LANDSCAPE

OF LITERACY AND DISABILITY

CANADIAN ABILITIES FOUNDATION

EZRA B.W. ZUBROW
MARCIA H. RIOUX
CHRISTINA K. SPIELMAN
MIHAELA DINCA-PANAITESCU
GAIL KUNKEL
ALLYSON MARSOLAIS

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FOREWORD

No project is the sole achievement of its authors, and this one is no exception. This report was the joint effort of a number of organizations and individuals[1]. The many individuals who supported this work did so both in the conceptualization of ideas and methodology. At the early stages, people in the field of Geographic Information Systems (GIS) gave input into the possibility of using GIS to look at social phenomena of this nature. Individuals in the field of literacy were proactive in encouraging us to take a fresh look at literacy. People in the disability movement recognized the potential of having data in forms that would expose information often obscured in tables and graphs. There were individuals who gave generously of their knowledge in statistical surveys and of their time to support the statistical data manipulation, working the data around innovative concept formulations. In particular we want to thank Tamara Daly and Christopher Riddel who contributed to aspects of the research and writing of this Atlas. A number of students also worked on various aspects of the project, work that contributed to the overall task.

There is always a challenge and a danger in trying to develop novel ways of looking at data, particularly quantitative data, and of using new paradigms. It leaves one vulnerable to criticism that may be fair but could also be silencing. We will be satisfied if we have moved the agenda along a little towards greater understanding of the relationship of literacy and disability and if we have even the slightest impact on the introduction of disability rights and critical literacy into the collection of survey data. Please contact the authors with questions on how the data was collected and displayed.

We dedicate this work to the people who have faced the double jeopardy of being marginalized by their disability and by their experience of literacy.

1 The study was financed by a grant from the National Literacy Secretariat of Human Resources and Social Development Canada to the Canadian Abilities Foundation. The authors wish to thank them as well as the School of Health Policy and Management at York University and the National Center for Geographic Information Analysis and the Applied Social Systems Laboratory of the University at Buffalo. The researchers are also grateful for access to and use of the Statistics Canada Research Data Centre at the University of Toronto and in Ottawa. This is the second report of this nature – the first Atlas was produced in 2003 (Rioux et al., 2003).

RESEARCH PURPOSES

Previous research (Rioux et al., 2003a; Rioux et al., 2003b) laid the groundwork for this updated Atlas. This project does not replace the previous work, but rather builds upon it with updated data from PALS and IALSS and introduces international and life-cycle frameworks. This newer version examines barriers and accommodations on both inclusion and socio-economic conditions nationally and for the two sub-populations and makes quantitative data accessible and usable for advocacy by civil society. This study's Research Purposes include:

- using geographic information system (GIS) methodology and spatial data to uncover and analyze the relationship between literacy and disability;
- providing a set of spatial data to be used for policy recommendations and development in the area of disability and literacy;
- applying a rights and inclusion perspective to literacy and disability data; and
- demonstrating the ways in which GIS can be used to inform social policy.

CHAPTER 1

INTRODUCTION AND TIPS FOR READING MAPS

This atlas is intended to provide an understanding of the relationship between literacy and disability. As the study unfolds, it becomes clear there is a complex, multi-directional relationship between literacy and disability. In some cases, they reinforce each other, but in other instances, they have an inverse relationship.

This spatial look at social issues provides a tool for policy and service development. The specific objective was to use the spatial characteristics of literacy and disability in Canada to understand the underlying presumptions about disability and literacy; to document the very different perspectives that may be drawn depending on definition of the two phenomena; and finally to get a clear picture of the characteristics of their relationship as a basis for policy initiatives.

Mapping disability and literacy variables, both on their own and in combination, allows one to visualize old and new issues in a fresh manner. With spatial representations, as opposed to linear, numerical or narrative depictions, the viewer's attention is drawn to the data's visual features and the relationships between those features, which may have been previously concealed. This visual perspective often provides otherwise overly complicated correlations with a new lens, allowing highly complex relationships to be represented graphically and grasped with much greater ease.

This atlas provides a perspective on the broader international debate that is taking place about the meaning and context of both disability and literacy. The new United Nations Convention on the Rights of People with Disabilities has brought to the fore the importance of understanding disability as more than simply a medical condition (United Nations, 2006). The debates and discussions about poverty and education, including literacy, particularly in the context of the Millennium Goals on poverty, make it imperative that we investigate whether it is enough to limit literacy to the simple notion of reading, writing and numeracy (United Nations, 2007).

One of the reasons for writing this book is our recognition of the important work being carried out in these two fields of study. More simply, recognition and understanding of disability and literacy differ drastically now from their conceptions even a brief decade ago. This book is intended to be an accessible and meaningful tool for use by policy-makers, program developers and people in the literacy and disability fields by making the relationships between literacy and disability transparent. It further provides information that makes it possible to track where the needs and rights of Canadians with disabilities are being taken into account in policy development, planning, and programs in the area of literacy.

Research in the past few decades points to a strong relationship between "disability" and "barriers to literacy" (Roeher Institute, 1990; Roeher Institute, 1999; Canadian Association of Independent Living Centres, 2008 ongoing; Brewster, 2004; Kliewer & Biklen, 2007). That is, people with disabilities tend to have disproportionately low levels of literacy. The most recent international survey of literacy, the 2003 International Adult Literacy and Skills Survey (IALSS), showed that the literacy skills of

Canadians with disabilities are lower than those of the general population. This was also true for the other countries surveyed in that Survey.

Upon closer examination, issues of literacy and disability are characterized with considerable complexity. The way these two issues intersect statistically is not shown reliably in any single Canadian or international statistical source. As separate fields, both literacy and disability are well researched and have been measured through surveys.[2] The many factors leading to low literacy may simultaneously be creating barriers to full participation and equality experienced by persons with disabilities (Fawcett, 1996; Roeher Institute, 1992; Torjman, 1996; Roeher Institute,1989; Independent Living Canada , 2008 ongoing; Neil Squire Foundation, 1999). Elwan, (1999), looks at the striking difference between the general population and the population of people with disabilities in both developed and developing countries in education, level of qualifications, school attendance, employment status and literacy. Even in developed countries such as Canada, Britain, and Australia, the differences in school attendance between those with disabilities and those without are significant (Lichtenstein, 1993; Newman & Cameteo, 1993; Hogan, et al., 2000).

While major literacy surveys such as IALSS include questions to identify the population of individuals with disabilities, these questions are limited in scope and do not lead to an accurate picture of that population. The same is true for literacy-related variables in major disability surveys such as the Statistics Canada PALS.

The traditional notion of literacy as a set of neutral, measurable, technical skills outside a social context remains the dominant concept of literacy knowledge, teaching and intervention. It has been called the “autonomous model” of literacy (Scope, 2001) and is similar to the unidimensional understanding of disability from an individual medical model. These models are too limited to be able to provide the detailed analysis needed to understand the denial of rights, participation and inclusion that affect people with disabilities.

Some research presumes that lower levels of literacy in the population of people with disabilities are the result of individual impairments (Kapsalis, 1996). Alternately, this book grounds its analysis on the expectation that the relationship between disability and literacy is multi-directional, and not based on any single cause. Educational opportunities, institutionalization and type of disability all intersect with literacy issues in the disability community[3].

2 These include the International Adult Literacy and Skills Survey (IALSS), the early Health and Activity Limitation Survey on disability (HALS) and, more recently, the Participation and Activity Limitation Survey (PALS) (Statistics Canada, 2005). Numerous studies show factors and circumstances that lead to low levels of literacy and explore the possible determinants of not being literate (World Bank, 2001).

3 Gender, socio-economic status, immigration status, geographic location, occupation, language, and ethnicity, amongst many other factors come into play in what becomes a complex matrix of circumstances, inequities, opportunities, and designations that weave in and out of issues of literacy and disability (Erickson and Koppenhavier, 2000, Paul, 1997). Disability may lead to low literacy in some cases, but low literacy may also lead to disability.

This research is important for two key reasons. The first is that it provides an example and foundation from which to apply what have, until now, been mainly theoretical conceptions of disability. Following the principle that disability is a result of social barriers infringing upon fundamental human rights, this book provides a methodology through which it is possible to see how a human rights conception of disability can be applied empirically to data and to empirical questions and problems to arrive at strategic policy recommendations. It provides an example of emancipatory work in the field of disability and steps away from being grounded in a space of unconscious judgment ascribed to anonymous theoretical people and social groups and instead, measures the forces behind the ways in which we categorize people as they relate to real experiences, policies, and questions in general (Barnes 2003, Zarb 1992, Oliver 1992).

Equally importantly, this book also contributes to international scholarship[4]. This research is related to how Canada is situated internationally and how research of this nature furthers the mandate for disability rights. It provides a foundation for comparative studies to be undertaken in countries around the world. Similarly, despite what appears to be poor literacy rates for Canadians with disabilities [see Chapter 4], Canada is nevertheless ranked one of the best countries for literacy in international surveys (Government of Canada, 2003).

Canada consistently performs higher than the United States and United Kingdom in all forms of literacy (Government of Canada, 2003). Norway, Switzerland, Bermuda and Canada are repeatedly amongst the top in the world in terms of Prose, Document, Numeracy, and Problem Solving Literacy (Government of Canada, 2003). However, those with disabilities perform much lower than those without disabilities. In terms of Scientific, Mathematical and Reading[5] literacy, Canada places 2nd, 3rd and 5th respectively against 57 participating countries assessed for PISA, OECD's assessment of student knowledge and skills in science, mathematics and reading at age 15 (EOCD, 2008).

Literacy and disability are issues that impact the well-being of people globally and discussions of this nature can lead to strategy, policy and program changes[6]. Canada should be an important influence on these developments. In these days of globalization, Canada needs to both learn from other countries and be an example; to both understand and impact global policies.

4 These fields provide a methodology and theoretical framework in applying this paradigm beyond academia or traditional scholarship. The Australian Council for Adult Literacy, for example, claims that although the 1996 IALS provided a wealth of Australian data, information and analysis, little follow up research or analysis was undertaken. Beyond the production of several initial publications, data from the 1996 was underutilized (ACAL, 2008).

5 According to OECD's 2008 Factbook, Scientific literacy is the capacity to use scientific knowledge to identify questions, to acquire new knowledge, to explain scientific phenomena, and to draw evidence-based conclusions about science-related issues; Mathematical literacy is the capacity to identify and understand the role that mathematics plays in the world, to make well-founded judgments and to use and engage with mathematics in ways that meet the needs of the individual's life as a constructive, concerned and reflective citizen; Reading literacy is the capacity to understand, use and reflect on written texts, in order to achieve one's goals, to develop one's knowledge and potential and to participate in society.

6 These include the International Adult Literacy and Skills Survey (IALSS), the early Health and Activity Limitation Survey on disability (HALS) and, more recently, the Participation and Activity Limitation Survey (PALS) (Statistics Canada, 2005). Numerous studies show factors and circumstances that lead to low levels of literacy and explore the possible determinants of not being literate (World Bank, 2001).

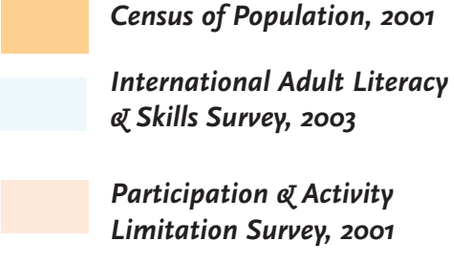
TIPS ON READING THE MAPS

The maps in this atlas were made using a Geographic Information System or GIS. To create our GIS, data from surveys were exported in tabular format along with the corresponding geographic identifier, in this case province and territory names. This data was then linked to the geographic boundaries using the geographic identifier so that maps could be made. Due to data limitations we were limited to illustrating the data by province and territory only and were not able to show a more refined picture of the variables we chose to study.

A map is a spatial representation of the earth's surface. Cartographers use colours, symbols, and labels to represent features or characteristics found on the ground or distributed across space. In this atlas we have employed the use of thematic maps to illustrate variation among provinces in societal characteristics. A thematic map shows the relative value of one such characteristic, or theme, across geographic units, in this case the provinces and territories of Canada. Most of the maps in this atlas show the provinces and territories shaded according to the relative value of the data. As a general rule, light colours mean *less* of what is being measured, and dark colours mean *more*. For example, in figure 1, the darker the area, the higher the percentage of the population with less than grade 9 education. Some maps also have bar charts to illustrate the values for a variety of different but related variables on the same map (such as on map 3, the percentage of adults for each prose literacy level). Taller bars mean *more* of what is being measured, and shorter bars mean *less*. Colors on all of the maps have been chosen carefully using ColorBrewer™, a web tool for selecting map colours, accessible at *www.colorbrewer.org*. We selected this tool because the colour schemes were tested for numerous display techniques and readability, and are legible to people who are colour-blind.

Every map in this atlas includes the following elements: map, legend, equation, data source, map number, and title box with title, population, description, and national average (FIGURE 1). The map in the center of the page shows the results of the data geographically. There may be two or more maps of Canada in the center space when there is data available to illustrate the theme of the map in more than one way. The legend is the key to interpreting the map. It usually shows the range of values that correspond to the colours on the map. The equation, located in small text at the bottom of the map, gives more detail about the map's theme and exactly how the values, usually percents, were calculated. The data source identifies the survey that was used to collect the data.

The title box gives more reference information useful for interpreting and understanding the map. The colour of the title box indicates the data source. The title is a brief summary of the map's themes. The population explains what subset of people was used in calculating the percents. Most data were only available for adults, but the cut-off age was often different according to the survey. The descriptive text offers some brief interpretive notes about the map. Finally, the small map of Canada is usually shaded one color to represent the national average of the variable being displayed.

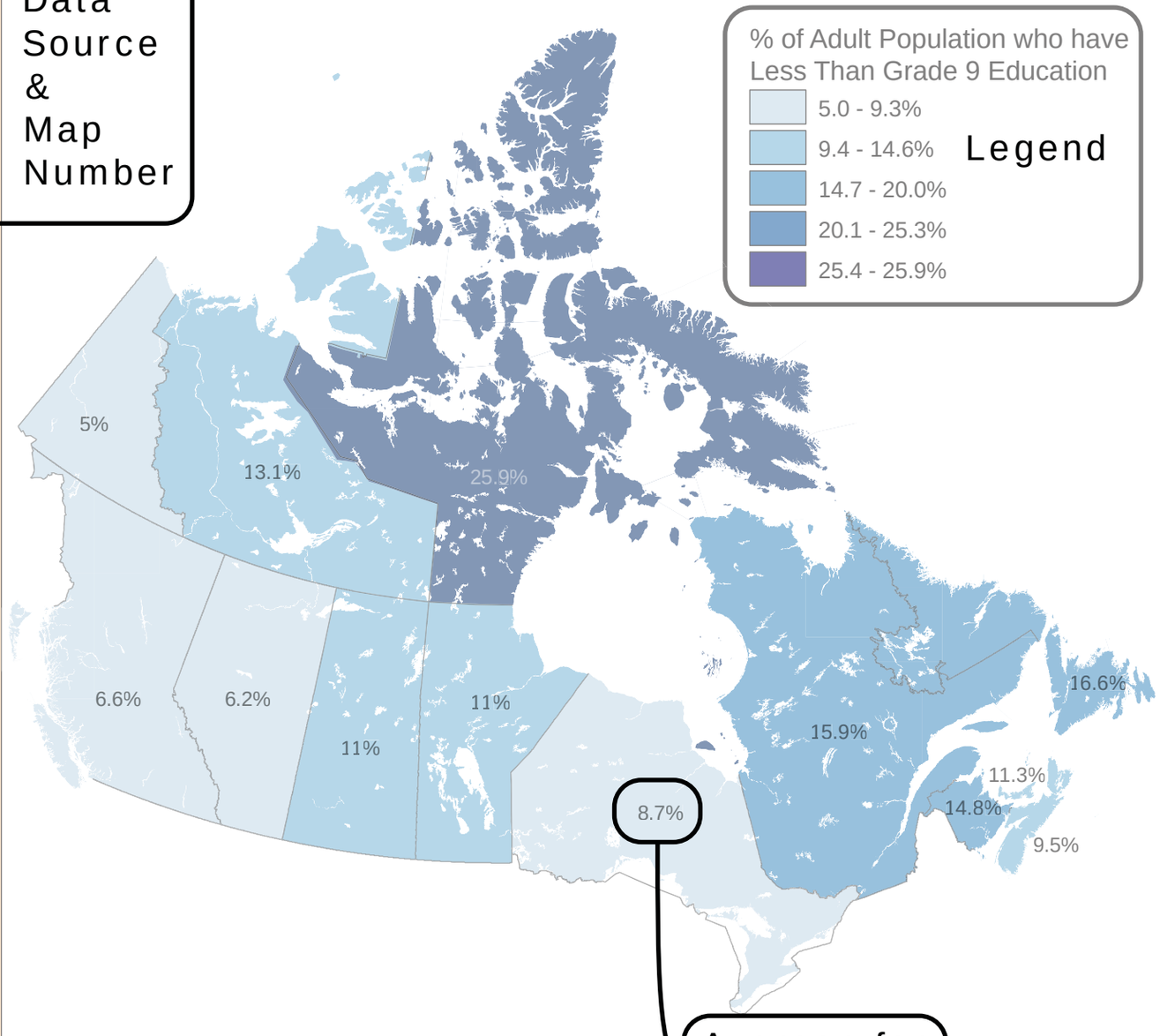


Map 1

Data Source & Map Number

2001 Census of Population

FIGURE 1



Average for Province

Equation

(Adult Population with Less Than Grade 9 Education) / (Adult Population)

1:30,000,000

Map 1

Title

Less Than Grade 9 Education

Adults - Age 20 & Older Population

Description

Less than grade 9 education is broadly accepted as a measure of basic literacy. All provinces and territories experienced a decrease in the percent of people with less than a grade 9 education between 1996 and 2001. This can be explained in part by the change in the age of the population measured from 15 & older in 1996 to 20 & older in 2001. Nunavut's rate of low basic literacy is much greater than the rest of the country. As in 1996, Newfoundland & Labrador, Quebec, & New Brunswick have a large proportion of the population with low basic literacy.

National Average

Canada -- 10.5%

CHAPTER 2

WAYS OF LOOKING AT LITERACY & DISABILITY

Not only is the relationship between literacy and disability complicated, further intricacies emerge in the language used to discuss the two concepts and related issues. Specifically, there is a multiplicity of meanings to the terms 'disability' or 'literacy' as they are applied in both the Canadian and international policy context and in the design of surveys to measure disability and/or literacy. Disability can be defined in a variety of ways: as a medical/biological condition; as functional limitations in daily living; as a condition resulting from environmental barriers; and as a form of social oppression. With equal inconsistency, literacy is approached as: the acquisition of basic reading, writing and numeracy skills; as the ability to apply such skills in daily life; and as having both means and opportunity to communicate in public discourse. This shifting of vision results in different social responses, policies, and activism. Ultimately, these perspectives will make a difference in how people with literacy issues and with disabilities live and function in Canadian society.

Formerly, both disability and illiteracy were seen as problems in the individual that needed to be cured, fixed, or compensated for. Today's standards reflect the social belief that the experiences of disability and literacy are not problems in the individual but rather, these experiences involve a relationship between individuals and their environments.

WAYS OF LOOKING AT LITERACY

This study draws on a variety of meanings of literacy that have been used in western societies in the past decade and that are found in the literature. Three literacy models were used in this study.

- Basic literacy: rudimentary reading, writing and numeracy skills
- Functional literacy: ability to use reading, writing, and numeracy skills to participate in the social and economic life of the community
- Critical literacy: the means to communicate one's experience and interests in public discourse by socially marginalized individuals and groups

Defining Basic Literacy

What is termed 'basic literacy' in this report is derived from a definition that sees literacy as the acquisition of a set of reading and writing skills. This frames literacy as a norm and illiteracy as pathology in relation to that norm. In this approach, literacy is a binary concept — a person is either literate, or they are not. Literacy, as the United Nations defined it in 1948, is the ability to read a simple message. This definition was expanded by the international agency in 1978 as: "A person is literate who can with understanding both read and write a short simple statement on his everyday life" (United Nations Educational, Scientific and Cultural Organization, 1978). The corollary then is that a person who is illiterate is deficient in this skill. A person who is illiterate, according to this

definition, is able to neither read nor write even a simple statement. The standard that has been often used as a proxy for basic literacy is a grade 9 level of education.

Defining Functional Literacy

To account for the changing demands for literacy, UNESCO developed a new definition of literacy in 1978:

> *A person is functionally literate who can engage in all those activities in which literacy is required for effective functioning of his/her group and community and also for enabling him/her to continue to use reading, writing and calculation for his/her own and the community's development (UNESCO, 1978).*

This set the groundwork for the emergence of a new framework of functional literacy. In the functional definition, literacy is understood as a relative concept that depends not only on the skills an individual has, but the situations and environments within which an individual finds him or herself everyday (Thomas, 1990).

Defining Critical Literacy

A further development in the understanding of literacy moves away from the idea that the onus is always on the individual to acquire whatever literacy skills are required to function in a particular environment. Literacy difficulties are posed as deficits of society, not of individuals. This is termed 'critical literacy' for the purpose of this report, but the concept is recognizable under the rubrics 'New Literacy', 'dialogic literacy' and 'emancipatory literacy'. Critical literacy refers to the means marginalized individuals and groups have to engage and participate in the social life in which they are involved.

Operationalizing Literacy

Until recent decades, Canada, like most countries, relied primarily on the census for national literacy statistics. The Canadian Census of Population provides the data that is used as a standard measurement for literacy — the grade 9 cutoff — established by UNESCO. In this context, less than grade 9 is defined as illiterate; while grade nine or more is interpreted as literate. This binary and contemporary literacy variable makes operational the concept of basic literacy defined earlier. On UNESCO's recommendation, it is used in most developed countries, while developing nations and some Eastern European countries tend to use the traditional definition in their censuses, that is, the ability to read and write a simple sentence on the basis of respondent self-reporting or a simple test.

This traditional definition is no longer used in Canadian government surveys. It does not account for informal learning or the lack or loss of skills despite having reached a grade nine level (Satin,

1991). Further, the binary grade level cut-off does not account for either the social context in terms of demand for literacy in a given country, or the complexity of varying literacy skill levels in different environments (Satin, 1991).

In Canada and the United States, a number of pioneering studies began setting out a method for a functional definition of literacy in the context of its relationship to social and economic prosperity[7]. The functional measure of literacy employed in the International Adult Literacy and Skills Survey (IALSS) accounts for a continuum of literacy skills in relation to participation in the social and economic life of the community. Measures of functional literacy are based on a synchronicity between the skills people have, and the skills they need in daily life. Four skill domains were proposed in the survey.

- Prose Literacy - *the knowledge and skills needed to understand and use information from texts;*
- Document Literacy - *the knowledge and skills required to locate and use information contained in various formats;*
- Quantitative Literacy - *the knowledge and skills required to effectively manage the mathematical demands of diverse situations;*
- Problem Solving Literacy - *the goal-directed thinking and action required in situations for which no routine solution is available.*

The difference between the IALSS and more conventional binary literacy surveys lies in a shift from the underlying question, "can you read" to "how well you read". IALSS tested respondent proficiency levels to find a point at which a person "has an 80 percent chance of successfully completing tasks that are associated with a similar level of difficulty". Five levels of difficulty were established for prose, document, and numeracy literacy. For the problem solving domain, there were four levels of difficulty established[8].

A recent study in eastern Canada (2008) found that while formal educational achievement is higher than in the past, there is "no indication that levels of knowledge and literacy are increasing in the Canadian … populace" (Pannozzo et al., 2008, p.66). Indeed, according to the GPI Atlantic Education Indicators Report in some areas, like civic literacy and political awareness, knowledge is declining.

7 In the United States, this included the 1985 Young Adult Literacy Survey (YALS) — the Department of Labour's study assessing literacy skills of American workers (DOL study), and the 1992 National Adult Literacy Survey (NALS). In Canada, Statistics Canada's 1989 Survey of Literacy Skills Used in Daily Living (LSUDA) designed and applied a functional definition of literacy (Statistics Canada et al., 1996). These studies set out a method for measuring a continuum of literacy in various skill areas. In 1994, the Organization for Economic Cooperation and Development (OECD) and seven partner countries, including Canada, combined what was learned from these earlier surveys to create the International Adult Literacy Survey (IALS). The goal of this survey was to create literacy measures that could be compared across different national, linguistic and cultural contexts (Statistics Canada, HRDC and NLS, 1996). A follow up study which built on the IALS study, the IALSS (Adult Literacy and Life Skills Survey) was carried out in 2003. That study defines skills along a continuum of proficiency containing four skill domains: prose, document, numeracy and problem-solving literacy. The first two are defined and measured in the same way as the IALS study; while numeracy and problem-solving are new domains.

8 The survey employed a sophisticated testing and scaling method to derive proficiency scores and used Item Response Theory to estimate item difficulty and proficiency. Respondents were tested across the four domains. Proficiency scores in these four domains were measured on a scale of 0 to 500, with 0 being low. This was further grouped into five literacy levels, with level 1 as the lowest and level 5 as the highest. According to the OECD/ Statistics Canada report on IALSS, level three is the minimum skill level for coping with the demands for modern life and work.

The study found that not only had basic levels of literacy not increased, levels of functional and critical literacy were particularly troubling (Pannozzo et al. 2008). On an international scale, upper secondary graduation is becoming the norm today. On average across the 24 OECD countries, 36% of person's at the typical age of graduation completed university or an equivalent in 2005. This tertiary-type A graduation rate has shown on average a significant increase of more than 10 percentage points over the last 10 years (OECD, 2008).

WAYS OF LOOKING AT DISABILITY

There are four general models of disability (bio-medical, functional/environmental, social/environmental and disability rights) that can be identified in the literature. These models are discussed in relation to the way the concept 'disability' has been operationalized in surveys including the Canadian Health and Activity Limitation Survey (HALS), the National Population Health Survey (NPHS), the Participation and Activity Limitation Survey (PALS), the International Adult Literacy and Skills Survey (IALSS), and the Census of Population.

- Biomedical – *disability is a consequence of a biological abnormality or medical condition in the individual*
- Functional/Environmental – *disability is a restriction in ability or functioning in one's environment resulting from impairment in the performance of an activity in a range considered normal*
- Social/Environmental – *disability is the result of barriers that prevent people with disabilities from participating in social and economic institutions*
- Disability Rights – *disability is a product of social, economic and political conditions and the discrimination and inequality attached to them*

Biomedical Conceptions

The biomedical model of disability defines disability as an observable deviation from a biomedical norm with regards to structure or function resulting directly from a disease, trauma, or other related health conditions (Barnes et al, 1999). Additionally, the biomedical model contends that the acquisition or development of a disability is considered either a turn of poor luck or as a natural occurrence and not due to unjust social circumstances. Because disability is seen as a deviation from a biomedical norm, and is assumed to be a result of either a mental or physical condition, it is also assumed that the condition can be prevented or ameliorated by situating the individual closer to the established norm through medical, biological, or genetic intervention (Rioux, 1997).

Functional or Rehabilitation Conceptions of Disability

Similar to the biomedical model, the functional conception of disability also attributes a deficit to an individual condition or pathology (Rioux, 1997). The barriers experienced by people with disabilities are interpreted as a functional incapacity resulting from the individual's impairment. Rehabilitation is directed towards increasing the individual's capacity to approximate a 'normal" person who has no disability.

Environmental Conceptions of Disability

In contrast to the medical-based, individualized ways of viewing disability, a social pathology conceptualization of disability identifies secondary rather than primary prevention as the goal (Rioux, 1997). Disability is recognized simply as a difference occurring between individuals, and not as an anomaly (Rioux, 1997). Barnes (1999) emphasizes the importance of an individual's interaction with society in defining disability. As such, the inclusion of people with disabilities is seen as a public responsibility and the points of intervention are the social and economic systems within which individuals live (Rioux, 1997).

Conceptualizing Disability within a Human Rights Framework

A human rights model presumes that society has a responsibility to ensure that people are provided with the supports they need to fully participate in and contribute to society. All people are presumed to have the right to access, participate in, and exercise self-determination as equals in society. A rights-outcome approach looks at how society marginalizes people, and what strategies are needed to address existing inequities. This means viewing people with disabilities as subjects and not merely as objects. It involves moving away from viewing people with disabilities as problems or anomalies, towards viewing them as rights holders and equal citizens, such that justice demands substantive equality and accommodation (Quinn and Degener, 2002). Importantly, it means locating the barriers and problems faced by people with disabilities outside the individual and to look at the manner by which various economic and social processes accommodate the difference of disability or not, as the case may be.

LIFE CYCLE

The Canadian government's Office of Disabled Persons (ODI; *http://www.hrsdc.gc.ca/en/gateways/nav/top_nav/program/odi.shtml*) used a life cycle approach to disability in their 2001 profile of persons with disabilities[9]. This study continues and extends that study by taking a life cycle approach to examining the relationship of socioeconomic factors to both disability and literacy, as well as the relationship between disability and literacy. Such an examination recognizes that persons with disabilities are disadvantaged in a multitude of ways and the discrimination that attaches to disability may have a greater or lesser impact at different life stages.

One important factor of the life cycle approach is age of onset of disability. Age of onset affects the experience of impairment over a lifetime and can have significant impact on a person's opportunities. It affects educational experiences, employment patterns and disability-related supports and benefits. The reverse concept, the age of amelioration, will also affect the experience of impairment over a lifetime and can have a significant impact on a person's opportunities. An individual who is in a position where their impairment or limited literacy skills can be ameliorated will experience different structural and attitudinal barriers than one who cannot.

CONCLUSION

This chapter makes clear that the conceptualizations of both disability and literacy are still evolving. Because neither disability nor literacy is a static concept, attempts to quantify them from existing survey data is difficult, as will be evident in the following chapters. The literature reflects different understandings of the phenomena so the survey data collected tends to reflect that and it is neither uniform nor easily comparable. However, there are some general ideas that help in looking at the intersection of the phenomena. Both disability and literacy are concepts that are moving away from understandings that they can be explained solely as characteristics of the individual. The meanings of both disability and literacy are, in most cases, program entitlement definitions rather than objective definitions. Emerging characterizations of the two phenomena are taking a more critical perspective and recognizing that these concepts are the interaction of individual characteristics and the environment in which an individual lives. The social and legal construction of both disability and literacy that lead to categorical classification are being questioned. This further leads to much broader understandings that recognize their grounding in rights and demands much more from the studies that are done and the data that is used to analyze the phenomena.

9 The ODI also used GIS and mapping to further enhance their profiles.

CHAPTER 3

THE LANDSCAPE OF LITERACY

Literacy is an area of social, political and economic interest in Canada as it is internationally. According to the most recent national literacy survey, the IALSS (2003), nearly half of all Canadians have skills at the lowest two levels in prose (48.1%), document (48.8%) and quantitative literacy (53.3%).

Additionally, all provinces experienced a subtle decrease in the percentage of people with less than a grade 9 education from 1996 to 2001. This is, at least in part, due to the fact that in 1996 the Census used 15 years old as the cut off, while in 2001 it changed to 20 years or older. According to the 2001 census data, 10.5% of people in Canada have less than a grade 9 education (Census, 2001), which is broadly accepted as a measure of basic literacy (map 1). MAP 1 shows that Nunavut has the highest incidence of people with less than a grade 9 education, with 25.9% of the total population in that territory (Census, 2001). While not nearly as high above the Canadian average as Nunavut, Quebec, Newfoundland, and New Brunswick also have a large proportion of people who have not achieved basic literacy (Census, 2001).

The provincial trends are similar between 1996 and 2001. No significant change in any one province allows us to conclude that there were not any meaningful policy initiatives launched or that had an impact during this period to grade 9 education achievement rates.

MAP 2 shows the rate of basic literacy during different stages in the life cycle. As a person gets older he or she is less likely to have a grade 9 education. This trend is particularly evident in people over 60 years of age.

PROSE LITERACY

Prose literacy is “the knowledge and skills needed to understand and use information from texts including editorials, news stories, brochures and instruction manuals” (Government of Canada, 2003). MAP 3 shows that nearly half of all Canadians aged 16 or older score at levels 1 or 2 for prose literacy. Levels 1 and 2 are considered to be less than desirable for full participation in Canadian society (Government of Canada, 2003). Quebec, New Brunswick, Newfoundland and Labrador have the highest rates of low prose literacy among adults while the Yukon Territory has the lowest rate.

Between 1994 and 2003 and across the entire country, the percentage of people with level 2 or 3 prose literacy increased (CHART 1). Many provinces saw the number of people at the highest level of prose literacy decrease. However, in Quebec, Prince Edward Island, and Newfoundland & Labrador, the number of people with the highest level of prose literacy increased by over 50%. Quebec, Prince Edward Island, and Newfoundland & Labrador experienced, along with Manitoba, New Brunswick, and Nova Scotia, a decrease in the rate of people scoring at level 1 (the most basic form) prose literacy, though all provinces show an increase in people scoring at level 2.

DOCUMENT LITERACY

Document literacy measures one's ability to extract information from non-continuous texts (Government of Canada, 2003). Examining the bar graphs on MAP 4 shows a consistent pattern – the greatest percentage of the total population has low prose literacy, or scored at levels 1 and 2, in every province and territory except the Yukon. Similar to prose literacy, nearly half of all Canadians have low document literacy (Government of Canada, 2003). Spatially the patterns are also similar. Generally, low document literacy rates become worse as one moves east across the country, though rates in PEI and Nova Scotia are more similar to Ontario than to New Brunswick.

According to CHART 2, the number of people who tested at levels 1, 2, and 3 increased throughout Canada between 1994 and 2003 however there is considerable variation among the provinces and those results are heavily skewed by provinces with more people, such as Ontario and BC. The majority of the provinces, 7 out of 10, actually experienced a decrease in the number of people who tested at level 1 for document literacy between 1994 and 2003. Half of the provinces show a decrease in the number of people who tested at the highest level of document literacy (Alberta, Saskatchewan, Manitoba, Ontario, and New Brunswick). Newfoundland & Labrador, on the other hand, had a 75% increase in the number of people with the highest level of document literacy.

NUMERACY LITERACY

Numeracy literacy is the knowledge or skills necessary to manage mathematical demands in a diverse array of circumstances (Government of Canada, 2003). In general, Canadians score lower on tests for basic numeracy literacy than prose or document literacy (MAP 5). While the national rates for the lowest levels of prose and document literacy were at 48.1% and 48.8% respectively, the rate for the lowest levels of numeracy literacy is 55.3% (Government of Canada, 2003). Once again the western provinces and territories have lower rates of low numeracy literacy and higher rates of high numeracy literacy.

Looking at the overall pattern of change in the number of people by level of numeracy literacy between 1994 and 2003 there is a very mixed combination of triangles and boxes above the zero line, indicating that the number of people tested at each level tended to increase between 1994 and 2003 (CHART 3). There is one striking exception however. In 7 out of 10 provinces, the number of people who tested at levels 4 & 5 for numeracy literacy decreased. Quebec and PEI show significant increases in the number of people testing at levels 4 & 5 – over 40% increase – and BC showed a slight increase. The test results for Alberta show a dramatic increase in the number of people who tested at level 1 – over 90% or nearly double. Only PEI experienced a decrease in the number of people who tested at the lowest level of numeracy literacy.

PROBLEM-SOLVING LITERACY

Problem-solving involves goal-directed thinking and action outside of routine solutions (Government of Canada, 2003). In this study it is the proxy for critical literacy. As shown on MAP 6, 73.1% of Canadians scored at low problem-solving literacy levels (Government of Canada, 2003). Of the four types of literacy tested this is the highest score indicating low literacy (levels 1 & 2) and is indicative of a troubling situation for Canadian literacy. The geographic pattern of low problem-solving literacy is similar to that for the other types of literacy. Nunavut has the highest rate of low literacy in all cases and the Yukon Territory has the lowest rate of low literacy (Government of Canada, 2003).

MAP 7 compares low literacy levels for all the provinces by each type of literacy. As displayed, Nunavut, Quebec, Newfoundland & Labrador, and New Brunswick tend to have a large percentage of their population with low literacy in all four domains. Conversely, the western provinces (especially Yukon Territory, British Columbia and Alberta) repeatedly report the smallest proportion of individuals with low problem-solving literacy. There is a trend in the percentage of the population with low literacy increasing from prose literacy, to document literacy, through numeracy, and finally to problem-solving literacy. The greatest proportion of people in all provinces has low problem-solving literacy.

LIFE CYCLE

Distinctions are more apparent when life cycle factors are introduced. The Canadian average for low prose literacy is 48.1%. Map 8 shows low prose literacy for adults in five age cohorts between 16 and 60+. The percent of each age cohort with low prose literacy increases from approximately 34% among people age 20 to 29 to over 76% for people age 60 and older (MAP 8). While there is considerable variation in the percent of each age group that has low prose literacy the relative spatial pattern among the provinces and territories is generally similar to the patterns already seen. Yukon Territory and British Columbia consistently have the lowest percent of people with low prose literacy for most age cohorts. Nunavut has the highest rate of people with low literacy for all age cohorts and Newfoundland & Labrador, New Brunswick, and Quebec generally also have high rates of low literacy though not always and there is some variation across the life cycle.

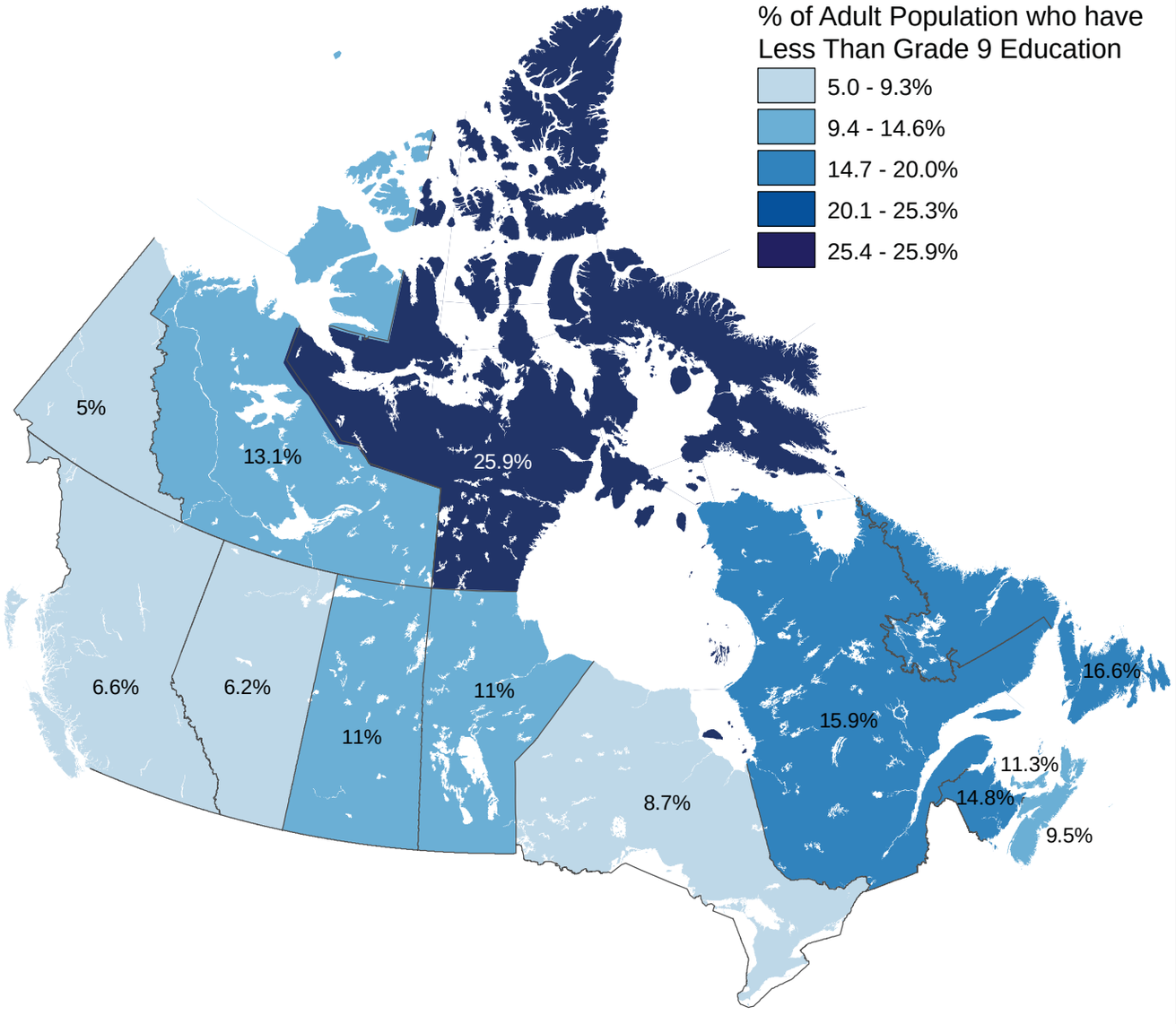
When changing the domain to document literacy, a similar pattern emerges (MAP 9). The consistency of this increasing percentage of people with low literacy from west to east and across the cohorts is noteworthy (MAP 10 and MAP 11). It may reflect differing policy emphasis with respect to literacy in the western provinces and point to major changes in literacy education in the last generation that is now reflected in the improved performance of the younger cohort.

CONCLUSION

There are differences in the way in which we measure or determine rates of literacy. Using a simple grade 9 measure for literacy does not provide a rich enough picture to allow us to know whether the population is struggling with literacy skills. However, even using that measure, which doesn't tell us very much, more than 10% of the Canadian population doesn't meet that simple standard of literacy. Certainly we do know that getting a job is a much greater challenge without completing high school. The importance of looking carefully at functional literacy skills as found in the figures on the combination of prose, document, and numeracy literacy provides a somewhat more refined measure of how a person might fare in society and in some provinces there are improvements. It is however, with the problem-solving literacy that there is a significant issue that has to be addressed. With increasing technology to get and to process information, the most essential skill needed in a highly technological society is now problem-solving but a very high percentage of Canadians (73.1%), according to IALSS, scored at the lowest levels of problem-solving literacy. Policies and programs do not appear to be addressing this situation. More encouraging data shows that the rates of literacy are higher in the younger cohorts and the highest rates of low literacy are among those over 60 years, suggesting that some of the surprising low rates may be a residual effect of previous policies. The unsettling picture of a country in which some provinces and territories have much higher rates of literacy and some a very bleak picture cannot however be ignored. The promise of equal opportunity and equal entitlement across Canada is not being met in the area of literacy, a fundamental right of social justice and equality.

2001 Census of Population

Map 1



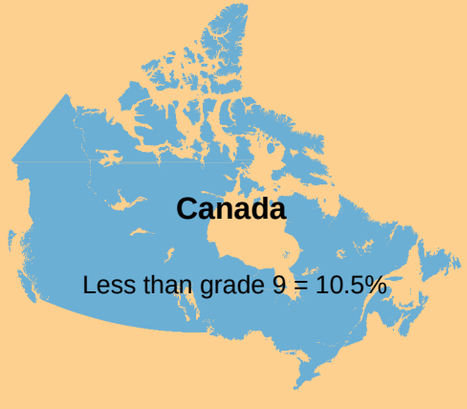
(Adult Population with Less Than Grade 9 Education) / (Adult Population)

1:30,000,000

Less Than Grade 9 Education

Adults - Age 20 & Older

Less than grade 9 education is broadly accepted as a measure of basic literacy. All provinces and territories experienced a decrease in the percentage of people with less than grade 9 education between 1996 and 2001. This can be explained in part by the change in the age of the population measured from 15 & older in 1996 to 20 & older in 2001. Nunavut's rate of low basic literacy was much greater than the rest of the country. As in 1996, Newfoundland & Labrador, Quebec, & New Brunswick had a large proportion of the population with low basic literacy.

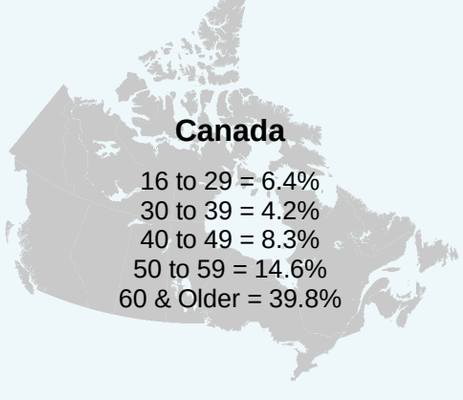


Map 1

Less Than Grade 9 Education Through the Life Cycle

Adults - Age 16 & Older

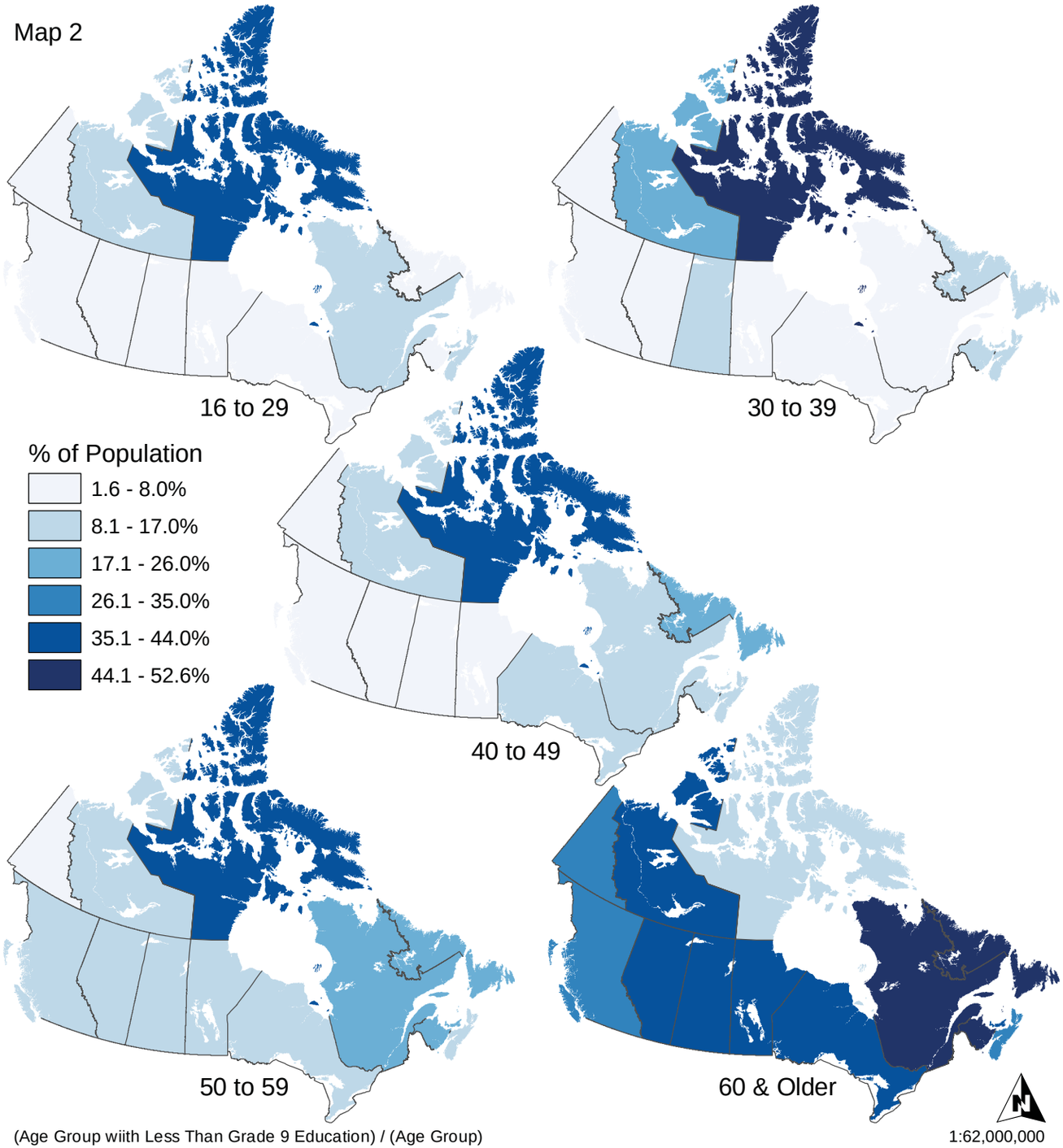
People aged 60 years & older are more likely to have less than Grade 9 education, especially in Quebec, Newfoundland & Labrador, & New Brunswick. Nunavut had the highest rate of people with less than grade 9 education in every age group except among people aged 60 years & older.



Canada

16 to 29 = 6.4%
30 to 39 = 4.2%
40 to 49 = 8.3%
50 to 59 = 14.6%
60 & Older = 39.8%

Map 2



(Age Group wiith Less Than Grade 9 Education) / (Age Group)

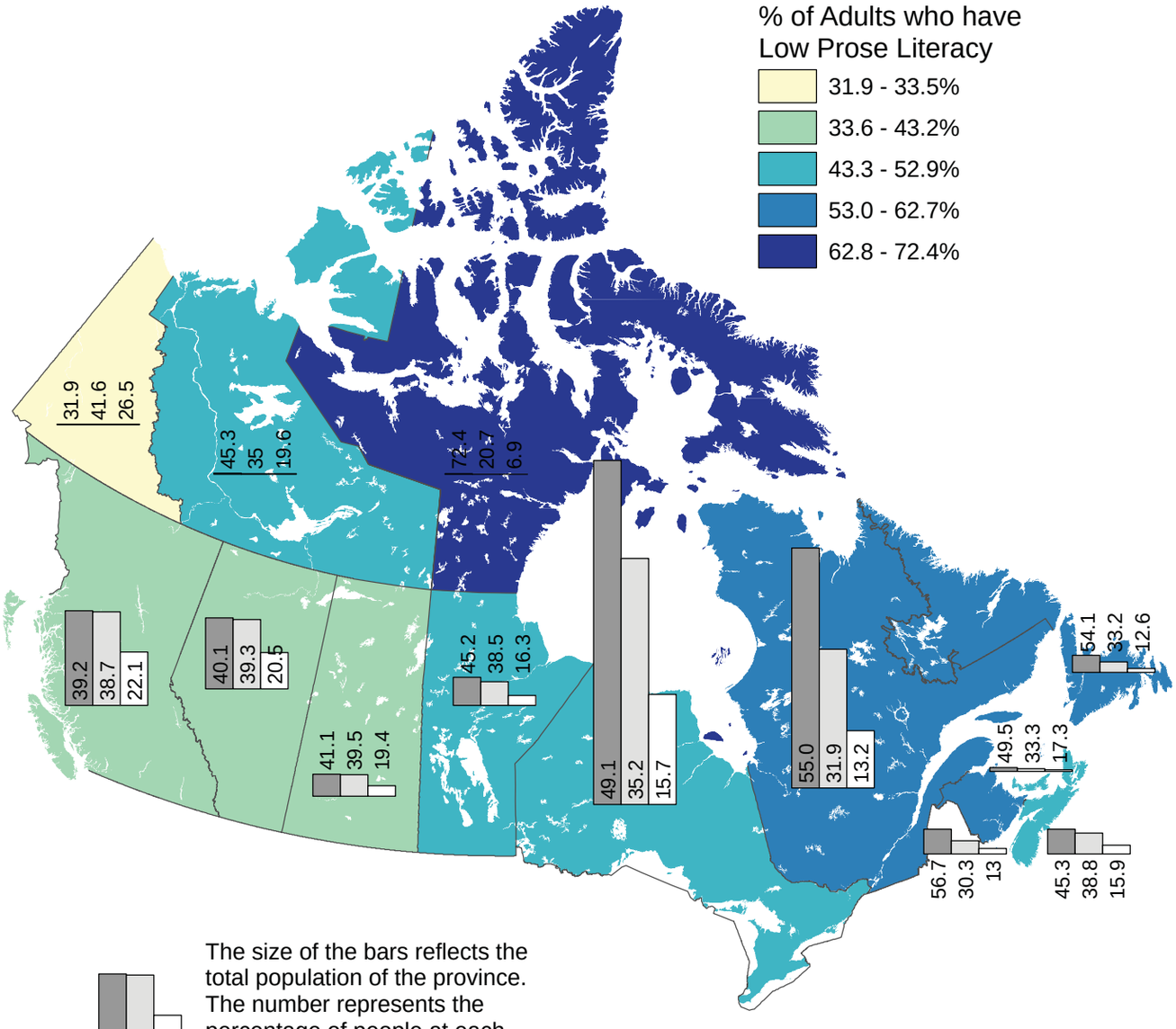
1:62,000,000

2003 International Adult Literacy & Skills Survey

Map 2

2003 International Adult Literacy & Skills Survey

Map 3



(Adult Population with Prose Literacy at Level 1 & 2) / (Adult Population)

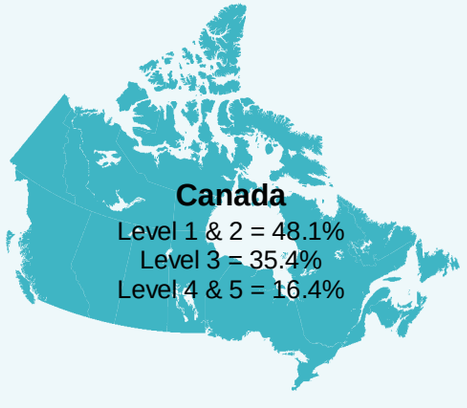
1:30,000,000

Prose Literacy

Adults - Age 16 & Older

Literacy is defined as “using printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential” (IALSS, 2003). Prose literacy was determined by scores on continuous texts, or those texts that are "formed of sentences and organized into paragraphs” (IALSS, 2003).

Results show nearly half of adult Canadians scored at levels 1 or 2 which corresponds to less than desirable prose literacy for participation in Canadian society. More than half of adults in Quebec, Newfoundland & Labrador, PEI, New Brunswick and Nunavut were at levels 1 or 2.



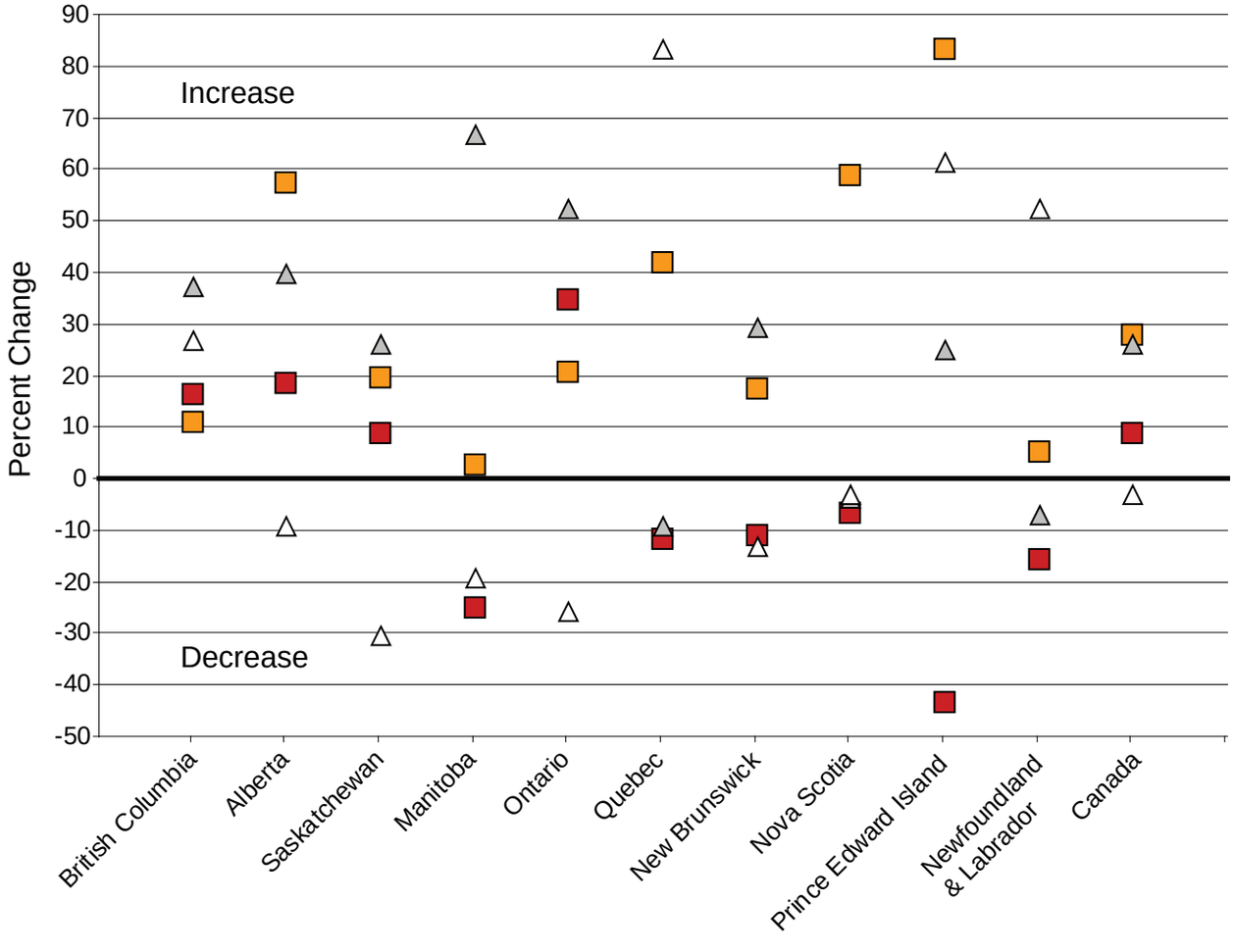
% Change in Prose Literacy Between 1994 & 2003

Adults - Age 16 & Older

For all of Canada, the percentage of people with a prose literacy level of 2 or 3 increased the most between 1994 & 2003 while the number of people with prose literacy at the highest level decreased slightly. Many provinces saw the number of people at the highest level of prose literacy decrease. However, in Quebec, PEI, and Newfoundland & Labrador, the number of people with the highest level of prose literacy increased by more than 50%. British Columbia, Alberta, Ontario, & Saskatchewan all showed an increase in people testing at the lowest level of prose literacy while all other provinces showed a decrease in people with the lowest levels of literacy.

*Not including Territories

Chart 1



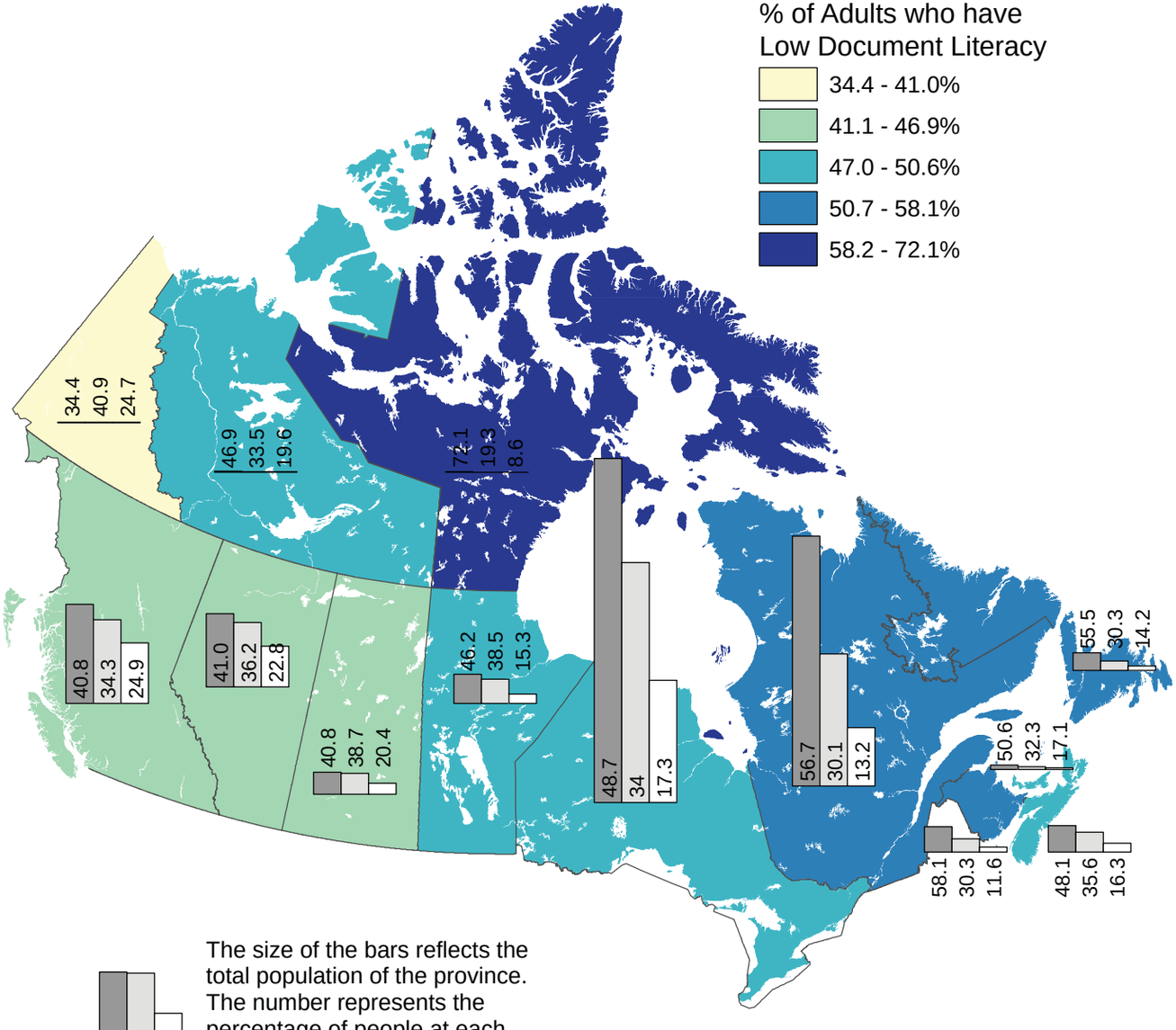
Change in Prose Literacy Levels between 1994 & 2003

- Level 1
- Level 2
- Level 3
- Levels 4 & 5

(# of People in 2003 - # of People in 1994 by Prose Literacy Level) / (# of People in 1994 by Prose Literacy Level)

2003 International Adult Literacy & Skills Survey

Map 4

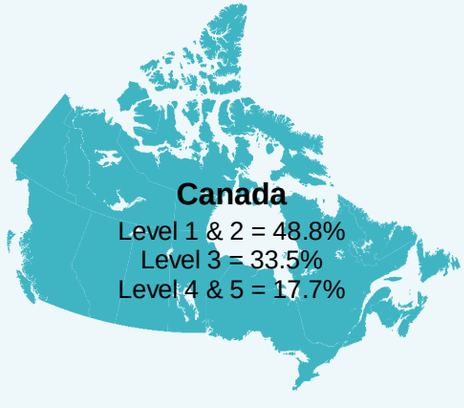


Document Literacy

Adults - Age 16 & Older

Document literacy measures the ability to extract information from non-continuous texts.

As with prose literacy, almost half of the adult population had low document literacy. More than 50% of the population of Newfoundland & Labrador, Quebec, New Brunswick and Nunavut had low document literacy. People in the western provinces of BC, Alberta, & Saskatchewan along with Yukon Territory were more likely to have higher levels of document literacy.



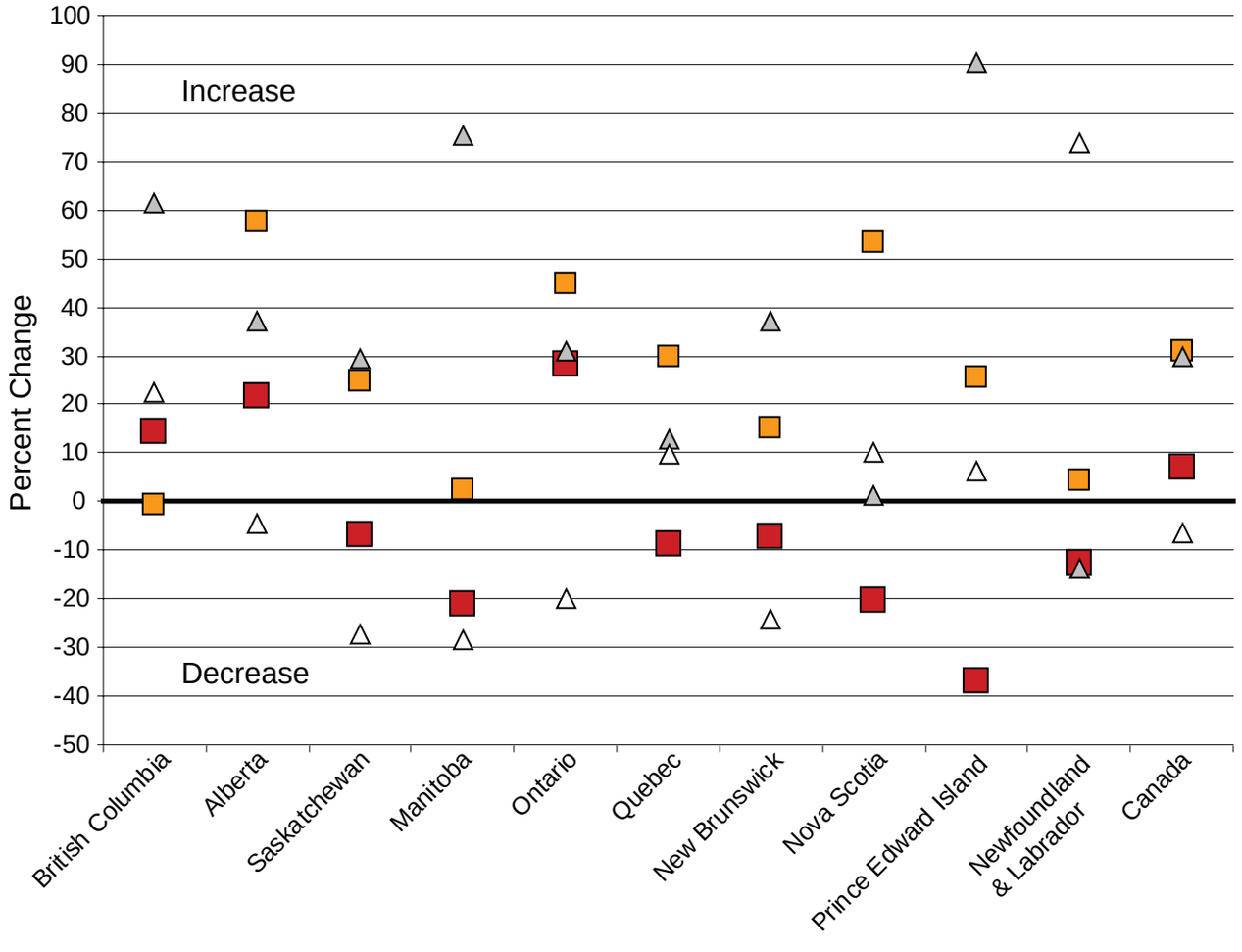
% Change in Document Literacy Between 1994 & 2003

Adults - Age 16 & Older

In Canada as a whole there was an increase in the number of people scoring at each level of document literacy except for level 4/5 where the number decreased between 1994 and 2003. The number of people at the lowest level (level 1) of document literacy decreased in all provinces except for British Columbia, Alberta and Ontario. Half of the provinces also experienced a decrease in the number of people scoring at the highest level of document literacy (level 4/5).

*Not including Territories

Chart 2



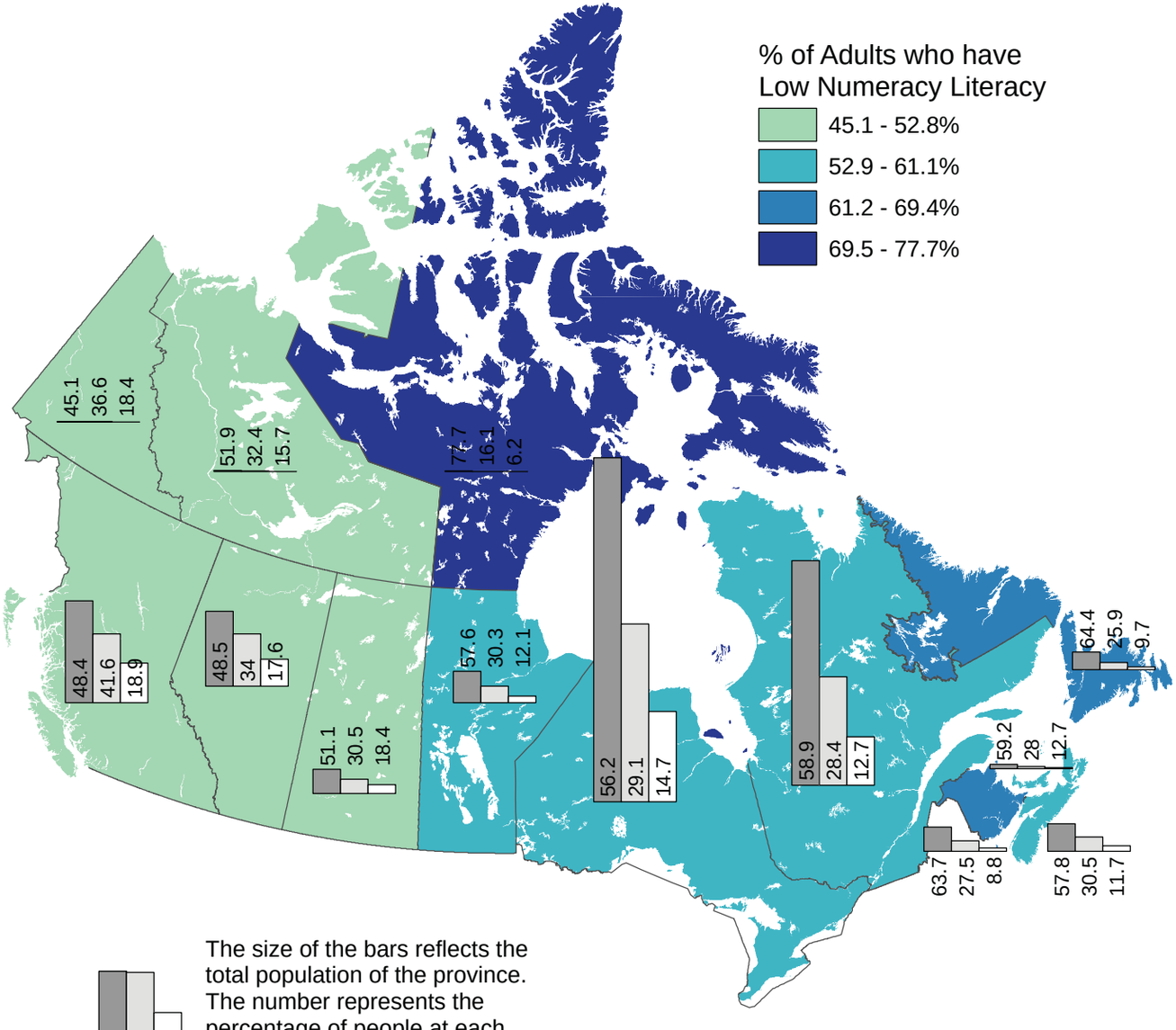
Change in Document Literacy Levels between 1994 & 2003

- Level 1
- Level 2
- Level 3
- Level 4/5

(# of People in 2003 - # of People in 1994 by Document Literacy Level) / (# of People in 1994 by Document Literacy Level)

2003 International Adult Literacy & Skills Survey

Map 5



(Adult Population with Numeracy Literacy at Levels 1 & 2) / (Adult Population)

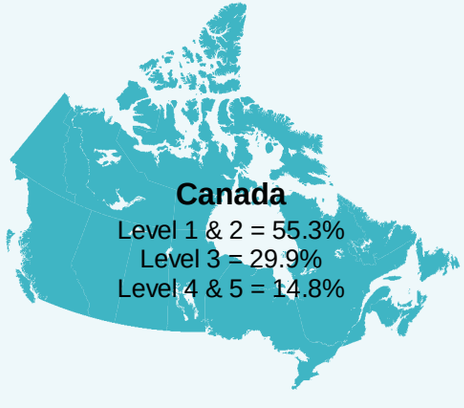
1:30,000,000

Numeracy Literacy

Adults - Age 16 & Older

Numeracy literacy is "the knowledge & skills required to effectively manage and respond to the mathematical demands of diverse situations" (IALSS 2003).

Canadians tended to score lower on the tests for numeracy literacy compared to prose or document literacy. While this pattern remains similar across the country, a greater proportion of the population in the western provinces score at level 4/5. Nunavut has a much greater percentage of people who score at levels 1 & 2 (77.7%) than the other provinces & territories.



