth and self-esteem (Marmot and Wilkinson, 2001). This is explained further in Chapters 4 and 5, along with other indicators of precariousness and the research that supports their use.

Harmonization of the variables for sector and union coverage was fairly straightforward but was only possible for Canadian and United States data and not for either the United Kingdom or Sweden. The sector variable in the CPD indicates if respondents are employed in the public or private sector. It does not include information on the for-profit or not-for-profit sectors. For union coverage, the CPD variable indicates if respondents are union members and/or are covered by a collective agreement.

Education was one of the more complicated variables to harmonize. The CPD includes an indicator of the highest level of education attained. This harmonized variable aims to translate national measures of workers' highest level of educational attainment in to a typology that links educational systems across Canada, the United States, and the European Union. The

International Standard Classification of Education (ISCED) 1997, developed by UNESCO (ISCED, 1997), is used as a model for harmonizing national variables and definitions of education. The ISCED is designed to provide a common international structure for classifying educational programs, modes of learning, and levels of academic achievement, and provide a leveled basis for harmonizing education. There were some compromises that had to be made in the harmonizing of this variable, particularly for category 3 for EU LFS data: 'Medium high (upper secondary)'. For EU data, this category includes some cases that should be in harmonized category 4 - 'High (some college/college diploma/trade/some university)'. For US CPS data, a college education is treated as a university education. Though helpful for understanding some differences in the credentialed qualifications of different groups of care providers, education level is very challenging to interpret cross-nationally due to dissimilar systems in different countries (Vosko, 2014).

The variable for immigration status in the CPD indicates if respondents are immigrants or non-immigrants in their current country of residence. In cases where a national survey does not directly measure immigration status, country of birth or citizenship status is used as a proxy. For CA SLID data, immigration status is available only for persons living in an urban area of 500,000 persons or more. Measurement for individuals who have migrated from a different country one year ago is only available for EU LFS data, and hence only the United Kingdom and Sweden in this thesis. This variable indicates if respondents have migrated from a different country within the last year. To allow for sufficiently reliable sample sizes, the author of this thesis designed a variable for the CPD that groups these data into five-year groupings, in order to track a somewhat understudied, though very important, segment of the labour force (Walsh et al.,

2014). Indeed, few sources of cross-national data allow for examination of recent migrants or migrant workforces in health and social care, but the CPD provides some data to fill this gap.

Measuring the health and well-being of workers was a challenge using the source data for the CPD (Laxer and Armstrong, 2014). Hence, the CPD includes two direct indictors and a few indirect indicators or proxies for health and well-being. A variable measuring worker absenteeism that provides counts of workers according to their reasons for absence from work is one indicator used in this thesis. This variable indicates the reason an individual was absent from work during the survey reference week. Self-identified long-term disability or chronic illness is another variable harmonized in the CPD and measures whether respondents identify as having a long-term disability or chronic illness. For US CPS data, this variable indicates how respondents rated their current health on a five-point scale (from excellent to poor) and was modified to exclude respondents under 15 years old.

Long-term disability or chronic illness affecting work is also provided among the harmonized variables of the CPD to explore dimensions of precariousness. This harmonized variable measures if respondents have a disability or chronic illness affecting their ability to work. However, there were several challenges to harmonization and the variable within the CPD includes several alerts for researchers who use this indicator. For example, with the CA SLID data, the variable is based on a source variable that measures if respondents stated illness or disability as the reasons why they have irregular or part-time work schedules. Also, the sample population included for this variable in the CA SLID is different from the sample population included in the other national surveys. The questions pertaining to the CA SLID survey were asked to people who were either absent from work or who were working part-time. The other national surveys asked the question of disability affecting work to a specialized population of

respondents that specifically identified as having a chronic disability or illness affecting their ability to work. The EU SILC data for this indicator captures a respondent's self-assessment of whether they are hampered in their daily activity by any ongoing physical or mental health problem, illness or disability. Finally, the US CPS data identifies persons who had 'a health problem or a disability which prevents him/her from working or which limits the kind or amount of work'. Respondents were not supposed to refer to short, acute illnesses (e.g., influenza) or temporary conditions (e.g., pregnancy or broken bones) – even if these may in fact be related to their work in some way or may be related to chronic conditions, a noteworthy limitation of the US CPS variable.

Work schedule can indicate precariousness in several ways (Laxer and Armstrong, 2014; Armstrong and Armstrong, 2009) that are described in Chapters 4 and 5. Most significantly, type of work schedule demonstrates how much control workers have over their daily planning (for example, workers in on-call scheduling have much less control than other workers). Further, workers in some types of schedules have disproportionate rates of illness and injury, such as those in night shifts and rotating shifts. Using the harmonized CPD variable, work schedule indicates if respondents work regular daytime shifts, evening shifts, nightshifts or other shift work. For EU LFS data, the CPD created a derived variable where, if the respondent said 1 - 'yes, they do shift work' or 2 - 'sometimes do shift work', then they were combined in to a single category of 'yes, respondent does shift work'.

To measure job tenure, this thesis uses the CPD variable for tenure which tracks the number of years workers have been employed in their in current job. Temporary and part-time employment are measures included in a larger measure of the CPD on detailed forms of employment which is a mutually exclusive typology of employment relationship forms (Vosko et

al., 2014) that separates workers into six categories: full-time permanent, full-time temporary, part-time permanent, part-time temporary, self-employed and unpaid family worker. This typology of employment relationships stems from extensive work by Vosko (2006) that examines how employment relationships relate to precariousness. The CPD includes a few variables for form of employment but the one included in this thesis uses a definition of part-time that is based on the source survey's definition of part-time employment. Finally, self-employment is measured in a simple variable of the CPD that distinguishes the self-employed from all other employed persons. For US CPS data, workers with multiple sources of employment are classified according to the job in which they worked the most hours.

There are few models for how to harmonize so many variables from so many surveys, and accordingly, this CPD project was very challenging and interesting. Some variables were particularly difficult to harmonize, requiring several drafts and meetings, such as for harmonizing the classifications of industry and occupation. Moreover, the actual coding in R-code of these datasets was an enormous task undertaken primarily by the manager of the CPD. Throughout the data harmonization process for the CPD, several revisions of the R-code were shared and circulated and a final revision was collectively conducted over several full days of meeting to review each line of code for errors – a process that was well worth this communal investment of time and attention. Finally, data were checked against other sources of cross-national data, such as those gathered by the OECD, to ascertain validity.

Data limitations

There are limitations to the sources used in mapping. For example, the main sources of comparative cross-national labour force data for European countries are the European Union

Labour Force Survey (EU LFS) and the European Union Survey on Income and Living Conditions (EU SILC) and each source has limitations for profiling national labour forces in long-term residential care. The most significant limitation is that Eurostat microdata available to researchers aggregates industry data to the 1-digit level in order to meet criteria for anonymisation, which means data are available at the industry level of health and social care, but not for the sub-industries within health and social care. Secondly, these surveys do not collect data on sector (public, private, for-profit and not-for-profit) and union coverage, which are important indicators for mapping context and working conditions for labour forces in health and social care and specifically in long-term residential care. However, the CA SLID data, as well as the Canadian Census data, provide data on the sub-industries of health and social care along with data on unionization and sector, which are presented in Chapter 4.

Another limitation discovered during the building of multidimensional tables within the CPD is related to dissimilar universes for some variables. For example, the CA SLID variable for immigrants only looks at populations of 500,000 or more, leaving out immigrants in many contexts and limiting the universe for comparison with the other countries. Other variables of the CPD might include survey data that measures paid employees with survey data that measures the entire paid labour force (including, for example, the self-employed). These and other limitations are further reviewed in Chapters 4 and 5, and in the Appendices, along with related technical and harmonizing challenges.

The CPD is a living database and all those involved in its design recognize that data change and evolve over time with implications for current or past configurations of statistics and variables. Part of the aim of this thesis is to contribute to the discussions about data design and the process of conducting cross-national comparisons. Harmonization of the variables from the

source surveys helped not only to provide new ways of depicting cross-national comparisons but also served to educate those involved, including the author of this thesis, about how statistical data on the labour force are configured differently in different contexts. It was a challenging process, involving a careful scrutinizing of many data dictionaries and codebooks, along with some consultation among CPD module developers. The goal has not been to produce "perfect" data – an impossible and misguided objective – but instead to engage the data so as to understand its design, objectives, and potential for shedding light on new ways of thinking about workers in relation to context, precarious employment, gender, and other social locations.

Conclusion

This thesis analyzes the silences in the data and how these reflect limited understandings of care. Secondary sources are used to fill gaps in available statistical data. In line with the feminist political economy approach adopted, a primary aim of this thesis is to engage in a conceptual dialogue with statistical data to find the silences and gaps, while elevating a portrait based on a unique harmonization of existing occupation data in order to draw attention to the circumstances and conditions of work for some of the most invisible providers in care.

Chapter 4: The Shifting Division of Labour in Care in Canada

This Chapter examines the four sub-industries of health and social care in Canada. The aim here is to explore the division of labour across the industries of care with a focus on long-term residential care and its evolving role within the broader industry of health and social care. The chapter begins with a description of the transformations of the sub-industries in health and social care between 1993 and the present, including shifts in sector delivery and union coverage. Provincial and metropolitan comparisons are considered, along with the social location of providers, including concentrations by gender, race, ethnicity, immigrant status and age groups for workers across the sub-industries in health and social care. Finally, this chapter examines the precariousness of care providers in Canada, again with a focus on long-term residential care. Throughout, the choice of indicators is explained along with the approach to statistical mapping, which incorporates a variety of analytical tables and visualizations.

The sectors in health and social care

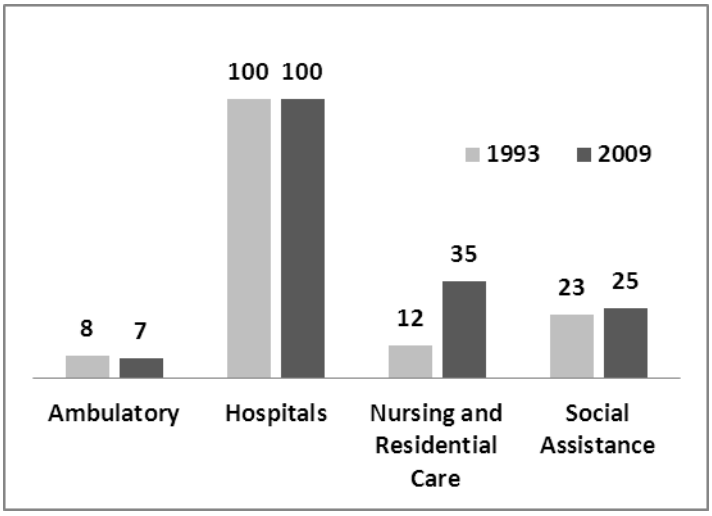
Health and social care in Canada takes place across all sectors including the public, private, for-profit and not-for-profit sectors. The primary objective of Canadian health policy is "to protect, promote and restore the physical and mental well-being of residents of Canada and to facilitate reasonable access to health services without financial or other barriers" (Health Canada, 2014).

The *Canada Health Care Act* looks to ensure that all insured persons have access to medically necessary hospital and physician services on a prepaid basis. The Act establishes conditions for insured health services and extended health care services that the provinces and territories must fulfill to receive full federal funding. The *Canada Health Care Act* was enacted in 1984, and funding became conditional upon the five criteria of universality, accessibility, portability, comprehensiveness, and public administration. The Act currently covers insured health services, which are: "hospital services provided to in-patients or out-patients, if the services are medically necessary for the purpose of maintaining health, preventing disease or diagnosing or treating an injury, illness, or disability; and medically required physician services rendered by medical practitioners" (Health Canada, 2014). Provinces and territories may also offer additional benefits funded and delivered on their own terms and conditions, such as prescription drugs, dental care, optometric, chiropractic, and ambulance services. These benefits may be targeted to specific population groups, including children, seniors, or social assistance recipients.

The *Canada Health Care Act* does not cover services provided by hospitals and physicians that are not considered medically necessary. For example, those services not covered include: preferred hospital accommodation unless prescribed by a physician; private duty nursing services; and the provision of telephones and televisions. Uninsured physician services for which patients may be charged include such things as prescription renewals by telephone; the provision of medical certificates required for work, school, insurance purposes and fitness clubs; testimony in court; and cosmetic services. Health care tribunals have variously interpreted the term "medically necessary" as have Canadian courts. Furthermore, the *Canada Health Care Act* does not explicitly mention long-term residential care nor does it explicitly prohibit for-profit delivery of publicly funded health services.

The only sub-industry in health and social care in Canada that is entirely publicly funded is the hospital industry (figure 1) and almost all hospitals are not-for-profit. There is considerable variation in the ownership of other services. However, mapping ownership and delivery models by sector is limited by the classification of public and private sector used by Statistics Canada labour force surveys, including the CA LFS and the CA SLID. Statistically, the public sector includes publicly owned and/or institutions and services that are part of government. Employees who work for a local, provincial or federal government, for a government service or agency, a crown corporation, or a government-funded establishment such as a school, university or hospital, are considered to be part of the public sector. Statistics Canada labour force surveys define the public sector as including institutions and services that are part of government and/or publicly owned (Statistics Canada, 2013). The private sector is defined as including all institutions and businesses outside government services, whether for-profit or not-for-profit, as well as private households (Statistics Canada, 2013). The parts of the labour force in ambulatory, nursing and residential care, and social assistance that are statistically classified within the public sector are working in establishments that receive considerable financial support from government or are owned by government. The ownership can be at the municipal, provincial or national level. The most significant limitation to the sector variable used by labour force surveys at Statistics Canada is the lack of data on the not-for-profit and for-profit sectors. This omission is quite consequential in Ontario, where for example, there has been a considerable rise in provincial government funding for for-profit long-term residential care.

Figure 1 - Public Sector Share in Sub-Industries of Care, CA, 1993 & 2009, SLID



Scholars have pointed to the push towards privatized and managed competition home care solutions as a neoliberal approach to reducing expenditures on health care (Peter et al., 2007) and this is related to how care is funded in Canada. Notably, some provinces like Quebec have been less inclined to adopt managed competition or private service delivery models for home care (Firbank, 2011), pointing to the varying choices made by provinces in regard to the management and financing of care. Health and social care are largely a provincial and territorial responsibility. The funding of national programs was intended to create conditions to ensure comparable quality across Canada. They included programs for higher education, for social assistance and for health care. Introduced in 1966, the Canada Assistance Plan (CAP) established a cost-sharing arrangement for social assistance programs and matched funding for hospital and doctor care preceded it. In the 1970s, changes were made to the initial arrangements and the Established Program Financing was introduced. The change to block funding provided provinces and territories increased flexibility in administering health care programs, although the funding for health care, education, and social programs remained separate.

In 1996, the federal government introduced the Canada Health and Social Transfer (CHST), which combined funds to the provinces and territories for health care, post-secondary education, social assistance and social services, while reducing the total amount significantly. This change reduced the federal commitment to social programs both by reducing the amount transferred and by diminishing the federal conditions attached to the transfer, allowing for more provincial autonomy and discretion (McBride and Shields, 1997). Indeed, as is further discussed later in this chapter, some provinces have moved significantly in the direction of privatization and other neoliberal reforms since these federal changes, particularly in Ontario under the Harris conservative government (Sears, 1999).

During the period of 2000 to 2003, the federal and provincial/territorial governments entered into several agreements for publicly funded health care, aiming to improve accountability and transparency. In February 2003, there was an agreement to restructure the CHST, establishing two new transfers, the Canada Health Transfer (CHT) and the Canada Social Transfer (CST). In 2003, 62 percent of the CHST was allocated towards health. The remaining 38 percent was provided for post-secondary education, children and other social programs. The 2003 budget allocated $16 billion over five years through the Health Reform Transfer, which is directed mainly at primary health care, home care, and catastrophic drug coverage. For accountability, reports with comparable indicators relating to health status, health outcomes, and quality of service, were required. This framework for accountability sought to monitor progress, the level of access to health services and the overall efficiency of the health care system, although it has yet to be fully realized.

In September 2004, the federal and provincial/territorial governments agreed to a ten year plan to strengthen health care. Effective April 1, 2005, the Health Reform Transfer was rolled into the CHT. In 2007, the federal government placed all major transfers on a five year track and changed the CST to provide equal per capita cash support to the provinces and territories. In 2009, legislation was introduced to adjust the payment to Ontario to ensure it receives the same per capita CHT cash transfer as other provinces. The CHT and CST are increased annually by fixed percentages. While the new transfers made up for some of the previous cuts resulting from the CHST, the significant cuts to hospital beds and the shift to home care intended to handle the reductions were well underway.

The proportion of the GDP spent on Canadian public health care is 7.9 percent (see Chapter 5, table 6). Most of the money is spent on hospitals, pharmaceuticals, and physicians. Any cuts on health care and social assistance tend to increase the load on women more than men, both as users of the system and as providers of care, paid and unpaid. Researchers have argued that women are poorer and tend to benefit more as recipients of social assistance than men. Given that women's unpaid work is not adequately measured in Canada it has been argued that health care policy cannot appropriately represent women's interests (Day and Brodsky, 2007). Women's secondary status as a result of unpaid reproductive and caregiving work has been reinforced in part because of growing low wage work and of governments' withdrawal from social programs. When services are cut back, it has been argued that women lose good paying jobs, and the burden of unpaid caregiving is increased (O'Connor et al., 1999; Day and Brodsky, 2007). And yet governments are expected to provide support for unpaid and paid health care (Armstrong, 2012).

The four industries of care

Within the industry entitled "health care and social assistance" (HSCA) by the North American Industry Classification System (NAICS), there are four primary sub-industries including ambulatory health care services, hospitals, nursing and residential care facilities, and, social assistance. Within each of these, there are several additional sub-industries. As a general breakdown, using calculations based on CA SLID data drawn from the GWD for 2009, all health care and social assistance in Canada represented 11.2 percent of the total measurable Canadian paid labour force, or 1,750,000 workers. Nursing and residential care facilities represented 2.1 percent of the total Canadian paid labour force or 327,000 workers. Ambulatory care represented 2.2 percent of the total Canadian paid labour force or 336,000 workers. Hospitals, the largest sub-industry in care, represented 4.1 percent of the total Canadian paid labour force or 637,000 workers (CA SLID, Gender and Work, 2013). Finally, social assistance represented 2.9 percent of the total Canadian paid labour force or 449,000 workers (CA SLID, Gender and Work, 2013). These figures point to the sheer size and significance of measurable paid health and social care work in the Canadian economy. The industry as a whole has seen considerable changes over the last couple decades with implications for the four sub-industries of care, and in particular, for long-term residential care. Most significantly, as the subsequent mapping will demonstrate, the division of labour across the industries is changing with critical implications for both care providers and recipients of care.

Ambulatory health care services comprise physician, dentist and other health practitioner offices along with out-patient care centres, medical and diagnostic laboratories, and home health care services. Ambulatory care is where medical home care is classified. Home health care services within ambulatory include personal care services, physical therapy, counselling,

medication and intravenous therapy, dietary and nutritional care, occupational and vocational therapy, homemaker and companion services, medical equipment and supplies, medical social services, and skilled nursing services (Minister of Industry, 2012). Not included in ambulatory care is what is referred to by the NAICS as "non-medical home care", which is classified within a sub-industry of social assistance. These distinctions within the NAICS are worth noting and is of some significance when examining the shifts underway in health and social care in Canada, given the rise of home care, particularly for older persons and persons with disabilities. Non-medical home care will be described in greater detail in the description of social assistance.

The hospital sub-industry includes general medical and surgical hospitals, psychiatric and substance abuse hospitals, and specialty hospitals. Specialty hospitals include establishments such as licensed hospitals that are primarily engaged in providing diagnostic and medical treatment to in-patients with a specific type of disease or medical condition. This does not include in-patients with psychiatric or substance abuse health issues. Hospitals providing long-term care for the chronically ill and hospitals providing rehabilitation are also included, as are those providing restorative and adjustive services to physically-challenged or disabled people. Specialty hospitals may provide other services, such as out-patient services, diagnostic X-ray services, clinical laboratory services, physical therapy services, educational and vocational services, and psychological and social work services (Minister of Industry, 2012).

Some illustrative examples provided by the NAICS for specialty hospitals in Canada are: hospitals dedicated to cancer care, chronic disease, extended care, geriatric care, maternity care, and nursing stations. Excluded are in-patient nursing and rehabilitative services to persons requiring convalescence along with residential care of persons with developmental handicaps, both of which are classified within the sub-industry of nursing and residential care facilities.

This detail is relevant and worth noting because it helps clarify some of the statistical classification distinctions and how these obscure some care within the sub-industry of hospitals that includes extended care for older persons. This care may be somewhat similar to care in the sub-industry of nursing and residential care, pointing to both the complexity of mapping the labour force caring for older persons and the challenges to documenting statistical distinctions between notions of medical and social care.

Nursing and residential care facilities include nursing care facilities; residential developmental handicap, mental health and substance abuse facilities; community care facilities for the elderly; and other residential care facilities. Most of long-term residential care for older persons is classified within "nursing care facilities" which includes "establishments primarily engaged in providing in-patient nursing and rehabilitative services, and continuous personal care services" (Minister of Industry, 2012). Some illustrative examples are: convalescent homes with health care, domiciliary care with health care, intermediate care facilities, nursing homes and personal care homes with health care. The mapping of the labour force in this thesis is at the level of "nursing and residential care facilities" and hence includes some sub-industries within that do not provide the sort of long-term residential care for older persons that this thesis aims to focus on. However, as already mentioned, it is worthwhile to explore the broader industries within health and social care. One area of future research, described in the concluding chapter, could be to map the labour force within these sub-industries of nursing and residential care, keeping in mind that statistical reliability would be diminished by smaller sample sizes.

Finally, social assistance, the forth sub-industry, includes individual and family services; community food and housing, and emergency and other relief services; vocational rehabilitation services; and, child daycare services. Non-medical home care is classified within social

assistance and includes services for older persons and persons with disabilities. Some examples provided by the NAICS of non-medical home care include: attendant service to disabled persons; family care and home-maker services; home care of older persons; home maintenance and home-maker services; household care and home-maker services; non-medical home care for the developmentally handicapped; red cross home-maker services; respite worker services without nursing skills; services for older persons and persons with disabilities; and social services home-maker services (Minister of Industry, 2012).

To emphasize, this detail on the sub-industries of health care and social assistance as classified in Canada by the NAICS is critical given the rise of home care as an alternative to long-term residential care and extended hospital care. Though it is beyond the scope of this thesis to examine home care more fully, in future research it is worth considering the distinction between "medical" and "non-medical" home care. Setting long-term residential care in a comparative analysis of the other sub-industries of care allows for a better understanding of its evolving role in health and social care, the neoliberal influence on this role, and the implications for care providers in terms of pay, benefits, skills and working conditions. The privatization and managerial approaches, and the resultant work intensification and deskilling observed within facilities, are influenced by the same pressures faced by home care workers in private homes.

Figure 2 shows the growth in numbers of the paid labour force in each of ambulatory, hospitals, nursing and residential care, and social assistance between 1993 and 2009. Evident here is the dramatic rise of social assistance, where non-medical home care is classified (medical home care is classified in ambulatory). Between 1993 and 2009, the labour force in social assistance grew by more than 200,000 workers, considerably outpacing the growth in each of the

other sub-industries. Figure 3 shows that between 1993 and 2009, social assistance grew by 130 percent, compared to a growth of 29.9 percent for all of health care and social assistance.

Figure 2 - Size of Labour Force in Sub-Industries of Care, CA, 1993 & 2009, SLID

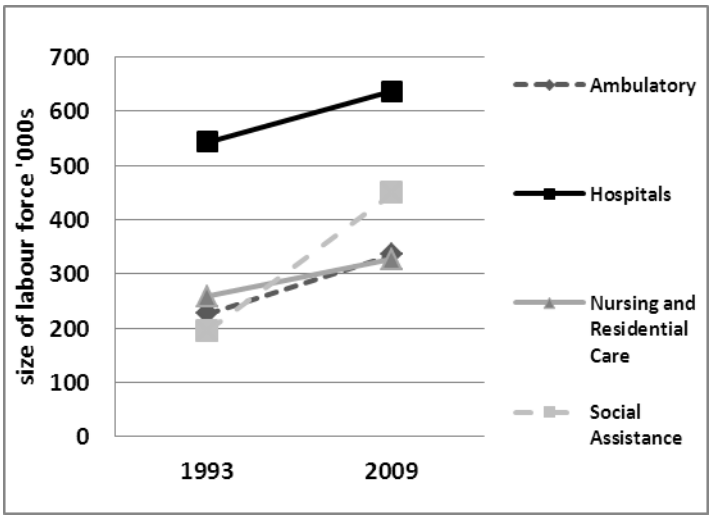
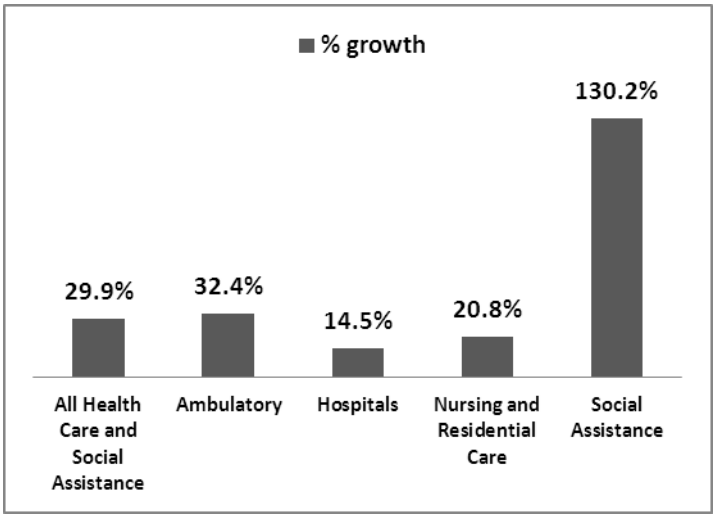


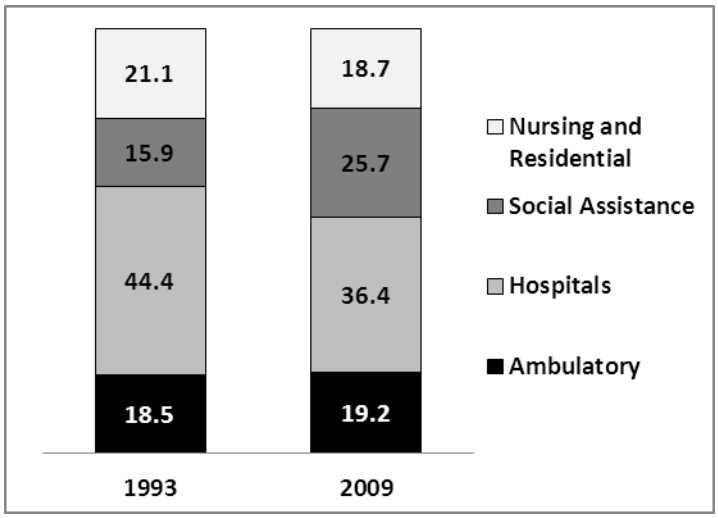
Figure 3 - Percentage Growth in Size of Sub-Industries of Care, CA, 1993-2009, SLID



Ambulatory care has also grown more than the average across all the sub-industries, though its growth hardly compares to that of social assistance. Nevertheless, this growth in ambulatory care can also be attributed to the emphasis in the last two decades on home care since

as noted above, medical home care is classified within this sub-industry. Hospital care has grown by only 14.5 percent, the smallest growth of the four sub-industries in care. As figure 4 demonstrates, the varied rate of growth of the sub-industries has led to a realignment of the relative sizes of each. In 1993, 44 percent of health care and social assistance took place in hospitals, but by 2009, only 36.4 percent of care is hospital care. Meanwhile, in 1993, 15.9 percent of all care was social assistance care but by 2009, this sub-industry comprised 25.7 percent of all of health care and social assistance. In sum, the last two decades in Canada have seen a dramatic shift in the direction of care work, with the paid labour force in both medical and non-medical home care growing considerably.

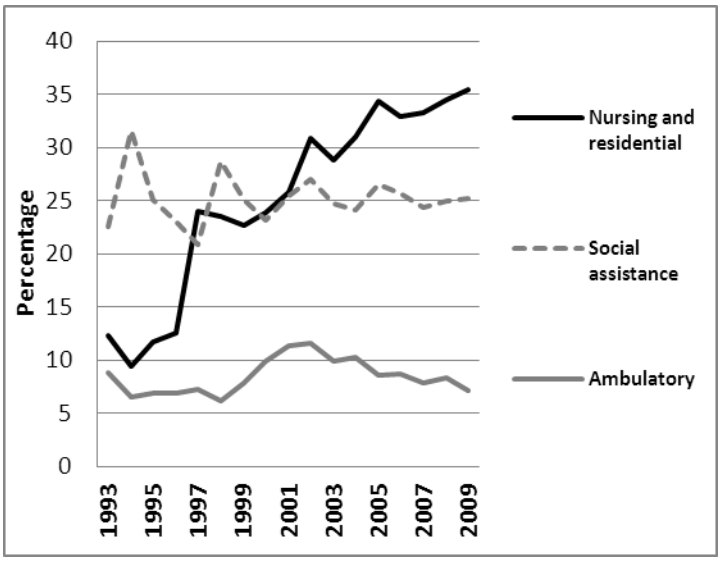
Figure 4 - Relative Size of Sub-Industries in Care, CA, 1993 & 2009, SLID



The timing of this growth corresponds with a couple key events in policy and funding direction for health and social care in Canada, including the shift from the CHST to CST and CHT payment to provinces for care. This can be seen in figure 5 showing the growth of the public sector labour force in nursing and residential care occurring soon after these funding

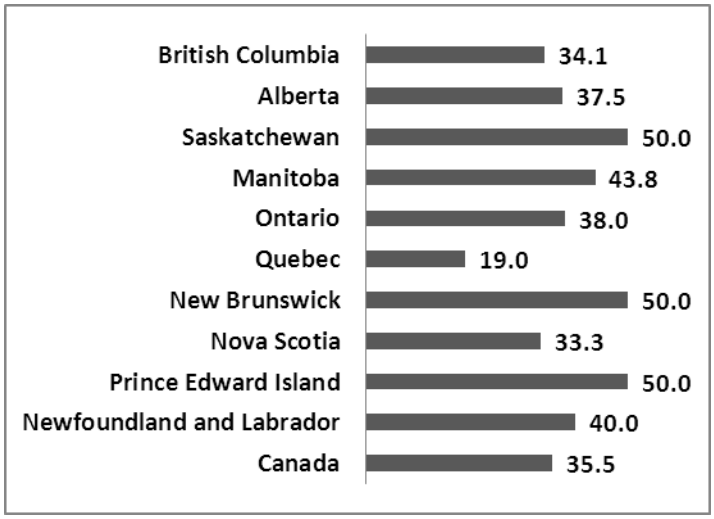
changes in the early 1990s. The growth of social assistance and shrinking of hospitals also corresponds with the push to marketize, privatize and turn a profit from care, all approaches to care delivery that are guided by neoliberal values. Hence, in the last two decades governments are shifting funding from hospital care to less expensive nursing and residential care where more care can be provided privately, in the market, and for-profit. The lens of feminist political economy helps demonstrate how this shift is both gendered and racialized in terms of who is segregated into this work. In general, the shift has been to offload more care to less costly providers who are defined as less skilled even though they are providing increasingly demanding care to residents with higher acuity levels. It is a reflection of the feminization of employment norms (Vosko, 2006) whereby the characteristics of precarious employment associated with marginalized groups of workers in the labour force spread to more workers, in this case eroding the standard medical model approach to care.

Figure 5 - Change in Size of Public Sector in Sub-Industries of Care, CA, 1993-2009, SLID



Nursing and residential care falls mostly under provincial and municipal jurisdiction, and research has demonstrated that provinces across Canada have taken distinctly different approaches to funding and fee structures in this sub-industry (Banerjee, 2009). Figure 6 shows the share of the labour force in each province classified as public in 2009. Newfoundland, Saskatchewan and New Brunswick have the highest shares of public sector nursing and residential care, at 50 percent in each province. The province with the lowest share is Quebec at 19 percent. These figures on the varying sizes of the public sector share in each province require some unpacking due to the confusion caused by how Statistics Canada classifies sector mentioned earlier in this chapter. For instance, since the Harris government of the 1990s in Ontario, public funding of for-profit facilities has increased significantly, but given the definition of sector used by Statistics Canada, it is not possible to distinguish workers in such settings from workers in not-for-profit, government owned settings. This is a significant limitation to the data on health and social care workforces, as the ensuing analysis will show.