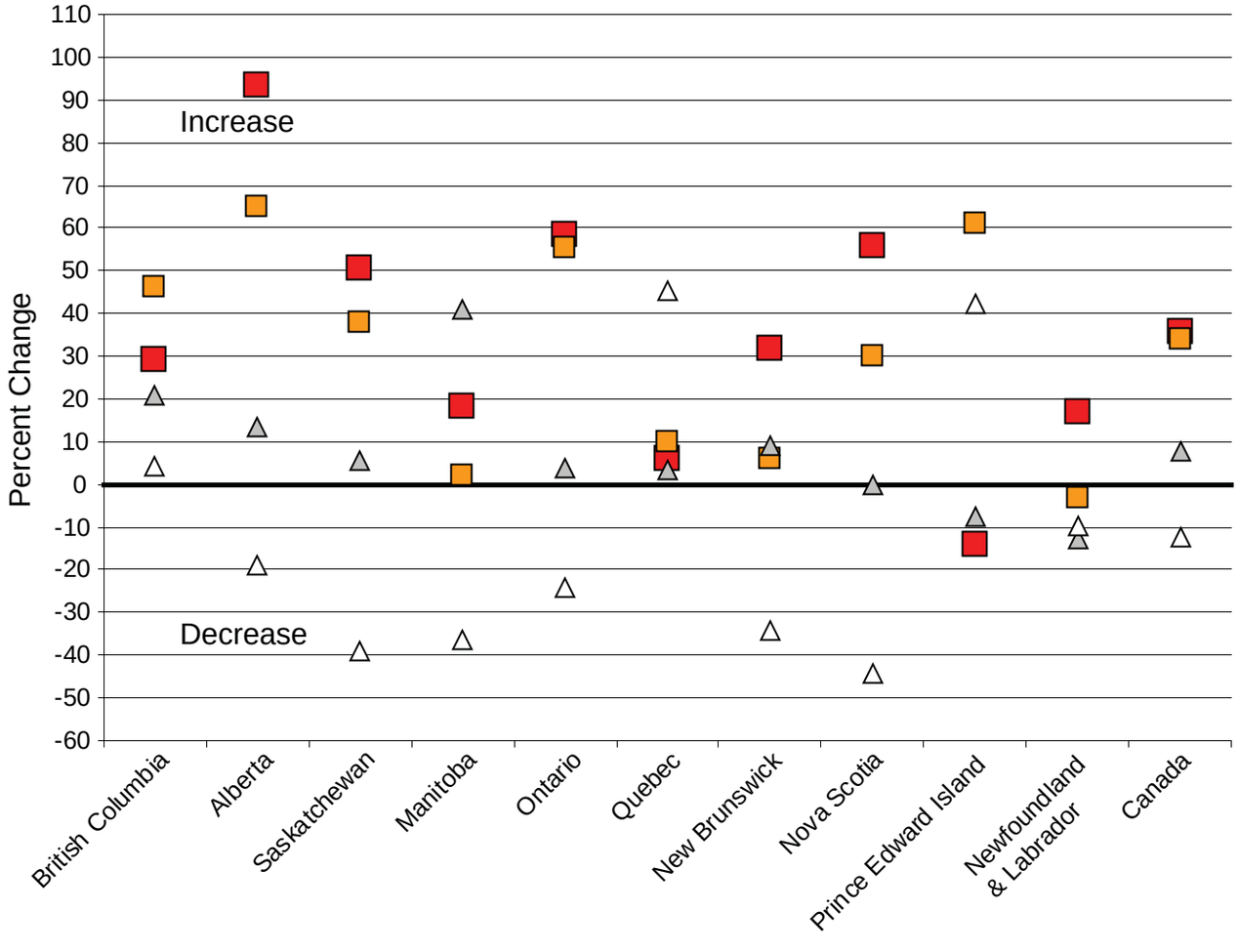
% Change in Numeracy Literacy Between 1994 & 2003

Adults - Age 16 & Older

Between 1994 and 2003 there was a decrease in the number of people scoring at the highest level of numeracy literacy in every province except British Columbia, Quebec, & PEI. The greatest increase in all of the provinces except for Manitoba, PEI and Quebec was in the number of people scoring at levels 1 or 2. Alberta saw an increase of over 90% in the number of people measuring at the lowest level of numeracy literacy and an increase of almost 70% in the number of people scoring at level 2.

*Not including Territories

Chart 3



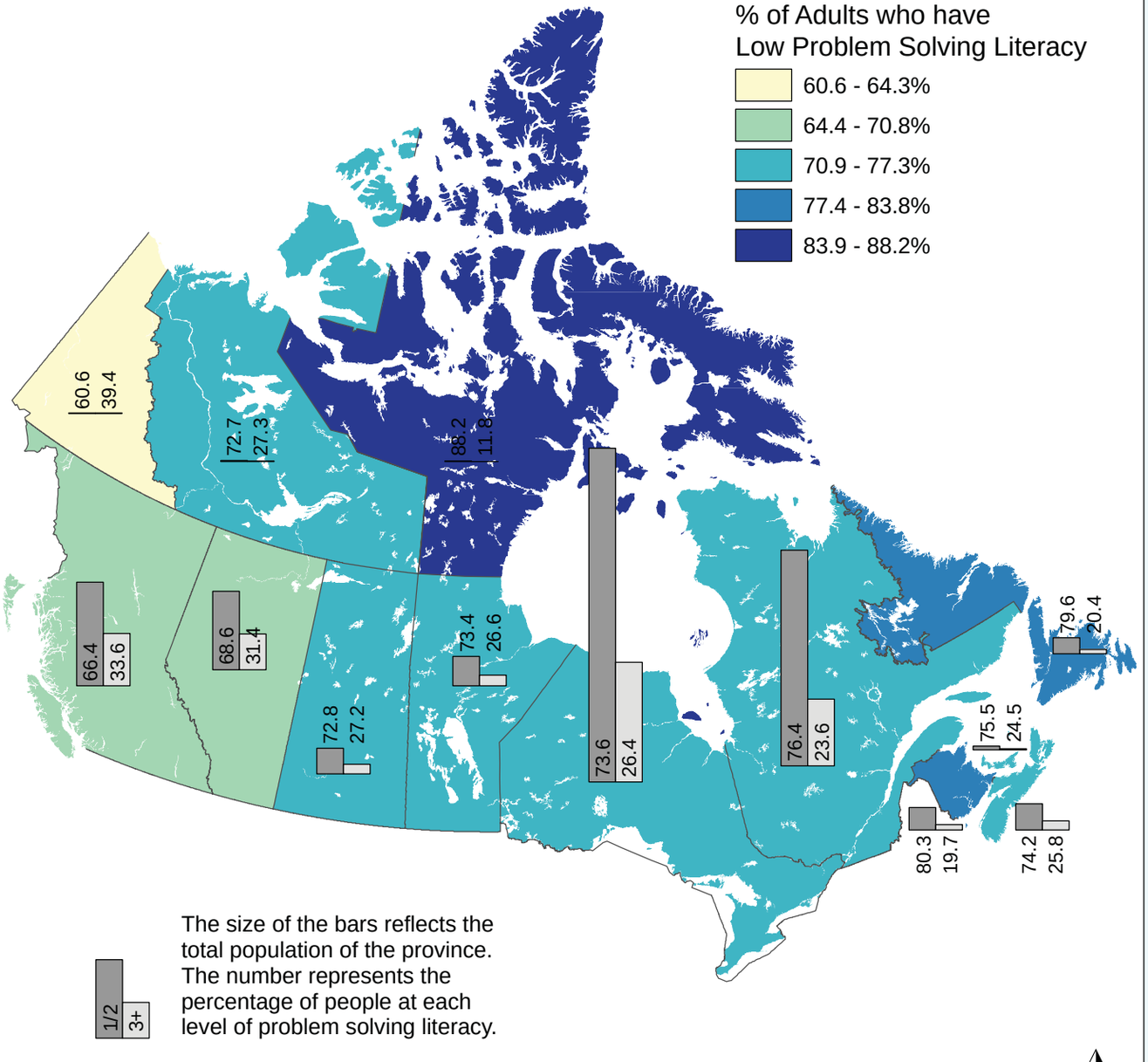
Change in Document Literacy Levels between 1994 & 2003

- Level 1
- Level 2
- Level 3
- Level 4/5

(# of People in 2003 - # of People in 1994 by Numeracy Literacy Level) / (# of People in 1994 by Numeracy Literacy Level)

2003 International Adult Literacy & Skills Survey

Map 6



(Adult Population with Problem Solving Literacy at Levels 1 & 2) / (Adult Population)

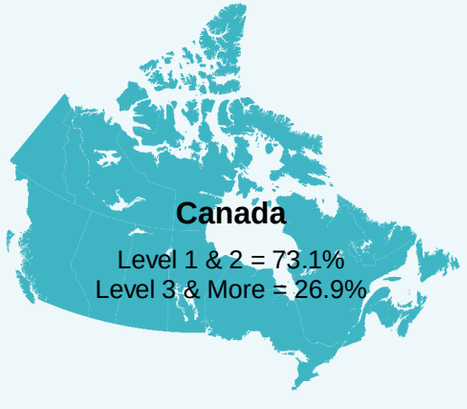
1:30,000,000

Problem Solving Literacy

Adults - Age 16 & Older

Problem solving is "goal-directed thinking and action in situations for which no routine solution procedure is available ... the problem solver has a more or less well-defined goal, but does not immediately know how to reach it" (IALSS 2003).

On average, 73.1% of Canadians scored at levels 1 or 2. As with the other types of literacy, Yukon Territory & Nunavut were at the high and low extremes respectively. Canadians performed worse on Problem Solving tests than on tests for all other types of literacy.

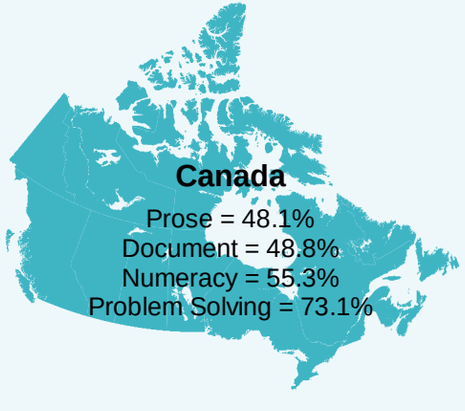


Map 6

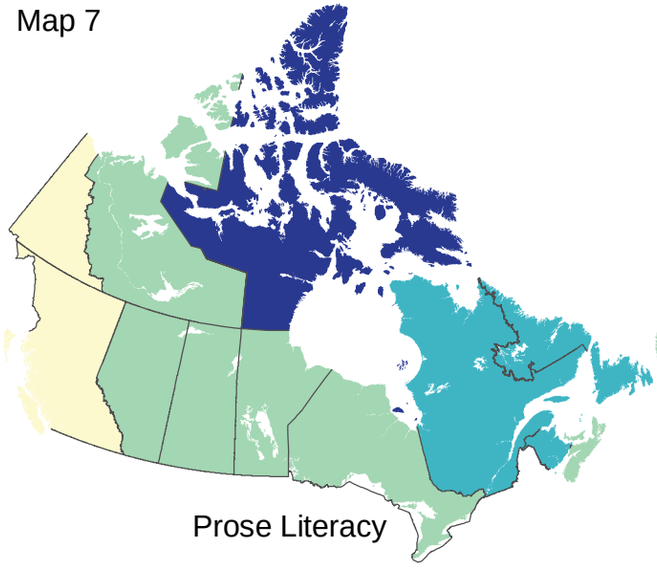
Low Literacy

Adults - Age 16 & Older

The largest percentage of the population with low literacy in all four categories was found in Nunavut. In general, a smaller percentage of people had low literacy in the western provinces and territories than in the east, specifically in Yukon Territory, British Columbia, and Alberta. Across Canada, the percentage of people with low problem solving literacy skills was much greater than the percentage with low skill levels for the other types of literacy.

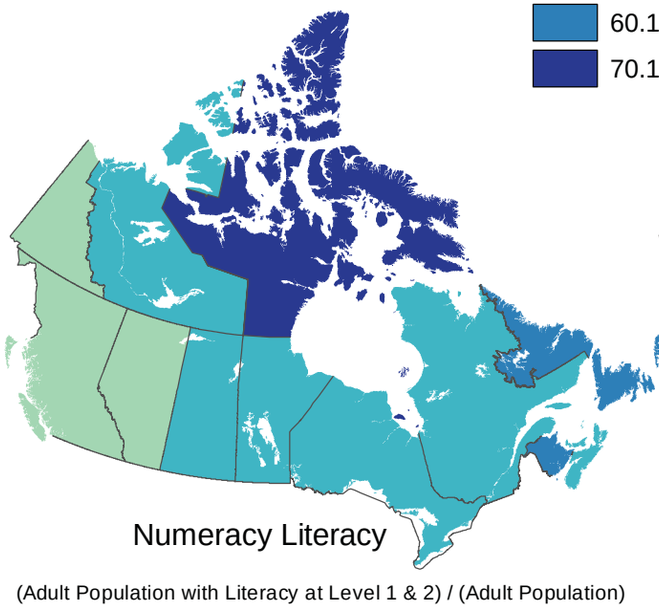


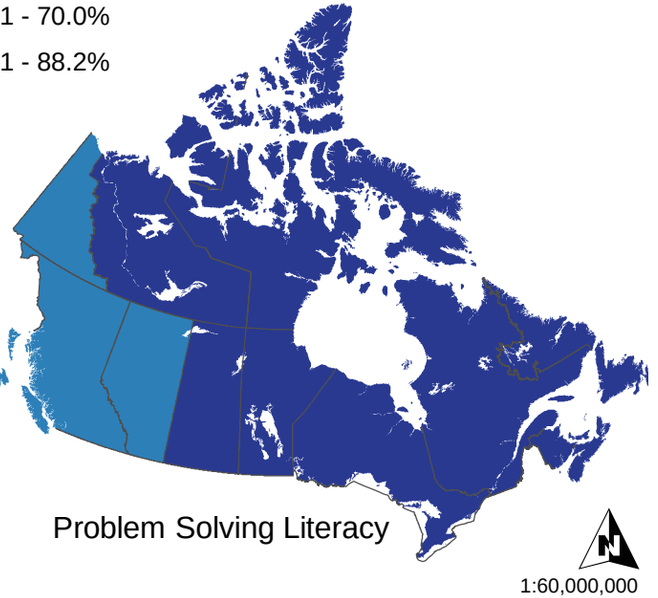
Map 7



Percent with Low Literacy
(Level 1 or 2)

- 31.9 - 40.0%
- 40.1 - 50.0%
- 50.1 - 60.0%
- 60.1 - 70.0%
- 70.1 - 88.2%





(Adult Population with Literacy at Level 1 & 2) / (Adult Population)

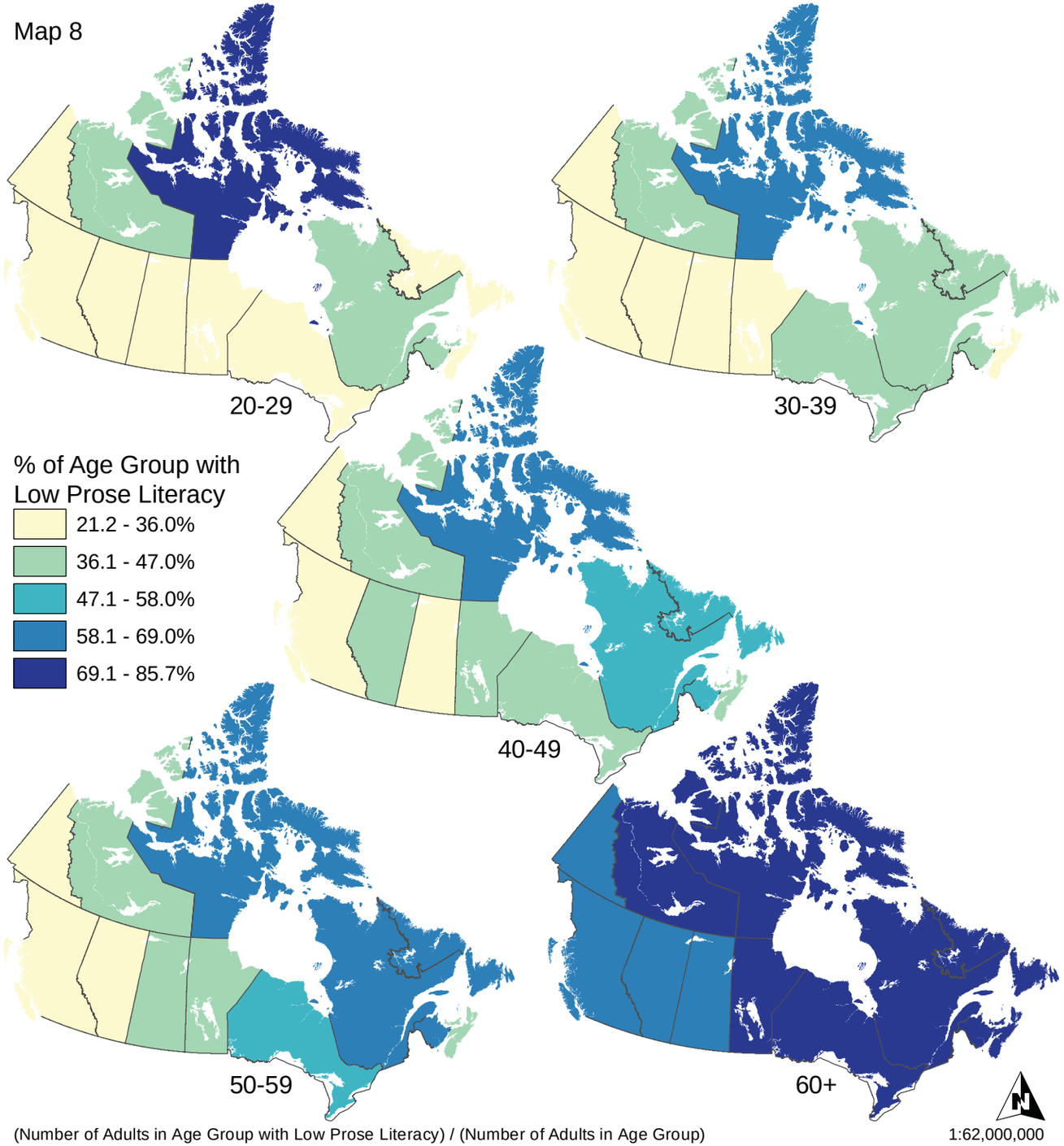
1:60,000,000

2003 International Adult Literacy & Skills Survey

Map 7

2003 International Adult Literacy & Skills Survey

Map 8



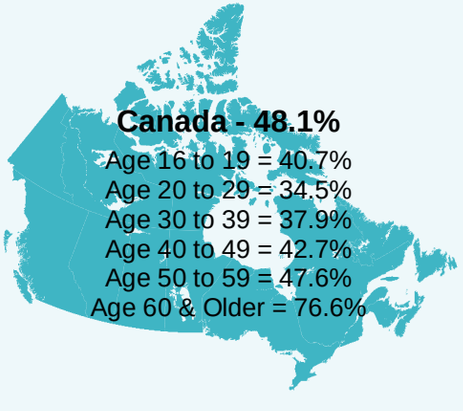
(Number of Adults in Age Group with Low Prose Literacy) / (Number of Adults in Age Group)

1:62,000,000

Low Prose Literacy & Life Cycle

Adults - Age 16 & Older

Generally, low prose literacy rates (level 1 and 2) increased with age. On average more than 75% of people in Canada aged 60 and over scored low in prose literacy. The lowest overall rate (34.5%) was found in people aged of 20 and 29. For the most part, people in western Canada tended to score better in prose literacy compared to the rest of Canada across all age groups.

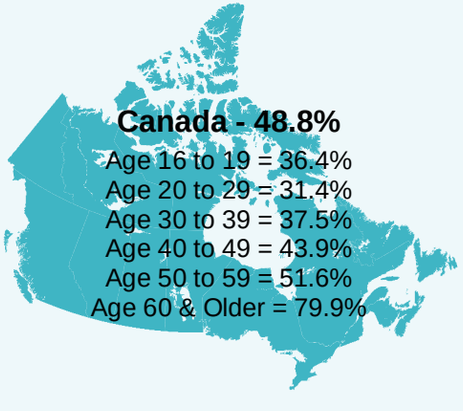


Map 8

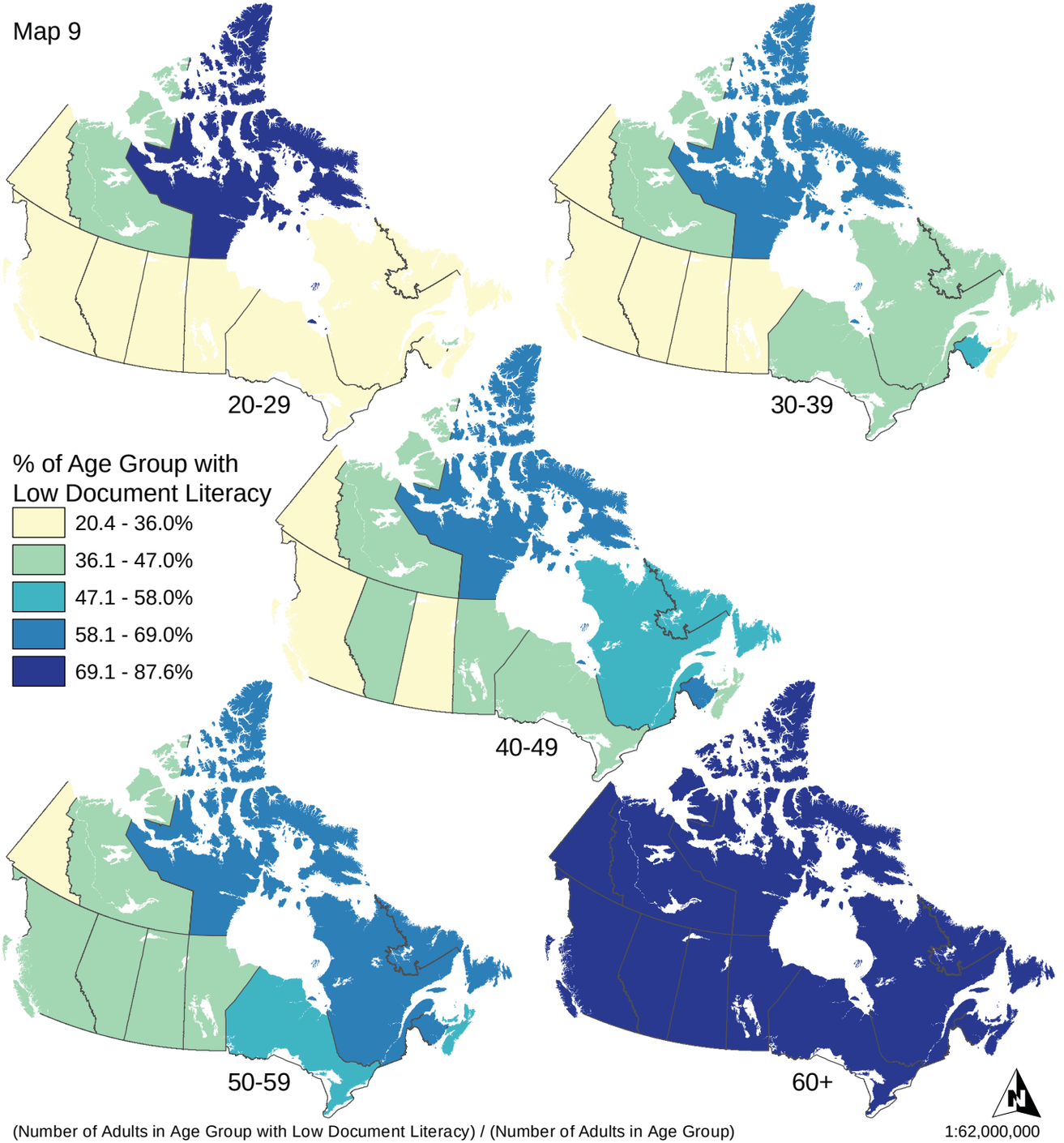
Low Document Literacy & Life Cycle

Adults - Age 16 & Older

The rate of low document literacy was quite similar to the rate of low prose literacy at every age level. The rates of low document literacy for people in the two oldest age groups were higher than for prose literacy. At least 69.1% of people aged 60 and over had low document literacy in every province and territory.



Map 9

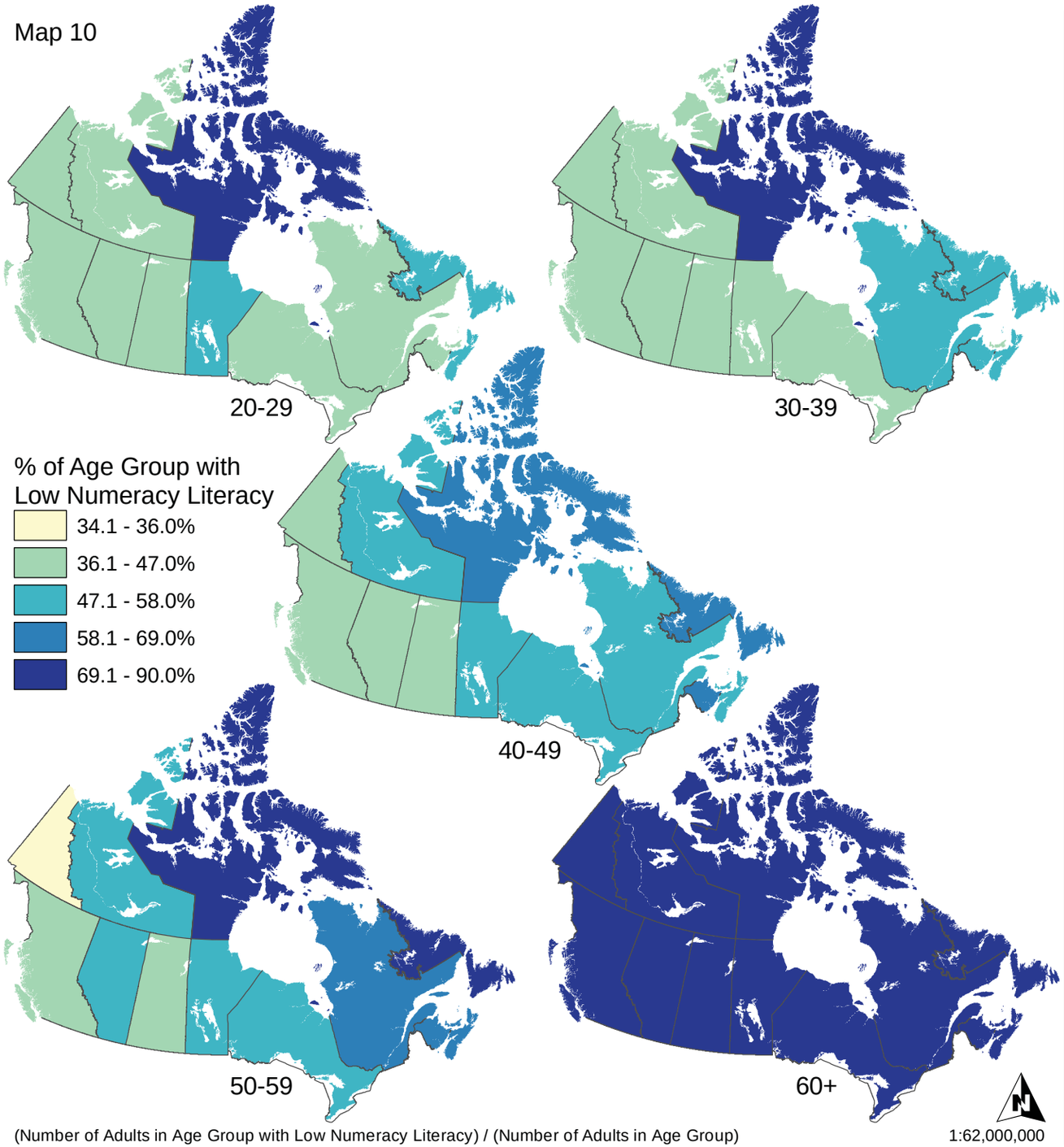


(Number of Adults in Age Group with Low Document Literacy) / (Number of Adults in Age Group)

1:62,000,000

2003 International Adult Literacy & Skills Survey

Map 10



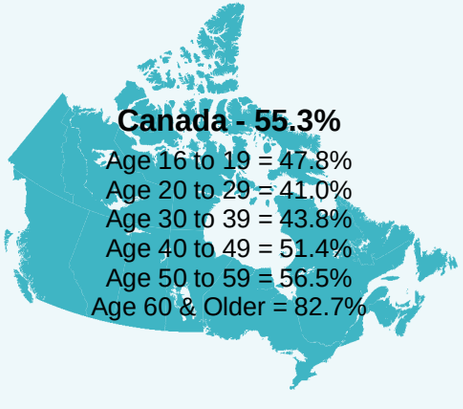
(Number of Adults in Age Group with Low Numeracy Literacy) / (Number of Adults in Age Group)

1:62,000,000

Low Numeracy Literacy & Life Cycle

Adults - Age 16 & Older

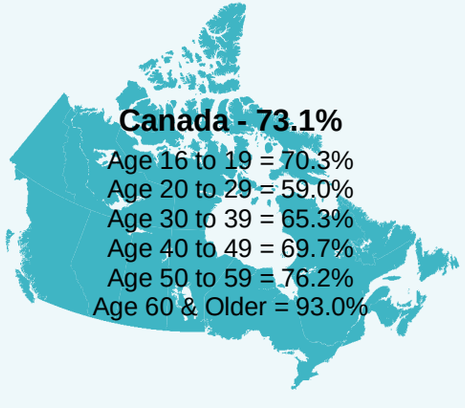
The higher rates of low numeracy literacy were reflected at every age level and in the overall population. Just under half of all Canadians scored at the lowest levels of document and prose literacy while the rate jumps to 55.3% for numeracy literacy. The age-related pattern across the provinces and territories is similar to that for both document and prose literacy.



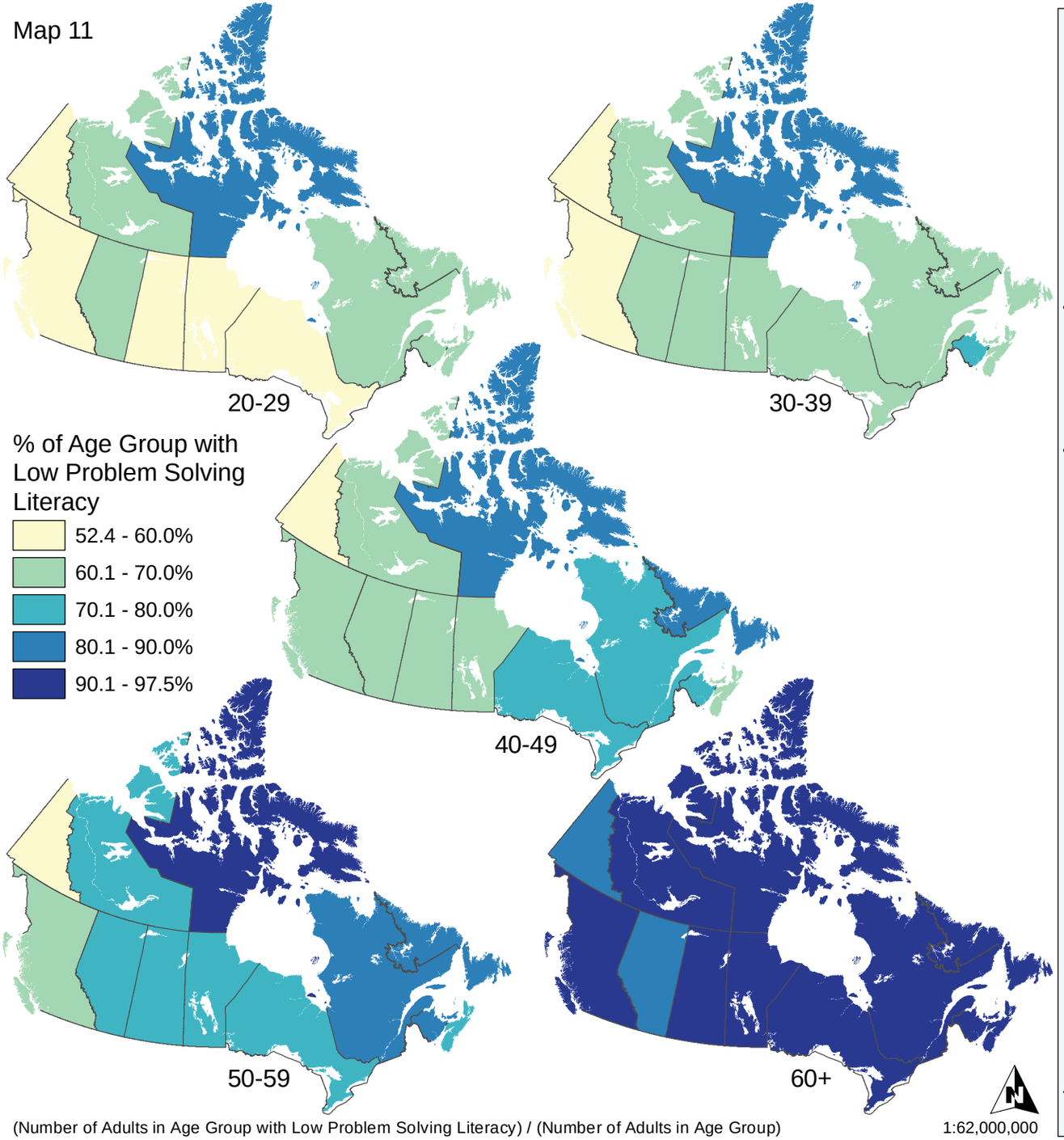
Low Problem Solving Literacy & Life Cycle

Adults - Age 16 & Older

More than 90% of people over the age of 60 had low problem solving literacy. Although the rates were higher than for the other types of literacy, people in the west and the Yukon usually had higher levels of literacy, or lower rates of low problem solving literacy, compared to the rest of the country.



Map 11



(Number of Adults in Age Group with Low Problem Solving Literacy) / (Number of Adults in Age Group)

1:62,000,000

CHAPTER 4

THE LANDSCAPE OF DISABILITY

According to the UN, people with disabilities are the world's largest minority (United Nations, 2007) and growing due to population growth, medical advances and the aging process (WHO, 2006). In Canada, the Participation and Activity Limitation Survey (PALS) done in 2001 showed that approximately 3.6 million or one in every seven, Canadians has at least one disability (MAP 12) . Disability rates among the provinces are surprisingly consistent. There are two significant exceptions. One is Quebec where there is an 8.2% rate of disability. The other exception is Nova Scotia with a rate of 16.8%, the highest rate found. This consistency of rate of disability across the country is surprising when one thinks of the difference in the demographic, economic, social and political variation across Canada.

As the previous century came to a close and the new millennium drew closer there was increased interest in disability in Canada and several surveys attempted to include the population with disabilities. Some surveys focused on people with disabilities only and others included disability as part of a wider range of social and/or economic issues. In 1986 and 1991 there was HALS, the Health and Activity Limitation Survey. In 1994 and 2003 Canada was an international member of the IALS, International Adult Literary Survey. The National Population Health Survey (NPHS) was conducted in 2000 and 2002. In addition, PALS, the Participation and Activity Limitation Survey, was undertaken in 2001[10].

Each of these surveys defined disability differently and therefore used different trigger questions to identify the population with disabilities. It is not surprising that with this diversity in definition the landscape of disability looked very different depending upon which survey was being looked to for information. As MAP 13 shows, the disability rates range from 11.8% to more than three times that rate [34.5%] which is a difference of approximately 7.5 million people. What is very clear is that the disability rate measured varies widely depending upon definition and trigger question. For this study we chose to use the PALS dataset for most of our analysis since it is the most thorough and most recent survey dedicated to exploring the life of people with disabilities in Canada.

LIFE CYCLE

Disability rates vary by age of the population. MAP 14 shows the disability rate over the life cycle in three broad cohorts – children age 0-14, adults age 15-65, and seniors age 65+. Children have the lowest rate of disability at 3.2%, while seniors have the highest rate at 37.4%. There is considerably more variation among the provinces in the disability rate for seniors, ranging from 25.4% in Quebec

10 As always new data on people with disabilities in Canada are continuously collected. The 2006 estimates are provided at: http://www4.hrsdc.gc.ca/indicator.jsp?preview=1&indicatorid=40&lang=en by Human Resources and Social Development Canada.

to 46.4% in Nova Scotia. The disability rate for seniors in Quebec is more than 10% lower than the next lowest rate. For each cohort, Quebec has the lowest disability rate, while Nova Scotia has the highest.

An important characteristic of the population is its age structure. MAP 15 shows the number of people with disabilities in five year age cohorts up to age 64. Generally, the likelihood that one will experience disability increases with age. There are a few cases in which reductions in the number of people with disabilities can be seen as one ages, such as with the 15-19 cohort. This is the age when people are most healthy and therefore are at decreased risk of disability. In most provinces, there is a reduction in the number of people with disabilities between the ages of 60 to 64. In countries with life expectancies over 70 years, individuals spend on average about 8 years, or 11.5% of their lifespan, living with a disability (United Nation, 2007).

DISABILITY TYPE

Differences in type of disability affect the experiences of people living with a disability. Both HALS and PALS provide data on type of disability. HALS broke disability down into seven types: seeing, hearing, speech, mobility, agility, and unknown (MAP 16). PALS broke disability down with somewhat more specificity with the following categories: mobility, pain, agility, hearing, seeing, psychological, learning, memory, speech, developmental, and unknown (MAP 17). According to the more recent PALS data, over 60% of adults with disabilities experience mobility, pain and/or agility disabilities. HALS did not include pain and showed that just over 50% of people with disabilities experienced mobility and agility disabilities nationwide. Although the patterns generally are similar across the provinces there are subtle differences. For example, more people with disabilities live with pain in British Columbia, Alberta, and Saskatchewan while mobility is the most common disability in the other provinces. A cluster analysis showing commonalities is inset in the upper right hand portion of map 17. It shows the provinces with similar patterns in types of disability. As you can see, BC and Alberta make up one group, the Prairie Provinces and the Maritimes are a second group, while Ontario, Quebec, and Newfoundland and Labrador are idiosyncratic.

AGE OF ONSET

Age of onset is another factor affecting people's experience of having a disability. Age of onset affects the experience of impairment over a lifetime and can have significant impact on a person's opportunities. It affects educational experiences, employment patterns and disability-related supports and benefits. Age of onset data also affects policy decisions in terms of resource development.

In Canada, 17.2% of people with disabilities who are between the ages of 15 to 64 first experienced their disability between birth and 14 years of age; 21.5% between 15 and 29 years of age; 31.5% between the ages of 30 and 44; and 29.8% between the ages of 45 and 64 (MAP 18). Throughout Canada it is clear that the rate of onset increases as one gets older. However, there is spatial variation across the provinces. The birth to 14 age cohort map shows that the rate of onset of disability during these years is fairly consistent across all the provinces. The rate of onset is more variable among the provinces for older age cohorts.

According to HALS, in 1991 the largest proportion of Canadian adults with disabilities acquired their disability between the ages of 20 and 44 (32%), followed by adults aged 45 to 64 (28%) (CHART 4). Less than one in five (17%) acquired their disability as seniors. In 2001, according to the PALS data, Canadian adults with disabilities experienced disability onset at a higher rate during the ages of 45 to 54 compared to any other period, though the 20 to 44 cohort is close behind. There were greater percentages of the population in 1991, compared to 2001, whose disability onset was during the childhood years of 0-4 or 5-19. The pattern for age of onset is remarkably consistent across the provinces in both 1991 and 2001.

The age of onset for mobility, pain, agility, hearing, and seeing, were each looked at independently (MAP 19 to MAP 23). Each of the maps is scaled in the same way so that comparisons by age of onset cohort and among the 5 types of disability are meaningful. These values are calculated by dividing the number of adults whose age of onset is between the cohort end values for a particular type of disability by the number of adults with that type of disability.

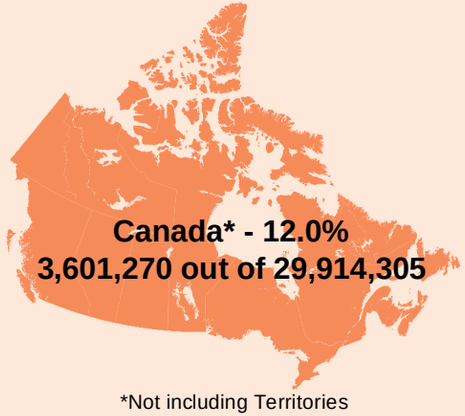
There are numerous patterns which can be seen in the disaggregated age of onset maps. Relatively few adults indicated the onset of any one of these 5 disabilities during childhood (age 0-14) or as young adults (age 15 to 24). Generally, the rate of onset for each of these disabilities increases with age and the spatial variation, or differences between provinces, also tends to increase for the older cohorts. It appears, according to the maps, that a higher percentage of people with each of these disabilities experienced an onset of disability between age 40 and 54 compared to those between age 55 and 64. This may be inaccurate, however, due to the different number of years included in those 2 age cohorts (15 years versus 10 years). The highest rates for onset of hearing disabilities are found among seniors (age 65 and older) in Saskatchewan and Manitoba, while the highest rates for onset of seeing disabilities are found in Saskatchewan and Ontario.

As the data shows the rate of disability varies significantly among the various surveys reviewed here. Age, type of disability and age of onset have an important impact on the rate of disability. There are some provincial and territorial differences but they are not significant. Although when looked at in relation to the other factors, we can see some variation. However, disability is not a static category; rather it is the result of the relationship between an individual impairment and the social environment in which an individual lives.

Disability Rate

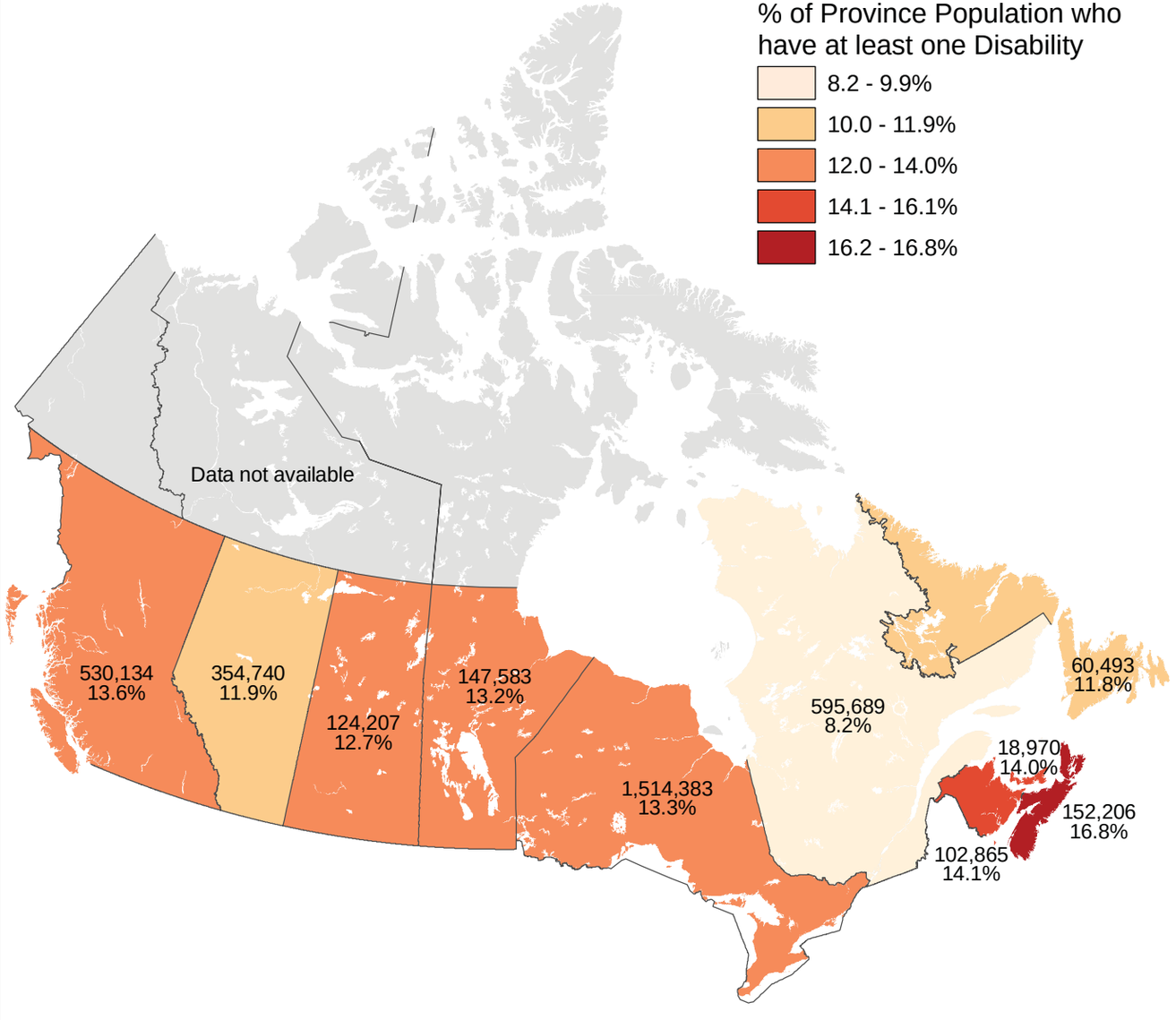
All People

Overall, 12% of Canadians had at least one disability in 2001. Nova Scotia had the highest disability rate (16.8%) while Quebec had the lowest (8.2%). More than 40% of Canadians with at least one disability lived in Ontario.



*Not including Territories

Map 12



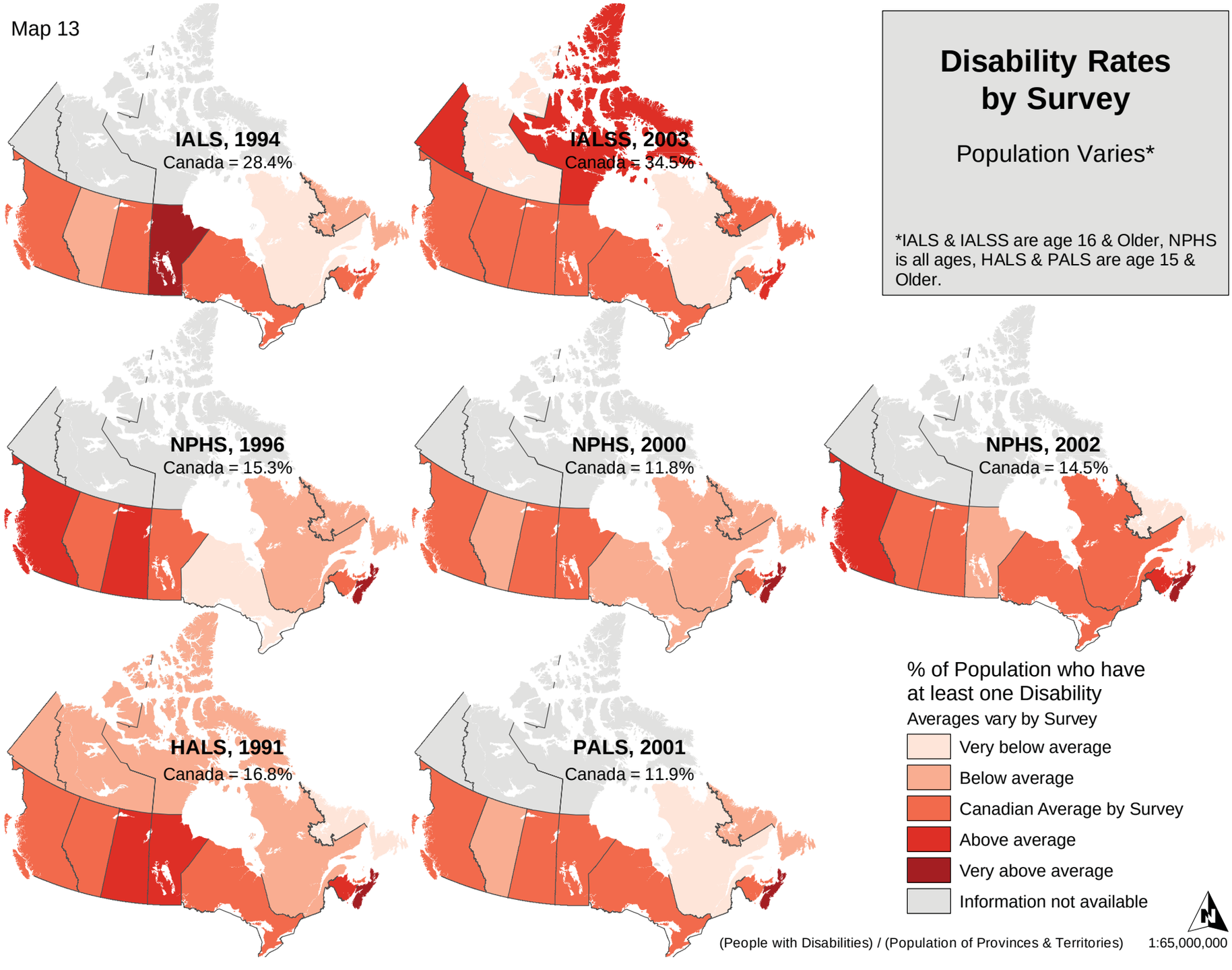
(People with Disabilities from PALS 2001) / (Total Population of Province from Census 2001)

1:30,000,000

2001 Participation & Activity Limitation Survey Map 12

Multiple Data Sources

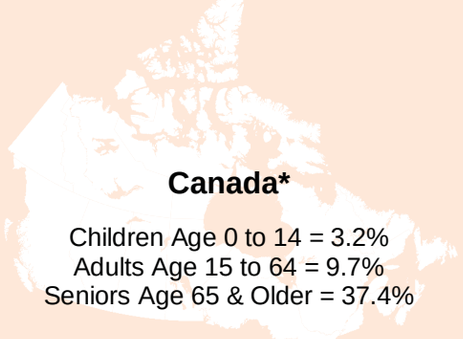
Map 13



Disability Rate Over the Life Cycle

All People by Age Group

The rate of disability and variation between provincial rates of disability increased with age when comparing three broad categories: Children aged 0-14, Adults aged 15-65, and Seniors aged 65 & over. In each age group, Nova Scotia had the highest rate of disability, while Quebec had the lowest. However, in the children's category, the difference between provincial rates was small. Quebec had the lowest rate (2.1%) and Nova Scotia the highest (3.8%). Among people over the age of 65, the rate ranges from 25.4% in Quebec to 46.4% in Nova Scotia. Quebec is the only province with a rate less than 35% for seniors.

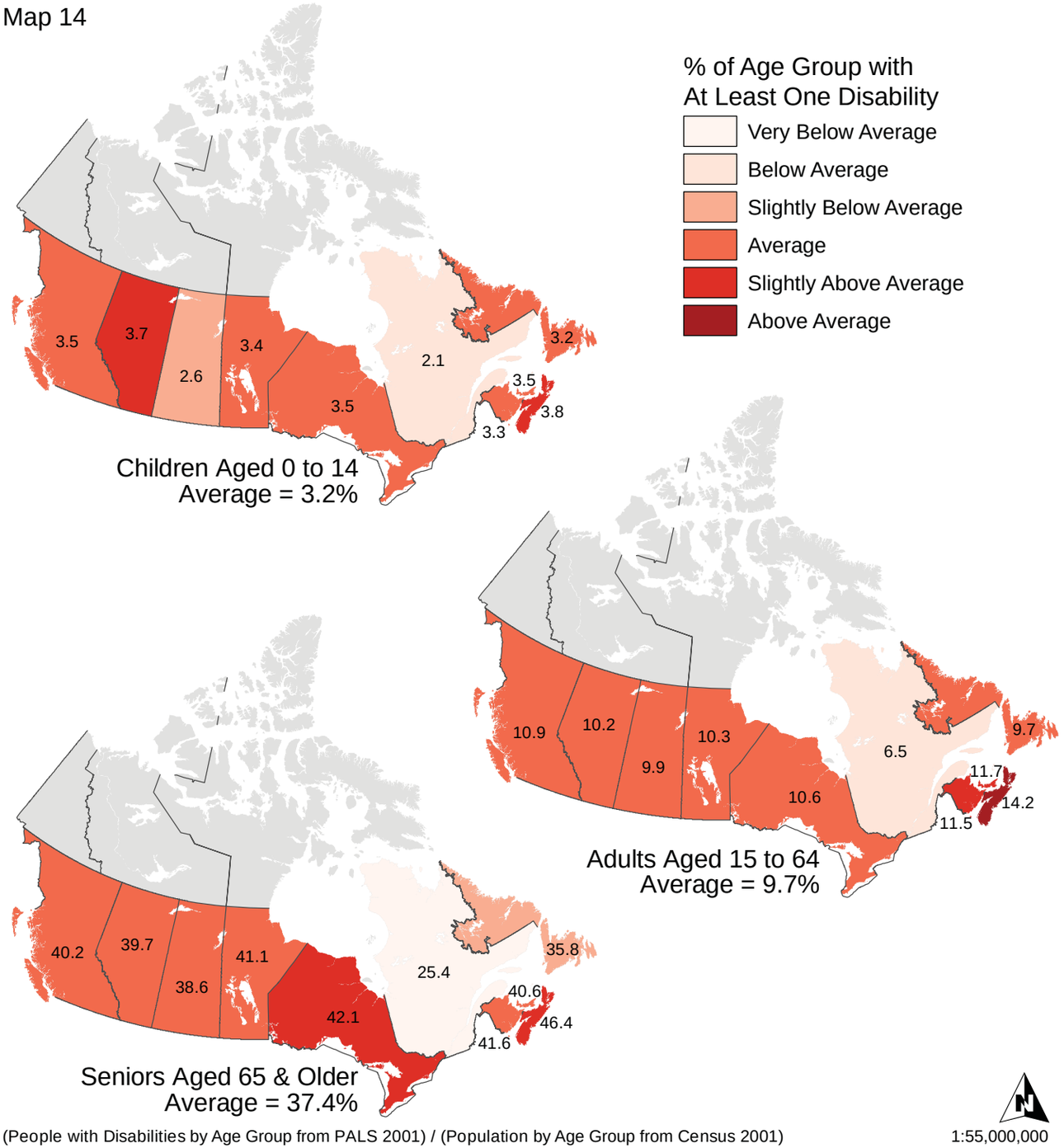


Canada*

Children Age 0 to 14 = 3.2%
Adults Age 15 to 64 = 9.7%
Seniors Age 65 & Older = 37.4%

*Not including Territories

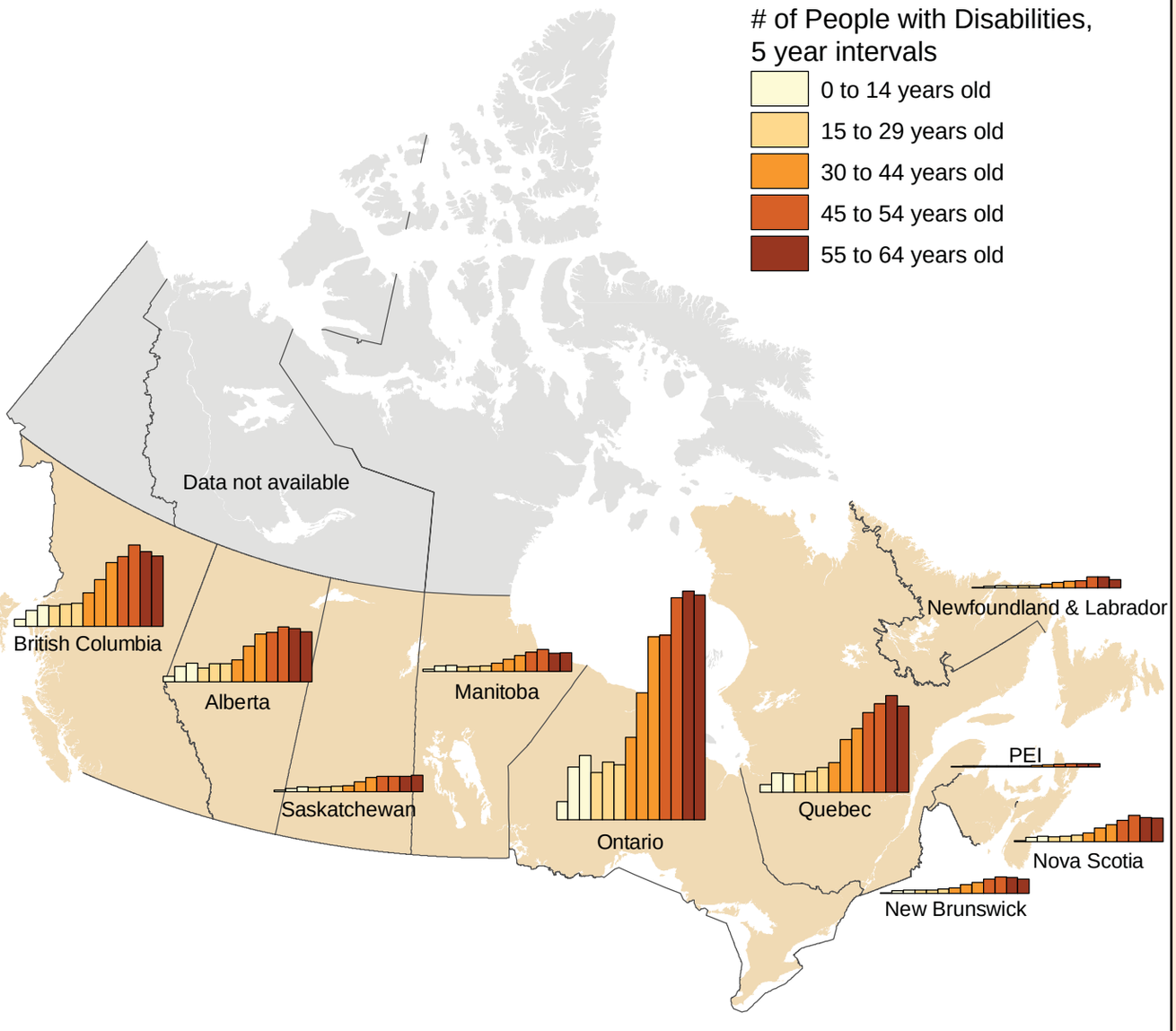
Map 14



(People with Disabilities by Age Group from PALS 2001) / (Population by Age Group from Census 2001)

2001 Participation & Activity Limitation Survey

Map 15



Number of People with Disabilities by Age Group

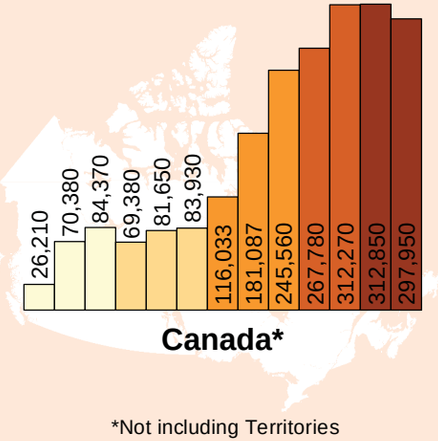
1:30,000,000

People with Disabilities by Age Group

All People Under Age 65

The age distribution of people with disabilities under the age of 65 was generally consistent across all of the provinces, regardless of the size of the population. Some provinces show a slight dip in the number of people with one or more disabilities among people between the ages of 15 & 19 and again for those aged 60 to 64.

The 65 & older group was excluded so that patterns could emerge more clearly amongst the other groups. In Canada as a whole in 2001, over 40% of people with disabilities were 65 & older.



*Not including Territories

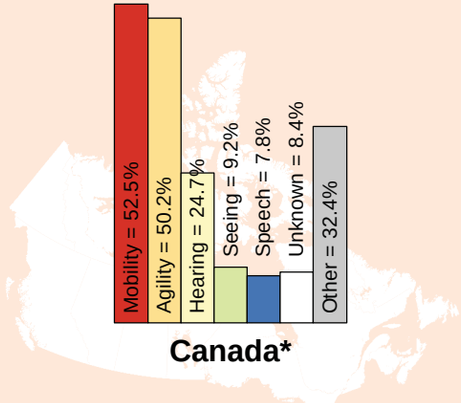
Map 15

Type of Disability 1991

Adults - Age 15 & Older

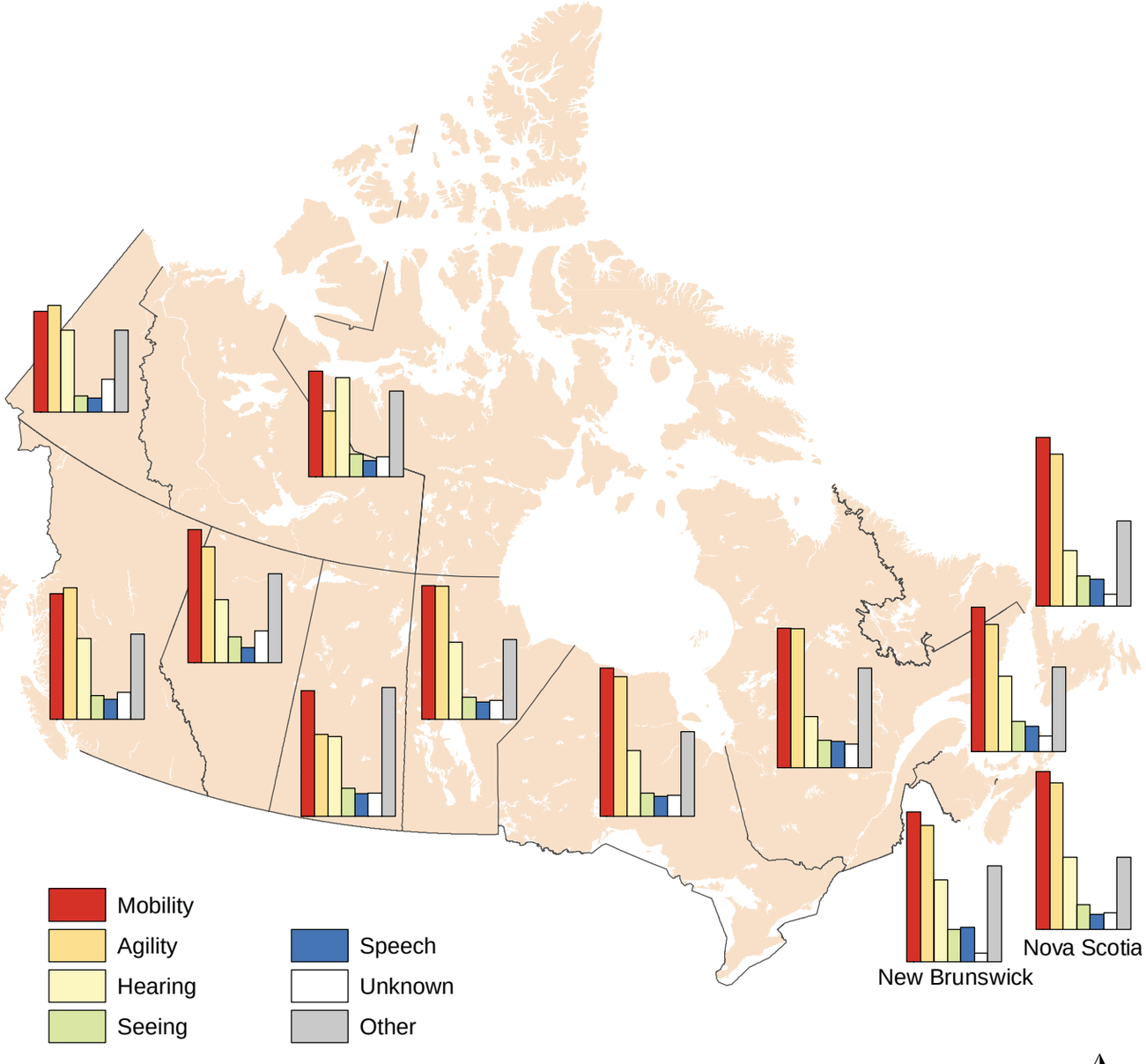
Fewer types of disabilities were measured in the 1991 Health & Activity Limitation Survey (HALS) with a higher percentage of people with disabilities having 'unknown' disabilities in 1991 than in 2001. In addition, many disabilities were classified as 'other' in 1991, a category that does not exist in the 2001 PALS data. 'Pain', which was the category with the third highest rate of disability in 2001, was not included in the 1991 survey.

The categories with the highest rates of disability nationwide in both 1991 and 2001 were 'Mobility' and 'Agility'. However, the rates for those two categories were lower in 1991.



*Northwest Territories includes Nunavut

Map 16



(Adults with Disabilities by Type of Disability) / (Adults with Disabilities)

1:30,000,000

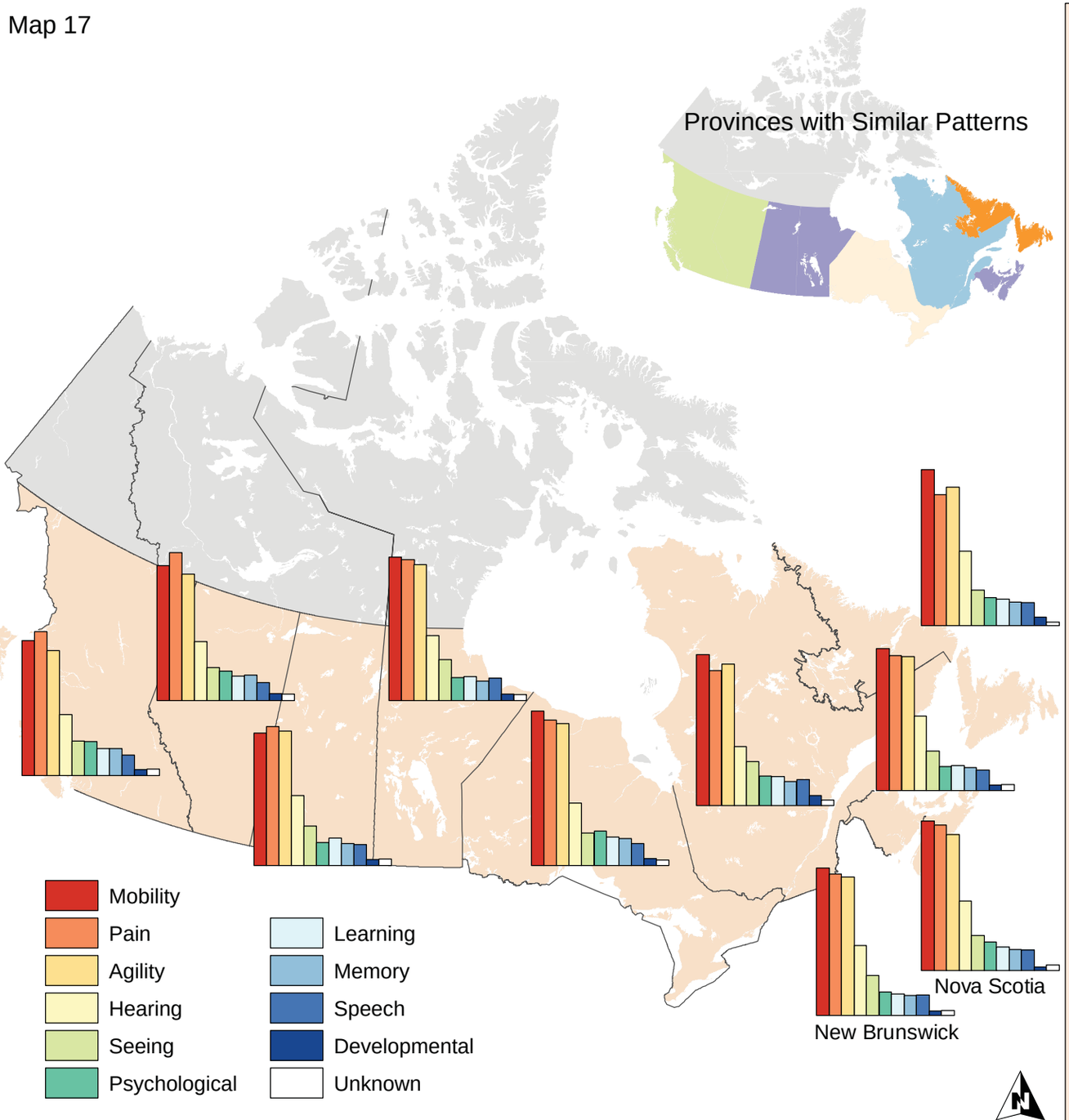
1991 Health & Activity Limitation Survey

Map 16

2001 Participation & Activity Limitation Survey

Map 17

Map 17



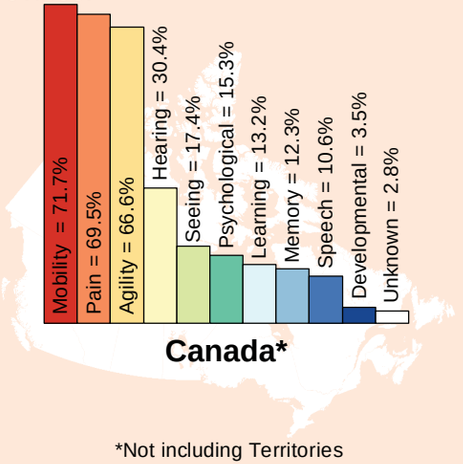
(Adults with Disabilities by Type of Disability) / (Adults with Disabilities)

Type of Disability 2001

Adults - Age 15 & Older

In 2001, over 60% of adults with disabilities experienced mobility, pain, and/or agility disabilities in all provinces. Over 75% of adults with disabilities had a mobility disability in Ontario & Newfoundland & Labrador, the highest rate of any type of disability in any province. Overall, around 30% of adults with disabilities had a hearing disability.

The inset map shows the results of a cluster analysis done to determine which provinces have similar patterns. Results show that BC & Alberta have a similar pattern while Ontario, Quebec, & Newfoundland & Labrador have patterns that are most unlike any other province.

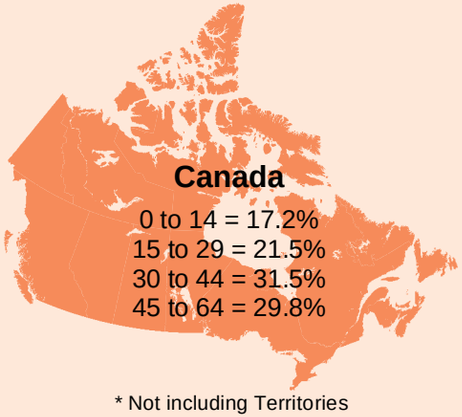


*Not including Territories

Age of Onset

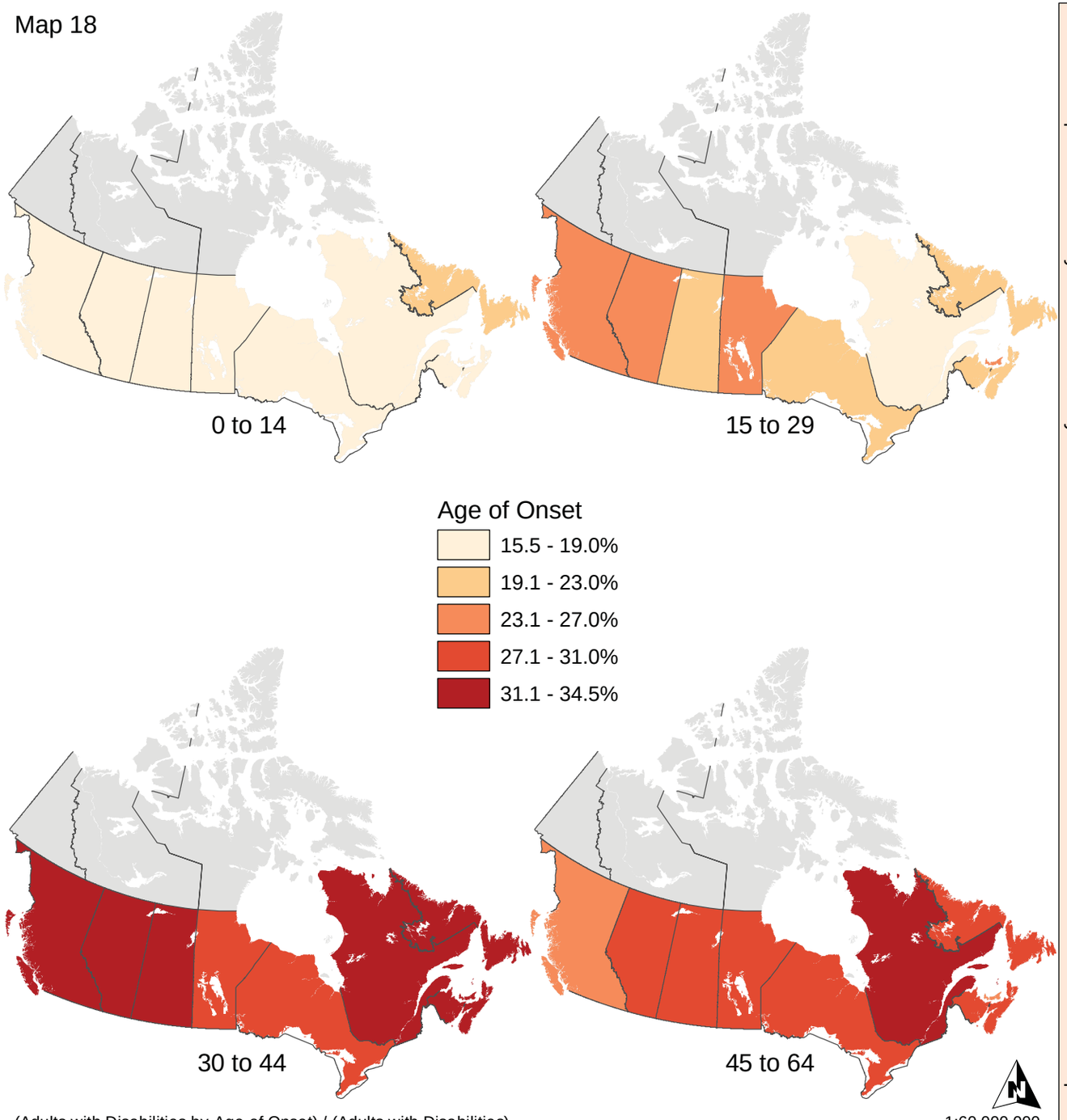
Adults - Age 15 to 64

Over 60% of people with disabilities between the ages of 15 and 64 first experienced their disability between the ages of 30 & 64. The rate of onset between the ages of 0 & 14 was consistent across all provinces. That rate stayed the same in Quebec for people who first experienced onset between 15 & 29, while the rate increased in all other provinces for this age group. The rate continued to increase in all provinces for people whose onset occurred between the ages of 30 & 44. The rate of onset decreased between the 30 to 44 and 45 to 64 age groups in several provinces.