Figure 6 - Size of Public Sector in Nursing and Residential Care by CA Province, 2009, SLID



The shape of the labour force in long-term residential care, along with pay, benefits, skills and working conditions, are influenced by the jurisdiction involved in the management and delivery of care. Further, across Canada, fees paid by residents in long-term residential care are not standardized, resulting in significant geographic variations in cost burdens for individuals and families. McGregor and Ronald show (2011) that provinces and territories vary in per capita spending on long-term residential care with some having much larger shares of public spending overall. Their study reveals that Newfoundland and Labrador has the highest per capita public spending on long-term residential care while Nunavut, Quebec and Alberta have relatively low public spending. The provinces also differ in the extent of for-profit care over not-for-profit care, and these differences, along with fees paid by residents, shape the labour force and delivery of care. In 2008, Ontario had the largest number of for-profit beds out of all beds in long-term residential care, at 53 percent (McGregor and Ronald, 2011), which is no doubt due to the increases to public funding of for-profit facilities in this province under the Harris conservative government in the 1990s. Indeed, measures taken by the Harris government can be linked to the spread of neoliberalism throughout Canada and was largely motivated by a desire to eliminate "waste" in the public sector via the implementation of lean state practices and generating "efficiencies" through privatization and managed competition (Sears, 1999). The province with the fewest number of for-profit beds was Newfoundland and Labrador, which does not have any for-profit long-term residential care (McGregor and Ronald, 2011).

Whether facilities are publicly or privately owned, or whether care is delivered by for-profit or not-for-profit entities affects the workforce in those settings. For example, McGregor et al. (2010) demonstrate in another study on long-term residential care that not-for-profit facilities owned by health authorities in British Columbia had the highest rate of increase in nursing hours

between 1996 and 2006 as compared to for-profit facilities and not-for-profit non-government facilities. Facilities with the lowest increase were for-profit. Their findings demonstrate the importance of type of ownership for workforces (McGregor et al., 2010). Meanwhile, other research has shown that workers in the public sector earn more and have better job security than their counterparts in the private sector (Evans and Werkerle, 1997), but less is known about the differences between the for-profit and not-for-profit sectors in terms of conditions of work, which is largely due to a lack of data collection in national labour force surveys in Canada on this distinction. While both the CA SLID and the CA LFS provide data on the public and private sectors, neither provides information on the for-profit and not-for-profit sectors. The lack of data is an important limitation and renders the analysis of working conditions in different types of facilities in long-term residential care challenging through using only existing quantitative instruments. This points to the need for mixed methods approaches in this area of research advocated in Chapter 3, since qualitative studies undertaken in these settings could fill in gaps in knowledge comparing labour forces in different sectors such as the for-profit and not-for-profit sectors.

To summarize, there are several limitations to how sector is classified in labour force surveys in Canada. Because the definition of public sector is not strictly based on ownership but rather is related to government funding, it is unclear what the threshold of funding must be to classify an establishment as public. Furthermore, it is not possible to distinguish between for-profit and not-for-profit organizations using these data, so in provinces like Ontario where there has been considerable government financial support for for-profit long-term residential care, the concentrations of labour forces within the public and private sectors become murkier. The public sector has long been recognized as an important shelter for workers, particularly women

workers in government, and in health and social care (Evans and Werkerle, 1997; Armstrong and Laxer, 2011). However, the trends in funding observed in these data suggest that governments are shifting resources from more expensive care in hospitals to less expensive care in long-term facilities and home care settings where most care is provided by lower paid or unpaid workers.

Although data examined later in this chapter confirm that there is a public sector advantage for workers in long-term residential care, overall the data suggest that governments, guided by policy, are key contributors to both work intensification and deskilling in extended and acute care for older persons, particularly in some jurisdictions such as Ontario where hospital care is being substituted with less costly care in nursing and residential care facilities and in home care – both areas of care that are unprotected by the *Canada Health Care Act* and that have faced the increased implementation of neoliberal measures such as managed competition and outright privatization. Viewed independently, growth in government supported nursing and residential care in Canada could be interpreted as a greater state commitment for the care of older persons. However, by pursuing an approach in this thesis that maps the sub-industry of nursing and residential care alongside the three other primary sub-industries within health care and social assistance, this growth is more appropriately interpreted as an offloading of care onto less expensive, less professionalized, and less powerful providers.

The occupational division of labour

Reflecting the medical model, dominant approaches to statistical mapping of the labour force in health care focus on particular groups of care providers, such as nurses and physicians, and on particular care work indicators, such as full-time equivalents (FTEs) and staffing ratios. This thesis takes a critical approach to labour force mapping of the long-term residential care industry

in Canada guided by research demonstrating the need to account for all workers in care. Armstrong, Armstrong and Scott-Dixon (2008) draw upon feminist political economy to interpret and critique the data on the health and social care labour force, particularly in relation to division of labour and precarious employment. Further, they point to the importance of mapping the division of labour within the contexts shaping care work. Alongside the importance of adding in all workers in health and social care is the significance of mapping the gendered and racialized dynamics such as those influencing precarious employment (Vosko, 2006), which further affect pay, benefits, skills and working conditions for providers. The absence of data and the typical depictions of the labour force contribute to the invisibility of some forms of care work and care working conditions which this and subsequent sections of this chapter aim to address.

As noted in Chapter 2 on theory, much of the existing research on workers in long-term residential care focuses on staffing ratios or FTEs, often in relation to resident population, funding and/or delivery. For example, OECD databases on health and social care workforces in home-based and facility-based long-term care use FTEs as one of two measures for estimates on the size of these workforces (see Chapter 5). These employee indicators minimize the actual contribution made by workers. The FTE, for example, represents the number of employees whose working time is lumped together to total the equivalent of one full-time employee. Contract and part-time workers are grouped in this calculation with actual full-time workers, and yet, their conditions of work and contributions vary substantially. Using the FTE as an indicator reflects a neoliberal approach to mapping labour – described in strictly economic terms with the aim to understand the fiscal cost of work and provide a basic estimate of the supply of labour. Not included in this sort of analysis is a comprehensive delineation of who is actually

concentrated in the paid labour force and how particular groups of workers are segregated into particular types of work.

Also missing is a detailed profiling of the division of labour. Typically, the work in long-term residential care is depicted as involving nursing care and varieties of personal support work, although concentrations of these occupational groups have not been mapped using national labour force data, nor have concentrations of other occupational groups in long-term residential care, such as food service and administrative workers. Overall, the focus in existing research is on direct care, with little attention paid to the other workers in this industry. Building from the research of Armstrong, Armstrong and Scott-Dixon (2008), this section explores mappings of these groups of workers in order to better understand their specific contribution and the conditions affecting their work.

The dominant approach to mapping "human resources" in care that stems from the medical model – which sees physicians and nurses as the primary care providers, along with dentists, therapists and technical assistants – focuses understandings of care on body parts, treatment of illness, pharmaceutical intervention and surgery. Professional and associate professional care providers most often have considerable formal training and are highly regulated. One implication of thinking about care in such terms is that certain groups of workers tend to get counted in statistical profiling of workforces in health care while others are left out. For example, the Canadian Institute for Health Information (CIHI) whose partners include federal, provincial and territorial ministries of health, Statistics Canada and Health Canada, along with other non-governmental health organizations, has as its mandate "to lead the development and maintenance of comprehensive and integrated health information that enables sound policy and effective health system management that improve health and health care" (CIHI, 2013). In

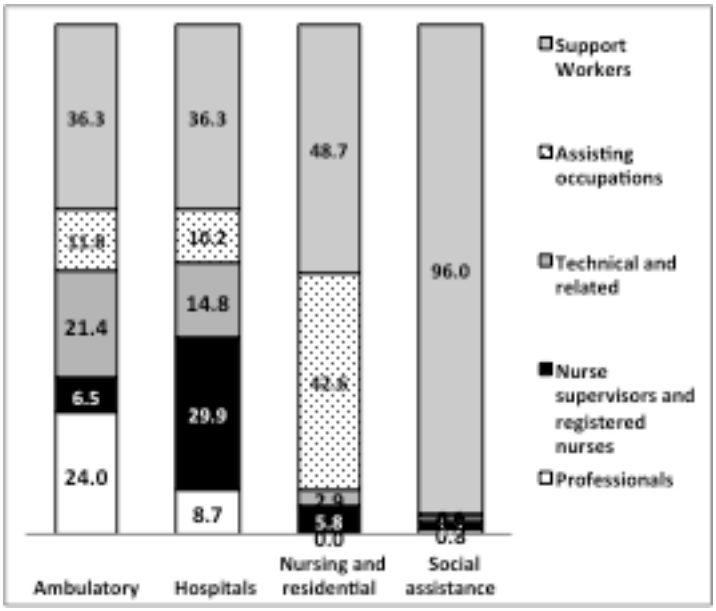
spite of emphasis on comprehensiveness and integration, a central and recurrent publication of the CIHI, *Canada's Health Care Providers* (CIHI, 2007), offers information on only those providers considered part of health care within the medical model approach. Moreover, CIHI houses several databases on care providers, but again, these cover occupations conventionally classified within the professional and associate professional groupings. A medical model approach to mapping of care workers adopted by organizations like CIHI leads to workforce policy analysis in care that renders invisible many workers who contribute to integral aspects of care environments. Further, the medical approach contributes to limited understandings of care work processes, which constrain the ability to consider appropriate changes in regard to care configurations and suitable skill sets.

Armstrong et al. (2008) uncover a very different portrait of care in Canada through an approach to mapping workers that includes those who fall outside the aforementioned categories. These other workers, who are almost all women, constitute nearly half the labour force in care. They are marginalized, precarious and largely invisible and their work is distinct from work in other industries such as food and accommodation services (Armstrong and Laxer, 2011; Cohen, 2001; Duffy, 2011). As Armstrong et al. note, their work "plays a central role in health protection and…costly infections or errors can result from new managerial practices and the privatization of the work" (p. 170). They are invisible in part because they are workers who have few formal credentials, less education, and whose skills are assumed to be part of their natural capacities as women rather than acquired through experience and training (Ibid.).

By adopting a similar approach to Armstrong et al. (2008) and including all measurable occupation groups in care in mapping the division of labour, it is evident that the four sub-industries in health care and social assistance in Canada differ significantly in their occupational

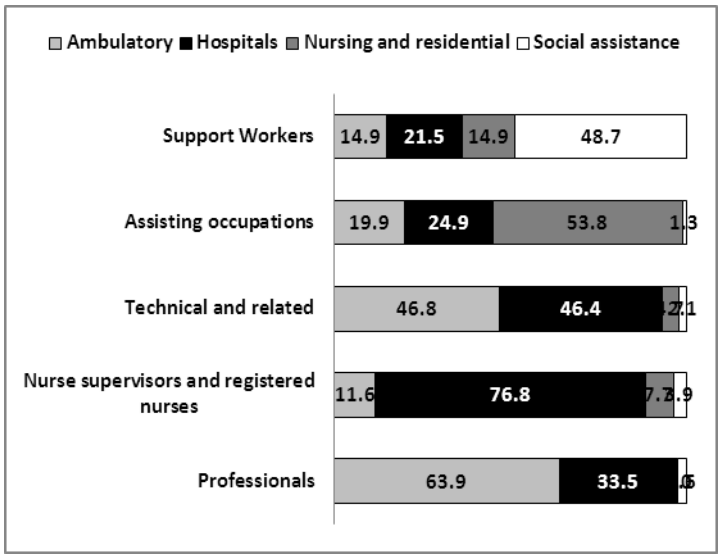
configurations (figure 7). Ambulatory and hospital care both employ large concentrations of professionals as compared to nursing and residential care, and social assistance. Not surprisingly, the largest share of nurse supervisors and registered nurses is found in hospitals, while the largest share of workers in assisting occupations – which includes personal support workers and care aides – is found in nursing and residential care. All of the sub-industries in care employ large concentrations of support workers – everyone else in care doing work such as cleaning, laundry, food service, clerical, security, and maintenance work. Among all of these groups of providers in care, the most neglected in research and data collection are those in the assisting occupations and support occupations. As mentioned, CIHI, for example, does not collect data on either group and the OECD compiles only limited measures on only providers in assisting occupations such as basic head counts and FTEs.

Figure 7 - Occupational Division of Labour within Sub-Industries of Care, CA, 2009, SLID



It is worth considering where the occupational groups work across the industries, not just within each industry, as is depicted in figure 8. Looking at the distribution of types of providers across the sub-industries of care, it is observed that 63.9 percent of professionals work in ambulatory care and almost none work in nursing and residential care. Most registered nurses and nurse supervisors – 76.8 percent – work in hospitals. Among workers classified as support workers, most are employed in social assistance, many of whom are employed in occupations such as those defined by Statistics Canada as non-medical home care. Finally, among the assisting occupations, which include personal support workers and care aides, over half are employed in nursing and residential care facilities. This representation in figure 8 further reinforces the data depicted in figure 7 by demonstrating the varied distribution and function of the sub-industries in health and social care in Canada, and by showing where the most expensive and professionalized providers are employed, as compared to the least expensive, and less powerful providers.

Figure 8 - Distribution of Types of Providers across Sub-Industries of Care, CA, 2009, SLID



The division of labour uncovered through this mapping is in part obscured by the contracting out and outsourcing of support services in health and social care in Canada over the last decade, since it is likely some workers are no longer classified within the industry of health care and social assistance (Armstrong and Laxer, 2011). Reinforced by the *Romanow Report* of 2002, which distinguished between direct care and ancillary services and suggested that ancillary work was an area for potential cost savings and contracting out, many provinces deepened the approach of outsourcing this work to other, private and sometimes multinational ancillary establishments providing cleaning services and food services. Hence, some workers who may be working in health care settings, including hospitals or nursing and residential care, but who are not directly employed by these organizations, may be classified to another industry – such as, for example, facility support services.

The industry of facility support services includes establishments that are engaged in providing a combination of services to support the operations within a client's facilities. Such establishments typically provide a combination of services, such as janitorial; maintenance; garbage disposal; security services; mail services; reception and administration; laundry services; and other related services to support operations within facilities (Minister of Industry, 2012). According to the NAICS definition of facility support services, this industry provides operating staff to carry out support activities, but who are not involved with, or responsible for, the core business or activities of the client (NAICS, 2012). However, it is not clear how the core business or activities of the client are defined.

The questions used by the Statistics Canada Labour Force Survey to ask respondents about their work and where they work might contribute to the classification of workers who work in health and social care establishments into other industries. Working through the logical

ordering of the questions on type of work used for the Statistics Canada Labour Force Survey, it is possible that workers employed with an establishment that provides facility support, even if within some kind of health and social care setting, could be classified to the facility support industry:

> LFS Survey Questions on Type of Work: LFI_Q114 — For whom did he/she work? (Name of business, government department or agency, or person); LFI_Q115 — What kind of business, industry or service was this? (e.g., cardboard box manufacturing, road maintenance, retail shoe store, secondary school, dairy farm, municipal government); LFI_Q116 — What kind of work was he/she doing? (e.g., babysitting in own home, factory worker, forestry technician); LFI_Q117 — What were his/her most important activities or duties? (e.g., caring for children, stamp press machine operator, forest examiner) (Statistics Canada Labour Force Survey Questionnaire, 2013).

To summarize, each of the sub-industries in health care and social assistance in Canada have distinct configurations of care providers. Professionals are concentrated in ambulatory services, nurses in hospitals, workers in assisting occupations are primarily in nursing and residential care, and, support workers are in social assistance. Hence, the most highly trained, highly paid workers are in the ambulatory and hospital sub-industries where they provide the most specialized care to patients with more acute needs – care typically defined within the medical model. The least trained workers are in nursing and residential care and social

assistance. This raises concerns as researchers observe that acuity levels of care recipients are rising (McGregor et al., 2010) in both nursing and residential care and in social assistance, particularly as more care work is being relocated from hospitals.

Finally, not all workers in these settings necessarily appear within the division of labour as it is mapped above given that outsourced workers may be classified to other industries. Also absent in the data are the unpaid providers in these settings including volunteers and family members who provide care in facilities. Further, personal companions and other informal providers who offer services such as hair and grooming care, are often hired privately by residents or families to supplement care in long-term residential facilities and cannot be mapped using Canadian labour force data (Laxer, 2013). There is growing evidence that these are important groups of workers who augment the insufficient care found in facilities as a consequence of privatization and cost cutting in this sub-industry (Armstrong and Braedley, 2013). The next section considers the occupational division of labour in more detail, particularly in relation to the segregation of some workers into particular types of care, such as women, immigrants and visible minorities.

Inequitable segregation in care

In Canada, over 80 percent of those employed in health care and social assistance are women. Concentrations of women vary by health care sub-industry and the highest concentrations are found within the sub-industry of nursing and residential care where long-term residential care is classified. In 2005, 80.7 percent of workers in hospitals were women, 77.4 percent of workers in ambulatory care were women, and 85.3 percent of workers in nursing and residential care were women (Statistics Canada, 2008). There is considerable gender segregation within the

occupations in health care and social assistance, which varies by sub-industry. Table 1 demonstrates the patterns of occupational sex segregation by sub-industry of health care and social assistance through showing the percentages of all men and women workers in all occupational categories within nursing and residential, ambulatory, and hospital care. In each sub-industry a sizeable portion of the paid labour force works in occupations other than those classified by Statistics Canada surveys as *health occupations*[3]. For example, out of all women working in hospital and ambulatory care, 31.6 percent and 50.7 percent respectively work in occupations other than "health occupations". In nursing and residential care, 41.5 percent of women work in other occupations.

[3] Both the Canadian Census and the CA SLID use the National Occupation Classification. Category D "Health Occupations" includes: D0 "professional occupations in health" where physicians, physiotherapists, dentists and other health professionals are classified; D1 "nurse supervisors and registered nurses"; D2 "technical and related occupations in health" where licensed practical nurses are classified; and, D3 "assisting occupations in support of health services" where personal support workers and care aides are classified.

Table 1 – Occupation Shares for Men and Women in Select Sub-Industries of Care, CA, 2006 Census

	Nursing and Residential Care		Ambulatory		Hospitals	
	Men	Women	Men	Women	Men	Women
Total	100.0	100.0	100.0	100.0	100.0	100.0
A Management occupations	8.6	3.6	4.0	2.2	4.7	2.2
B Business, finance and administrative occupations	4.1	5.8	5.4	30.3	6.9	16.6
B0 Professional occupations in business and finance	0.7	0.5	0.6	0.5	0.9	0.5
B1 Finance and insurance administrative occupations	0.1	0.1	0.1	0.7	0.0	0.1
B2 Secretaries	0.1	0.9	0.4	8.9	0.2	4.5
B3 Administrative and regulatory occupations	1.0	0.9	0.9	4.4	0.7	1.0
B4 Clerical supervisors	0.3	0.2	0.2	0.2	0.2	0.2
B5 Clerical occupations	1.9	3.2	3.2	15.4	4.9	10.4
C Natural and applied sciences and related occupations	1.0	0.1	3.0	0.6	6.0	1.0
D Health occupations	30.0	58.6	72.6	49.3	53.9	68.4
D0 Professional occupations in health	1.3	1.5	48.9	11.4	19.3	7.3
D1 Nurse supervisors and registered nurses	4.5	13.1	1.5	10.4	11.6	37.8
D2 Technical and related occupations in health	2.7	6.3	20.0	15.5	10.4	13.2
D3 Assisting occupations in support of health services	21.5	37.7	2.2	12.0	12.6	10.1
E Occupations in social science, education, government service,religion	20.1	11.1	7.6	7.1	5.6	3.9
E0 Judges, lawyers, psychologists, social workers...	5.4	3.4	5.9	5.1	3.6	2.9
E1 Teachers and professors	0.3	0.1	0.1	0.2	0.7	0.3
E2 Paralegals, social services workers... n.e.c.	14.4	7.6	1.6	1.8	1.3	0.7
F Occupations in art, culture, recreation and sport	0.9	1.1	0.3	0.3	0.4	0.5
G Sales and service occupations	32.1	19.5	5.1	10.0	16.8	7.2
G0 Sales and service supervisors	0.6	0.3	0.0	0.0	0.5	0.2
G1 Wholesale, technical, insurance, real estate...	0.0	0.0	0.1	0.0	0.0	0.0
G2 Retail salespersons and sales clerks	0.0	0.1	0.3	0.2	0.1	0.1
G3 Cashiers	0.0	0.0	0.0	0.0	0.1	0.1
G4 Chefs and cooks	6.1	3.3	0.1	0.1	1.5	0.6
G5 Occupations in food and beverage service	0.6	0.7	0.0	0.0	0.1	0.0
G6 Occupations in protective services	1.5	0.2	0.3	0.0	1.5	0.1
G7 Occupations in travel and accommodation...	0.1	0.0	0.0	0.0	0.0	0.0
G8 Childcare and home support workers	2.6	2.8	2.4	8.4	0.1	0.3
G9 Sales and service occupations, n.e.c.	20.6	12.1	1.9	1.2	12.9	5.8
H Trades, transport and equipment operators and related occupations	2.3	0.1	1.6	0.1	5.3	0.1
I Occupations unique to primary industry	0.8	0.1	0.2	0.0	0.2	0.0
J Occupations unique to processing, manufacturing and utilities	0.1	0.0	0.2	0.1	0.2	0.0

Among women working in ambulatory care, 15.5 percent are employed in clerical occupations as compared to 10.4 percent in hospital care. Only 3.2 percent of women in nursing and residential care work in these jobs. Meanwhile, higher concentrations of women work in

sales and services occupations in nursing and residential care as compared to ambulatory and hospital care. The concentrations of workers in "health occupations" are also very different by sub-industry in care. Of all women working in hospitals, 37.8 percent are nurse supervisors and registered nurses. Only 10.4 percent of women in ambulatory care and 13.1 percent of women in nursing and residential care are nurse supervisors and registered nurses. Nursing and residential care also employs relatively small concentrations of women in technical and related occupations, where licensed practical nurses are classified. Among women workers in ambulatory care and hospital care, 15.4 percent and 13.2 percent respectively, are working in technical and related occupations, while only 6.3 percent of women in nursing and residential care are in these occupations.

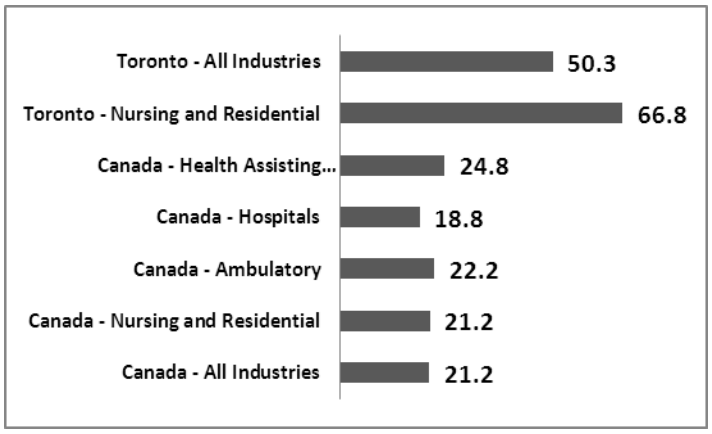
Most of the direct care in nursing and residential care facilities is contributed by women working in occupations classified as "assisting occupations in support of health services". This occupational category includes personal support workers and care aides and, in nursing and residential care, represents 37.7 percent of the female workforce, compared to 12 percent for ambulatory care and 10.1 percent for hospital care. These assisting occupations, along with sales and service, are among the most poorly paid and precarious in health and social care in Canada, which is explored further in subsequent sections of this chapter.

Though health care is largely composed of women workers, women are relegated to the lower end of the labour market in care and their jobs are associated with less security, lower wages and less benefit coverage. It is striking how men's occupational concentrations differ from those for women in all of health and social care and in nursing and residential care specifically. Among men working in ambulatory care, for example, 48.9 percent are professionals as compared to only 11.4 percent of women in that sub-industry. These are highly paid jobs, as are

management occupations, where 8.6 percent of men in nursing and residential care are employed as compared to only 3.6 percent of women.

The labour force in long-term residential care is not only gendered, but also racialized and aging. Immigrants and visible minorities have higher than average concentrations in the less secure and lower paid jobs in all of health and social care and, specifically, in long-term residential care. For example (figure 9), assisting occupations in support of health services are composed of 24.8 percent immigrant workers, as compared to 21.2 percent of immigrant workers across all occupations in the measurable paid labour force in Canada (Statistics Canada, 2008).

Figure 9 - Percentage of Immigrants, Select Industries, Occupations, and Regions, CA, 2006 Census

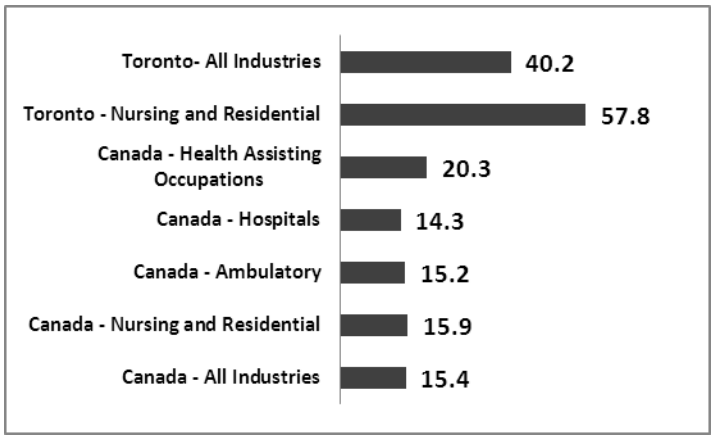


The definition of the statistical category of "visible minority" is not straightforward nor without some criticism from scholars. In this thesis, visible minority is not used as a conceptual or empirical category. Instead, following the lead of Cranford and Vosko (2006), the use of visible minority here refers to the specific variable defined by Statistics Canada to delineate some racialized groups. As noted by Cranford and Vosko (2006), Statistics Canada defines "visible minority" as persons, other than Aboriginal peoples, who are non-Caucasian in race or

non-white in colour. These categories of race and ethnicity are socially constructed. Some scholars advocate the disuse of the term "race" along with other racialized identity categories (Miles, 1987), however, given that racism and racialization shape workers' labour force experiences, many scholars point to the importance of mapping racial distinctions including "people of colour" and "visible minority" (Das Gupta and Iacovetta, 2000; Mensah, 2002, Cranford and Vosko, 2006). The approach in this thesis is to document these categorized groups so as to better understand inequitable segregation and marginalization of groups in society in some types of care work, particularly care work that is more hazardous, less secure, low paid, and often defined as less skilled.

Indeed, the overrepresentation of visible minorities is even higher than that of immigrants in assisting occupations in health care and social assistance (i.e., includes personal care workers and care aides). Census data show that in 2005 (figure 10), 20.3 percent of all workers in assisting occupations were visible minorities as compared to only 15.4 percent of workers in the total paid labour force in Canada. In other words, approximately 25 percent more workers in jobs like personal support are visible minorities than in all jobs in all industries in Canada, and, in some places like Toronto, the overrepresentation is also very significant (Statistics Canada, 2008).

Figure 10 - Percentage of Visible Minorities, Select Industries, Occupations, and Regions, CA, 2006 Census



According to Census data, approximately 57.8 percent of workers in Toronto in nursing and residential care were visible minorities in 2005, compared to 40.2 percent of workers in all industries in Toronto (figure 10). Specific groups of visible minorities are concentrated in nursing and residential care in Toronto, as is shown in figure 11. In 2005, the majority of visible minority providers were Black (42 percent), followed by Filipino (20 percent), South Asian (13 percent), Chinese (13 percent) and other visible minorities (12 percent).

Figure 11 - Toronto, Nursing and Residential Care, Visible Minority Shares, 2006 Census

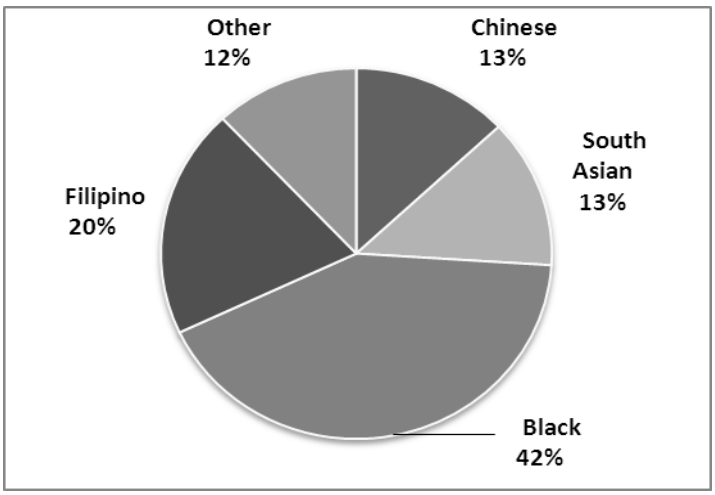
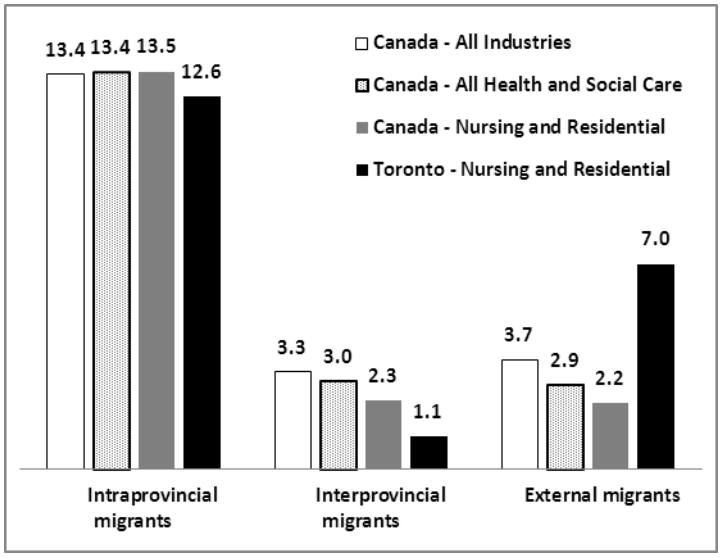


Figure 12 demonstrates that among intraprovincial, interprovincial, and external migrants[4], a very high percentage of workers in nursing and residential care in Toronto are recently arrived external migrants. The labour force trajectory of recent immigrants and migrants into various forms of low paid health and social care work has a long history in Canada (Arat-Koc, 1990; Arat-Koc, 2006). These workers typically have few citizenship rights and are particularly vulnerable to exploitation (Ibid.). Many workers are women who have originally come on the national Live-in Caregiver Program and who must meet requirements set by Citizenship and Immigration Canada and Human Resources and Skills Development Canada/Service Canada in order to remain in Canada. Research has demonstrated how workers who come in on the Live-in Caregiver Program are particularly precarious due to their tenuous citizenship status in Canada (Bakan and Stasiulis, 1997). These data also point to where particularly precarious workers in health and social care are concentrated within Canada. This information could help with policy dedicated to assisting new comers with dedicated resources that is targeted to their specific needs.

[4] *Total labour force by mobility status 5 years ago* refers to "the relationship between a person's usual place of residence on Census Day and his or her usual place of residence five years earlier. A person is classified as a non-mover if no difference exists. Otherwise, a person is classified as a mover and this categorization is called Mobility status (5 years ago). Within the movers category, a further distinction is made between non-migrants and migrants; this difference is called migration status. Non-movers are persons who, on Census Day, were living at the same address as the one at which they resided five years earlier. Movers are persons who, on Census Day, were living at a different address from the one at which they resided five years earlier. Non-migrants are movers who, on Census Day, were living at a different address, but in the same Census subdivision (CSD) as the one they lived in five years earlier. Migrants are movers who, on Census Day, were residing in a different CSD five years earlier (internal migrants) or who were living outside Canada five years earlier (external migrants). Intraprovincial migrants are movers who, on Census Day, were living in a different Census subdivision from the one in which they resided five years earlier, in the same province. Interprovincial migrants are movers who, on Census Day, were living in a different Census subdivision from the one in which they resided five years earlier, in a different province" (Statistics Canada, 2008)

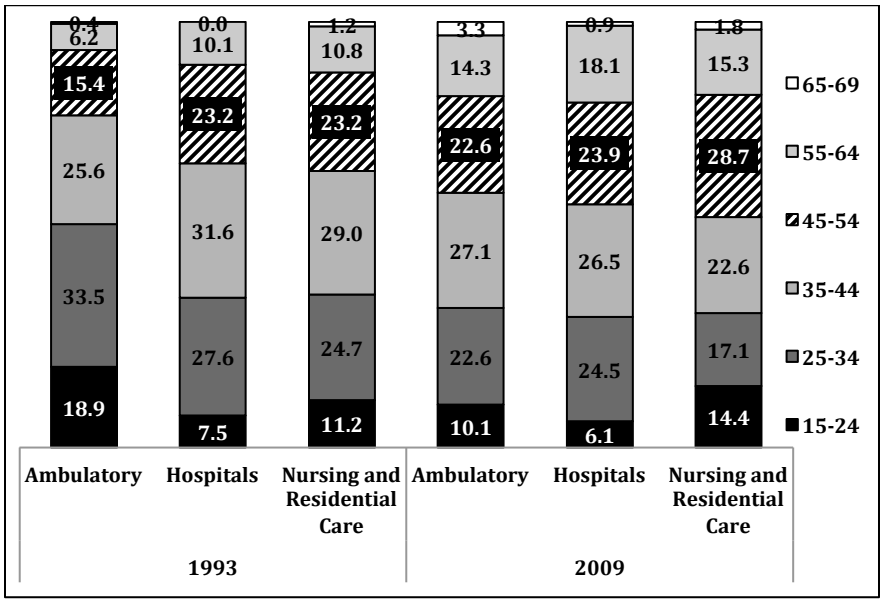
Figure 12 - Percentage of Five-Year Migrants, Select Industries, and Regions, CA, 2006 Census



With respect to age, the paid labour force in all of health care and in long-term residential care employs larger concentrations of workers in older age categories (Armstrong and Laxer, 2012). Data drawn from the CA SLID and shown in figure 13 reveals that in 1993, 9 percent of the labour force in health care and social assistance was between 55 and 64 years of age. By 2009, the percentage in this age category had risen to 15.8 percent. In nursing and residential care, the size of the paid labour force age 55 to 64 years rose from 10.8 percent to 15.3 percent over the same time period. Workers in nursing and residential care do the heaviest physical work as compared to ambulatory and hospital care. In 2009, 45.8 percent of workers in nursing and residential care were over the age of 45, while 42.9 percent and 40.2 percent of workers in hospital and ambulatory care respectively were over 45 years old. The aging of the paid labour force in care, along with especially high concentrations of older workers in nursing and residential care, can be in part attributed to declining union and pension benefit coverage and to lower wages associated with this work, meaning workers are not able to adequately fund retirement and have fewer other options than to continue working, often in full-time jobs

(Armstrong and Laxer, 2012). Furthermore, management may not replace retirees with young new hires in order to keep the labour force lean through retirement attrition.

Figure 13 - Age Group Shares, Sub-Industries of Care, CA, 1993 & 2009



To summarize, this section has illustrated who works in long-term residential care in Canada and their occupational concentrations. This sub-industry of health care and social assistance stands out in several ways as compared to the other sub-industries in care. It employs an older, gendered and racialized labour force, particularly in personal support, sales and services occupations, jobs that are poorly paid and less secure as compared to other occupations in the industry, and jobs that are often left out of statistical profiling and analysis of paid workforces in health and social care. The invisibility of this labour force is further reinforced by the lack of data collection on some groups of workers. Absent from the data and nearly impossible to track in this industry is the unpaid labour force. There are volunteers and family members who spend time devoted to caring for people in these facilities, as well as paid workers who contribute extra

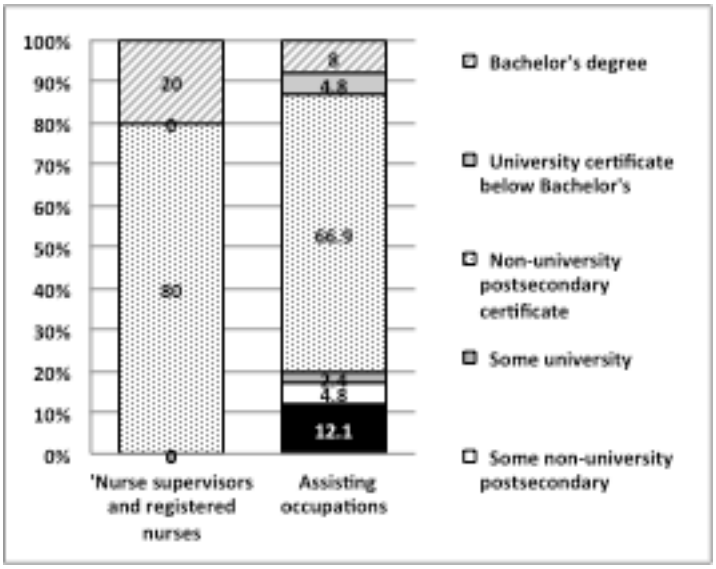
time on care in addition to their paid time. Furthermore, as Armstrong and Braedley (2013) point out, there is a considerable informal paid labour force working as personal companions in long-term residential care for older people. These are workers hired privately by families to supplement the care provided directly by facilities. This labour force is very challenging to track using national surveys making difficult the mapping of their contributions and the conditions of their involvement in care. There are implications related to who is responsible for this informal labour force, related to the uneven care received when some can afford to hire extra care alongside those who cannot and, in turn, related to the overall quality of care. Furthermore, the conditions of work of informal providers affect the paid workforce and their relations. Finally, leaving out support and assisting occupations in conventional mappings of care configurations, along with leaving out the informal and unpaid providers, affects the mapping of mostly female and racialized workforces, who are among those segregated into long-term residential care work.

Locating precarious care

The paid labour force in long-term residential care is a precarious one, relative to the total paid labour force in Canada, and relative to the paid labour forces in ambulatory and hospital care. This section will examine the precariousness of paid workers in health and social care in Canada with particular attention to the labour force in nursing and residential care facilities. To measure precariousness, several indicators are used including education level, income and wages, union coverage, nonstandard forms of employment such as part-time and multiple job holding, work schedule, and self-reported health status. These indicators build off of the work of earlier Canadian research in this area (e.g., Vosko, 2006; Armstrong and Armstrong, 2009).

Beginning with education, it is not surprising to find that the highest levels of education attained by most workers in nursing and residential care are considerably different compared to providers in hospitals and ambulatory care. Given the high concentrations of physicians and nursing professionals in ambulatory and hospital care – professionalized occupations requiring considerable training and education – the highest level of education is on average higher than for those working in both nursing and residential care and social assistance. Figure 14 shows the education levels of nurse supervisors and registered nurses and of providers in assisting occupations in nursing and residential care facilities in 2009. Providers in assisting occupations, such as personal support workers and care aides, have lower levels of education attainment overall, with a high concentration of providers having only a high school level education (12.2 percent). As has been mentioned, the skill levels, training and education levels of workers in nursing and residential care are of considerable concern given the rising acuity levels of residents. As work intensifies in this sub-industry of care, and as more tasks typically defined as medical are shifted into these facilities, the lower levels of education of the main providers – those in assisting occupations – speaks to the precariousness of both the providers themselves and of recipients of care.

Figure 14 - Highest Level of Education, Nursing and Residential Care, CA, 2009



Average incomes are very different across the sub-industries in care in Canada, in part a reflection of different levels of professionalization, credential attainment and education. Table 2 shows the average and median annual incomes for full-year, full-time workers for men and women in all industries in Canada relative to those in nursing and residential care facilities, ambulatory care, hospital care, and in assisting occupations. Average and median incomes are lower in both nursing and residential care and assisting occupations than for the average of all workers in Canada. This finding is observed for both men and women. Furthermore, average and median incomes are higher than national averages in both ambulatory and hospital care. Hence, looking at incomes alone, providers in nursing and residential care and in assisting occupations, are less well off than the majority of workers in Canada and are less well off as compared to workers in other sub-industries of care. Lower relative incomes speak to how workers in nursing and residential care and assisting occupations are less valued in Canadian society.

Wage gaps between men and women reveal the gendered nature of precariousness in care. Gaps are particularly high in both ambulatory and hospital care and this is due to the segregation of men and women into different types of professionalized employment such as physician and nursing care. Interestingly, income gaps between men and women are much lower relatively in nursing and residential care and for assisting occupations, likely a reflection of harmonizing down (Armstrong, 1996) and the feminization of employment norms (Vosko, 2006).

Table 2 – Average Income for Full-Year Full-Time Employees, Select Industries, and Occupations, CA, 2006 Census

	Canada - All Industries			
	Men	Women	$ Gap	% Gap
Number	5332045	3943725		
Average employment income	$58,537	$41,331	$17,206	29
Median employment income	$46,778	$35,830	$10,948	23
Standard error of average employment income	$86	$37		
	Nursing and Residential Care			
	Men	Women	$ Gap	% Gap
Number	27345	131310		
Average employment income	$40,823	$35,267	$5,556	14
Median employment income	$35,736	$32,562	$3,174	9
Standard error of average employment income	$627	$100		
	Ambulatory			
	Men	Women	$ Gap	% Gap
Number	62500	178160		
Average employment income	$101,262	$44,521	$56,741	56
Median employment income	$65,524	$36,686	$28,838	44
Standard error of average employment income	$963	$168		
	Hospitals			
	Men	Women	$ Gap	% Gap
Number	71670	256055		
Average employment income	$69,534	$52,207	$17,327	25
Median employment income	$50,317	$48,262	$2,055	4
Standard error of average employment income	$575	$115		
	Assisting Occupations in Health			
	Men	Women	$ Gap	% Gap
Number	17465	104690		
Average employment income	$35,275	$30,181	$5,094	14
Median employment income	$32,940	$30,071	$2,869	9
Standard error of average employment income	$284	$76		

Census data show that in 2005, the average income for full-year, full-time women workers was $44,521 in ambulatory care and $52,207 in hospital care, but only $35,267 in nursing and residential care (table 2). However, over 30 percent of the workers in long-term residential care are employed part-time. The median income for part-year or part-time women workers in assisting occupations such as personal support work was $16,185 in 2005 (Statistics

Canada, 2008). Part-time workers have fewer benefits (Carre and Heintz, 2009; Doudeijns, 1998) and lower union coverage than full-time workers (Anderson et al., 2006), contributing to their more precarious employment status overall.

The conditions of work in care are influenced by collective bargaining which varies considerably by province and sub-industry in care in Canada with some jurisdictions and industries having a more militant labour movement and collective bargaining history than others (Briskin, 2010). The province in Canada with the highest union coverage in nursing and residential care is British Columbia (figure 15). Not surprisingly, Alberta has the lowest union coverage and is typically considered the province in Canada with the least developed and militant labour movement, in part stemming from different collective bargaining laws. Across Canada, union coverage for workers in nursing and residential care is 57.5 percent, which is relatively high as compared to all industries in Canada. Among the sub-industries of health care and social assistance, the union coverage of workers in nursing and residential care is higher than for workers in both social assistance and ambulatory, but lower than for workers in hospitals.

Figure 15 - Union Coverage in Nursing and Residential Care, CA Provinces, 2009, SLID

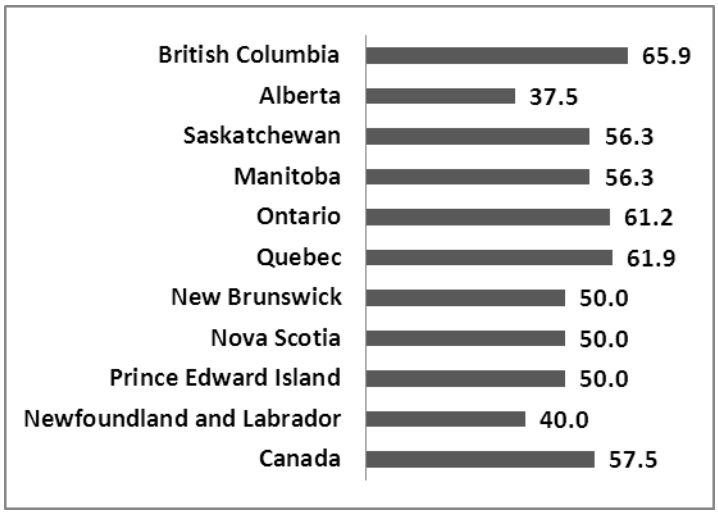
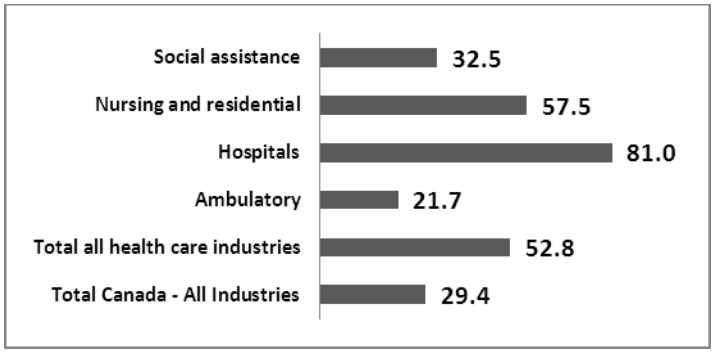
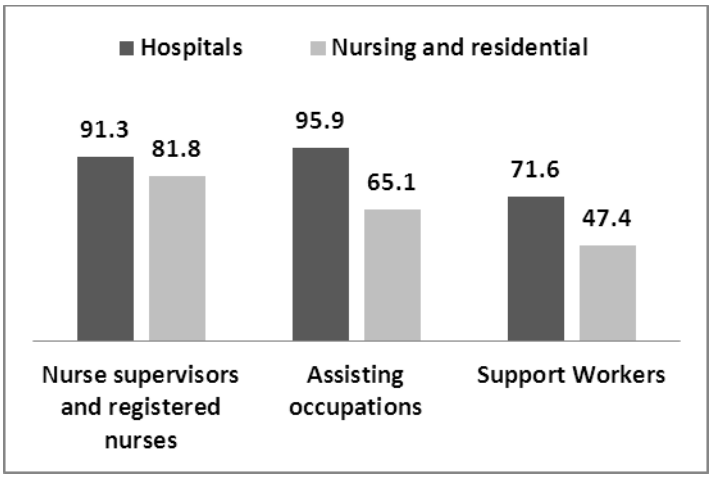


Figure 16 - Union Coverage by Industry, CA, 2009, SLID



These union coverage differences reflect different historical labour movement organizing initiatives in health and social care, which initially focused on unionizing workers in hospitals and nursing occupations. The larger establishment sizes typical of most hospitals were more practical for organizing campaigns as workers were centralized and easily coordinated. This is also true for some nursing and residential care facilities, which can have large workplace sizes, and can be seen as more ideal settings within which to undertake union organizing campaigns. Workers in ambulatory and social assistance, however, tend to be much more dispersed and therefore much more challenging to coordinate. Factors such as workplace size have been demonstrated to present challenges to union organizing (Anderson et al., 2006). Unions began to target women workers for organizing in the 1970s as women began to move in large numbers into paid employment, particularly in the public sector. In the last decade, unions less associated historically with both health and social care and women workers, have begun focusing on organizing workplaces with large numbers of women workers. For example, the Canadian Auto Workers, now UNIFOR, has moved into organizing in health and social care settings.

Figure 17 - Union Coverage by Occupation, Hospitals and Nursing and Residential Care, CA, 2009, SLID



Despite developments in union organizing and the union advantage many workers have (Briskin, 2010; Jackson, 2003; Anderson et al., 2006), data show that providers in the same occupation groups are less likely in nursing and residential care to be unionized than their counterparts in hospitals (figure 17). This factor is no doubt linked to the shifting of care from hospitals to nursing and residential care facilities as a means to reduce costs on labour. Of course, unionized workers in most contexts earn more than their non-unionized counterparts. Further, they are more like to have greater benefit coverage (Anderson et al., 2006), along with seniority terms that affect scheduling. These union advantages are impediments to management and government who, guided by neoliberal ideals, seek to save on care costs through reducing the expenditures on workers. The union wage advantage for most workers in health and social care in Canada is apparent in table 3. In 2009, the average hourly wage for unionized workers in nursing and residential care was $20.41 as compared to $16.74 for their non-unionized counterparts. That is a difference of $3.67 or 17.9 percent. Lower rates of unionization make

long-term residential care an ideal target for reducing costs on labour by shifting care out of relatively expensive hospitals into these settings.

Table 3 – Average Hourly Wages by Sub-Industry in Care and by Union Coverage, With Dollar Wage Gaps, CA, 2009, SLID

	Covered by a union	Not covered by a union	Wage gap
Total all health care industries	25.45	22.1	3.35
Ambulatory	28.94	23.9	5.04
Hospitals	27.49	35.16	-7.67
Nursing and residential care	20.41	16.74	3.67
Social assistance	22.97	17.98	4.99

Collective bargaining and employment standards differ by province in Canada. For example, health care workers in British Columbia, have made significant gains through collective bargaining, affecting a wide array of conditions including wages, job security, health and safety, and training. Labour unions such as the Hospital Employees' Union have bargained for considerable improvements to pay equity even though pay equity is not covered by provincial legislation in British Columbia. Central to their strategy was to work for wage equivalency between hospitals and long-term residential care, given the latter had much lower wages for equivalent occupational categories. These gains, as noted by Cohen (2003), have "not only raised the wages of women workers, but just as importantly, have affirmed the value, skill and responsibility involved in the work they perform" (p. 1). Cohen highlights differences to demonstrate gains to pay equity for health care workers in British Columbia as compared to Ontario, where there is pay equity legislation. Indeed, Census data confirm Cohen's findings. Table 4 shows the income averages for full-year, full-time employees in nursing and residential care in Ontario and British Columbia. Median employment incomes are higher for women workers in nursing and residential care in British Columbia than for their counterparts in Ontario

at $36,830 and $34,455 respectively. Most notable, however, is the difference in wage gaps between men and women working in nursing and residential care in these two provinces. The gender wage gap in average employment income is 17 percent in Ontario while it is only 6 percent in British Columbia (table 4).

Table 4 – Income for Full Year Full-Time Employees in Nursing and Residential Care, Ontario and British Columbia, 2006 Census

	Ontario			
	Men	Women	$ Gap	% Gap
Number of employees	8290	49235		
Average employment income	$45,278	$37,425	$7,853	17
Median employment income	$38,033	$34,455	$3,578	9
Standard error of average employment income	$1,971	$172		
	British Columbia			
	Men	Women	$ Gap	% Gap
Number of employees	3205	13365		
Average employment income	$40,754	$38,209	$2,545	6
Median employment income	$38,009	$36,830	$1,179	3
Standard error of average employment income	$737	$320		

Of course, context is changing and many of these changes are related to the prevailing ideology of neoliberalism throughout Canada (Braedley and Luxton, 2010; McBride and Shields, 1997; Sears, 1999). For example, there have been substantial changes to health and social care funding and delivery in both British Columbia and Ontario that have implications for the workers in long-term residential care. Most significantly, in 2003 British Columbia introduced Bill 29 which allows for the contracting out of support services in hospitals and long-term residential care, a change undermining the pay equity and collective bargaining gains along with overall conditions for these workers (Cohen, 2003). Bill 29 became law but was found to be contrary to the *Canadian Charter* right to associate, and therefore to bargain collectively. The legislation

was repealed in part and amended in 2008 so as to recognize an agreement providing pay equity adjustments. In Ontario, under the Progressive Conservative government led by Harris between 1995 and 2002, public funding for for-profit long-term residential care increased dramatically leading to Ontario having the highest for-profit density level in Canada. For example, in 2004, out of all facilities in Ontario, 343 were for-profit and 68 were not-for-profit (Banerjee, 2009). These changes are being implemented in conjunction with the shifting of extended care from more expensive hospital care to less expensive alternatives including home care and long-term residential care, which has contributed to the intensification of care needs of residents. McGregor et al. (2010) observe that residents in long-term care facilities were younger and less disabled a decade ago than older persons currently in these facilities. Further, because residents are closer to the end of life and the overall resident profile of facilities has shifted, this has increased workload and the complexity of work for staff (McGregor et al., 2010, p. 1). This transformation in the case-mix of residents, with more facilities accommodating the needs of more challenging case-mix profiles, is taking place alongside reports of increased stress and burnout among Canadian workers (Armstrong et al., 2009).

As has been previously reviewed in this chapter, although research shows ownership is a factor in working conditions, mapping providers in nursing and residential care across the public, private, for-profit and not-for-profit sectors is not possible using Canadian labour force data. There can be little doubt that workers employed in for-profit settings in health and social care will earn less in some jobs where profit is an economic priority guiding management. Indeed, in for-profit settings, so-called efficiencies may be implemented not so much to reduce economic pressure on governments, but to yield a greater return for owners and shareholders. Despite the limitations to the variable on sector, data on the public and private sectors as they are defined by

Statistics Canada do reveal important differences in benefits coverage and wages for providers, demonstrating that some providers have a more significant public sector advantage than others. Put another way, some providers are more seriously affected by privatization than others and earlier research has demonstrated this to be particularly true for support and ancillary providers in health and social care generally (Armstrong and Laxer, 2011).

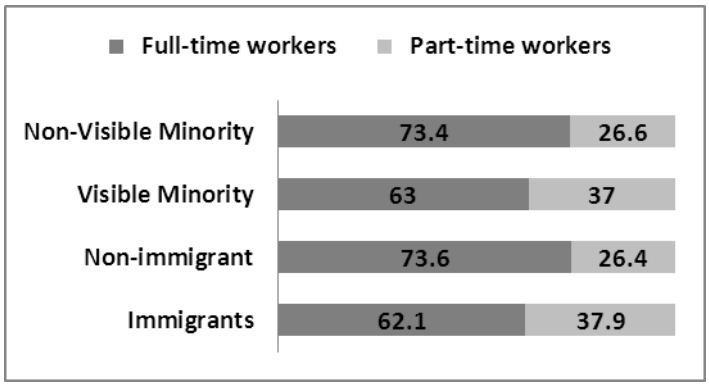
Table 5 shows the average hourly wages and gaps between the public and private sectors in nursing and residential care in Canada in 2009. Not surprisingly, nurse supervisors and registered nurses have the highest wages relative to the other occupation groups. The lowest average hourly wage is for providers in assisting occupations employed in the private sector at only $16.65 per hour. The most striking observation, however, is how much larger the wage gap is between workers in the public and private sectors for providers in the assisting occupations and support occupations as compared to providers in the professional nursing group. Furthermore, the gap between the highest and lowest earners is larger in the private sector than in the public sector – a relative difference in earnings that has been shown in other research to influence the self-worth and health and well-being of workers (Marmot and Wilkinson, 2001; Wilkinson and Pickett, 2009)

Table 5 – Average Hourly Wage and Wage Gaps for Occupation Groups in Public vs. Private Nursing and Residential Care, CA, 2009, SLID

	Average Total	Public sector	Private sector	$ Wage Gap	% Wage Gap
Nurse supervisors and registered nurses	$29.26	$29.92	$28.80	$1.12	3.7
Technical and related occupations in health	$21.55	$22.49	$21.18	$1.31	5.8
Assisting occupations in support of health services	$17.28	$18.67	$16.65	$2.02	10.8
All other occupations	$18.50	$21.10	$16.87	$4.23	20.0

Long-term residential care employs sizeable shares of temporary workers, part-time workers and multiple job holders (CA SLID, Gender and Work, 2013). Furthermore, there is evidence to suggest these nonstandard forms of employment are both gendered and racialized (Vosko, 2006). Many more women in health and social care, and in nursing and residential care, are employed in part-time work as compared to men (CA SLID, Gender and Work, 2013). Concentrations of workers in part-time employment reflect aspects of precariousness linked to labour market insecurity because part-time workers earn lower incomes due to working fewer hours, and also because they are segregated into occupations and industries with lower pay and fewer benefits (Rubery and Fagan, 1993; Baxter, 1998; Rubery, 1998). Further, because many employment and social benefits are linked to full-time employment, part-time employees are particularly precarious (Vosko, 2010). Nonstandard work is racialized (Vosko, 2006) and the mapping of CA SLID data unveils higher concentrations of both immigrants and visible minorities working in part-time employment in nursing and residential care. As figure 18 depicts, in 2009, 37 percent of visible minorities and 37.9 percent of immigrants were working part-time in assisting occupations in nursing and residential care as compared to 26.6 percent of non-visible minorities and 26.4 percent of non-immigrants.

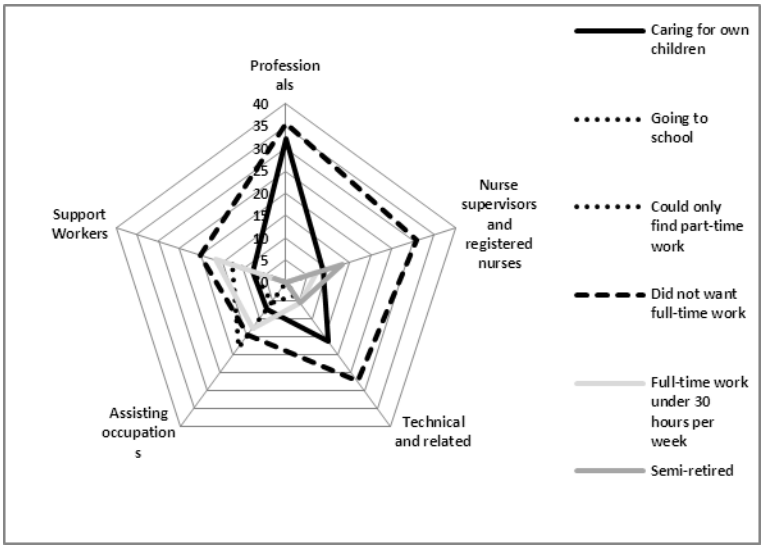
Figure 18 - Part-Time and Full-Time Employment, Assisting Occupations in Nursing and Residential Care, CA, 2009, SLID



Also noteworthy are the reasons reported for working part-time by different occupation groups in health and social care in Canada. As figure 19 demonstrates, the most commonly reported reason for working part-time among providers in assisting occupations – the largest occupational group in nursing and residential care – is "going to school". Meanwhile, among professionals, the most common reason reported is "did not want full-time work", followed by "caring for own children". A significant reason reported among nurses is "semi-retired". Each of these reasons reflects the gendered nature of part-time work but the data on assisting providers suggest that part-time work arrangements help accommodate additional training and education, perhaps as a means to leave this form of employment. Combined these data suggest that work in assisting occupations in health and social care in Canada is a stepping stone or stop gap for mostly women workers with fewer choices who want to move eventually into more desirable employment. The potential then for high turnover and low job tenure creates concerns for the future supply of this labour force. Data on job tenure presented in Chapter 5 indicate that Canadian workers in occupations most concentrated in long-term residential care have much shorter job tenure as compared to their counterparts in the United Kingdom and Sweden.

The findings presented here on part-time employment are consistent with other research on part-time employment in other industries and the reasons why workers end up in this form of employment (Duffy and Pupo, 1992; Duffy, Glenday and Pupo, 2007). Further, these data are consistent with other research on the "choice" to work part-time in order to accommodate other commitments outside work, revealing for example, gendered expectations about household responsibilities and caregiving (O'Reilly et al., 2009; Vosko and Zukewich, 2006).

Figure 19 - Reason for Part-Time Employment, Health Occupations, CA, 2009, SLID

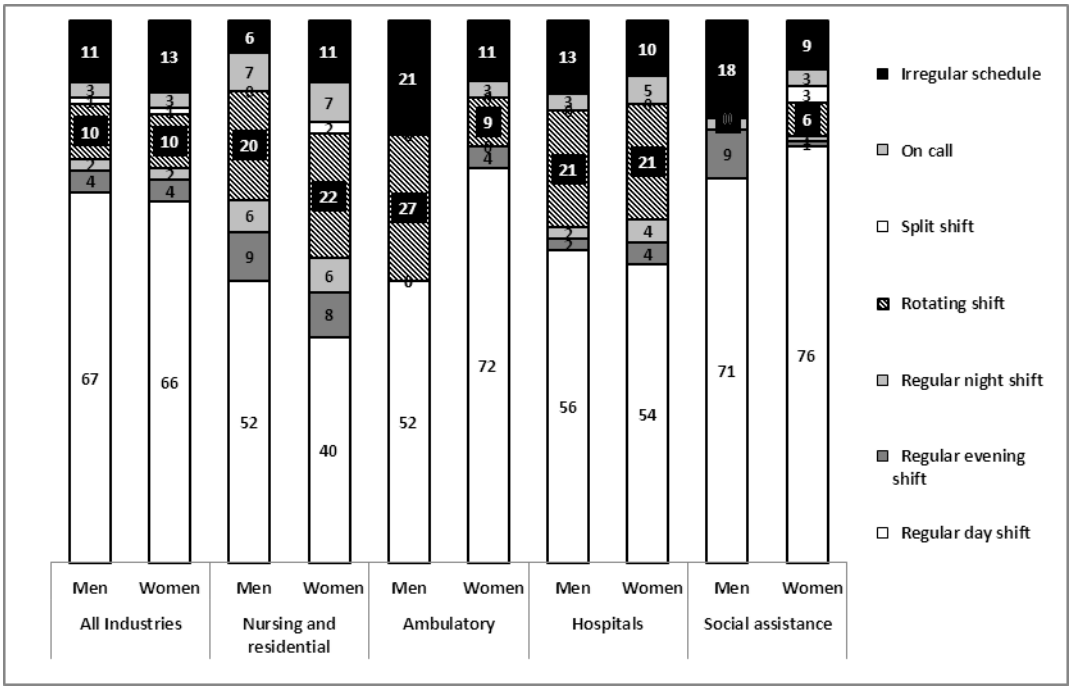


Precarious employment in health and social care has specific dimensions (Armstrong and Armstrong, 2009; Armstrong and Laxer, 2011). For example, atypical schedules falling outside daytime working hours, though in some ways an integral aspect the twenty-four hour nature of care work, are a reflection of managerial efforts to save on costs associated with labour. Split, irregular and on-call shifts, in particular, reflect marketization strategies to coordinate care at peak and unpredictable times (Armstrong and Armstrong, 2009). In some contexts such as Ontario, these shifts may also reflect differing employment standards for different industries in

health and social care. These schedules are disruptive to workers, undermining their ability to forecast and control their daily lives and time commitments to family and other responsibilities. Research has demonstrated the high risks to health and well-being that accompany working night and rotating shifts such as increased injury rates, stress, and alarmingly disproportionate rates of cancer (Wong, McLeod and Demers, 2011; Geiger-Brown et al., 2004).

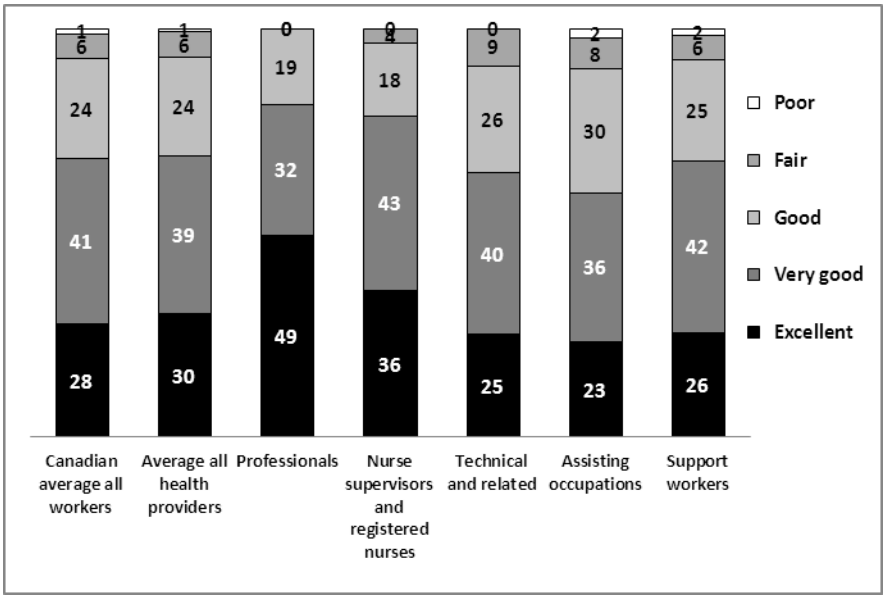
Some groups of workers with higher concentrations in atypical shifts are more seriously affected by these schedules. More health workers in cleaning and service jobs work night shifts and, as is demonstrated in figure 20, atypical shifts are worked by significantly more women in nursing and residential care as compared to in ambulatory and hospital care. Nursing and residential care has the largest share of on-call scheduling (7 percent) as compared to ambulatory and hospital care. It also has the largest shares of workers in night and evening shifts. The implications are gendered with research demonstrating women's health is more seriously affected by atypical shifts, in part because women spend more time on childcare and household responsibilities and encounter greater stress from balancing responsibilities (Wong, McLeod and Demers, 2011; Armstrong and Armstrong, 2009).

Figure 20 - Type of Schedule by Sub-Industries in Care and by Sex, CA, 2009, SLID



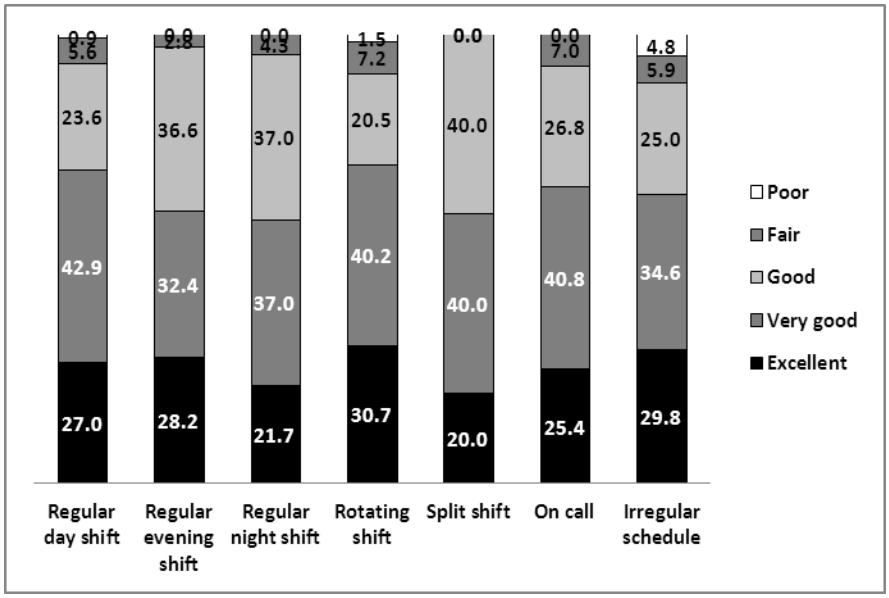
A consideration of the self-reported health status among occupation groups shows that working conditions, including atypical scheduling, may be influencing the health of workers in nursing and residential care. Figure 21 shows that among providers in assisting occupations, 2.4 percent of workers reported having poor health and 7.5 percent reported only fair health. These shares are higher than for any other occupation category in health and social care in Canada. Notable also is the very large share of professionals reporting excellent health (49.3 percent) relative to all other occupation groups. Self-reported health is a problematic indicator in many ways and assessing the relationship between poor, fair and excellent health and type of occupation is not possible with the data provided here. However, the data are striking and suggest there is a possible negative effect on health experienced by some providers more than others which may be related to the type of work they do and their working conditions.