* Not including Territories

Map 18



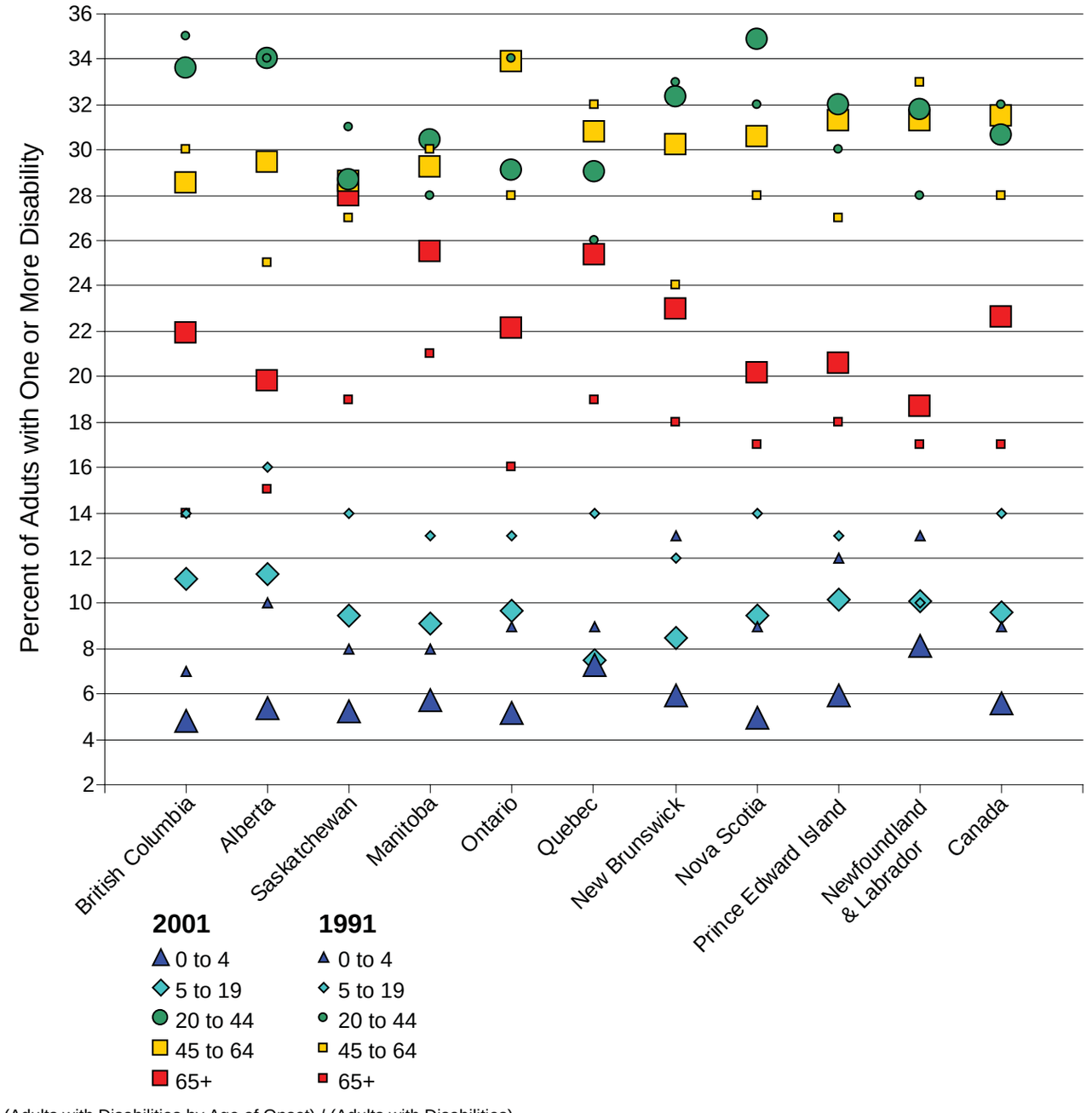
(Adults with Disabilities by Age of Onset) / (Adults with Disabilities)

1:60,000,000

2001 Participation & Activity Limitation Survey

Map 18

Chart 4



(Adults with Disabilities by Age of Onset) / (Adults with Disabilities)

Age of Onset Comparison Between 1991 & 2001

Adults - Age 15 & Older

Fewer adults with disabilities reported onset of disability before the age of 19 in 2001 compared to 1991. However, with the exception of people in British Columbia, Quebec and Newfoundland & Labrador, there were increased reports of disabilities first appearing after the age of 45. In those three provinces, the rate of reporting disability onset between 45 to 64 was quite similar between the 1991 and 2001 surveys. The rates for disability onset between the ages of 20 & 44 were also similar between the two surveys. In 1991 and 2001 the age of onset for most adults occurred during the working years of 20 to 64.

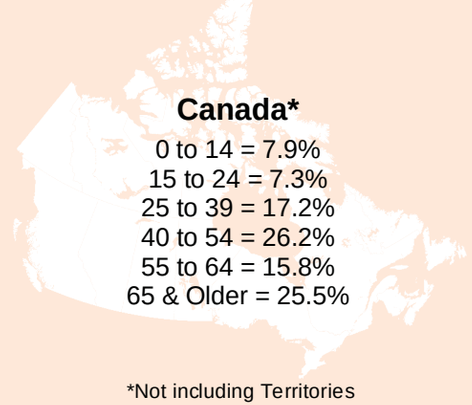
Approximately one quarter of all adults with disabilities first experienced their disability after turning 65, with higher rates of onset reported in 2001 than in 1991 for this age group.

*Not including Territories

Age of Onset for Mobility Disability

Adults - Age 15 & Older

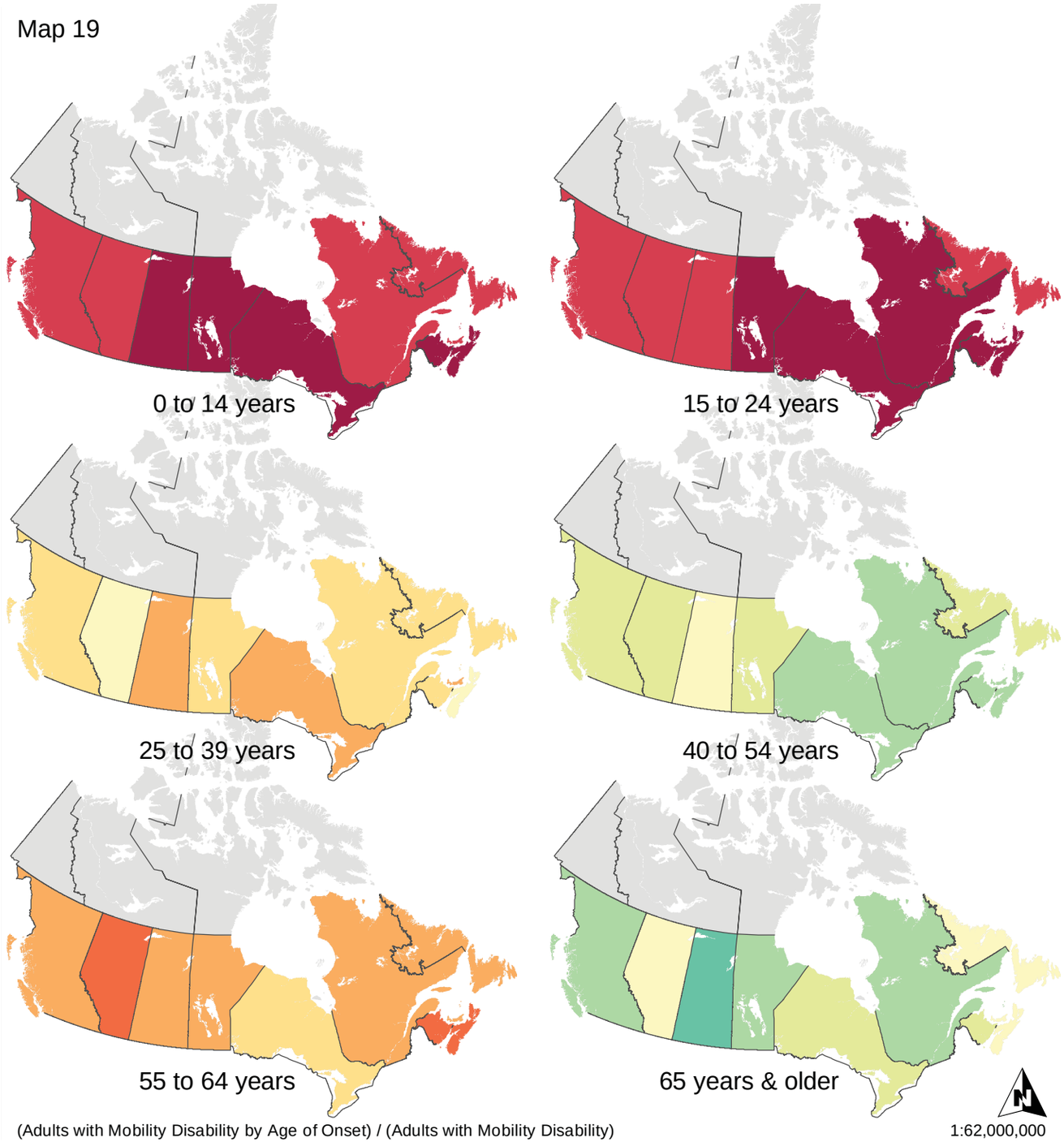
Map 19



Canada*

0 to 14 = 7.9%
15 to 24 = 7.3%
25 to 39 = 17.2%
40 to 54 = 26.2%
55 to 64 = 15.8%
65 & Older = 25.5%

*Not including Territories



(Adults with Mobility Disability by Age of Onset) / (Adults with Mobility Disability)

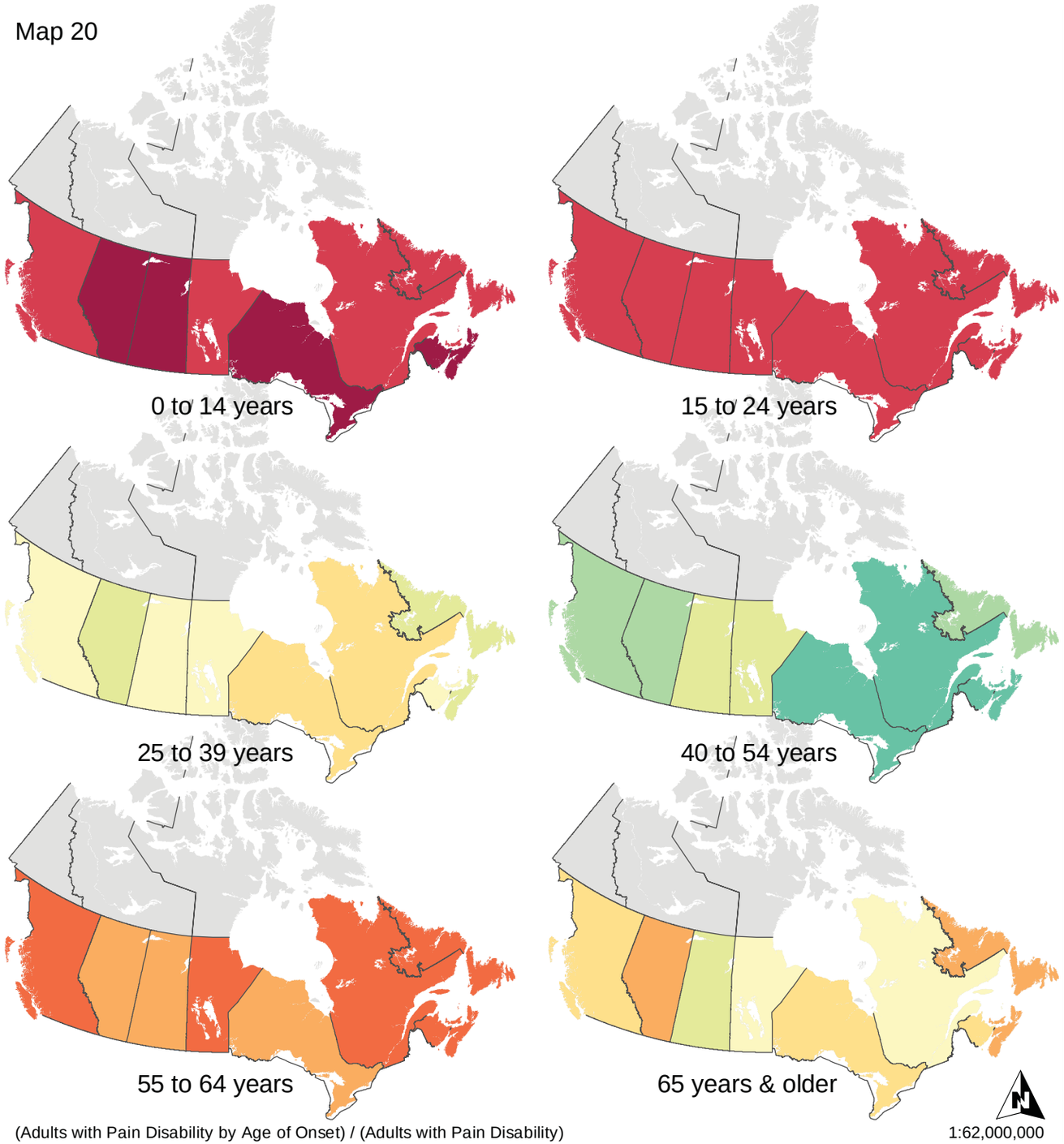
1:62,000,000

2001 Participation & Activity Limitation Survey

Map 19

2001 Participation & Activity Limitation Survey

Map 20



(Adults with Pain Disability by Age of Onset) / (Adults with Pain Disability)

1:62,000,000

Age of Onset for Pain Disability

Adults - Age 15 & Older

Age of Onset

- 4.6 - 8.0%
- 8.1 - 11.0%
- 11.1 - 14.0%
- 14.1 - 17.0%
- 17.1 - 20.0%
- 20.1 - 23.0%
- 23.1 - 26.0%
- 26.1 - 29.0%
- 29.1 - 32.0%
- 32.1 - 35.0%
- 35.1 - 38.7%

Canada*

0 to 14 = 8.0%
15 to 24 = 9.5%
25 to 39 = 20.0%
40 to 54 = 28.6%
55 to 64 = 14.5%
65 & Older = 19.4%

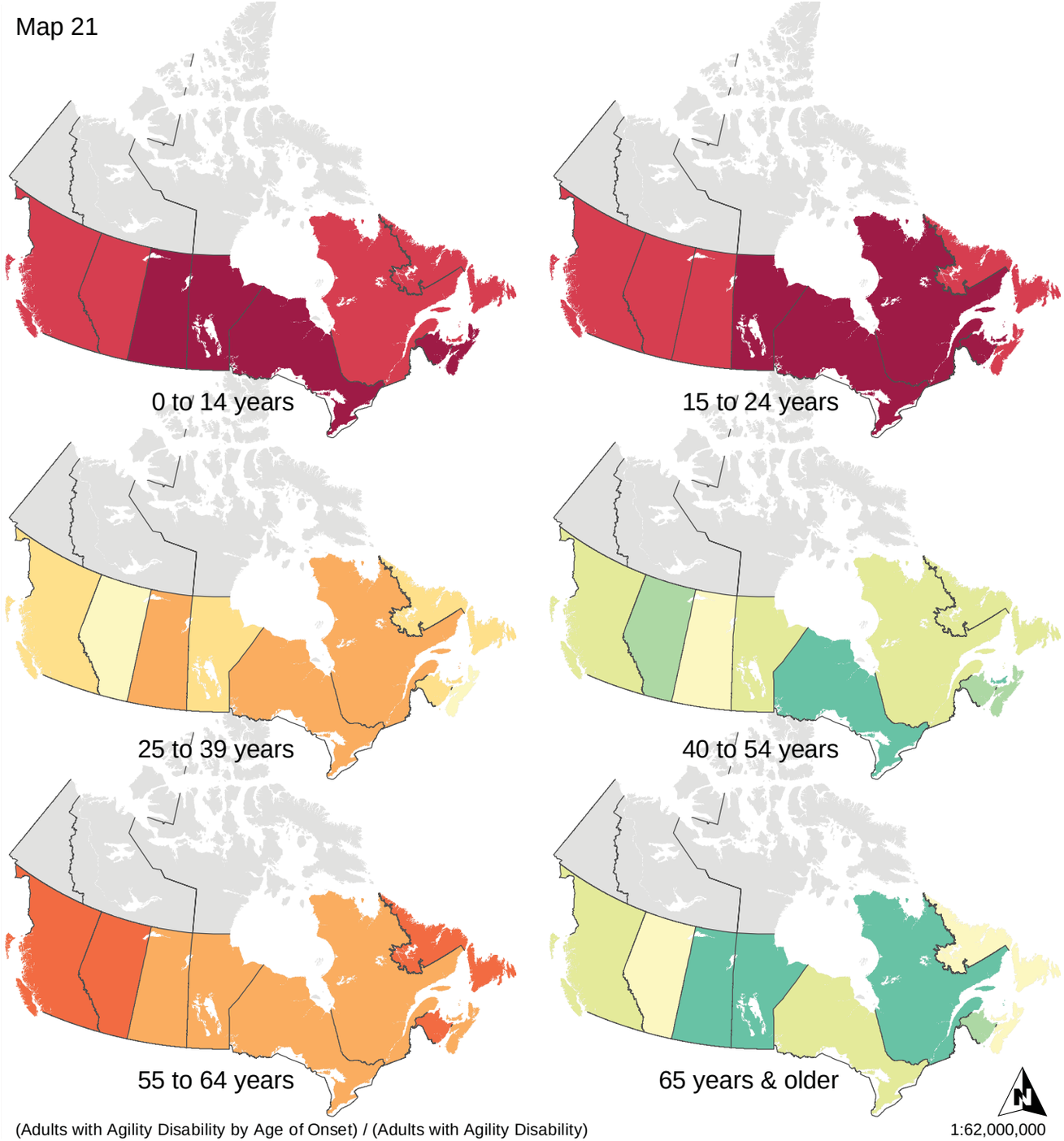
*Not including Territories

Map 20

Age of Onset for Agility Disability

Adults - Age 15 & Older

Map 21



Age of Onset

- 4.6 - 8.0%
- 8.1 - 11.0%
- 11.1 - 14.0%
- 14.1 - 17.0%
- 17.1 - 20.0%
- 20.1 - 23.0%
- 23.1 - 26.0%
- 26.1 - 29.0%
- 29.1 - 32.0%
- 32.1 - 35.0%
- 35.1 - 38.7%

Canada*

0 to 14 = 7.9%
15 to 24 = 7.1%
25 to 39 = 17.3%
40 to 54 = 27.2%
55 to 64 = 14.9%
65 & Older = 25.6%

*Not including Territories

(Adults with Agility Disability by Age of Onset) / (Adults with Agility Disability)

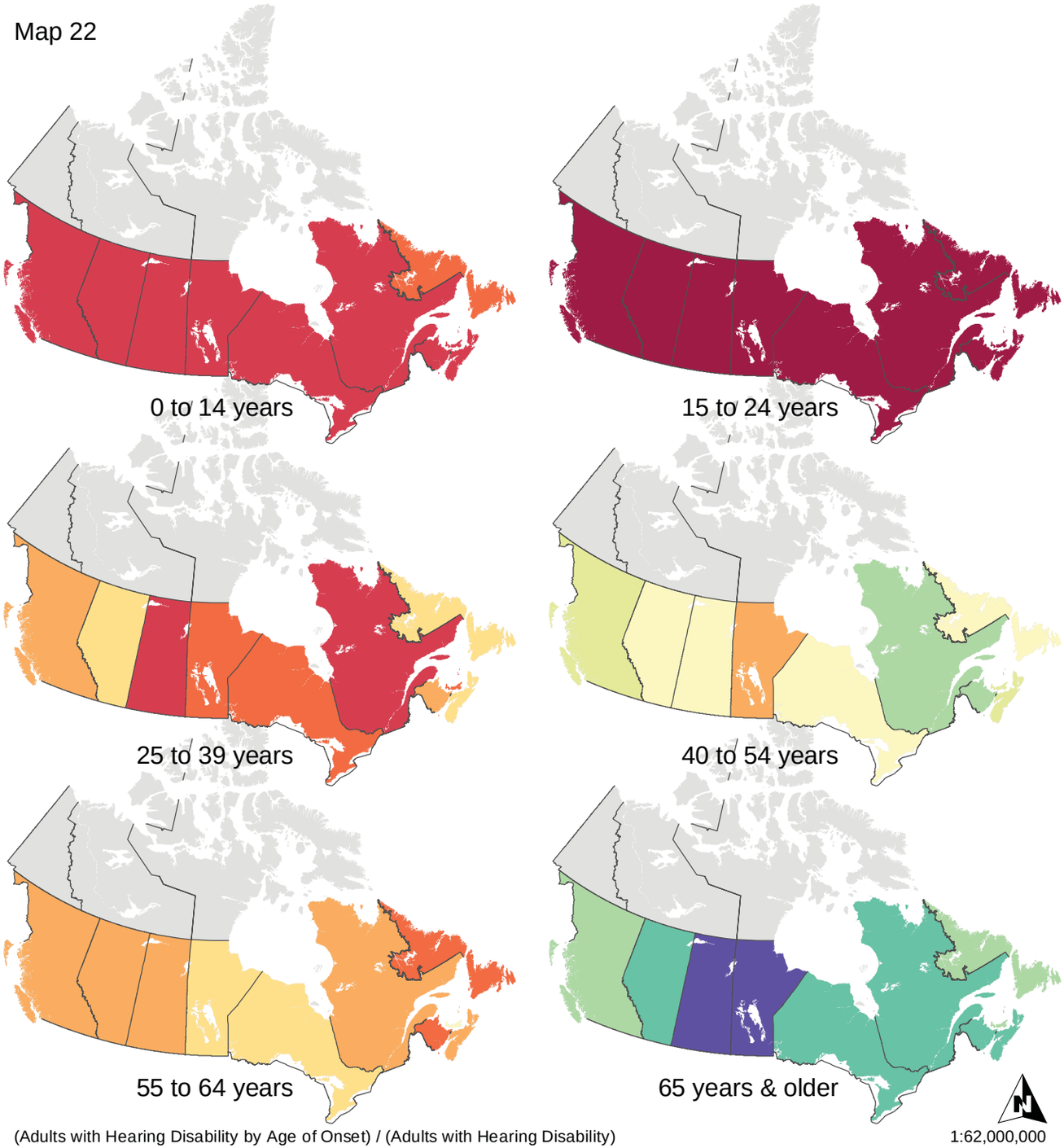
1:62,000,000

2001 Participation & Activity Limitation Survey

Map 21

2001 Participation & Activity Limitation Survey

Map 22



(Adults with Hearing Disability by Age of Onset) / (Adults with Hearing Disability)

1:62,000,000

Age of Onset for Hearing Disability

Adults - Age 15 & Older

Age of Onset

- 4.6 - 8.0%
- 8.1 - 11.0%
- 11.1 - 14.0%
- 14.1 - 17.0%
- 17.1 - 20.0%
- 20.1 - 23.0%
- 23.1 - 26.0%
- 26.1 - 29.0%
- 29.1 - 32.0%
- 32.1 - 35.0%
- 35.1 - 38.7%

Canada*

0 to 14 = 9.8%
15 to 24 = 6.6%
25 to 39 = 13.6%
40 to 54 = 23.1%
55 to 64 = 16.4%
65 & Older = 30.6%

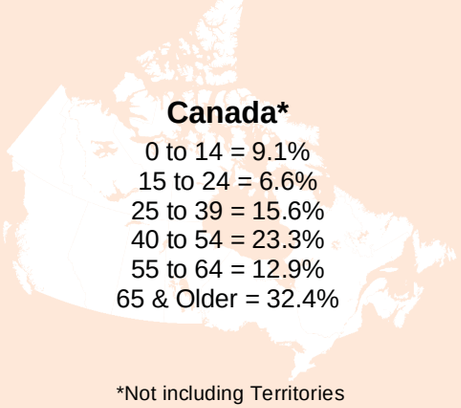
*Not including Territories

Map 22

Age of Onset for Seeing Disability

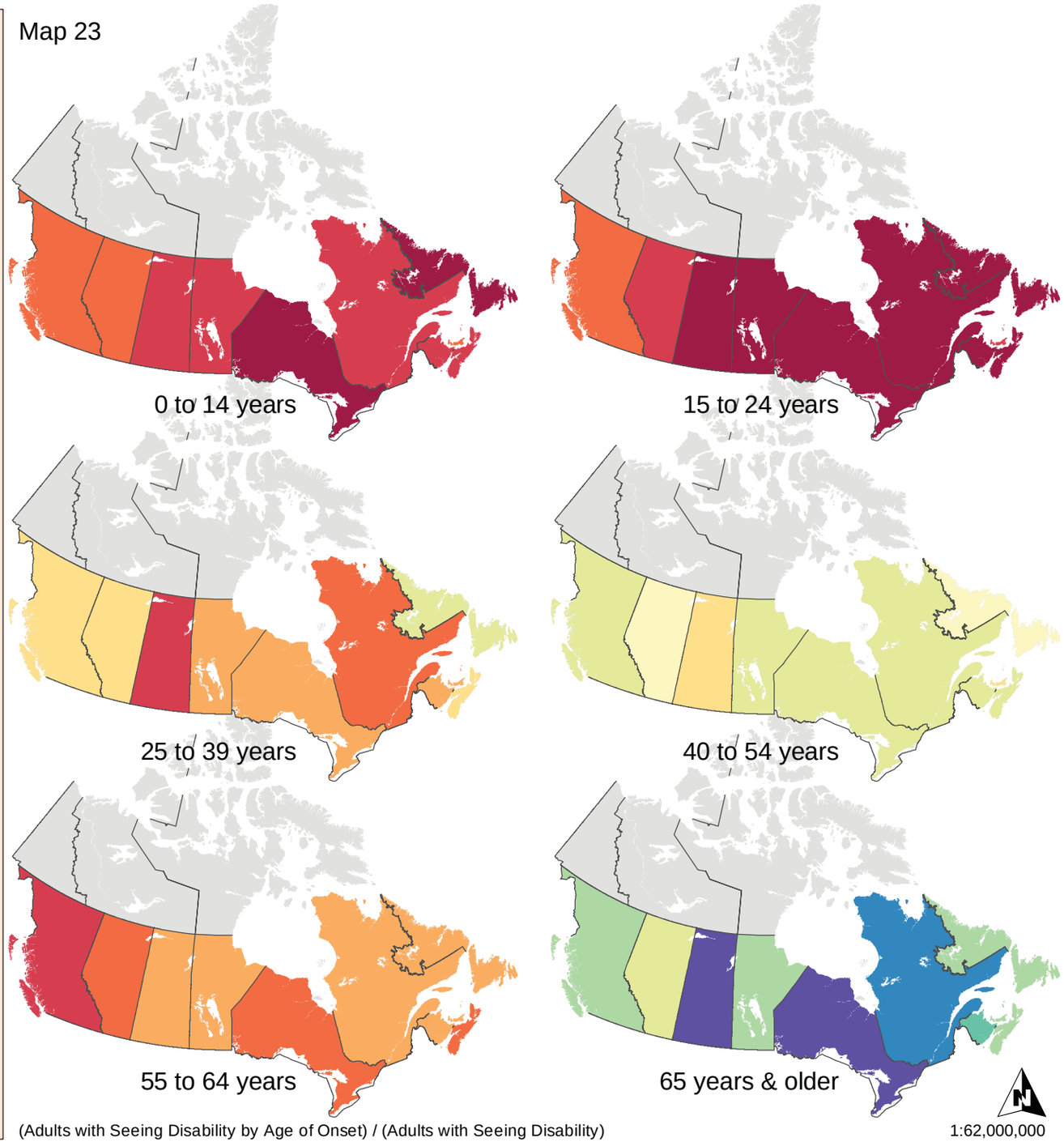
Adults - Age 15 & Older

Map 23



Canada*
0 to 14 = 9.1%
15 to 24 = 6.6%
25 to 39 = 15.6%
40 to 54 = 23.3%
55 to 64 = 12.9%
65 & Older = 32.4%

*Not including Territories



(Adults with Seeing Disability by Age of Onset) / (Adults with Seeing Disability)

1:62,000,000

2001 Participation & Activity Limitation Survey

Map 23

CHAPTER 5

LANDSCAPE OF LITERACY & DISABILITY IN CANADA

This chapter examines the relationships between gender, migration, education, and economics on the one hand, and literacy and disability on the other. Canada is not a level playing field in which all people have equal access to literacy skills or the same probability of disability.

SEX/GENDER

In Canada the sex ratio varies with geography. In the three territories - areas where there are low populations, natural resource exploitation, and difficult weather conditions - there are more men than women. Alberta has an even number of men and women and the other provinces all have more women than men.

Literacy

A surprising finding is the overall low level of literacy in Canada for both sexes (MAP 24 and MAP 25). In general, women have slightly higher prose literacy while men have higher document and numeracy literacy. Nearly 3 out of 4 men and women have low problem solving literacy. For both women and men, Nunavut has the highest rate of low literacy in all four categories. Fewer men and women tend to have low literacy in the Yukon Territory, British Columbia, Alberta, and Saskatchewan than in the rest of the country. MAP 26 shows the difference in the rates of low literacy between men and women with orange areas indicating a higher percent of women with low literacy while darker blue indicates a higher percent of men. Men in Saskatchewan, Manitoba, and Prince Edward Island stand out as having lower prose and problem solving literacy skills than women. Also, the map shows that women consistently have lower document literacy skills than men everywhere except New Brunswick where the rates of low literacy are nearly equal between the sexes.

Disability

Women make up the greatest proportion of people with disabilities by a difference that is greater than the ratio of men to women in the population overall (CHART 5). For example, 51% of the Canadian population is female but among the Canadian population with disabilities this figure jumps to over 55%. Ontario has the largest gap between men (under 44%) and women (over 56%) with disabilities. This has important implications for households and family life.

The age of onset of disability is an important issue because it affects the educational, social, and economic lives of people with disabilities. There is evidence that the earlier the onset of disability, the more difficult it is for an individual to become included in the social and economic life of their community and therefore to exercise their rights (Buchardt, 2003). Onset is a slippery concept. For some individuals and for some disabilities it is possible to pinpoint the onset, as, for example, when an

individual becomes blind in an automobile accident. On the other hand, it is difficult to know when multiple sclerosis or Lou Gehrig's is a disease or a disability and the distinction is generally made by a physician as a basis for a disability claim.

In general, the rate of onset of disability increases with age (MAP 27 and MAP 28). Overall, the age of onset is fairly consistent for men and women, with approximately 17% of adults age 15 to 64 experiencing onset of disability in childhood (age 0 to 14) while just under 32% experience onset between the ages of 30 and 44. There is more spatial variation among the provinces in the rates of onset for men than there is for women.

IMMIGRANTS

Canada is a country of immigrants. According to Statistics Canada, there is a net migration gain of one person every 2 minutes and 29 seconds[11]. The multi-cultural, multi-linguistic nature of Canada has had, as it has in other countries, an important and valuable impact on how Canada sees itself and the way in which our institutions function (Castels, 2002).

Literacy

As would be expected, immigrants have a somewhat different experience of literacy than non-immigrants (MAP 29). The percentages of immigrants with low literacy are 64.5% for prose, 63.5% for document, 67.8% for numeracy, and 85.7% for problem-solving literacy. The percentages of non-immigrants with low literacy are much lower (43.6% for prose, 44.7% for document, 51.9% for numeracy, and 69.6% for problem solving literacy). Provinces with few immigrants do tend to have lower rates of low literacy among immigrants, though immigrants in Manitoba have among the highest rates of low literacy for all four types of literacy. Immigrants in Newfoundland and Labrador and the Yukon Territory have among the lowest rates.

For Canada as a whole, almost 30% of the people who have low prose literacy are immigrants while almost 65% of all immigrants have low prose literacy (MAP 30). Ontario and British Columbia have the largest percentages of people with low prose literacy who are immigrants, which is perhaps not surprising since more immigrants live in these two provinces. There is evidently a need for literacy programs aimed at immigrants in these provinces.

11 http://www.statcan.ca/english/edu/clock/population.htm

Disability

The percentage of people who have disabilities and who are immigrants is 23.6% - or nearly 1 in 4 adults with a disability is an immigrant (MAP 31). The percentage of immigrants who have disabilities is 15.7%, compared to the percentage of the adult population as a whole who have disabilities which equals 11.9% according to PALS (see map 13). It is important to note that disability rates for immigrants are higher than for the overall population in every province. Quebec has the lowest rate of disability for both its overall population and for its immigrant population. In each province, the immigrant population has more people with lower literacy levels than they do with disabilities.

MAP 32 shows the proportion of all people who are currently residing in the province where they were born compared to the proportion of adults with one or more disabilities who live in the province where they were born. The two patterns are very similar, with a .99 correlation coefficient. Broadly speaking, there is a greater influx of people, both with and without disabilities, in the western provinces. Only 32.7% of people with disabilities, and 48.2% of the total population, in British Columbia were born there, compared to over 93% in Newfoundland & Labrador for both people with and without disabilities.

EDUCATION

Education and literacy are related as might be expected - the higher the education the greater an individual's literacy skills are. This is significant for people with disabilities who have much lower levels of education than people without disabilities.

Literacy

There is a correlation between educational attainment and all four levels of literacy - prose, document, numeracy and problem solving. The higher the level of education, the more likely a person will have high literacy skill levels in all four categories. Conversely, the lower the level of education, the more likely a person will have low literacy skills.

Looking at the general level of educational attainment in Canada, the percentage of adults with less than grade 9 education is 10.5% (MAP 33). The majority of Canadians (90%) have some high school or post high school education. There is little variation among the provinces except in Nunavut, which has a higher proportion of people with less than grade 9 education.

For Canada overall, more than three quarters of the individuals with less than high school education experience low literacy in all four IALSS literacy categories (MAP 34). In general, the east and Nunavut have higher incidence of low literacy for people with lower educational attainment.

Disaggregating these overall trends shows subtle differences in categorization and meaning (MAP 35). Over 41% of people with low prose literacy have less than a high school education, while over 78% of people with less than a high school education have low prose literacy.

Disability

MAP 36 compares the rate at which adults with and those without disabilities have less than grade 9 education. For all provinces, the rate at which people with disabilities have less than a grade 9 education is at least double, and in many cases over triple, the rate for people without disabilities. For both populations there is a west to east trend with the west having fewer people with less than grade 9 education. Nova Scotia, and to a lesser extent Prince Edward Island, are exceptions to that trend.

The lower map on MAP 37 shows the percentage of people with less than grade 9 education who have one or more disabilities. Here there is no east-west trend. Quebec has the lowest rate of people with less than grade 9 education who have one or more disabilities. Nova Scotia has a high rate of people with less than grade 9 education who have a disability though a relatively low percentage of adults with disabilities with less than grade 9 education.

The percentage of people with disabilities who have some post secondary education tends to increase as one moves east to west across Canada (MAP 38). This means that in the west people with disabilities tend to be better educated than in the middle and eastern provinces. Comparing the educational attainment for people without disabilities to people with disabilities, there are some very informative generalities (map 38 and MAP 39). For secondary education the situation is about the same for people with and without disabilities. The difference between those with disabilities and those without can be found among the least educated and the most educated populations. People with disabilities have less than a grade nine education at a rate three times greater than people without disabilities. People without disabilities are more likely to have some post-secondary education.

Gender does make a difference in educational achievement among people with disabilities (MAP 40). Women with disabilities tend to have more success at achieving a grade 9 education than men.

LABOUR FORCE

Literacy skills have an impact on the economic well-being of Canadians. Increasingly, basic and functional literacy are the minimum requirements for jobs– that is the ability to read, write, comprehend and use English or French. In every province, people with disabilities participate in the labour force at a much lower rate than those without disabilities. Women with disabilities are much less likely than men to be active in the labour force.

Literacy

Literacy makes a large difference in getting and holding a job. Nationally, for all four categories of literacy, more than 50% of individuals who are not in the labour force have low literacy (MAP 41). Nunavut has either the highest or one of the highest rates of low literacy among people not in the labour force. The proportion of those with low literacy in the labour force is smaller than the proportion of those who are not in the labour force, though it is still surprisingly high for each category of literacy measured by IALSS (MAP 42). There is approximately 10% difference between those not in the labour force and those in the labour force for each category of literacy. The results show an east-west pattern in each case, which may be a consequence of the types of labour needed in some areas. In areas of the country where resource extraction, such as lumber, mining, or fishing, are the key industries there may be less demand for high literacy skills in the labour force. Approximately one fifth of the population with low literacy is not in the labour force, and this is true for each type of literacy measured by IALSS (MAP 43).

Disability

Having a disability also has an impact on one's participation in the labour force. Looking broadly at those who are not in the labour force it is possible to show a clear comparison between the proportion of people with and without disabilities who are not active in the labour force (CHART 6). Between one-third (Alberta, Saskatchewan, and Manitoba) and two-thirds (Newfoundland and Labrador) of people with disabilities are not active in the labour force, with a nationwide average of just under 50%. From east to west the rate of those with disabilities who are not in the labour force tends to get larger.

Turning the question in a more positive direction to the proportion of people with disabilities who are active in the labour force, we see that nationally over a million people, or more than half of the population of people with disabilities are active in the labour force (MAP 44). Spatially, a west to east trend is evident with greater proportions of people with disabilities being in the labour force in the west. However, looking at real numbers, four out of every ten adults with disabilities - almost half of all people with disabilities active in the labour force - live in Ontario.

Comparing labour force participation of people with and without disabilities by gender shows a pattern that suggests a bias against women in all provinces (CHART 7). In most cases, the difference between men and women not in the labour force is less among people with disabilities than those without.

Disaggregating by type of disability gives a perspective on the differential impact that type of disability has in labour force participation among people with disabilities (CHART 8). Generally, there is a greater proportion of people with seeing impairments who are out of the labour force, followed by mobility impairments and then hearing.

To get a more holistic picture, it is necessary to consider the impact of disability in labour force participation in combination with educational attainment (MAP 45). Their combined impact can be significant. Nearly 21% of people with disabilities not active in the labour force have less than a grade 9 education compared to just over 6% of people with disabilities who are active in the labour force. There is a significant west to east trend with the highest rates of people with disabilities with less than a grade 9 education among both those active in the labour force and not active in the labour force found in Newfoundland and Labrador and Quebec.

INCOME

Sources of income are not uniform. Income may come from social assistance, disability benefits, and pensions or from wages. It is difficult to generalize about trends in income figures without knowing the source of income. However, it is clear that a large percentage of Canadians have low incomes and that there is a relationship between low literacy and low income. The situation is magnified for people with disabilities, and particularly for women with disabilities. The income levels, among people with disabilities, are also not uniform across the country.

Literacy

Over 29% of all Canadians have an individual income of over $35,000 while over 17% of Canadians have the lowest level of income, less than $5000 (MAP 46) (Census, 2006). Twenty two percent of adults are in the $5,000 to 14,999 income bracket; 17% in the $15,000 to $24,999 income bracket; and 14% in the $25,000 to $34,999 income bracket. The highest income bracket has the greatest amount of spatial variation among the provinces.

What is the income picture when we add low literacy rates to the income data? While 17.3% of all adults have incomes of less than $5,000, only 12.4% of adults with low prose literacy have incomes below $5,000 (MAP 47). In the upper income bracket a higher percentage of people with low prose literacy make more than $35,000 the average for all Canadian adults. It is important to note that perhaps this difference is in part caused by the fact that the data comes from two different sources, the 2001 Census and 2003 IALSS.

There is a higher percentage of adults with low incomes who have low literacy (MAP 48) than of adults with low literacy who have low income (MAP 49). In each of the four categories of literacy - prose, document, numeracy, and problem solving - more than one out of every two adults with an income below $5000 has low literacy and the rate increases from prose (50%) to problem solving (76.7%). Conversely, a much smaller percentage (12.3% to 13.2%) of adults with low literacy earn less than $5,000 and the rates are very similar for all four categories of literacy. These results indicate that no one category of literacy has more or less of an impact in determining whether or not a person will have low income.

Disability

Finally, in analysing the relationship of income and disability, this study looked at the income of people with disabilities standardized against all people with disabilities and compared this to the income levels of people without disabilities standardized against all people without disabilities (MAP 50 and MAP 51). Both of these maps can also be compared to the individual income of people in general (see map 46) and income for people with low prose literacy (see map 47).

Of people with disabilities, one in eight have incomes less than $5000; one in three have incomes between $5000 and $14,999; one in five between $15,000 and $24, 999; one in eight between $25,000 and $34,999; and one in six has an income more than $35000. Of people without disabilities, one in three has an income of less than $5,000; one in six has an income between $5,000 and $14,999; one in eight has an income between $15,000 and $24,999; one in eight has income between $25,000 and $34,999; and one in five has an income of more than $35000. Eighty- three percent of all people who have disabilities are in the lowest four income categories contrasted to 75% of those who do not have disabilities.

People with disabilities with higher incomes are more likely to reside in the western provinces. Note the relatively high percentages of people with disabilities with incomes over $35,000 in British Columbia and Alberta. A higher percentage of people without disabilities make more than $35,000 in Ontario than in any other province.

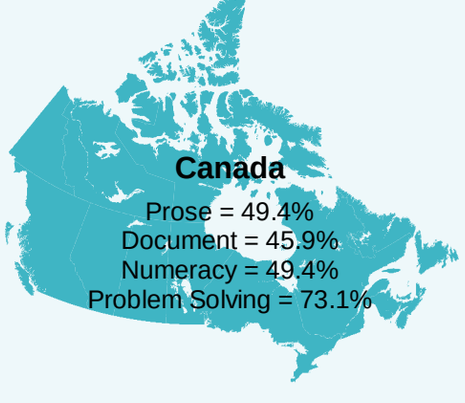
CONCLUSION

This chapter shows the complicated interactions between a variety of socio-cultural factors and literacy and disability. There are provincial differences in terms of the rates of literacy identified. Overall for Canada women make up the greatest proportion of people with disabilities and there are significantly higher rates of low document and numeracy literacy for women. Among immigrants, Manitoba has one of the highest rates of low literacy for all four categories of literacy. In Saskatchewan, Quebec, and New Brunswick, low prose literacy is found in many other groups in addition to immigrants but for an immigrant there is a very strong chance of having low literacy. In every province the literacy rates are low enough in all four categories of literacy to suggest that there is real need for attention. Correlations among labour force, income, age of onset of disability, educational attainment and literacy are explored showing important differences between those with and without disabilities. The interface of disability and literacy suggests a clear picture of the way in which patterns of exclusion are woven.

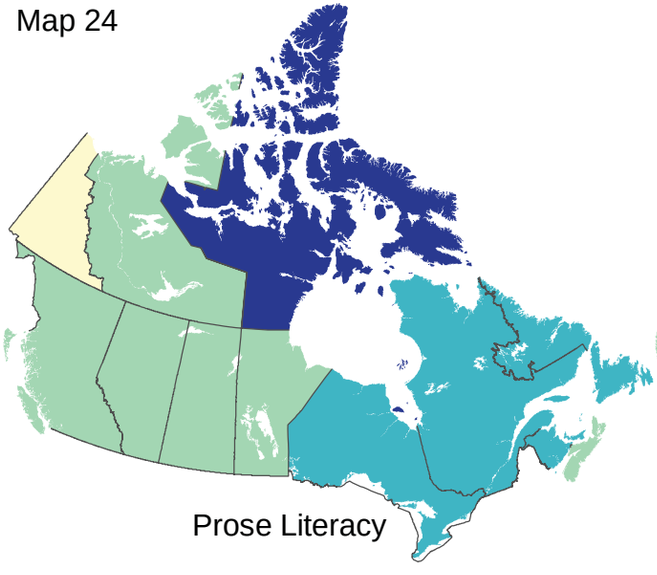
Low Literacy in Men

Adults - Age 16 & Older

Overall, close to 50% of men had low levels of literacy in prose, document and numeracy. More than 70% of men across Canada had low scores for problem-solving literacy. The only jurisdictions in which fewer than 40% of men had low levels for any type of literacy were the Yukon, (prose and document literacy), Alberta (document literacy) and Saskatchewan (document literacy). More than 70% of men had low scores for problem-solving literacy in all of the provinces and territories except for the Yukon, BC and Alberta. In those three provinces more than 60% of men had low literacy scores in problem solving. The results for document literacy were slightly better than for numeracy literacy.

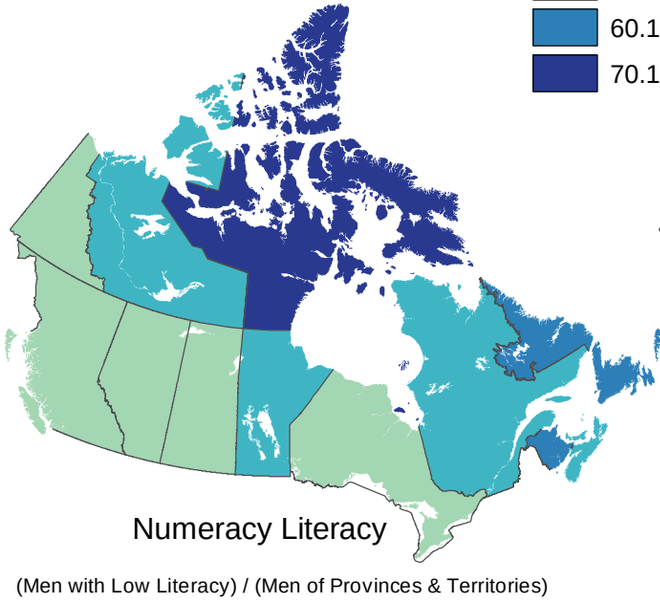


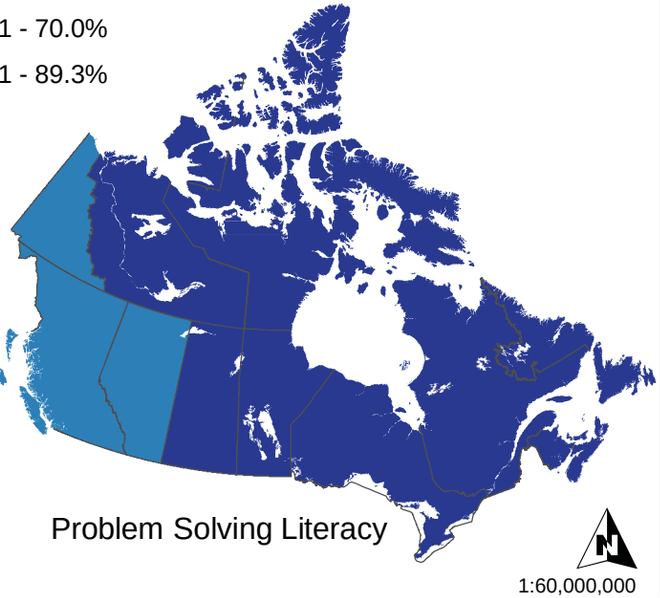
Map 24



Percent with Low Literacy
(Level 1 or 2)

- 34.0 - 40.0%
- 40.1 - 50.0%
- 50.1 - 60.0%
- 60.1 - 70.0%
- 70.1 - 89.3%





(Men with Low Literacy) / (Men of Provinces & Territories)

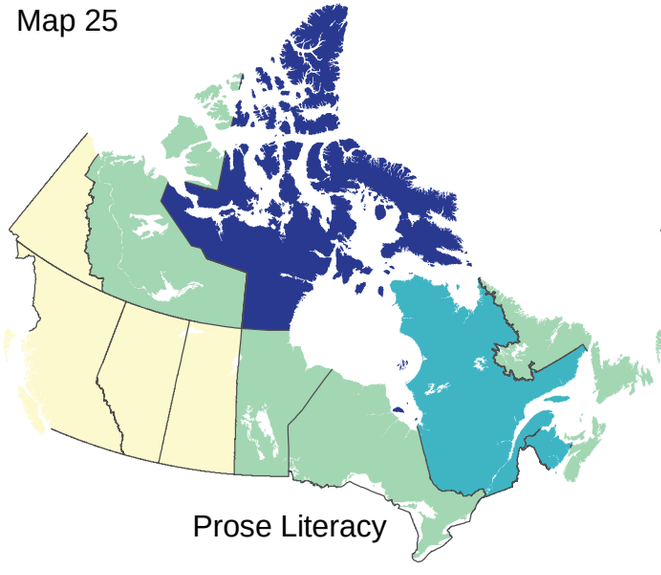
1:60,000,000

2003 International Adult Literacy & Skills Survey

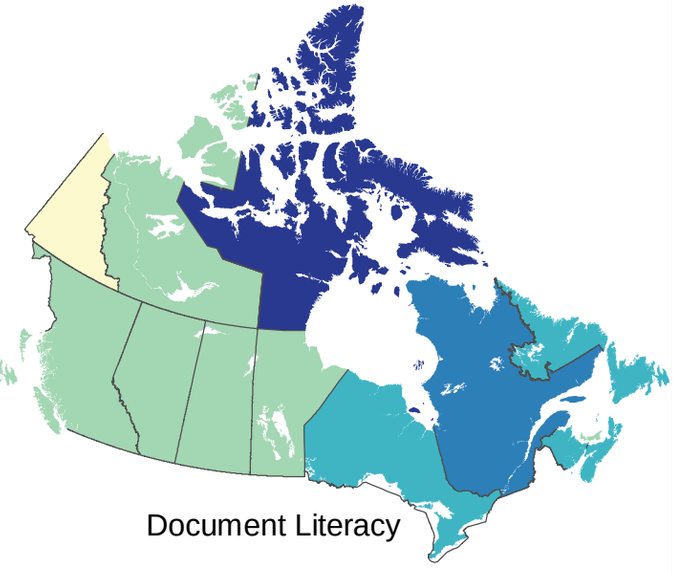
Map 24

2003 International Adult Literacy & Skills Survey

Map 25



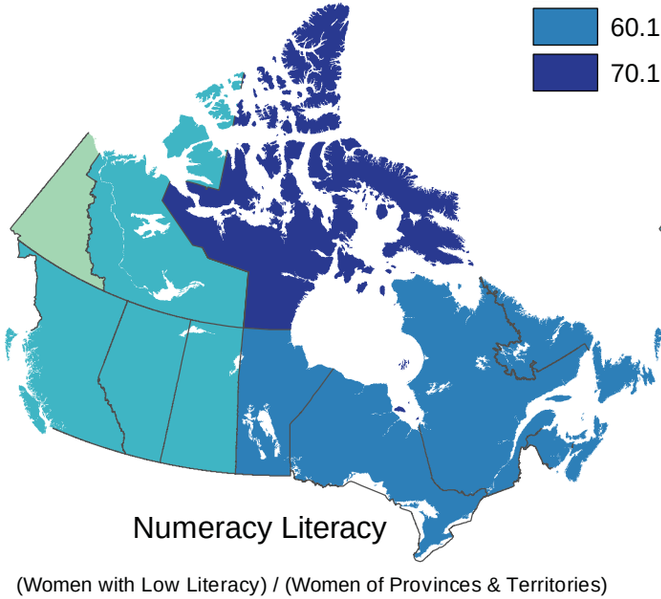
Prose Literacy



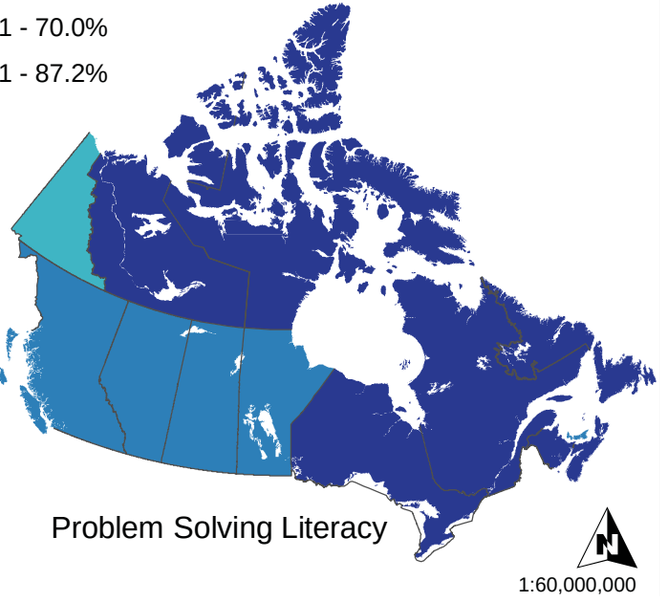
Document Literacy

Percent with Low Literacy
(Level 1 or 2)

- 29.9 - 40.0%
- 40.1 - 50.0%
- 50.1 - 60.0%
- 60.1 - 70.0%
- 70.1 - 87.2%



Numeracy Literacy



Problem Solving Literacy

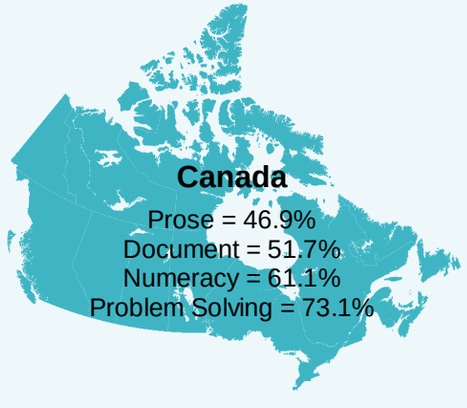
(Women with Low Literacy) / (Women of Provinces & Territories)

1:60,000,000

Low Literacy in Women

Adults - Age 16 & Older

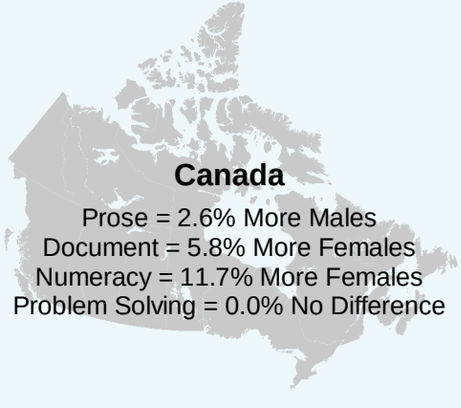
Overall, the percentage of women with low levels of prose literacy was similar to the percentage of men. Nunavut had the highest rate of low literacy among men and women. The overall rates of low literacy for document and numeracy were higher for women than for men while the rate of low problem solving literacy was the same between the sexes. In almost every province and territory, the percentage of women with low document literacy was greater than the percentage for men. At least 50% of women in each province or territory had low problem solving literacy.



Difference in Low Literacy Between Men & Women

Adults - Age 16 & Older

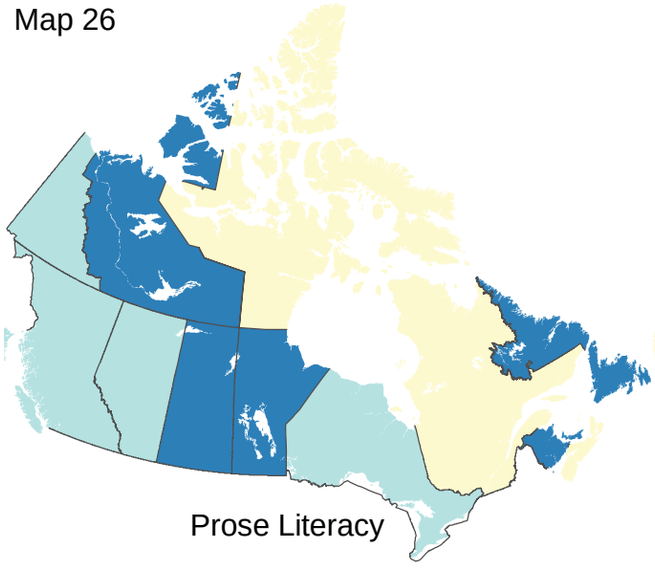
Visually displaying the difference in rate at which men and women had low literacy highlights the spatial variation, or lack of, among provinces and sexes for each literacy type. For example, the percentage of women with low literacy levels exceeds that of men for both document and numeracy literacy. The maps show that the gap is consistently large across the country for numeracy literacy but, in the case of document literacy, the gap is relatively small or non-existent. The maps also illustrate the variation among provinces and territories for prose and problem solving literacy.



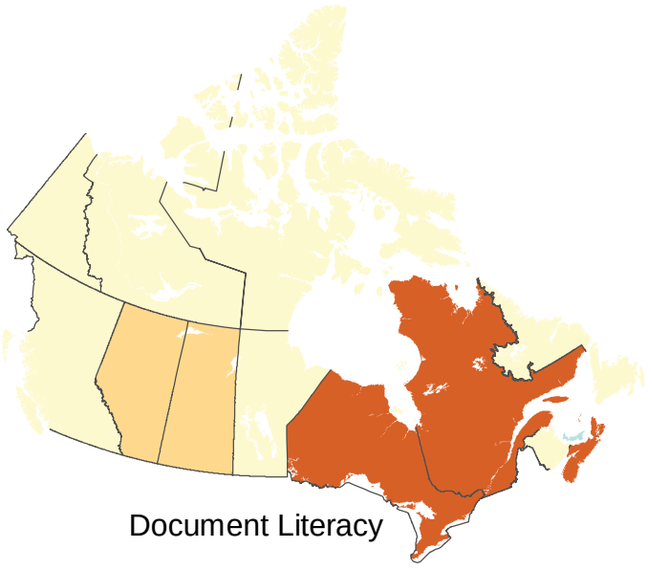
Canada

Prose = 2.6% More Males
Document = 5.8% More Females
Numeracy = 11.7% More Females
Problem Solving = 0.0% No Difference

Map 26



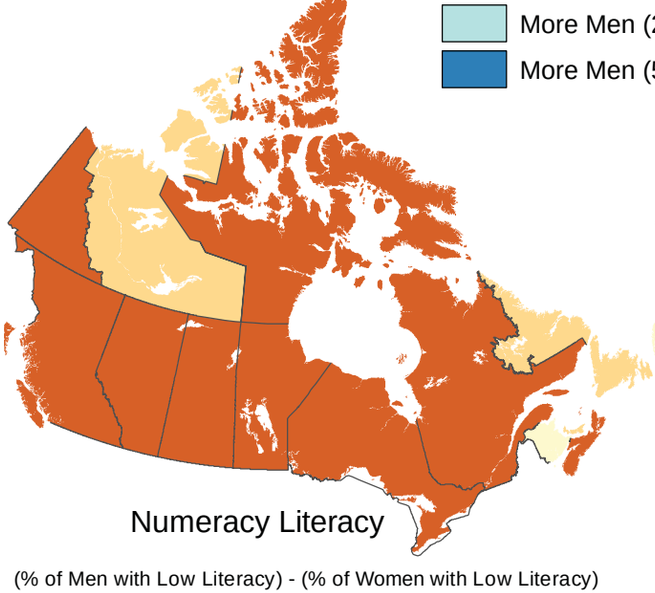
Prose Literacy



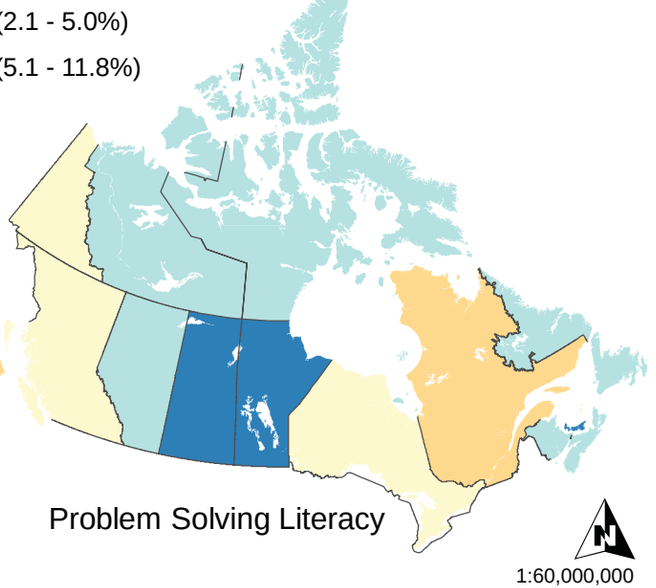
Document Literacy

Difference in Percent with Low Literacy (Level 1 or 2)

- More Women (5.1 - 17.2%)
- More Women (2.1 - 5.0%)
- About Equal (0 - 2.0%)
- More Men (2.1 - 5.0%)
- More Men (5.1 - 11.8%)



Numeracy Literacy

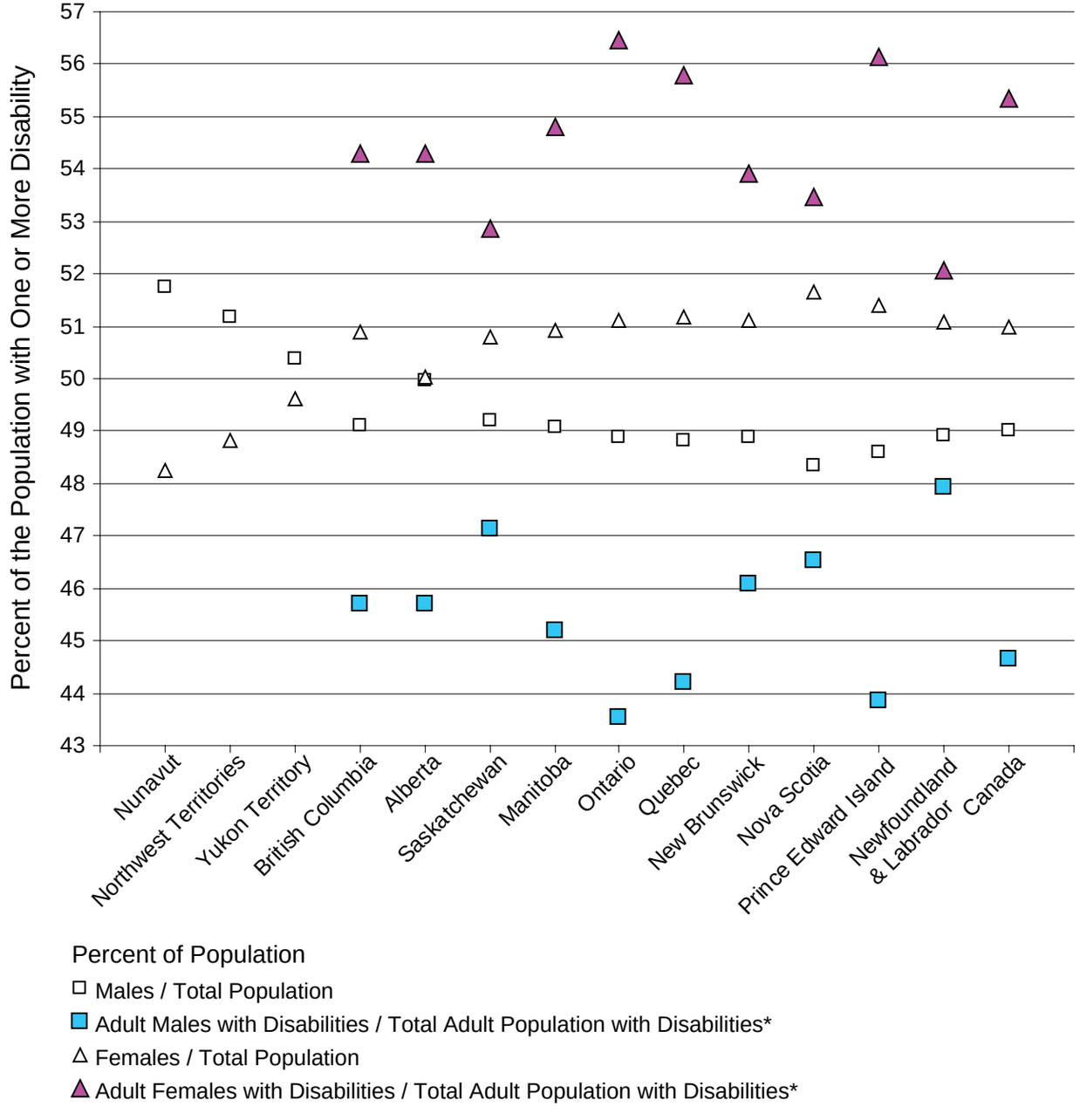


Problem Solving Literacy

(% of Men with Low Literacy) - (% of Women with Low Literacy)

1:60,000,000

Chart 5



(Population by Sex) / (Population of Provinces & Territories)

Population & Disability Distribution by Sex

All People*

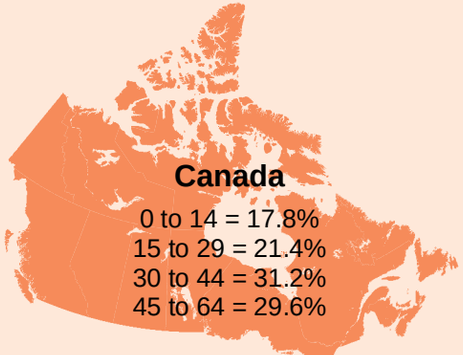
Except in the three territories, women constitute a greater percentage of the population than men. Overall 51% of the population are women. The percentage varies in each province, but the gap between men and women in the population as a whole is relatively small. The number of women with one or more disabilities also exceeds the number of men with disabilities in each province. There does not appear to be any relationship between the proportion of a province's population that are women and the proportion of women with one or more disabilities in the province.

*Adults only for People with Disabilities, Disability data not available for the Territories

Age of Onset, Men

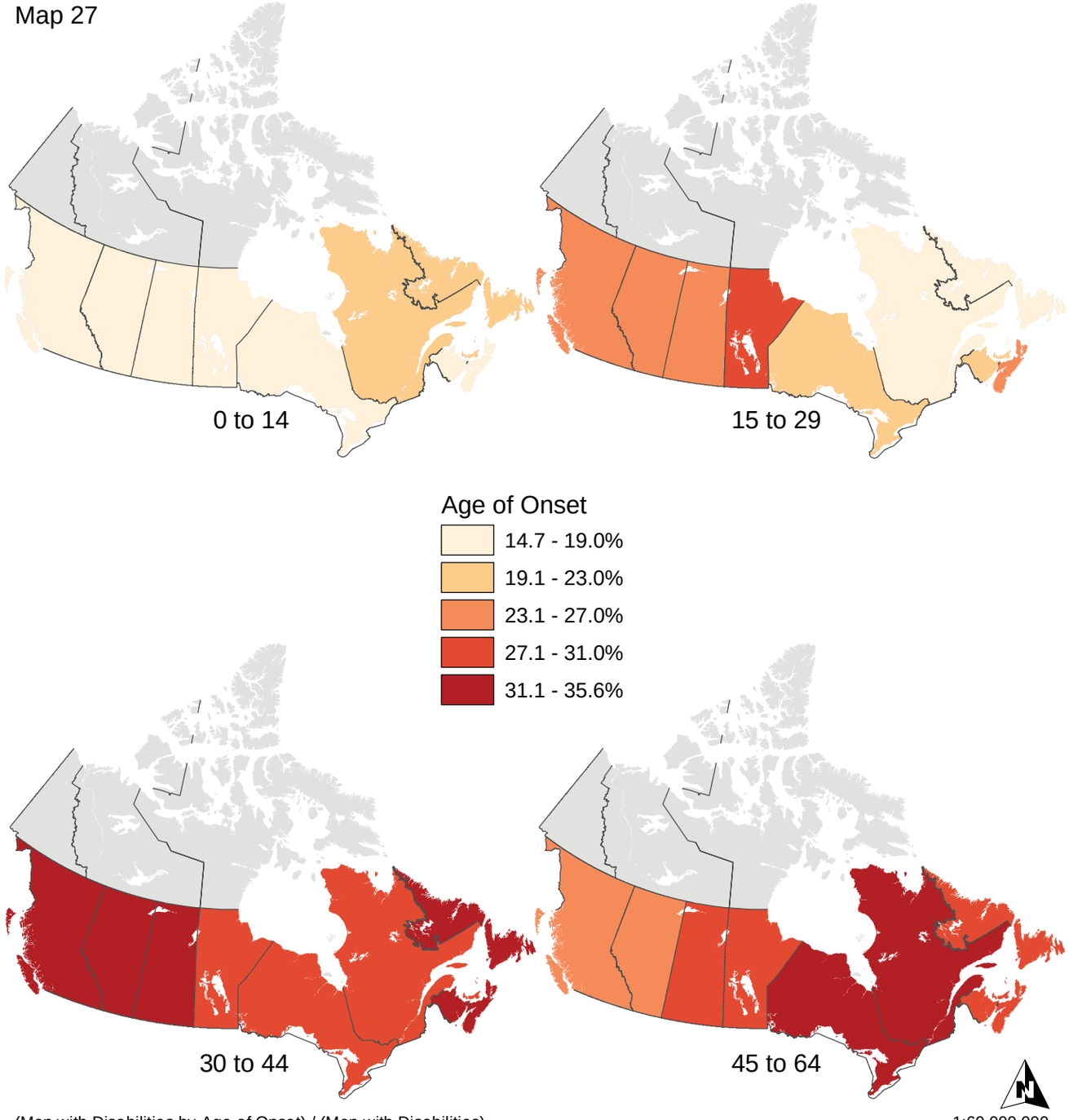
Adults - Age 15 to 64

The rate of age of onset of disability among men between the ages of 15 and 64 generally increases with age. The age category with the smallest percentage is 0 to 14. The greatest degree of variation between the provinces was for men whose age of onset was between 15 and 29. For men in western Canada and Newfoundland & Labrador, New Brunswick, & Nova Scotia the greatest percentage of men experienced an age of onset between the ages of 30 and 44. Onset between the ages of 45 and 64 was highest for men in Ontario & Quebec.



* Not including Territories

Map 27

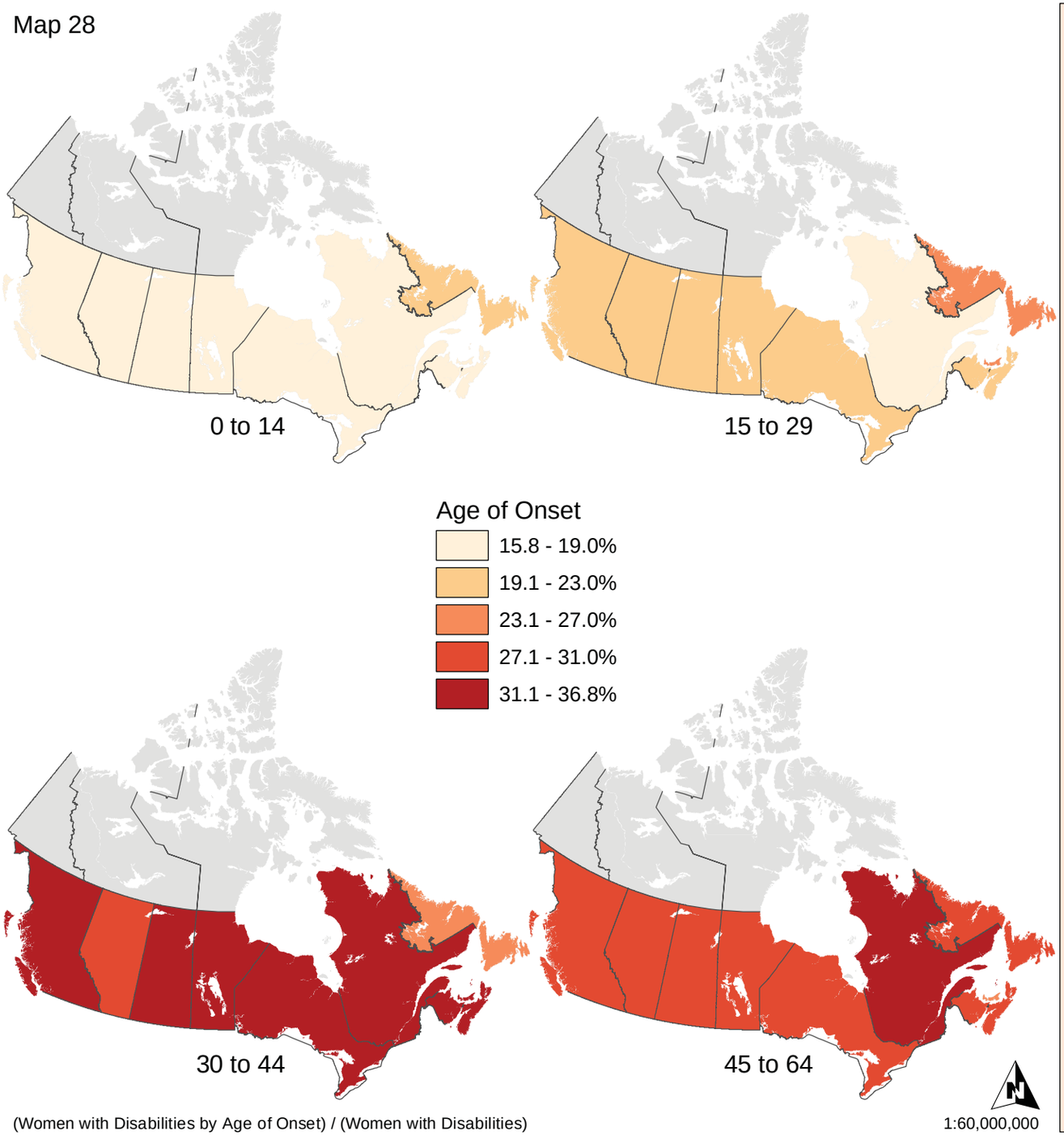


(Men with Disabilities by Age of Onset) / (Men with Disabilities)

1:60,000,000

2001 Participation & Activity Limitation Survey

Map 28

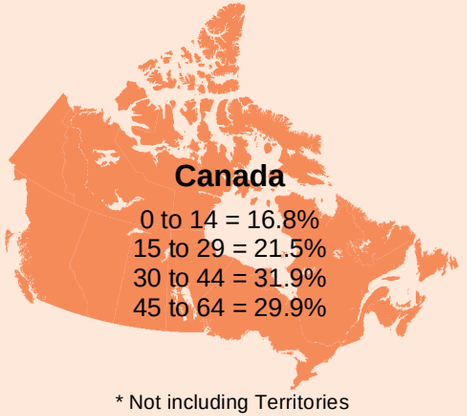


(Women with Disabilities by Age of Onset) / (Women with Disabilities)

Age of Onset, Women

Adults - Age 15 to 64

The age of onset of disability for women between the ages of 15 and 64 was relatively consistent for each age group across Cnada. Onset increased with age, with the highest percentage of women experiencing disability onset between the ages of 30 and 44.