Figure 21 - Self-Reported Health Status by Occupation in HCSA, CA, 2009, SLID



Moreover, though it is not possible to determine the relationship between self-reported health and work schedule from these data depictions alone, figure 22 suggests that workers in some forms of atypical scheduling such as rotating, irregular and on-call – each more common in health and social care and particularly in nursing and residential care – may be experiencing negative health outcomes related to these schedules.

Figure 22 - Self-Reported Health Status by Type of Shift, HCSA, CA, 2009, SLID



The new politics of national data in Canada

Up to this point, this chapter has focused on the mapping of labour forces in health and social care in Canada in order to point to the challenges while also using existing data to present a portrait of workers who are often left out of general accounts of human resources in care. However, as this section will demonstrate, the challenges to mapping these workforces are mounting, particularly for mapping groups of workers by social location such as immigrant status, and for mapping unpaid work. These emerging challenges are directly linked to national reforms to statistical infrastructure guided by neoliberal values about who and what is worth counting.

In many ways, Canada provides an ideal setting for exploring the challenges to statistical mapping of the labour force in long-term residential care. It is a country with comparable data spanning multiple jurisdictions with varying approaches to care. However, the ability to map associations and relationships among context, conditions of work, and quality of care is in

jeopardy due to recent cuts to Statistics Canada surveys. In 2010, the Canadian federal government under the Conservative Party and its leader, Stephen Harper, cut back funding for Statistics Canada and, as a result, the mandatory Census long-form survey was discontinued. In addition, the national longitudinal component of the Survey of Labour and Income Dynamics, and the Residential Care Facilities Survey were discontinued. Statistics Canada also removed key analytical publications that have long presented accounts of workers in different contexts, including *Perspectives on Labour and Income*. The absence of data affects the analysis of the labour force in long-term residential care, and unpaid labour in Canada, going forward.

Statistics Canada published the final Residential Care Facilities Survey on July 17, 2012 (Statistics Canada, 2014a). This survey collected data from residential care facilities across Canada annually from 1975 to 2012. As the Statistics Canada website describes, "the data was used by all levels of government, health organizations, owners of such facilities and related organizations for the purpose of program analysis, policy development, planning and research" (Statistics Canada, 2014a). This mandatory survey had a response rate of more than 80 percent in later years (Ibid.). The Residential Care Facilities Survey is the survey used by McGregor et al. (2010) in their research on facility ownership and staffing ratios. A new survey, the Long-term Care Facilities Survey, has replaced the former Residential Care Facilities Survey. It is funded by Health Canada, the Public Health Agency of Canada, and CIHI. It uses the same questionnaire as the former survey, but it measures only facilities that provide a minimum of professional nursing care or medical supervision. The former Residential Care Facilities Survey was responsible for surveying all residential care facilities in Canada, of four beds or more, "that provided some level of care to residents" (Statistics Canada, 2014a). The first release of data from the new Long-term Care Facilities Survey was on April 10, 2014.

Similarly, Statistics Canada published the final Survey on Labour and Income Dynamics (CA SLID) on June 27, 2013. This annual survey provided longitudinal data up to 2010. As described by Statistics Canada, the objective of this survey is to understand "the economic well-being of Canadians", including the economic shifts that individuals and families live through, and how these vary with changes in their paid work, family, receipt of government transfers and other factors (Statistics Canada, 2014b). The CA SLID was also an important source for mapping workers according to their social location, such as immigrant and visible minority status, since the CA LFS does not collect this information. The discontinuation of these two surveys creates gaps in national data in relation to the labour force in long-term residential care, particularly for looking at types of facilities, immigrant workers and visible minorities. Because of the disproportionately high shares of women in the sub-industry of long-term residential care, terminating the above surveys contributes to the invisibility of women who are segregated into certain types of care so that analyses of pay, benefits, skills and working conditions are also undermined.

In 2011, Statistics Canada introduced the National Household Survey (NHS) to alleviate concerns about the loss of the long-form survey data previously gathered from the Census. For example, the Census was changed so there is no longer any reference to unpaid work. Although unpaid work by women may amount to approximately 40 percent or more of the GDP in the Canadian economy (UNPAC, 2011), the long-form survey question 33 was removed from the NHS. Question 33 asked about unpaid work in caring for children and older persons, and particularly the question: "Last week, how many hours did this person spend doing the following activities: providing unpaid care or assistance to one or more seniors." In direct response, the House of Commons Standing Committee on the Status of Women recommended an immediate

reinstatement of question 33 (House of Commons Committee on the Status of Women, 2011). The Committee states that the removal of question 33 may lead to Canada's non-compliance with international obligations under the Beijing Platform for Action (Canadian Federation of University Women, 2011). Queen's university professor Kathleen Lahey argues that question 33 was excluded as part of a compromise in response to the government's concerns over invasiveness and privacy, noted by others as well (Grant, 2013). She critiques the NHS as not being sufficient since the survey "does not drill down deep enough, nor is the sample size adequate, to assist in making major policy decisions affecting women" (Grant, 2013).

The NHS has been heavily criticized as unrepresentative and unreliable. Critics argue that the survey is unrepresentative since many immigrants do not fill out this survey, as its completion is voluntary. Some critics have found that the NHS "underrepresents people on both income extremes, as well as those most likely to need government services that rely on this data" (Cain, 2013). Response rates for the NHS are lower than for the mandatory long-form survey, with more than 26 percent nationally not responding to the NHS, whereas only 6.6 percent did not respond to the previous long-form survey of the Census (Ibid.).

As a result of the higher non-response rate, Statistics Canada changed the threshold of reliability for the NHS compared to the long-form survey and lowered their standards for acceptance. For the NHS, a neighbourhood's results are not considered where the non-response rate is more than 50 percent. For the 2006 long-form survey, the threshold for a neighbourhood's non-response was 25 percent. Even with the lowering of the threshold and standard, a number of neighbourhoods were not represented in the NHS. If the previous long-form survey threshold of 25 percent were applied to the NHS, more than two thirds of Canada's demarcated neighbourhoods would be excluded for being too unreliable (Cain, 2013). Under representative

data affects planning and service allocation. As described by one municipal government representative, among the obvious concerns is the inability "to identify changing socio-economic trends and target services where they are needed most" (Cain, 2013). Further, the senior economist of the Centre for Policy Alternatives, Armine Yalnizyan has stated that "what's affected the most is our ability to allocate resources well... We'll be making a lot more mistakes. We'll be wasting a lot of money" (Cain, 2013).

Given the widespread criticism of the NHS, Canada's Industry Minister, James Moore, recently acknowledged that he would review the survey and make recommendations regarding its use and content of NHS, if it goes forward. As Marc Hamel, Director General of Statistics Canada's Census Management Office stated:

> As you start looking at some of these results for smaller populations, the smaller areas, you might see a little bit more volatility in the information. So we are cautioning users… We don't have [comparative] sources at the small level, very small towns. So we can't say if the information is in line with reality in these locations…. Ironically, these are the ones that need the data most: The Census is the only source of information every five years that looks at small towns, small neighbourhoods, small groups of the population (Grant, 2013).

Some critics argue that immigrants and low-income people are less likely to complete the NHS, while others argue that NHS data have less value since there is no longer a random sample and it is therefore unrepresentative (Grant, 2013). Additional concerns were raised with the NHS

given the control of Canadian data by an American company subject to American laws that place the security of Americans above all else. The software used to analyze and process data gathered from the NHS is owned and controlled by a large American company. This foreign control of sensitive Canadian data was recently challenged in the courts when an 89-year-old peace activist, Audrey Tobias, was acquitted by a Toronto Judge for failing to complete her 2011 Census as required under the *Statistics Act*. The activist went to trial over refusing to fill out the Census because it is processed with software from United States military contractor Lockheed Martin. The court found there was a lack of proof of intent to commit a crime in this case (*Globe and Mail*, 2013).

The change from the mandatory long-form survey to the voluntary NHS has been challenged by other social groups who rely upon these data to address their issues. For example, Aboriginal groups in Nova Scotia unsuccessfully challenged the change and loss of data that would impact the allocation of resources and, they argued, their own specific health and social care needs (*Native Council of Nova Scotia v. Canada*, 2011). The Federal Court dismissed the argument that the removal of the long-form survey questions identifying Aboriginal people as respondents would result in adverse effect discrimination under the equality provisions of the Canadian *Charter of Rights and Freedoms* and the *Canadian Human Rights Act.*

Clearly, politics influence the representation of national survey data, and whether particular groups in the population are adequately included. The politics of national data even encompass the thresholds of statistical reliability and the control and ownership of data. The contours of workforces represented, and those made invisible, suggest caveats in the use of statistical data following the recent changes to several Statistics Canada surveys. Further, the

changes to data collection point to broader shifts related to who counts and who has the power to count in Canada.

Conclusion

This chapter sets the groundwork for a comprehensive mapping of the labour force in long-term residential care that accounts for gendered and racialized dynamics, and that makes visible the critical contributions from a broader spectrum of workers in the industry. Including these workers in this particular way supports more robust understandings of care processes and aims to more appropriately address poor working conditions that influence quality of care. The context for workers in these settings is shifting towards greater work intensity alongside increasing for-profit care and challenges to collective bargaining. Precarious employment is affecting more workers in long-term residential care and mapping this requires understanding the interrelationship of gender, visible minority and immigration status, conditions of work, and the particular features of care work.

Among the key findings in the mapping presented in this chapter is the relocation of paid work to less expensive sub-industries with fewer professionalized providers, and to other settings, either paid or unpaid. Social assistance has grown dramatically as a sub-industry in care as compared to the other sub-industries, and this is where non-medical home care is classified. Ambulatory care has also grown, where medical home care is classified. So too has nursing and residential care. Meanwhile, hospital care has barely grown at all, and its relative share among the sub-industries has shrunk since 1993. Nursing and residential care is less unionized in some contexts, making it a suitable setting to save costs on labour. Mapping the sub-industries of health care and social assistance alongside one another makes it possible to track this

realignment and downward substitution ongoing in care. However, relocating patients with more acute needs into settings with workforces less accustomed to providing the level of care necessary to treat these people, presents considerable risks both for providers and recipients. Part of the incentive driving work intensification and deskilling is to reduce costs and, in some contexts, to turn a profit. These values are consistent with neoliberal ideals but very problematic both for marginalized and precarious workers with little influence, and for residents who may not have any other social support.

In many ways, Canada provides an ideal setting for exploring the challenges to cross-jurisdictional statistical mapping of the labour force in long-term residential care. However, the ability to map associations and relationships among context, conditions of work, and quality of care is in jeopardy due to recent cuts to Statistics Canada surveys. Though some data are collected by other government jurisdictions on long-term residential care, there are no sources of detailed data of the sort presented in this chapter on the workforce, particularly in relation to quality outcome measures, which, along with the cuts to Statistics Canada data, is a shortcoming of the current data infrastructure in this area. It is notable that the neoliberal ideology supporting increases to for-profit and privatized care also supports the cuts to data collection in this area, rendering more invisible the workers and their conditions, along with the implications of these reforms for care.

Chapter 5: Comparing the Division of Labour in Care across Countries

This chapter examines the division of labour in health and social care in four countries: Canada, the United States, the United Kingdom, and Sweden. For the ensuing analysis, Canada is set within a comparative lens so as to better understand the limitations to the statistical data infrastructure and their implications, along with the similarities and differences in the division of labour in health and social care each country that can be plotted with data that are available. These four countries offer interesting possibilities for considering cross-national labour force comparisons in health and social care. The countries are different in their systems of health and social care, and though they are all represented within OECD datasets, there is no other significant source of cross-national labour force data that covers all four countries except the newly created *Comparative Perspectives on Precarious Employment Database* (CPD). Involvement with the variable harmonization and module design with the CPD allowed for the unique opportunity to explore this somewhat unmapped area in statistical labour force data.

The four countries of Canada, the United States, the United Kingdom, and Sweden have been selected for a few additional reasons. Firstly, these four countries differ in ways that demonstrate several of the key distinctions presented in Chapter 1 and Chapter 3 – particularly in

regard to definitions and developments around public and private care within the context of neoliberalism. Secondly, the national context for workers is different in these four countries. For example, in the United States, citizens rely mostly on employer provided benefits to pay for health and social care, although this may change considerably with the recent reforms to health policy under the Obama administration (Emanuel, 2014). Paid employees in the United States have less employment security due to "at will employment" whereby employment relationships can be terminated without cause, providing an example of a country with relatively precarious full-time employment comparatively (Vosko, 2010). In contrast, workers in Sweden have relatively good employment protections and very good relative government-provided health and social care benefits.

States, gender, and care

Esping-Andersen (1990) describes features of different types of welfare states that align with the countries under study in this thesis and point to some influences guiding the differences in how care is organized and funded. He identifies three main types of welfare states: liberal, corporatist-statist, and social democratic. Esping-Andersen argues that economic processes are shaped by the nature of states and state differences, and not by market forces. The primary features of a liberal welfare state include "means-tested assistance, modest universal transfers or modest social-insurance plans" (p. 26) which are focused on those with lower income or dependents. In this type of liberal welfare state, the rules for entitlement are more onerous to achieve and any benefits are limited and stigmatized. He suggests that in this case the "limits of welfare equal the marginal propensity to opt for welfare instead of work" (p. 26). For the conservative/corporatist welfare state, social insurance is used more than social assistance and

benefits are often tied directly to income. Meanwhile, the social democratic welfare state is characterized by higher levels of government provided benefits. In this type, caring for the vulnerable in society is regarded to be the responsibility of government.

Though the general criticism of this categorization is that welfare states might be better seen along a continuum rather than as firm types, Esping-Andersen's typology helps illustrate key differences between the countries under study in this thesis. Sweden stands out as a social democratic state with a vision of universal care entitlements, and, on the other end of the continuum is the United States, where the politics of care are very different and much care is provided privately and for-profit. Both Canada and the United Kingdom can be described as falling somewhere between these two visions of care, though much is changing in each context.

Esping-Andersen's typology has been criticized for not accounting for gender. State types influence women in different ways and approaches to welfare and liberalism have gendered implications. For example, O'Connor, Orloff, and Shaver (1999) examine the relationship between policy, liberalism and gender. They challenge the notion that public and private spheres are autonomous and question whether or not the market and family are suitable substitutes for the state for certain needs (Evans, 1999). Moreover, the authors question whether the liberal concept of "civil" rights can be adequately met without "social" rights (Ibid.). O'Connor et al. examine the three policy areas of labour markets, income maintenance, and reproductive rights. The key question guiding this comparative examination of liberalism is whether or not, in a context of state retrenchment that places women at a social and political disadvantage, a "liberal" society can truly exist once gender is taken into account. As social services change, the responsibility for care is shifted between government, markets, and families with women most affected. O'Connor et al.'s study of liberalism and states examines four

countries, including United States, Canada, and the United Kingdom (the fourth being Australia). In each of these countries there is a liberal emphasis on "gender sameness" and a focus on individual civil rights. However, there are notable differences between the countries that are highlighted by the authors. In particular, there is considerably more significance allocated to the role of the market in the United States along with keen assumptions of gender sameness and weak commitment to social rights. According to O'Connor et al., Canada shares an emphasis on the market and gender sameness, but there is more government involvement elevating social rights. Meanwhile, Britain is depicted as having a relatively strong commitment to social rights along with gender difference. The authors point to examples where civil rights might be emphasized but cannot be exercised without coinciding social rights.

These theories of state involvement in various aspects of governing demonstrate some of the particularities of the countries being studied in this thesis, while pointing to the gendered implications of different types of liberal and welfare regimes. The implications of neoliberalism are gendered and while assumptions guiding neoliberal values suggest that people are provided even opportunity, this is not the case for marginalized groups or for women who are disproportionately affected when the state withdraws support for social programs (Evans, 1999). Moreover, employment opportunities are also impacted, particularly in some areas such as health and social care.

Cross-national mapping of care

A statistical portrait of these countries exhibits the breadth of statistical labour force data gathered from, and harmonized within, the CPD. Five surveys are called upon in this mapping, including the Statistics Canada Labour Force Survey (CA LFS), the Statistics Canada Survey of

Labour and Income Dynamics (CA SLID), the United States Current Population Survey (US CPS), the European Union Labour Force Survey (EU LFS) and the European Union Survey on Income and Living Conditions (EU SILC). The main sources of comparative cross-national labour force data for European countries are the EU LFS and the EU SILC, but obviously these surveys do not include data on either Canada or the United States. The OECD provides very limited labour force data collected from national surveys.

Each of these sources have limitations for profiling national labour forces in long-term residential care. The most significant limitation of Eurostat EU LFS and EU SILC microdata available to researchers is that industry data are aggregated to the 1-digit level in order to meet criteria for anonymisation, which means data are available at the industry level of health and social care, but not for the sub-industries within health and social care. Secondly, these surveys do not collect data on sector (public, private, for-profit and not-for-profit) and union coverage, both important indicators for mapping context and working conditions for labour forces in health and social care and specifically in long-term residential care. The Canadian microdata supplied to build the CPD are also aggregated to the 1-digit level. The US Current Population Survey is the only national survey in the CPD that does not aggregate in this way.

As a consequence, the mapping in this chapter is for all workers in health and social care and the focus is on the varied occupational divisions of labour in the different contexts, along with their relationships to skills and precariousness in terms of working conditions, pay and benefits. Hence, to map paid labour forces in health and social care across the four countries, an occupation variable designed for the CPD that harmonizes data from three occupation classifications: the ISCO-88 (EU LFS), the SOC 2000 (US Current Population Survey) and the NOCS 2001 (Statistics Canada Labour Force Survey) is used. Keeping in mind the need to map

workers in all health and social care occupations groups including support and personal care (Armstrong, Armstrong, Scott-Dixon, 2008), the harmonized occupation variable divides the entire health and social care labour force into six occupation categories. These categories are: managers, physicians and other professionals, nursing professionals (includes midwifery), technical and associate professionals (includes licensed practical nurses), assisting providers (includes care aides and personal support workers), and support providers (includes all other workers in health and social care but who are not elsewhere classified, including clerical, cleaning, food services and other support). Details on the harmonization of this variable can be found in Chapter 2 and Appendix A.

The data constructed through the CPD are unlike any other cross-national data available to investigate health and social care labour forces. Though it is not possible to look at the sub-industries in care, the capacity to look at the division of labour by occupation is very unique and very useful for understanding work organization in care in different countries. Particularly unique are the data on workers in assisting occupations, including for example workers in personal support work and care aide positions, along with the data on support workers, a group that includes everyone else in health and social care such as cleaners, food service workers, and others. There are no cross-national data that looks at support workers in health and social care – workers who comprise close to half the labour force in health and social care (as was demonstrated for Canada in Chapter 4). Much of the focus in this chapter is on workers in assisting occupations in relation to five other occupation categories. These are the primary providers in long-term care generally, and specifically in long-term residential care. Comparing these providers across the four countries offers some insight into work organization, conditions

of work and precariousness experienced by this labour force relative to other workers in health and social care.

The data presentations in this chapter use the terminology "assisting occupations" when referring to workers in personal care and care aide jobs. This terminology was chosen mainly because the category within the NOCS "health occupations" classification used by Statistics Canada that categorizes workers in these occupations is named "assisting occupations in support of health services". While participating in the design of the CPD, and in particular the design of the variables to track health occupations, there was some back and forth on this terminology of "assisting occupations". Originally, "personal care providers" was used for this group but the category was switched to "assisting occupations" out of concern that the terminology should align with the Canadian classification language. Ultimately, it was decided "personal care providers" was a better name and this is now the terminology used within the CPD multidimensional tables. "Personal carers" is also the terminology used by the OECD in classifying this occupation group. However, for this thesis the terminology "assisting occupations" is used, partly because it is consistent with the terminology of the data presented in Chapter 4 on the occupational division of labour using Statistics Canada data. Nevertheless, it is believed that "personal care providers" is more descriptive of what workers in these occupations are actually doing, and is more suitable for the naming of this group.

Long-term care in Canada, the United States, the United Kingdom and Sweden

This section reviews the existing research and available data on long-term residential care in Canada, the United States, the United Kingdom, and Sweden. The European countries and North American countries in this study are all characterized by some combination of formal and

informal home care with continued emphasis on long-term residential care, though there are differences between the countries in terms of public and private spending on health. Table 6, a compilation of data from multiple OECD country profiles, shows that the four countries have very different population sizes and though the populations are aging in each, the United States is a younger country relative to the other three countries. Life expectancy is fairly similar for the four countries. However, there are notable differences in the amount of spending on health as a percentage of GDP among the four countries. All four spend near equal amounts of public funds on health, but the United States spends considerably more privately on health than the three other countries. Canada also has more private spending relative to the United Kingdom and Sweden (table 6).

Table 6 – Country Profiles, OECD Health Statistics, CA US UK SW, 2011

Country 2011	Population	% of population over 65	Public spending on health as % of GDP	Private spending on health as % of GDP	Life expectancy
SW	9,449,000	19.30%	7.7%*	1.8%*	Men – 79.8
					Women – 83.7
UK	61,761,000	16.20%	8.0%*	1.6%*	Men – 78.6*
					Women – 82.6*
US	311,592,000	13.30%	8.5%*	9.1%*	Men – 76.2*
					Women – 81.1*
CA	34,109,000*	14.40%	7.90%	3.30%	Men – 78.5**
					Women – 83.1**
*Data from 2010					
** Data from 2008					
Source: Country statistical profiles: Key tables from OECD - ISSN 2075-2288 - OECD 2013					

Within the European Union, the mandatory right to social services, including those for old age, was abolished in 2000 and replaced with a recognition of entitlement rather than a

commitment to universal access to social service and social assistance. Social care is the responsibility of national member states (Lethbridge, 2010). In general, long-term care provision in Europe is characterized by a mix of family, market and state provision (Lethbridge, 2010; Lyon and Glucksmann, 2008), but care in all four countries is increasingly delivered at home rather than in facilities, with the exception of Sweden that has the highest percentage of GDP public spending on long-term care (Lethbridge, 2010).

Staffing standards vary across and within the four countries (Harrington et al., 2012). Canadian staffing standards vary widely across jurisdiction and are the responsibility of provincial governments. According to a study conducted by Harrington et al. (2012), three provinces in Canada require a registered nurse director of nursing and seven require a registered nurse on duty 24 hr. per day. Five have specific requirements for direct care staffing levels. Overall, the standards for 24-hr licensed nursing are higher than for the other countries in this study, but the direct care standards (which ranged from 1.9 to 3.0 hours per day) are generally lower than in the United States, except in Prince Edward Island for high-acuity facilities.

In the United States, there are federal staffing standards for all certified nursing homes that provide Medicare and Medicaid services, requiring for example one registered nurse on duty for 8 consecutive hours 7 days a week. States may set higher staffing standards than the federal standards, which apply to all licensed and federally certified homes within each state. If the state standards are lower, they only apply to licensed facilities. Overall, twenty states had higher requirements for registered nurses than the federal requirements, fifteen had the same, and sixteen had lower requirements in 2010.

The United Kingdom's national standards established for residential and nursing homes state that "staffing numbers and skill mix of qualified and unqualified staff must be appropriate

to the assessed needs of the service users, the size, layout, and purpose of the home at all times" (Harrington et al., 2012). Finally, for Sweden, the Social Services Act that regulates residential care for older people includes a general declaration that services and care should be of good quality, but there are no standards set out for staffing ratios or for any specific skill mix (Harrington et al., 2012).

To summarize, there is great variability in staffing standards with some countries like Sweden having no specific standards in long-term residential care. Staffing standards in long-term residential care may not necessarily translate into better working conditions, but there is no research specifically on this topic to draw from. However, considering these data in relation to other studies suggest that while Nordic countries like Sweden have no specified staffing standards, the working conditions are reportedly better (Daly and Szebehely, 2012; Armstrong et al., 2009; see also the next section in this chapter).

As has been reviewed in the previous chapter, long-term residential care in Canada is very complicated (Banerjee, 2009). This sub-industry of health care and social assistance is not covered by the *Canada HealthCare Act,* which means that provinces, territories, and municipalities differ to a great extent in the way long-term residential care is funded and provided, whether public, private, for-profit, or not-for-profit. Private insurance funds most care in the United States, with Medicare covering the population 65 and over, Medicaid covering the poor, and the Veterans Affairs system covering veterans and their families. A large portion of the country is uninsured, although this will soon change considerably under the new health policies of the Obama administration. The United Kingdom spends about 0.8 percent of GDP on long-term care. About 16 percent of care takes place in facilities, 42 percent in home care and 42 percent in informal care situations (Lethbridge, 2010). The United Kingdom uses a tax-based

system with extensive private provision in long-term care. This is in contrast to the Nordic region where there is still strong public sector provision. The current system of care in the United Kingdom can be described best as a safety net providing for the poorest with the highest needs (Ibid.). Local authorities assess care needs but there is wide variation in spending. About 4 percent of older people live in residential homes in the United Kingdom, of which local authorities fund two thirds and another third is privately funded (Ibid.). There has been a move in the United Kingdom towards giving individuals cash to purchase their own services. This has led to the rise of a group of workers in the United Kingdom called "personal assistants" who are often self-employed and who are not covered by codes of practice on employment, pay and working conditions (Lethbridge, 2010).

Sweden spends the most as a percentage of GDP on long-term care out of the four countries in this thesis, and out of all European countries, at 3.5 percent (Lethbridge, 2010). Long-term care in Sweden is composed of about 30 percent facility-based care and about 70 percent home care (Lethbridge, 2010). In general, in Nordic countries, long-term care systems are tax based and countries like Sweden and Norway share the assumption that the state has a responsibility for looking after older people. The overall system has been described as decentralized universalism with local autonomy (Ibid.). In recent years the systems of assessment have become stricter and people have had to go outside the state system for services. Overall, in Europe, the population age 65 plus is expected to rise to close to 25 percent by 2060 (European Commission, 2009). There is great variation in how long-term care is delivered, with countries like Sweden having high levels of formal care and others with high levels of informal care (Lyon and Gluckmann, 2008). There has been an expansion overall, like in Canada, of home care and personalization of care policies.

A comparison of working conditions

Recent cross-national research on long-term residential care conducted by Armstrong and a team of researchers (2009) finds that working conditions are very different between Canada and the Nordic countries of Norway, Sweden, Denmark and Finland. Their study, which included a survey of workers along with seven focus groups with workers in Canada, shows that among personal support workers the level of violence reported was very different for Canadian workers as compared to the Nordic workers. Forty-three percent of Canadian workers in this study reported experiencing physical violence on a daily basis as compared to only 7 percent of Nordic workers.

The results for physical exhaustion, mental exhaustion, and for back pain, are also strikingly different between Nordic countries and Canada. Canadian workers report much more physical and mental exhaustion along with back pain at the end of their working days. This study (Armstrong et al., 2009) found some important differences in how work is organized in Canada as compared to the Nordic countries. In particular, researchers found that care providers report working short-staffed on a daily basis 44 percent of the time in Canada. Only 15 percent of Nordic workers reported working short staffed on a daily basis. The ability to plan workdays was also very different for workers in Canada as compared to the Nordic countries. Forty-five percent of Nordic workers reported being able to plan their workdays. Only 24 percent of Canadian workers reported having this control over their days. Finally, there were also differences in terms of workers reporting that they have too much to do. Many workers in all countries reported having too much to do all or most of the time, but this was especially the case for the Canadian workers, of whom 57 percent reported this. The average for all the Nordic

countries was 40 percent. The evidence from this study suggests that Canadian workers in long-term residential care are encountering much more strain in their days than are Nordic workers.

The results of this comparative study demonstrate that work strain and stress are not inherent to work in long-term residential care and that context plays a very important role in determining how providers experience their roles. Clearly, workers in long-term residential care in Canada are much more strained in their jobs than are those in the Nordic countries. Part of the objective in the cross-national mapping undertaken in this thesis is to further explore why this is the case – to examine what is so different about how care work is organized in these countries. Before turning to the cross-national comparisons using data from the CPD, existing cross-national data on health and social care workforces are examined, specifically on long-term care, available through the OECD. Following this, the choice of indicators from the CPD is explained and also where specific challenges were encountered due to limits of comparability or the lack of data. The data in this chapter suggest that health and social care work is highly gendered and racialized in all four countries and that some groups of providers are more precarious than others.

Existing cross-national measures of long-term care

The OECD defines and measures various indicators of health, and of employment in health and social care. The health and social care workforce is discussed primarily in terms of medical doctors, midwives, psychiatrists, and nurses, among others. Health care activities include consultations with doctors, medical technologies, hospital beds, hospital discharges, hospital stay length, various medical procedures, and pharmaceutical consumption. Long-term care is measured in terms of life expectancy and health life expectancy at age 65, self-reported health

and disability at 65, prevalence of dementia, recipients of long-term care, informal carers, long-term care workers, long-term beds in institutions and hospitals, and expenditures.

Informal carers are defined as: "people providing assistance with basic activities of daily living (ADL) for at least one hour per week" (OECD, 2011). The data relates only to the population aged 50 and over. There are limitations on the data depending upon the country. For example, data on informal care providers from the United States include care provided for parents only. The OECD recognizes variations in the relative importance of informal care giving by family members compared with more formal long-term care workers. There are difficulties in obtaining data on informal carers across countries because of the lack of documenting and accounting of the work. As a result, OECD data are primarily from those who are aged 50 years or older, and who report providing care of a minimum duration of one hour daily to a family member. The OECD estimates that the potential pool of informal carers is likely to shrink in the coming decades "as a result of declining family size, changes in residential patterns of people with disabilities, and rising participation rates of women in the labour market" (OECD, 2011). Further, the OECD anticipates "…a greater share of people providing informal care may be required to provide high-intensity care. Without adequate support, informal care giving might exacerbate employment and health inequalities" (Ibid.).

Long-term workers are defined as "paid workers who provide care at home or in institutions (outside hospitals)" (OECD, 2013). This definition includes qualified nurses and personal care workers providing assistance with ADL and other personal support. However, personal care workers include different categories of workers who may be called different names in different countries, and may or may not have qualifications. The OECD notes that it is difficult to collect comparable data on personal care workers since they may not be part of

recognized occupations. Long-term workers also include family members and friends employed under a formal contract with the care recipient or a public or private service provider. The OECD measures the proportion of long-term workers relative to the population aged 65 years and over in various countries, finding that the numbers are highest in Sweden and Norway.

The OECD raises some concerns about the growing inflows of long-term care workers from other countries, including the management of irregular migration inflows and paid work which is undeclared for tax and social security purposes (Colombo et al., 2011). The definition of long-term worker varies in different countries and it is suggested by the OECD that this wide variation may be partly explained by institutional factors, such as public health insurance coverage. Many countries may look to delegate some tasks currently provided by nurses to lower-skilled providers to increase the supply of services and reduce costs, while ensuring that minimum standards of quality of care are maintained.

There have been increases in long-term care over the last decade in many countries, partly due to an aging population and public protection for related risks. The OECD anticipates that the demand for long-term care workers will double by 2050 due to the aging population and the expected decline in the availability of family caregivers. The OECD provides data for long-term beds in facilities in Canada, United States, United Kingdom, and Switzerland. By OECD definition, long-term institutions mean nursing and residential care facilities that provide accommodation and long-term care as a package. However, this definition does not include beds in adapted living arrangements for persons who require help while providing autonomy and self-control. Several countries only provide data to the OECD on beds in publicly-funded long-term care facilities, while others also include private institutions (both for-profit and not-for-profit). For example, some countries provide data that include information on beds in treatment centers

for addicted people, psychiatric units of general or specialized hospitals, and rehabilitation centers. The OECD measures the number of long-term beds in institutions and hospitals per 1000 population aged 65 or over.

Long-term care expenditure is defined as "both health and social support services to people with chronic conditions and disabilities needing care on an ongoing basis" (OECD, 2013). The agreed upon definitions under the System of Health Accounts (SHA) state: "The health component of long-term care spending relates to health care provided to patients with chronic impairments and assistance with activities of daily living (ADL, such as eating, washing and dressing). It includes palliative care and health care provided in long-term care facilities, and health and personal care services (for ADL) received at home. Long-term care social expenditure includes support for residential services in assisted living arrangements and other kinds of protected housing for persons with functional limitations; assistance with instrumental activities of daily living (IADL, such as getting groceries, preparing meals, managing personal finances, and other services of housekeeping), social services of day care such as social activities for dependent persons; transport to and from day care facilities or similar social services" (OECD, 2013). However, some countries use different definitions of the "health" part of long-term care expenditure.

Long-term care expenditure has risen over the past few decades in most OECD countries and is expected to rise further in the coming years due mainly to population aging and a growing number of people requiring health and social services on an ongoing basis. The OECD notes the two components in long-term care spending, with "health" relating to continuous episodes of care dominated by medical or personal care, and "social" relating to services or programs

associated with helping people with disabilities to live as independently as possible, which is considered outside of medical and personal care.

The OECD identifies a significant difference in total public spending on long-term care as a percentage of the GDP between some countries, such as Sweden and the Netherlands, with higher percentages, and other countries having much less spending. These significant variations reflect differences in population structure and in the development of formal long-term care systems, as opposed to more informal arrangements based mainly on care giving provided by unpaid family members. The OECD believes there is underreporting of privately-funded long-term care expenditure. There remain differences in the boundaries between health and social long-term care spending, depending upon the country. As of 2011, the average public spending on "health" long-term care for OECD countries is approximately 1 percent of GDP. The Netherlands, Denmark and Norway reportedly spend over 2 percent of GDP on "health" long-term care.

Resources allocated by government to long-term care have been growing rapidly in recent years in several countries and are a significant factor in the overall growth of health expenditure. For more than half of OECD countries, the health component of public long-term care expenditure has grown faster than overall public health expenditure. However, in other countries such as Canada, Sweden, and the United States, the "health" part of public long-term care spending has grown slower than public health expenditure. The OECD anticipates that public spending for long-term care, as a share of GDP, will at least double by 2050. As a result, the OECD believes the challenge in the next few decades is in balancing the protection of long-term care while ensuring that this protection is fiscally sustainable in the long term (Colombo et al., 2011).

On the workforce in long-term care, the OECD collects very limited statistics from countries. In research for this thesis, data on the labour force in long-term care for Sweden and Canada were available in the OECD publication *Health at a Glance* (2013). In OECD statistical tables, data for the United States and the United Kingdom were available (as were data for several other countries, however, not for Canada and Sweden). Table 7 provides a summary of the workforce statistics that are available and have been gathered from several statistical tables compiled by the OECD for the United Kingdom and the United States. Though there are statistics going back at least a decade, the summarized data are for 2011, the most recent year available. As is evident in table 7, the OECD divides the formal labour force in long-term care into the labour force in institutions and the labour force working in home settings. Data are collected on the number of nurses and personal carers, and on FTEs, however only data on personal carers is available from the United Kingdom. Interestingly, the United States has considerably more personal carers as a percentage of the total population aged 65 and over as compared to the United Kingdom, both in institutions and in home settings, possibly a reflection of already using inexpensive labour to provide for the care of older persons and the chronically ill.

Table 7 – Formal Workforce in Long-Term Care, UK US, 2011, OECD Statistics

Country	Total (nurses and personal carers)	% for total population aged 65 years old and over	% of nurses for total population aged 65 years old and over	% of personal carers* for total population aged 65 years old and over	Nurses	Personal carers	Total FTEs (nurses and personal carers)	% FTEs for total population aged 65 years old and over
Formal LTC workers in institutions								
UK	--	--	--	0.9	--	88011	--	--
US	3983149	9.6	6	3.6	2473997	1509152	2189888	5.3
Formal LTC workers at home								
UK	--	--	--	0.9	--	92447	--	--
US	971805	2.3	0.4	2	156922	814883	449105	1.1

The main point about table 7 is to illustrate how limited the data are on the workforce in long-term care in key cross-national sources such as OECD datasets. The labour force is very narrowly presented in terms of "head counts" and "FTEs" (see Appendix C for more information on OECD statistics on long-term care). It is not possible with these data to consider who these workers are in terms of their social locations, nor is it possible to ascertain anything about working conditions and work arrangements. Though the roles of providers are defined and described (see Appendix C), there is little information about job tasks, education and skill level. In terms of division of labour, little can be gleaned about the configuration of care within different settings, either facilities or home settings. Furthermore, though several countries are included in the tables, for this study only data for the United Kingdom and the United States are available, pointing to the national variability in these statistics. In general, the further away from "medical" health care the data are, the more uneven they become. It is emphasized that this is a reflection of uncoordinated data collection on this topic. National surveys, though increasingly problematic in some contexts like Canada, can yield more information – even very basic – on this workforce, but the priority has not yet been pursued.

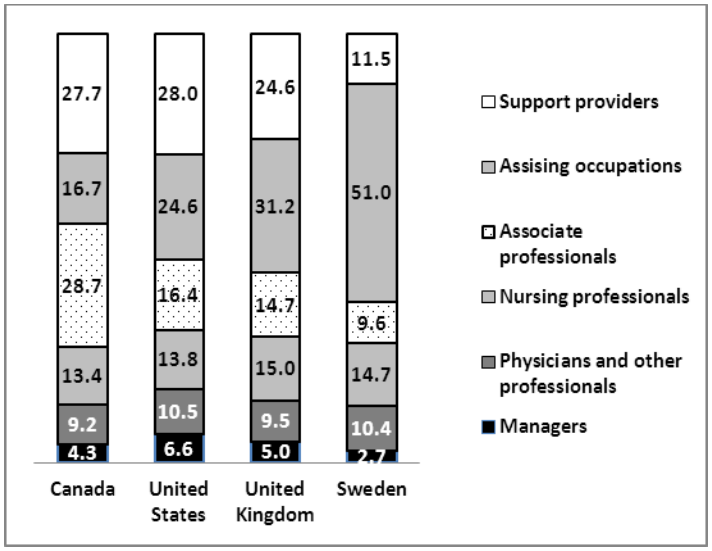
As elsewhere noted, these data gaps point to the importance of qualitative research for supplementing the lack of data on the workforce. Though challenging, cross-nationally coordinated qualitative research, such as that being undertaken with the project *Re-Imagining Long-term Residential Care*, can shed light on some of these gaps. The next sections of this chapter also attempt to fill these data gaps through a creative harmonization of occupation data on health and social care workforces. Though it is not possible to look within the sub-industry of long-term residential care, a consideration of occupation groups relative to one another sheds

some light on the largest group of providers in long-term care – those in "assisting occupations". Support providers are also important in long-term care. The next sections maps these occupation groups relative to managers, physicians and other professionals, nursing professionals, and associate professionals.

The occupational division of labour in the four countries

Work organization in health and social care is different in the four countries examined in this thesis. Looking across the entire paid labour force in health and social care, data from the CPD suggest important differences in the size of workforces in each occupation group but particularly in manager occupations, assisting occupations and support provider occupations. Figure 23 shows, for example, that the United States concentrates more workers in manager occupations. Sweden has the smallest concentration of workers in manager occupations at only 2.7 percent. Shares of workers in assisting occupations, the dominant providers in long-term care, vary across the countries. Out of all paid providers in care in Canada, 16.7 percent are workers in assisting occupations as compared to 51 percent of providers in Sweden. Sweden has the smallest share of support providers – workers doing things like cleaning, laundry, food preparation, maintenance, security and clerical work. Only 11.5 percent of providers in Sweden are classified in this grouping compared to over 25 percent in the three other countries. Interestingly, Canada has a much larger share of workers in associate professional occupations. This category includes licensed practical nurses, an occupation group that is expanding in Canada.

Figure 23 - Occupational Division of Labour in HSC, CA US UK SW, 2011, CPD



Of course, the varied configurations of care work in the different countries, particularly in regard to the sizes of the workforces in assisting occupations and support occupations, do not suggest that some countries like Sweden have less need for cleaning, food services, clerical and other work. What is suggested by these data and confirmed by other recent research (e.g., Daly and Szebehely, 2012) is that other workers in care in Sweden perform some of the tasks separated out into support work in Canada, the United States, and the United Kingdom. Indeed, recent research on the division of labour in long-term residential care comparing Canada and Sweden conducted by Daly and Szebehely (2012) has shown that personal support workers in Sweden also do the cleaning, cooking and laundry work, and that the work tends not to be divided out to other workers as often. They refer to the model in Sweden as "integrated relational care work" and their data show that this work is less demanding and more rewarding for workers than in Canada where the division of labour is very different and reflects a model they refer to as "highly differentiated task-oriented work" (2012). Daly and Szebehely (2012)

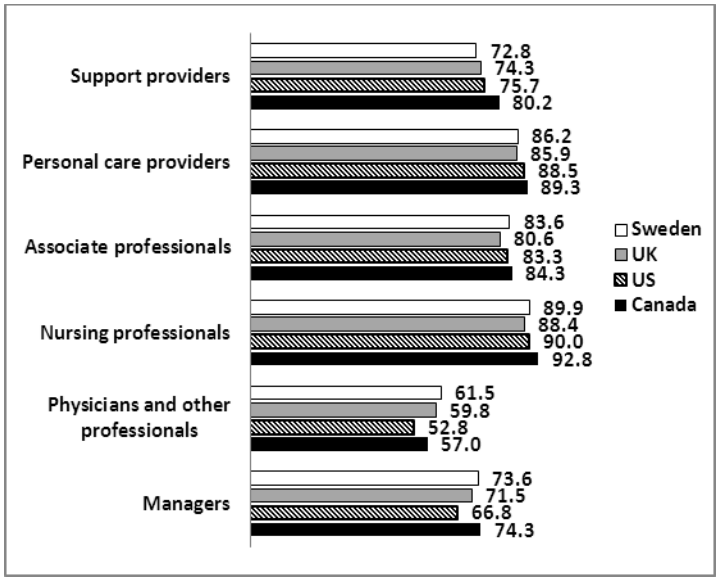
suggest from their findings that workers in Sweden have more power and control than workers in Canada – that they feel their work is related to outcomes and that they are part of the team of care.

The differing division of labour in different contexts suggests other implications, including the vulnerability of some groups of workers to privatization. In Canada, several provinces have moved towards outsourcing of support services. In those provinces, the division of tasks into different occupations such as support work places these workers at greater risk of being redefined and reassigned as externally employed contract workers, working for third-party agencies. This involuntary job change usually involves moving those workers into roles with reduced workers' wages and benefits while also challenging existing collective bargaining contracts, exposing workers to greater precariousness (Armstrong and Laxer, 2011).

The gendered segregation of care work

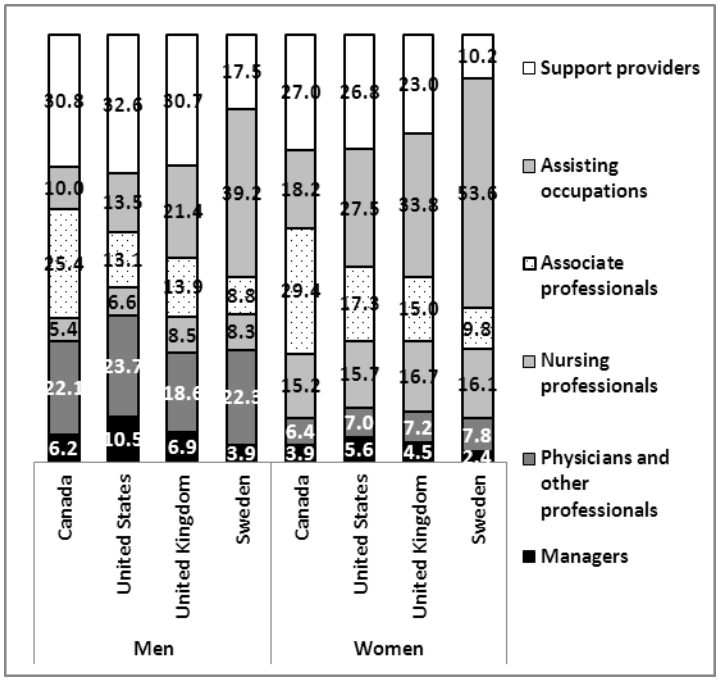
Data from the CPD indicate that men and women are concentrated in very different jobs in health and social care and that this is the case, albeit with notable differences, in the four countries of this study. As figure 24 demonstrates, women provide the majority of paid care in each of the countries. Overall, their concentrations in health and social care are at over 80 percent in all four countries. Women have lower concentrations in physician and other professional occupations in each of the countries. Their concentrations are also lower relatively in management and support worker occupations. Meanwhile, concentrations of women are very high in professionalized nursing occupations.

Figure 24 - Concentration of Women by Occupation in HSC, CA US UK SW, 2011, CPD



Women are concentrated in different types of provider roles than are men in health and social care. As figure 25 shows, among all men in health and social care in the four countries, many more are employed in physician and other professional occupations than are women. In the United States, a larger share of men work in management occupations. In each of the four countries, more men are concentrated in support work occupations. Interestingly, Sweden stands out in terms of the gendered division of labour in care. Though there are higher concentrations of men working in physician and other professional occupations, men are more evenly and comparably concentrated in other occupations relative to women.

Figure 25 - Occupational Division of Labour by Sex in HSC, CA US UK SW, 2011, CPD



Aging labour forces and the role of immigrants

The labour forces in health and social care are aging across all of the countries in this study. Table 8 demonstrates the growth in shares of providers between the ages of 45 and 64 years of age from 1997 to 2011. Table 9 shows a growth in the labour force of providers over the age of 65 in each of the countries. The growth of the workforce past age 65 is particularly striking. The only country among the four that already had notable shares of workers past age 65 in 1997 is the United States, a country with fewer public benefits including health insurance and pension coverage. However, workers in Canada, the United Kingdom and Sweden may be feeling pressures to continue working that are related to a reduction in pension and health coverage (Townson, 2012 and 2011; European Commission, 2009; Gruber and Wise, 2007). Furthermore, there has been an end to mandatory retirement in many jurisdictions and it is predicted that workers will work longer, despite current variations in mandatory retirement (European

Commission, 2009). A further explanation of a growth in the size of the workforce among older groups is the demand for labour in health and social care in each of these countries. It would be interesting to consider the varied reasons different providers continue to work past 65 years of age. The reasons physicians work past age 65 are likely very different from the reasons nurses and assisting providers have to continue working, choices that are gendered. However, research in general is pointing to the growing trend among older workers to stay in the labour force longer with far-reaching consequences (European Commission, 2009; Townson, 2006; Gruber and Wise, 2007).

Despite the aging of the labour force across all the countries, it is unlikely that this is a factor in the high injury and absenteeism rates in long-term residential care, particularly among workers in assisting occupations (Armstrong and Laxer, 2012). For example, absenteeism is almost twice as high for workers in assisting occupations in health and social care in Canada than for any other group of worker in health care (Daboussy and Uppal, 2012). However, similar rates of absenteeism and injury are not observed in other contexts such as Sweden, suggesting that work organization and working conditions are more likely explanations for the high rates in Canada (Armstrong and Laxer, 2012).

Table 8 – Percentage of Workforce in HSC between the Ages 45-64 Years, CA US UK SW, 1997 & 2011, CPD

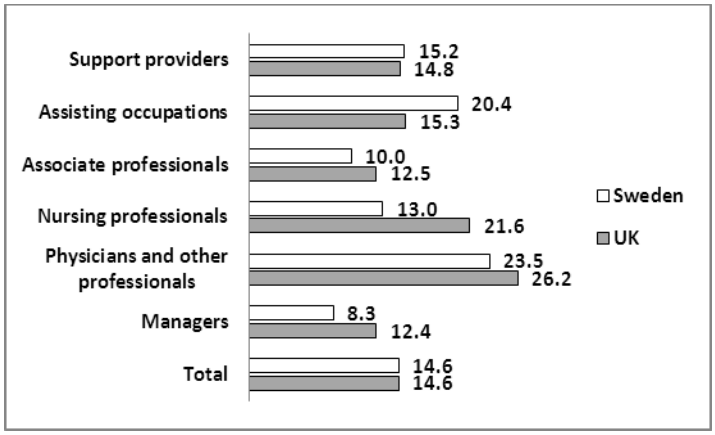
	CA		US		UK		SW	
	1997	2011	1997	2011	1997	2011	1997	2011
Managers	42.5	58.7	42.0	53.9	44.7	55.4	59.8	60.8
Physicians and other professionals	30.8	39.8	34.5	43.4	32.1	35.1	36.4	47.0
Nursing professionals	39.5	46.6	32.5	43.1	29.6	44.5	45.9	48.1
Associate professionals	25.0	34.6	28.4	42.8	33.0	43.5	39.2	58.2
Assisting occupations	35.2	43.9	25.6	34.0	32.4	38.6	36.5	44.3
Support providers	36.3	48.7	31.8	41.8	44.9	49.4	48.8	52.8

Table 9 – Percentage of Workforce in HSC over 65 Years, CA US UK SW, 1997 & 2011, CPD

	CA		US		UK		SW	
	1997	2011	1997	2011	1997	2011	1997	2011
Managers	2.7	2.5	2.3	4.4	0.8	2.4	0.0	2.9
Physicians and other professionals	4.0	6.5	4.5	7.7	2.8	3.0	11.9	3.7
Nursing professionals	0.2	2.7	2.3	3.6	0.8	1.6	0.0	1.3
Associate professionals	0.6	1.7	1.2	2.5	1.2	2.4	0.6	2.6
Assisting occupations	1.0	2.4	2.9	4.6	0.6	2.2	0.3	1.3
Support providers	0.9	3.3	3.3	5.3	1.7	3.7	0.0	1.7

Data presented in Chapter 3 on Canadian providers reveal the roles of immigrants, visible minorities and recent migrants in health and social care, and, specifically in long-term residential care. Data from the CPD show high concentrations of immigrants in both Sweden and the United Kingdom in each of the occupation groups of health and social care (figure 26). Both countries have equal concentrations of foreign-born providers at 14.6 percent of all providers in care. However, there are differences between Sweden and the United Kingdom in regard to which occupations immigrants have sizeable concentrations. In Sweden, a disproportionate share of workers in assisting occupations are immigrants, meanwhile in the United Kingdom high concentrations of nursing professionals are immigrants. Both countries have very large shares of immigrants in physician and other professional occupations in health and social care.

Figure 26 - Concentration of Immigrants, Occupations in HSC, UK SW, 2011, CPD



Data on immigrant status are not available for the United States in the CPD. Also unavailable are detailed reliable data on recent migrant workforces in health and social care – a challenge across all four countries in this study. Indeed, research has shown that migrant workforces are critical within health and social care for many European countries and for Canada and the United States (e.g., Lyon and Glucksmann, 2008; Spencer, 2010; Twomey, 2013), but that this is a very challenging workforce to measure statistically (OECD, 2013; Bourgeault, 2008; Bourgeault and Wrede, 2008; Samers, 2001). Migrant workforces are particularly precarious due to their insecure citizenship status and lack of rights (Yeates, 2012; Bakan and Stasiulus, 1997; Abu-Laban and Gabriel, 2002). A variable designed for the CPD that groups recent immigrants by into five-year sets allows for some basic detail on new comers to different countries in the European Union. However, it is not possible to discern types of immigrants – whether permanent or temporary – nor is it possible to map much additional detail on these groups due to small sample sizes within the Eurostat data samples. Also unavailable are data on race and ethnicity in Europe. Furthermore, the survey sample from the US CPS used in the CPD

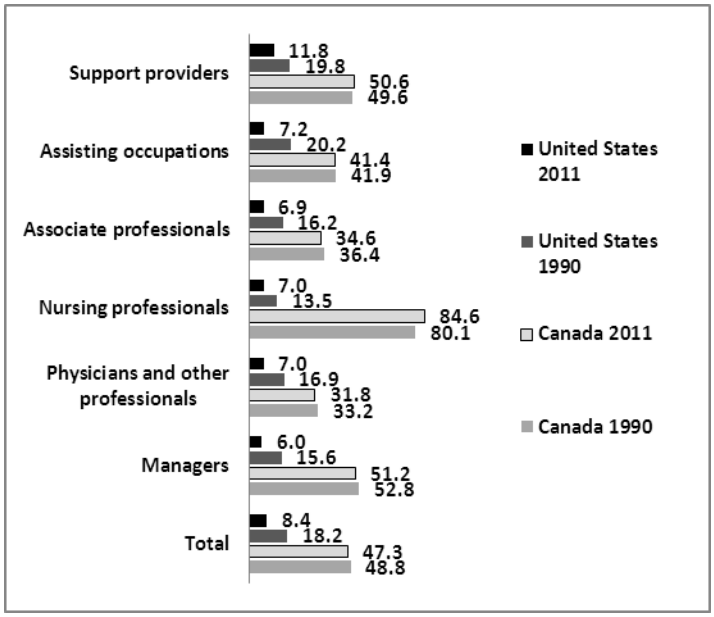
for the United States does not include immigrant status, race and ethnicity data (though the United States collects detailed data elsewhere on this). These varying approaches in Europe and North America reflect a divergence in the politics of collecting data on race and ethnicity in different contexts. As populations age, more and more countries are relying on migrant labour forces to provide care for older persons. Perhaps the most invisible workers in care, migrant providers depart from their home countries, leaving behind care gaps in these locations, to provide care work that is poorly paid and very precarious in other countries. As countries move towards reducing costs in care, migrant providers are often called upon, however, there is less reliable data to track this critical component of the labour force in health and social care.

Sector and unionization

There are no data for the European countries on either sector or union coverage, which is a critical limitation of the cross-national data available at Eurostat in this area. Data from Canada and the United States on sector measure the public and private sector workforces and do not include information on the for-profit and not-for-profit sectors[5]. Nevertheless, the size of the public sector in health and social care is very different in the two countries. Furthermore, as figure 27 demonstrates, the public sector in health and social care is shrinking in the United States but remaining somewhat stable in Canada. In general, providers in the United States are much less likely to work in the public sector as compared to providers in Canada.

[5] The United States Current Population Survey which is used in the CPD does have data on the not-for-profit and for-profit sectors, however, the sample month most appropriate for harmonizing to the CPD did not include this variable.

Figure 27 - Size of Public Sector, Occupations in HSC, CA US, 1990 & 2011, CPD



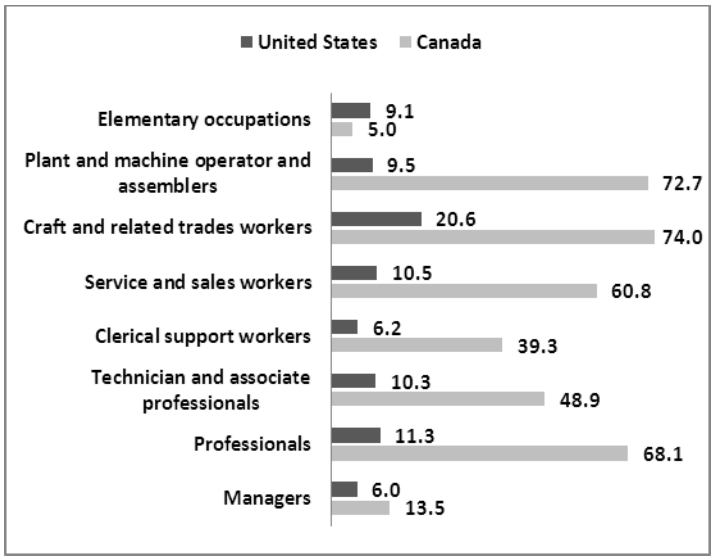
The public sector offers a wage advantage for all occupation groups in health and social care in Canada and for both men and women. However, as table 10 shows, the same is not true for the United States where some groups of male providers earn more in the private sector than in the public sector. For providers in long-term residential care including workers in assisting occupations there is a significant public sector wage advantage in both countries.

Table 10 – Average Hourly Wage and Percentage Gap, Sectors, Men and Women in HSC, CA US, 2011, CPD

	Canada						United States					
	Men			Women			Men			Women		
	Public	Private	% Gap	Public	Private	% Gap	Public	Private	% Gap	Public	Private	% Gap
Managers	$38.30	$30.58	20.2	$39.18	$31.24	20.3	$17.73	$24.14	-36.2	$30.73	$17.12	44.3
Physicians and other prof	$33.83	$32.57	3.7	$32.97	$27.99	15.1	$22.23	$31.36	-41.1	$30.38	$31.89	-5.0
Nursing professionals	$32.66	$29.11	10.9	$34.28	$29.62	13.6	$27.20	$28.91	-6.3	$32.05	$28.41	11.4
Associate professionals	$28.27	$22.65	19.9	$25.94	$20.34	21.6	$22.49	$19.96	11.2	$20.22	$20.65	-2.1
Assisting occupations	$20.84	$17.49	16.1	$20.44	$17.61	13.9	$13.53	$11.49	15.0	$12.42	$11.73	5.6
Support providers	$24.52	$19.00	22.5	$23.29	$18.37	21.1	$17.02	$13.40	21.3	$12.99	$13.54	-4.2

Figure 28 shows the differences in union coverage in health and social care in the United States and Canada in 2011 using a more expanded variable for occupation from the CPD. Again, not surprisingly, union coverage is much higher for almost every occupation group in Canada as compared to the United States. Looking at time-series data, no notable change was observed in union coverage between 1997 and 2011 for either country (CPD, 2014).

Figure 28 - Union Coverage by Occupation in HSC, CA US, 2011, CPD



Tables 11 & 12 demonstrate the union wage advantage for occupation groups in health and social care in both countries. Among workers in assisting occupations, for example, there is a 15 percent wage advantage in Canada and a 29.2 percent wage advantage in the United States for those who work in unionized settings. This is not surprising and union coverage has long been recognized as an important shelter from precariousness (Anderson et al., 2006; Jackson, 2003; Briskin, 2010) for workers both in health and social care and in other industries. As noted in Chapter 4 in regard to Canadian workers in nursing and residential care, some occupation groups in health and social care have a more significant union wage advantage than others. For

example, in both Canada and the United States, the wage advantage is larger for workers in assisting and support occupations relative to nursing professionals. The observation was made in Chapter 4 for the Canadian context that opportunities for cost saving on labour are possible by shifting care from highly unionized hospital settings to less unionized long-term residential care settings. These data from Canada and the United States, though looking only at occupation group, reconfirm this suggestion. They also point to the relative importance of unions for workers in the non-professionalized occupations in care.

Table 11 – Average Hourly Wages and Percentage Gap by Union Coverage and Occupations in HSC, CA US, 2011, CPD

	Canada			United States		
	Union	No Union	% Wage Gap	Union	No Union	% Wage Gap
Managers	$32.60	$35.89	-10.1	$25.93	$18.32	29.4
Professionals	$33.17	$30.29	8.7	$28.99	$25.21	13.0
Technician and associate professionals	$25.63	$20.70	19.2	$23.37	$20.20	13.6
Clerical support workers	$21.15	$18.52	12.4	$18.54	$13.72	26.0
Service and sales workers	$19.25	$16.21	15.8	$15.94	$11.16	30.0
Craft and related trades workers	$24.72	$16.53	33.1	$20.64	$15.64	24.2
Plant and machine operator and assemblers	$24.69	$18.31	25.9	$13.72	$8.77	36.1
Elementary occupations	$15.61	$12.16	22.1	$14.02	$11.49	18.0

Table 12 – Average Hourly Wages and Percentage Gap by Union Coverage and Occupations in HSC, CA US, 2011, CPD

	CA			US		
	Union	**No Union**	**% Gap**	**Union**	**No Union**	**% Gap**
Managers	$32.60	$35.89	-10.1	$25.93	$18.32	29.4
Physicians and other professionals	$32.23	$31.59	2.0	$25.04	$32.47	-29.7
Nursing professionals	$33.94	$31.59	6.9	$32.12	$28.07	12.6
Associate professionals	$25.63	$20.70	19.2	$23.37	$20.20	13.6
Assisting occupations	$20.11	$17.09	15.0	$15.83	$11.21	29.2
Support providers	$22.48	$19.97	11.2	$17.12	$13.31	22.3

Locating precarious care across the four countries

To evaluate the precariousness of providers in health and social care in the four countries, several indicators including level of education, self-employment status, income, job tenure, work schedule, and reason for absence from work are used. The aim is to consider the gendered and racialized aspects of precariousness among different groups of providers with special attention to those working in assisting occupations – the primary providers in long-term residential care. In general, workers in assisting occupations are more precarious than other providers in health and social care and this is especially true for some groups, and in some contexts.

Educational attainment differs considerably for different occupation groups in health and social care between the four countries of this study, as is shown in table 13. Not surprisingly, physicians and other professionals have "very high" levels of educational attainment in all four countries. Among managers and nursing professionals, most have "very high" levels of educational attainment (i.e., a university degree or post-graduate education), however, in both Canada and the United States both groups have sizable shares in "high" educational attainment as well (i.e., college, trade or some university). This is in contrast to both the United Kingdom and Sweden where educational attainment is "very high" for most in both groups. Similarly, among associate professionals, educational attainment is "very high" in the United Kingdom and Sweden, but this is not the case in either Canada or the United States. The most striking difference among the four countries in terms of educational attainment is for workers in assisting occupations and support providers. In both Canada and the United States, educational attainment is relatively high for both groups. In both the United Kingdom and Sweden, educational attainment is relatively low. Most workers in assisting occupations in the United Kingdom and

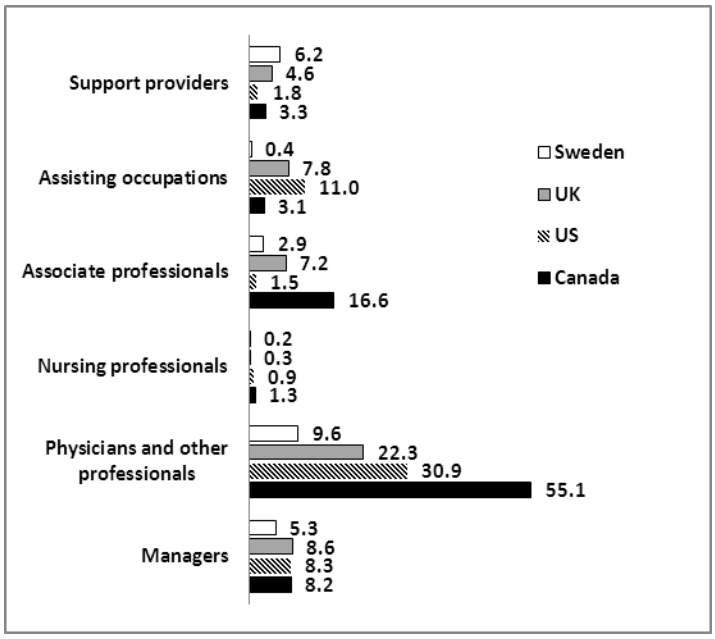
Sweden have only a “medium high” level of attainment (i.e., upper secondary), while in Canada and the United States, most have a “high” level (i.e., college, trade or some university). Data on education is somewhat challenging to interpret across national jurisdictions due to differing schooling systems (Vosko, 2014). They are also challenging data to harmonize for related reasons (see Chapter 3 and Appendix B). Nevertheless, they are illustrative of approaches in different contexts to skill development and training for providers.

Table 13 – Highest Level of Education, Occupations in HSC, CA US UK SW, 2011, CPD

Managers	CA	US	UK	SW
Low (below secondary)	0.2	0.1	0.0	0.6
Medium low (lower secondary)	1.3	0.6	1.6	0.6
Medium high (upper secondary)	8.7	14.3	23.2	9.2
High (college/trade/some university)	37.0	25.1	0.0	4.9
Very high (university degree/post-graduate)	52.8	59.9	75.2	84.7
Physicians and other professionals	**CA**	**US**	**UK**	**SW**
Low (below secondary)	0.1	0.1	0.0	0.0
Medium low (lower secondary)	0.4	0.0	0.2	0.0
Medium high (upper secondary)	2.5	1.8	5.3	1.0
High (college/trade/some university)	12.1	8.6	0.0	0.2
Very high (university degree/post-graduate)	85.0	89.5	94.5	98.8
Nursing professionals	**CA**	**US**	**UK**	**SW**
Low (below secondary)	0.2	0.2	0.0	0.0
Medium low (lower secondary)	0.5	0.1	0.1	0.0
Medium high (upper secondary)	2.2	1.1	9.6	1.1
High (college/trade/some university)	55.0	39.0	0.1	0.6
Very high (university degree/post-graduate)	42.1	59.7	90.1	98.2
Associate professionals	**CA**	**US**	**UK**	**SW**
Low (below secondary)	0.8	0.1	0.0	0.5
Medium low (lower secondary)	3.4	0.5	1.6	2.6
Medium high (upper secondary)	9.4	22.1	54.7	43.6
High (college/trade/some university)	64.3	50.9	0.0	8.6
Very high (university degree/post-graduate)	22.1	26.4	43.7	44.6
Assisting occupations	**CA**	**US**	**UK**	**SW**
Low (below secondary)	1.3	2.9	0.1	2.0
Medium low (lower secondary)	5.3	4.5	7.3	7.0
Medium high (upper secondary)	13.8	39.7	70.9	73.7
High (college/trade/some university)	67.2	42.6	0.3	5.6
Very high (university degree/post-graduate)	12.4	10.3	21.3	11.7
Support providers	**CA**	**US**	**UK**	**SW**
Low (below secondary)	1.8	1.8	0.1	2.4
Medium low (lower secondary)	6.8	2.1	10.0	6.0
Medium high (upper secondary)	16.7	32.4	49.0	34.6
High (college/trade/some university)	47.6	31.9	0.2	4.3
Very high (university degree/post-graduate)	27.0	31.8	40.7	52.7

Levels of self-employment for the different occupation groups in health and social care differ between the four countries. Not surprisingly, in Canada over 50 percent of physicians and other professionals work in self-employment. The rates are much lower for the other three countries and especially low in Sweden. Higher rates of self-employment are observed for workers in assisting occupations in the United Stated and the United Kingdom relative to Canada and Sweden. This is perhaps understandable in the United Kingdom given the recent move towards more self-employed home care providers in personal care (Lethbridge, 2010).