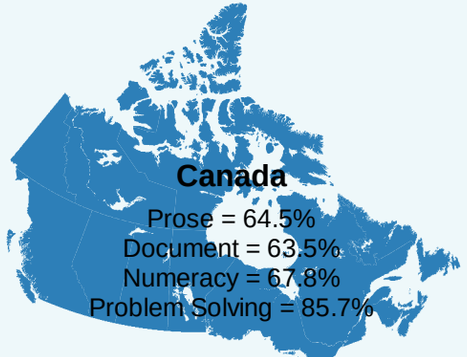


* Not including Territories

Low Literacy & Immigrants

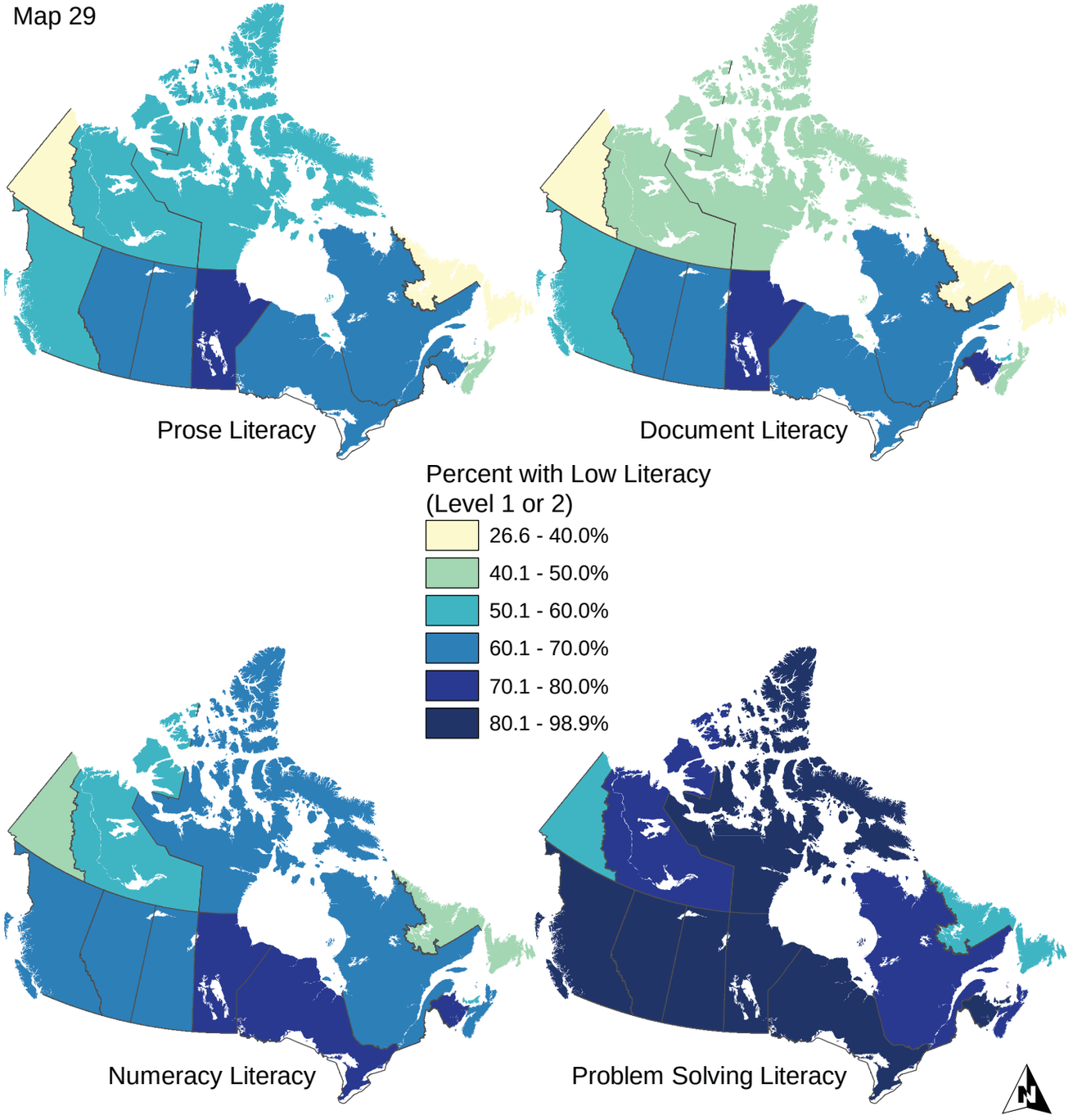
Adults - Age 16 & Older

Immigrants tend to have higher rates of low literacy for all four types though there are some noticeable exceptions. As with the population as a whole, immigrants tend to do worse on tests for problem solving and numeracy literacy than prose or document literacy. Interestingly, immigrants in Nunavut & Northwest Territories do best in document literacy. Generally, immigrants have a lower rate of low literacy in provinces where there are fewer immigrants.



*Values estimated for New Brunswick, PEI, & Nunavut

Map 29



(Immigrants with Literacy at Level 1 & 2) / (Total Population of Immigrants in Provinces & Territories)

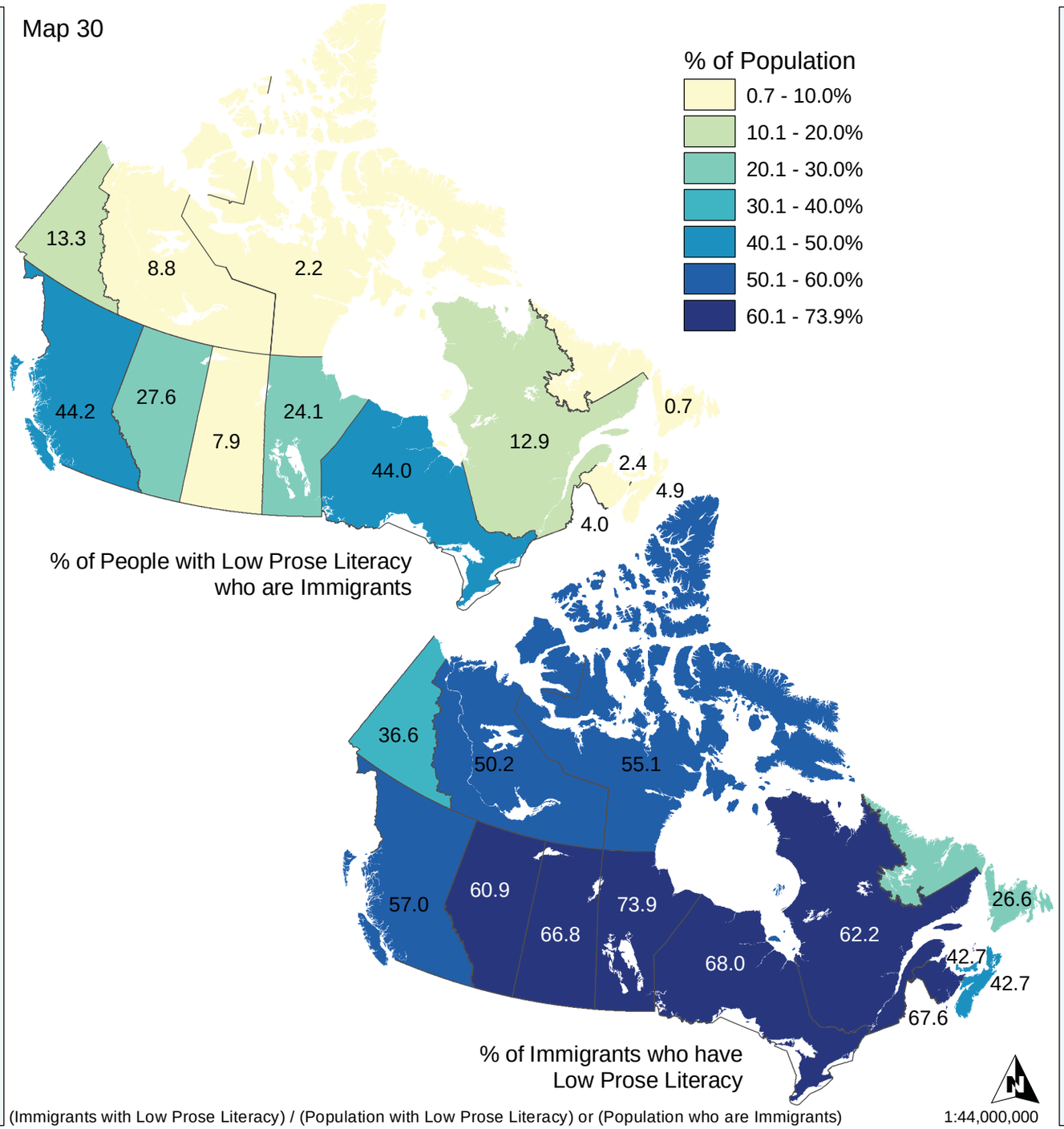
1:60,000,000

2003 International Adult Literacy & Skills Survey

Map 29

2003 International Adult Literacy & Skills Survey

Map 30



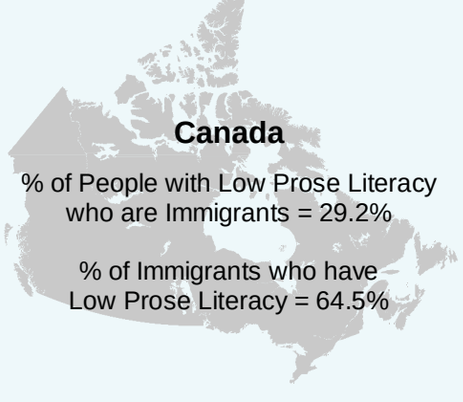
(Immigrants with Low Prose Literacy) / (Population with Low Prose Literacy) or (Population who are Immigrants)

1:44,000,000

Immigrants with Low Prose Literacy

Adults - Age 16 & Older

The provinces with the highest number of immigrants (Ontario & BC) had a larger proportion of people with low prose literacy who are immigrants. Meanwhile, nearly 2/3 of all immigrants in Canada had low prose literacy. The rates are variable across the country however, from a low of 26.6% in Newfoundland & Labrador to a high of 73.9% in Manitoba.



Map 30

Immigrants with Disabilities

Adults - Age 15 & Older

The percentage of adults with disabilities who are immigrants varied considerably among the provinces, from a low of 2% in Newfoundland & Labrador to a high of 32.9% in Ontario. Provinces with high immigrant populations, such as Ontario & British Columbia, tended to also have a high proportion of people with disabilities who were immigrants. The percentage of immigrants with disabilities was slightly less variable though the pattern was quite different and did not seem to reflect the distribution of the immigrant population. Over 25% of immigrants on Prince Edward Island were found to have a disability.

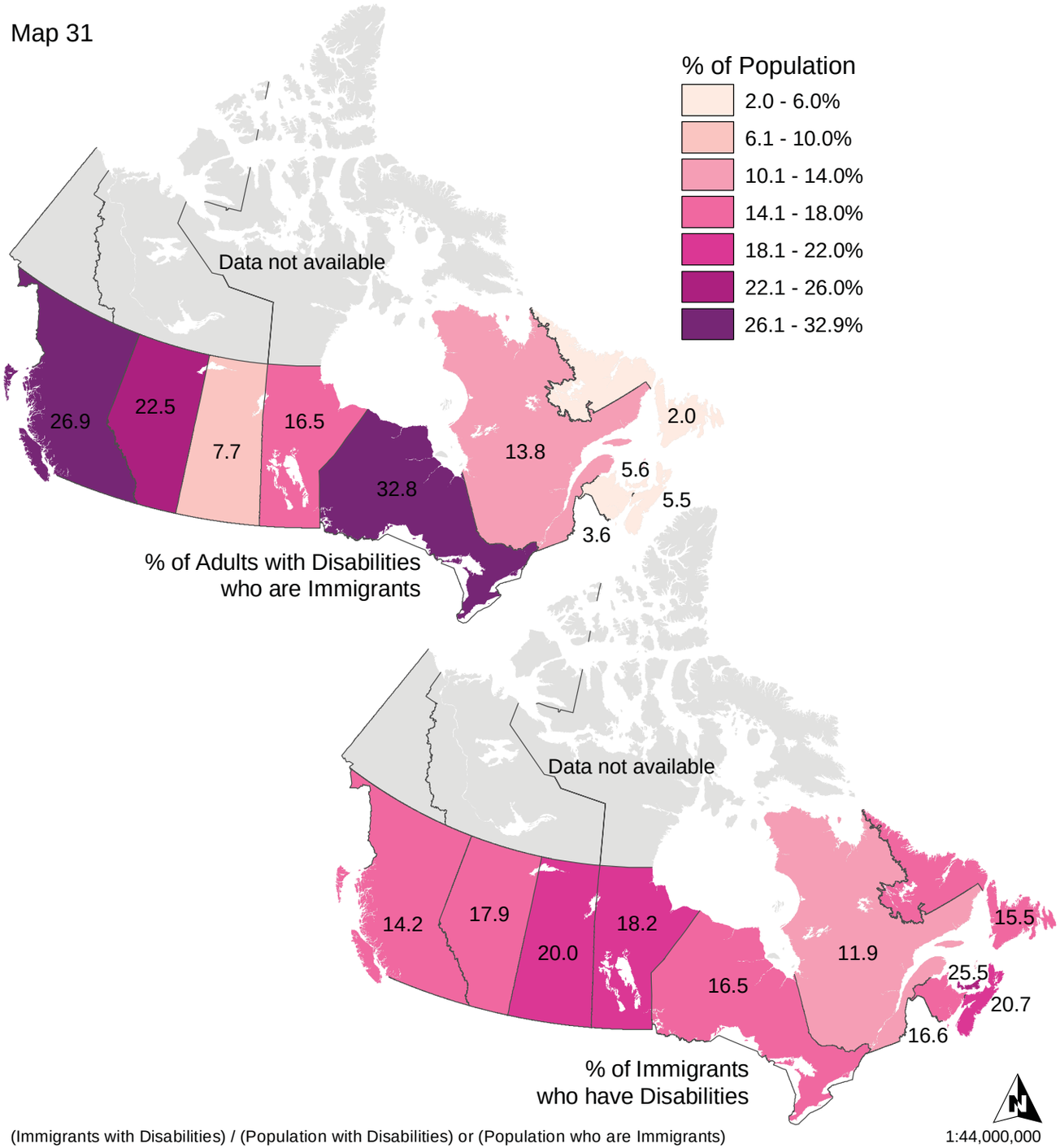
Canada*

% of People with Disabilities who are Immigrants = 23.6%

% of Immigrants who have Disabilities = 15.7%

*Not including Territories

Map 31

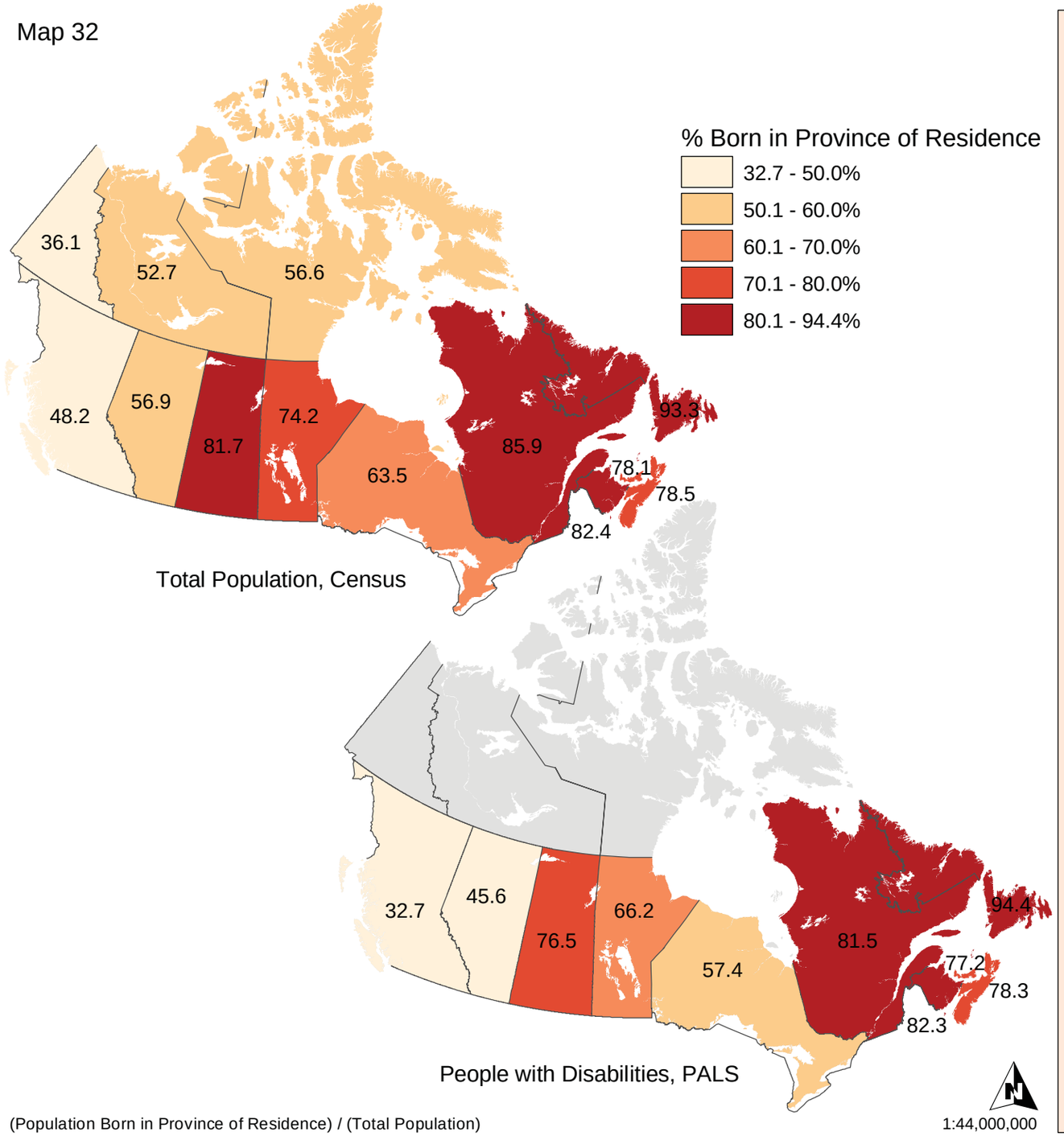


(Immigrants with Disabilities) / (Population with Disabilities) or (Population who are Immigrants)

1:44,000,000

2001 Participation & Activity Limitation Survey, 2001 Census of Population

Map 32



Born in Province of Residence

All People &
Adults - Age 15 & Older*

Adults with one or more disability tended to move from province to province in a pattern similar to the general population. In other words, people tended to stay put in Newfoundland & Labrador, Quebec, New Brunswick, Nova Scotia, PEI, & Saskatchewan - where over 75% of the population was born in the province of residence at the time of the survey - regardless of whether or not they have a disability. Meanwhile in BC, only 48.2% of the total population and 32.7% of the population with disabilities were born there, indicating a much greater influx of people born in other provinces.

Canada

% of Total Population who are
Born in Province of Residence = 68.7%

% of People with Disabilities who are
Born in Province of Residence* = 60.0%

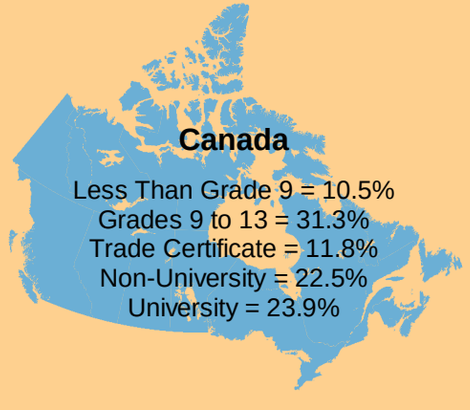
*Adults only for People with Disabilities, not including Territories

Map 32

Educational Attainment

Adults - Age 20 & Older

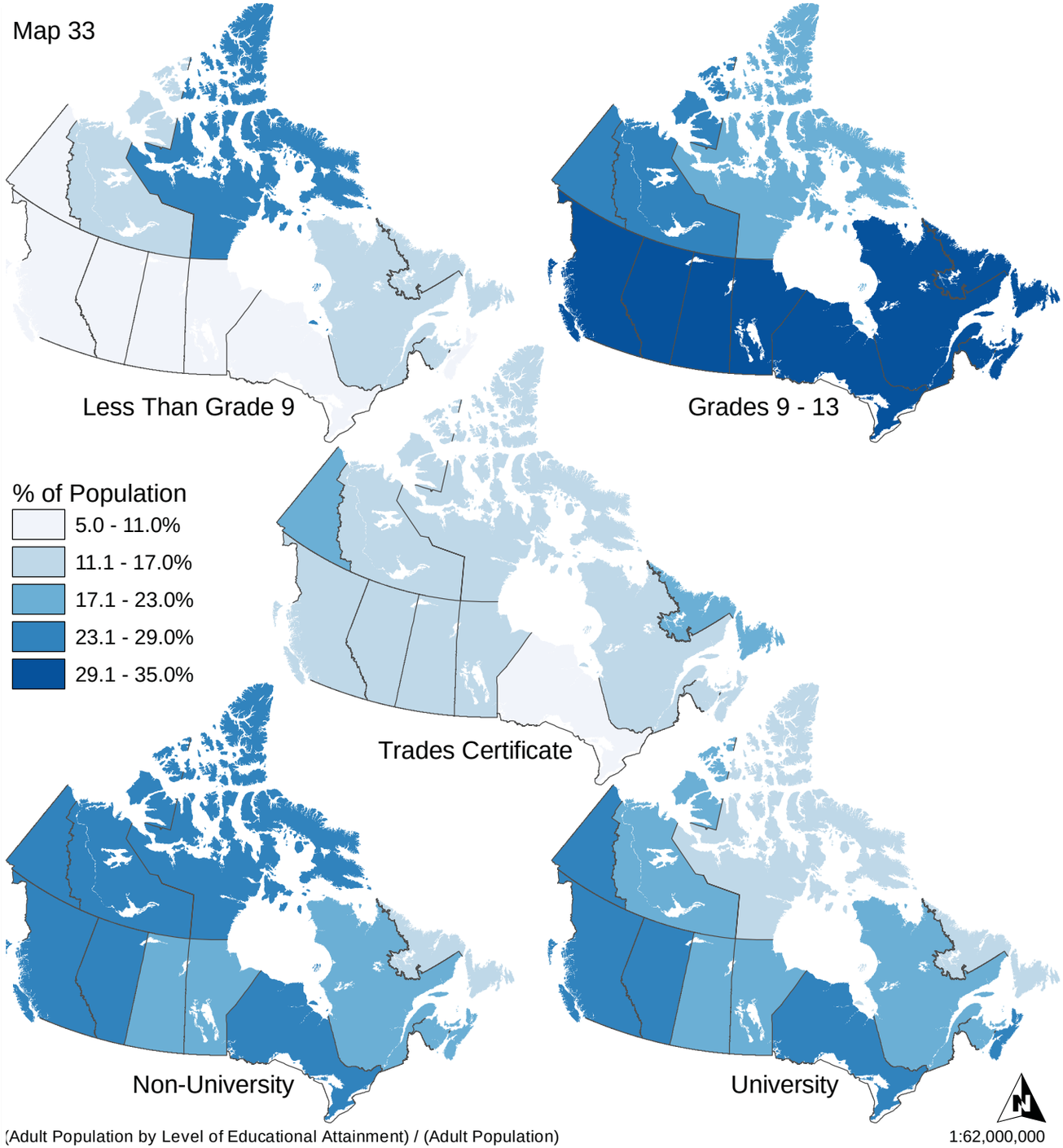
More adults had a grade 9 to 13 education in all provinces than any other level of education. In Nunavut & Yukon a greater proportion of the population had a non-university education. In the Northwest Territories the proportion of people with grade 9 to 13 and non-university education were nearly equal. The most variability between the provinces and territories is found in the rate of people who had less than grade 9 education, ranging from 5% in Yukon to 25.9% in Nunavut.



Canada

Less Than Grade 9 = 10.5%
Grades 9 to 13 = 31.3%
Trade Certificate = 11.8%
Non-University = 22.5%
University = 23.9%

Map 33



(Adult Population by Level of Educational Attainment) / (Adult Population)

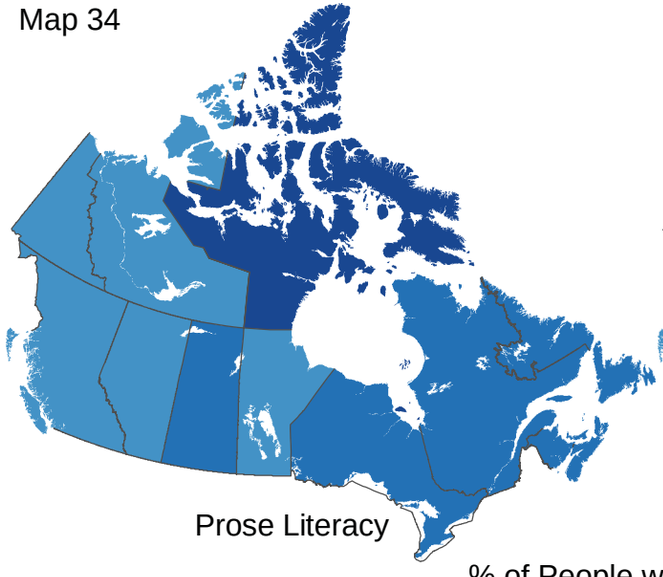
1:62,000,000

2001 Census of Population

Map 33

2003 International Adult Literacy & Skills Survey

Map 34

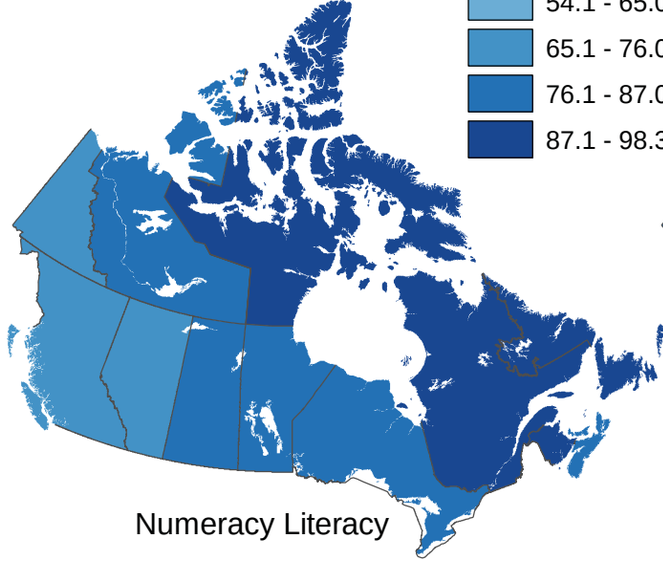


Prose Literacy

Document Literacy

% of People with less than a High School Education who have Low Literacy

- 21.5 - 32.0%
- 32.1 - 43.0%
- 43.1 - 54.0%
- 54.1 - 65.0%
- 65.1 - 76.0%
- 76.1 - 87.0%
- 87.1 - 98.3%



Numeracy Literacy

Problem Solving Literacy

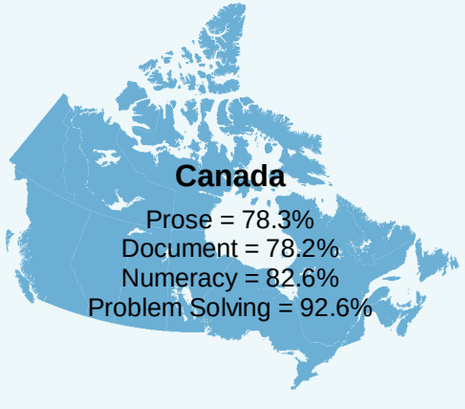
(People with Less Than a High School Education with Low Literacy) / (People with Less Than a High School Education)

1:60,000,000

Low Literacy & Less Than High School Education

Adults - Age 16 & Older

In most cases, over 3/4 of adults with less than a high school education had low literacy, regardless of the type of literacy measured. In 10 of the 13 provinces & territories over 90% of adults with less than a high school education had low problem solving literacy.

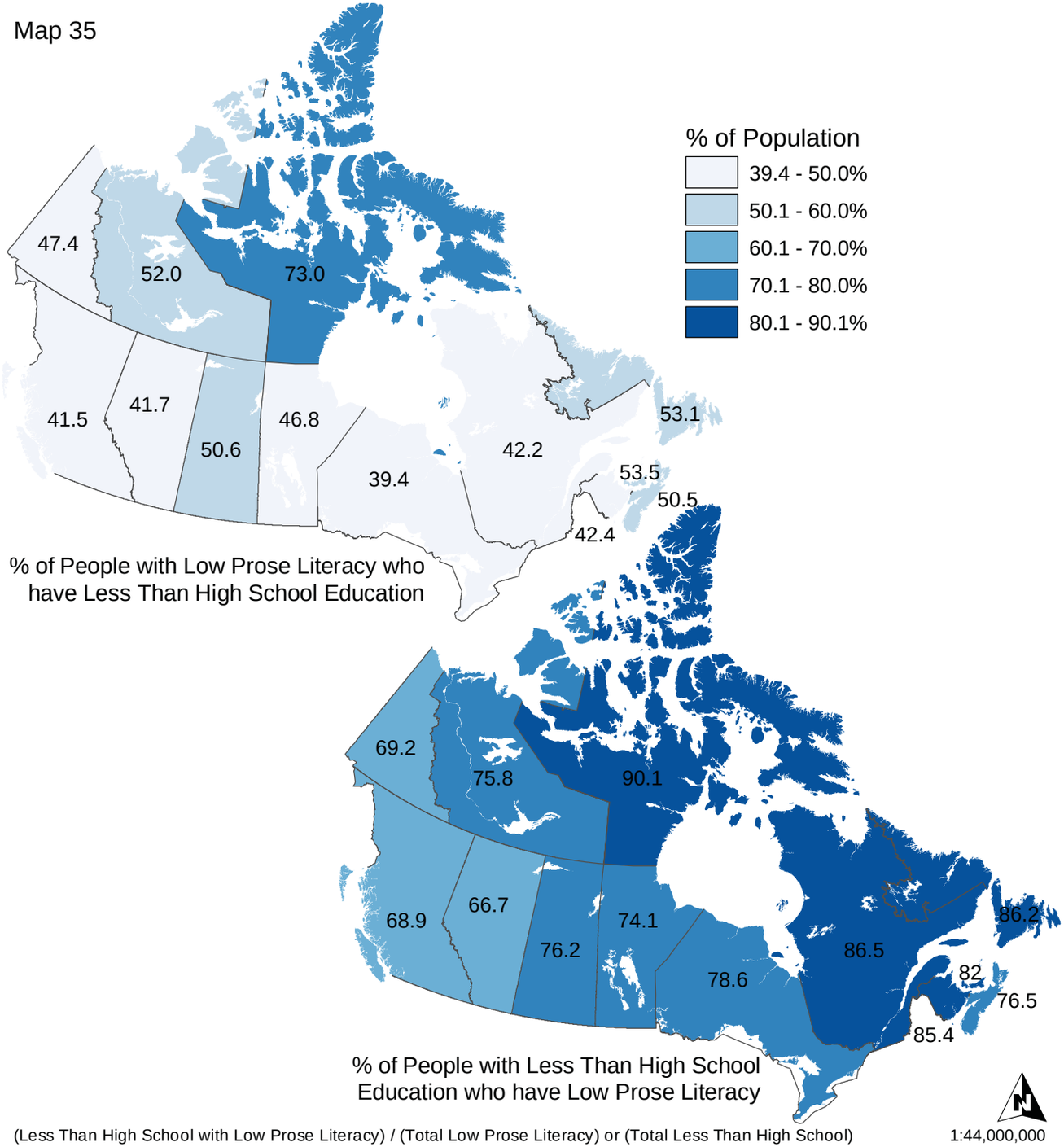


Map 34

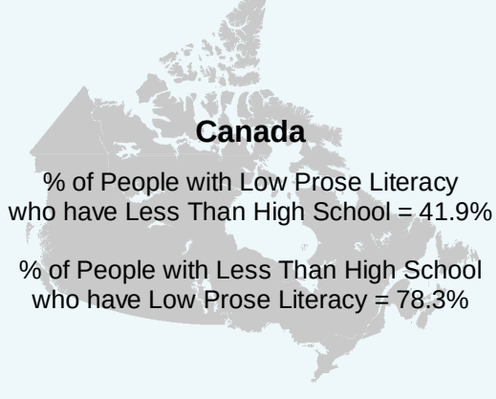
Less Than High School Education & Low Prose Literacy

Adults - Age 16 & Older

Map 35



Over half of the people with low prose literacy had more than a high school education. Meanwhile, in most provinces, over 3/4 of the population with less than a high school education had low prose literacy.



Canada

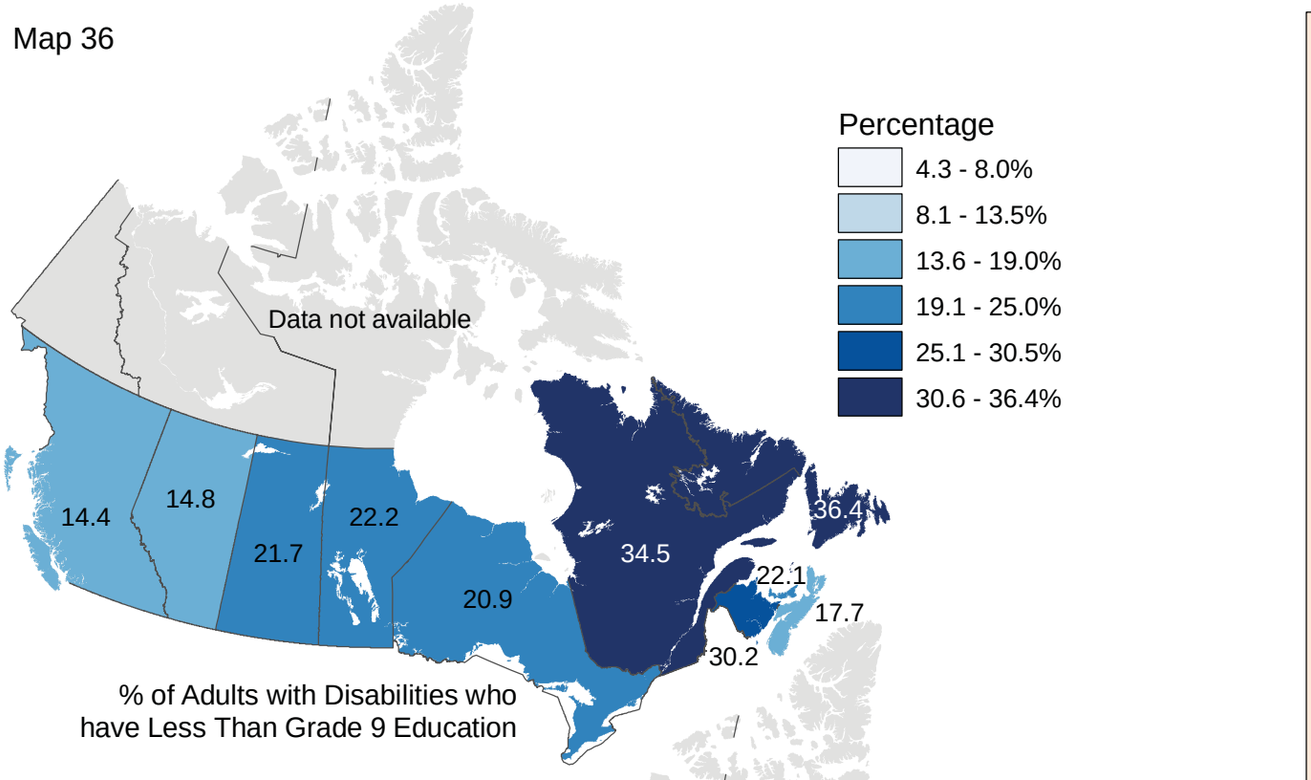
% of People with Low Prose Literacy who have Less Than High School = 41.9%

% of People with Less Than High School who have Low Prose Literacy = 78.3%

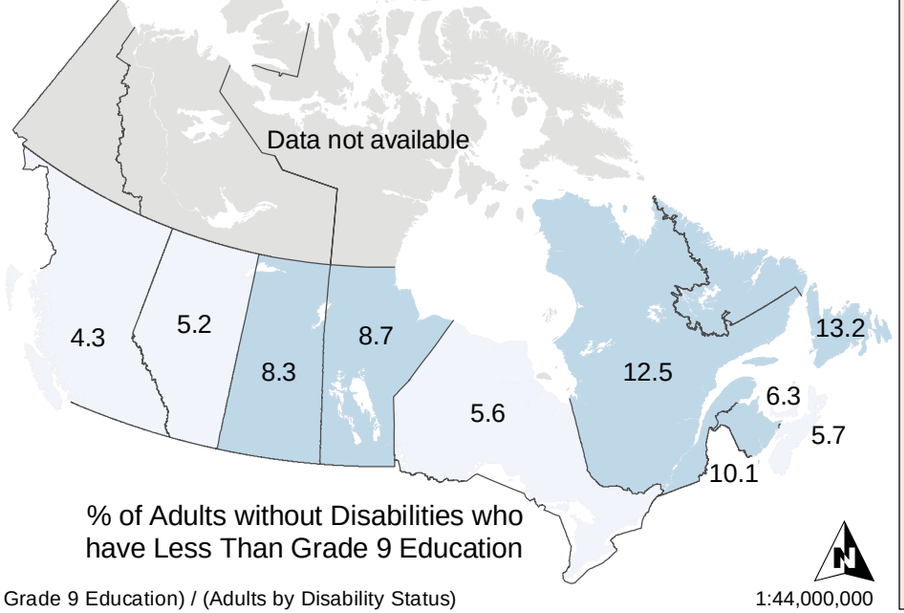
(Less Than High School with Low Prose Literacy) / (Total Low Prose Literacy) or (Total Less Than High School)

2001 Participation & Activity Limitation Survey

Map 36



% of Adults with Disabilities who have Less Than Grade 9 Education



% of Adults without Disabilities who have Less Than Grade 9 Education

(Adults by Disability Status with Less Than Grade 9 Education) / (Adults by Disability Status)

1:44,000,000

Less Than Grade 9 Education for People With & Without Disabilities

Adults - Age 15 & Older

In all provinces, the rate at which people with disabilities had less than a grade 9 education was nearly triple the rate for people without disabilities.

Canada*

% of Adults with Disabilities who have Less Than Grade 9 = 22.1%

% of Adults without Disabilities who have Less Than Grade 9 = 7.6%

*Not including Territories

Disabilities & Less Than Grade 9 Education

Adults - Age 15 & Older

The percentage of adults with disabilities with less than grade 9 education varied from 14.4% in BC to 36.4% in Newfoundland & Labrador. The western provinces and Nova Scotia and PEI showed fewer adults with disabilities with less than grade 9 education.

However, the highest rate of people with less than a grade 9 education who have disabilities was found in Nova Scotia (43.7%). These results indicate that while relatively few people with disabilities have less than grade 9 education compared to other provinces, a disproportionately high number of those with less than grade 9 education have a disability.

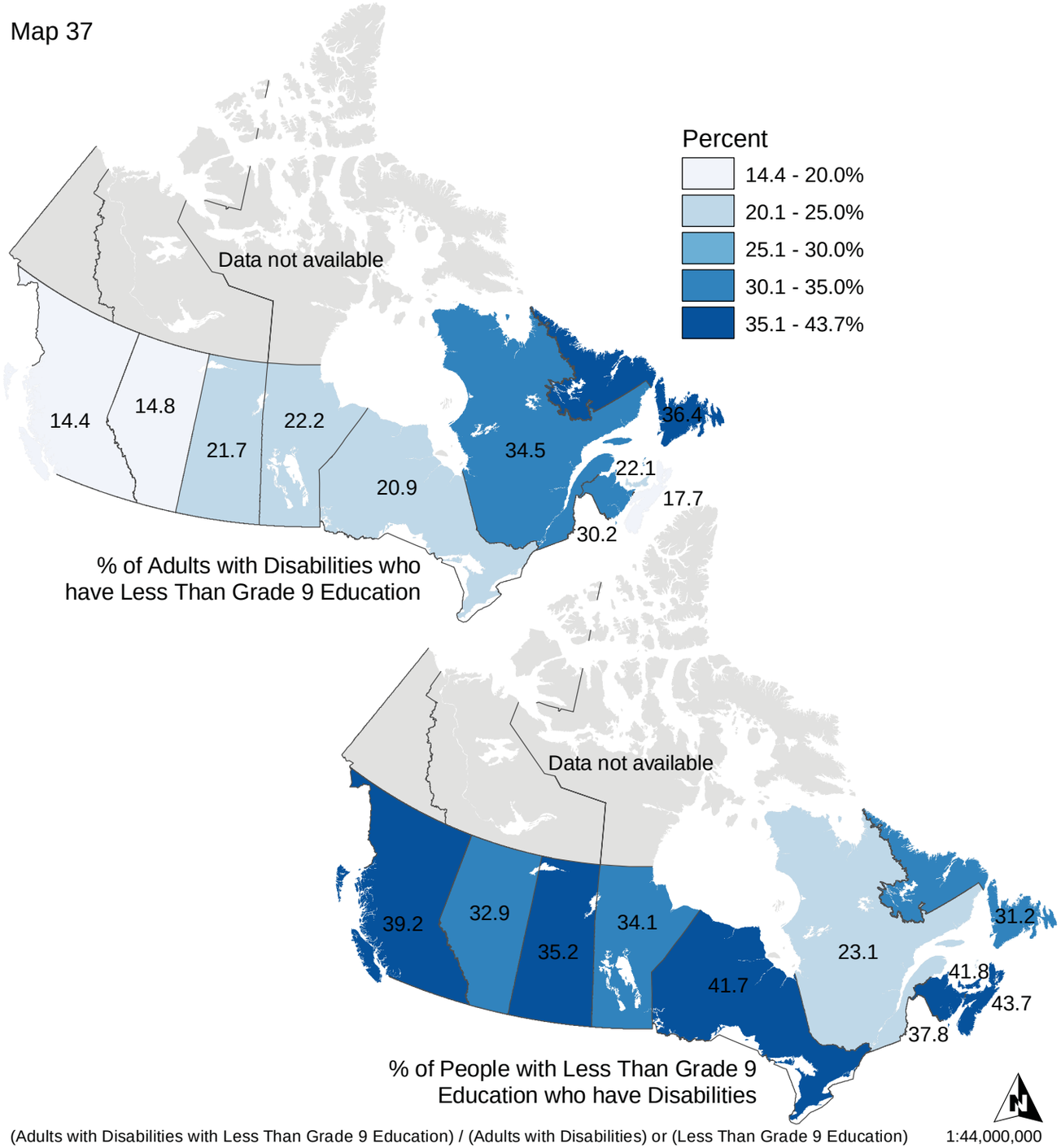
Canada*

% of Adults with Disabilities who have Less Than Grade 9 = 22.1%

% of People with Less Than Grade 9 who have Disabilities = 33.1%

*Not including Territories

Map 37

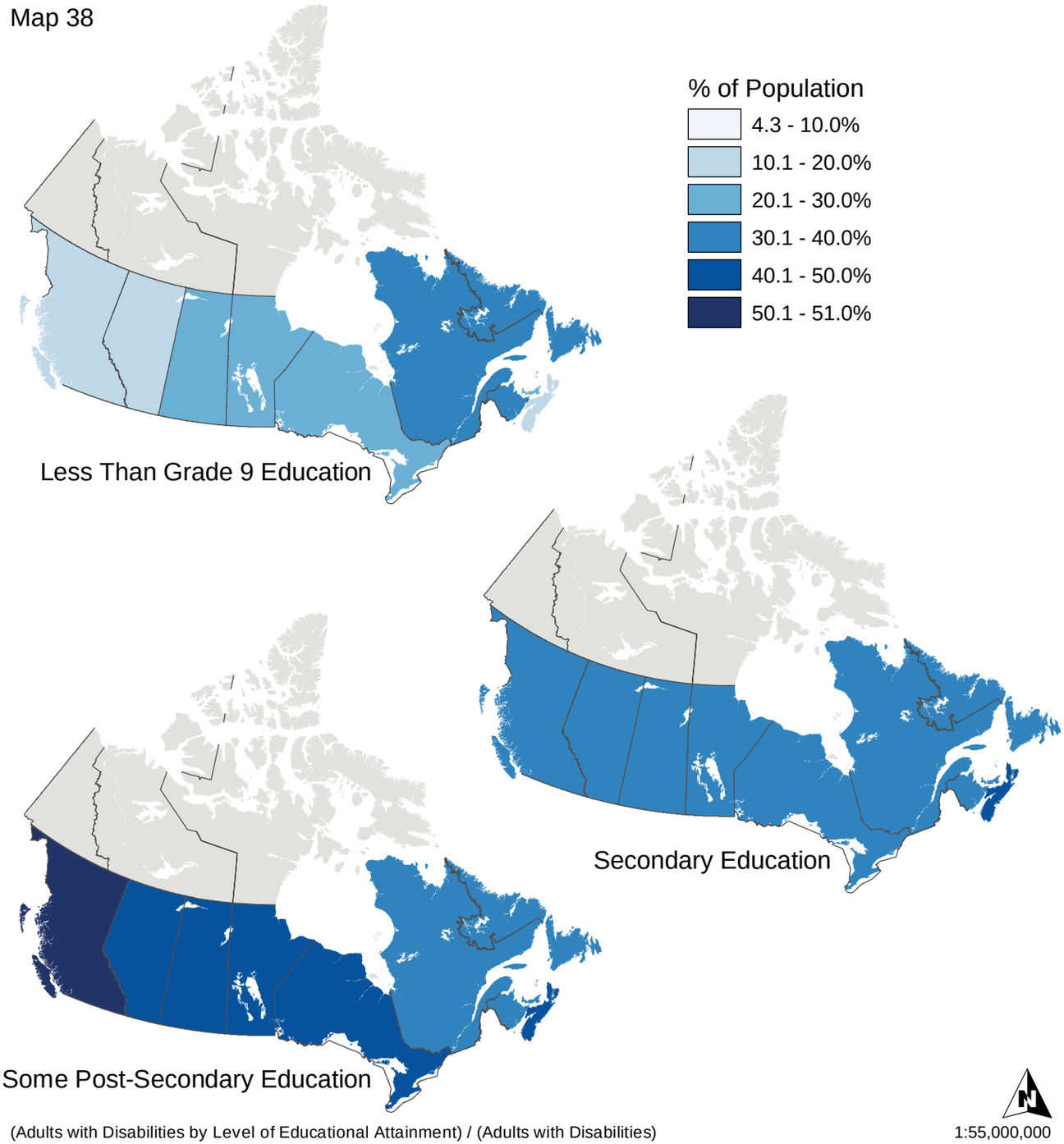


(Adults with Disabilities with Less Than Grade 9 Education) / (Adults with Disabilities) or (Less Than Grade 9 Education)

1:44,000,000

2001 Participation & Activity Limitation Survey

Map 38



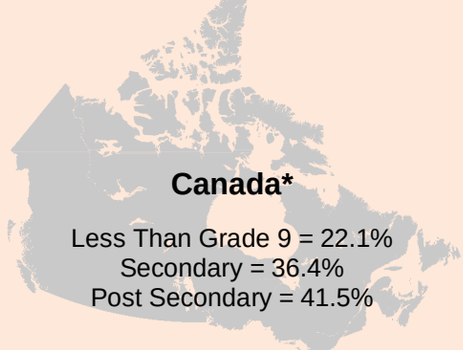
(Adults with Disabilities by Level of Educational Attainment) / (Adults with Disabilities)

1:55,000,000

Educational Attainment for People with Disabilities

Adults - Age 15 & Older

The percentage of people with disabilities with a secondary education was less variable across provinces and was comparable to the pattern found among people without disabilities with a secondary education. As with people without disabilities, people with disabilities generally had some post secondary education compared to those with less than grade 9 education. However the differences are less extreme than they were for people without disabilities.



Canada*

Less Than Grade 9 = 22.1%
Secondary = 36.4%
Post Secondary = 41.5%

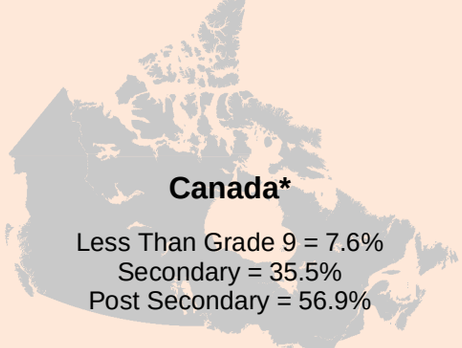
*Not including Territories

Map 38

Educational Attainment for People without Disabilities

Adults - Age 15 & Older

The percentage of people without disabilities who have a secondary education was very similar to the percentage of people with disabilities who have a secondary education. There was also little difference across provinces in the rate at which people achieved a secondary education. The percentages of people without disabilities who have less than grade 9 education are much lower in all provinces than for people with disabilities and the percentages for some post secondary education for people without disabilities are much higher than for people with disabilities.

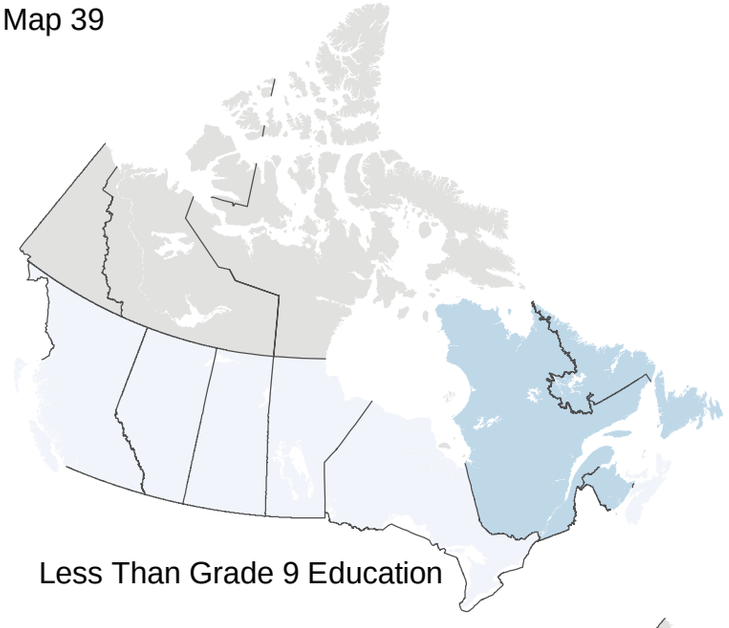


Canada*

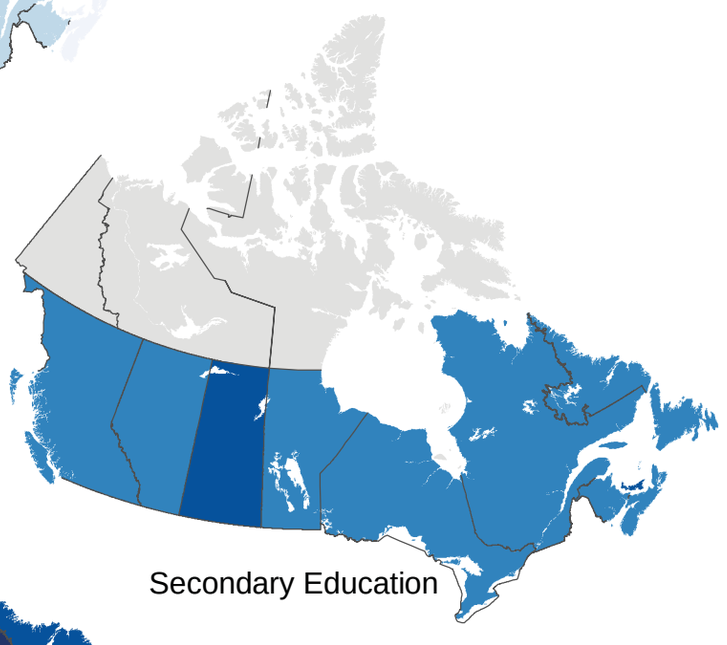
Less Than Grade 9 = 7.6%
Secondary = 35.5%
Post Secondary = 56.9%

*Not including Territories

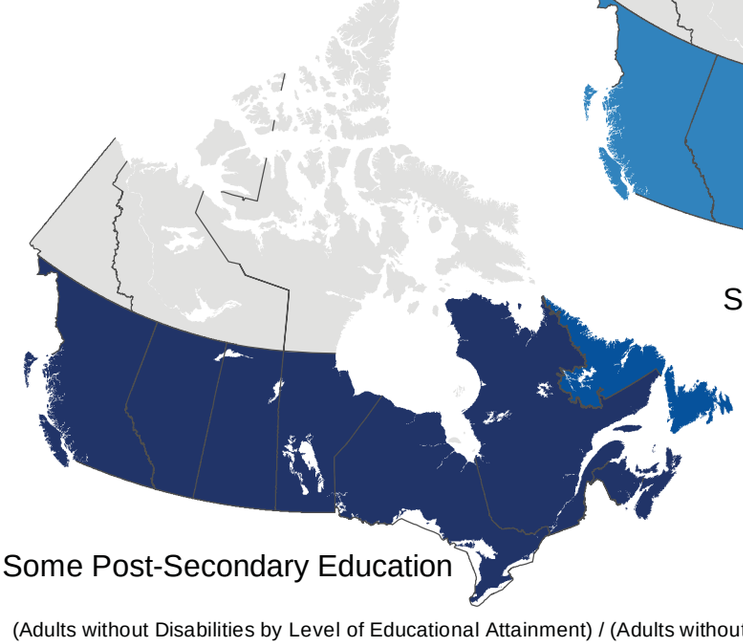
Map 39



Less Than Grade 9 Education



Secondary Education



Some Post-Secondary Education

% of Population
4.3 - 10.0%
10.1 - 20.0%
20.1 - 30.0%
30.1 - 40.0%
40.1 - 50.0%
50.1 - 61.4%

(Adults without Disabilities by Level of Educational Attainment) / (Adults without Disabilities)

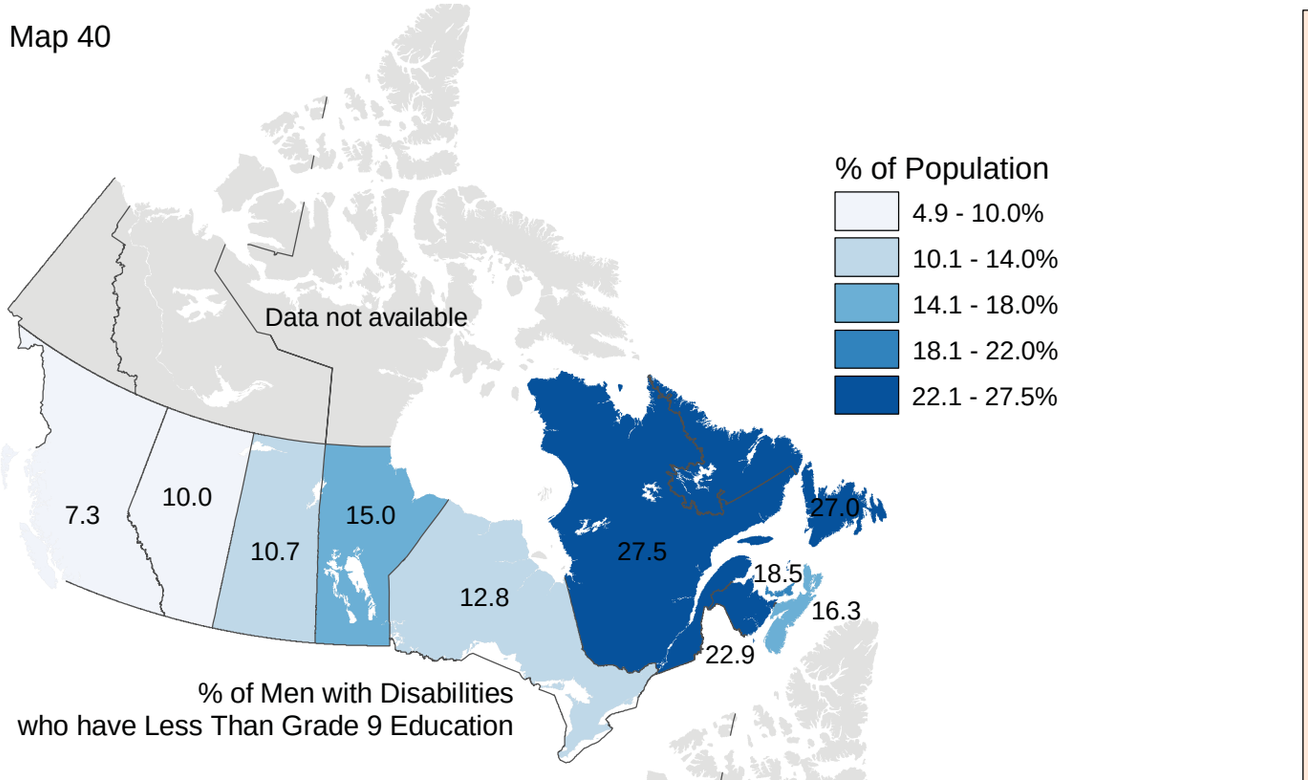
1:55,000,000

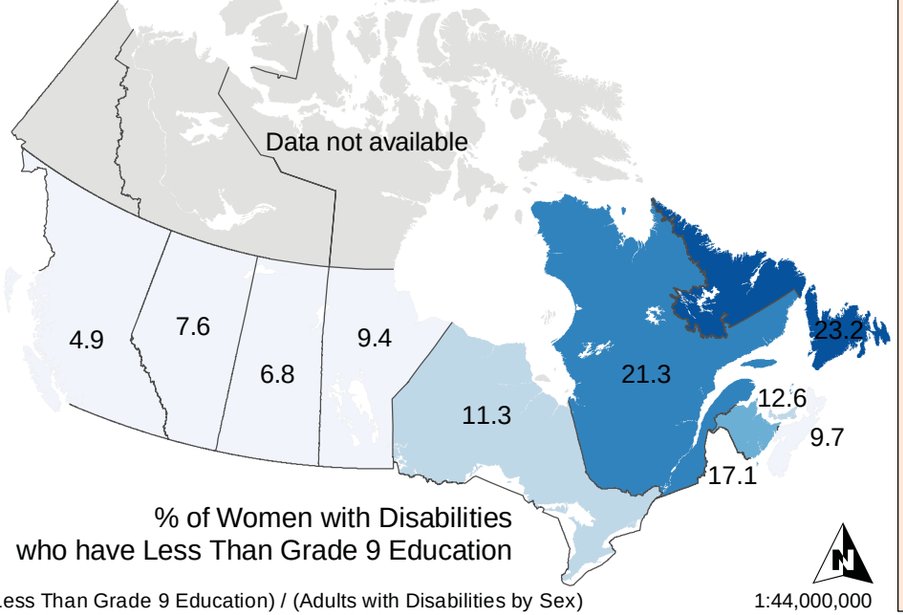
2001 Participation & Activity Limitation Survey

Map 39

2001 Participation & Activity Limitation Survey

Map 40





(Adults with Disabilities by Sex who have Less Than Grade 9 Education) / (Adults with Disabilities by Sex)

1:44,000,000

Adults with Disability with Less Than Grade 9 Education by Sex

Adults - Age 15 to 64

A larger percentage of men with disabilities have less than grade 9 education in all provinces, though the amount of difference varied slightly. Ontario has only a 1.5% difference in the rate of men and women with disabilities with less than grade 9 education while Nova Scotia and Quebec had a difference of over 6%.

Canada*

% of Males with Disabilities who have Less Than Grade 9 Education = 15.1%

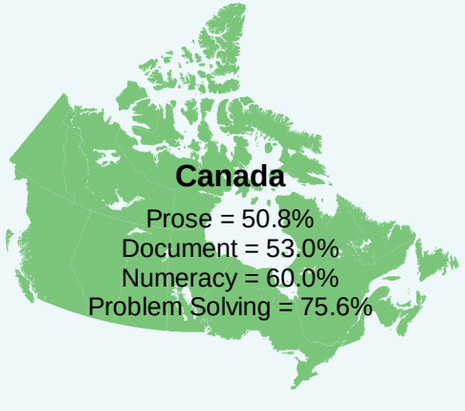
% of Females with Disabilities who have Less Than Grade 9 Education = 11.6%

*Not including Territories

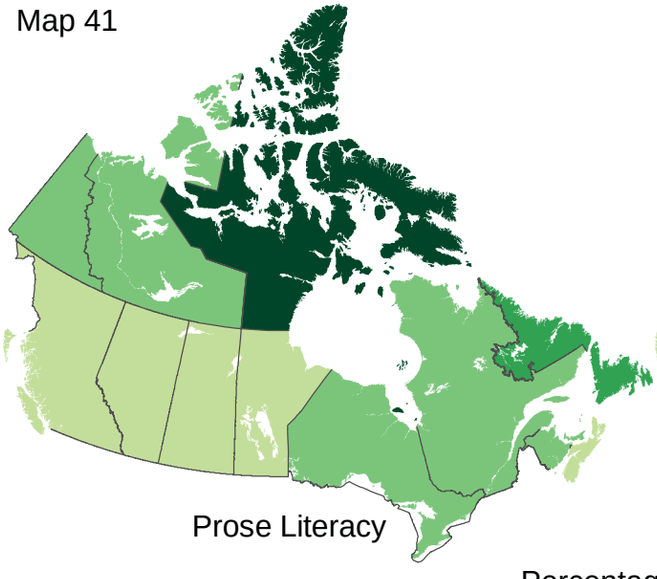
Low Literacy & Not in Labour Force

Adults - Age 15 to 64

As with other measures of low literacy among the four different types of literacy, the percentage of adults age 15 to 64 who are not in the labour force who have low literacy increased from 50.8% for prose literacy to 75.6% for problem solving literacy. Nunavut had the highest rate of low literacy among people not in the labour force for prose and numeracy literacy as well.

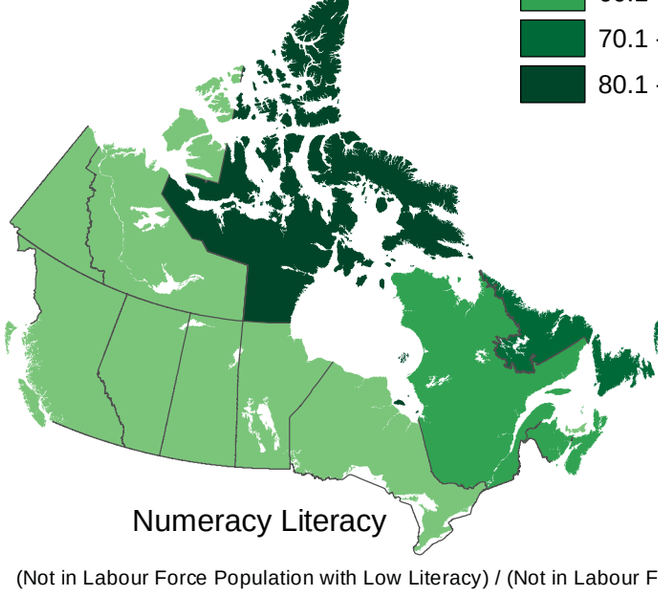


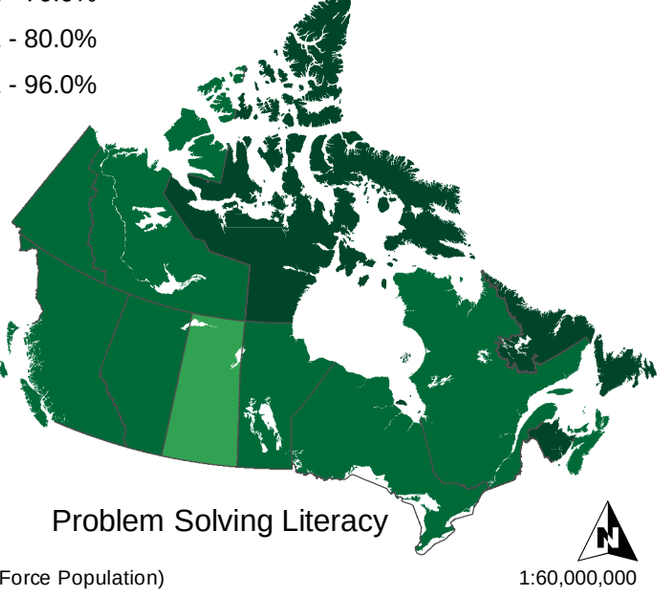
Map 41



Percentage with Low Literacy (Level 1 or 2)

- 25.8 - 40.0%
- 40.1 - 50.0%
- 50.1 - 60.0%
- 60.1 - 70.0%
- 70.1 - 80.0%
- 80.1 - 96.0%





(Not in Labour Force Population with Low Literacy) / (Not in Labour Force Population)

1:60,000,000

2003 International Adult Literacy & Skills Survey

Map 41

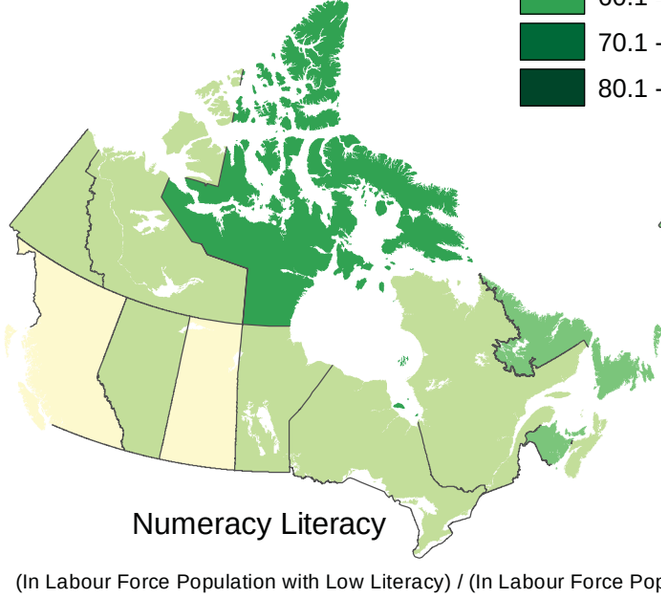
Map 42

Prose Literacy

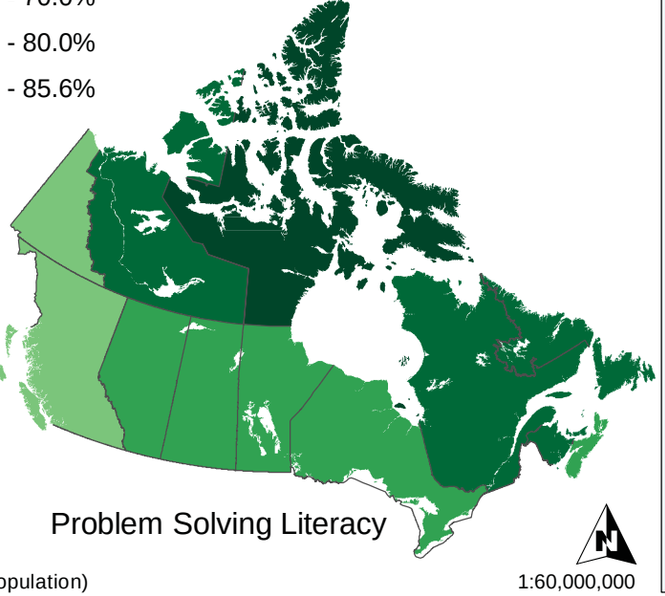
Document Literacy

Percentage with Low Literacy
(Level 1 or 2)

- 25.8 - 40.0%
- 40.1 - 50.0%
- 50.1 - 60.0%
- 60.1 - 70.0%
- 70.1 - 80.0%
- 80.1 - 85.6%



Numeracy Literacy



Problem Solving Literacy

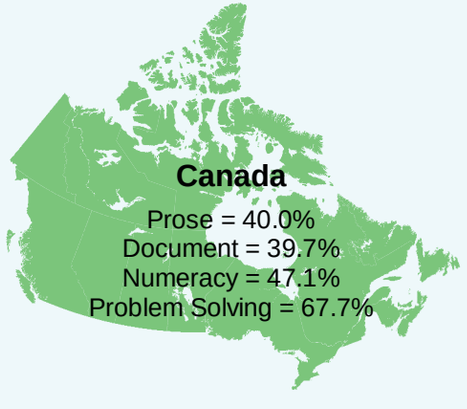
(In Labour Force Population with Low Literacy) / (In Labour Force Population)

1:60,000,000

Low Literacy & in Labour Force

Adults - Age 15 to 64

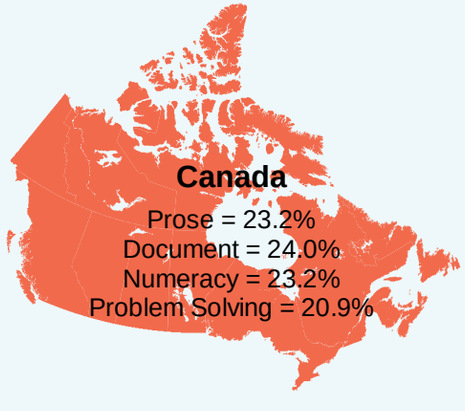
The percentage of adults in the labour force age 15 to 64 who had low literacy was lower than the percentage of adults not in the labour force with low literacy. There is an approximately 10% difference for each category of literacy with the percentage with low document literacy having the greatest difference between those in and not in the labour force and low problem solving literacy the smallest difference.



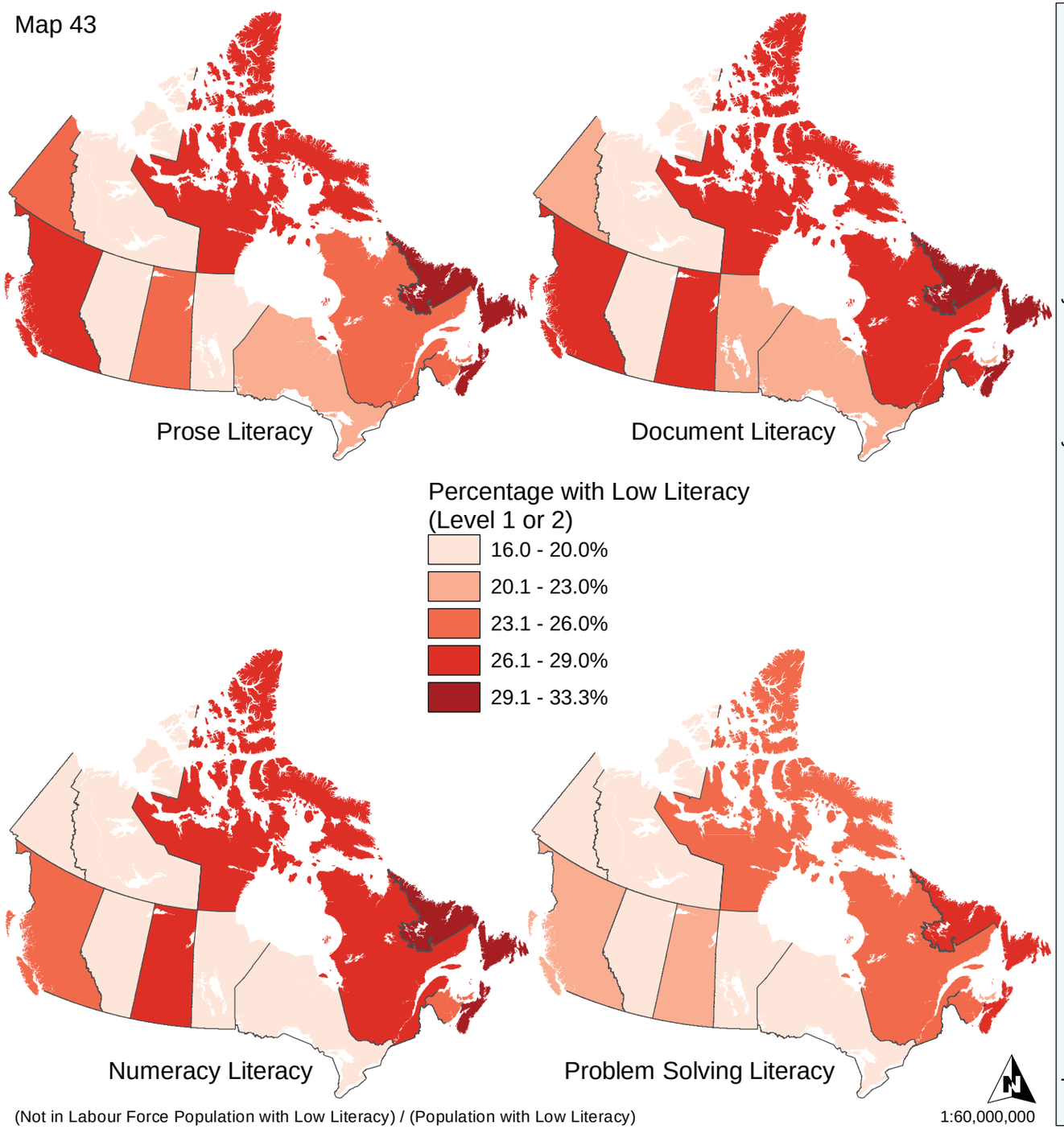
Not in Labour Force & Low Literacy

Adults - Age 15 to 64

This map shows that there is little difference in the importance of one type of literacy over another in determining whether or not a person is in the labour force. For example, in Newfoundland & Labrador a relatively high percentage of people with low literacy were not in the labour force compared to other provinces & territories and it's high for all four types of literacy. Alberta & Northwest Territories, meanwhile, had a relatively low percentage of people with low literacy who were not in the labour force and it's low for all four types of literacy.



Map 43

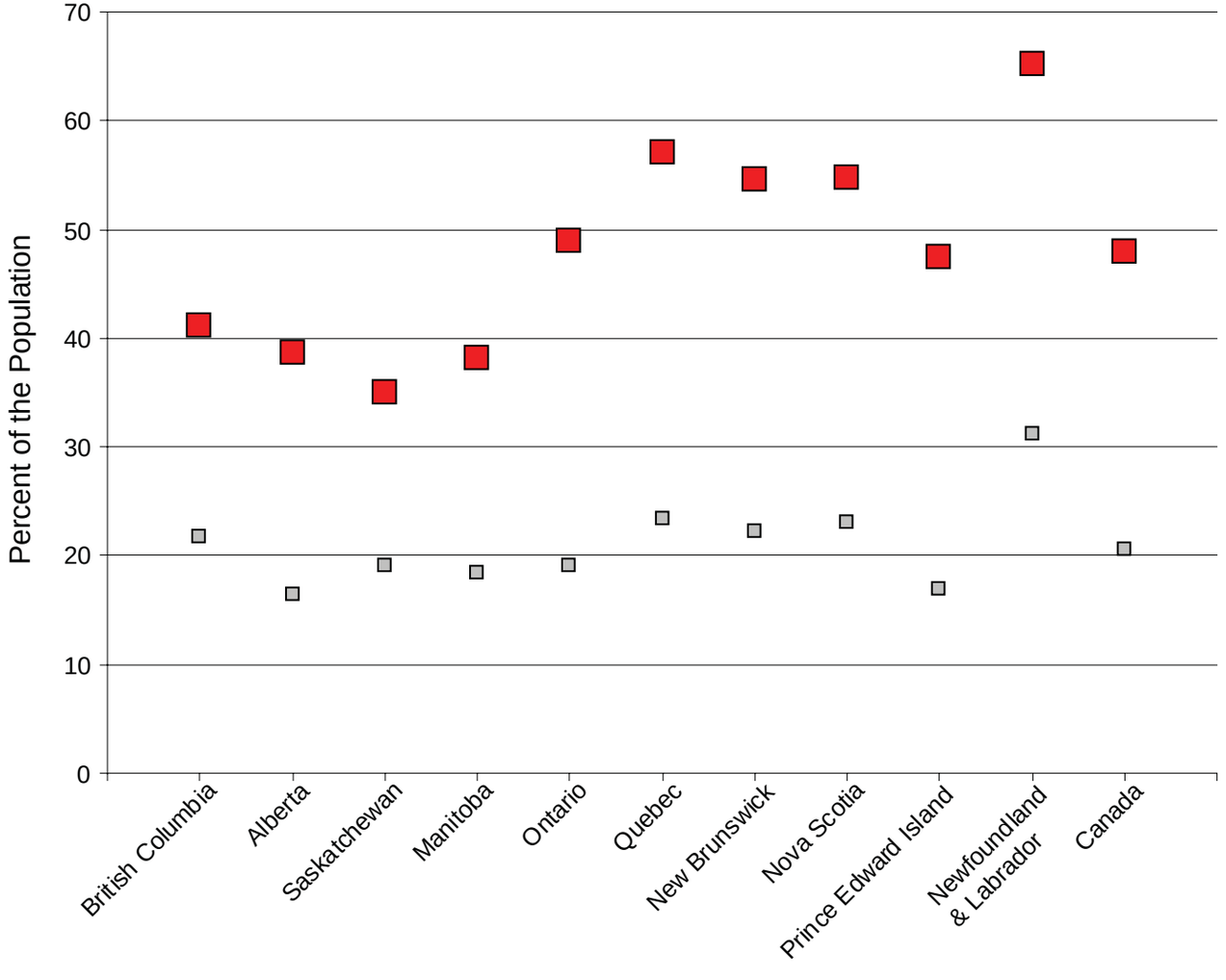


(Not in Labour Force Population with Low Literacy) / (Population with Low Literacy)

1:60,000,000

2001 Participation & Activity Limitation Survey

Chart 6



(People Not Active in the Labour Force by Disability Status) / (People by Disability Status)

Not in the Labour Force & Disability

Adults - Age 15 to 64

On average, almost half of adults with disabilities, compared to just over 20% of adults without disabilities, were not active in the labour force. The western provinces of British Columbia, Alberta, Saskatchewan, & Manitoba had both a lower rate of people with disabilities not in the labour force and less of a difference between the rates of labour force activity for people with and without disabilities. There was greater variation among provinces in the rate of people with disabilities not active in the labour force compared to those without disabilities.

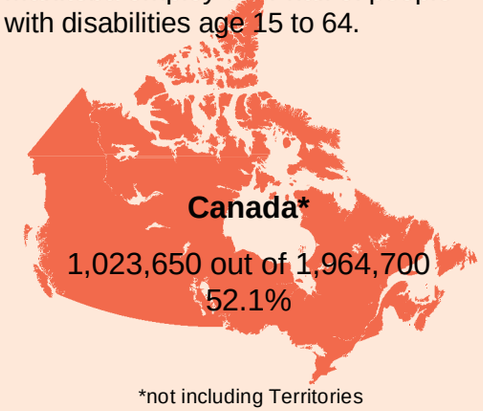
Chart 6

Adults with Disabilities who are Active in the Labour Force

Adults - Age 15 to 64

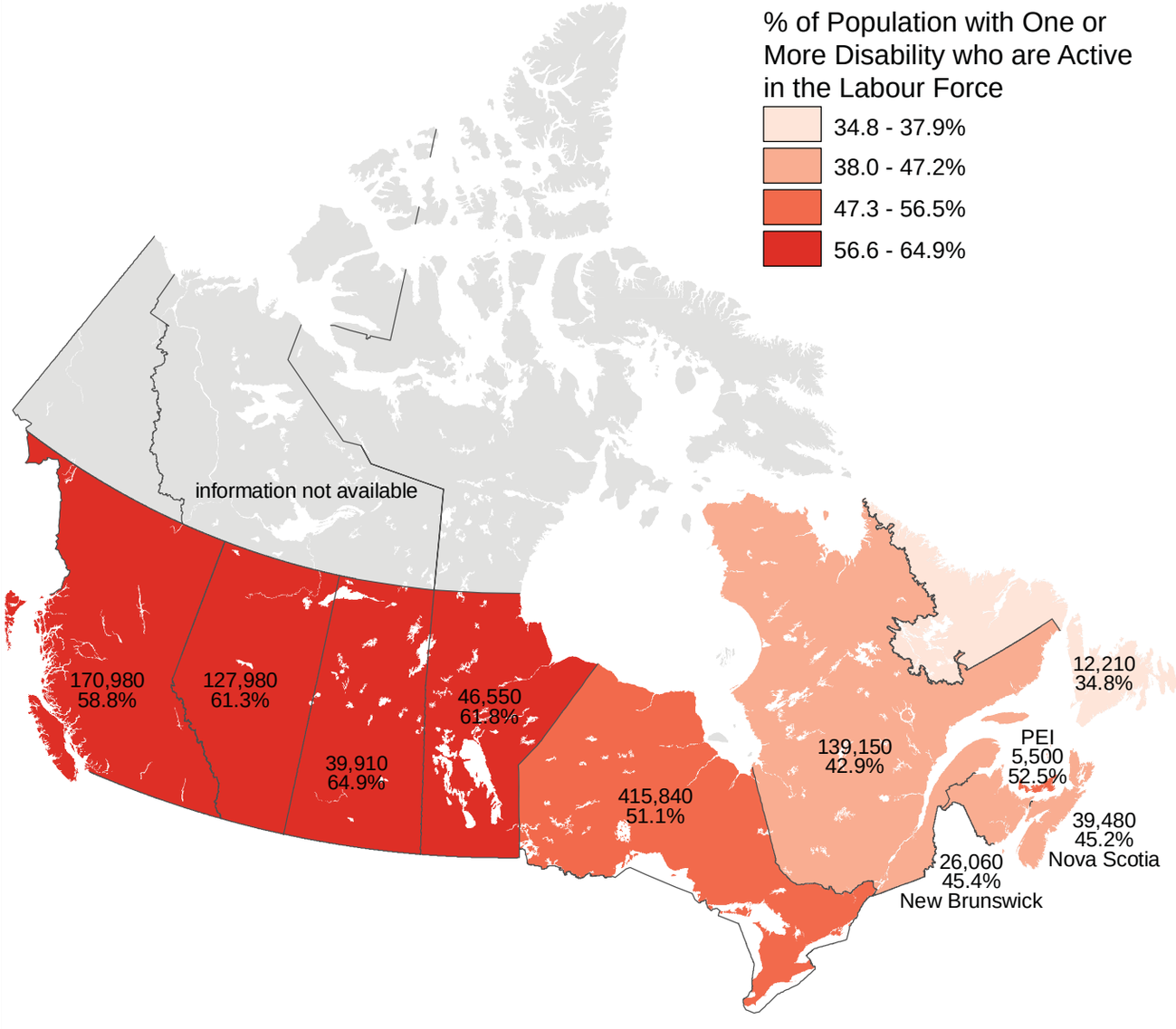
Over half of all people age 15 to 64 with a disability were active in the labour force. Newfoundland & Labrador stands out with the lowest rate at 34.8% and Saskatchewan has nearly double that rate at 64.9%. Newfoundland & Labrador also has a high unemployment rate (2,830 out of the 12,210 people with disabilities who were active in the labour force, or 23.2%, well above the Canadian average of 11.0%).

People with disabilities between the age of 15 and 64 were more likely to be active in the labour force, and employed, if they live in the western half of the country. Only British Columbia, Alberta, Saskatchewan, & Manitoba employ over half of people with disabilities age 15 to 64.



*not including Territories

Map 44



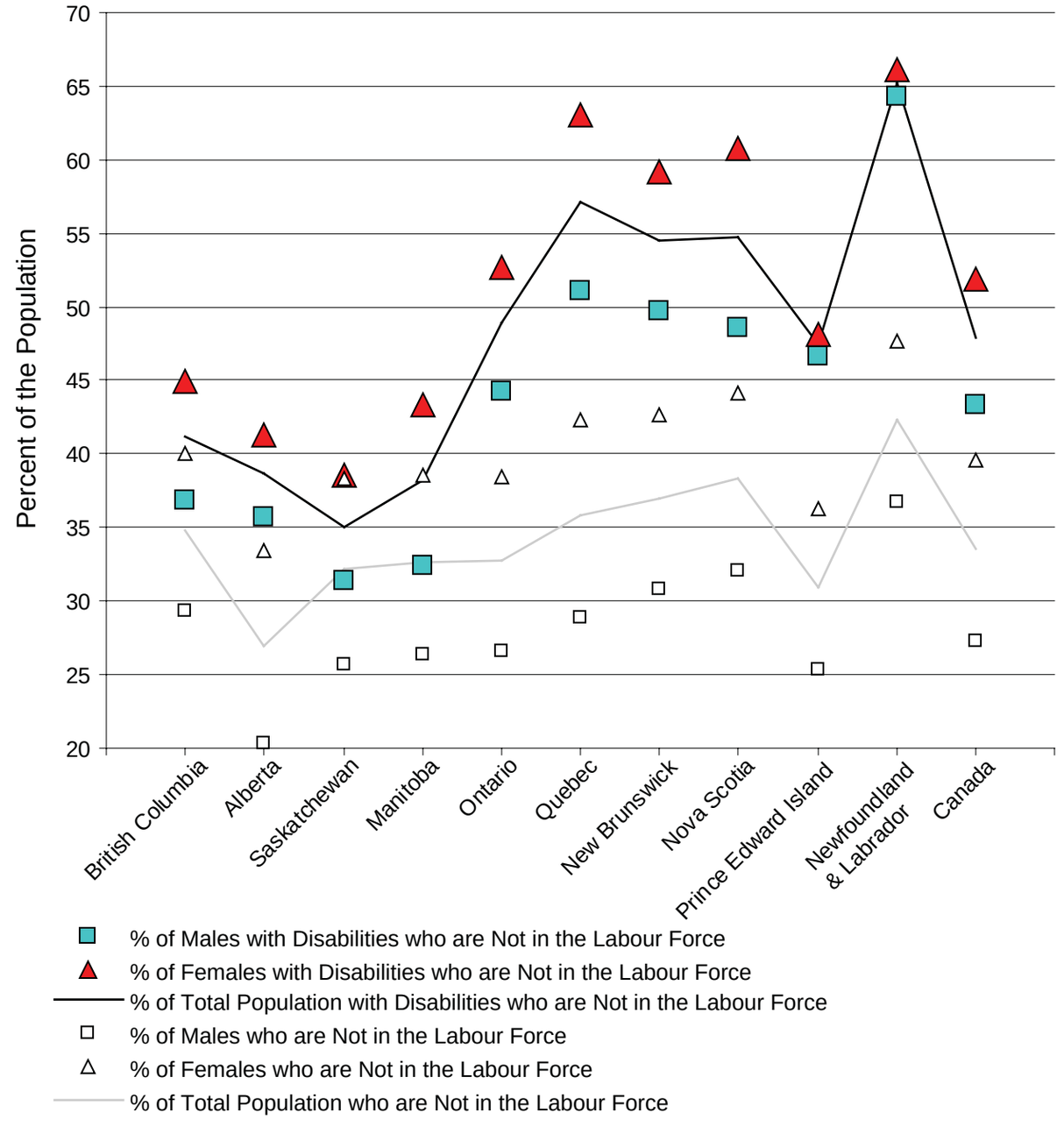
(People with Disabilities Active in the Labour Force) / (People with Disabilities)

1:30,000,000

2001 Participation & Activity Limitation Survey

Map 44

Chart 7



(People by Sex & Disability Status Not in the Labour Force) / (People by Sex & Disability Status)

Sex & Disability Status for People Not In the Labour Force

Adults - Age 15 & Older*

In all provinces, for both those with disabilities and the population as a whole, there was a higher rate of women not in the labour force compared to men. The rates of men and women with disabilities not in the labour force tended to be comparable to the overall rates of men and women for the western provinces. Men with and without disabilities in Alberta are exceptions. Men and women with disabilities participated in the labour force at nearly equal rates in PEI and Newfoundland & Labrador though this was not the case for the population as a whole.

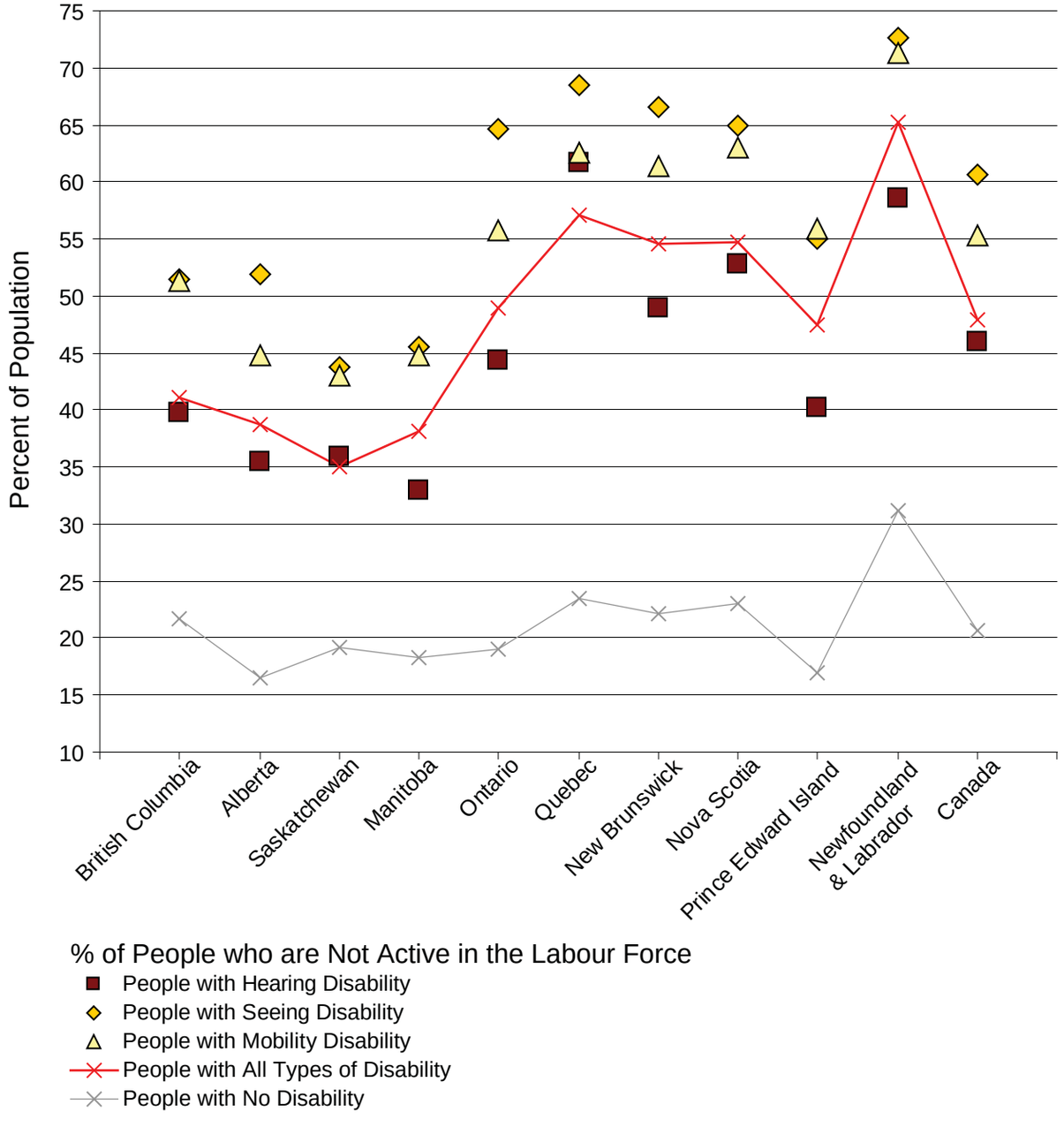
*Age 15 to 64 for People with Disabilities, Not including Territories

Hearing, Seeing, & Mobility Disability & Not Active in the Labour Force

Adults - Age 15 to 64

In all provinces, a higher percentage of people with seeing & mobility disabilities were not active in the labour force compared to those with a hearing disability as well as the average rate for all types of disability combined.

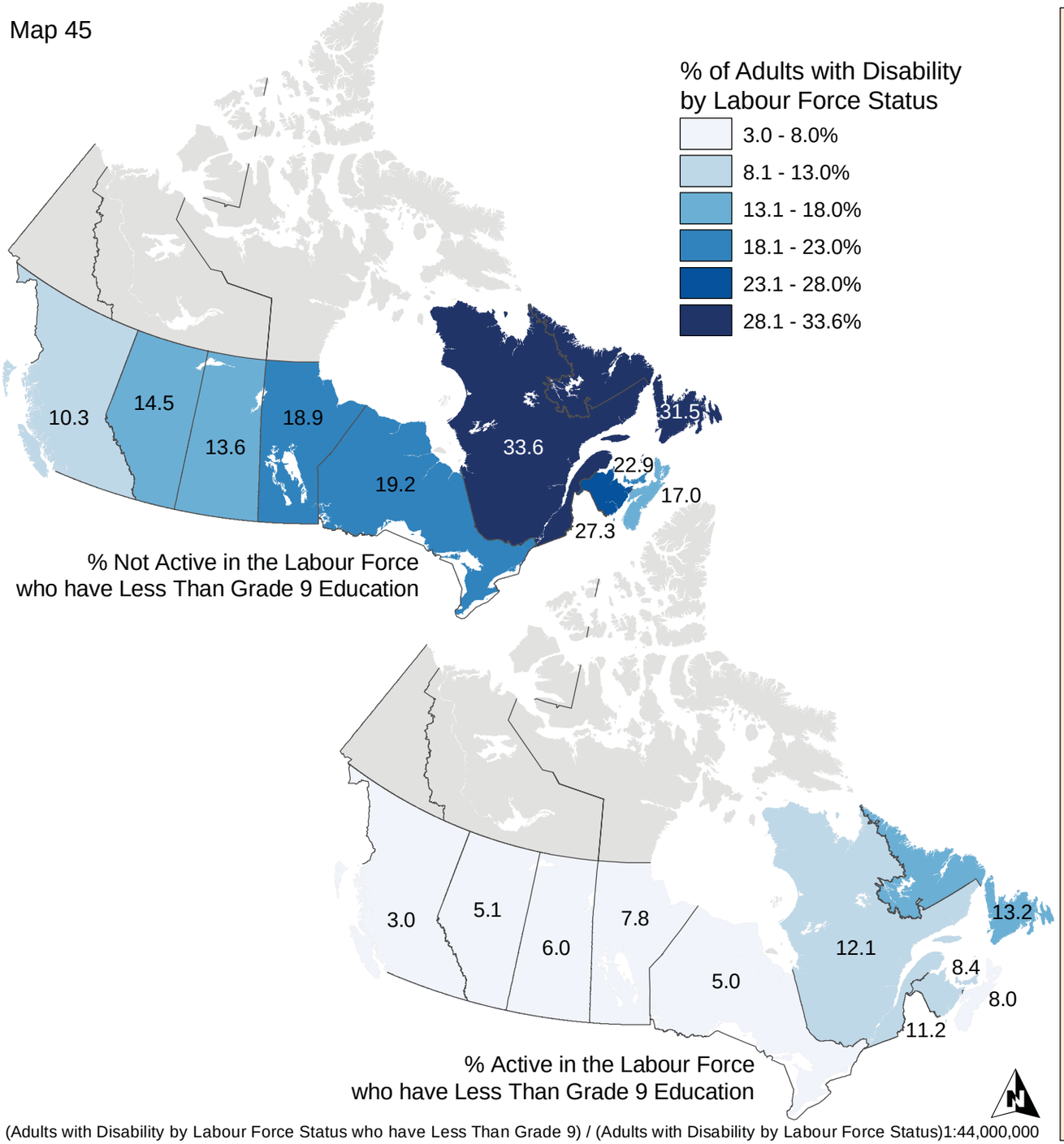
Chart 8



(Adults with Disability Not Active in the Labour Force) / (Adults with Disability)

2001 Participation & Activity Limitation Survey

Map 45



(Adults with Disability by Labour Force Status who have Less Than Grade 9) / (Adults with Disability by Labour Force Status)1:44,000,000

Adults with Disability by Labour Force Status with Less Than Grade 9 Education

Adults - Age 15 to 64

There is greater variation among the provinces in the rate at which adults with disabilities who were not active in the labour force have less than grade 9 education than the rate for those active in the labour force. Nonetheless, Newfoundland & Labrador, Quebec, and New Brunswick had the highest percentage of people with less than grade 9 education among both those active in and not active in the labour force.

Canada*

% Not Active in the Labour Force with Less Than Grade 9 Education = 20.9%

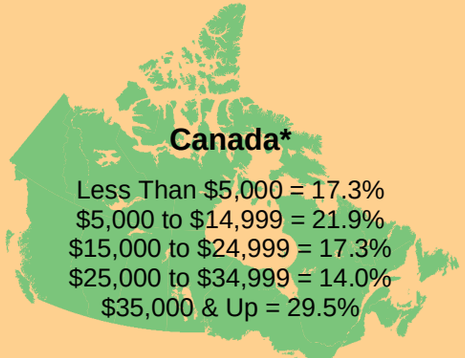
% Active in the Labour Force with Less Than Grade 9 Education = 6.2%

*not including Territories

Individual Income

Adults - Age 15 & Older

Results on this map which show the income levels for the general population should be compared the maps showing low prose literacy and income (map 47), people with disability and income (map 50), people without disability and income (map 51).

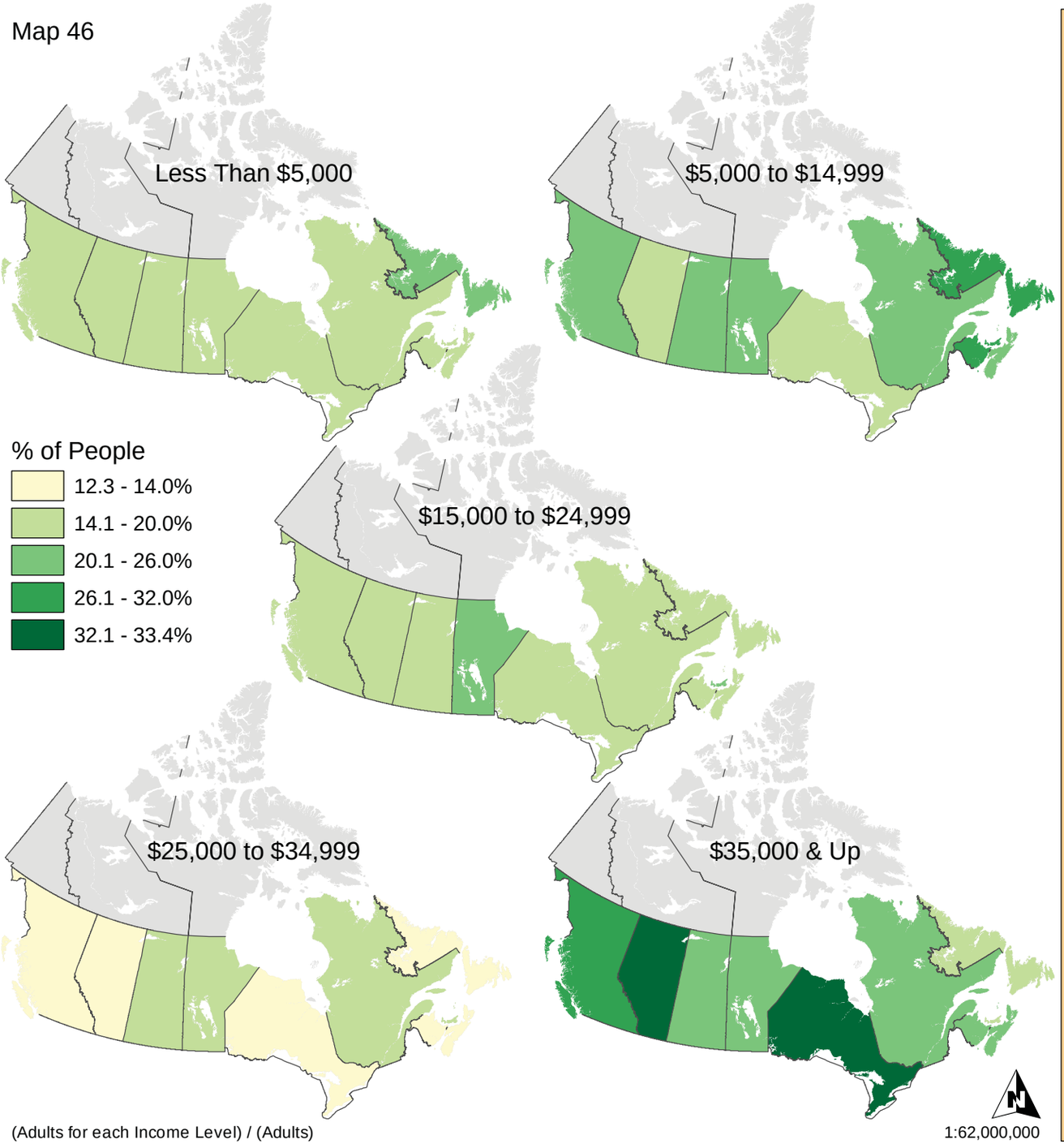


Canada*

Less Than $5,000 = 17.3%
$5,000 to $14,999 = 21.9%
$15,000 to $24,999 = 17.3%
$25,000 to $34,999 = 14.0%
$35,000 & Up = 29.5%

*not including Territories

Map 46



(Adults for each Income Level) / (Adults)

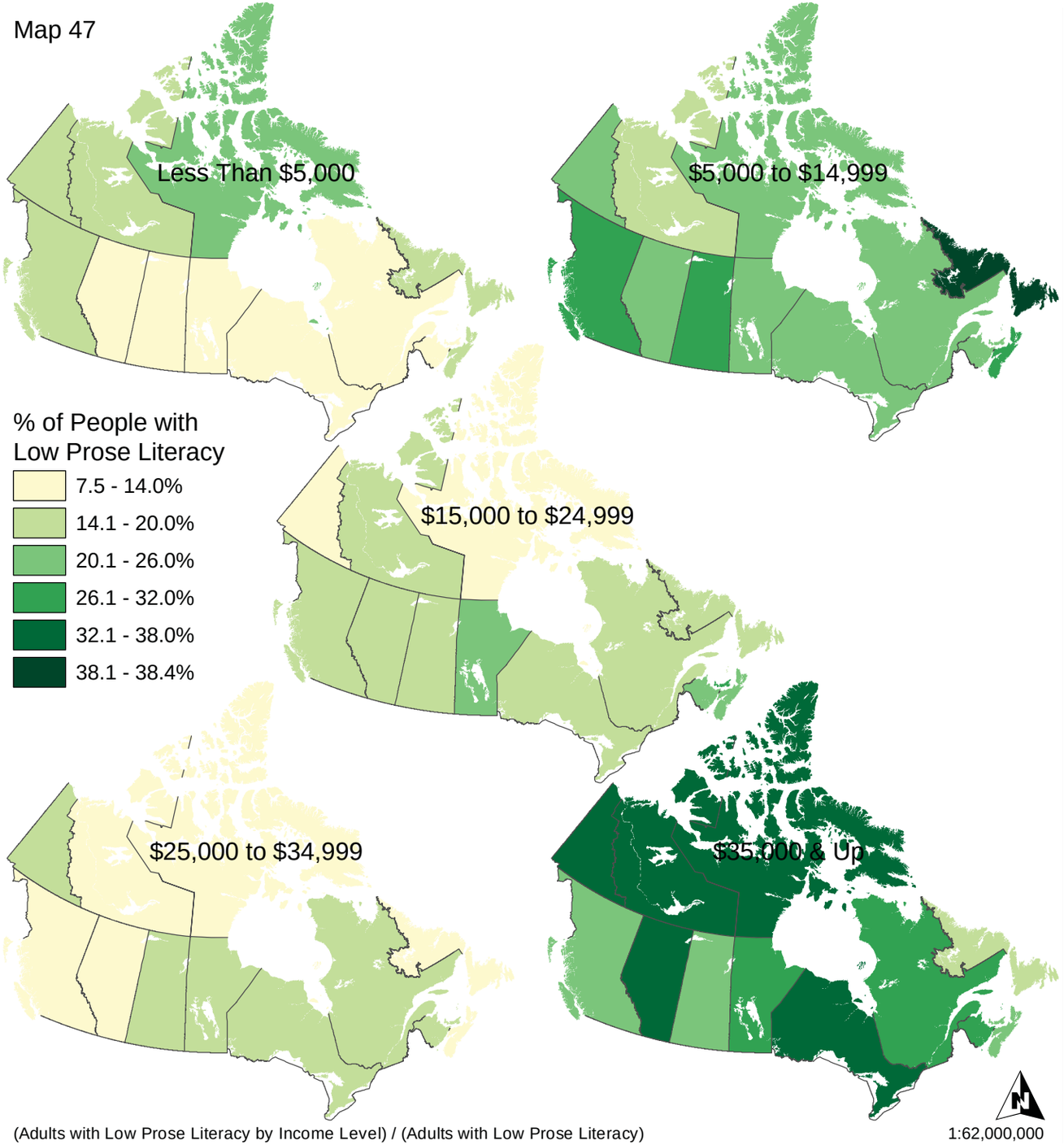
1:62,000,000

2001 Census of Population

Map 46

2001 International Adult Literacy & Skills Survey

Map 47



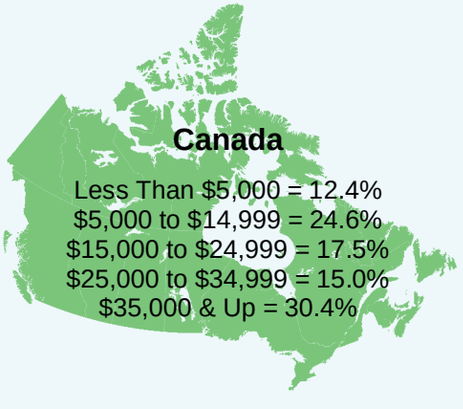
(Adults with Low Prose Literacy by Income Level) / (Adults with Low Prose Literacy)

1:62,000,000

Income & Low Prose Literacy

Adults - Age 16 & Older

Surprisingly, a slightly higher percentage of people with low prose literacy made more than $35,000 while a lower percentage of people with low prose literacy made less than $5,000 compared to the rates for all adults (map 46). Perhaps this difference has more to do with the fact that data came from two different sources than the implication that people with low prose literacy skills make more money.

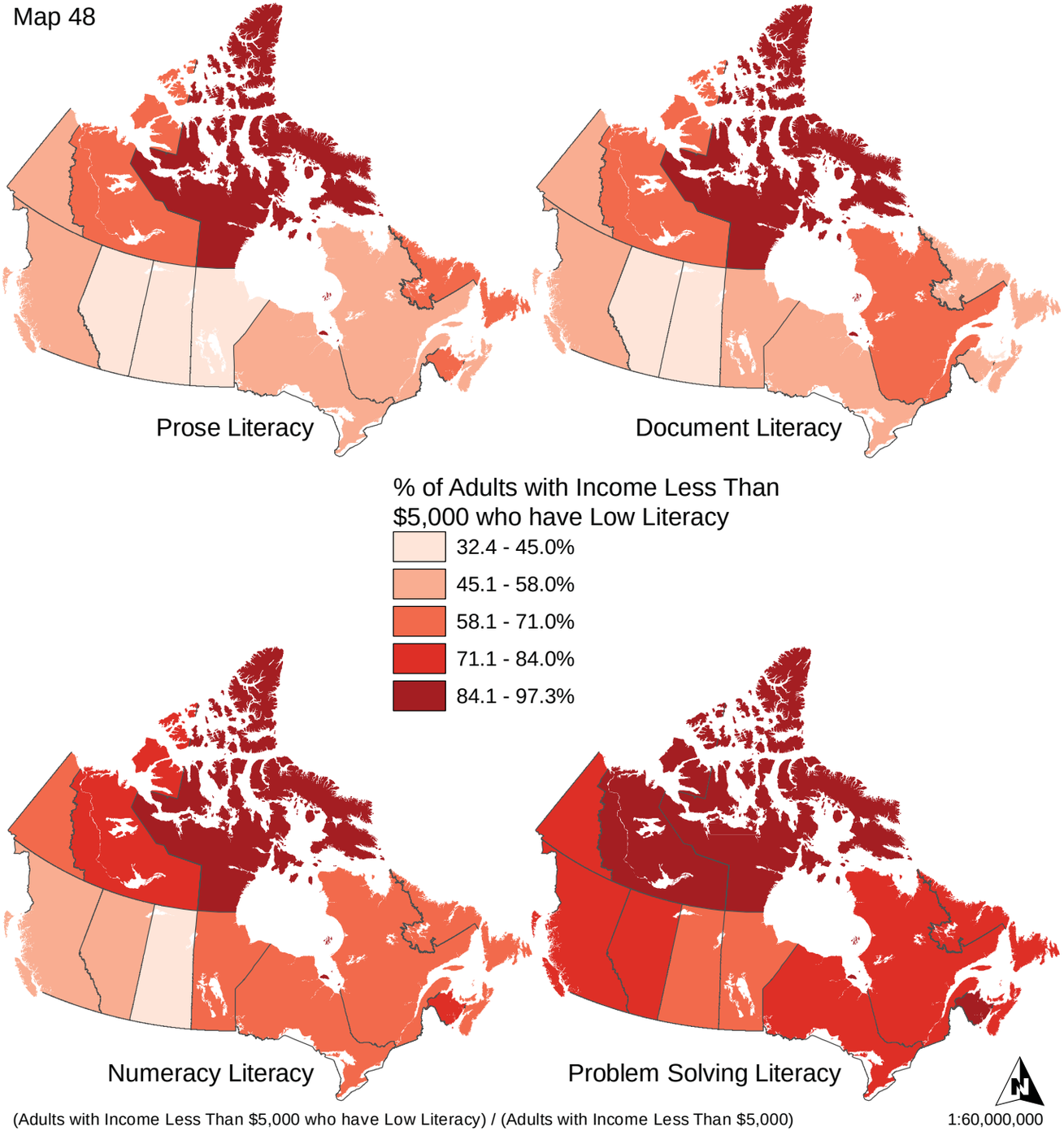


Map 47

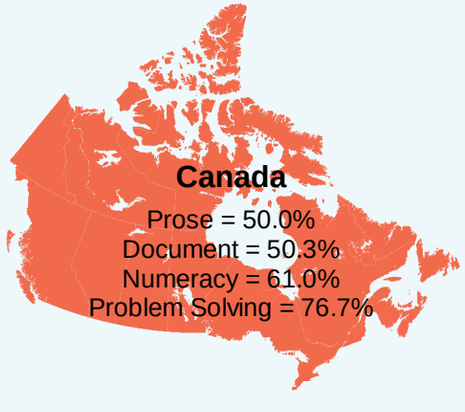
% of Adults with Low Income who have Low Literacy

Adults - Age 16 & Older

Map 48

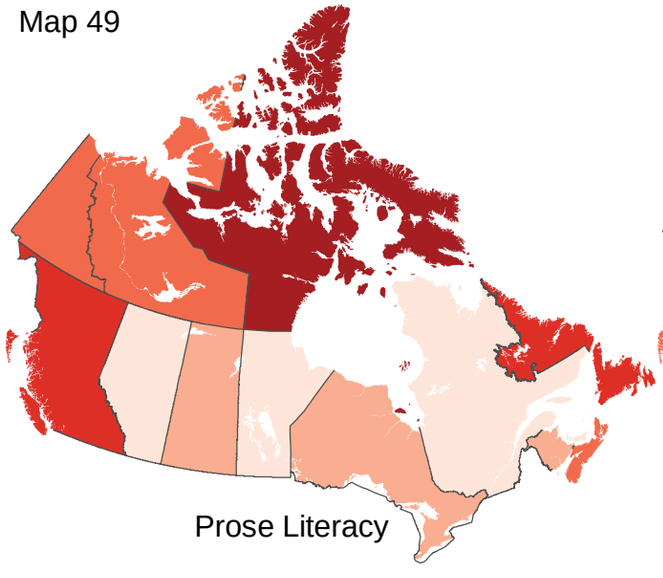


Nationally, over 50% of adults with low income had low literacy for all four categories of literacy. The prairie provinces tended to have a slightly lower percentage of people with low income who had low literacy.

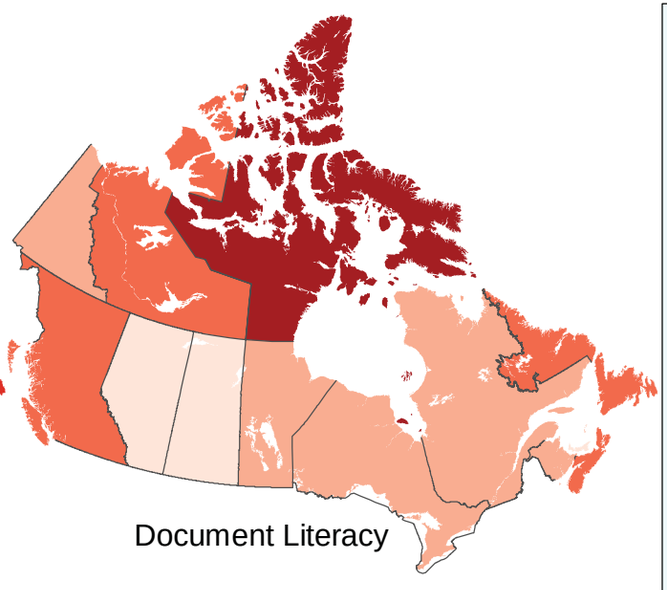


2003 International Adult Literacy & Skills Survey

Map 49



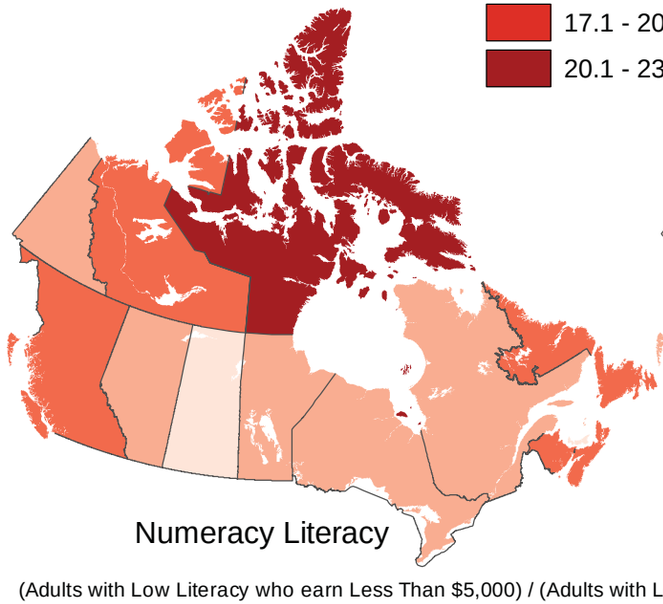
Prose Literacy



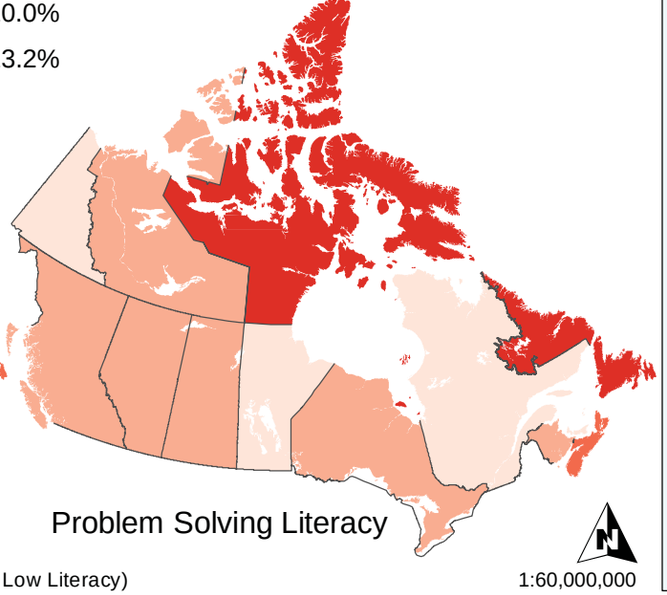
Document Literacy

% of Adults with Low Literacy who Earn Less Than $5,000

- 7.7 - 11.0%
- 11.1 - 14.0%
- 14.1 - 17.0%
- 17.1 - 20.0%
- 20.1 - 23.2%



Numeracy Literacy



Problem Solving Literacy

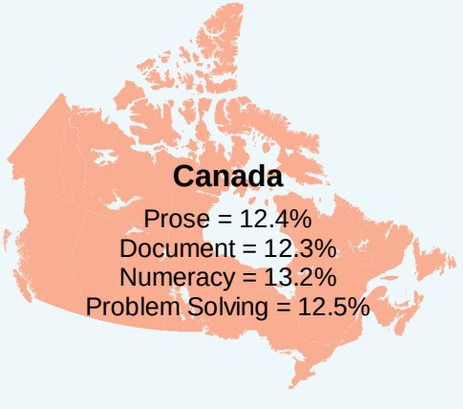
(Adults with Low Literacy who earn Less Than $5,000) / (Adults with Low Literacy)

1:60,000,000

% of Adults with Low Literacy who Earn Less Than $5,000

Adults - Age 16 & Older

The rate of adults with low literacy who earned less than $5,000 was nearly the same for all four categories of literacy. This indicates that no one category of low literacy had more or less of an impact on income.

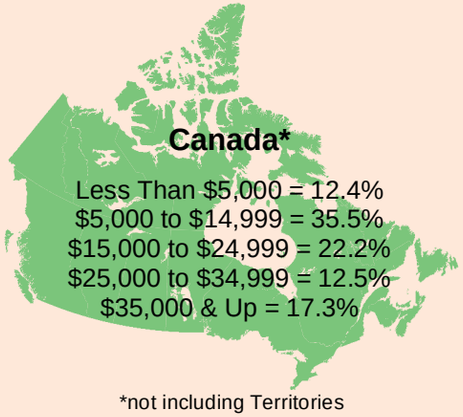


Map 49

Income & Disability

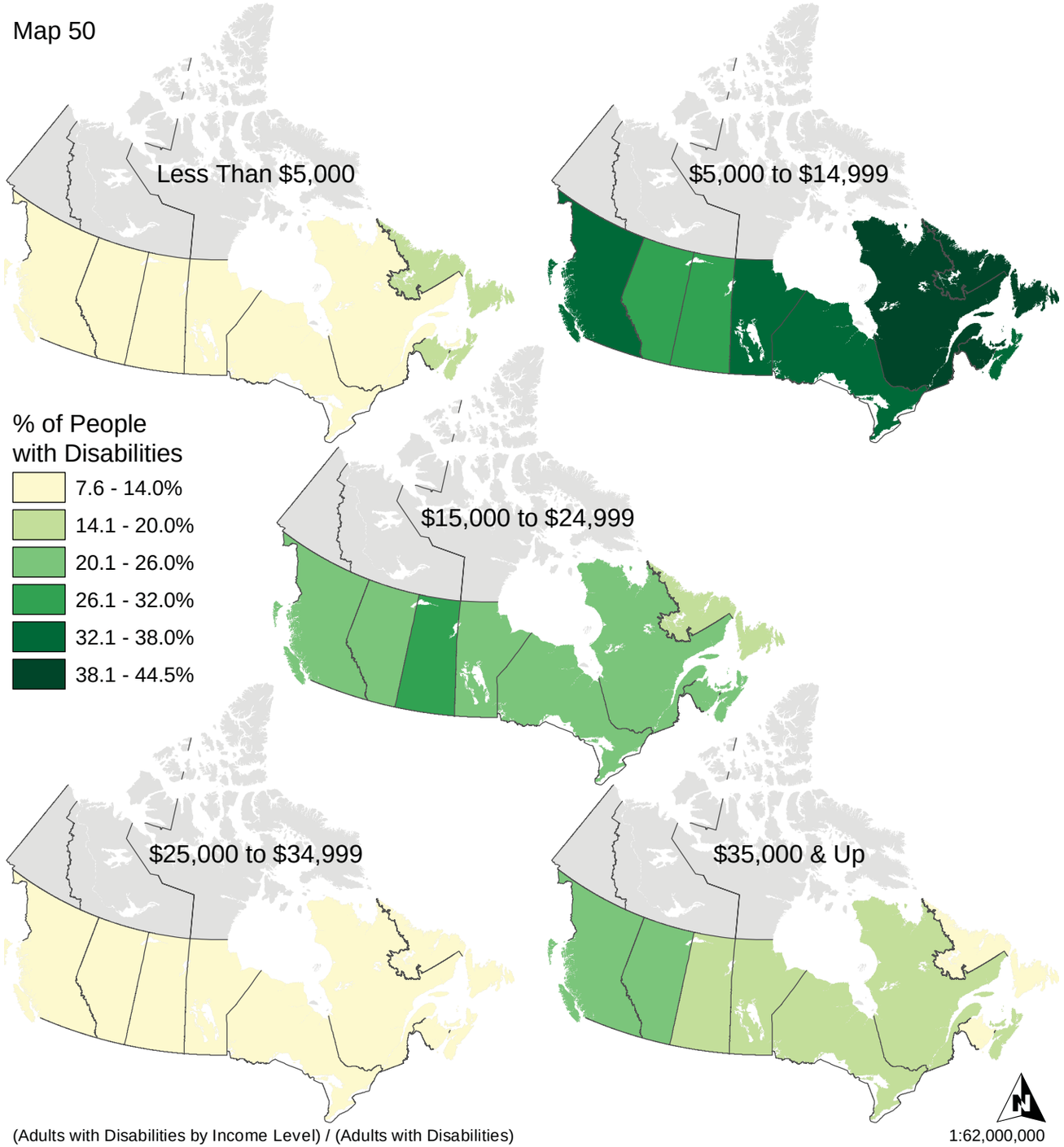
Adults - Age 15 & Older

More people with disabilities fell in the $5,000 to $14,999 income bracket than any other income bracket in all provinces. A smaller percentage of people with disabilities earned less than $5,000 than people without disabilities and the rate was the same as that for people with low prose literacy.



*not including Territories

Map 50



(Adults with Disabilities by Income Level) / (Adults with Disabilities)

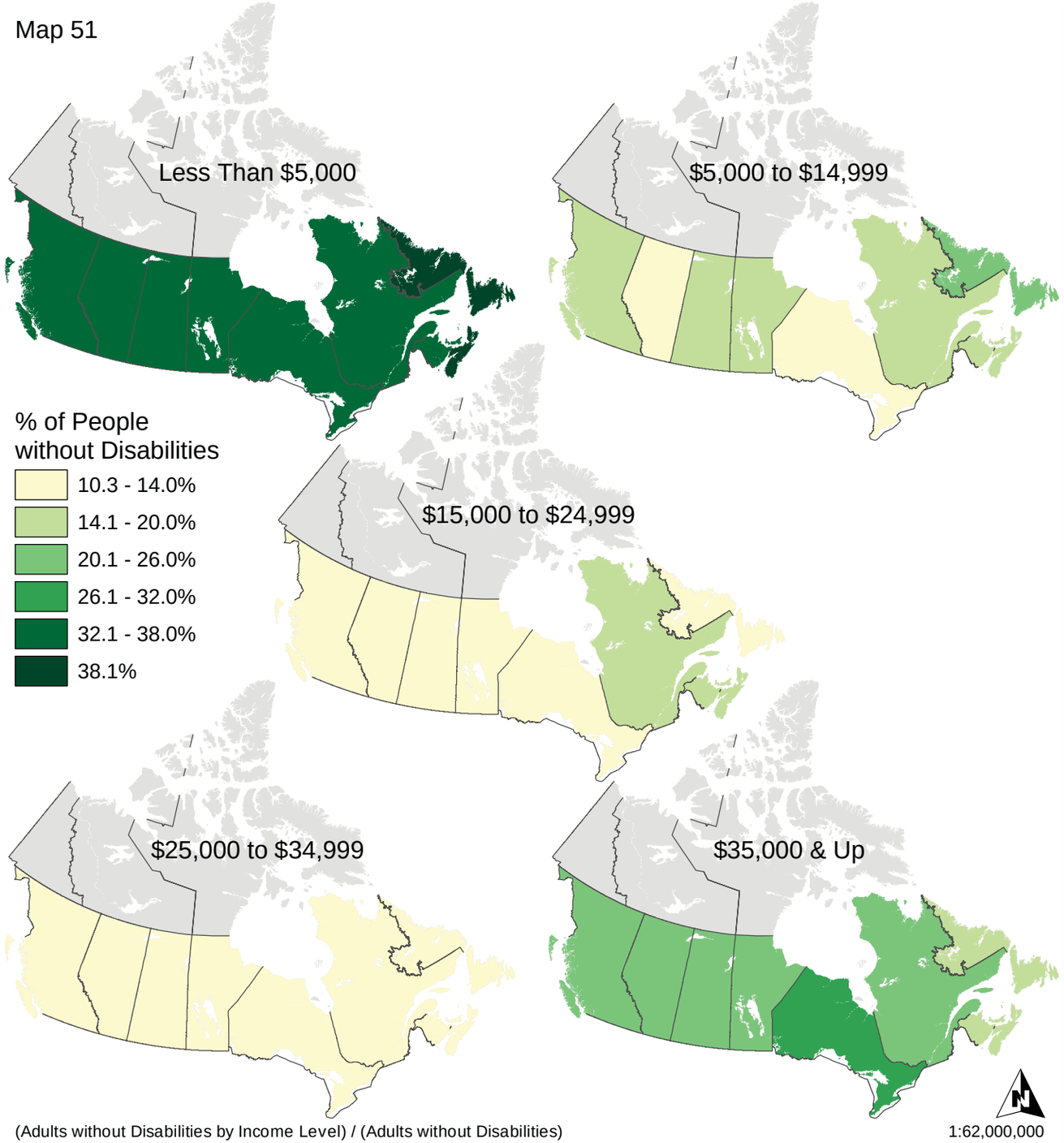
1:62,000,000

2001 Participation & Activity Limitation Survey

Map 50

2001 Participation & Activity Limitation Survey

Map 51



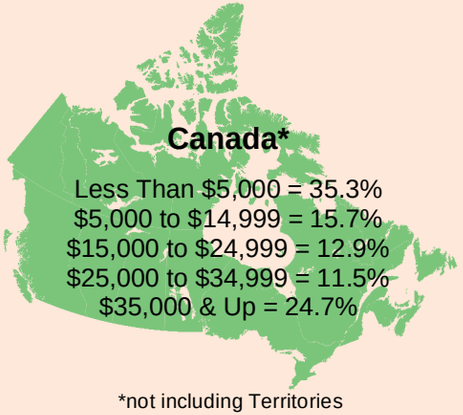
(Adults without Disabilities by Income Level) / (Adults without Disabilities)

1:62,000,000

Income & No Disability

Adults - Age 15 & Older

A larger pecentage of people without disabilities fell in the lowest income bracket than any other bracket and the rate was higher than that for people with disabilities or people with low prose literacy. The rate of people without disabilities who earned more than $35,000 was also greater than that for people with disabilities but not higher than that for people with low prose literacy.



*not including Territories

Map 51

CHAPTER 6

MODELS OF LITERACY – ENGAGEMENT AT WORK AND IN SOCIETY

Many adults in Canadian society are not engaging in reading, writing, numeracy, informal learning, or civic involvement in their everyday lives (MAP 52). These new variables collected by IALSS are used as our proxy for functional and critical literacy. Engagement in reading, writing, and numeracy at work corresponds to functional literacy, while informal learning and civic engagement are used to identify levels of critical literacy. The rates of low engagement are very similar for writing, numeracy and informal learning, while those for reading and civic engagement are very different. The western provinces and territories have higher engagement rates for all types of literacy than the eastern provinces; however, Nova Scotia and PEI are exceptions and have rates that more closely approximate the western provinces.

CRITICAL LITERACY

People learn in a variety of manners, including formal approaches, which often take place at school or in literacy programs. On the other hand, there is also informal learning which takes place by observing, trial and error, copying and watching others. Informal learning is closely associated with "critical literacy". Critical learning, however, is more than informal learning as defined here; it is also the means to communicate one's experience and interests in public discourse by socially marginalized individuals and groups. Not only does literacy involve skills in communication (verbal, written, sign gestural or other language), it also involves having access to the information needed for "self-determined participation in the communication processes of one's communities and broader society" (Roeher Institute, 1999 p.17). In Canada, there is a high proportion of adults with inadequate informal learning skills (CHART 9). People over 60 years of age are the most challenged when it comes to informal learning. One explanation is that people over 60 begin to lose the social and informative networks they rely upon to function in society as they age.

To what extent does age impact civic engagement? People aged 16 to 19 appear to be slightly more engaged in civic affairs than their elders in most provinces and territories (CHART 10). The largest difference in civic engagement between the more engaged young (aged 16 to 19) and less engaged old (over 60) can be found in the Northwest Territories, Yukon, Ontario, and Newfoundland and Labrador. Nunavut shows the opposite pattern where youth tend to be less civically engaged compared to their elders. Quebec has low civic engagement among all ages relative to the other provinces and territories.

MAP 53 compares low civic engagement rates by cross tabulating "low civic engagement" with "adult population", "immigrants", "education", "labour force", and "income". Across all variables, low civic engagement is generally higher in the east, particularly in Quebec. There is dramatic variation in the rates of low civic engagement depending on the population being looked at as well as across the provinces and territories – ranging from 12.6% to over 66%. People with less than a high school education and immigrants, particularly in Nunavut and Quebec, have higher rates of low civic

engagement. In other words, people in these populations tend to be the least engaged in civic life and thus have low critical literacy.

IMMIGRATION

Immigrants are less likely to use their functional literacy skills (reading, writing, and numeracy) at work and are less engaged in society compared to non-immigrants (MAP 54). Rates are lower among immigrants than for the Canadian adult population as a whole for every category of functional and critical literacy. The pattern of engagement in literacy activities for immigrants is not even across provinces and there is no west to east trend. Provinces and territories which often have relatively high rates of low literacy, such as Nunavut and Newfoundland & Labrador, tend to have lower rates of low literacy when only the immigrant population is considered.

EDUCATION

There are many reasons why people drop out of high school, including lack of interest, failure to succeed, lack of literacy skills to engage in learning, lack of diverse teaching methodologies and so on. Whatever the reason, it is clear that dropping out of high school reduces one's ability to engage in reading, writing or numeracy at work and hinders the establishment of informal learning networks and one's engagement in civic activities. The proportion of people without a high school education with low functional literacy skills is higher, by nearly 20% for reading and numeracy engagement at work and well over 20% for writing engagement at work and informal learning, than rates of low literacy for the population as a whole (MAP 55). People with less than a high school education also are more likely to be less engaged in civic life than the population as a whole but by less of a margin than for the other types of functional and critical literacy. Quebec's population with less than high school education has among the highest rates of low engagement for all the categories – reading, writing, numeracy, informal learning and civic engagement.

A different pattern emerges when considering those with a university education (MAP 56). Generally, among people with a university education, there is a nearly 20% improvement in functional and critical literacy in comparison to those who have less than a high school education.

INCOME

Informal learning and income do show some correlative patterns – as income increases, informal learning tends to improve, especially among people who earn more than $35,000 (MAP 57). Similarly, disaggregating the level of civic engagement by income we find the rates of low civic engagement to be about 15% lower than those for informal learning for all income levels with the exception of those

making more than $35,000 (MAP 58). Nunavut and Quebec are usually amongst the provinces with the highest rates of low civic engagement for all income levels.

CONCLUSION

The facts make it clear that literacy is more than just reading and writing. The notion of literacy has changed from a narrowly defined concept to a more holistic, context-bound continuum of reading, writing and numeracy skills that are absolutely essential in today's knowledge-based societies. This should be understood beyond literacy programs and educational development. These issues, including participation in work and society, should be recognized as fundamental rights under the International Covenant on the Economic, Social and Cultural Rights and other UN treaties in order to achieve a society in which all people are free to fully and equally participate.

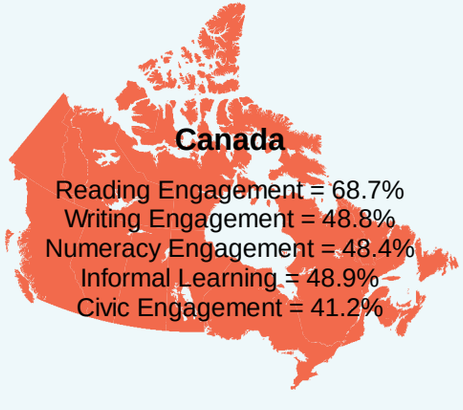
Though the United Nations recognizes economic, social, and cultural (ESC) rights and civil and political rights as being "indivisible, interdependent and equally important" (UN, 1993), western countries often ascribe second-class status to ESC rights. These rights and the systems for ensuring their protection tend to be less developed than others. However, ESC rights are central for marginalized groups to achieve the goal of redressing inequality and disadvantage, and protecting those who are vulnerable and marginalized.

Literacy is not only a right recognized in the Universal Declaration of Human Rights; it is also a means to achieving other human rights. "Those who can use literacy skills to defend their legal rights have a significant advantage over those who cannot. Indeed, it is often the poorest, most socially excluded and least literate individuals [in Canada, these include immigrants, people with disabilities and people with less education and lower incomes] whose rights are continually violated. Ones inability to read, write and calculate keeps them from knowing what they are entitled to, and how to demand it. It limits their ability to participate politically in society. It denies them a voice" (UNESCO, 2006).

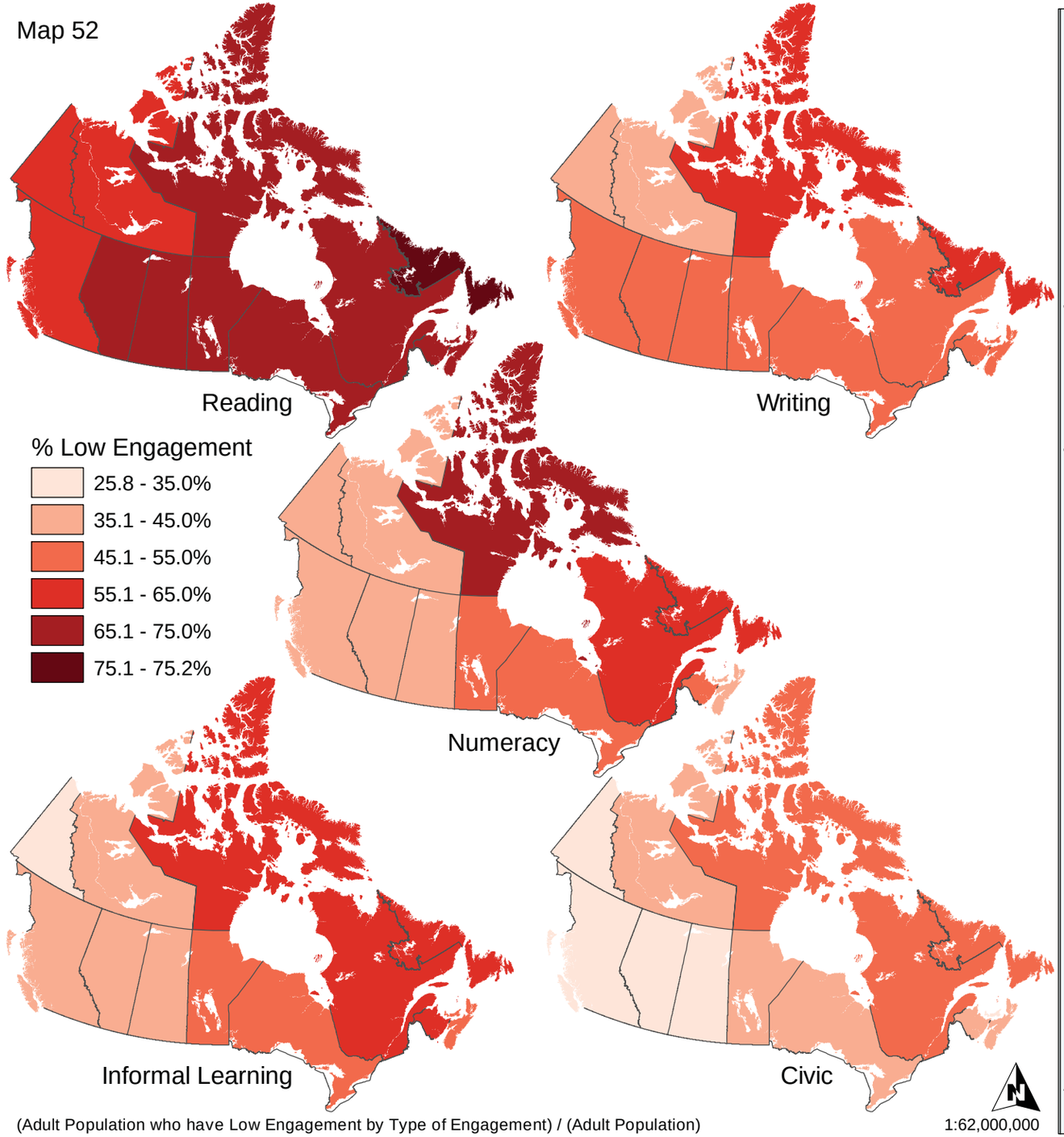
Low Engagement at Work & in Society

Adults - Age 16 & Older

In most provinces & territories, there were equal or more people with low engagement at work in reading, writing, & numeracy (or functional literacy) than there were with low informal learning or civic engagement (critical literacy). By all measures, Nunavut, Newfoundland & Labrador, and Quebec tended to have among the highest percentage of the adult population with low engagement and Yukon, Northwest Territories, British Columbia, Alberta, and Saskatchewan the lowest percentage with low engagement.



Map 52



(Adult Population who have Low Engagement by Type of Engagement) / (Adult Population)

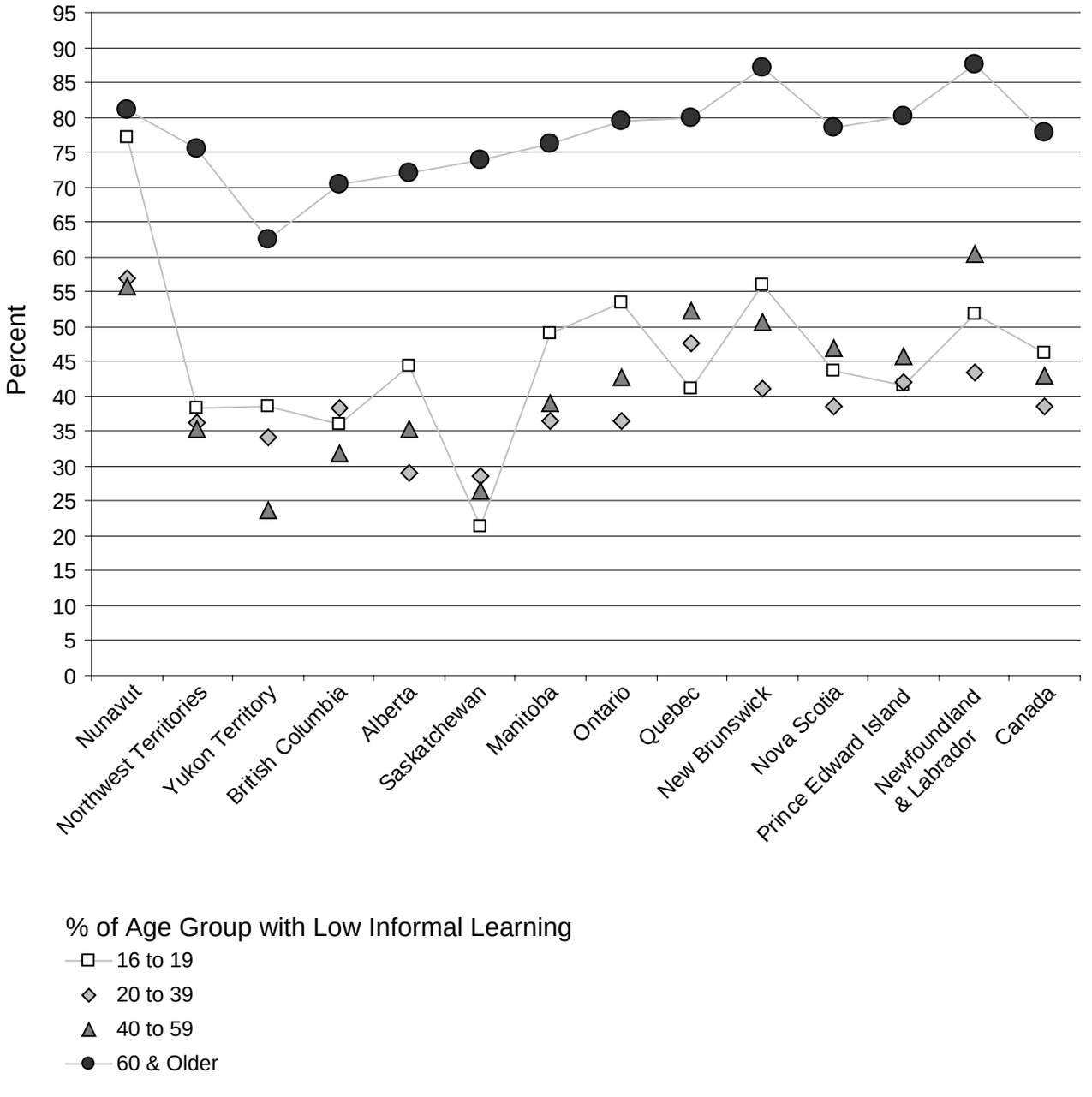
1:62,000,000

2003 International Adult Literacy & Skills Survey

Map 52

2003 International Adult Literacy & Skills Survey

Chart 9



(Adults by Age Group with Low Informal Learning) / (Adults by Age Group)

Low Informal Learning by Age Group

Adults - Age 16 & Older

People age 60 & Older had a much higher rate of low informal learning in all provinces & territories than people in other age groups, meaning they tended to have less of an ability to gain information through informal learning.

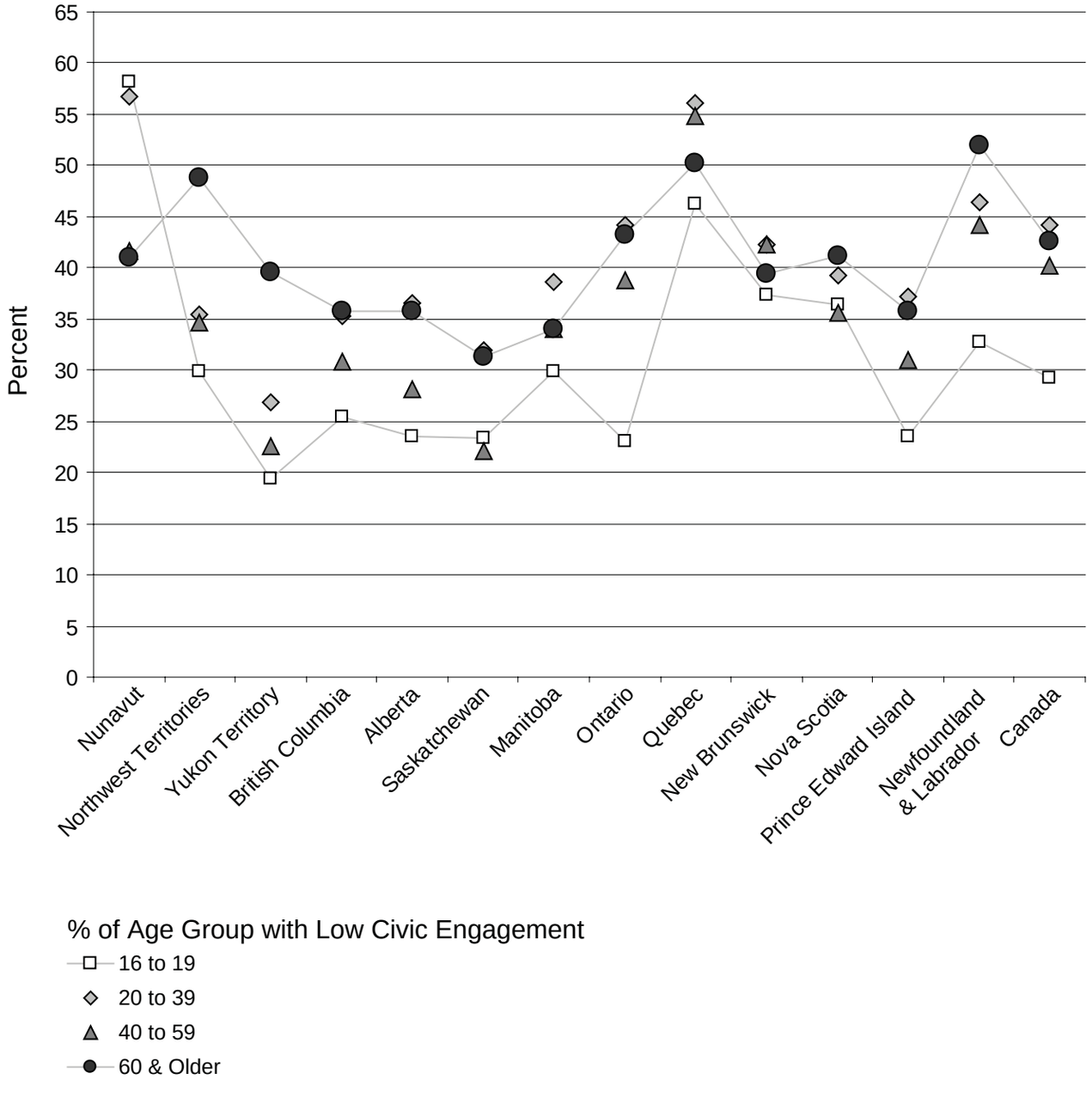
Chart 9

Low Civic Engagement by Age Group

Adults - Age 16 & Older

People in the 16 to 19 age group tended to have slightly lower rates of low civic engagement (meaning they are more likely to be engaged) than people in the other age groups but in some provinces the differences are minimal. The highest rates of low civic engagement were found among all age groups in Quebec and among younger people in Nunavut and older people in Newfoundland & Labrador.