Figure 29 - Concentration of Self-Employment, Occupations in HSC, CA US UK SW, 2011, CPD



Incomes and wages vary by occupation group in health and social care but income gaps between men and women, and among immigrant groups, differ between the countries in this study. For example, as figure 30 shows, male professionals earn considerably more than female professionals in the United Kingdom as compared to in Sweden where the gap is small. Similarly, among workers in assisting occupations in these two countries, women out earn men

in Sweden, but earn less than men in the United Kingdom. Finally, the gap between these two occupation groups in care – arguably the top earners and lowest earners – is larger in the United Kingdom than in Sweden. Put another way, male workers in assisting occupations in the United Kingdom earn 25 percent of what male professionals in health and social care earn, while in Sweden, they earn 40 percent. Evidence suggests measuring inequalities such as the gap between the top earners and lowest earners is a strong indicator of equity and precariousness (Marmot and Wilkinson, 2001; Wilkinson and Pickett, 2009). These income data point to how workers in health and social care are valued relative to one another within their respective countries. Considered this way, the data suggest that workers in assisting occupations in Sweden are valued more than their counterparts in the United Kingdom. No doubt this influences not only the self-worth of the workers themselves but also how their worth is recognized and reinforced socially.

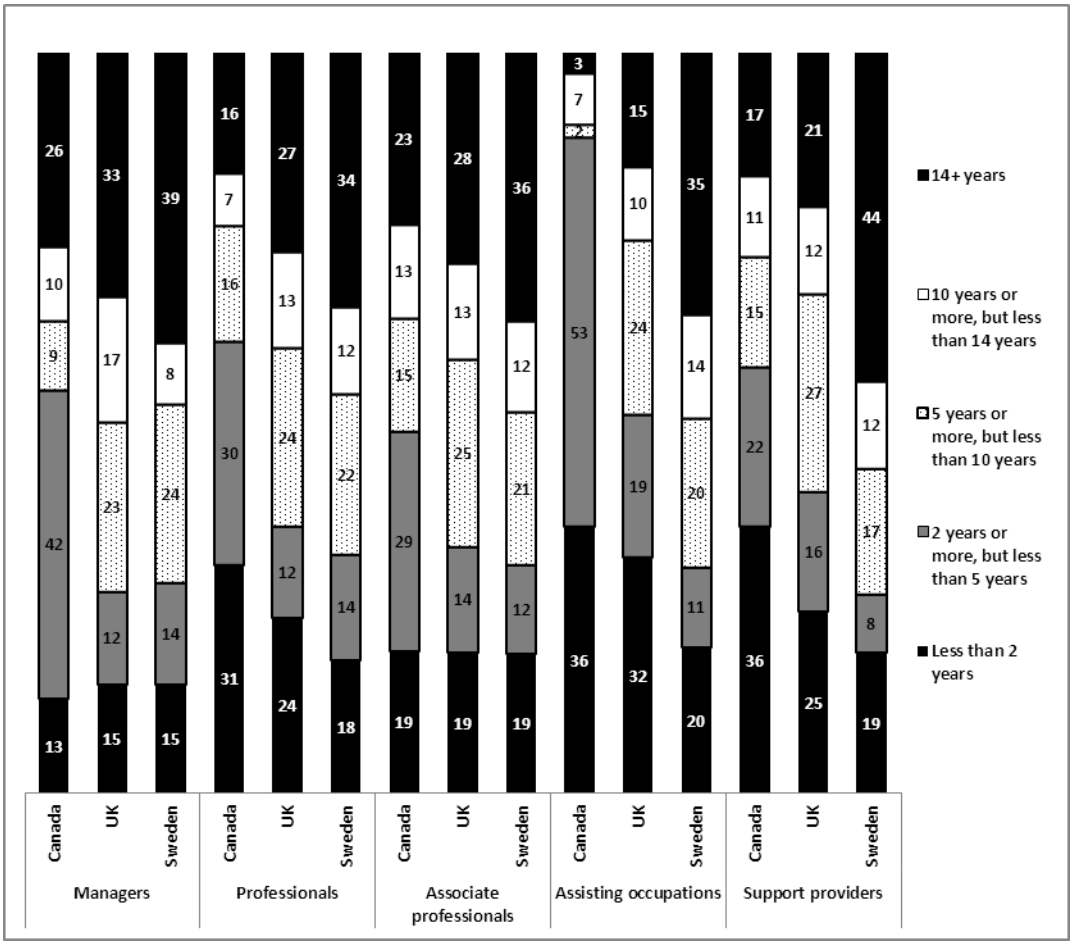
Figure 30 – Average Annual Income, Occupations in HSC, UK SW, 2011, CPD

		UK	SW
Total health and social care	Men	32,845.60 €	32,111.60 €
	Women	21,799.49 €	25,588.50 €
women's earnings as % of men's		66.4	79.7
Managers	Men	37,059.17 €	53,952.71 €
	Women	33,172.30 €	39,226.36 €
women's earnings as % of men's		89.5	72.7
Professionals	Men	65,523.21 €	45,859.24 €
	Women	35,719.81 €	31,953.18 €
women's earnings as % of men's		54.5	69.7
Associate professionals	Men	28,593.11 €	30,857.91 €
	Women	26,079.42 €	26,794.07 €
women's earnings as % of men's		91.2	86.8
Assisting occupations	Men	18,546.10 €	17,408.78 €
	Women	14,774.48 €	21,904.53 €
women's earnings as % of men's		79.7	125.8
Support providers	Men	21,121.01 €	22,652.86 €
	Women	16,811.26 €	19,397.86 €
women's earnings as % of men's		79.6	85.6

A comparison of Sweden, the United Kingdom, and Canada demonstrates that job tenure is very different between the countries for different occupation groups in health and social care. As figure 31 shows, Swedish providers in care have the longest job tenure for all occupation groups. Among workers in assisting occupations in Sweden, an astounding 49.3 percent have job tenure of more than ten years. In Canada, only 9.7 percent of workers in assisting occupations have job tenure of more than ten years. Indeed, workers in assisting occupations in Canada have the shortest job tenure of all occupations groups in each of the three countries. The short job tenure for workers in assisting occupations suggest several important differences about this work in Canada as compared to this work in the United Kingdom and in Sweden. Short job tenure suggests that workers in Canada in personal care roles simply do not want to stay in this

type of employment for very long – that the work is undesirable. Long job tenure observed in the United Kingdom and Sweden suggest that providers have more on the job training and experience than workers in Canada since a larger segment of the workforce has been employed in their work with one employer for a significant period. On-the-job experience is an important aspect of training in most occupations, but especially in health and social care where care involves serious consequences if errors occur and providers must be proficient in medical and relational skills, such as those presented earlier in this thesis. A provider who has worked for over 14 years in care with one employer will have knowledge unlike a provider who has only worked a few years in the same job. The more experienced workers, if conditions allow, can also mentor the less experienced workers.

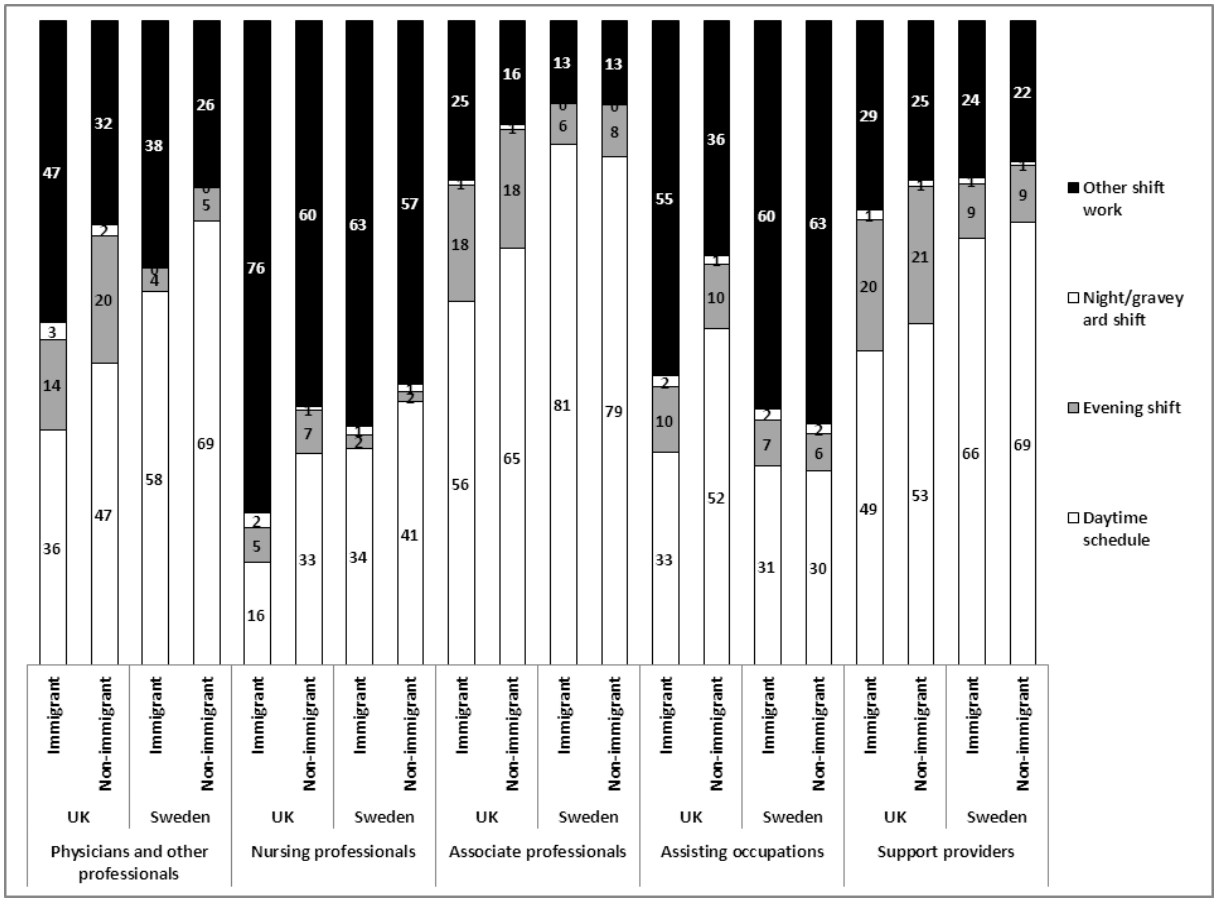
Figure 31 - Job Tenure, Occupations in HSC, CA UK SW, 2011, CPD



The interrelationship between social location and precariousness is evident in considering work schedules among immigrants and non-immigrants in Sweden and the United Kingdom. Data from the CPD show that immigrants in both Sweden and the United Kingdom are less likely to work a regular daytime schedule than non-immigrants (figure 32). However, the only group of providers for whom this is not the case is among workers in assisting occupations in Sweden, where both immigrant and non-immigrants have near equal shares in both daytime and atypical scheduling. Scheduling is related in many workplaces to seniority and it is of course very likely that immigrants have less seniority than non-immigrants in some instances.

Nevertheless, this discrepancy warrants inquiry, given research that demonstrates the deleterious impact that atypical scheduling can have on workers, particularly women (Geiger-Brown et al., 2004; Wong, McLeod and Demers, 2011).

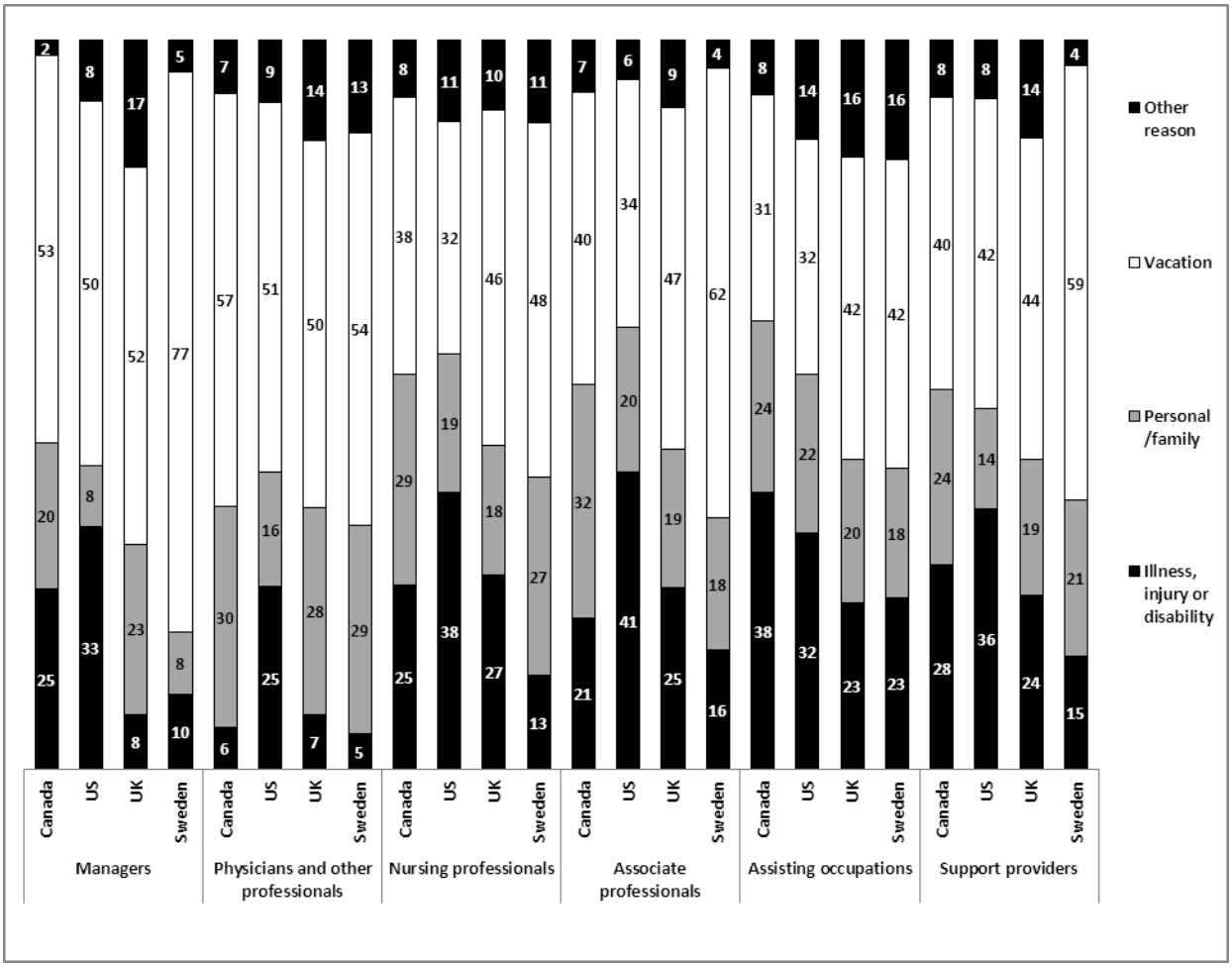
Figure 32 - Work Schedule, Immigrants and Non-Immigrants in HSC, UK SW, 2011, CPD



Another indicator of precariousness used in this thesis is "reason for absence during reference week". Figure 33 graphs the four primary reasons for absences reported by the different occupation groups in care. Physicians and other professionals in all four countries have the smallest shares reporting absence due to "illness, injury or disability". Workers in assisting occupations in Canada have higher shares reporting absence due to illness, injury or disability. Specifically, among workers in assisting occupations in Canada, 37.9 percent report absence as a consequence of this reason, compared to 32.3 percent in the United States, 22.8 percent in the United Kingdom, and 23.5 percent in Sweden. In general, providers across all occupation groups in the United States have large shares that report absence as a consequence of "illness, injury or disability". These are not ideal data on absences – a better indicator would have been number of days absent, even though this measure is also flawed given that people often go to work when they are sick.

The intent with this mapping in figure 33 is to get some sense of the differences in absences across the occupations groups in health and social care and across the four countries. Many factors could impact these data, such as what time of the year the reference week was when asking this particular question in these surveys. Nevertheless, there are notable differences. One theory about the larger concentrations of workers reporting as absent due to illness, injury or disability in the United States may be that workers have less vacation time entitlements in this country so that this becomes a less likely reason to report and shrinking that relative portion. Indeed, all occupation groups in Sweden have larger shares that report vacation as the explanation for absence, pointing to the longer vacation entitlements Swedish workers have in general as compared to workers in the three other countries.

Figure 33 - Reason for Absence from Work during Survey Reference Week, Occupations in HSC, CA US UK SW, 2011, CPD



The diverse politics of national data

An interesting limitation of the data of the CPD, and of European surveys, is the lack of data on race, visible minority status and ethnicity for European countries. During conversations about this topic with researchers from Europe who are involved with the *Re-Imaging Long-term Residential Care* project, it was noted several times that in countries such as Germany, Sweden and Norway, it would be impossible to collect data on these demographic variables because it would provoke a variety of racial and ethnic tensions. Indeed, politically, it seems it is the left that objects to this sort of data collection because of fears around labelling in these countries, meanwhile in Canada the left supports the collection of these data (e.g., Cranford and Vosko, 2006) so as to point to communities in need and to inequitable distributions of resources and opportunities.

Conclusion

This chapter explores a comparative mapping of the division of labour in health and social care in Canada, the United States, the United Kingdom, and Sweden. Due to limits of accessible cross-national statistical data on the sub-industries in health and social care, it was not possible to map the labour force within long-term residential care facilities across these jurisdictions. Though the OECD does compile statistics on paid long-term care, these data are limited in several ways, particularly in regard to the labour force where only two statistics are provided: head counts and FTEs. Given these limits to cross-national data, the focus shifted in this thesis to mapping the occupation groups in health and social care, and data designed and harmonized for the *Comparative Perspectives on Precarious Employment Database* were used to map the occupational division of labour. Looking at the six occupation groupings that divide the

measurable paid labour force in care, several observations can be made. The division of labour in care is gendered and racialized in all four countries. Precariousness is also gendered in all four countries. However, providers are less precarious in some contexts than in others. For example, workers in assisting occupations – the main providers in long-term residential care - are less precarious in Sweden than they are in Canada, the United States, and the United Kingdom. Lower relative precariousness is suggested by data that point to higher relative incomes for workers in assisting occupations in Sweden, and also by more equitable scheduling for groups from different social locations, such as immigrants and non-immigrants. Furthermore, very long job tenure in Sweden among providers in assisting occupations suggest that workers may be somewhat content in their roles. Considering job tenure for workers in assisting occupations alongside other recent research on providers in long-term residential care in Sweden, including the study on working conditions (Armstrong et al., 2009) and that on the work organization (Daly and Szebehely, 2012), points to better overall circumstances for Swedish workforces. In contrast, workers in assisting occupations are more precarious in Canada where larger shares have very low job tenure and are more likely to report absence as the consequence of injury, illness or disability. Workers in assisting occupations are also relatively precarious in the United States where few work in the public sector and most lack union coverage. There are limitations to the data available, in particular the lack of data on sector and unionization for the European countries.

Chapter 6: Conclusion

The power to count

Reflecting the medical model, the dominant approach to mapping workers in health and social care focuses on physicians, nurses, other professionals, and associate professionals. Key sources of statistical data on labour forces in care maintain this focus. While there has been a move by organizations such as the OECD to collect more data on other providers, including those in informal and personal care, these data are problematic in many ways and hardly account for their complete contribution to care. Further, the OECD data do not offer information on skills, training, wages, benefits, working conditions, or social location. Research on migration demonstrates that high-income countries are drawing workers from poorer countries to supply labour in health and social care (Abu-Laban and Gabriel, 2002). Yet data cannot adequately account for these flows since many migrants work in informal arrangements that are not accounted for in the statistical infrastructure. This thesis has sought to fill some of the gap by using data from the newly developed CPD database. In constructing an occupation variable that harmonizes data from several countries and breaks down the measurable paid labour force in health and social care into six primary occupations, the data presented in this thesis allow for cross-national comparisons that account for many more paid workers in care, including those occupation groups typically left out. Meanwhile, other data from the CPD allow for an analysis

of the gendered aspects of care and of the varying social locations of providers in relation to precarious employment.

Two key observations can be made from the data examined in this thesis. Firstly, in Canada, there has been a significant realignment in the sub-industries of health and social care. Social assistance has grown dramatically over the last two decades as a consequence of the push towards more home care. Meanwhile, hospital care has shrunk in relative size. There has also been a shift to more personal responsibility, defined as choice, and more individual payment. Nursing and residential care is taking on some of the care work previously provided in hospitals and this is observable through the mapping of the relative sizes of the sub-industries across time. Secondly, while care work is clearly gendered and racialized, some workers are doing better in some contexts than in others. Workers in care who are unionized have an advantage over those who are not. Similarly, providers in the public sector have an advantage over their private sector counterparts and this is especially true for workers in assisting and support occupations.

Through this approach to mapping, the research indicates that workers in assisting occupations are more precarious in Canada relative to Sweden for example, where Canadian workers in assisting occupations have very low relative job tenure and higher than average absences related to injury, illness and disability. Workers in assisting occupations in the United States are also relatively precarious, demonstrated by their low relative wages and very low levels of union coverage. The data show that in Canada, immigrants and visible minorities are disproportionately concentrated in long-term residential care and that they are more likely to work in more precarious forms of employment, and to work part-time. Though European statistical sources do not provide data on race and ethnicity, data on immigrants demonstrate disproportionate shares in both Sweden and the United Kingdom in some forms of health and

social care. Moreover, these data show that immigrants are more likely than non-immigrants to work in atypical scheduling, however, this is much less the case in Sweden, particularly among workers in assisting occupations. Overall, Sweden surfaces in this mapping as a context in which workers in assisting occupations – the main providers in long-term residential care – are doing better relative to the three other countries in this study. Earnings are higher for workers in assisting occupations and there is a much smaller gap between their earnings and those of the highest earners in care in Sweden, pointing to how they are valued in this country. Such findings confirm, and develop upon, other research findings that show that workers in Sweden report less strain in their jobs (Armstrong et al., 2009), and that the "integrated relational care" division of labour common in Swedish long-term care facilities (Daly and Szebehely, 2012) allows providers greater control, autonomy, and satisfaction in their care work.

Reflecting neoliberal priorities, there are several limitations to the data available to map labour forces in health and social care in Canada, the United States, the United Kingdom, and Sweden. Data on informal and unpaid providers are very limited in all countries. Data on migrant workers are also very limited. There are no detailed cross-national data on the sub-industries within health and social care, so a mapping of workers in long-term residential care across these four countries is not currently possible. There are no data on race, ethnicity and visible minority status for the European countries. Finally there are no data sector and union coverage for the European countries.

A key contribution of this thesis has been to map data from a newly designed database that seeks to fill gaps in information related to precarious employment and labour forces in health and social care. In this sense, this thesis is driven by the exploration and discoveries within the data, hence the numerous data depictions and visualizations throughout. The data

presented are unlike any other existing cross-national examinations of labour forces in health and social care. Overall, there are virtually no cross-national comparisons of either workers in assisting occupations or support occupations in health and social care. Furthermore, there is no existing research that investigates the division of labour in care by looking at all formal occupation groups in health and social care – including support workers. Including all workers in this way to examine their contributions to care and their relative levels of precariousness for the four countries is perhaps the most unique contribution made within this thesis and fills a gap that is related to how care is conventionally measured and valued.

Suggestions for future research

Several areas for further research have surfaced through the exploratory mapping undertaken in this thesis. In particular, further mapping of providers in assisting occupations, a group that includes personal support workers and care aides, would be very informative and would fill a critical gap in research both in Canada and cross-nationally. Though this thesis provides a comparison of providers in these roles, more detailed examinations using national datasets could provide additional information on skills, training, wages, benefits and occupational health. Furthermore, a consideration of workers in personal care across different sub-industries in care would be helpful. For example, how different are the roles of workers in assisting occupations in home settings as compared to facility settings? How have their roles evolved over the last two decades with the realignment of the industrial division of labour in care?

While both the CA SLID and the CA LFS provide data on public and private sector, neither provides information on the for-profit and not-for-profit sectors. The lack of data is an important limitation in the current context of privatization and renders the analysis of working

conditions in different types of facilities in long-term residential care challenging through using only existing quantitative instruments. This points to the need for mixed methods approaches in this area of research advocated in Chapter 3, since qualitative studies in these settings could fill in gaps in knowledge on labour forces in different sectors, such as the for-profit and not-for-profit sectors.

Research on notions of "medical" and "non-medical" home care would be valuable to review further. For example, how do Statistics Canada and the NAICS determine this difference? What are the qualifications of providers in these two areas of care? How can we trace the shift of care from hospitals and facilities into these two types of home care? In what ways does this shift reflect deskilling and work intensification in care and who is most impacted? What are working conditions like for medical and non-medical home care providers? How does their work overlap?

Cross-national collaborative research could fill many gaps in mapping the labour forces in long-term residential care and in personal care provider roles. Though the CPD does contain very unique cross-national data, using national datasets would provide additional detail. Furthermore, if researchers from different countries worked together to analyze their domestic data in relation to the data from other countries, this could shed light on issues related to comparability, but more importantly, on more nuanced understandings of how work organization differs in different contexts. Many challenges in understanding and interpreting the data from Canada in relation to data from other countries were encountered, suggesting that similar research involving experts with knowledge of their own country's systems of care and work organization would improve this sort of cross-national comparative research. This sort of research is currently underway with the project *Re-Imagining Long-term Residential Care*,

particularly with the ongoing development of a collaborative paper tracking assistive personnel (unpublished). Involvement with this collaboration on assistive personnel has been extremely valuable for learning country-specific distinctions for this group of workers in long-term care.

There is a gap in research on the shifting terrain of data collection and the implications for mapping health and social care. Given the very dramatic changes on-going for data collection in Canada, a variety of topics related to health and social care could be explored, perhaps in a collaborative manner. This might involve a collection of research that, in relation to health and social care, looks at case study implications of the changes to data and also at the overall state of data infrastructure measuring health and social care in Canada. For example, what are the impacts for different groups of removing the question on unpaid work from the Canadian Census? What are the implications of American software involvement in Canadian data collection? How do the changes with the NHS impact understanding of health and social care labour forces and needs across Canadian communities? What are the politics behind evolving data reliability and suppression thresholds? How are marginalized populations affected? What are the privacy issues related to data collected on health and social care? What other data exist in Canada aside from those at Statistics Canada and who has access for analysis? As mentioned in the introduction to this thesis, this is an era of so-called big data. There is no shortage of data, but who has access, how much of it is related to health and social care, and for what purpose is it being developed and analyzed, ought to be further explored. It is likely that there is a growing gap between who has access to data and who does not in Canada and that there has been a substantial growth of privately developed data related to health and social care in recent years. Much of the motive driving private data collection may be related to the search for "efficiencies"

and profit typical of neoliberal values but less congruent with the needs of marginalized workers and recipients of care.

The approach to mapping health and social care workforces undertaken in this thesis has uncovered areas for further research that might previously have been overlooked, including for example the need to investigate differences in work schedules among immigrants and non-immigrants. Also noteworthy is the very different job tenure observed for workers in health and social care in the four countries, particularly in some occupations. This too warrants additional investigation. The quantitative mapping, using a unique harmonization of occupation data, points to the ways in which this type of mapping research can inform qualitative studies by identifying patterns and raising important questions about these understudied workforces. It is an exploratory mapping approach of statistical understandings that is beneficial in complex comparative research in order to triangulate findings, cultivate questions and theories, and draw attention to workers whose indiscernibility in the data is not an accident but a choice.

Summary

This thesis has examined the statistical data available for mapping the labour force in long-term residential care in North America and Europe through a case exploration of four countries: Canada, the United States, the United Kingdom, and Sweden. The aim has been to uncover what is missing in the data and why, and to use existing data to map the work organization, working conditions, pay, skills, and social locations of providers in relation to context. Research of others that demonstrates the importance of mapping all workers in care (Armstrong, Armstrong, and Scott-Dixon, 2008) and the need to consider the gendered and racialized dynamics of precarious employment (Vosko, 2006) is built upon. National and cross-national labour force data

infrastructure has been designed with particular objectives in mind and these are explored to show how the imprint of neoliberalism (Armstrong, H., 2013) and medical notions of care are evident in how data on care providers are structured. Research demonstrates that much is missing from neoliberal and medical visions of care, such as the range of work involved in care, the necessary skills to provide appropriate care, along with the importance of relational care and choices for providers. How some of these understandings of care differ by context and are reflected by, or absent from, the statistical data, have been examined.

The theoretical framework of feminist political economy is used, a lens that underscores the importance of gender, race, and class dynamics, in addition to the need to examine multiple intersecting levels of analysis from the macro global level where the chains of migratory labour can be observed, to the bedside level where gendered and racialized hazards in day-to-day care can be examined. Feminist political economy advocates an approach to research that is empirically grounded and triangulated through multiple methods. Guided by feminist political economy, this thesis provides an exploratory and critical mapping of quantitative measures that have the potential to uncover inequitable distributions of economic and social resources in care, with the implications being that this knowledge can be mobilized politically to push for alternative approaches to care and care work. Statistical measurement within neoliberal and medical frameworks emphasizes cost efficiency, a medical definition of care and skills, and an individualized definition of choice. Neoliberalism is dominant throughout North America and Europe, but there are enclaves of alternative visions, such as in Scandinavia and in some areas of Canada. This thesis has explored these shelters for care through cross-national and sub-national comparisons. While approaches to care that work well in one place might not work equally well

in another, the hope is to demonstrate that neoliberalism and the search for profit generates risks in care settings that are not inevitable and that better options are possible.

Appendix A: Cross-national Harmonization of Occupations in Health and Social Care

The appendix is intended to supplement the detail provided in this thesis. This first appendix includes information on the harmonization of occupation groups in health and social care for the cross-national comparisons profiled primarily in Chapter 5.