Chart 10

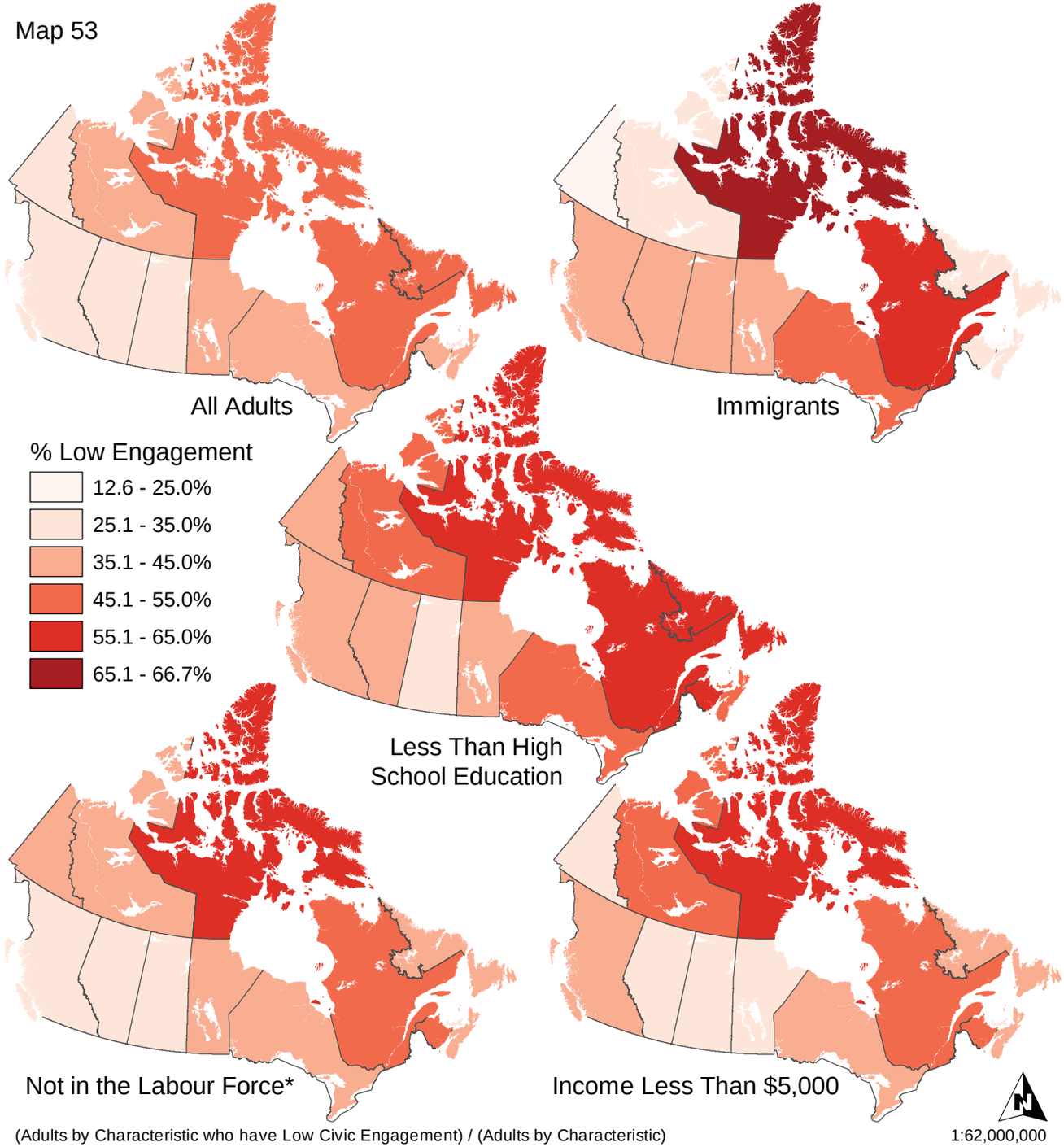


(Adults by Age Group who have Low Civic Engagement) / (Adults by Age Group)

2003 International Adult Literacy & Skills Survey

Chart 10

Map 53



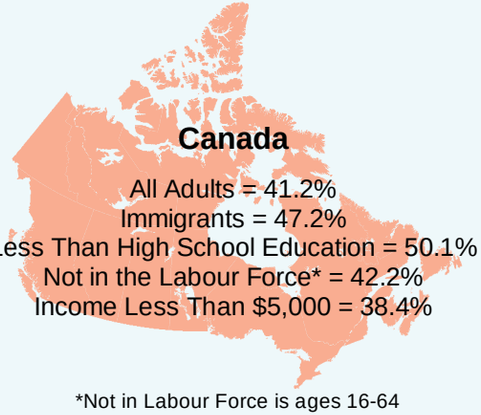
(Adults by Characteristic who have Low Civic Engagement) / (Adults by Characteristic)

1:62,000,000

Low Civic Engagement

Adults - Age 16 & Older*

Overall, there is a higher percentage of people with less than a high school education who have low civic engagement than there is for other segments of society. Quebec & Nunavut consistently have the highest percentage of low civic engagement but the provinces & territories with the lowest percentage of low civic engagement varies depending on other variables.



Canada

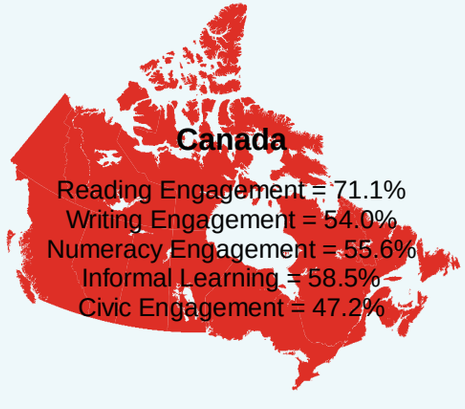
All Adults = 41.2%
Immigrants = 47.2%
Less Than High School Education = 50.1%
Not in the Labour Force* = 42.2%
Income Less Than $5,000 = 38.4%

*Not in Labour Force is ages 16-64

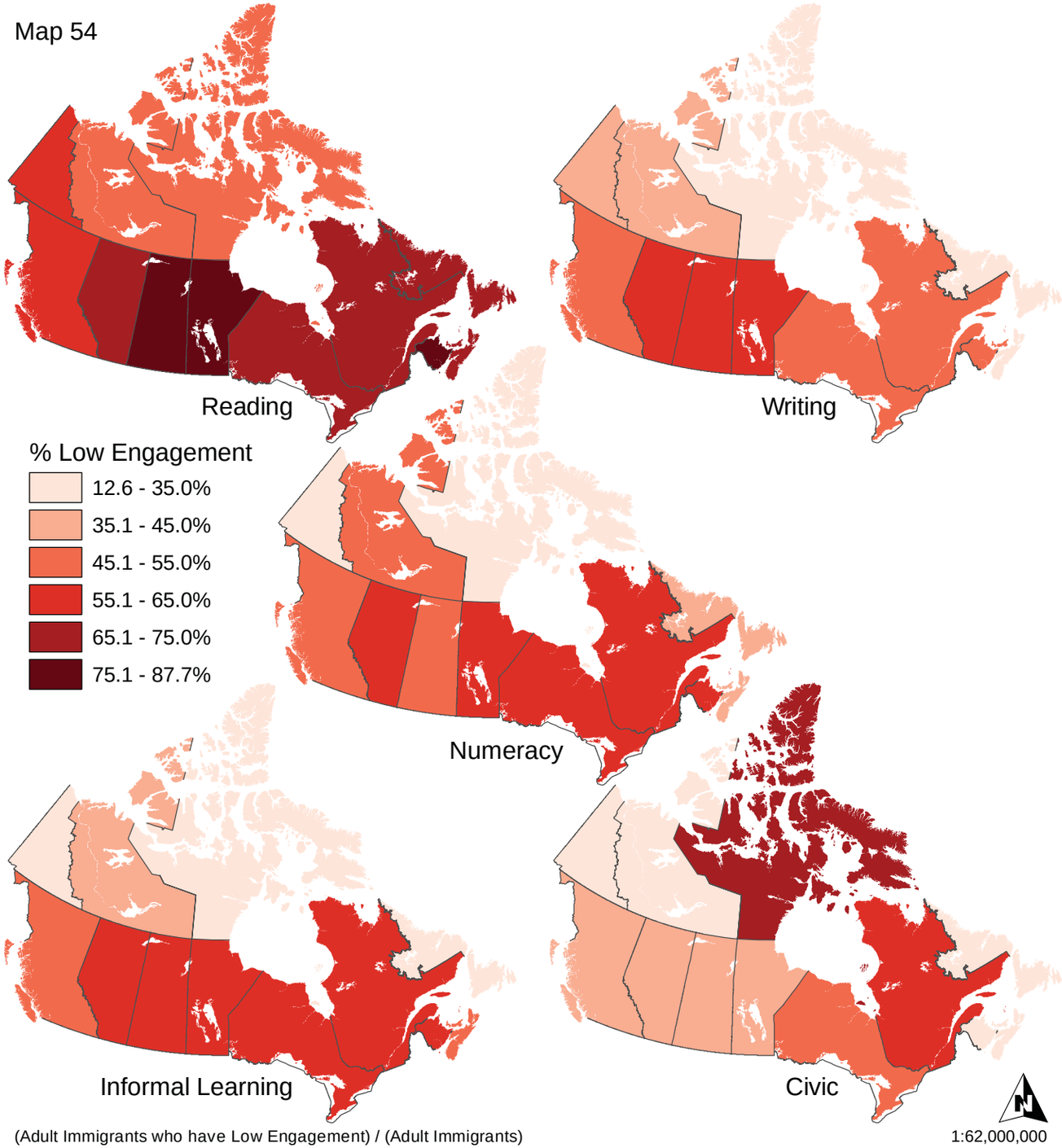
Low Engagement at Work & in Society for Immigrants

Adults - Age 16 & Older

Overall, a higher percentage of immigrants have low functional & critical literacy than the population as a whole. The patterns for each type of literacy engagement across Canada are quite different and more variable however. In some cases Newfoundland & Labrador & Nunavut have relatively low percentages of low engagement among immigrants even though the percentage of the total population with low engagement is relatively high for those areas. Saskatchewan & Manitoba tend to have relatively high percentages of immigrants with low engagement for every type except civic engagement.



Map 54

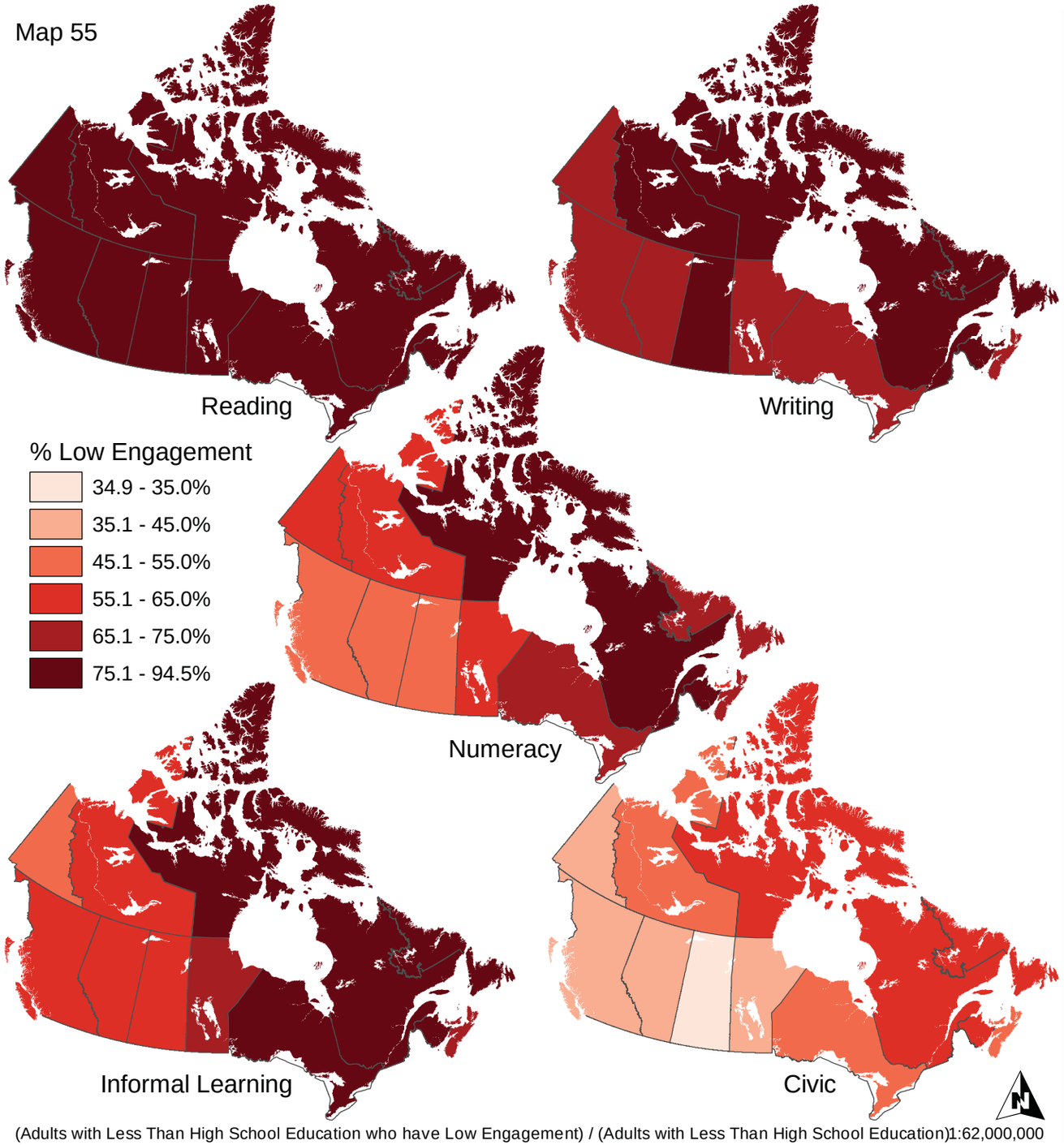


(Adult Immigrants who have Low Engagement) / (Adult Immigrants)

1:62,000,000

2003 International Adult Literacy & Skills Survey

Map 55

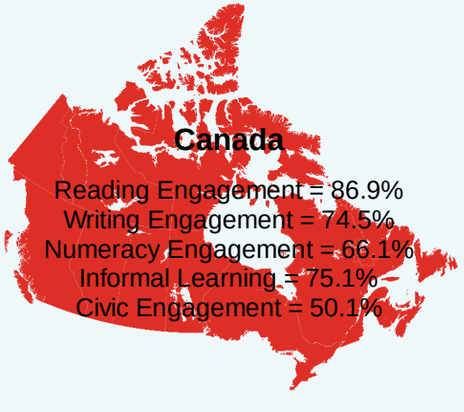


(Adults with Less Than High School Education who have Low Engagement) / (Adults with Less Than High School Education)1:62,000,000

Low Engagement at Work & Less Than High School Education

Adults - Age 16 & Older

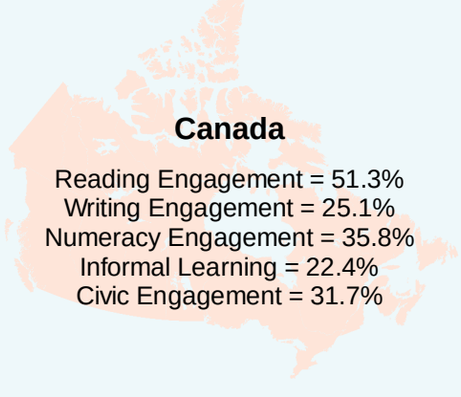
A higher percentage of adults with less than a high school education appear to have low functional literacy in all provinces & territories. The percentage of people with the least amount of education who have low critical literacy is also higher but by less of a margin, particularly for civic engagement indicating that low educational attainment has less of an influence on civic engagement than it does on the other types of functional & critical literacy.



Low Engagement at Work & University Education

Adults - Age 16 & Older

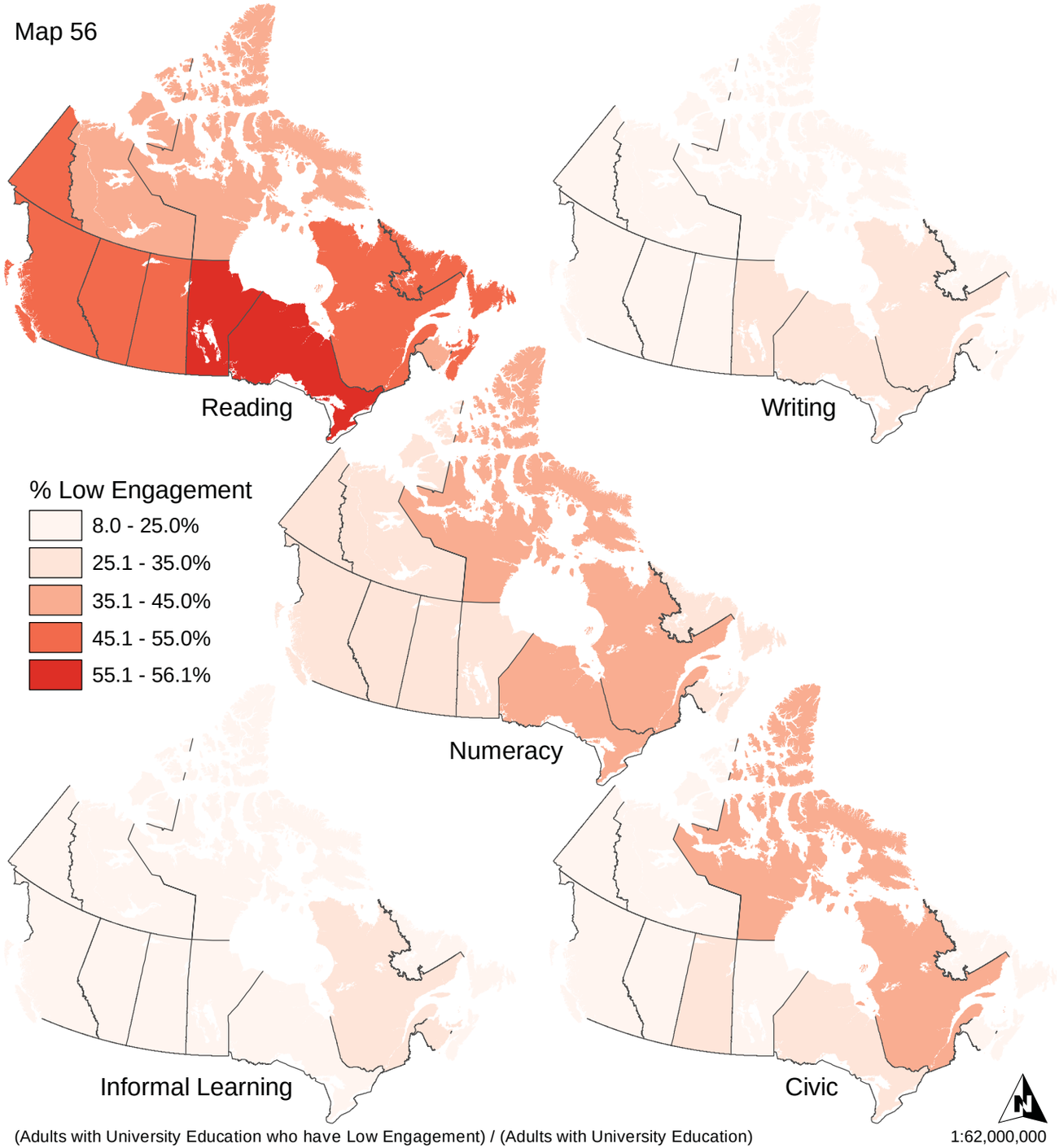
Education appears to have a big impact on reducing the percentage of the population with low functional & critical literacy, particularly when it comes to informal learning & writing engagement at work. Reading engagement continues to have the highest rates of low engagement with over 50% indicating low reading engagement at work even among people who have a university education.



Canada

Reading Engagement = 51.3%
Writing Engagement = 25.1%
Numeracy Engagement = 35.8%
Informal Learning = 22.4%
Civic Engagement = 31.7%

Map 56



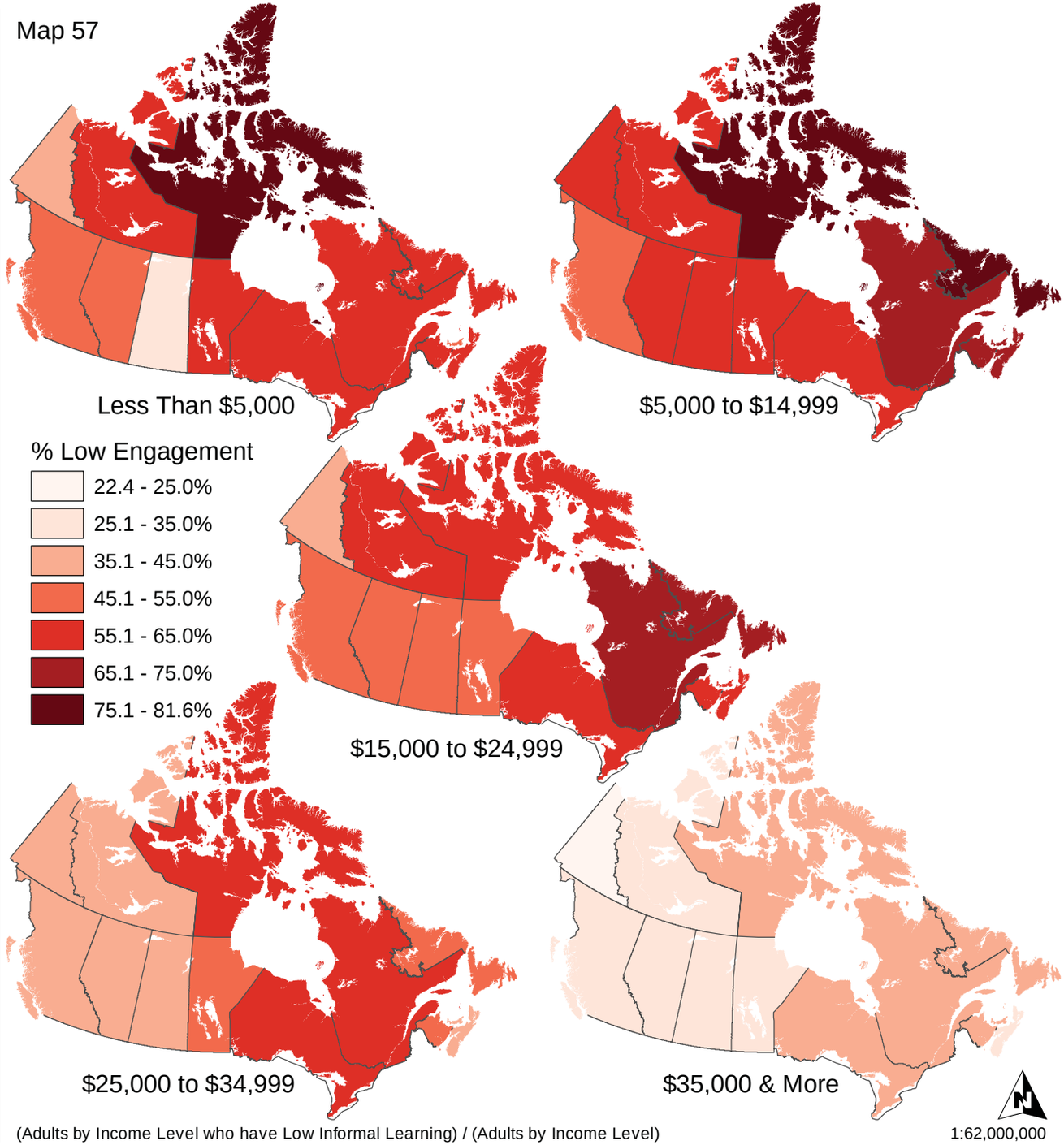
(Adults with University Education who have Low Engagement) / (Adults with University Education)

1:62,000,000

2003 International Adult Literacy & Skills Survey

Map 56

Map 57



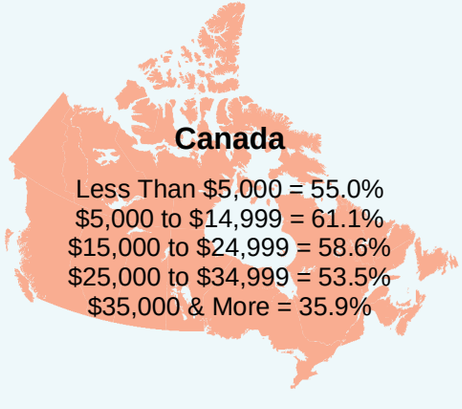
(Adults by Income Level who have Low Informal Learning) / (Adults by Income Level)

1:62,000,000

Low Informal Learning & Income

Adults - Age 16 & Older

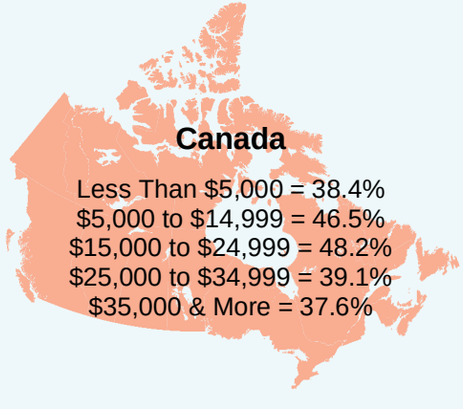
Overall, a smaller percentage of people earning $35,000 or more indicated low informal learning compared to people with lower incomes. Nunavut is consistently among the 3 provinces & territories with the highest rate of low informal learning and Yukon is consistently among the 3 provinces & territories with the lowest rate.



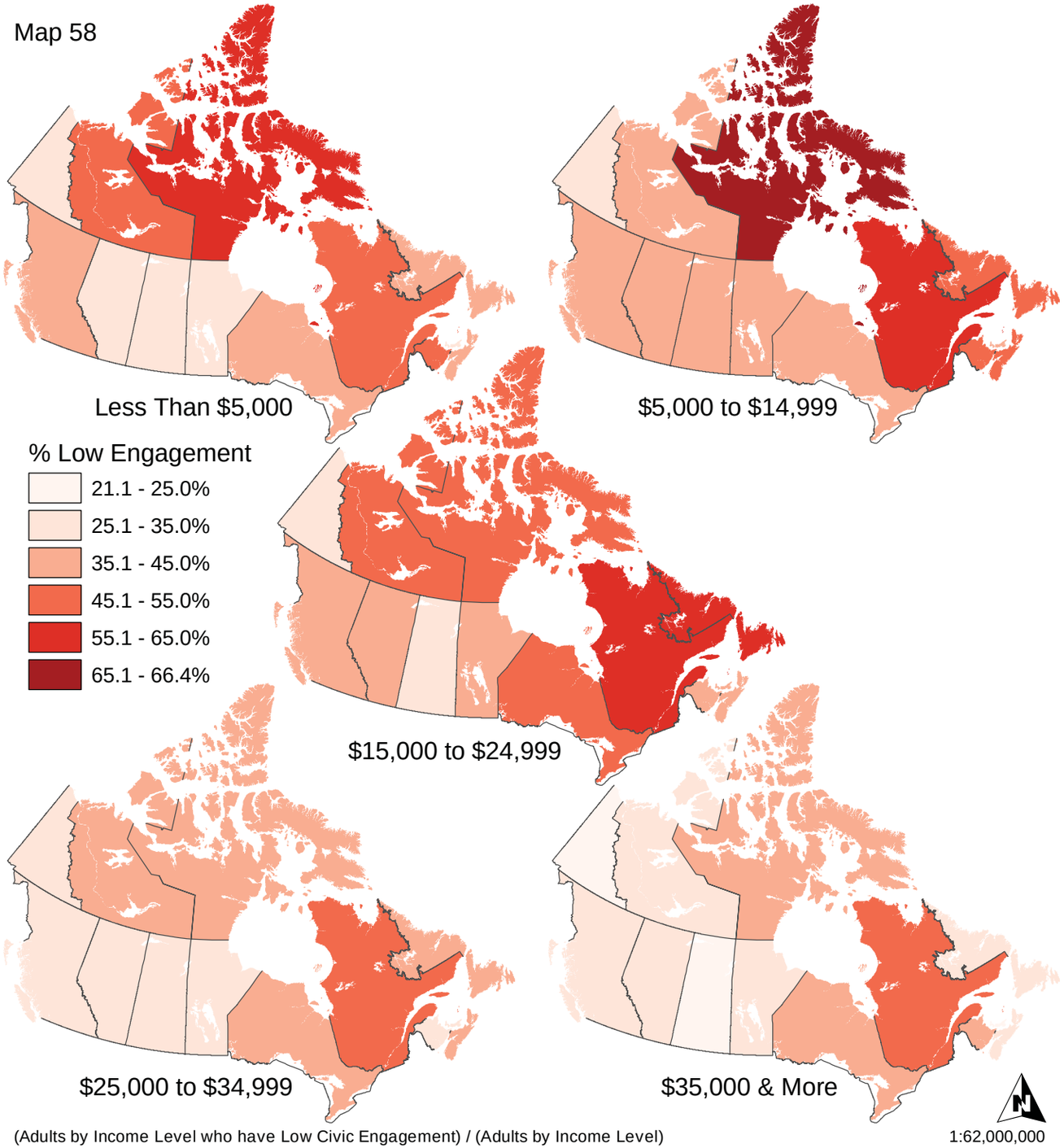
Low Civic Engagement & Income

Adults - Age 16 & Older

Overall, there is an increase in the percentage of the population with low civic engagement among people who earn $15,000 to $24,999, though Saskatchewan, New Brunswick, & Nunavut have a higher percentage of people with low civic engagement among those who earn $5,000 to $14,999.



Map 58



(Adults by Income Level who have Low Civic Engagement) / (Adults by Income Level)

1:62,000,000

2003 International Adult Literacy & Skills Survey

Map 58

CHAPTER 7

MODELS OF DISABILITY – BARRIERS AND ACCOMMODATIONS

This study revises and extends the previously developed Barriers and Accommodations Index (BAI) originally created for the Atlas of Literacy and Disability (2003). The original and two new indices are responses to the need for indicators that place emphasis on social inclusion rather than on the characteristics of individuals. The two new indices are the Degree of Accommodation for Aids & Services index (DAAS) and the Revised Barriers and Accommodations Index (RBAI).

METHODS

Degree of Accommodation for Aids & Services (DAAS)

There are derived variables in PALS that provide information on the need and use of specialized equipment or services for people with disabilities to carry out everyday activities. The advantage of this approach, to measuring barriers and accommodations, is that for every question that measures a barrier there is also a question that measures an accommodation. Therefore, it is possible to get a sense of how well people with disabilities who need specialized equipment or services are being accommodated. For example, the variable on the need for technical aids was derived in the dataset from the responses to the question: "Are there any aids, specialized equipment or services that you think you need but do not have?" This question was asked of persons with various types of disabilities, though not all types. Similar variables describe the use and need for help with everyday activities.

Revised Barriers and Accommodations Index (RBAI)

The Revised Barriers and Accommodations Index is designed to find answers to questions regarding barriers and accommodations faced by people with disabilities. The index is divided into four general domains of life - aids and personal services, financial burdens, personal and community attitudes, and environment. Each of these is divided into sub-categories (FIGURE 2). For example, the Financial Burden domain includes sub-categories for Aids and Personal Services, the Environment, Medication, and School and Work. Some sub-categories are subdivided further. For example, the Environment - Transportation sub-category is divided into travel by car, by public transportation, or by long distance. All maps derived from the revised BAI include a diagram similar to figure 2 to show which part of the index the data is derived from.

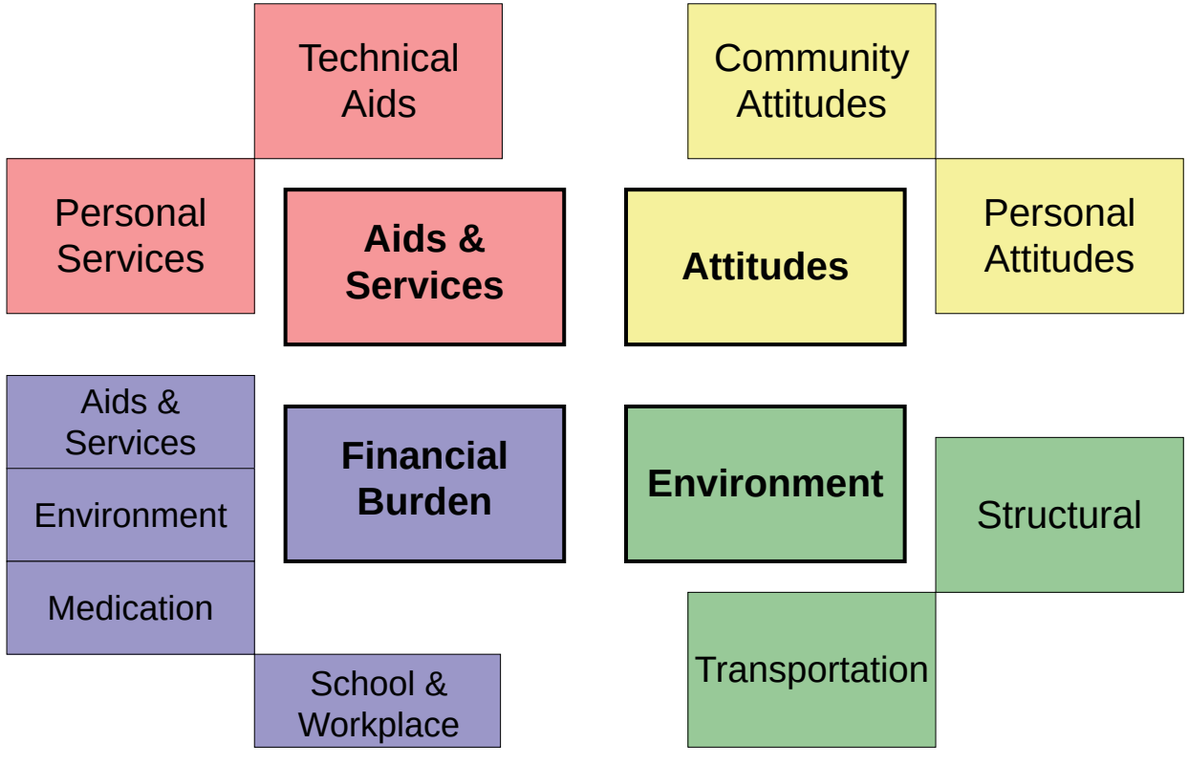


Figure 2: Major categories of the Revised Barriers and Accommodations Index (RBAI)

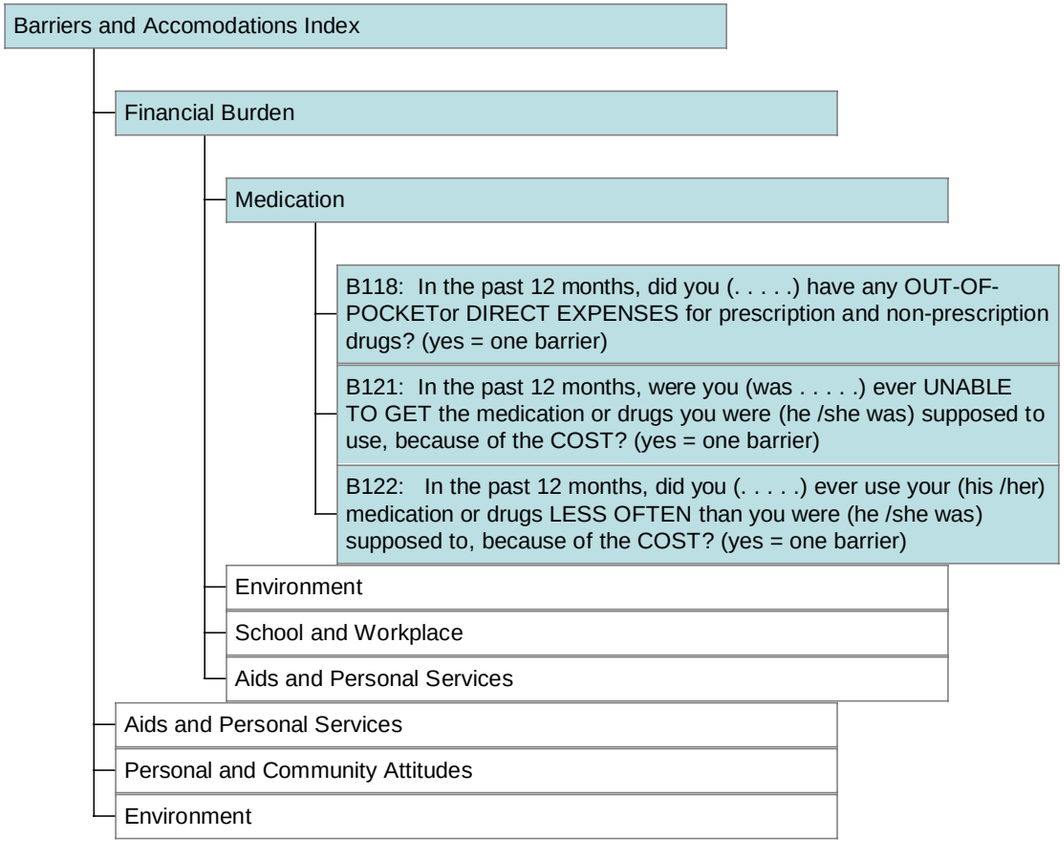


Figure 3: RBAI example: questions used from PALS to determine barriers and accommodations to the Medication subcategory of the Financial Burden portion of the RBAI.

Collections of questions asked in PALS make up each sub-category. The Financial Burden - Medication sub-category is created from three questions regarding the costs of medication (FIGURE 3). In this case, the PALS questions only measure a barrier to medication and there is no way to determine whether or not accommodations have been made to ameliorate the financial burden. FIGURE 4 shows the entire set of questions that make up each part of the RBAI sub-categories.

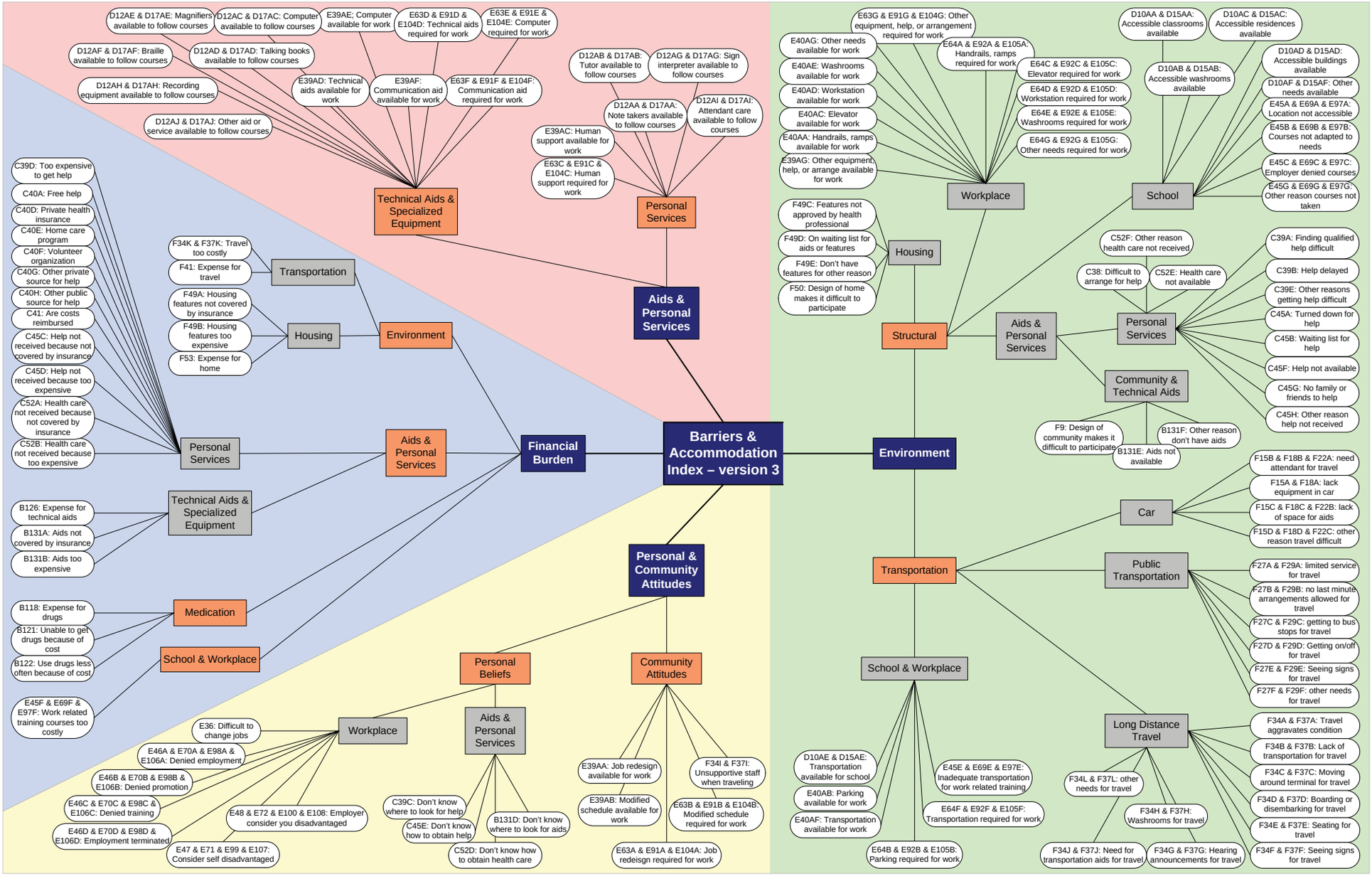


Figure 4: Diagram of the questions used for the Revised Barriers and Accommodations Index

Due to the structure of PALS it is often difficult to determine whether or not barriers have been accommodated. For example, the Personal Services domain measures a maximum of 12 barriers, meaning it is based on the responses to 12 questions. The data vetted represents the number of individuals with one or more disability who have one or more barrier. For people with one or more disability in all of Canada:

- 3,262,470 individuals responded in a way that indicates that access to personal services is not relevant in their lives,
- 41,700 individuals had no barriers to personal services (in other words, all of their barriers have been accommodated),
- 116,170 individuals had at least one barrier that had not been accommodated at the time of the survey.

It was not possible to get data on people with two or more barriers, much less those with up to 12 barriers, due to small cell size issues. As a result, some calculations made using this data - such as the total number of barriers or the average number of barriers faced by individuals with disabilities - is greatly underestimated because there are certainly some people who have two, three, or more barriers yet they all get classified, at least in the case of the personal services domain, as having 'one or more'.

Taking the same example as above, there are 9 questions in PALS that could be interpreted as identifying an accommodation to personal services. In response to these questions:

- 3,355,930 individuals indicated that the issue is irrelevant to them,
- 10,520 individuals had no accommodations regardless of the number of barriers faced,
- 53,890 individuals had at least one accommodation but this says nothing about the number of barriers that remain unaccommodated.

One way to interpret this data is to calculate the average number of barriers or accommodations encountered for all individuals with disabilities in Canada. This creates an index that can then be compared to the index for other sub-categories in the BAI to establish the relative significance of barriers and accommodations in the lives of people with disabilities across the different domains and sub-categories of the RBAI. In all of Canada, not including the territories, only 3.4% of people with one or more disabilities experienced at least one barrier and only 1.6% experienced at least one accommodation in the personal services sub-category. The percentage of people with disabilities who face barriers to travel by car is much greater at 16.3% (accommodations for this sub-category were not measured). Thus, it would appear that barriers to travel by car impact a larger percentage of people with disabilities than do barriers to personal services.

TECHNICAL AIDS, SPECIALIZED EQUIPMENT AND PERSONAL SERVICES

In Canada, almost half of people with disabilities use technical aids and specialized equipment (such as a wheelchair, cane, hearing aid, or speech recognition program). One in five people with disabilities still have a need for more technical aids according to the DAAS data (MAP 59). The 10% provincial variation in use is much greater than the provincial variation in need, which is only 3.7%. In other words, unfulfilled need is more or less constant across the country. The question remains: are the unfulfilled needs of people with disabilities the result of societal barriers, government policy, or unavailability of certain aids for instance?

Two thirds of the Canadian population with disabilities receive help with everyday activities, while slightly more than one fifth indicates that they require help or more help (MAP 60). While there is 8.3% variation in the population with disabilities who *need* help across the provinces, there is almost a 15% variation in *use* of help among provinces, with a clear west to east trend.

The rate of people with disabilities who use technical aids (CHART 11) or need help with everyday activities (CHART 12) generally increases with age, particularly between the 60 to 64 and 65 & older cohorts. The percentage of people with disabilities who indicated a need for aids or help remained more or less consistent over all age cohorts, indicating that the needs of each age group are being met at more or less the same rate and that no one age group is at more of a disadvantage due to unmet needs than any other.

Also included in the PALS data are derived variables on accommodations for seeing and hearing disabilities in particular (MAP 61). Nationwide, less than 70% of people with each of these disabilities have been completely accommodated. However, there are dramatic differences among the provinces in how well people with these disabilities are being accommodated. In both cases, Newfoundland and Labrador accommodate the smallest percentage of people with needs for seeing and hearing accommodation – less than 55%, much lower than any other province.

MAP 62 shows the percentage of people with disabilities reporting barriers and accommodations with regard to technical aids and specialized equipment based on the Revised Barriers and Accommodations Index. The numbers indicate that barriers and accommodations for technical aids and specialized equipment do not appear to impact a very large percentage of the overall population with disabilities. For Canada, the rate of barriers is approximately 2.5 times more than the rate of accommodations, although there were fewer questions in PALS that measured technical aid accommodations. The relative variation among provinces may be significant, however. The highest rates of people with disabilities with barriers to technical aids and specialized equipment appear to be in Ontario and in Newfoundland and Labrador, with the lowest found in British Columbia. Also, the difference in the rate of people with disabilities with barriers and those with accommodations is smallest in Alberta, at only 0.4%, and largest in Ontario, at 2.4%.

Only one question relating to barriers in the personal services sub-category does not have a corresponding question measuring whether or not that barrier has been accommodated (MAP 63). In British Columbia 2.4% of the population with disabilities experience barriers and 2.1% indicated that their barriers have been accommodated in this sub-category. The percentage of people accommodated in British Columbia is twice what it is in Quebec, which has the lowest accommodation percentage (1.1%). Newfoundland and Labrador have the largest gap between those who have a barrier (5.9%) and those who have been accommodated (1.8%). There is a clear west to east trend in the rate of barriers to personal services, but little or no trend for accommodations. More importantly, low rates of barriers and accommodations to personal services are similar to the rates of access to technical aids and specialized equipment, indicating that barriers to personal services and technical aids do not appear to be an issue for the vast majority of people with disabilities.

CHART 13 shows the percentage of people with disabilities with barriers to and or accommodations for technical aids and personal services. The rate of people with disabilities who have barriers to personal services in Newfoundland and Labrador is noteworthy at nearly 6% - much higher than any other rate illustrated on this chart. Rates for accommodations are less variable across provinces than the rates for barriers. The percentage of people with disabilities with barriers and accommodations to personal services is higher than those for technical aids in every province except Manitoba.

COSTS AND FINANCIAL BURDEN

People with disabilities frequently incur greater costs for accommodations related to their disability than do their non-disabled peers as they may need to buy special equipment, insurance costs may be different, and travel planning may not be as simple. Some costs are government funded, others are paid by foundations and charities, and some are covered by family, friends, or the individuals themselves.

The maps and charts in this domain are organized by theme and for each theme there is a mix of data based on derived variables from PALS and the Revised Barriers and Accommodations Index. It is important to note that in the financial burden category of the RBAI there is no measure of accommodation since because very few questions in PALS measured whether or not financial accommodations were made.

Financial Burden of Technical Aids

Out of pocket expenses for technical aids are a reality for more than one out of every ten people with disabilities (MAP 64). Of people with disabilities with costs, more than one quarter pay over $500 a year. For those who pay more than $500, the provincial variation ranges from almost 19% in Saskatchewan to 33% in BC.

In order to determine the financial barriers to technical aids, the RBAI uses both the "out of pocket costs" data (see map 64) and adds the lack of needed technical aids due to cost (MAP 65). The RBAI thus shows how the derived variable in PALS underestimates the true cost barrier to technical aids faced by people with disabilities. For Canada, 21.1% of people with disabilities have a financial barrier to technical aids, while only 13.8% indicated they had out of pocket costs for technical aids. The relative position of each province for each measure is similar however. Quebec and Saskatchewan are relatively low while Ontario is relatively high.

Financial Burden of Help, Health Care, and Personal Services

For Canada there is a slightly higher percentage of adults with costs for help than for costs for technical aids (MAP 66). However, the percentage of adults with disabilities with costs who pay more than $500 annually is much greater than it is for those with costs for technical aids. It could be assumed, therefore, that help may be more expensive or there may be fewer subsidies. In addition, technical aids are often a single expense while help frequently is a recurring cost. This corresponds to the general trends in the Canadian economy of replacing labour with technology whenever possible (Cekota, 1988; Bielebroeck, 2003). The highest percentage of people with disabilities with costs over $500 is in Alberta.

The rate of adults with disabilities with out of pocket costs for health care is even higher than the rate for help with everyday activities or technical aids (MAP 67). There is also considerably more provincial variation in health care costs (16.3% variation) in comparison to the variation in rates for technical aids (4.9%) or help (6.7%). British Columbia has the greatest percentage (25.6%) of people with disabilities paying for health care costs, while Newfoundland and Labrador has the least. Generally, the rates decrease across the country from west to east. There is also considerable variation in the percentage of adults with costs who pay more than $500, with Alberta the highest again at over 35%.

Almost one in three Canadians with disabilities have one or more financial barriers to personal services according to the RBAI (MAP 68). This is over one million people in Canada. Quebec has the most barriers at 34.4% and Saskatchewan the least at 25.1%. The data used to create this sub-category of financial burden reflects the percentage of people with disabilities who need personal services but do not get them because they are too expensive or not covered by insurance. People with disabilities with out of pocket costs are not included in this case.

Financial Burden of Medication

People with disabilities often have problems with medication costs and thus under use their prescription drugs or seek other cost-cutting alternatives. In Canada, more than half the population with disabilities report having annual out of pocket costs for medication (MAP 69). There is 11% variation among the provinces, reflecting the fact that prescription payment schemes vary provincially,

both by amount and by which drugs are covered (Anis, 2001). Of people with disabilities who are paying out of pocket costs, approximately one in three pays more than $500. Saskatchewan has the highest cost burden and Ontario the lowest.

We used both the question about out-of-pocket expenses from the financial barriers to medication sub-category of the RBAI, as well as questions about whether medication is not used or used less often because of cost (MAP 70). Nearly two thirds of the population with disabilities, over two million people in Canada, have financial barriers to medication according to this index and the variation among provinces ranges from 70.6% in PEI to 59.1% Newfoundland and Labrador. It is almost twice the size of the population with financial barriers to personal services (see map 68).

Financial Burden of Transportation

As a matter of policy and equality, people with disabilities should be able to access both public and private transportation. Approximately one in four adults with disabilities has annual out of pocket costs for transportation (MAP 71). Saskatchewan had the highest rate, while the lowest was found in Alberta. Of those people with disabilities paying transportation costs, approximately one out five was paying more than $500.00 per year. The financial barriers to transportation sub-category of the RBAI combines out of pocket costs and the non use of public and long distance transportation because of expense (MAP 72). Saskatchewan has the highest percentage of people with disabilities dealing with at least one financial barrier to transportation.

Financial Burden of Housing

People with disabilities have concerns regarding housing including discrimination in buying and renting accommodation as well as modification costs. It is surprising that such a small percentage (4.7%) of adults with disabilities have out of pocket expenses for modifications to housing (MAP 73). Alberta has the lowest value with only 4.1%. However, for people with disabilities who do have costs, over 44% pay more than $500 annually. PEI has the highest rate of those with high costs at 65.1%, which is about 33% higher than the percentage found in British Columbia (32.8%).

Similarly, the financial barriers to housing modifications are not an issue for most people with disabilities (MAP 74). The index is based on out of pocket expenses, insurance coverage, and expense and finds that only 262,700, or 7.7% of adults with disabilities, reported one or more financial barriers to housing modification.

Financial Burden Conclusions

Plotting the average number of financial barriers for each sub-category shows their relative significance in the lives of people with disabilities (CHART 14). Results show that adults with

disabilities face far more financial barriers to medication than any other financial category. There is little variation among the provinces for all of the financial barriers sub-categories. The most variation across provinces is found for the financial barriers to personal services.

PERSONAL & COMMUNITY ATTITUDES

Public attitudes have a significant impact on access to the health and well-being of people with disabilities. Discrimination, an everyday occurrence for many people with disabilities, has personal and social implications. There are no derived variables in the PALS data that measure personal and community attitudes, but we were able to construct some indexes for the RBAI.

Community Attitudes toward Transportation and Work

The community attitudes barriers toward transportation and work are based on over 10 questions. Accommodations in this sub-category are based on only two questions and are therefore underestimated (MAP 75). In any case, there is a clear increasing west-east trend across Canada from a low of 12.9% in Saskatchewan to a high of 21.7% in Newfoundland and Labrador.

Personal Belief Barriers

Personal belief barriers to having a disability were found in PALS data to range from denial, to resentment, to shame, to isolation, and to helplessness. The personal belief questions in the BAI are divided into two sub-categories, one for barriers to aids and personal services and the other for barriers to employment.

The questions related to aids and personal services asked about the respondent's knowledge of where to obtain needed aids and/or services (MAP 76). About 9% of adults with disabilities had at least one personal belief that prevented them from getting the aids and services they need. These rates are consistent across all of Canada.

Similar factors (denial, resentment, shame, isolation, and helplessness), in addition to feelings of inadequacy and lack of capability were also reported in reaction to employment. Many respondents expected rejection, thus creating feelings of demoralization and self-deprecation. Just over one third, or 1,218,660, people with disabilities believe they face at least one barrier regarding employment (MAP 77), while two thirds do not. Saskatchewan had the smallest percentage reporting attitudinal barriers to employment while Newfoundland and Labrador had the highest.

STRUCTURAL ENVIRONMENT

Structural barriers may be formal or informal and they incorporate the physical, social, or psychological limitations created by environmental factors. The next series of maps provides an overview of structural barriers for people with disabilities over the age of 15 in the areas of housing and community, technical aids, personal services, and employment. Very few questions about corresponding accommodations were asked for these sub-categories.

The structural barriers for housing focus on the physical limitations in the design, layout, or access to specialized features for the home or work which enable the respondent to participate in activities or go about their daily lives. Similar to the financial barriers to housing (see map 73), the structural barriers appear to impact relatively few people - 202,350 or 5.9% of adults with disabilities in all of Canada (MAP 78). The spatial variation across the country is relatively small – less than 2.5%. As expected, the east shows a higher percentage of people with disabilities impacted by structural barriers to housing.

Structural barriers to personal services include lack of availability and delays in receiving the help needed (MAP 79). One out of five adult Canadians with disabilities has structural barriers to personal services (688,070 people). Quebec has the highest percentage of adults with at least one barrier and Alberta and Saskatchewan have the least.

The structural barriers to the employment sub-category of the RBAI includes a number of questions related to availability of ramps, handrails, modified washrooms, modified equipment, help, as well as alternative work arrangements (MAP 80). Approximately one out of every ten people with disabilities, or 403,570 people, has one or more structural barriers to employment. The west has the least at 9.3% in British Columbia and Alberta, while Newfoundland and Labrador have the most with 16.6%. Lack of employment has a number of consequences for people with disabilities including isolation, marginalisation, financial vulnerability and fewer opportunities to reach full potential (CCD, 2000). It also can limit a person's ability to participate in the social, economic, political and cultural life of their community.

Structural barriers to personal services and employment are the most common of the structural barriers (CHART 15). Newfoundland and Labrador has the highest occurrence of these types of barriers. There is also considerably more variation between the provinces in the average number of barriers per person with disabilities in the personal services and employment sub-categories than there is with the other sub-categories of structural barriers.

TRANSPORTATION

People with disabilities who travel have very diverse experiences possibly resulting from intrinsic, environmental, and/or interactive factors (Darcy & Daruwalla, 1999). The PALS database includes

derived variables on how easily people with disabilities are able to travel. Also included are maps derived from the transportation sub-category of the RBAI which uses a different set of questions than the derived variables. In each case, travel was divided into three categories – by car, locally, and long distance.

For the whole of Canada, more than 40% of adults with disabilities were prevented from or had difficulty travelling long distance (MAP 81). Local public transportation appears to pose less of a problem than automobile travel and long distance travel. The barriers to long distance travel are particularly acute in Ontario and in the eastern provinces.

Looking at the rates at which people with disabilities travelled without difficulty, we see the importance of travel by car. Almost three times as many people with disabilities, over 67%, had no difficulty travelling by car compared to travelling locally or long distance (MAP 82). Less than one in five people with disabilities travel long distance without problems.

Using the transportation sub-category of the RBAI, we find that about 16% of adults with disabilities have one or more barriers to travel by car compared to 11.6% for long distance travel and 8.9% for public transportation (MAP 83). Ontario is consistently among the highest in the percentage of adults with disabilities who face barriers to all three types of transportation, while Quebec and Saskatchewan are consistently among the lowest. The index counts all people with disabilities with one or more barriers equally regardless of the number of barriers faced. When the numbers are recalculated to show the average number of barriers to travel per person with disabilities a slightly different pattern emerges (MAP 84). While more people with disabilities face barriers to travel by car than by public transit or long distance (see map 83) there are more barriers encountered by people travelling long distance because often people face multiple barriers.

In Canada, 8.8 % of adults with disabilities have one or more barriers to work or school as a result of transportation issues (MAP 85). Provincially, the values range from 6.7% in Alberta to 12.8% in Newfoundland and Labrador. These barriers result from lack of affordable transportation that is adequately flexible for people with disabilities. Workers with disabilities are limited in the jobs they can access and the caregivers they can use depending on the availability of transportation and whether or not the quality of the wage outweighs the cost of the commuting (Pugh, 1998).

Only three out of seven questions could be used to measure accommodations to transportation issues associated with work and school. This explains in part why accommodations for barriers in this sub-category are so low, i.e.1.5% nationally[12].

12 In some countries accommodations include simple information such as “mobility maps”. The citation to an exemplary “mobility map” from Coff’s Harbour Australia is: http://www.coffsharbour.nsw.gov.au/resources/documents/coffscbdmobmap1.pdf

When the average number of barriers to transportation per adult with a disability is put on one graph, we see far more variation across provinces than with other categories of the RBAI (CHART 16).

CONCLUSION

There are numerous types of barriers faced by people with disabilities: barriers to technical aids and personal services; financial barriers; barriers derived from personal and community attitudes; and environmental and transportation barriers. Calculating an average number of barriers per person with disability for each of the sub-categories discussed above gives a sense of the relative importance of the different types of barriers on the lives of people with disabilities in Canada (CHART 17). *Financial barriers* are by far the most problematic and on average each adult with a disability has at least 2 financial barriers. *Barriers to technical aids and personal services* are by far the least problematic. There are, on the average, two financial barriers per person, one barrier caused by personal and community attitudes, three quarters of a barrier caused by environmental, structural and transportation factors, and a small amount caused by barriers to technical aids and personal services. Provincially, the highest percentage of financial barriers for people with disabilities is found in New Brunswick and Nova Scotia, with the lowest found in Manitoba. The highest percentage of community and personal attitudes barriers is found in Quebec while the lowest is in Saskatchewan. The highest burden for environmental, structural barriers is in Newfoundland and Labrador; the lowest is in Saskatchewan. The highest percentage of transportation barriers is in Ontario, while the lowest in Saskatchewan. Newfoundland and Labrador have the highest percentage of technical aid barriers, however, these are at such low levels that differentiating highest and lowest among the provinces probably cannot be considered significant.

Showing the average number of accommodations per adult with a disability for the RBAI categories presents a different pattern (CHART 18). Personal and community attitudes are the most accommodated averaging about 2 accommodations per person. Financial burden has approximately one half of an accommodation per person. Technical aids and personal services and the environmental, structural and transportation accommodations are at such a low level as to be virtually indistinguishable. These results probably reflect more the lack of questions asked regarding accommodations for most categories of the RBAI and not the current degree to which people with disabilities are accommodated.

Examining the full panoply of barriers for people with disabilities reveals the situation to be disturbing (MAP 86). The average number of barriers per person for every single person with a disability is 4.87, or over sixteen and half million barriers for some three million four hundred thousand people with disabilities. In terms of absolute number of barriers, Ontario has the highest (7,349,610) with just about three times more than the second highest Quebec (2,668,560). Nova Scotia has the least reported barriers with 84,910. In terms of the average number of barriers per person with disabilities,

Newfoundland and Labrador has the highest at 5.35 barriers, while Saskatchewan fairs slightly better at 4.31 barriers per person. The situation tends to be more serious in the eastern half of the country.

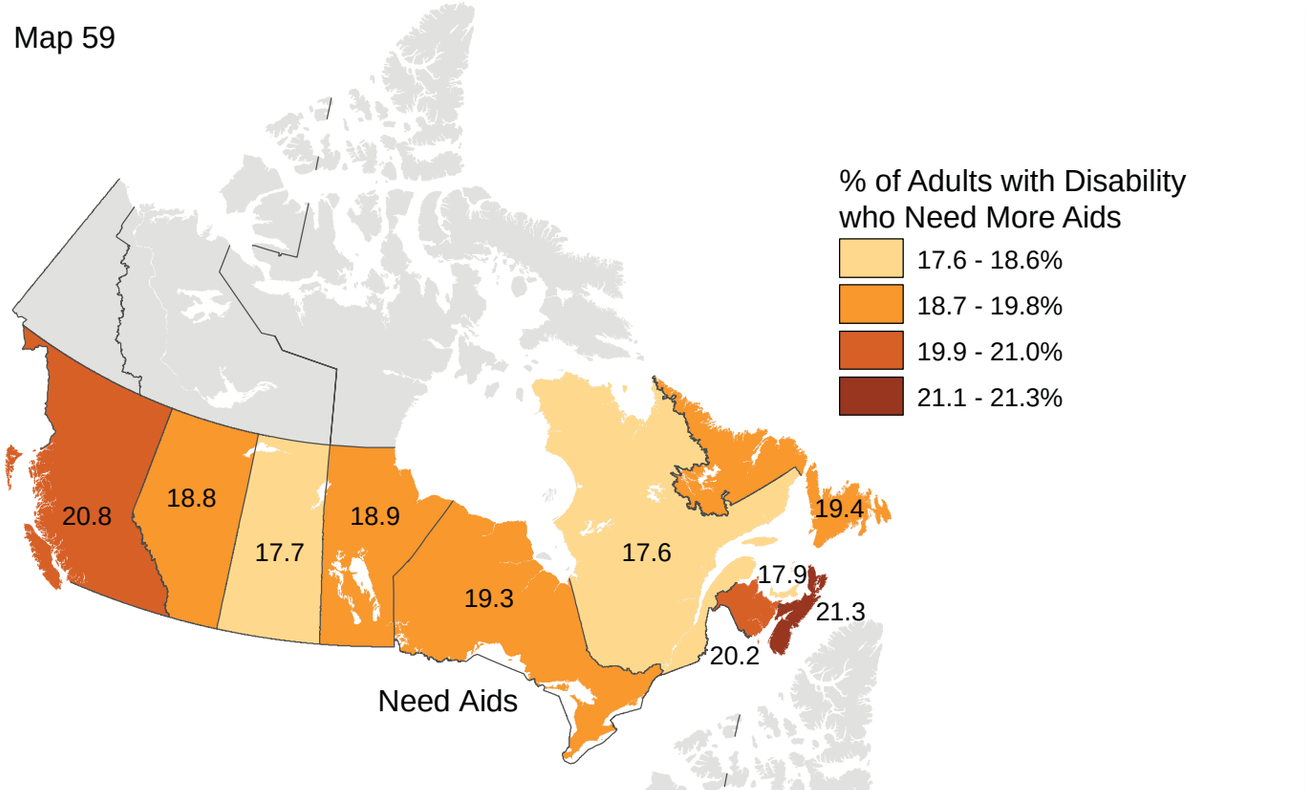
To what extent is this barrier load accommodated? CHART 19 shows the average number of barriers and the average number of accommodations per person with disability. Given the discrepancy between barriers and accommodations it is not surprising that people with disabilities have major obstacles to integrating into Canadian society, both economically and culturally. Even recognizing that the survey structure makes it difficult to get a clear picture of barriers and accommodations for people with disabilities in Canadian society, it is clear that much more needs to be done for Canadians with disabilities to be equal, fully participating members of society.

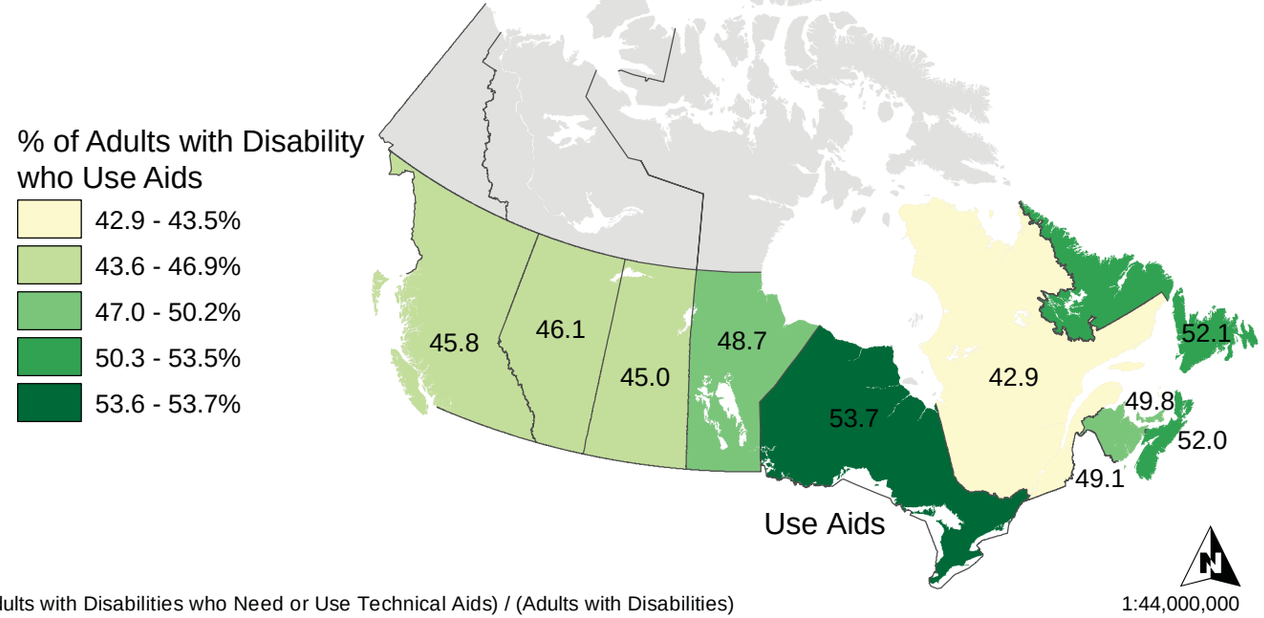
2001 Participation & Activity Limitation Survey

Map 59

Access to Technical Aids & Specialized Equipment

Adults - Age 15 & Older

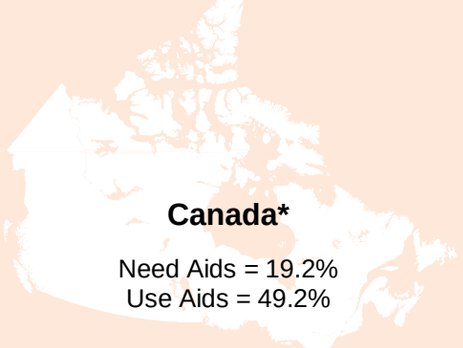




(Adults with Disabilities who Need or Use Technical Aids) / (Adults with Disabilities)

1:44,000,000

The highest rates of those in need of aids occurred in Nova Scotia & British Columbia. Quebec had the least amount of people with disabilities with unmet aid needs as well as the lowest percentage of people with disabilities who use aids.



Canada*

Need Aids = 19.2%
Use Aids = 49.2%

*not including Territories

Map 59

Access to Help with Everyday Activities

Adults - Age 15 & Older

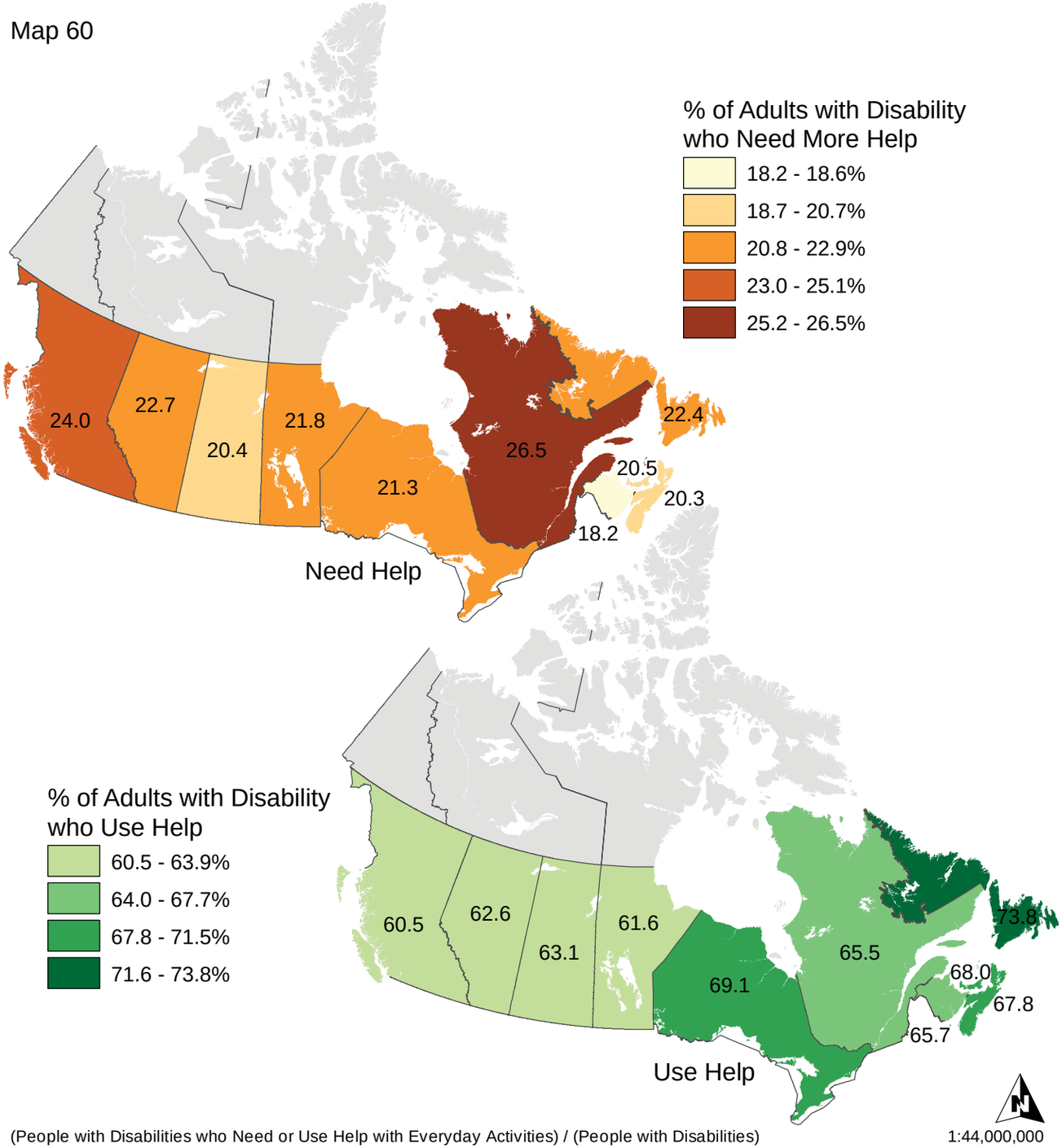
Nearly 2/3 of people with disabilities received help with everyday activities and less than 1/4 of people with disabilities reported needing more help with everyday activities. Quebec had the highest percentage of people who need help and Newfoundland & Labrador had the highest percentage of people with disabilities who received help.

Canada*

Want Help = 22.6%
Use Help = 66.0%

*not including Territories

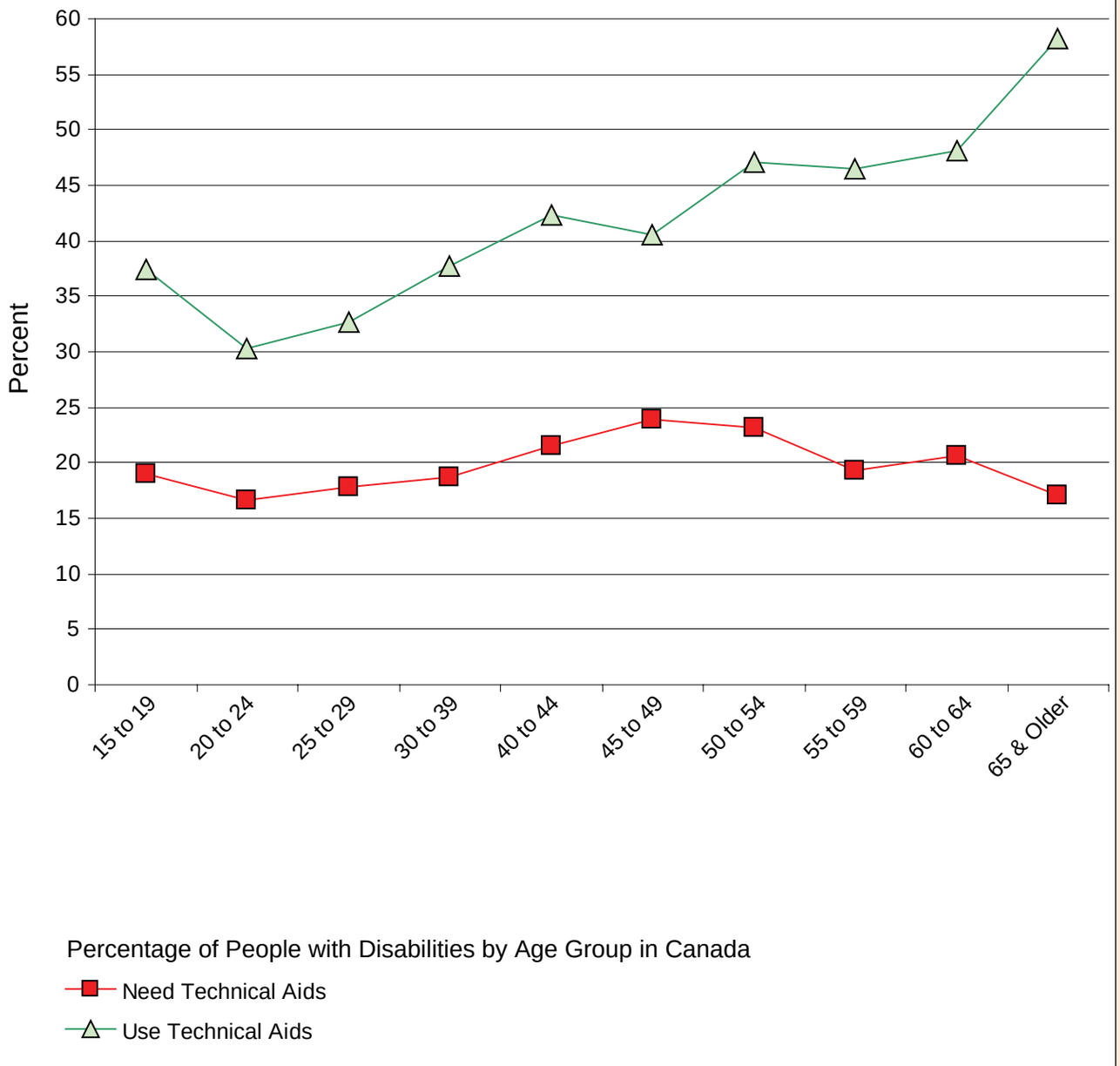
Map 60



(People with Disabilities who Need or Use Help with Everyday Activities) / (People with Disabilities)

2001 Participation & Activity Limitation Survey

Chart 11



(People with Disabilities by Age Group who Need or Use Technical Aids) / (People with Disabilities by Age Group)

Need & Use of Technical Aids by Age Group

Adults - Age 15 & Older

On average for Canada as a whole, the use of technical aids increased with age while the need for technical aids remained fairly level and even dropped for people over age 55. These results may indicate that society is doing a better job of meeting the needs for technical aids of people with disabilities who are over age 55 than it is for people in other age groups.

*Not including Territories

Chart 11

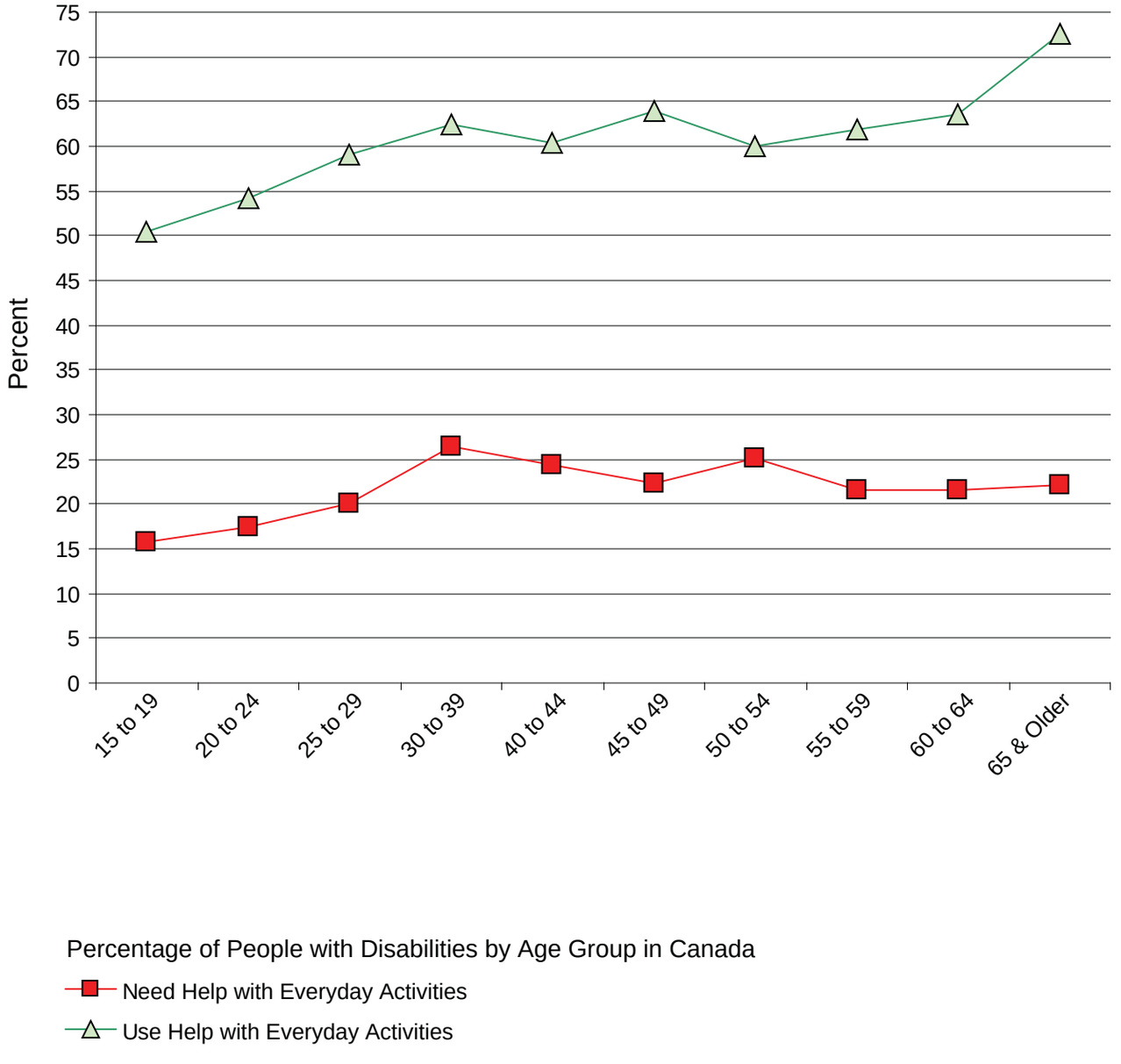
Need & Use of Help with Everyday Activities by Age Group

Adults - Age 15 & Older

The use of help with everyday activities increased with age while the need for help remained fairly consistent. Younger adults tended to have slightly less of a need for help.

*Not including Territories

Chart 12

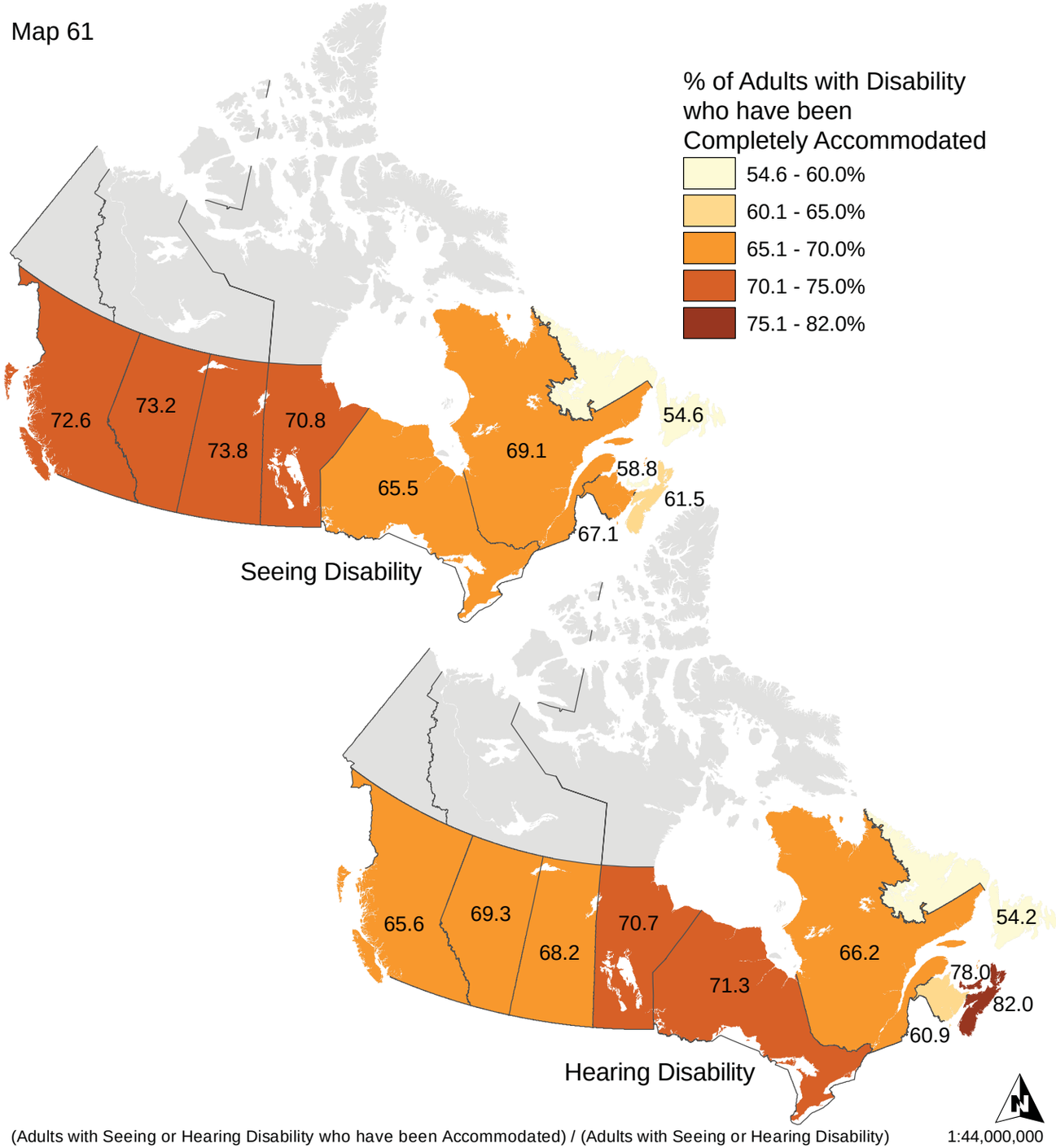


(People with Disabilities by Age Group who Need or Use Help with Everyday Activities) / (People with Disabilities by Age Group)

2001 Participation & Activity Limitation Survey

Chart 12

Map 61



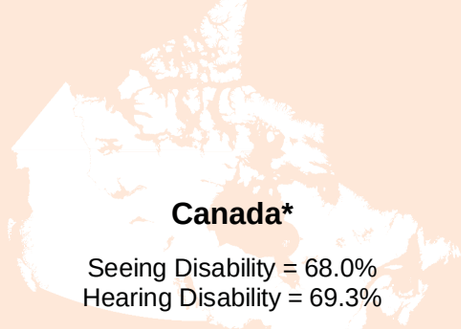
(Adults with Seeing or Hearing Disability who have been Accommodated) / (Adults with Seeing or Hearing Disability)

1:44,000,000

Accommodations for Seeing & Hearing Disabilities

Adults - Age 15 & Older

People with seeing and hearing disabilities were least likely to be accommodated if they live in New-foundland & Labrador than any other province in 2001. Nova Scotia & PEI had the highest rate of accommodating people with hearing disabilities but a lower rate for those with seeing disabilities. The rest of the provinces accommodate people with seeing & hearing disabilities at a rate of about 70%.



Canada*

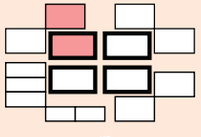
Seeing Disability = 68.0%
Hearing Disability = 69.3%

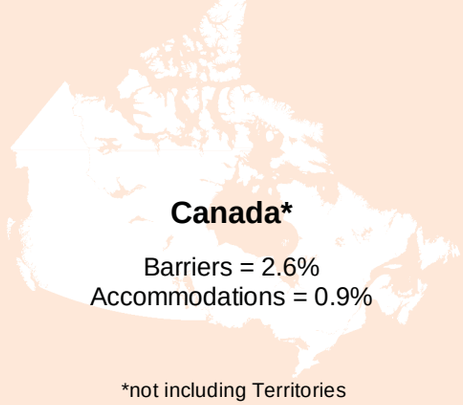
*not including Territories

Access to Technical Aids & Specialized Equipment (RBAI)

Adults - Age 15 & Older

There are three questions that measure barriers which do not have a corresponding question to measure whether or not that barrier has been accommodated. This discrepancy explains in part why the rate for accommodations is lower than the rate for barriers. In other words, the rate of accommodation is under represented due to survey design.



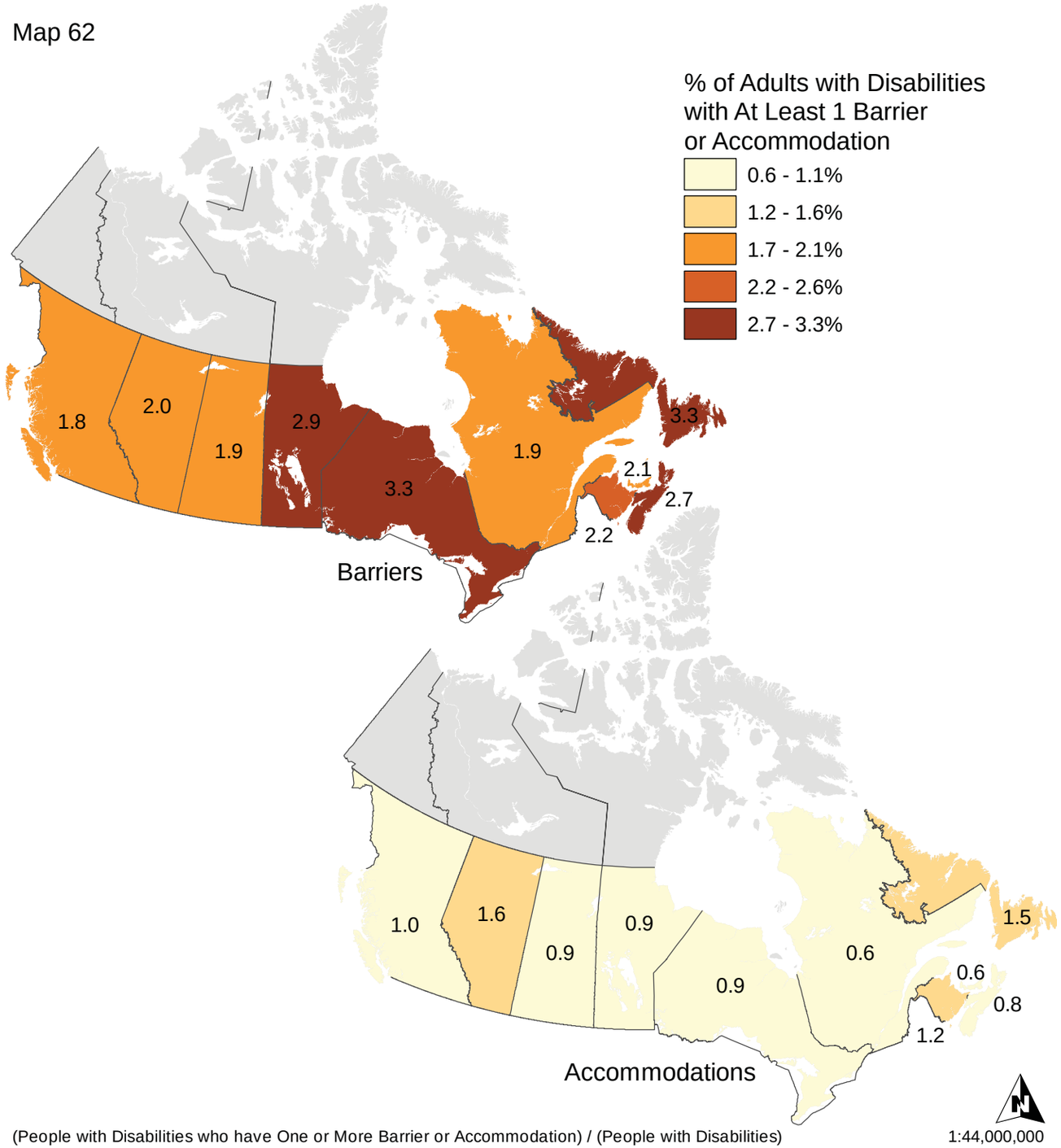


Canada*

Barriers = 2.6%
Accommodations = 0.9%

*not including Territories

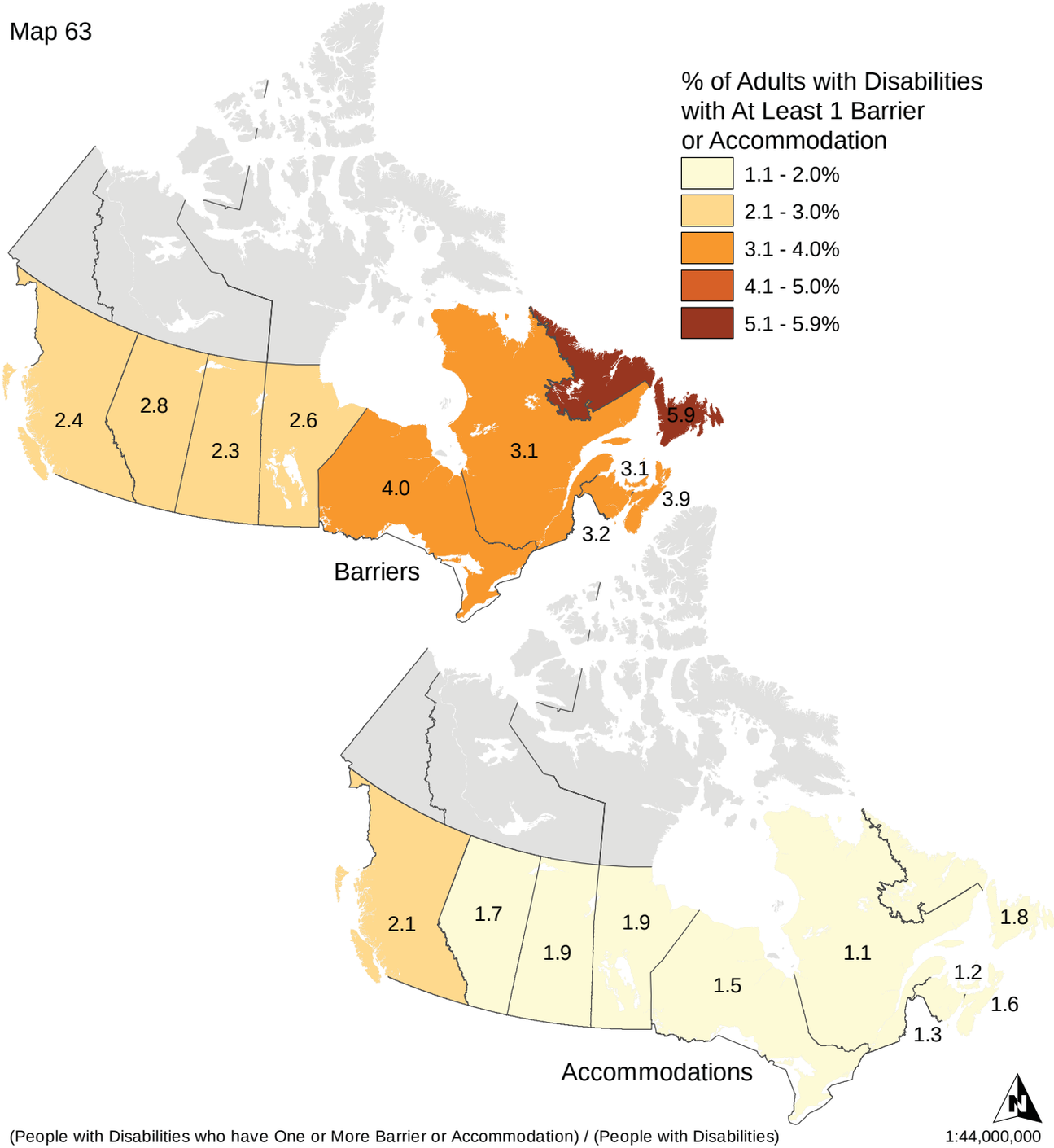
Map 62



(People with Disabilities who have One or More Barrier or Accommodation) / (People with Disabilities)

2001 Participation & Activity Limitation Survey

Map 63

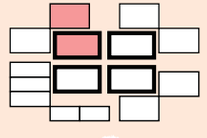


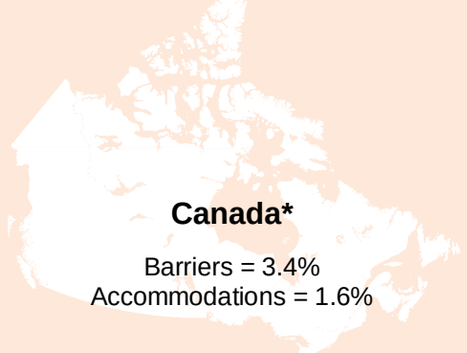
(People with Disabilities who have One or More Barrier or Accommodation) / (People with Disabilities)

Access to Personal Services (RBAI)

Adults - Age 15 & Older

The difference in the percentage of people with disabilities who have barriers and those with accommodations to personal services varied considerably across Canada in 2001. BC had the lowest difference (0.3%) indicating that almost everyone with a barrier had been accommodated. Newfoundland & Labrador showed the highest difference (4.1%) indicating that fewer people had been accommodated compared to the rest of the country.





Canada*

Barriers = 3.4%
Accommodations = 1.6%

*not including Territories

Map 63

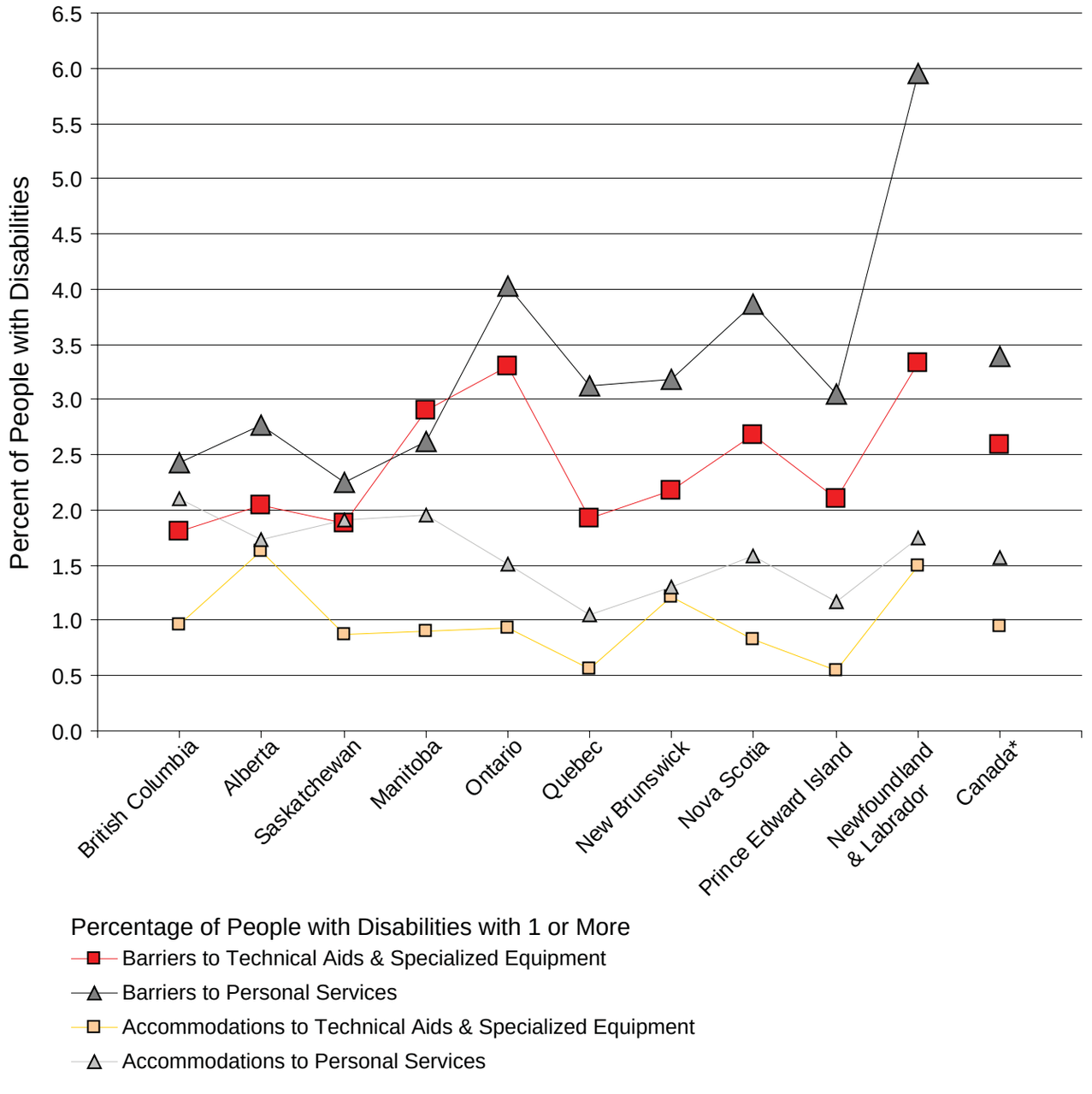
One or More Barrier or Accommodation to Technical Aids & Personal Services

Adults - Age 15 & Older

Newfoundland & Labrador, New Brunswick, and Alberta, show a similar percentage of people with disabilities who had one or more accommodation for technical aids or personal services. In other words, these provinces accommodate technical aids and personal services at similar rates according to the questions asked in the PALS 2001 survey. Generally, the western provinces of BC, Alberta, and Saskatchewan had a lower percentage of people with disabilities with barriers and the rate of accommodation more closely matched the need, particularly for personal services. Eastern provinces tended to have a higher discrepancy between barriers and accommodation, particularly in Ontario and Newfoundland & Labrador, for both technical aids and personal services.

*not including Territories

Chart 13

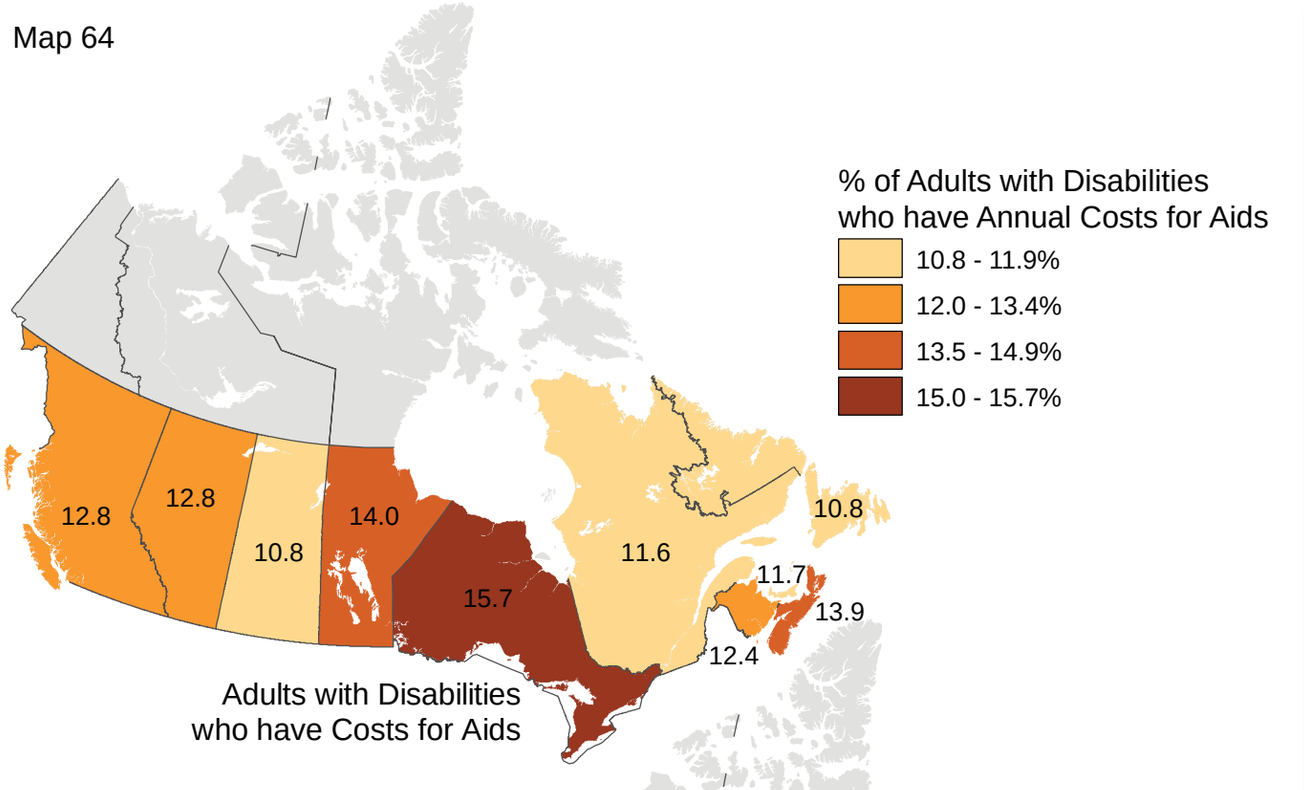


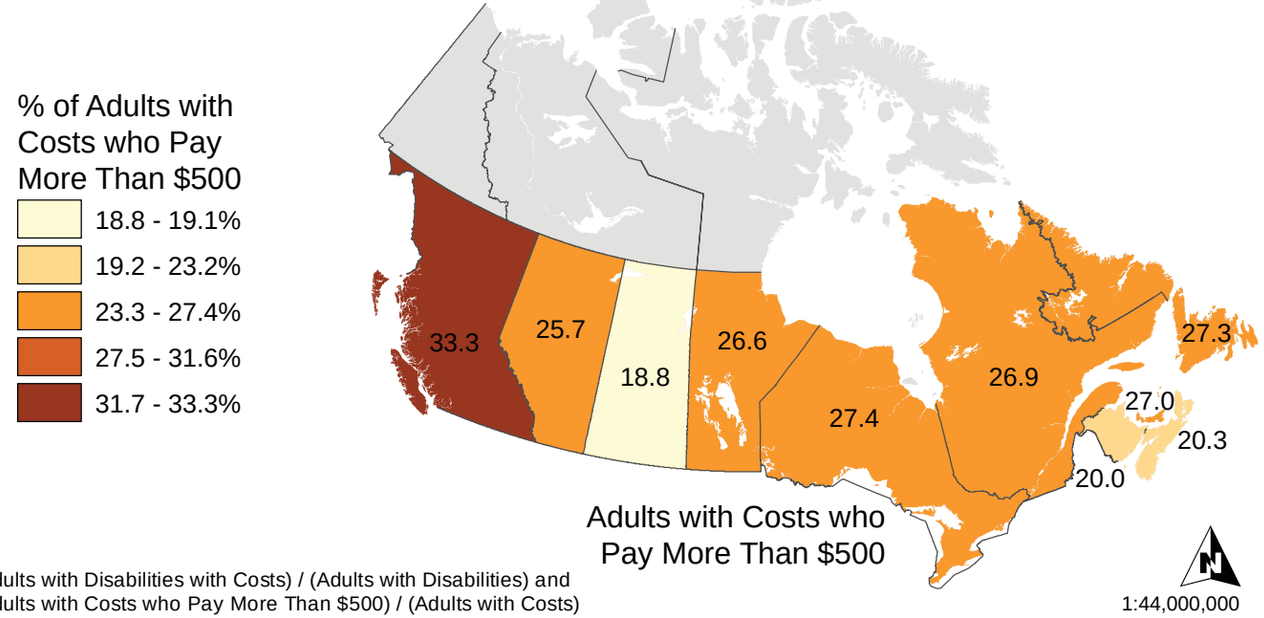
(People with Disabilities with One or More Barrier or Accommodation) / (People with Disabilities)

2001 Participation & Activity Limitation Survey

Chart 13

Map 64





(Adults with Disabilities with Costs) / (Adults with Disabilities) and
(Adults with Costs who Pay More Than $500) / (Adults with Costs)

1:44,000,000

Costs for Technical Aids

Adults - Age 15 & Older

Across the provinces of Canada, 10 to 15% of adults with disabilities had out of pocket costs for technical aids with the highest percentage found in Ontario (15.7%). The percentage of people with costs who paid more than $500 annually varied from 19 to 33%. People with disabilities are more likely to pay higher costs for technical aids in British Columbia than any other province.

Canada*

People with Disabilities who have Costs for Technical Aids = 13.8%

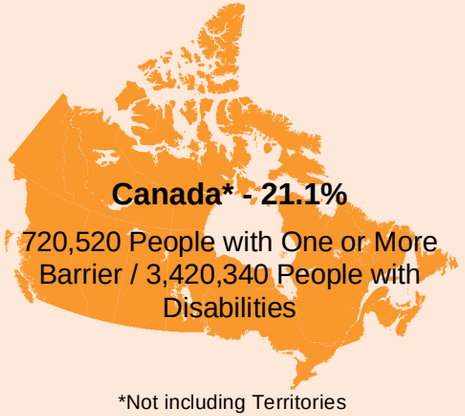
People with Costs who Pay More Than $500 = 27.2%

*not including Territories

Financial Barriers to Technical Aids (RBAI)

Adults - Age 15 & Older

The index for financial barriers to technical aids uses two questions from PALS. The first is on out-of-pocket costs for technical aids. This question also forms the basis for the derived variable on costs (see map 64). The second question is on why the respondent does not have needed technical aids and two responses to this question were deemed relevant: the technical aid is not covered by insurance and/or the technical aid is too costly. Results show the degree to which the derived variable underestimates the financial barrier to technical aids.

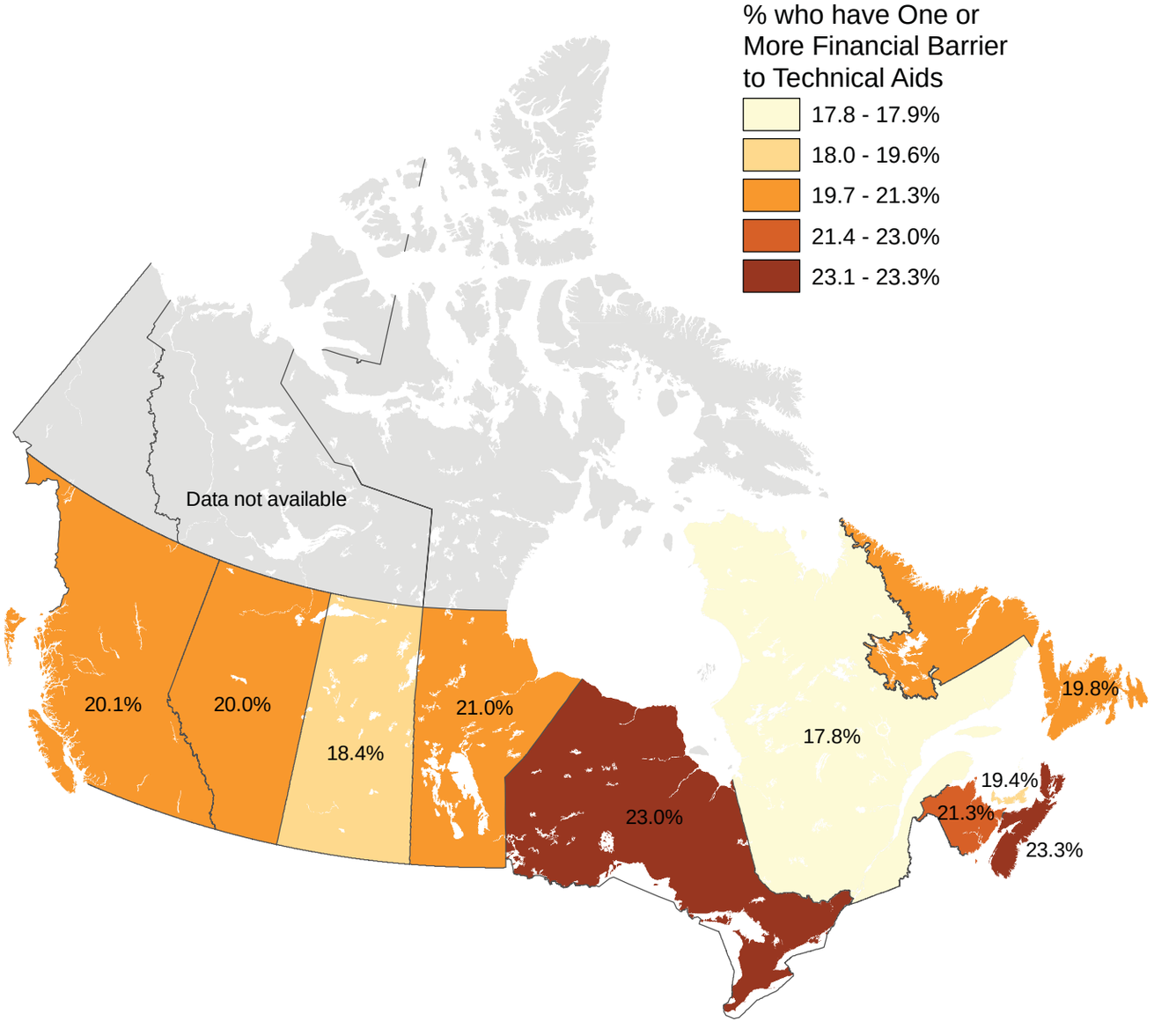


Canada* - 21.1%

720,520 People with One or More Barrier / 3,420,340 People with Disabilities

*Not including Territories

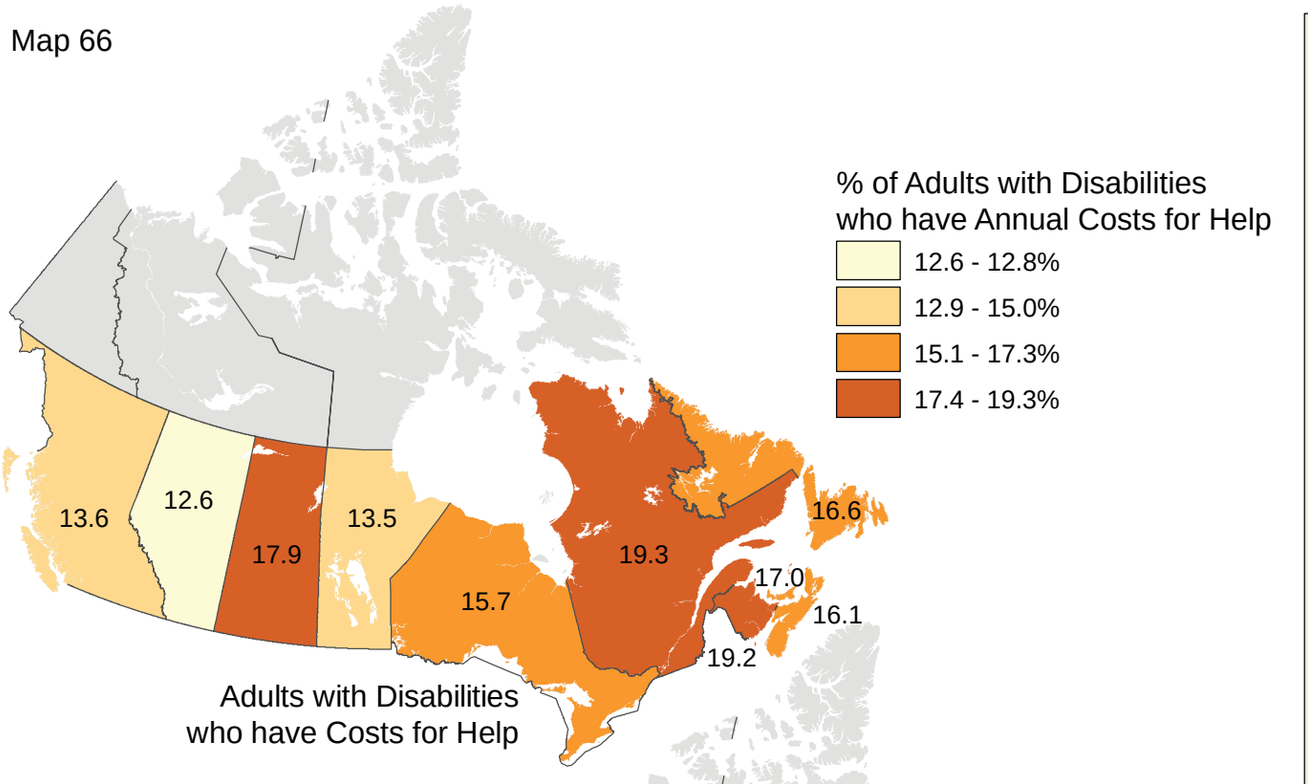
Map 65

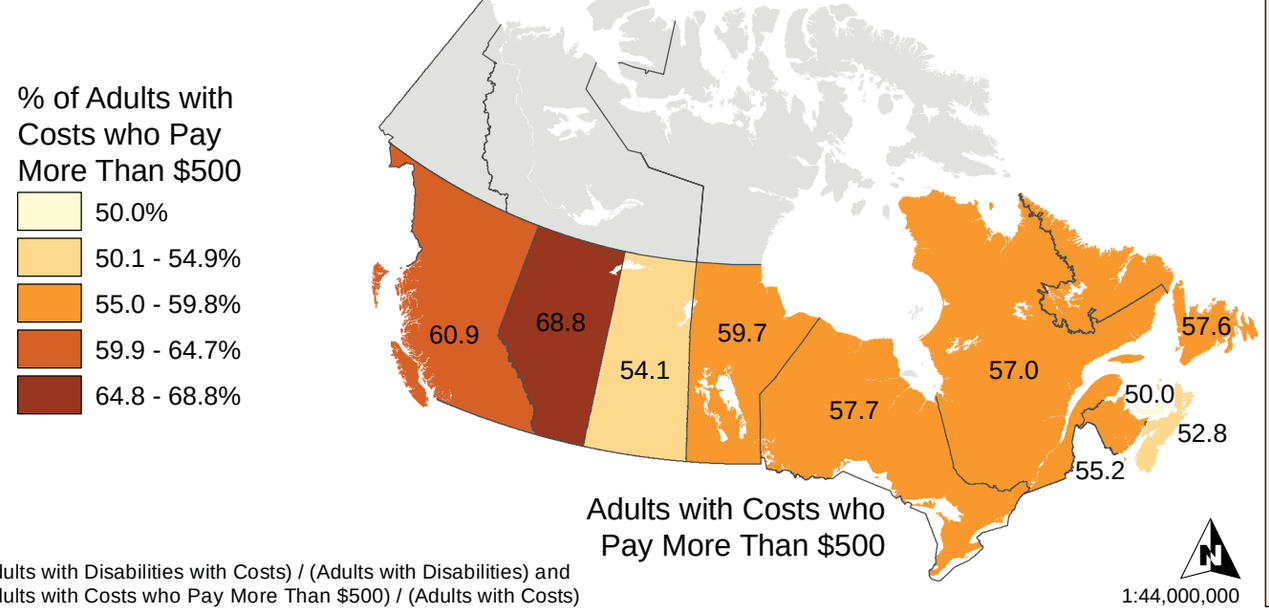


(People with Disabilities with One or More Financial Barrier to Technical Aids) / (People with Disabilities)

1:30,000,000

Map 66





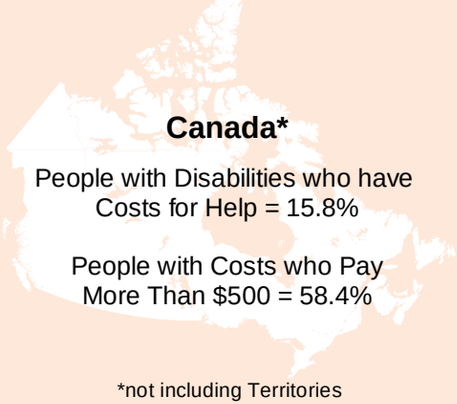
(Adults with Disabilities with Costs) / (Adults with Disabilities) and
(Adults with Costs who Pay More Than $500) / (Adults with Costs)

1:44,000,000

Costs for Help

Adults - Age 15 & Older

A slightly higher percentage of adults with disabilities had out of pocket costs for help in 2001 than for technical aids in most provinces. However, the percentage of people with assisstance costs over $500 annually is more than double the rate of those with high costs for technical aids.



Canada*

People with Disabilities who have Costs for Help = 15.8%

People with Costs who Pay More Than $500 = 58.4%

*not including Territories

Costs for Health Care

Adults - Age 15 & Older

There was greater variability between the provinces in the percentage of adults with disabilities who had out of pocket costs for health care than there was for costs for technical aids and help. The variability ranged from 9.3% in Newfoundland & Labrador to 25.6% in British Columbia. On average, less than 1/3 of the people who had annual costs for health care spent more than $500.

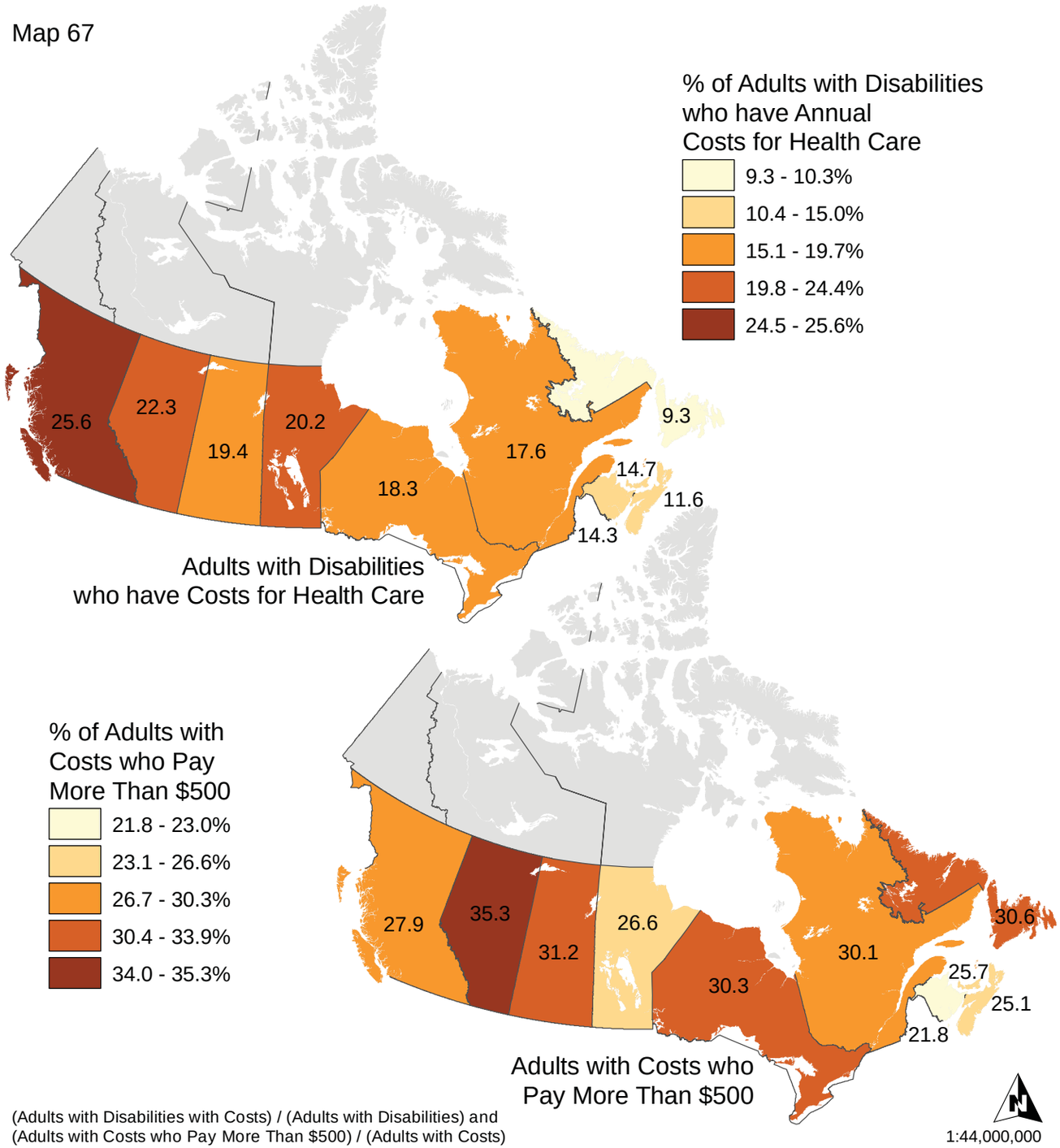
Canada*

People with Disabilities who have Costs for Health Care = 19.2%

People with Costs who Pay More Than $500 = 29.9%

*not including Territories

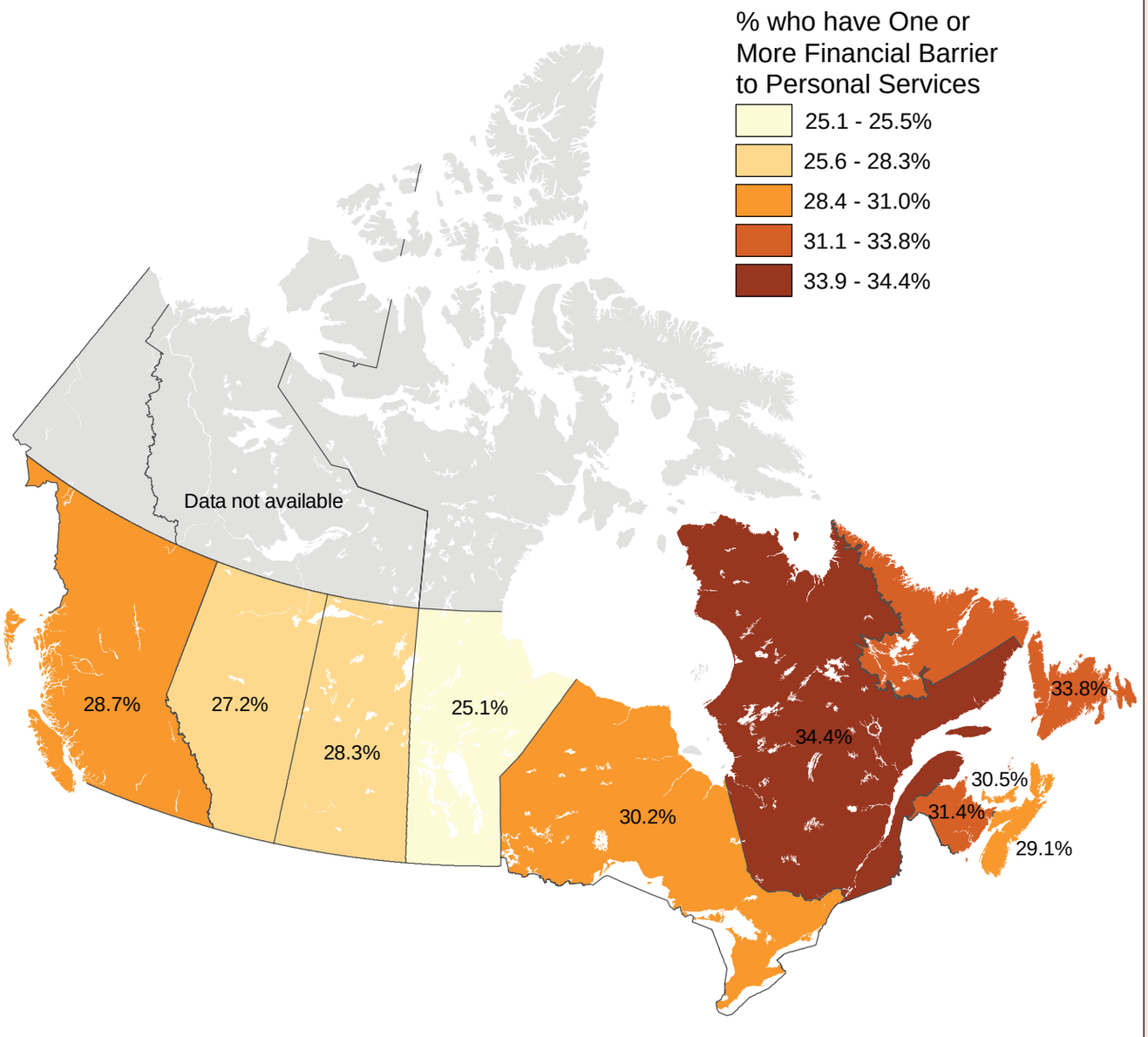
Map 67



(Adults with Disabilities with Costs) / (Adults with Disabilities) and
(Adults with Costs who Pay More Than $500) / (Adults with Costs)

2001 Participation & Activity Limitation Survey

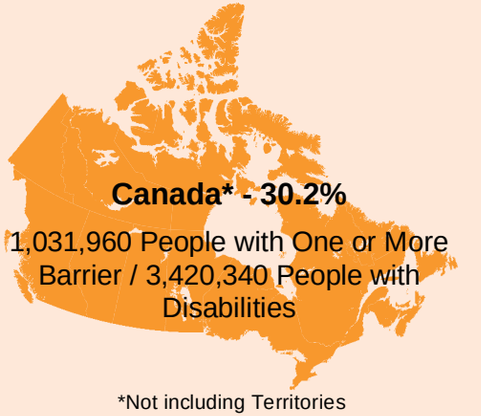
Map 68



Financial Barriers to Personal Services (RBAI)

Adults - Age 15 & Older

The index for barriers to personal services does not include questions which are used for the derived variables on out of pocket costs for help or health care so there is no overlap between these measures. Instead, the index uses responses to questions on why the respondent does not have the personal services needed, such as the service is too expensive, not covered by insurance, or is not reimbursed. Quebec had the highest rate of financial barriers to personal services (34.4%) and Manitoba the lowest (25.1%).



Canada* - 30.2%

1,031,960 People with One or More Barrier / 3,420,340 People with Disabilities

*Not including Territories

(People with Disabilities with One or More Financial Barrier to Personal Services) / (People with Disabilities)

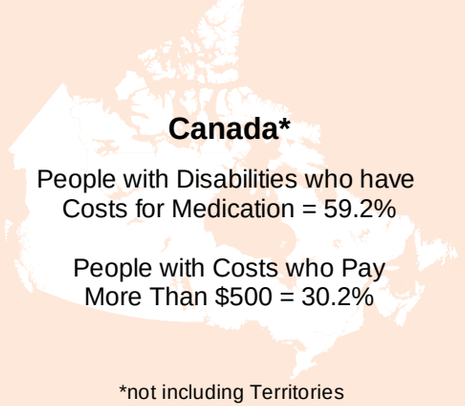
1:30,000,000

Map 68

Costs for Medication

Adults - Age 15 & Older

Well over half of people with disabilities had some annual out of pocket costs for medications in 2001 with the highest percentage found in PEI (65.2%). Of the people with costs for medications, less than 1/3 paid more than $500 annually. There is considerable variation among provinces, with Ontario being the lowest at 23.3% and Saskatchewan the highest at 47.0%.



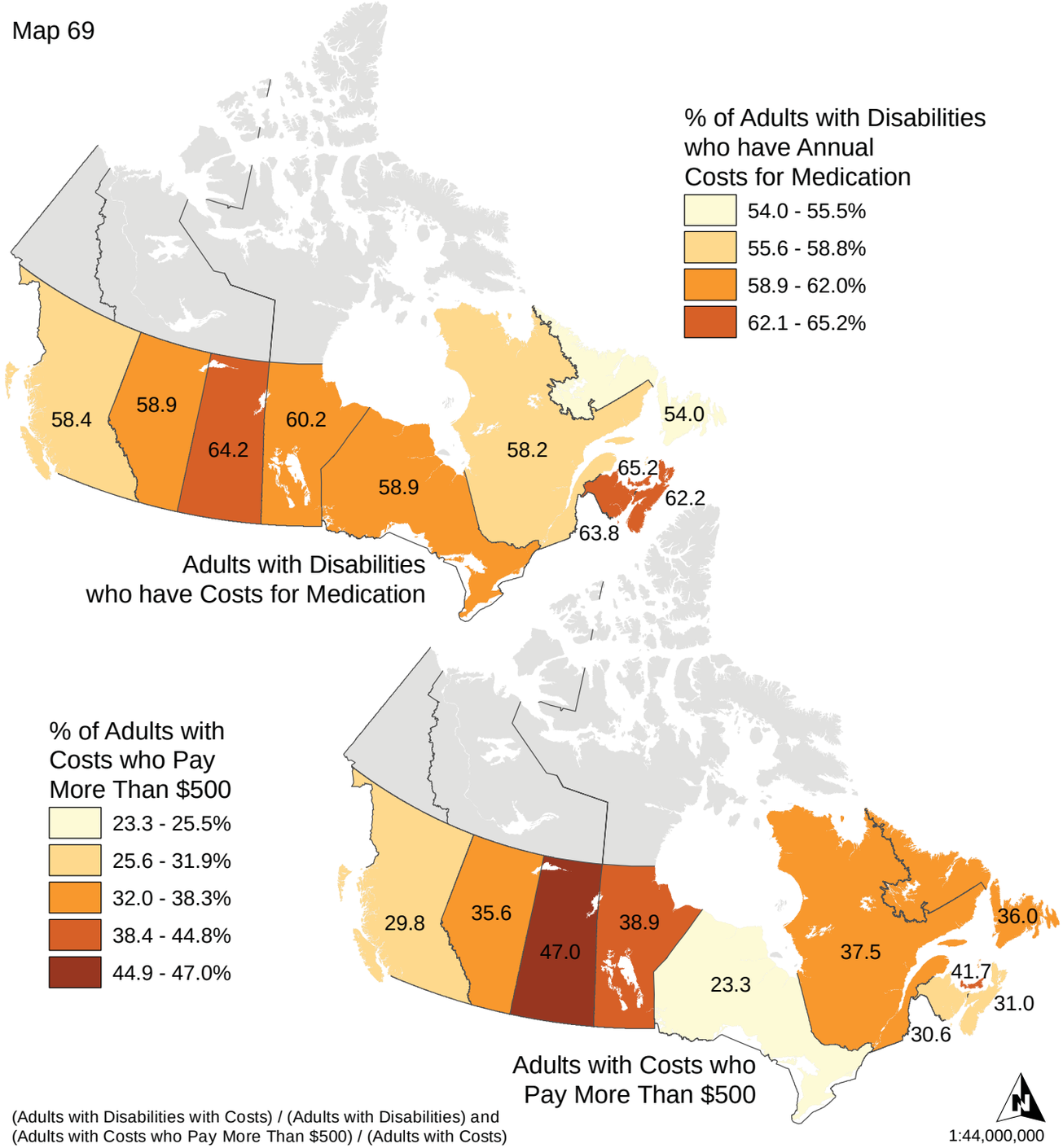
Canada*

People with Disabilities who have Costs for Medication = 59.2%

People with Costs who Pay More Than $500 = 30.2%

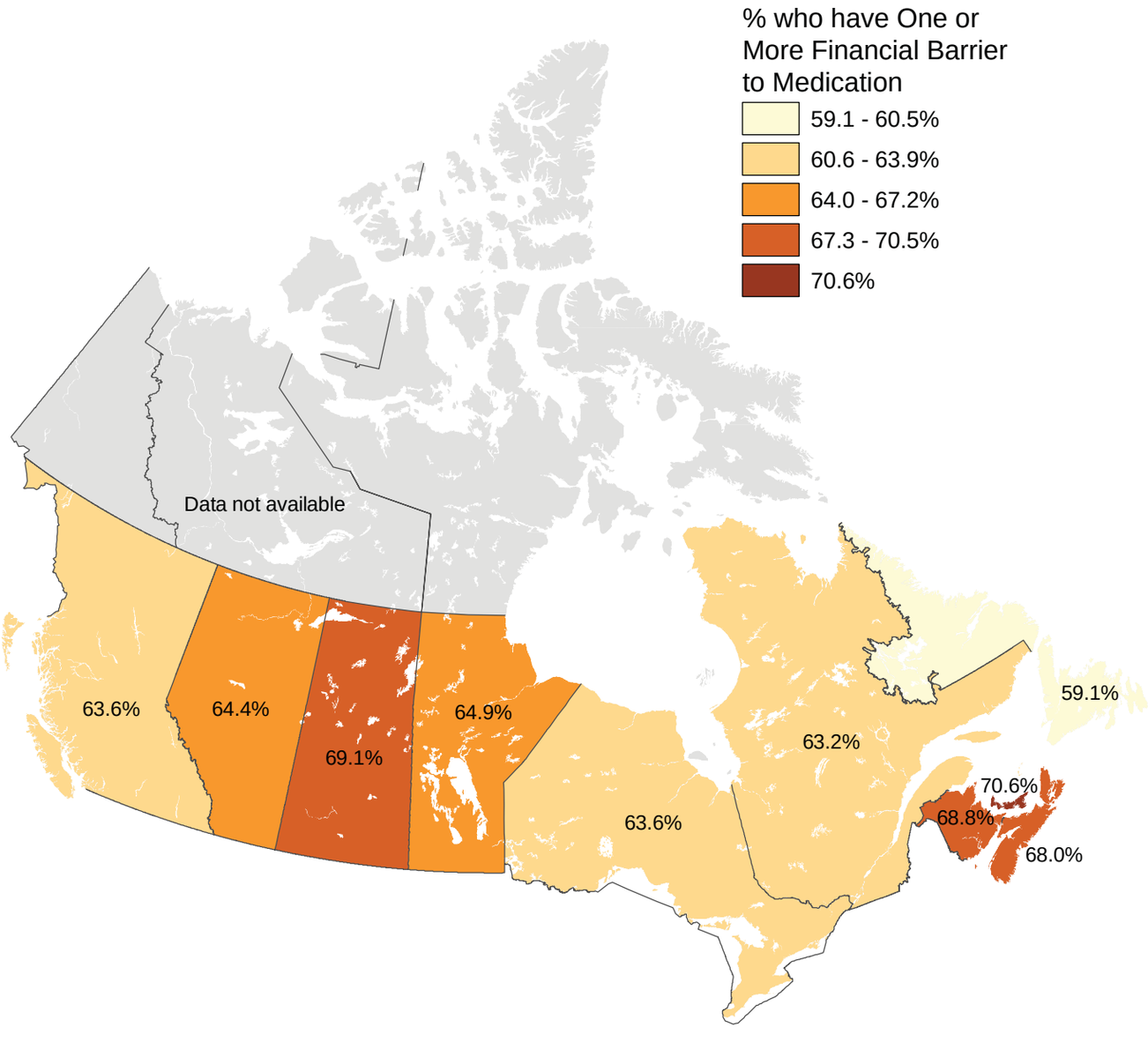
*not including Territories

Map 69



(Adults with Disabilities with Costs) / (Adults with Disabilities) and
(Adults with Costs who Pay More Than $500) / (Adults with Costs)

Map 70



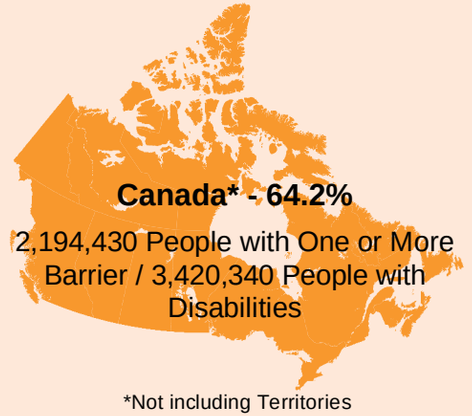
(People with Disabilities with One or More Financial Barrier to Medication) / (People with Disabilities)

1:30,000,000

Financial Barriers to Medication (RBAI)

Adults - Age 15 & Older

The barriers index for medications includes the out-of-pocket costs question used in the formation of the derived variable (see map 69) but it also includes two questions on whether or not the respondent had limited accessibility to and/or limited use of the medications needed due to cost. As expected, the rate of people with disabilities who experience barriers to medication is slightly higher than the derived variable which considers out-of pocket costs alone.



Canada* - 64.2%

2,194,430 People with One or More Barrier / 3,420,340 People with Disabilities

*Not including Territories

Costs for Transportation

Adults - Age 15 & Older

On average, about 1/4 of adults with disabilities had annual out of pocket costs for transportation with the highest rate found in Saskatchewan (30.8%) and the lowest in Alberta (22.6%). Of those people, more paid over $500 annually in Newfoundland & Labrador (28.0%) than any other province. The western provinces of BC, Alberta, & Saskatchewan also showed a higher than average rate of people with costs exceeding $500.

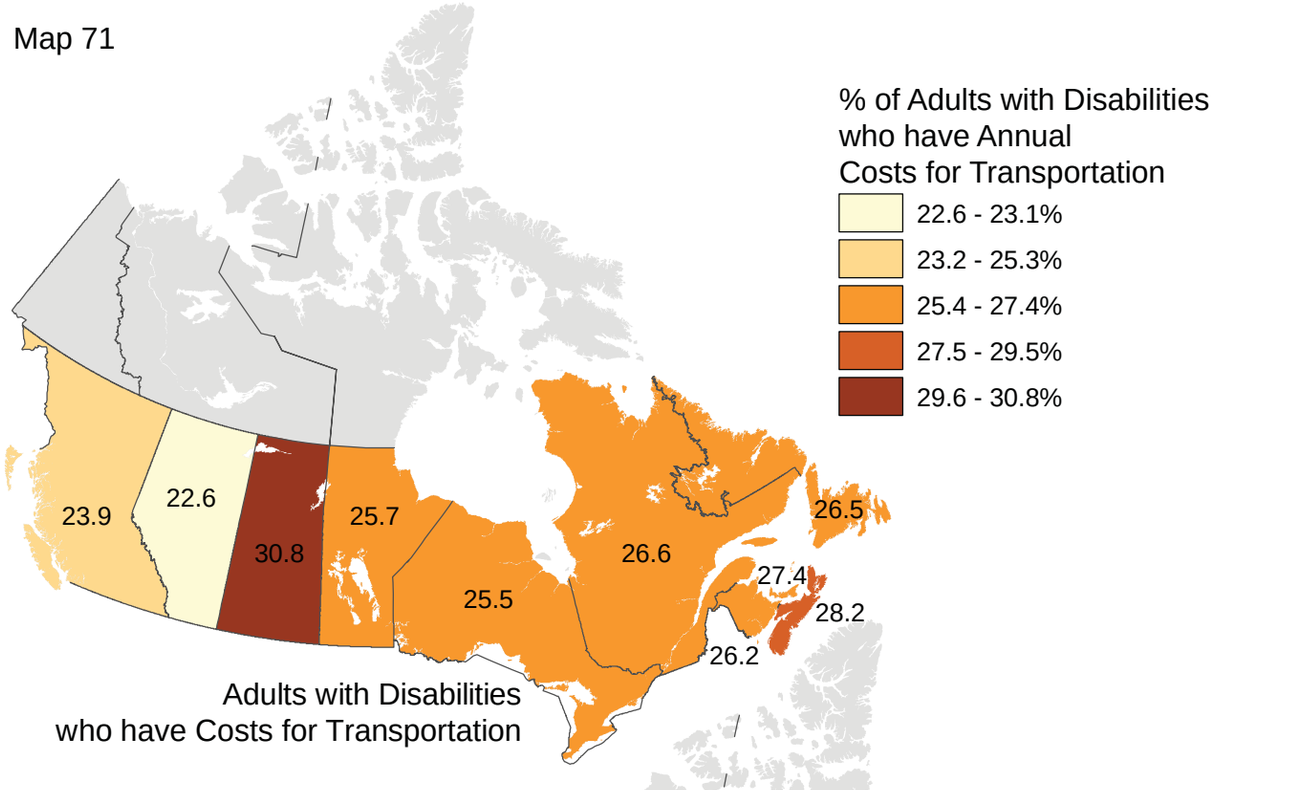
Canada*

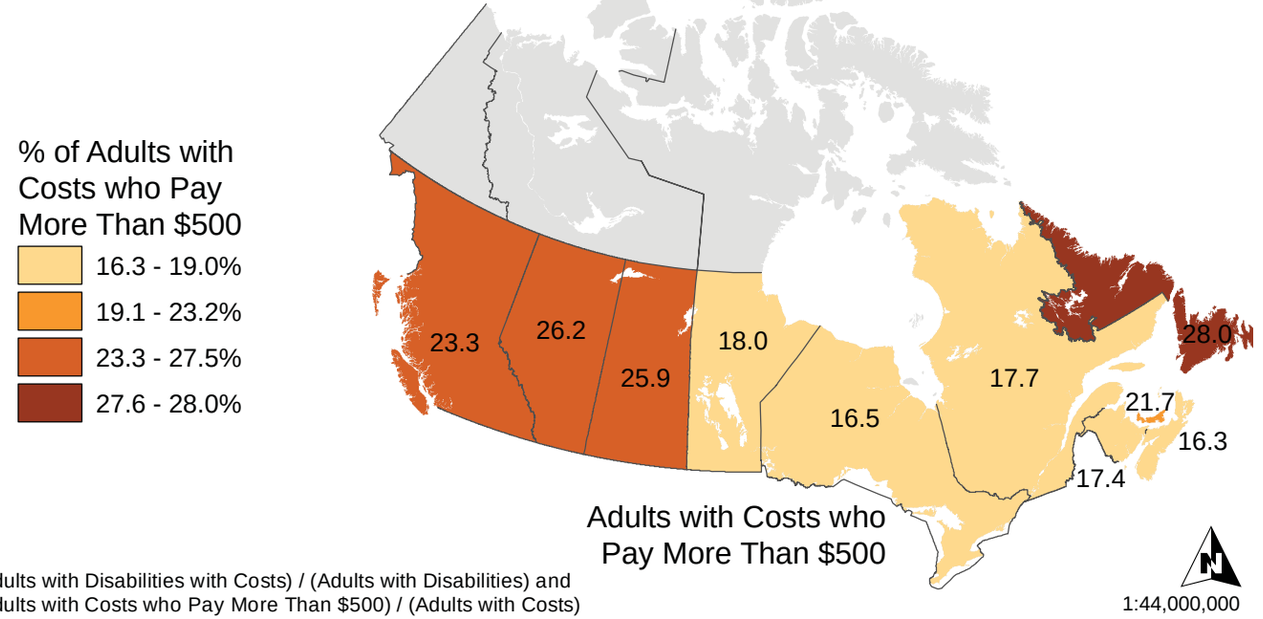
People with Disabilities who have Costs for Transportation = 25.5%

People with Costs who Pay More Than $500 = 19.2%

*not including Territories

Map 71



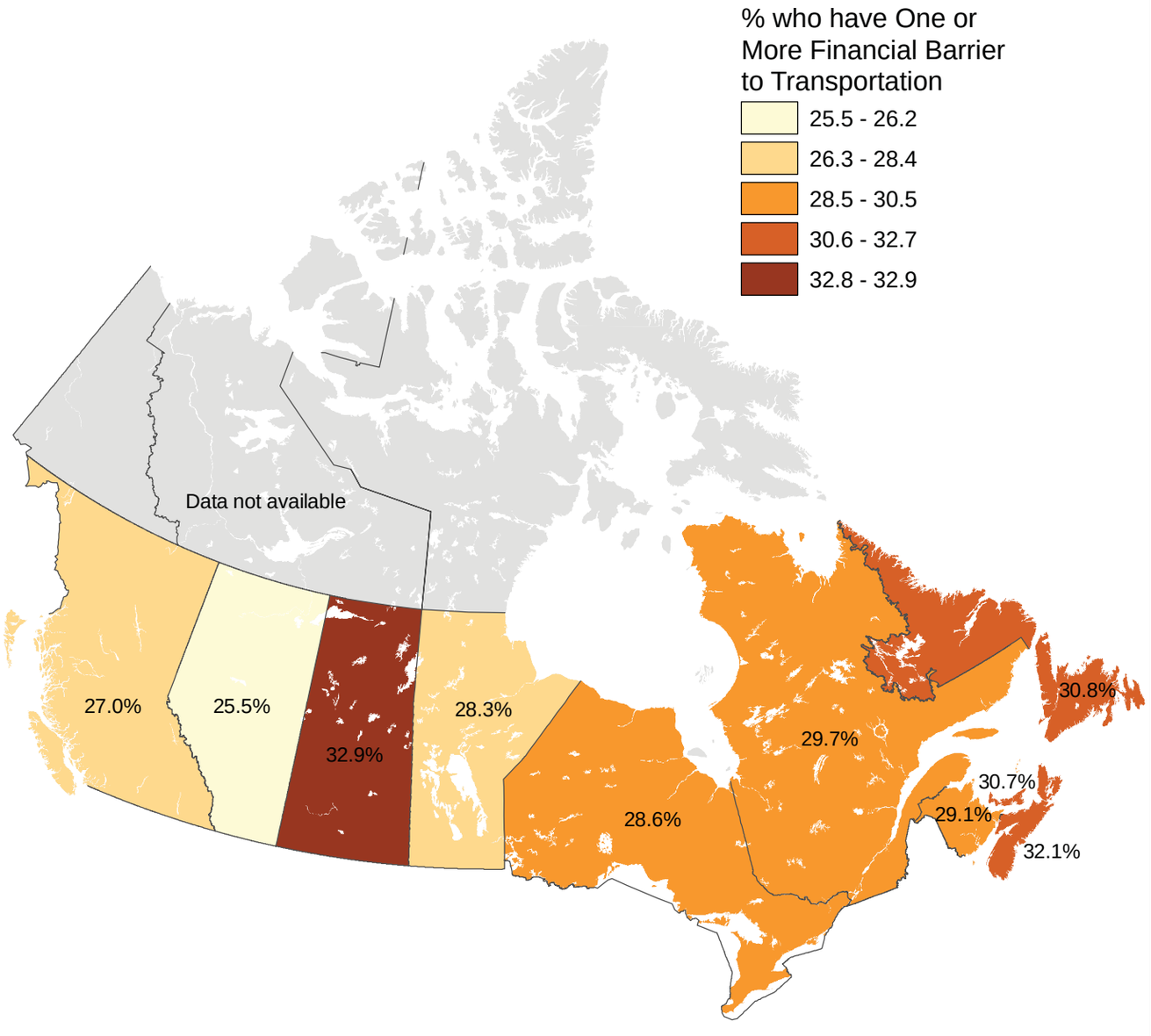


(Adults with Disabilities with Costs) / (Adults with Disabilities) and
(Adults with Costs who Pay More Than $500) / (Adults with Costs)

1:44,000,000

2001 Participation & Activity Limitation Survey

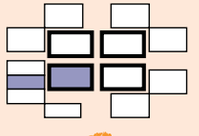
Map 72

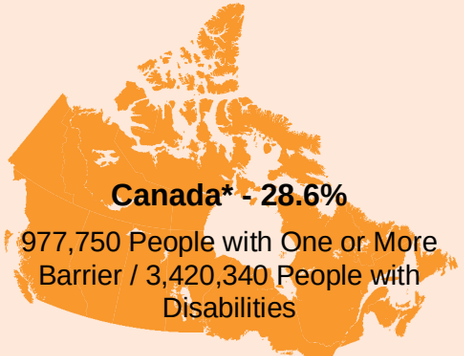


Financial Barriers to Transportation (RBAI)

Adults - Age 15 & Older

The rate of people with disabilities with financial barriers to transportation was similar to the rate of people who have out of pocket costs for transportation. This is probably due to the fact that the index is based on only 3 questions and one of the questions is the same question used for the derived variable on costs.