Managers

NOCS 2001 – CA LFS

1 Senior Management

2 Specialist Managers

3 Manager: Retail, Food

4 Other Managers, NEC

5 Business, Finance

NOCS 2001 – CA SLID

1 Senior Management Occupations (A011-A016)

2 Other Management Occupations (A111-A392)

ISCO-88 – EU LFS

111 Legislators and senior government officials

114 Senior officials of special-interest organizations

121 Directors and chief executives

122 Production and operations managers

123 Other specialist managers

131 Managers of small enterprises

ISCO-88 – EU SILC

11 Legislators, senior officials and managers

12 Corporate managers

13 Managers of small enterprises

SOC 2000 – US CPS

10 Chief executives

20 General and operations managers

30 Legislators

40 Advertising and promotions managers

50 Marketing and sales managers

60 Public relations managers (includes Fundraising Managers in 2011 forward)

100 Administrative services managers

110 Computer and information systems managers

120 Financial managers

130 Compensation and Benefits Managers (2011 forward)

135 Human Resources Managers (2011 forward)

136 Training and Development Managers (2011 forward)

137 Human resources managers

140 Industrial production managers

150 Purchasing managers

160 Transportation, storage, and distribution managers

200 Farm, ranch, and other agricultural managers

205 Farmers, Ranchers, and Other Agricultural Managers (2011 forward)

220 Construction managers

230 Education administrators

300 Engineering managers (includes Architectural Managers in 2011 forward)

310 Food service managers

320 Funeral directors

330 Gaming managers

340 Lodging managers

350 Medical and health services managers

360 Natural sciences managers

400 Postmasters and mail superintendents

410 Property, real estate, and community association managers

420 Social and community service managers

425 Emergency Management Directors (2011 forward)

430 Miscellaneous managers including postmasters and mail superintendents (includes Funeral Service Managers in 2011 forward)

500 Agents and business managers of artists, performers, and athletes

Professionals

NOCS 2001 – CA LFS

11 Natural science, professionals

13 Health professional

14 Nurse supervisors

17 Judges, lawyers

18 Teachers, professors

20 Art and culture, professionals

NOCS 2001 – CA SLID

3 Professional Occupations in Business and Finance (B011-B022)

6 Natural and Applied Sciences and Related Occupations (C011-C183)

7 Professional Occupations in Health, Nurse Supervisors and Registered Nurses (D011-D112)

9 Occupations in Social Science, Government Service and Religion (E011-E039, E211-E217)

10 Teachers and Professors (E111-E133)

ISCO-88 – EU LFS

211 Physicists, chemists, and related professionals

212 Mathematicians, statisticians and related professionals

213 Computing professionals

214 Architects, engineers and related professionals

221 Life science professionals

222 Health professionals (except nursing)

223 Nursing and midwifery professionals

231 College, university and higher education teaching professionals

232 Secondary education teaching professionals

233 Primary and pre-primary education teaching professionals

234 Special education teaching professionals

235 Other teaching profs.

241 Business professionals

242 Legal professionals

243 Archivists, librarian and related information professionals

244 Social science and related professionals

245 Writers and creative or performing artists

246 Religious professionals

247 Public service administrative professionals

ISCO-88 – EU SILC

21 Physical, mathematical and engineering science professionals

22 Life science and health professionals

23 Teaching professionals

24 Other professionals

SOC 2000 – US CPS

620 Human resources, training, and labor relations specialists

640 Compensation, benefits, and job analysis specialists (2011 forward)

650 Training and development specialists (2011 forward)

700 Logisticians

710 Management analysts

730 Other business operations specialists

735 Market research analyst and marketing specialist

740 Business operations specialists, all other (2011 forward)

735 Market research analysts and marketing specialists (2011 forward)

800 Accountants and auditors

810 Appraisers and assessors of real estate

820 Budget analysts

830 Credit analysts

840 Financial analysts

850 Personal financial advisors

860 Insurance underwriters

950 Financial specialists, all other

1000 Computer scientists and systems analysts

1005 Computer and information research scientists (2011 forward)

1006 Computer systems analysts (2011 forward)

1007 Information security analysts (2011 forward)

1020 Computer software engineers (includes software developers, applications and system software in 2011 forward)

1030 Web developers (in 2011 forward)

1040 Computer support specialists

1050 Computer support specialists (in 2011 forward)

1060 Database administrators

1100 Network and computer systems administrators

1105 Network and computer systems administrators (in 2011 forward)

1106 Computer network architects (in 2011 forward)

1110 Network systems and data communication analysts

1200 Actuaries

1210 Mathematicians

1220 Operations research analysts

1230 Statisticians

1240 Miscellaneous mathematical science occupations, including mathematicians and statisticians

1300 Architects, except naval

1310 Surveyors, cartographers, and photogrammetrists

1320 Aerospace engineers

1330 Agricultural engineers

1340 Biomedical engineers

1350 Chemical engineers

1360 Civil engineers

1400 Computer hardware engineers

1410 Electrical and electronics engineers

1420 Environmental engineers

1430 Industrial engineers, including health and safety

1440 Marine engineers

1450 Materials engineers

1460 Mechanical engineers

1500 Mining and geological engineers, including mining safety engineers

1510 Nuclear engineers

1520 Petroleum, mining and geological engineers, including mining safety engineers

1530 Miscellaneous engineers, including agricultural and biomedical

1540 Drafters

1600 Agricultural and food scientists

1610 Biological scientists

1640 Conservation scientists and foresters

1650 Medical scientists (includes life scientists in 2011 forward)

1700 Astronomers and physicists

1710 Atmospheric and space scientists

1720 Chemists and materials scientists

1740 Environmental scientists and geoscientists

1760 Physical scientists, all other

1800 Economists

1810 Market and survey researchers

1820 Psychologists

1830 Sociologists

1840 Urban and regional planners

1860 Miscellaneous social scientists, including sociologists (includes survey researchers in 2011 forward)

2000 Counselors

2010 Social workers

2020 Miscellaneous community and social service specialists

2025 Miscellaneous community and social service specialists, including health educators and community health workers (in 2011 forward)

2040 Clergy

2050 Directors, religious activities and education

2100 Lawyers (includes judges, magistrates, and other judicial workers in 2011 forward)

2110 Judges, magistrates, and other judicial workers

2200 Postsecondary teachers

2300 Preschool and kindergarten teachers

2310 Elementary and middle school teachers

2320 Secondary school teachers

2330 Special education teachers

2340 Other teachers and instructors

2400 Archivists, curators, and museum technicians

2430 Librarians

2600 Artists and related workers

2630 Designers

2700 Actors

2710 Producers and directors

2720 Athletes, coaches, umpires, and related workers

2740 Dancers and choreographers

2750 Musicians, singers, and related workers

2760 Entertainers and performers, sports and related workers, all other

2800 Announcers

2810 News analysts, reporters, and correspondents

2820 Public relations specialists

2830 Editors

2850 Writers and authors

3000 Chiropractors

3010 Dentists

3030 Dietitians and nutritionists

3040 Optometrists

3050 Pharmacists

3060 Physicians and surgeons

3120 Podiatrists

3130 Registered nurses

3140 Audiologists

3150 Occupational therapists

3160 Physical therapists

3200 Radiation therapists

3210 Recreational therapists

3220 Respiratory therapists

3230 Speech-language pathologists

3240 Therapists, all other

3245 Other therapists, including exercise physiologists (in 2011 forward)

3250 Veterinarians

3255 Registered nurses (in 2011 forward)

3256 Nurse anesthetists (in 2011 forward)

3258 Nurse practitioners and nurse midwives (in 2011 forward)

3260 Health diagnosing and treating practitioners, all other

Associate Professionals

NOCS 2001 – CA LFS

9 Clerical supervisors

12 Natural science, technician

15 Health technician

19 Paralegals

21 Art and culture, technician

23 Insurance

44 Manufacturing, supervisor

NOCS 2001 – CA SLID

8 Technical, Assisting and Related Occupations in Health (D211-D313)

11 Occupations in Art, Culture, Recreation and Sport (F011-F154)

12 Wholesale, Technical, Insurance, Real Estate Sales Specialists, and Retail, Wholesale and Grain Buyers (G111-G134)

18 Contractors and Supervisors in Trades and Transportation (H011-H022)

ISCO-88 – EU LFS

311 Physical and engineering science technician

312 Computer associate professional

313 Optical and electronic equipment operators

314 Ship and aircraft controllers and technicians

315 Safety and quality inspectors

321 Life science tech and related associate professionals

322 Health associate professionals

323 Nursing and midwifery associate professionals

331 Primary education teaching associate professionals

332 Pre-primary education teaching associate professionals

333 Special education teaching associate professionals

334 Other teaching associate professionals

341 Finance and sales associate professionals

342 Business services agents and trade brokers

343 Administrative associate professionals

344 Customs, tax and related government associate professionals

345 police inspectors and detectives

346 social work associate professionals

347 Artistic, entertainment and sports associate professionals

348 Religious associate professionals

ISCO-88 – EU SILC

31 Physical and engineering science associate professionals

32 Life science and health associate professionals

33 Teaching associate professionals

34 Other associate professionals

SOC 2000 – US CPS

510 Purchasing agents and buyers, farm products

520 Wholesale and retail buyers, except farm products

530 Purchasing agents, except wholesale, retail, and farm products

540 Claims adjusters, appraisers, examiners, and investigators

560 Compliance officers, except agriculture, construction, health and safety, and transportation

565 Compliance officers (2011 forward)

600 Cost estimators

630 Human resource workers (2011 forward)

720 Meeting and convention planners

725 Meeting, convention, and event planners (2011 forward)

726 Fundraisers (2011 forward)

900 Financial examiners

910 Loan counselors and officers

930 Tax examiners, collectors, and revenue agents

940 Tax preparers

1010 Computer programmers

1107 Computer occupations, all other (in 2011 forward)

1550 Engineering technicians, except drafters

1560 Surveying and mapping technicians

1900 Agricultural and food science technicians

1910 Biological technicians

1920 Chemical technicians

1930 Geological and petroleum technicians (includes nuclear technicians in 2011 forward)

1940 Nuclear technicians

1960 Miscellaneous life, physical, and social science technicians, including social science research assistants and nuclear technicians

1965 Miscellaneous life, physical, and social science technicians, including social science research assistants and nuclear technicians (excludes nuclear technicians in 2011 forward; see 1930)

2015 Probation officers and correctional treatment specialists (in 2011 forward)

2105 Judicial law clerks (in 2011 forward)

2140 Paralegals and legal assistants

2150 Miscellaneous legal support workers

2440 Library technicians

2540 Teacher assistants

2840 Technical writers

2860 Miscellaneous media and communications workers

2900 Broadcast and sound engineering technicians and radio operators and other media and communication equipment workers (includes media and communication equipment workers, all other in 2011 forward)

2920 Television, video, and motion picture camera operators and editors

2960 Media and communications workers, all other

2910 Photographers

3110 Physician assistants

3300 Clinical laboratory technologists and technicians

3310 Dental hygienists

3320 Diagnostic related technologists and technicians

3400 Emergency medical technicians and paramedics

3410 Health diagnosing and treating practitioner support technicians

3420 Health practitioner support technologists and technicians (in 2011 forward)

3500 Licensed practical and licensed vocational nurses

3510 Medical records and health information technicians

3520 Opticians, dispensing

3530 Miscellaneous health technologists and technicians

3540 Other healthcare practitioners and technical occupations

3630 Massage therapists

3820 Detectives and criminal investigators

3910 Private detectives and investigators

4000 Chefs and head cooks

4920 Real estate brokers and sales agents

5000 First-line supervisors/managers of office and administrative support workers

5700 Secretaries and administrative assistants

6200 First-line supervisors/managers of construction trades and extraction workers

7030 Avionics technicians

8760 Medical, dental, and ophthalmic laboratory technicians

9030 Aircraft pilots and flight engineers

9040 Air traffic controllers and airfield operations specialists

9310 Ship and boat captains and operators

9330 Ship engineers

9420 Misc. transportation workers, includ. bridge and lock tenders and traffic technicians

Assisting Occupations

NOCS 2001 – CA LFS

16 Support health service

30 Childcare

NOCS 2001 – CA SLID

16 Childcare and Home Support Workers (G811-G814)

ISCO-88 – EU LFS

513 Personal care and related workers

514 Other personal workers

ISCO-88 – EU LFS 2011

227 Medical assistant practitioners

531 Child care workers and teachers' aides

532 Personal care workers in health services

ISCO-88 – EU SILC

51 Personal and protective services workers

SOC 2000 – US CPS

2016 Social and human service assistants (in 2011 forward)

3600 Nursing, psychiatric, and home health aides

3610 Occupational therapist assistants and aides

3620 Physical therapist assistants and aides

3640 Dental assistants

3645 Medical assistants (in 2011 forward)

3647 Pharmacy aides (in 2011 forward)

3649 Phlebotomists (in 2011 forward)

3650 Medical assistants and other healthcare support occupations

3655 Healthcare support workers, all other, including medical equipment preparers (in 2011 forward)

4320 First-line supervisors/managers of personal service workers

4600 Child care workers

4610 Personal and home care aides

4650 Personal care and service workers, all other

Support Providers

NOCS 2001 – CA LFS

22 Sales, service, supervisor

24 Retail and sales clerk

25 Cashiers

26 Chefs and cooks

27 Food, beverage service

28 Protective services

29 Travel, accommodation

31 Sales, service occupation

6 Insurance administration

7 Secretaries

8 Administration, regulatory

10 Clerical occupations

41 Agriculture

33 Construction trades

36 Mechanics

37 Other trades, nec

32 Trades, transportation

34 Power station

35 Machinists

38 Heavy equipment

39 Transport operators

42 Forest, mine, oil, gas

45 Machine operator

46 Assembler in manufacturing

40 Trades help

43 Product labourers

47 Labourers, manufacturing

NOCS 2001 – CA SLID

13 Retail salespersons, sales clerks, cashiers, including retail trade supervisors (G011, G211-G311)

14 chefs and cooks, and occupations in food and beverage service, including supervisors (G012, G411- 513)

15 Occupation in protective services

17 Sales and service occupations n.e.c, including occupations in travel and accommodation, attendants in recreation and sport as well as supervisors (G013-G016, G711-G732, G911-G983)

4 Financial, secretarial and administrative occupations (B111-B318)

5 Clerical occupations, including supervisors (B411-B576)

23 Occupations unique to primary industry (I011-I216)

19 Construction trades (H111-H145)

20 Other trades occupations (H211-H535)

21 Transport and equipment operators (H611-H737)

24 Machine operators and assemblers in manufacturing, including supervisors (J011-J228)

22 Trades helpers, construction, and transportation labourers and related occupations (H811-H832)

25 Labourers in processing, manufacturing and utilities (J311-J319)

ISCO-88 – EU LFS

511 Travel attendants and related workers

512 Housekeeping and restaurant services workers

516 Protective services workers

521 Fashion and other models

522 Shop, stall and market salespersons and demonstrators

411 Secretaries and keyboard-operating clerks

412 Numerical clerks

413 Material-recording and transport clerks

414 Library, mail and related clerks

419 Other office clerks

421 Cashiers, tellers and related clerks

422 Client information clerks

611 Market gardeners and crop growers

612 Animal producers and related workers

613 Crop and animal producers

614 Forestry and related workers

615 Fishery workers, hunters and trappers

711 Miners, shotfires, stone cutters and carvers

712 Building frame and related trades workers

713 Building finishers and related trade workers

714 Painters, building structure cleaners and related trades workers

721 Metal molders, welders, sheet-metal workers, structural-metal prepares, etc.

722 Blacksmiths, tool-makers and related trades workers

723 Machinery mechanics and fitters

724 Electrical and electronic equipment mechanics and fitters

731 Precision workers in metal and related

732 Potters, glass-makers and related trades

733 Handicraft workers in wood, textile, leather and related

734 Craft printing and related trades workers

741 Food processing and related trades workers

742 Wood treaters, cabinet-makers and related trades

743 Textile, garment and related trades workers

744 Pelt, leather and shoemaking trades workers

811 Mining and mineral-processing plant operators

812 Metal processing plant operators

813 Glass, ceramics and related plant operators

814 Wood processing and papermaking plant operators

815 Chemical processing plant operators

816 Power production and related plant operators

817 Industrial robot operators

821 Metal and mineral products machine operators

822 Chemical products machine operators

823 Rubber and plastic products machine operators

824 Wood products machine operators

825 Printing, building and paper product machine operators

826 Textile, fur, and leather products machine operators

827 Food and related products machine operators

828 Assemblers

829 Other machine operators not elsewhere classified

831 Locomotive engine drivers and related workers

832 Motor vehicle drivers

833 Agricultural and other mobile plant operators

834 Ships' deck crew and related workers

911 Street vendors and related workers

912 Show cleaning and other street services elementary occupations

913 Domestic and related helpers, cleaners and launderers

914 Building caretakers, window and related cleaners

915 Messengers, porters, doorkeepers and related workers

916 Garbage collectors and related labourers

921 Agricultural, fishery and related labourers

931 Mining and construction labourers

932 Manufacturing labourers

10 Armed forces (isco-88 COM)

11 Armed forces (isco-88)

ISCO-88 – EU SILC

42 Customer services clerks

52 Models, salespersons and demonstrators

41 Office clerks

61 Skilled agricultural and fishery workers

71 Extraction and building trades workers

72 Metal, machinery and related trades

73 Precision, handicraft, craft printing and related trades

74 Other craft and related trades workers

81 Stationary plant and related operators

82 Machine operators and assemblers

83 Drivers and mobile plant operators

91 Sales and services elementary occupations

92 Agricultural, fishery and related labourers

93 Labourers in mining, construction, manufacturing and transport

1 Armed forces

SOC 2000 – US CPS

2060 Religious workers, all other

2550 Other education, training, and library workers

3646 Medical transcriptionists (in 2011 forward)

3648 Veterinary assistants and laboratory animal caretakers (in 2011 forward)

3700 First-line supervisors, managers of correctional officers

3710 First-line supervisors, managers of police and detectives

3720 First-line supervisors, managers of firefighting and preventions workers

3740 Fire fighters

3750 Fire inspectors

3730 Supervisors, protective service workers, all other

3800 Bailiffs, correctional officers, and jailers

3830 Fish and game wardens

3840 Miscellaneous law enforcement workers

3850 Police officers

3860 Transit and railroad police

3900 Animal control workers

3920 Security guards and gaming surveillance officers

3940 Crossing guards

3945 Transportation security screeners (in 2011 forward)

3950 Lifeguards and other protective service workers

3955 Lifeguards and other recreational, and all other protective service workers (in 2011 forward)

4020 Cooks

4040 Bartenders

4060 Counter attendants, cafeteria, food concession, and coffee shop

4110 Waiters and waitresses

4120 Food servers, non-restaurant

4130 Dining room and cafeteria attendants, bartender helpers, and miscellaneous food preparation and serving related workers

4150 Hosts and hostesses, restaurant, lounge, and coffee shop

4200 First-line supervisors, managers of housekeeping and janitorial workers

4210 First-line supervisors, managers of landscaping, lawn service, and grounds keeping workers

4240 Pest control workers

4300 First-line supervisors, managers of gaming workers

4340 Animal trainers

4350 Nonfarm animal caretakers

4400 Gaming services workers

4420 Ushers, lobby attendants, and ticket takers

4430 Miscellaneous entertainment attendants and related workers

4460 Funeral service workers (includes embalmers and funeral attendants in 2011 forward)

4465 Morticians, undertakers, and funeral directors (in 2011 forward)

4500 Barbers

4510 Hairdressers, hairstylists, and cosmetologists

4520 Miscellaneous personal appearance workers

4540 Tour and travel guides

4620 Recreation and fitness workers

4640 Residential advisors

4700 First-line supervisors, managers of retail sales workers

4710 First-line supervisors, managers of non-retail sales workers

4720 Cashiers

4965 Sales and related workers, all other (in 2011 forward)

4740 Counter and rental clerks

4750 Parts salespersons

4760 Retail salespersons

4800 Advertising sales agents

4810 Insurance sales agents

4820 Securities, commodities, and financial services sales agents

4830 Travel agents

4840 Sales representatives, services, all other

4850 Sales representatives, wholesale and manufacturing

4900 Models, demonstrators, and product promoters

4930 Sales engineers

4940 Telemarketers

4950 Door-to-door sales workers, news and street vendors, and related workers

4960 Sales and related workers, all other

5130 Gaming cage workers

5410 Reservation and transportation ticket agents and travel clerks

9050 Flight attendants (in 2011 forward)

9350 Parking lot attendants

9360 Service station attendants (includes automotive and watercraft in 2011 forward)

5010 Switchboard operators, including answering service

5020 Telephone operators

5030 Communications equipment operators, all other

5100 Bill and account collectors

5110 Billing and posting clerks and machine operators

5120 Bookkeeping, accounting, and auditing clerks

5140 Payroll and timekeeping clerks

5150 Procurement clerks

5160 Tellers

5165 Financial clerks, all other (in 2011 forward)

5200 Brokerage clerks

5210 Correspondence clerks

5220 Court, municipal, and license clerks

5230 Credit authorizers, checkers, and clerks

5240 Customer service representatives

5250 Eligibility interviewers, government programs

5260 File clerks

5300 Hotel, motel, and resort desk clerks

5310 Interviewers, except eligibility and loan

5320 Library Assistants, clerical

5330 Loan interviewers and clerks

5340 New accounts clerks

5350 Correspondence clerks and order clerks

5360 Human resources assistants, except payroll and timekeeping

5400 Receptionists and information clerks

5420 Information and record clerks, all other

5510 Couriers and messengers

5520 Dispatchers

5540 Postal service clerks

5550 Postal service mail carriers

5560 Postal service mail sorters, processors, and processing machine operators

5600 Production, planning and expediting clerks

5610 Shipping, receiving, and traffic clerks

5620 Stock clerks and order fillers

5630 Weighers, measurers, checkers, and samplers, record keeping

5800 Computer operators

5810 Data entry keyers

5820 Word processors and typists

5830 Desktop publishers

5840 Insurance claims and policy processing clerks

5850 Mail clerks and mail machine operators, except postal service

5860 Office clerks, general

5900 Office machine operators, except computer

5910 Proofreaders and copy markers

5930 Office and administrative support workers, all other

5920 Statistical assistants

5940 Miscellaneous office and administrative support workers including desktop publishers

210 Farmers and ranchers

6000 First-line supervisors, managers, contractors of farming, fishing, and forestry workers

6005 First-line supervisors of farming, fishing, and forestry workers (in 2011 forward)

6010 Agricultural inspectors

6020 Animal breeders

6040 Graders and sorters, agricultural products

6050 Miscellaneous agricultural workers, including animal breeders

6100 Fishing and hunting workers

6110 Hunters and trappers

6120 Forest and conservation workers

6130 Logging workers

6220 Brick masons, block masons, and stonemasons

6230 Carpenters

6240 Carpet, floor, and tile installers and finishers

6250 Cement masons, concrete finishers, and terrazzo workers

6330 Drywall installers, ceiling tile installers, and tapers

6350 Electricians

6360 Glaziers

6400 Insulation workers

6420 Painters, construction and maintenance

6430 Paperhangers

6440 Pipe layers, plumbers, pipefitters, and steamfitters

6460 Plasterers and stucco masons

6500 Reinforcing iron and rebar workers

6510 Roofers

6520 Sheet metal workers

6530 Iron and steel workers

6660 Construction and building inspectors

6720 Hazardous materials removal workers

6700 Elevator installers and repairers

6710 Fence erectors

6830 Explosives workers, ordnance handling experts, and blasters

6910 Roof bolters, mining

7000 First-line supervisors, managers of mechanics, installers, and repairers

7010 Computer, automated teller, and office machine repairers

7020 Radio and telecommunications equipment installers and repairers

7040 Electric motor, power tool, and related repairers

7050 Electrical and electronics installers and repairers, transportation equipment

7100 Electrical and electronics repairers, industrial, utility, and transportation equipment

7110 Electronic equipment installers and repairers, motor vehicles

7120 Electronic home entertainment equipment installers and repairers

7130 Security and fire alarm systems installers

7140 Aircraft mechanics and service technicians

7150 Automotive body and related repairers

7160 Automotive glass installers and repairers

7200 Automotive service technicians and mechanics

7210 Bus and truck mechanics and diesel engine specialists

7220 Heavy vehicle and mobile equipment service technicians and mechanics

7240 Small engine mechanics

7260 Miscellaneous vehicle and mobile equipment mechanics, installers, and repairers

7300 Control and valve installers and repairers

7310 Heating, air conditioning, and refrigeration mechanics and installers

7320 Home appliance repairers

7330 Industrial and refractory machinery mechanics

7340 Maintenance and repair workers, general

7350 Maintenance workers, machinery

7360 Millwrights

7410 Electrical power-line installers and repairers

7420 Telecommunications line installers and repairers

7430 Precision instrument and equipment repairers

7510 Coin, vending, and amusement machine servicers and repairers

7520 Commercial divers

7540 Locksmiths and safe repairers

7550 Manufactured building and mobile home installers

7560 Riggers

7600 Signal and track switch repairers

7620 Other installation, maintenance, and repair workers, including commercial drivers and signal and track switch repairers

7630 Other installation, maintenance, and repair workers, including wind turbine service technicians, commercial divers, and signal and track switch repairers (in 2011 forward)

7740 Structural metal fabricators and fitters

7800 Bakers

7810 Butchers and other meat, poultry, and fish processing workers

7840 Food batch makers

7855 Food processing workers, all other (in 2011 forward)

8060 Model makers and patternmakers, metal and plastic

8100 Molders and molding machine setters, operators, and tenders, metal and plastic

8120 Multiple machine tool setters, operators, and tenders, metal and plastic

8130 Tool and die makers

8140 Welding, soldering, and brazing workers

8150 Heat treating equipment setters, operators, and tenders, metal and plastic

8160 Lay-out workers, metal and plastic

8200 Plating and coating machine setters, operators, and tenders, metal and plastic

8210 Tool grinders, filers, and sharpeners

8220 Other metal workers and plastic workers, including milling, planning, and machine tool operators

8230 Bookbinders and bindery workers

8240 Job printers

8250 Prepress technicians and workers

8260 Printing machine operators

8256 Print binding and finishing workers (in 2011 forward)

8330 Shoe and leather workers and repairers

8350 Tailors, dressmakers, and sewers

8440 Fabric and apparel patternmakers

8450 Upholsterers

8460 Miscellaneous textile, apparel, and furnishings workers, except upholsterers

8500 Cabinetmakers and bench carpenters

8510 Furniture finishers

8520 Model makers and patternmakers, wood

8550 Miscellaneous woodworkers, including model makers and patternmakers

8710 Cutting workers

8750 Jewelers and precious stone and metal workers

8810 Painting workers

8910 Etchers and engravers

8920 Molders, shapers, and casters, except metal and plastic

4410 Motion picture projectionists

6210 Boilermakers

6300 Paving, surfacing, and tamping equipment operators

6310 Pile-driver operators

6320 Miscellaneous construction equipment operators

010 First-line supervisors, managers of food preparation and serving workers

4030 Food preparation workers

4050 Combined food preparation and serving workers, including fast food

4140 Dishwashers

4160 Food preparation and serving related workers, all other

4220 Janitors and building cleaners

4230 Maids and housekeeping cleaners

4250 Grounds maintenance workers

4530 Baggage porters, bellhops, and concierges

4550 Transportation attendants

5500 Cargo and freight agents

5530 Meter readers, utilities

6260 Construction laborers

6600 Helpers, construction trades

6730 Highway maintenance workers

6750 Septic tank servicers and sewer pipe cleaners

6760 Miscellaneous construction and related workers

6765 Miscellaneous construction workers including sola photovoltaic installers, septic tank servicers, and sewer pipe cleaners (in 2011 forward)

6920 Roustabouts, oil and gas

6930 Helpers - extraction workers

6940 Miscellaneous extraction workers, including roof bolters and helpers

7610 Helpers-installation, maintenance, and repair workers

8300 Laundry and dry-cleaning workers

8310 Pressers, textile, garment, and related materials

8950 Helpers-production workers

9415 Transportation attendants, except flight attendants (in 2011 forward)

9610 Cleaners of vehicles and equipment

9620 Laborers and freight, stock, and material movers, hand

9630 Machine feeders and off bearers

9640 Packers and packagers, hand

9650 Pumping station operators

9720 Refuse and recyclable material collectors

9740 Tank car, truck, and ship loaders

4010 First-line supervisors/managers of food preparation and serving workers

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4050 Combined food preparation and serving workers, including fast food

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4160 Food preparation and serving related workers, all other

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4550 Transportation attendants

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9630 Machine feeders and off bearers

9640 Packers and packagers, hand

9650 Pumping station operators

9720 Refuse and recyclable material collectors

9740 Tank car, truck, and ship loaders

6740 Rail-track laying and maintenance equipment operators

6800 Derrick, rotary drill, and service unit operators, and roustabouts, oil, gas, and mining

6820 Earth drillers, except oil and gas

6840 Mining machine operators

7700 First-line supervisors/managers of production and operating workers

7710 Aircraft structure, surfaces, rigging, and systems assemblers

7720 Electrical, electronics, and electromechanical assemblers

7730 Engine and other machine assemblers

7750 Miscellaneous assemblers and fabricators

7830 Food and tobacco roasting, baking, and drying machine operators and tenders

7850 Food cooking machine operators and tenders

7900 Computer control programmers and operators

7920 Extruding and drawing machine setters, operators, and tenders, metal and plastic

7930 Forging machine setters, operators, and tenders, metal and plastic

7940 Rolling machine setters, operators, and tenders, metal and plastic

7950 Cutting, punching, and press machine setters, operators, and tenders, metal and plastic

7960 Drilling and boring machine tool setters, operators, and tenders, metal and plastic

8000 Grinding, lapping, polishing, and buffing machine tool setters, operators, and tenders, metal and plastic

8010 Lathe and turning machine tool setters, operators, and tenders, metal and plastic

8020 Milling and planning machine setters, operators, and tenders, metal and plastic

8030 Machinists

8040 Metal furnace and kiln operators and tenders

8255 Printing machine operators (in 2011 forward)

8320 Sewing machine operators

8340 Shoe machine operators and tenders

8360 Textile bleaching and dyeing machine operators and tends

8400 Textile cutting machine setters, operators, and tenders

8410 Textile knitting and weaving machine setters, operators, and tenders

8420 Textile winding, twisting, and drawing out machine setters, operators, and tenders

8430 Extruding and forming machine setters, operators, and tenders, synthetic and glass fibers

8530 Sawing machine setters, operators, and tenders, wood

8540 Woodworking machine setters, operators, and tenders, except sawing

8600 Power plant operators, distributors, and dispatchers

8610 Stationary engineers and boiler operators

8620 Water and liquid waste treatment plant and system operators

8630 Miscellaneous plant and system operators

8640 Chemical processing machine setters, operators, and tenders

8650 Crushing, grinding, polishing, mixing, and blending workers

8720 Extruding, forming, pressing, and compacting machine setters, operators, and tenders

8730 Furnace, kiln, oven, drier, and kettle operators and tenders

8740 Inspectors, testers, sorters, samplers, and weighers

8800 Packaging and filling machine operators and tenders

8830 Photographic process workers and processing machine operators

8840 Semiconductor processors

8850 Cementing and gluing machine operators and tenders

8860 Cleaning, washing, and metal pickling equipment operators and tenders

8900 Cooling and freezing equipment operators and tenders

8930 Paper goods machine setters, operators, and tenders

8940 Tire builders

8960 Production workers, all other

8965 Other production workers, including semiconductor processors and cooling and freezing equipment operators

9000 Supervisors, transportation and material moving workers

9110 Ambulance drivers and attendants, except emergency medical technicians

9120 Bus drivers

9130 Driver/sales workers and truck drivers

9140 Taxi drivers and chauffeurs

9150 Miscellaneous motor vehicle operators, including ambulance drivers and attendants

9200 Locomotive engineers and operators

9230 Railroad brake, signal, and switch operators

9240 Railroad conductors and yardmasters

9260 Subway, streetcar, and other rail transportation workers

9300 Sailors and marine oilers

9340 Bridge and lock tenders

9410 Transportation inspectors

9500 Conveyor operators and tenders

9510 Crane and tower operators

9520 Dredge, excavating, and loading machine operators

9560 Hoist and winch operators

9600 Industrial truck and tractor operators

9730 Shuttle car operators

9750 Miscellaneous material moving workers; including conveyor operators and tenders; shuttle car operators; and tank car, truck, and ship loaders

Physicians and other professionals detailed variable

NOCS-2001 CA LFS

11 Natural science, professionals

13 Health professional

17 Judges, lawyers

18 Teachers, professors

20 Art and culture, professionals

ISCO-88 EU LFS

211 Physicists, chemists, and related professionals

212 Mathematicians, statisticians and related professionals

213 Computing professionals

214 Architects, engineers and related professionals

221 Life science professionals

222 Health professionals (except nursing)

231 College, university and higher education teaching professionals

232 Secondary education teaching professionals

233 Primary and pre-primary education teaching professionals

234 Special education teaching professionals

235 Other teaching professionals

241 Business professionals

242 Legal professionals

243 Archivists, librarian and related information professionals

244 Social science and related professionals

245 Writers and creative or performing artists

246 Religious professionals

247 Public service administrative professionals

SOC 2000 US CPS

620 Human resources, training, and labor relations specialists

640 Compensation, benefits, and job analysis specialists (2011 forward)

650 Training and development specialists (2011 forward)

700 Logisticians

710 Management analysts

730 Other business operations specialists

735 Market research analyst and marketing specialist

740 Business operations specialists, all other (2011 forward)

735 Market research analysts and marketing specialists (2011 forward)

800 Accountants and auditors

810 Appraisers and assessors of real estate

820 Budget analysts

830 Credit analysts

840 Financial analysts

850 Personal financial advisors

860 Insurance underwriters

950 Financial specialists, all other

1000 Computer scientists and systems analysts

1005 Computer and information research scientists (2011 forward)

1006 Computer systems analysts (2011 forward)

1007 Information security analysts (2011 forward)

1020 Computer software engineers (includes software developers, applications and system software in 2011 forward)

1030 Web developers (in 2011 forward)

1040 Computer support specialists

1050 Computer support specialists (in 2011 forward)

1060 Database administrators

1100 Network and computer systems administrators

1105 Network and computer systems administrators (in 2011 forward)

1106 Computer network architects (in 2011 forward)

1110 Network systems and data communication analysts

1200 Actuaries

1210 Mathematicians

1220 Operations research analysts

1230 Statisticians

1240 Miscellaneous mathematical science occupations, including mathematicians and statisticians

1300 Architects, except naval

1310 Surveyors, cartographers, and photogrammetrists

1320 Aerospace engineers

1330 Agricultural engineers

1340 Biomedical engineers

1350 Chemical engineers

1360 Civil engineers

1400 Computer hardware engineers

1410 Electrical and electronics engineers

1420 Environmental engineers

1430 Industrial engineers, including health and safety

1440 Marine engineers

1450 Materials engineers

1460 Mechanical engineers

1500 Mining and geological engineers, including mining safety engineers

1510 Nuclear engineers

1520 Petroleum, mining and geological engineers, including mining safety engineers

1530 Miscellaneous engineers, including agricultural and biomedical

1540 Drafters

1600 Agricultural and food scientists

1610 Biological scientists

1640 Conservation scientists and foresters

1650 Medical scientists (includes life scientists in 2011 forward)

1700 Astronomers and physicists

1710 Atmospheric and space scientists

1720 Chemists and materials scientists

1740 Environmental scientists and geoscientists

1760 Physical scientists, all other

1800 Economists

1810 Market and survey researchers

1820 Psychologists

1830 Sociologists

1840 Urban and regional planners

1860 Miscellaneous social scientists, including sociologists (includes survey researchers in 2011 forward)

2000 Counselors

2010 Social workers

2020 Miscellaneous community and social service specialists

2025 Miscellaneous community and social service specialists, including health educators and community health workers (in 2011 forward)

2040 Clergy

2050 Directors, religious activities and education

2100 Lawyers (includes judges, magistrates, and other judicial workers in 2011 forward)

2110 Judges, magistrates, and other judicial workers

2200 Postsecondary teachers

2300 Preschool and kindergarten teachers

2310 Elementary and middle school teachers

2320 Secondary school teachers

2330 Special education teachers

2340 Other teachers and instructors

2400 Archivists, curators, and museum technicians

2430 Librarians

2600 Artists and related workers

2630 Designers

2700 Actors

2710 Producers and directors

2720 Athletes, coaches, umpires, and related workers

2740 Dancers and choreographers

2750 Musicians, singers, and related workers

2760 Entertainers and performers, sports and related workers, all other

2800 Announcers

2810 News analysts, reporters, and correspondents

2820 Public relations specialists

2830 Editors

2850 Writers and authors

3000 Chiropractors

3010 Dentists

3030 Dietitians and nutritionists

3040 Optometrists

3050 Pharmacists

3060 Physicians and surgeons

3120 Podiatrists

3140 Audiologists

3150 Occupational therapists

3160 Physical therapists

3200 Radiation therapists

3210 Recreational therapists

3220 Respiratory therapists

3230 Speech-language pathologists

3240 Therapists, all other

3245 Other therapists, including exercise physiologists (in 2011 forward)

3250 Veterinarians

3260 Health diagnosing and treating practitioners, all other

Nursing professionals detailed variable

NOCS 2001 CA LFS

14 Nurse supervisors

ISCO-88 EU LFS

223 Nursing and midwifery professionals

SOC 2000 US CPS

3130 Registered nurses

3255 Registered nurses (in 2011 forward)

3256 Nurse anesthetists (in 2011 forward)

3258 Nurse practitioners and nurse midwives (in 2011 forward)

Appendix B: Other CPD harmonized variables used in Chapter 5

Appendix B provides harmonization information for the other variables developed for the *Comparative Perspectives on Precarious Employment Database* (CPD) that are used in this thesis. Most of this information is technical, describing the source survey variables and the categories of the harmonized variables created for the CPD, and much is directly from the CPD *Harmonized Codebook and Data Dictionary* (2014). These CPD variables were harmonized by a group of CPD researchers, including the author of this thesis, and the process and principles for this harmonization is provided in Chapter 3 on methods. More detail on harmonization for these variables can be found on the CPD website (www.genderwork.ca/cpd) and in the CPD *Harmonized Codebook and Data Dictionary* (2014).

Personal annual income

Personal annual income is defined as the total monetary earnings received from employment, farm labour, or self-employment, government transfers, benefits, pensions, and investments. The average figures report the gross value and are in the currency of their respective countries during the time period when the survey was conducted.

CA LFS

N/A

CA SLID

Based on variable TTINC42: Total Income Before Taxes (numeric range: -9999999 to 99999995), continuous variable.

EU LFS

N/A

EU SILC

Based on variable PY010G: Employee Cash or Near Cash Income (numeric range: 1 - 999999.99; income in Euros, 0 = no income), continuous variable. Employee income is defined as the total remuneration, in cash or in kind, payable by an employer to an employee in return for work done by the latter during the income reference period.

US CPS

Based on variable INCTOT: Total Personal Income (numeric range unavailable), continuous variable. This variable indicates each respondent's total pre-tax personal income or losses from all sources for the previous calendar year, and represents the sum of several different types of income that the survey asked respondents to report (see INCTOT in the US CPS online codebook).

Personal hourly wage

Wages are defined as the money earned through employment. This CPD variable reports the personal hourly wage of respondents. The average figures report the gross value and are in the currency of their respective countries during the time period when the survey was conducted.

CA LFS

Based on variable HRLYEARN (1997-2011): Usual Hourly Wages ($) (numeric range: 0000.01: 9999.95; dollars and cents; values require 2 decimal places), continuous variable. Includes tips, commission and bonuses.

CA SLID

Based on variable IMPHWE1: Hourly Wage at End of Job or End of Refyear (numeric range: 000.00-999.95), continuous variable. Implicit hourly wage at the end of the reference year or end of the job if it ended during the reference year. The amount includes tips, bonuses and

commissions. For respondents who reported their wage or salary at this job as an hourly amount, the value is taken directly. For respondents who reported their wage or salary on some other basis, the amount is converted to an hourly 'implicit' rate using information provided like number of months worked, number of weeks worked and number of hours per week usually worked. Respondents with zero paid hours are assigned the value 'not applicable'.

EU LFS

N/A

EU SILC

N/A

US CPS

Based on variable HOURWAGE (1990-2011): Hourly wage (numeric range unavailable), continuous variable. This variable reports how much the respondent earned per hour in the current job, for those workers paid an hourly wage. The Census Bureau reports that the results in the US CPS public use files for this data series included errors for years prior to 1990, so only data from 1990 forward are part of IPUMS-CPS.

Sector

This CPD harmonized variable indicates if respondents are employed in the public or private sector.

Sector

1 Public sector

2 Private sector

CA LFS

Based on variable COWMAIN: Class of Worker, Main Job, (public employee/private employee/private, self-employed, incorporated, with employees/private, self-employed incorporated, no employees/private, self-employed unincorporated, with employees/private, self-employed unincorporated, no employees/private, unpaid family worker), discrete variable.

CA SLID

Based on variable PUBPV10: Employer is in Public or Private Sector, (public sector/private sector), categorical variable.

EU LFS

N/A

EU SILC

N/A

US CPS

Based on variable CLASSWKR: Class of Worker, (self-employed/self-employed, not incorporated/self-employed, incorporated/works for wages or salary/wage or salary, private/ private, for profit/private, non-profit/wages or salary, government/federal government employee/armed forces/state government employee/local government employee/unpaid family worker), discrete variable.

Union Coverage

This CPD harmonized variable indicates if respondents are union members and/or are covered by a collective agreement.

Union Coverage

1 Union member or covered by a collective agreement

2 Not a union member or covered by a collective agreement

CA LFS

Based on variable UNION (1996-2011): Union Membership Status, (union member/not member, covered by collective agreement/not member or covered), discrete variable.

CA SLID

Based on variable UNCOLL1: Union Member or Covered by Collective Agreement, (yes, member of a union and covered by a collective agreement/yes, covered by a collective agreement, but not a union member/no, not a member of a union nor covered by a collective agreement), discrete variable.

EU LFS

N/A

EU SILC

N/A

US CPS

Based on variable UNION (1990-2011): Union Membership, (niu/no union coverage/member of a labour union/covered by union but not a member), discrete variable. This variable indicates whether, for the current job, the respondent was -- a member of a labor union or employee association similar to a union; not a union member but covered by a union or employee association contract; or neither a union member nor covered by a union contract.

Education Level

This CPD harmonized variable translates national measures of workers' highest level of educational attainment in to a typology that links educational systems across Canada, the US, and the European Union. The International Standard Classification of Education (ISCED) 1997, developed by UNESCO, is used as a model for harmonizing national variables and definitions of

education. The ISCED is designed to provide a common structure on an international basis for classifying educational programs, modes of learning, and levels of academic achievement, and provides a levelled basis for harmonizing education. Link to the ISCED 1997: http://www.unesco.org/education/information/nfsunesco/doc/isced_1997.htm

Education (highest level attained)

1 Low (below secondary)

2 Medium low (lower secondary)

3 Medium high (upper secondary)

4 High (some college/college diploma/trade/some university)

5 Very high (university degree and/or post-graduate)

CA LFS

Based on variable EDUC90 (1990-2011): Highest Educational Attainment (1990-), (0 to 8 years/some secondary/grade 11 to 13, graduate/some post secondary/post secondary certificate or diploma/university: bachelors degree/university: graduate degree), discrete variable.

CA SLID

Based on variable HLEVEG18: Highest Level of Education of Person, 1st grouping (never attended school/1-4 years of elementary/5-8 years of elementary school/9-10 years of elementary and secondary/11-13 years elementary and secondary school [but did not graduate]/graduated high school/some non-university postsecondary [no certificate]/some university [no certificate]/non-university post-secondary certificate/university certificate below Bachelor's/Bachelor's degree/university certificate above Bachelor's, Master's, first professional degree in law, medicine, dentistry, veterinary medicine or optometry, Doctorate [PhD]), discrete variable.

EU LFS

Based on variable HATLEVEL (1998-2011): Highest Level of Education or Training Successfully Completed (no formal education or below ISCED 1/ISCED 0-1/ISCED 1/ISCED 2/ISCED 3c [shorter than 2 years]/ ISCED 3c [2 years and more]/ISCED 3 a, b/ISCED 3 [without distinction a, b or c possible, 2y+]/ISCED 3c [3 years or longer] or ISCED 4c/ISCED 3b or ISCED 4b/ISCED 3a or ISCED 4a/ISCED 3 or 4 [without distinction a, b or c possible]/ISCED 4a, b/ISCED 4c/ISCED 4 [without distinction a, b or c possible]/ISCED 5b/ISCED 5a/ISCED 6), discrete variable. Harmonized category 3 - 'Medium high (upper secondary)' includes some cases that should be in harmonized category 4 - 'High (some college/college diploma/trade/some university)'.

EU SILC

Based on variable PE040: Highest ISCED Level Attained (pre-primary education/primary education/lower secondary education/[upper] secondary education/post-secondary non tertiary education/first stage of tertiary [not leading directly to an advanced research qualification] and second stage of tertiary education [leading to an advanced research qualification]), discrete variable.

US CPS

Based on variable EDUC: Educational Attainment (niu or no schooling/niu/none, pre-school, or kindergarten/grades 1, 2, 3, or 4/grade 1/grade 2/grade 3/grade 4/grade 5 or 6/grade 5/grade 6/grades 7 or 8/grade 7/grade 8/grade 9/grade 10/grade 11/grade 12/12th grade, no diploma/12th grade, diploma unclear/high school diploma or equivalent/1 year of college/some college but no degree/2 years of college/associate's degree, occupational or vocational program/associate's degree, academic program/3 years of college/4 years of college/bachelor's degree/5+ years of

college/5 years of college/6+ years of college/master's degree/professional school degree/doctorate degree), discrete variable. This is a recoded combination of two other variables, HIGRADE and EDUC99, which measure educational attainment in different ways. This variable was created to maximize comparability over time for those studying educational attainment. A college education in the US is treated and coded as a university education.

Immigration status

This CPD harmonized variable indicates if respondents are immigrants or non-immigrants in their current country of residence. In cases where a national survey does not directly measure immigration status, country of birth or citizenship status is used as a proxy.

Immigration Status

1 Immigrant to current country

2 Not an immigrant to current country

CA LFS

N/A

CA SLID

Based on variable IMMST15 (1999-2010): Person is an Immigrant (yes/no/don't know), discrete variable. In the public-use microdata files, immigration status is available only for persons living in an urban size of 500,000 persons or more. All other persons are coded as 'don't know'.

EU LFS

Based on variable COUNTRYB (2004-2011): Country of Birth (national or native of own country/born in another EU-15 country [1995-2004]/born in another EU-25 country [2005-2006]/born in another EU-27 country [2007+]/born in non-EU-15 country [1995-2004]/born in non-EU-25 country [2005-2006]/born in non-EU-27 country [2007+]/not born in country of

residence [if distinction EU- or non-EU not possible), discrete variable. The detailed grouping applied in Europe from 2004 onwards requires information on individual country codes, which were fully introduced in 2006 only. For that reason only the general grouping is applied until 2003 and a more detailed grouping is used from 2004 onward. Country of Birth (national or native of own country/EU15/10 new Member States of 2004/2 new member states of 2007/EFTA/other Europe/North Africa/other Africa/near and Middle East/East Asia/South and South East Asia/North America/Central America [and Caribbean]/South America/Australia and Oceania), discrete variable. Not all countries agreed to provide information on the groupings for measuring nationality due to concerns of protecting confidentiality, some countries used the following groupings: Country of Birth, (NMS12 = NMS10 + NMS2/EU27 = EU15 + NMS10 + NMS2/Europe outside EU27 = EFTA + other Europe/ North Africa and Near and Middle East = North Africa + Near and Middle East/East and South Asia = East Asia + South and South East Asia/Latin America = Central America [and Caribbean] + South America/North America and Australia and Oceania = North America + Australia and Oceania), discrete variable. 'National' or 'native of own country' are coded as 2 - 'Not an immigrant to current country'; all else are coded as 1 - 'Immigrant to current country'.

EU SILC

Based on variable PB210: Country of Birth, (same country as country of residence/any European union country [EU25] except country of residence/any other country), discrete variable. Country of birth is defined as the country of residence of the mother at the time of birth. If a person was born in a place that currently belongs to a country different from the country that the place belonged to at the time of birth, the 'country' which the place belonged to at the moment of birth is recorded. In the case of countries that no longer exist (such as parts of the former Soviet Union

or others), the present-day borders of the country are used. The categories 'any European union country [EU25] except country of residence' and 'any other country' are grouped together for: Estonia (2004), Germany (2004), Latvia (2005) and Slovenia (2005).

US CPS

Based on variable YRIMMIG (1994-2011): Year of Immigration, (niu/1949 or earlier/ 1950-1959/1960-1964/1965-1969/1970-1974/1975-1979/1980-1981/1982-1983/1984-1985/1986-1987/1988-1989/1990-1991/1992-1993/1992-1994/1994-1995 [1995 CPS: 1992-1995]/1994-1996/1996-1997 [1997 CPS: 1994-1997]/1998-1999 [1999 CPS: 1996-1999]/1998-2000/2000-2001 [2001 CPS: 1998-2001]/2000-2002/2002-2003 [2003 CPS: 2002-2003]/2002-2004/2004-2005 [2005 CPS: 2002-2005]/2004-2006/2004-2007 [2010 CPS: 2006-2007]/2006-2008 [2006-2007 CPS: 2004-2008]/2006-2009/2008-2010 [2012 CPS: 2008-2009]/2008-2012/2010-2012), discrete variable. This variable reports the year in which a person born outside the United States 'came to the US to stay'.

Migration

This CPD harmonized variable indicates if respondents have migrated from a different country within the last year. This CPD harmonized variable is for EU LFS data only. These data are grouped in five-year groupings in the multidimensional tables of the CPD.

Migration from Different Country One-Year Ago

1 Yes

2 No

CA LFS

N/A

CA SLID

N/A

EU LFS

Based on variable COUNTRYL and COUNTR1Y: Country (Austria/Belgium/Germany/Denmark/Spain//Finland/France/Greece/Ireland/Italy/Luxembourg/Netherlands/Portugal/Sweden/UnitedKingdom/Bulgaria/Czech Republic/Estonia/Cyprus/Latvia/Lithuania/Hungary/ Malta/Poland /Romania/Slovenia/ Slovakia/Norway/Switzerland/Iceland), discrete variable. Country of Residence One Year Before Survey (Austria/Belgium/ Germany/Denmark/Spain//Finland/France/Greece/Ireland/Italy/ Luxembourg/Netherlands/Portugal/Sweden/United Kingdom/Bulgaria/ Czech Republic/Estonia/Cyprus/Latvia/Lithuania/Hungary/Malta/Poland /Romania/Slovenia/Slovakia/Norway/Switzerland/Iceland), discrete variable.

EU SILC

N/A

US CPS

N/A

Worker Absenteeism

This CPD harmonized variable indicates the reason an individual was absent from work during the reference week.

Worker Absenteeism (reasons for absence from work)

1 Illness, injury or disability

2 Personal/family

3 Vacation

4 Labour dispute

5 Other reasons

6 Not absent from work

CA LFS

Based on variable YABSENT and LFSSTAT: Employed: Reason Absent Full Week (other/own illness or disability/personal or family responsibilities/vacation), discrete variable. Respondent Labour Force Status (employed, at work/employed, absent from work /unemployed, temporary layoff/unemployed, job searcher/unemployed, future start/not in labour force), discrete variable. Harmonized category 4 – 'Labour dispute' is not available.

CA SLID

N/A

EU LFS

Based on variable NOWKREAS and WSTATOR: Reason for not Having Worked at all though having a Job (bad weather/slack work for technical or economic reasons/labour dispute/school education or training/own illness, injury or temporary disability/maternity leave/ parental leave [from 2006, together with code 05 before]/holidays/ compensation leave [within the framework of working time banking or an annualised hours contract]/other reasons [e.g., personal or family responsibilities), discrete variable. Labour Status During the Reference Week (did any work for pay or profit during the reference week-one hour or more [including family workers but excluding conscripts on compulsory military or community service]/was not working but had a job or business from which he or she was absent during the reference week [including family workers but excluding conscripts on compulsory military or community service]/was not working because on lay-off/was a conscript on compulsory military or community service/other

[15 years or more] who neither worked nor had a job or business during the reference week), discrete variable.

EU SILC

N/A

US CPS

Based on variable WHYABSNT: Reason for Absence from work (niu/on temporary layoff, under 30 days/on indefinite layoff, 30+ days/slack work or business conditions/waiting for a new job to begin/vacation or personal days/own illness or injury or medical problems/child care problems/other family or personal obligation/maternity or paternity leave/labour dispute/weather affected job/school or training/civic or military duty/does not work in the business/other), discrete variable. This variable reports the reason for the absence of job holders who were not working during the preceding week. The basic survey question--"Why was [this person] absent from work last week?"--remained constant, but the number and detail of recognized responses grew.

Long-term disability or chronic illness

This CPD harmonized variable measures whether respondents self-identify as having a long-term disability or chronic illness.

Long-term Disability or Chronic Illness (self-identification)

1 Identify as having a long-term disability or chronic illness

2 Does not identify as having a long-term disability or chronic illness

CA LFS

N/A

CA SLID

Based on variable DISABS26 (1999-2010): Disability Status for the Reference Year, (yes/no), discrete variable. The questions ask whether the person has any difficulty doing any of the activities of daily living and whether the person has a physical condition or mental condition or health problem that reduces the amount or kind of activity he or she can do in any of a few different types of situations.

EU LFS

N/A

EU SILC

Based on variable PH020: Suffer from any Chronic (long-standing) Illness or Condition, (yes/no), discrete variable.

US CPS

Based on variable HEALTH (1996-2011): Health Status, (excellent/very good/good/fair/poor), discrete variable. This variable indicates how respondents rated their current health on a five-point scale (from excellent to poor). This variable was modified to exclude respondents under 15 years old.

Long-term disability or chronic illness affecting work

This CPD harmonized variable measures if respondents have a disability or chronic illness affecting their ability to work. Due to flags listed below, please see the harmonized codebook for more detail on this CPD harmonized variable.

Long-term Disability or Chronic Illness Affecting Work

1 Long-term disability or chronic illness affecting work

2 Long-term disability or chronic illness not affecting work

CA LFS

N/A

CA SLID

Based on variable REAISC1 and REAWPT1: Reason for Irregular work Schedule at end of the Refyear (own illness or disability/caring for own children/caring for elder relative(s)/other personal or family responsibilities/going to school/could only find this type of work/did not want a regular schedule/requirement of the job or no choice/earn more money/other), discrete variable. Reason why Person Worked less than 30 Hours per Week, (own illness or disability/caring for own children/caring for elder relative(s)/other personal or family responsibilities/going to school/could only find part-time work/did not want full-time work or personal preference/full-time work under 30 hours per week [nature of the job]/business conditions/semi-retired or pre-retired/other), discrete variable. Code 06 and 09 are considered as 'involuntary' part-time work. All other codes are considered as 'voluntary' part-time work. In reference year 2002 a new category called 'personal preference' has been added to code 07. Created a derived variable where, if respondents stated illness or disability as the reasons why they have irregular or part-time work schedules, they were placed in to harmonized category 1 - 'Long-term disability or illness affecting work'; all other reasons why respondents are working irregular or part-time scheduled work were placed in to harmonized category 2 – 'Long-term disability or illness not affecting work'. The sample population included for this variable is different from the sample population included in the other national surveys. The questions pertaining to the CA SLID survey were asked to people who were either absent from work or who were working part-time. The other national surveys asked the question of disability affecting work to a specialized population of respondents that specifically identified as having a chronic disability or illness affecting their ability to work.

EU LFS

N/A

EU SILC

Based on variable PH030: Limitation in Activities because of Health Problems (yes, strongly limited/yes, limited/no, not limited), discrete variable. Limitation in activities people usually do because of health problems for at least the last 6 months. The person's self-assessment of whether they are hampered in their daily activity by any ongoing physical or mental health problem, illness or disability. Limitations should be due to a health condition.

US CPS

Based on variable DISABWRK (1988-2011): Work Disability (no disability that affects work/disability limits or prevents work), discrete variable. This variable identifies persons who had 'a health problem or a disability which prevents him/her from working or which limits the kind or amount of work'. Respondents were not supposed to refer to short, acute illnesses (e.g., influenza) or temporary conditions (e.g., pregnancy or broken bones).

Work schedule

This CPD harmonized variable indicates if respondents work regular daytime shifts, evening shifts, nightshifts or other shift work.

Work Schedule

1 A regular daytime schedule

2 A regular evening shift

3 A regular night or graveyard shift

4 Other shift work

CA LFS

N/A

CA SLID

Based on variable SCDTYP1: Type of work Schedule at End of year for Given Job (a regular daytime schedule/a regular evening schedule/a regular night or graveyard shift/a rotating shift/a split shift/on call/an irregular schedule/other), discrete variable.

EU LFS

Based on variable SHIFTWK (1992-2011), EVENWK (1992-2011) and NIGHTWK (1992-2011): Shift Work (person does shift work [until 2000: Person usually does shift work]/person sometimes does shift work [old code used until 2000]/ person never does shift work), discrete variable. Created a derived variable where, if the respondent said 1 - 'yes, they do' or 2 - 'sometimes do shift work', then they are combined in to a single category of 'yes, respondent does shift work'. Evening Work (person usually works in the evening/person sometimes works in the evening/person never works in the evening), discrete variable. Created a derived variable where, if the respondent said 1 - 'yes, they do' or 2 - 'sometimes do evening work', then they are combined in to a single category of 'yes, respondent does evening work'. Night Work (person usually works at night/person sometimes works at night/person never works at night), discrete variable. Created a derived variable where, if the respondent said 1 - 'yes, they do' or 2 - 'sometimes do night work', then they are combined in to a single category of 'yes, respondent does night work'.

EU SILC

N/A

US CPS

N/A

Tenure in current job

This CPD harmonized variable reports the number of years respondents have worked in their current job.

Tenure in Current Job (number of years in current job)

1 Less than 2 years

2 2 years or more, but less than 5 years

3 5 years or more, but less than 10 years

4 10 years or more, but less than 14 years

5 14 years or more

CA LFS

Based on variable TENURE: Job Tenure in Months (numeric range unavailable), discrete variable.

CA SLID

Based on variable JOBDUR1: Duration of Job up to the End of Current Refyear (months) (numeric range: 000-995; in months), continuous variable.

EU LFS

Based on variable STARTIME (1992-2011):Time Since Person Started to Work (numeric range: 0-998; in months since the person started current employment), continuous variable.

EU SILC

N/A

US CPS

N/A

Detailed forms of employment

This CPD harmonized variable provides a detailed categorization of employment form by distinguishing those that are employed (full-time or part-time and on a permanent or temporary basis), self-employed and unpaid family workers, and is based on the source survey's definition of part-time employment.

Detailed Forms of Employment (based on survey's definition of part-time employment)

1 Full-time permanent employee

2 Full-time temporary employee

3 Part-time permanent employee

4 Part-time temporary employee

5 Self-employed

6 Unpaid family worker

CA LFS

Based on variable FTPTMAIN and PERMTEMP (1996-2011) and COWMAIN: Main job is full-time or part-time (full-time [30+ hours]/part-time [<30 hours]), discrete variable. Respondent's job is permanent (yes/no, seasonal/no, term or contract/no, casual), discrete variable. Class of Worker, main job (public employee/private employee/private, self-employed, incorporated, with employees/private, self-employed incorporated, no employees/private, self-employed unincorporated, with employees/private, self-employed unincorporated, no employees/private, unpaid family worker), discrete variable. Created a derived variable where COWMAIN category 1 and 2 = 1 - 'employees'.

CA SLID

Based on variable FLLPRT1, PRMJB1(2007-2010) and CLWKR1: Job Was Full-Time in Refyear, (full-time/part-time), discrete variable. Permanent Job, (permanent/not permanent),

discrete variable. Class of Worker in Refyear, (employee/unpaid family worker/incorporated business with paid help/incorporated with no paid help/not incorporated business with paid help/not incorporated business with no paid help), discrete variable.

EU LFS

Based on variable FTPT, TEMP, and STAPRO: Full-time/Part-time Distinction, (full-time job/part-time job), discrete variable. Permanency of the Job, (person has a permanent job or work contract of unlimited duration/person has temporary job or work contract of limited duration), discrete variable. Professional Status, (self-employed with or without employees/employee/ family worker), discrete variable.

EU SILC

Based on variable PL030 (2004-2008), PL031 (2009-2011), and PL140 and PL040: Self-Defined Current Economic Status (working full-time/working part-time/unemployed/pupil, student, further training, unpaid work experience/in retirement or in early retirement or has given up business/permanently disabled and/or unfit to work/in compulsory military community or service/fulfilling domestic tasks and care responsibilities/other inactive person), discrete variable. Self-defined Current Economic Status (employee working full-time/ employee working part-time/self-employed working full-time [including family worker]/self-employed working part-time [including family worker]/ unemployed/ pupil, student, further training, unpaid work experience/ in retirement or in early retirement or has given up business/ permanently disabled and/or unfit to work/in compulsory military community or service/ fulfilling domestic tasks and care responsibilities/ other inactive person), discrete variable. Type of Contract (permanent job or work contract of unlimited duration/temporary job or work contract of limited duration),

discrete variable. Status in Employment (self-employed with employees/self-employed without employees/employee/family worker), discrete variable.

US CPS

N/A

Self-employment

This CPD harmonized variable indicates whether or not a respondent is self-employed.

Self-Employment (basic)

1 Self-employed

2 Not self-employed

CA LFS

Based on variable COWMAIN: Class of Worker, main job (public employee/private employee/private, self-employed, incorporated, with employees/private, self-employed incorporated, no employees/private, self-employed unincorporated, with employees/private, self-employed unincorporated, no employees/private, unpaid family worker), discrete variable.

CA SLID

Based on variable CLWKR1: Class of Worker in Refyear (employee/unpaid family worker/incorporated business with paid help/incorporated with no paid help/not incorporated business with paid help/not incorporated business with no paid help), discrete variable.

EU LFS

Based on variable STAPRO: Professional Status (self-employed with or without employees/employee/ family worker), discrete variable.

EU SILC

Based on variable PL040: Status in Employment (self-employed with employees/self-employed without employees/employee/family worker), discrete variable.

US CPS

Based on variable CLASSWKR: Class of worker (niu/self-employed/self-employed, not incorporated/self-employed, incorporated/works for wages or salary/wage or salary, private/ private, for profit/private, non-profit/wages or salary, government/federal government employee/armed forces/state government employee/local government employee/unpaid family worker), discrete variable. Workers with multiple sources of employment were classified according to the job in which they worked the most hours. For persons employed at the time of the survey, the variable relates to the respondent's job during the previous week. Respondents who were not employed during the previous week reported the most recent job.

Appendix C: OECD statistics on long-term care

For profiling workers in personal care occupation, this thesis also uses data from the Organization for Economic Cooperation and Development (OECD). Included are all the data on formal long-term care workers available from data tables for the four countries at the OECD. Data are primarily from the United States with very limited data from the United Kingdom. Data for Canada and Sweden were found only in an OECD report on long-term care workers *Health at a Glance*.

Compiled are the counts of both "nurses" and "personal carers" working in institutions (i.e., nursing and residential care) and in home settings. The share of home versus institution care for each country is calculated in table 7 (Chapter 5). "Personal carers" are the equivalent of "assisting occupations" and "personal care providers". The most recent data available at the time of completing this thesis are for 2011. The following are the definitions for long-term care, home based and institution based, with the OECD. Also included are the definitions of "nurses" and "personal carers" within each of the countries profiled in table 7.

Definition of long-term care

The OECD defines long-term care as a "range of services required by persons with a reduced degree of functional capacity, physical or cognitive, and who are consequently dependent for an extended period of time on help with basic activities of daily living (ADL)". Some examples of ADL include bathroom activities, dressing, eating, and moving in and out of bed or around the home. The latter may be described as the personal care component, which is often combined with medical services. The lower level care associated with Instrumental activities of daily living (IADL) – for example, meals, housework, shopping and transportation – may be combined

with long-term care services. The OECD definition of long-term health care is consistent with the definition under the Health Accounts questionnaire (HC.3-type services).

Statistics on long-term care workers in the formal sector

The OECD provides data on head counts and full-time equivalents in its data tables on formal workforces in long-term care. Long-term care workers are defined as providing care to long-term care recipients. The formal long-term care workforce includes nurses and personal carers. Full-time equivalent data provided by the OECD are usually calculated on the basis of the standard or normal working time in the country. Below is a list of the occupations and classifications used by the OECD for these two occupation groups:

Nurses, as defined by the ISCO-08 classification (2221 ISCO code for professional nurses and 3221 ISCO code for associate professional nurses, providing long-term care at home or in long-term care facilities (other than hospitals). Included are persons who have completed their studies/education in nursing and who are licensed to practice (including both professional nurses and associate/practical/vocational nurses); Salaried and self-employed nurses delivering services at home or in long-term care facilities (other than hospitals); Foreign nurses licensed to practice and actively practicing in the country; Nurses providing long-term care to patients affected by dementia and/or Alzheimer's disease. Excluded are students who have not yet graduated; Nursing aids/assistants and care workers who do not have any recognized qualification/certification as a licensed nurse; Nurses working in administration, research, and in other posts that exclude direct contact with the patients; Unemployed nurses and retired nurses; Nurses working abroad; Nurses providing social services; Psychiatric nurses.

Personal carers include formal workers providing long-term care services at home or in institutions other than hospitals and who are not qualified or certified as nurses. As per the draft definition in the ISCO-08 classification, personal care workers are defined as people providing routine personal care, such as bathing, dressing, or grooming, to elderly, convalescent, or disabled persons in their own homes or in institutions. Included are: nursing aids/assistants and care workers providing long-term care services, who do not have any recognized qualification/certification in nursing; Family members, neighbours or friends employed (i.e., under a formal contractual obligation and/or declared to social security systems as caregiver) by the care recipient, or person/agency representing the care recipient, and/or by public care services and private care service companies, to provide the care services to the person in need for care. Excluded are informal caregivers receiving income support or other cash payments from the care recipient as part of cash programs and/or consumer-choice programs, but who are not formally employed, or paid for, by the care recipient (or person/agency representing the care recipient, including providers/organizations, such as public social care services and private care service companies); Unemployed and retired caregivers; Caregivers working abroad; Caregivers in assessment teams employed to evaluate care needs and other persons employed in administrative positions; Social workers/community workers.

Definition of long-term care settings

The OECD defines formal long-term care as taking place in two settings: long-term care at home and long-term care in institutions. Long-term care at home is provided to those who mainly reside at their home and who have restrictions in functioning. The latter definition also applies to the temporary use of institutions to support one's continued living at home. Some examples of the latter include day care centres and community care. Typically, home care includes supportive

living arrangements and those that have been modified for the circumstances where persons require assistance though ensuring a higher degree of autonomy and self-control.

Long-term care institutions refers to nursing and residential care facilities which provide accommodation and long-term care as a package. They refer to specially designed institutions or hospital-like settings where the predominant service component is long-term care and the services are provided for people with moderate to severe functional restrictions. Included for institutional long-term care are nurses and personal carers providing services in nursing and residential care facilities dedicated to long-term nursing care. Excluded are nurses and personal carers providing long-term care services in institutions used on a temporary basis to support continued living at home - such as community care, day care centres and respite care. Also excluded are nurses and personal carers providing long-term care services in specially designed or adapted living arrangements for persons who require help on a regular basis while guaranteeing a high degree of autonomy and self-control (defined as home). Finally, nurses and personal carers providing long-term care services in hospitals are excluded.

Data from the United Kingdom and United States

United Kingdom

As a preliminary, the data for nurses was not available. For personal carers, the data sources are**:** the NHS Information Centre for Health and Social Care (http://www.ic.nhs.uk); the National Minimum Data Set for Social Care Staff - Supplied by Skills for Care (SfC) (England); Department for Health, Social Services and Public Safety in Northern Ireland (DHSSPSNI), Quarterly Cost Analysis and Human Resource Management System (Northern Ireland); Health Statistics Team, Welsh Assembly Government - Staffing Data Collection Form (Wales); General Register Office for Scotland, Annual Reports (Scotland).

The data from the United Kingdom covers full and part time staff directly employed by Local Authority Social Services Departments. The data is obtained from September 30 each year. However, the data for Wales before 2005 has been calculated using a pro rata percentage of the United Kingdom total. See NHS Information Centre for Health and Social Care, http://www.ic.nhs.uk.

The data coverage for Northern Ireland is personal carers at home, which includes domiciliary carers employed by Health and Social care only. Coverage is limited since the number of nursing assistants providing long-term care cannot be ascertained.

The data coverage for Scotland is limited since estimates are used for the numbers of personal carers according to the December 31st, 2011 Annual Return information submitted from Local Authority/Health Board. Only services from the Local Authority/Health Board were included in the analysis, which differs from previous years. The definition of "care at home" covers the actively registered services of (i) Adult Day Care Centres, (ii) Housing Support Services combined with Care at Home Services, and (iii) non-combined Support Service Care at Home Services. The definition of "care institutions" covers Care Homes for Adults active registered services. The definition of "personal carers" covers those with job function classifications of C2, C3, or C4, excluding C4A (social workers) and C4E (registered nurses). Further details for the data classification can be found in the core minimum data set (CMDS).

With regards to methodology, the figures were obtained from an analysis of job functions of the employee records by services. The data accounts for non-responses by extrapolating the resulting job-function for each type of service.

United States

The data source is the U.S. Department of Commerce/ Census Bureau: American Community Survey (ACS). This data is unpublished. The data coverage is a national representative sample of the U.S. civilian, non-institutionalized population. The data seems to match the OECD definition. The definition of "Nurses" includes occupation recode "3130" (Med-dietitians, and nutritionist) and "3500"(Med-Licensed practical and licensed vocational nurses). The definition of "personal care workers" includes occupation recode "3600" (Nursing, Psychiatric, and home health aides), and "4610" (Personal and home care aides). Data for the United States include long term health workers that provide services for activities of daily living (ADL) and instrumental activity of daily living (IADL), along with both employed and self-employed workers. Further information: ACS website, http://www.census.gov/acs/www/. The definition of FTE is the "usual hours worked per week for the past 12 months. If greater than or equal to 40 hours, then the individual was considered working full-time".

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