Canada* - 28.6%

977,750 People with One or More Barrier / 3,420,340 People with Disabilities

*Not including Territories

(People with Disabilities with One or More Financial Barrier to Transportation) / (People with Disabilities)

1:30,000,000

Map 72

Costs for Modifications to Housing

Adults - Age 15 & Older

A very small percentage of adults with disabilities, less than 5% on average for all the provinces, had annual out of pocket costs for modifications to their housing. PEI had the highest percentage of people with costs who pay more than $500 annually (65.1%) and BC had the lowest (32.8%).

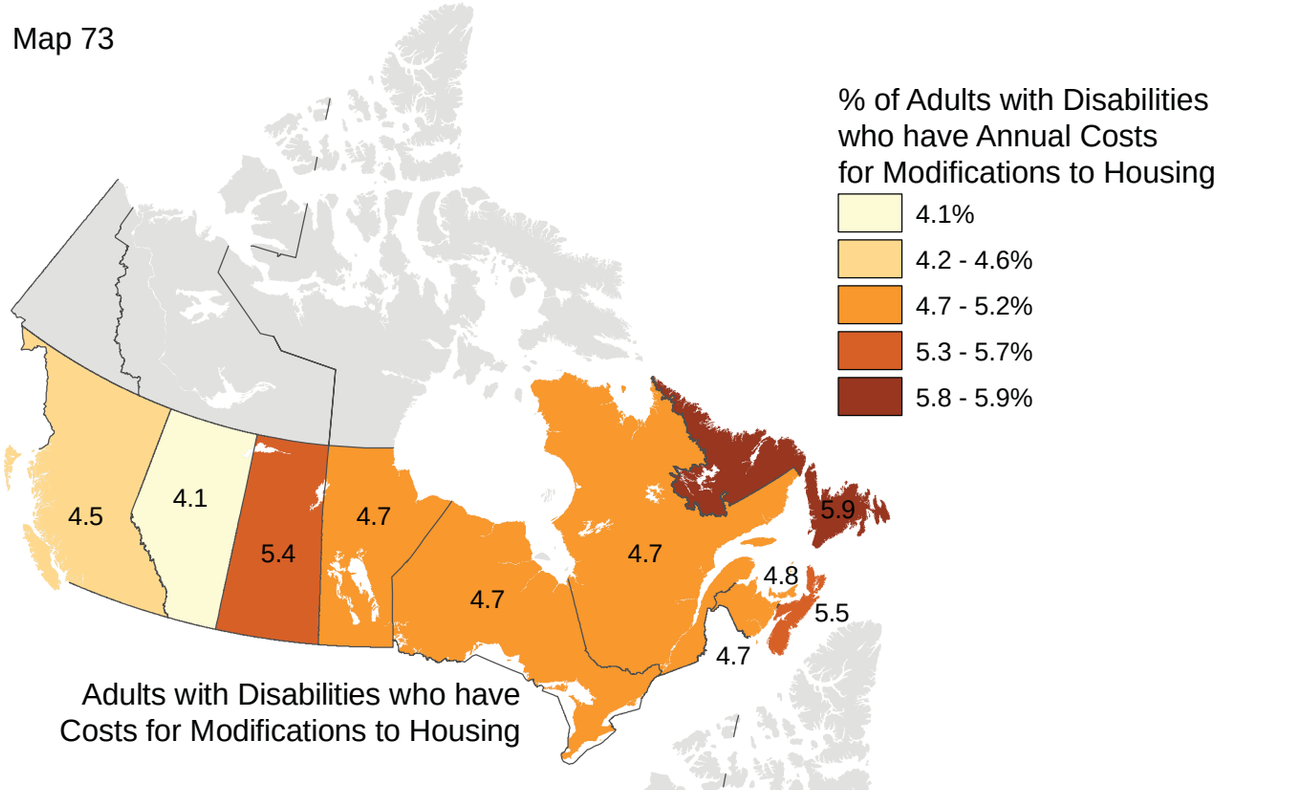
Canada*

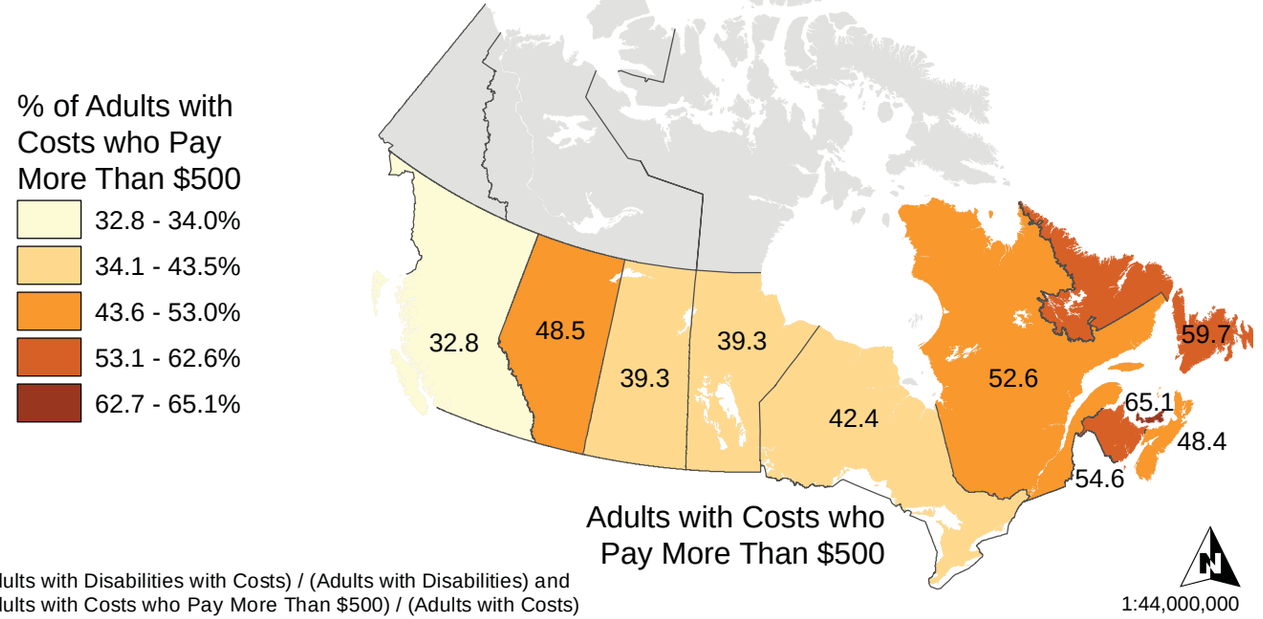
People with Disabilities who have Costs for Modifications = 4.7%

People with Costs who Pay More Than $500 = 44.2%

*not including Territories

Map 73



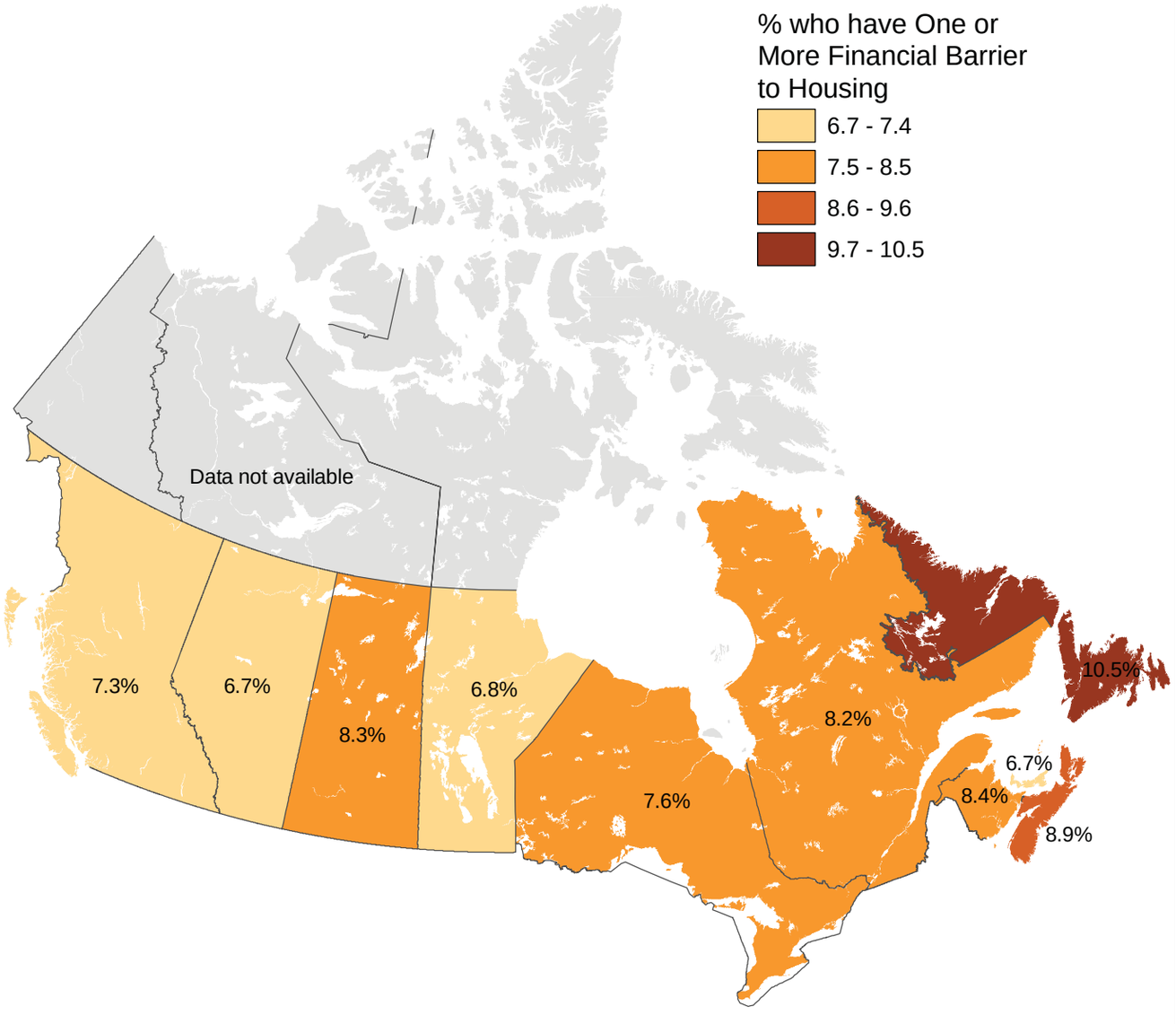


(Adults with Disabilities with Costs) / (Adults with Disabilities) and (Adults with Costs who Pay More Than $500) / (Adults with Costs)

1:44,000,000

2001 Participation & Activity Limitation Survey

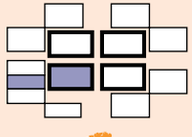
Map 74

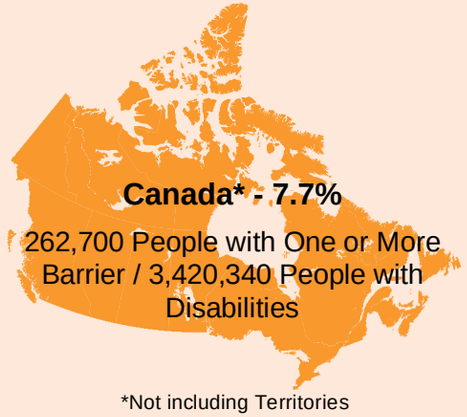


Financial Barriers to Housing (RBAI)

Adults - Age 15 & Older

The rate of financial barriers to modifications to housing were slightly higher than the derived variable on the out of pocket costs (see map 73). In addition to the question on out of pocket costs, the index calculation included two responses to a question on why the respondent does not have needed features in their home: the feature is not covered by insurance and the feature is too costly. As with the derived variable, Newfoundland & Labrador had the highest rate of barriers.





Canada* - 7.7%

262,700 People with One or More Barrier / 3,420,340 People with Disabilities

*Not including Territories

(People with Disabilities with One or More Financial Barrier to Housing) / (People with Disabilities)

1:30,000,000

Map 74

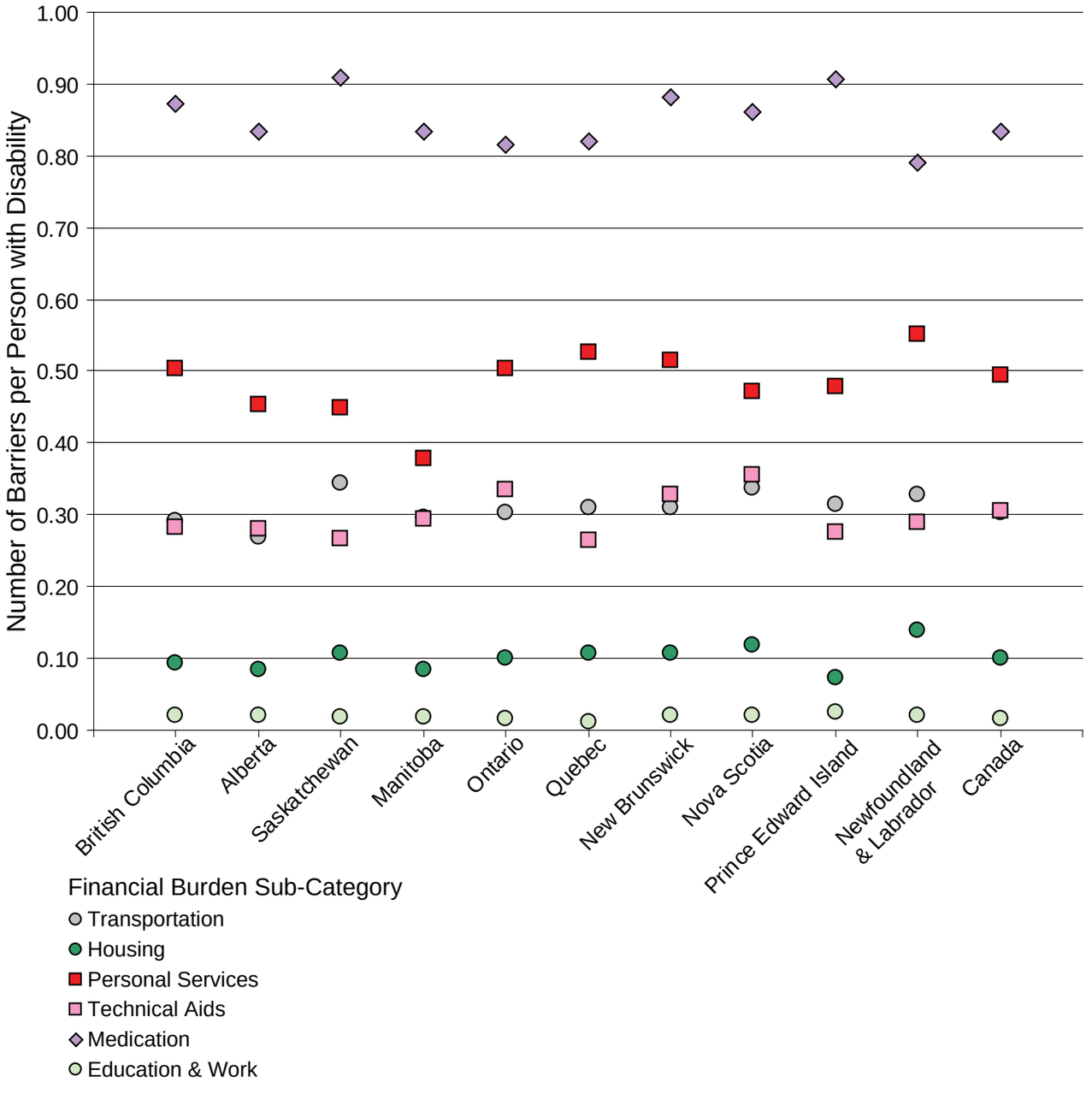
Financial Barriers per Person with Disability

Adults - Age 15 & Older

People with disabilities face more financial barriers to medication than the other categories of the RBAI, based on the questions asked in PALS. One issue in comparing the prevalence of the different types of barriers is to what extent does the number of questions asked for each type of barrier influence the outcome. For example, there are more questions regarding financial barriers to personal services than there are for technical aid or transportation barriers and this might contribute to the relative significance of one type of barrier over another.

*not including Territories

Chart 14

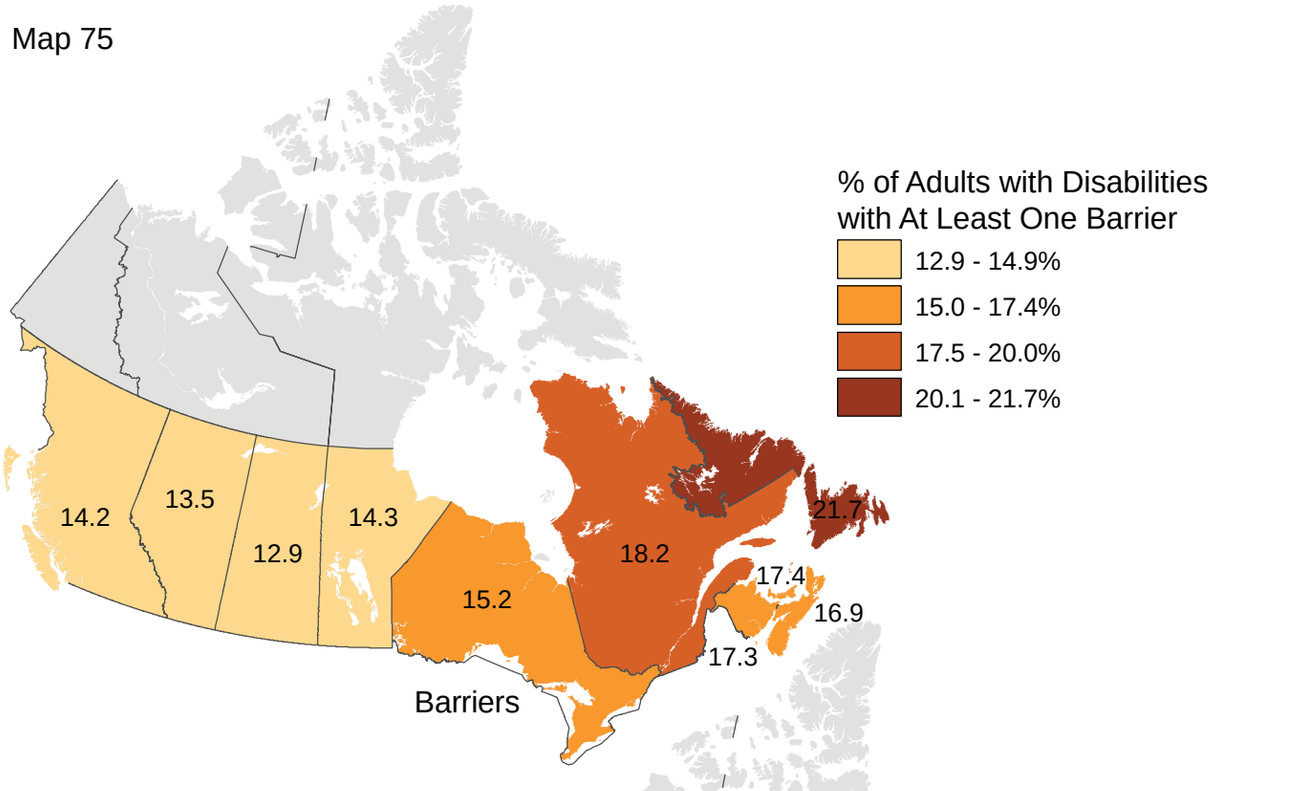


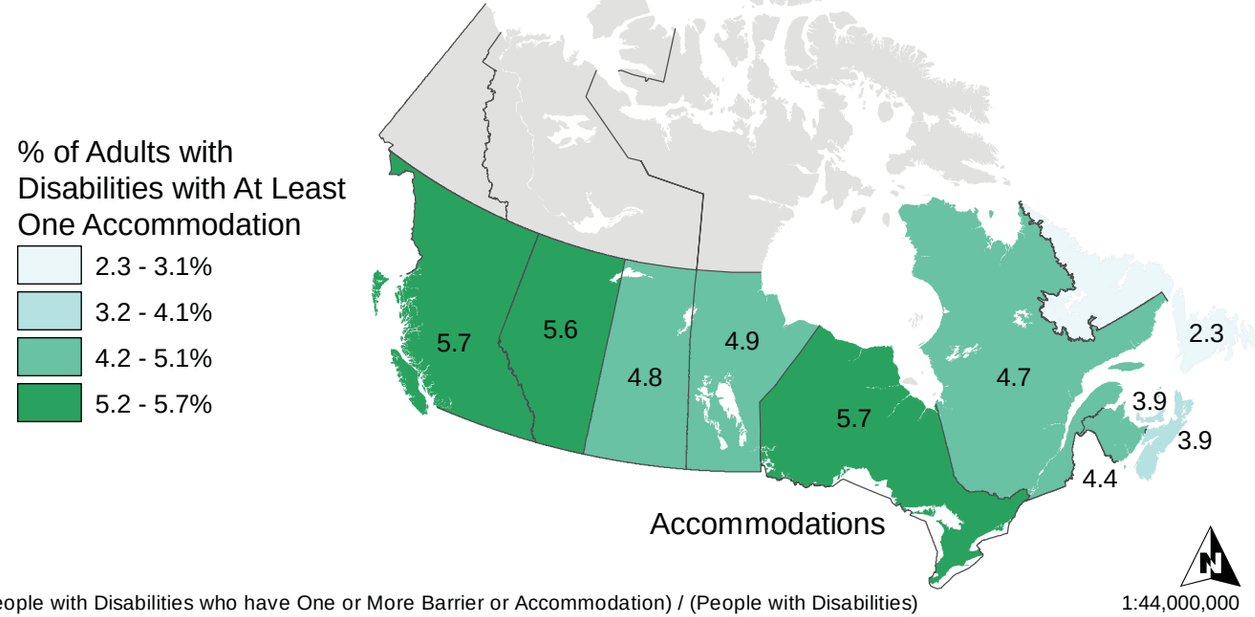
(Number of Barriers) / (Population with Disabilities)

2001 Participation & Activity Limitation Survey

Chart 14

Map 75





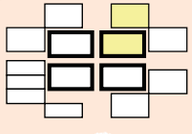
(People with Disabilities who have One or More Barrier or Accommodation) / (People with Disabilities)

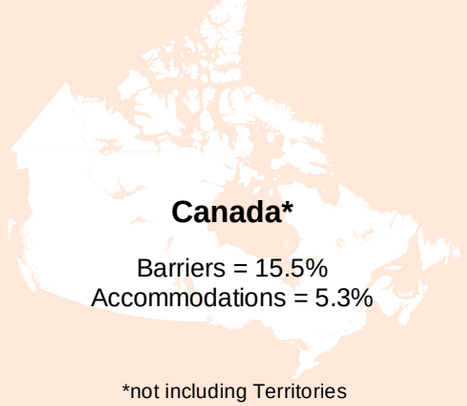
1:44,000,000

Community Attitudes, Transportation & Work (RBAI)

Adults - Age 15 & Older

There are several more questions in the PALS survey used to measure barriers compared to accommodations for the community attitudes sub-category of the BAI. Only two questions measured both a barrier and an accommodation (Have the following been made available to you?: job redesign or modified hours or days or reduced work hours). There are no questions in PALS which could be used to measure accommodations to community attitudes toward transportation.





Canada*

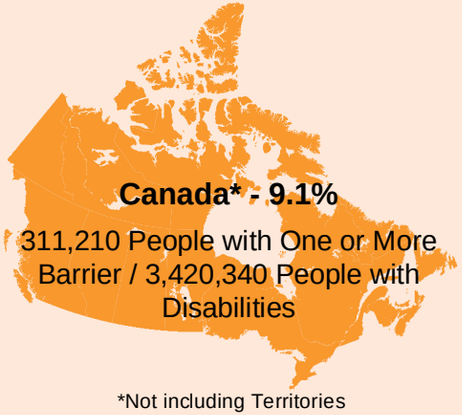
Barriers = 15.5%
Accommodations = 5.3%

*not including Territories

Personal Belief Barriers to Aids & Personal Services (RBAI)

Adults - Age 15 & Older

There is little variation among the provinces in the percentage of people with disabilities who had one or more personal belief barriers to technical aids & personal services. The lowest percentage was found in PEI. The questions used to create this index indicate that the respondent did not know where to look for or how to obtain the technical aids & personal services they needed.

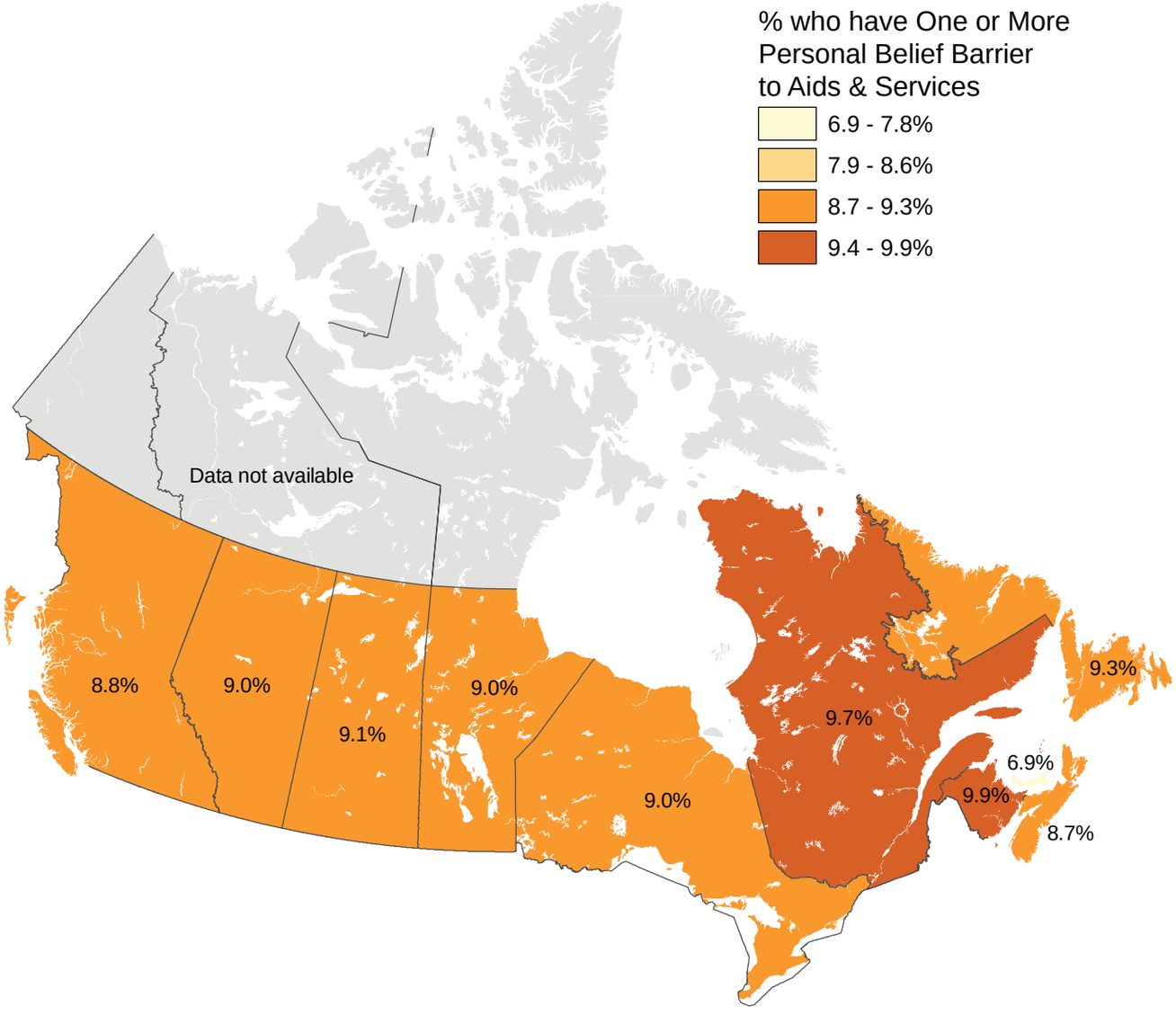


Canada* - 9.1%

311,210 People with One or More Barrier / 3,420,340 People with Disabilities

*Not including Territories

Map 76

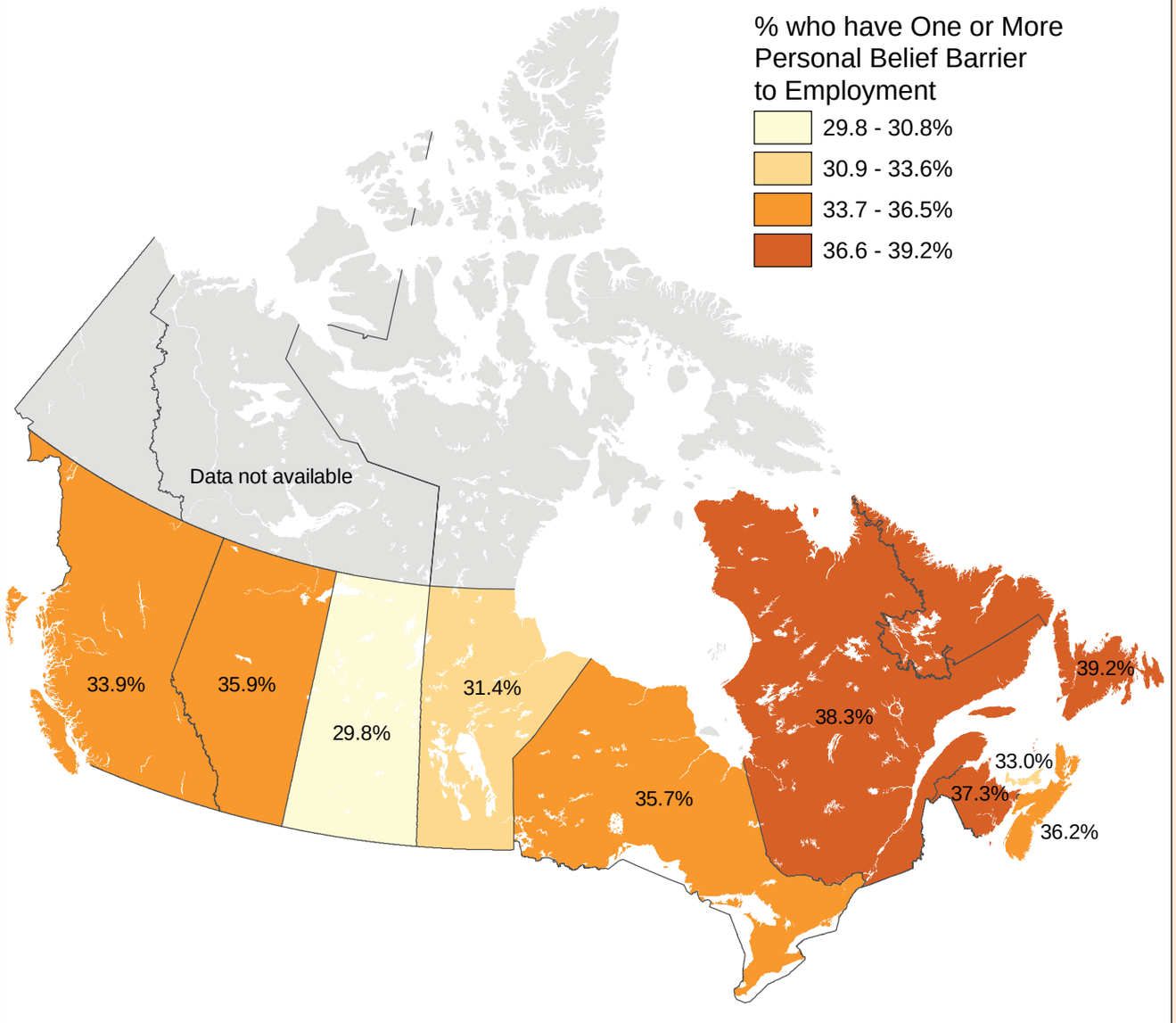


(People with Disabilities with One or More Barrier) / (People with Disabilities)

1:30,000,000

2001 Participation & Activity Limitation Survey

Map 77



(People with Disabilities with One or More Barrier) / (People with Disabilities)

1:30,000,000

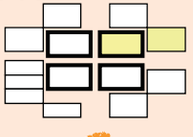
Personal Belief Barriers to Employment (RBAI)

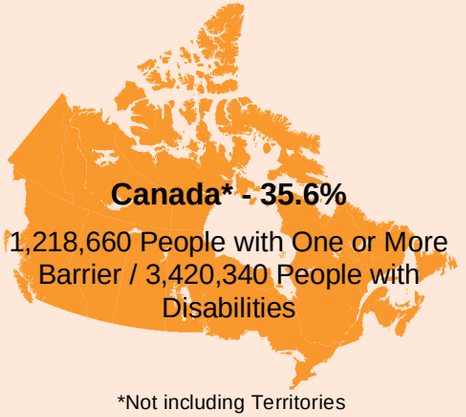
Adults - Age 15 & Older

Over 1/3 of people with disabilities indicated that they feel they are at a disadvantage when it comes to employment. The following are examples of questions used:

Do you believe that because of your condition, you have been refused employment, promotion, access to training programs or has your employment been terminated?

Do you consider yourself to be disadvantaged in employment because of your condition?





Canada* - 35.6%

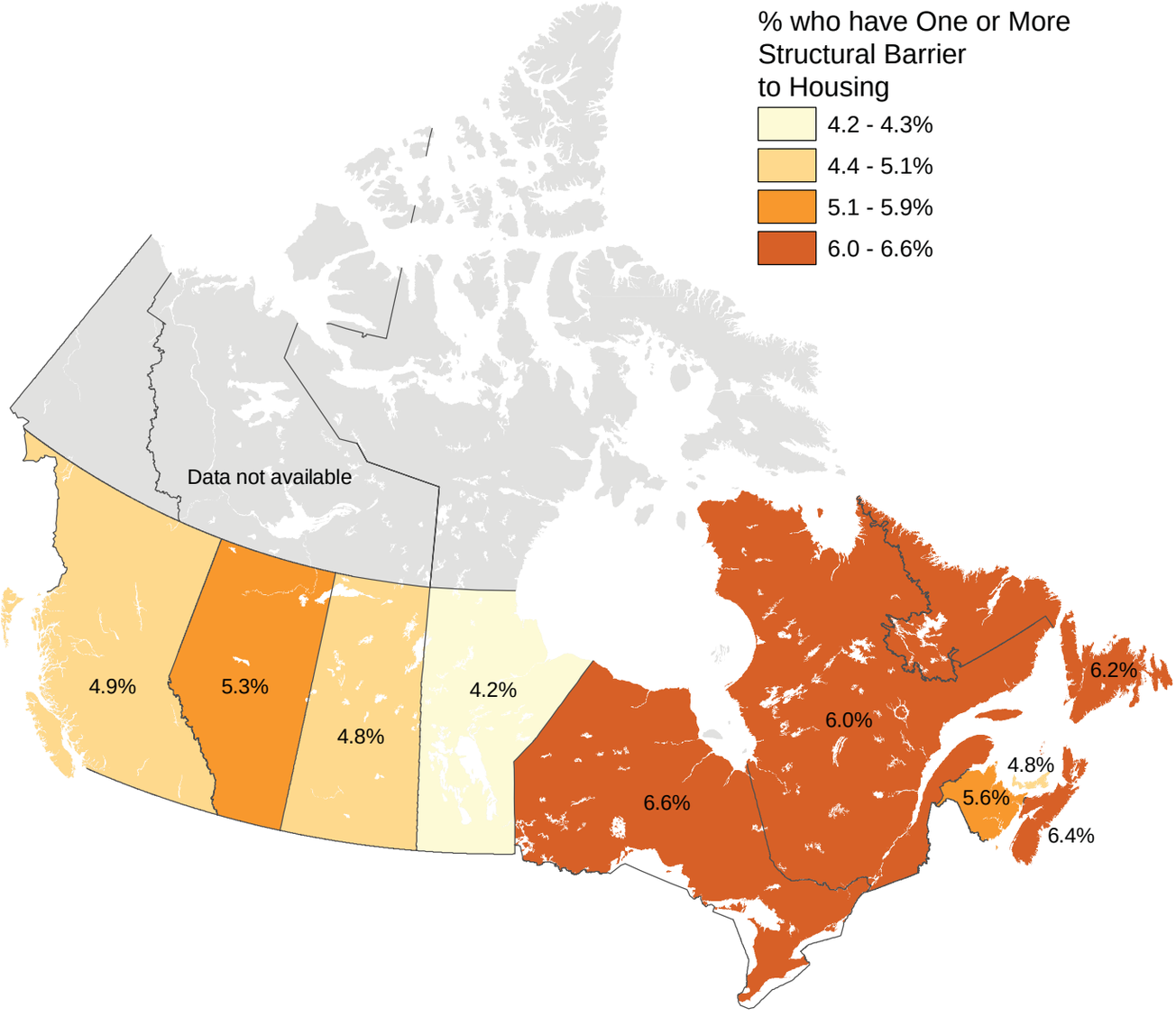
1,218,660 People with One or More Barrier / 3,420,340 People with Disabilities

*Not including Territories

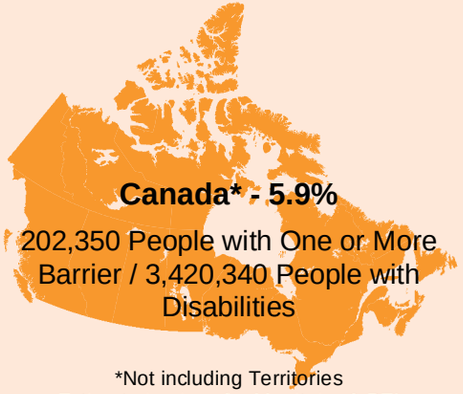
Structural Barriers to Housing (RBAI)

Adults - Age 15 & Older

Map 78



Questions used to create the structural barriers to housing index refer to limitations in the design, layout, or access to specialized features for the home which would enable the respondent to participate in activities or go about daily living. There are only two questions in PALS which address this issue.



Canada* - 5.9%

202,350 People with One or More Barrier / 3,420,340 People with Disabilities

*Not including Territories
Estimated values for Manitoba & PEI

(People with Disabilities with One or More Barrier) / (People with Disabilities)

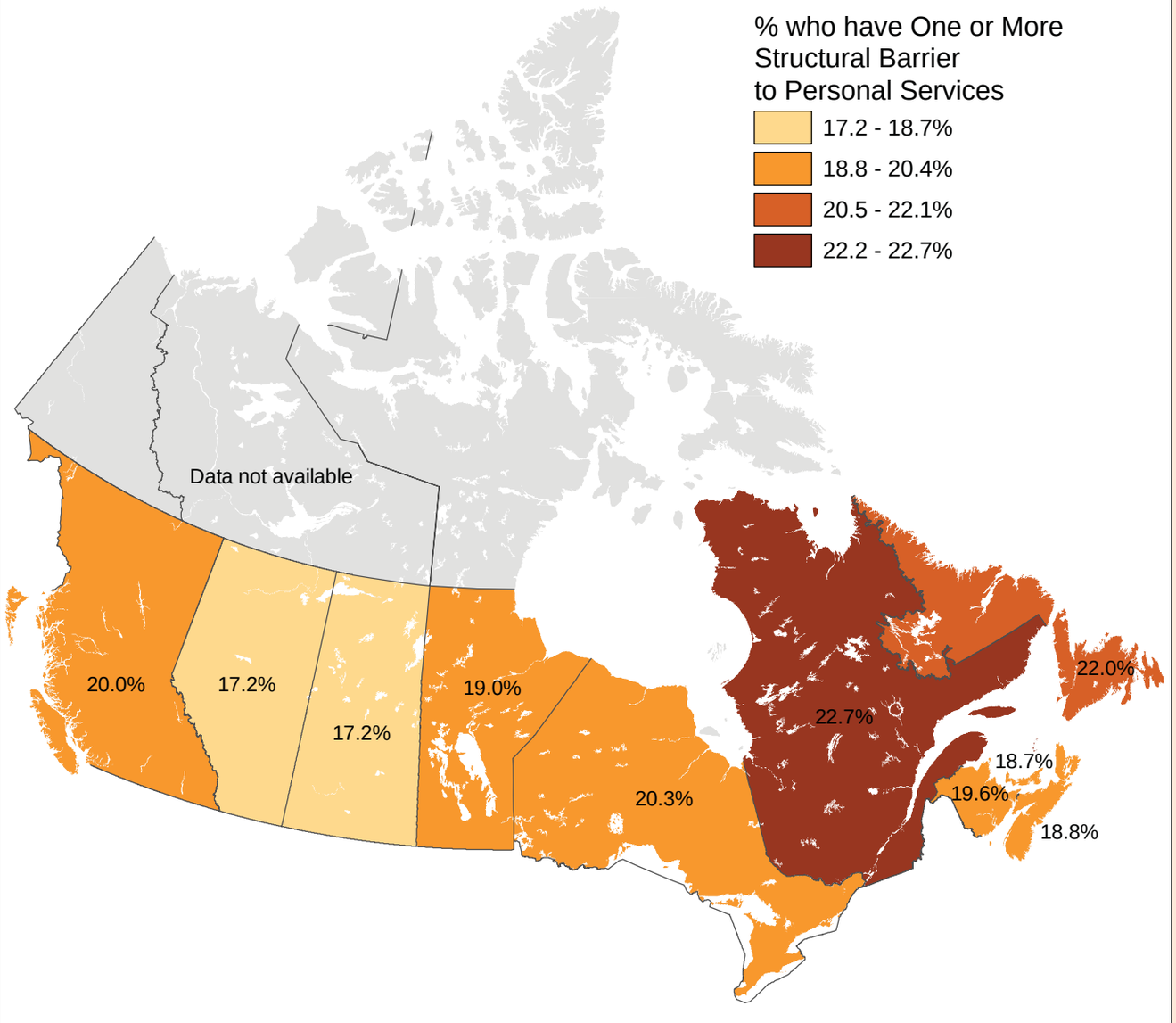
1:30,000,000

2001 Participation & Activity Limitation Survey

Map 78

2001 Participation & Activity Limitation Survey

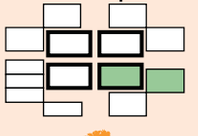
Map 79

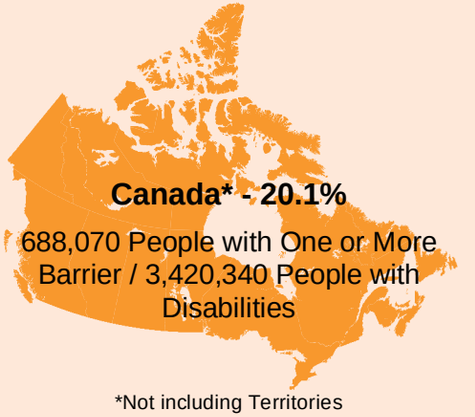


Structural Barriers to Personal Services (RBAI)

Adults - Age 15 & Older

Questions used to measure structural barriers to personal services include things like services are not available nearby or there is a delay in obtaining services. There were several questions asked that measure barriers but none for accommodations. Quebec had the highest percentage of people with disabilities with one or more structural barriers to personal services.





Canada* - 20.1%

688,070 People with One or More Barrier / 3,420,340 People with Disabilities

*Not including Territories

(People with Disabilities who have One or More Barrier) / (People with Disabilities)

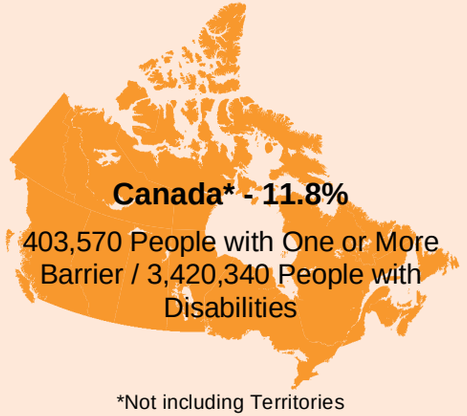
1:30,000,000

Map 79

Structural Barriers to Employment (RBAI)

Adults - Age 15 & Older

Questions used to measure structural barriers to employment include, do you require modified features or arrangements in the workplace, such as: handrail or ramps, accessible elevator, modified workstation, accessible washroom, other? Or do you require other equipment, help, or work arrangement to be able to work. A greater percentage of people with disabilities faced structural barriers to exmployment in Newfoundland & Labrador than anywhere else in Canada.

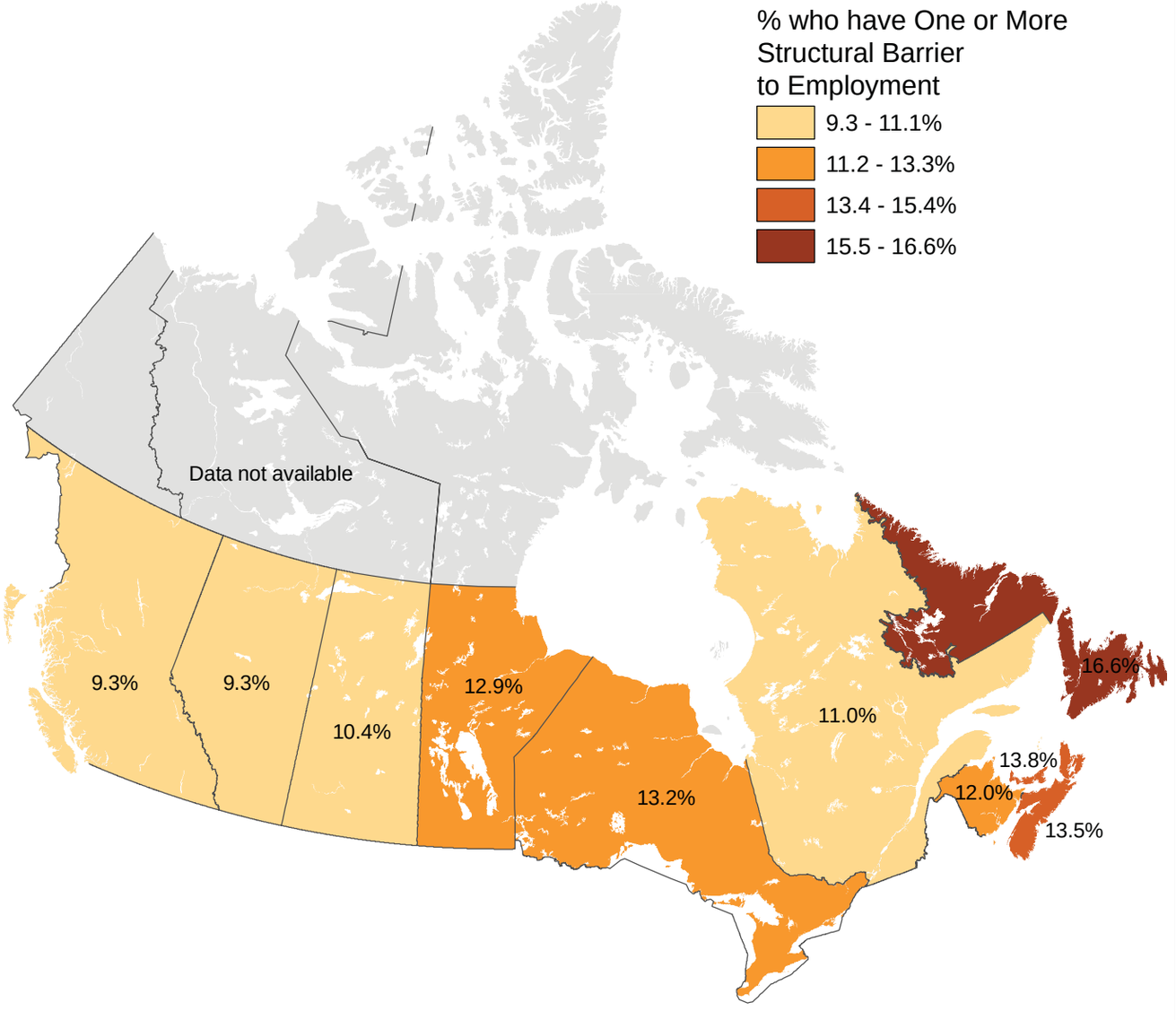


Canada* - 11.8%

403,570 People with One or More Barrier / 3,420,340 People with Disabilities

*Not including Territories

Map 80



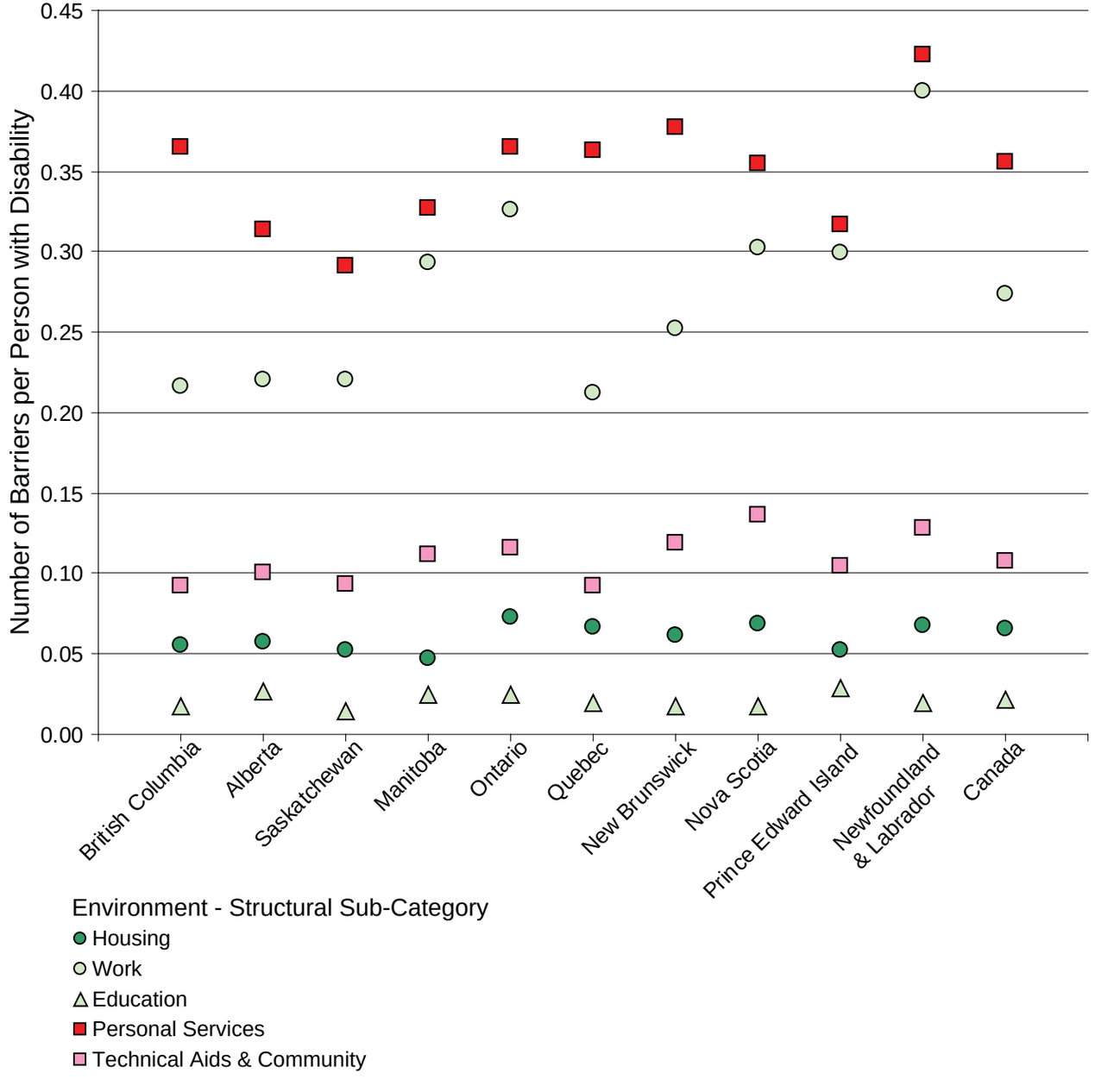
(People with Disabilities who have One or More Barrier) / (People with Disabilities)

1:30,000,000

2001 Participation & Activity Limitation Survey

Map 80

Chart 15



(Number of Barriers) / (Population with Disabilities)

Structural Barriers per Person with Disability

Adults - Age 15 & Older

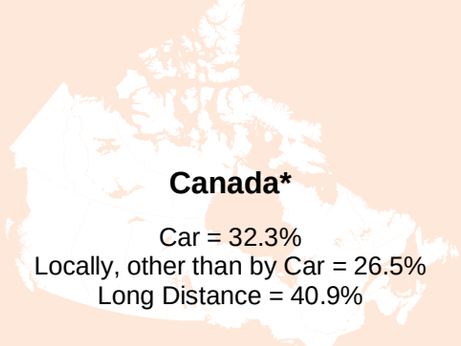
The structural barriers remained consistent across the country with the fewest amount of barriers being in education, housing, and technical aids and more in work and personal services. While there were very little differences across the country within education, housing, and technical aids, there was a greater amount of variance amongst the work and personal services categories.

*not including Territories

Prevented or Difficulty Travelling

Adults - Age 15 & Older

Only adults who in the last year were: prevented from travelling, travelled with difficulty, or had no difficulty travelling were counted for the travel locally and long distance. All adults with disabilities were used for the travel by car index. Presumably these maps more accurately reflect the relative difficulty faced by people with disabilities for each type of travel because only those with the desire to travel were included.

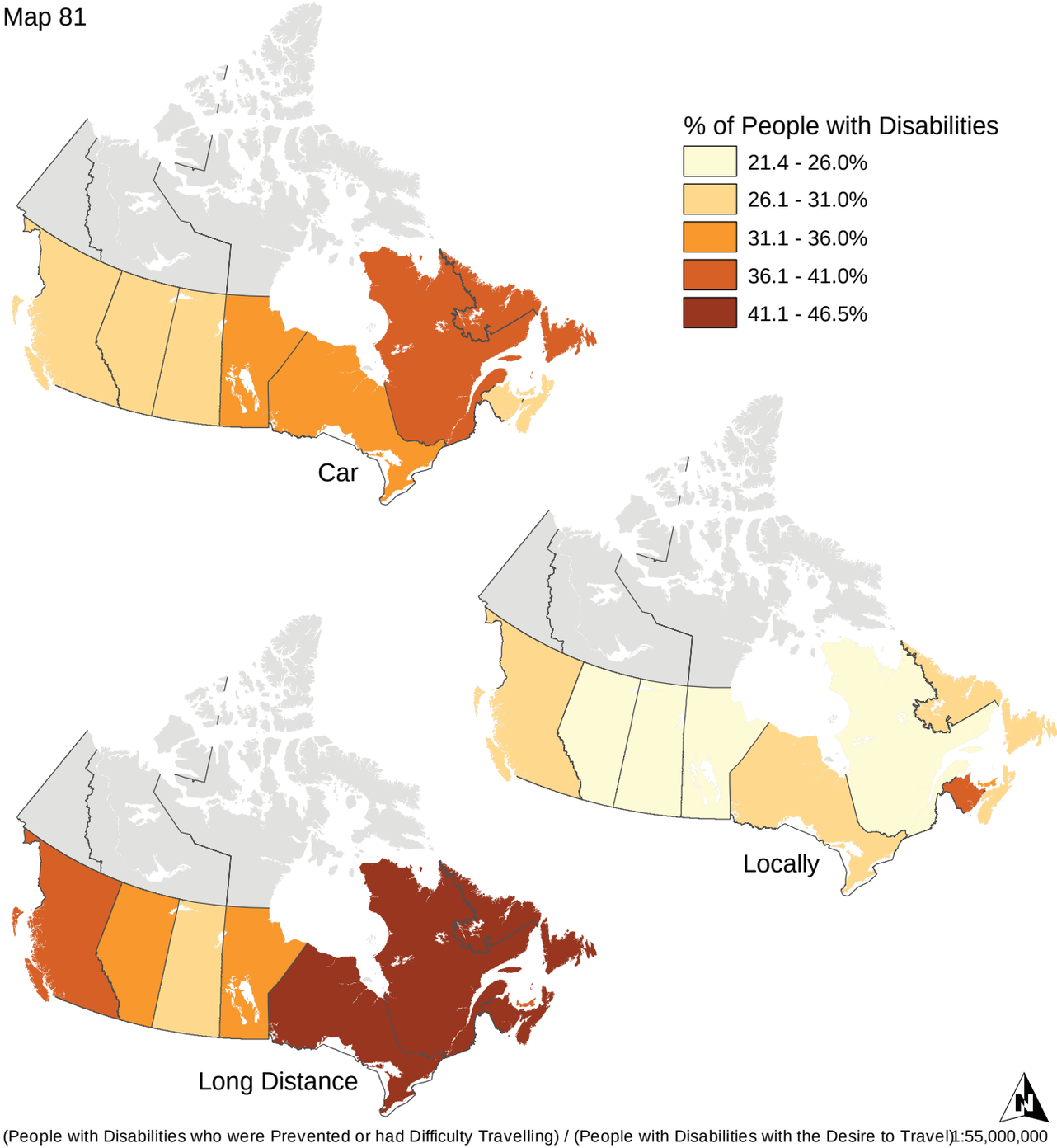


Canada*

Car = 32.3%
Locally, other than by Car = 26.5%
Long Distance = 40.9%

*Not including Territories

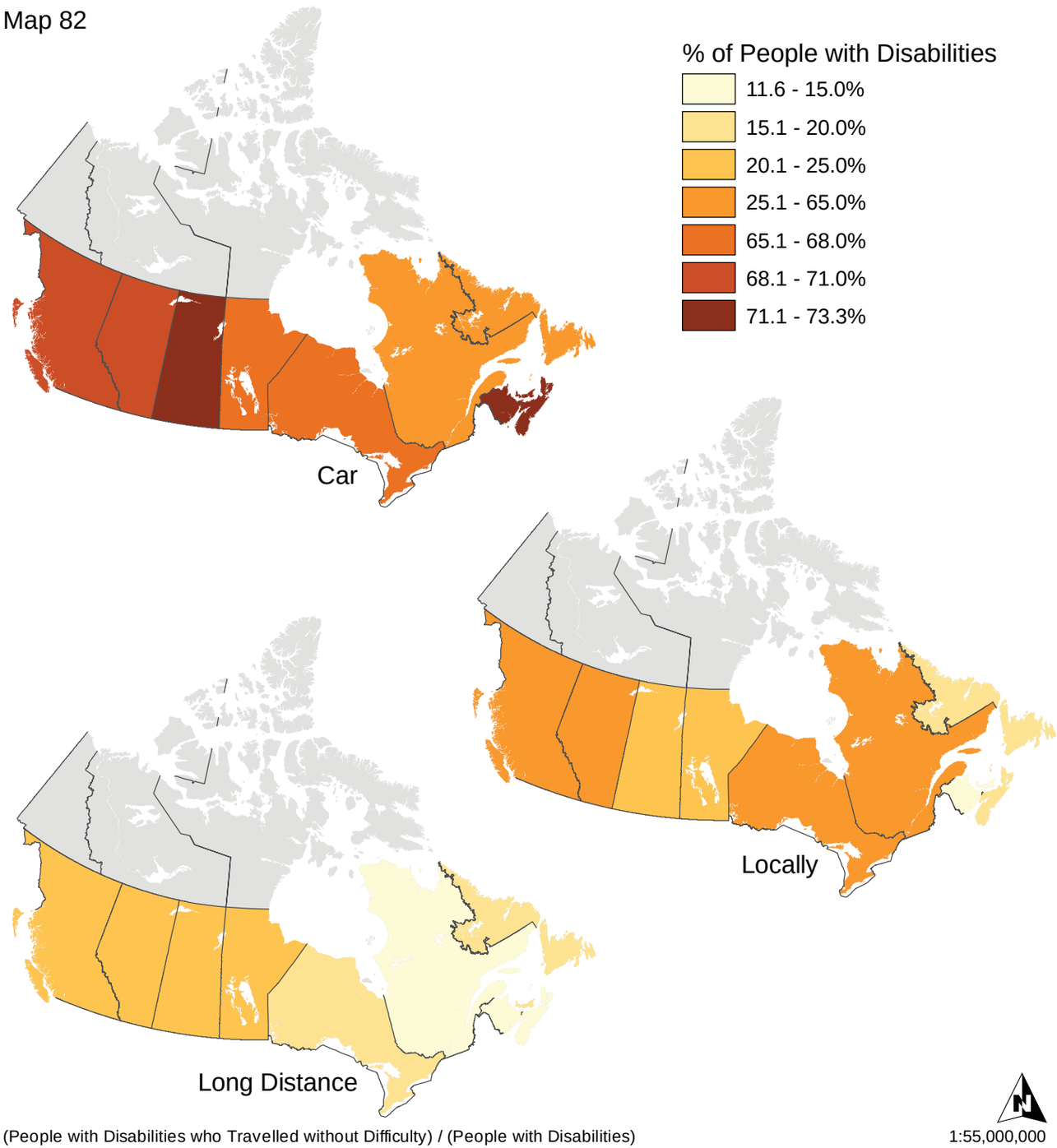
Map 81



(People with Disabilities who were Prevented or had Difficulty Travelling) / (People with Disabilities with the Desire to Travel)

1:55,000,000

Map 82



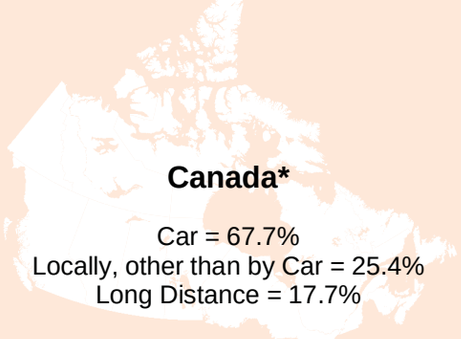
(People with Disabilities who Travelled without Difficulty) / (People with Disabilities)

1:55,000,000

Travelled Without Difficulty

Adults - Age 15 & Older

Three times as many people with disabilities had no difficulty travelling by car compared to travelling locally by other means or travelling long distances. Part of this discrepancy was presumably due to fewer trips made locally by other means or long distance. The results may be inaccurate because it is difficult to distinguish between no trips made and being prevented from travelling. Prevention could be disguised as decreased desire to travel due to perceived difficulties.



Canada*

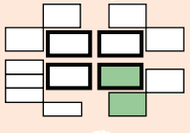
Car = 67.7%
Locally, other than by Car = 25.4%
Long Distance = 17.7%

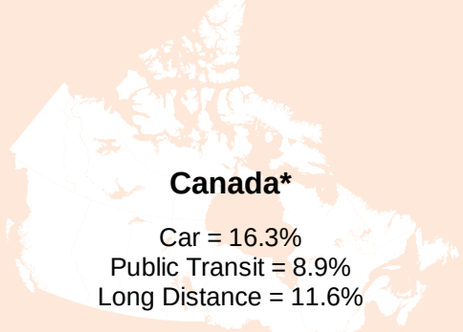
*Not including Territories

Barriers to Travel (RBAI)

Adults - Age 15 & Older

Values on the maps reflect the percentage of all adults with disabilities who had one or more barriers for three types of transportation. When people who responded that the travel barriers are not applicable are removed, well over 90% of people face one or more barrier in all three categories of transportation in all provinces. There are very few people categorized with zero barriers to transportation.



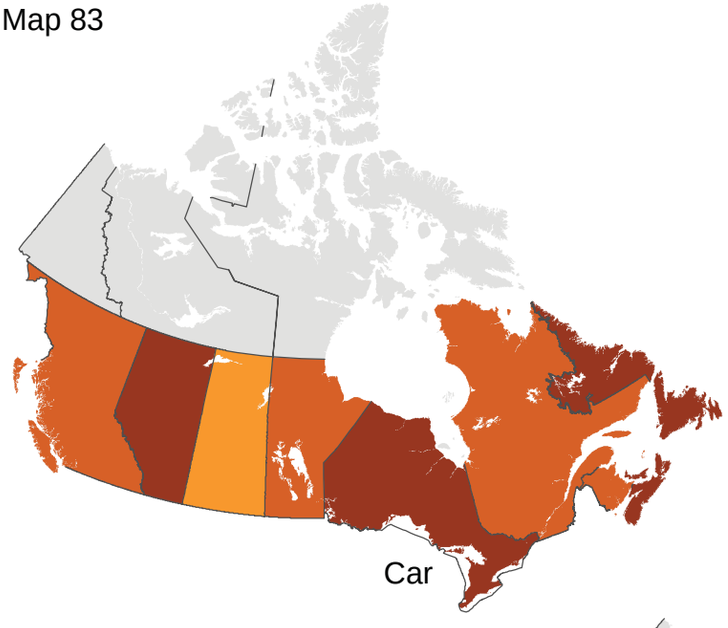


Canada*

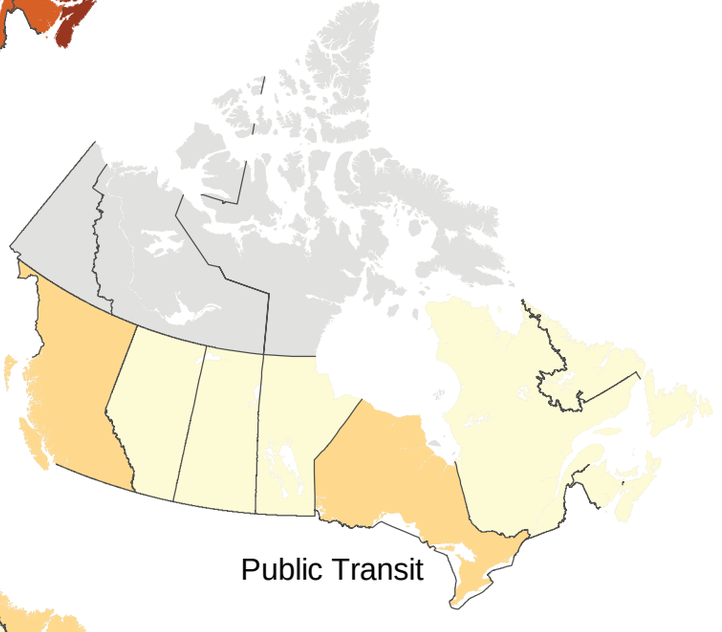
Car = 16.3%
Public Transit = 8.9%
Long Distance = 11.6%

*Not including Territories

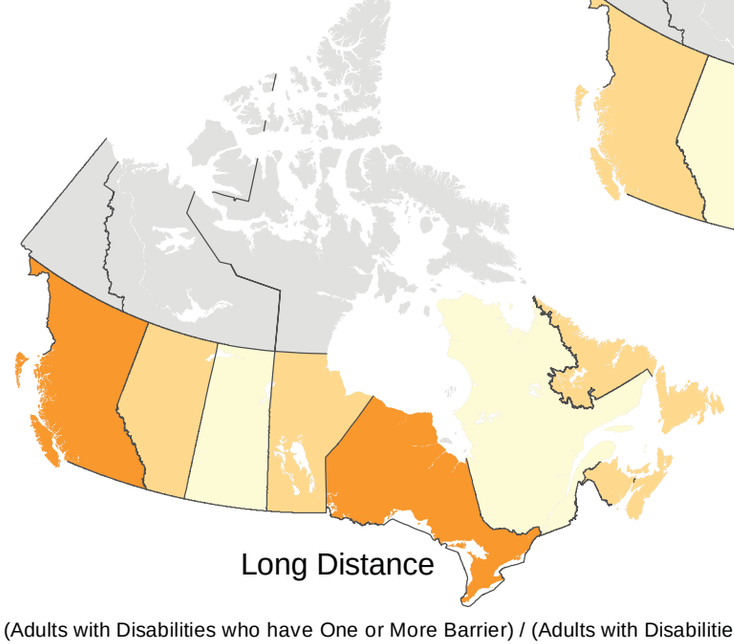
Map 83



Car



Public Transit



Long Distance

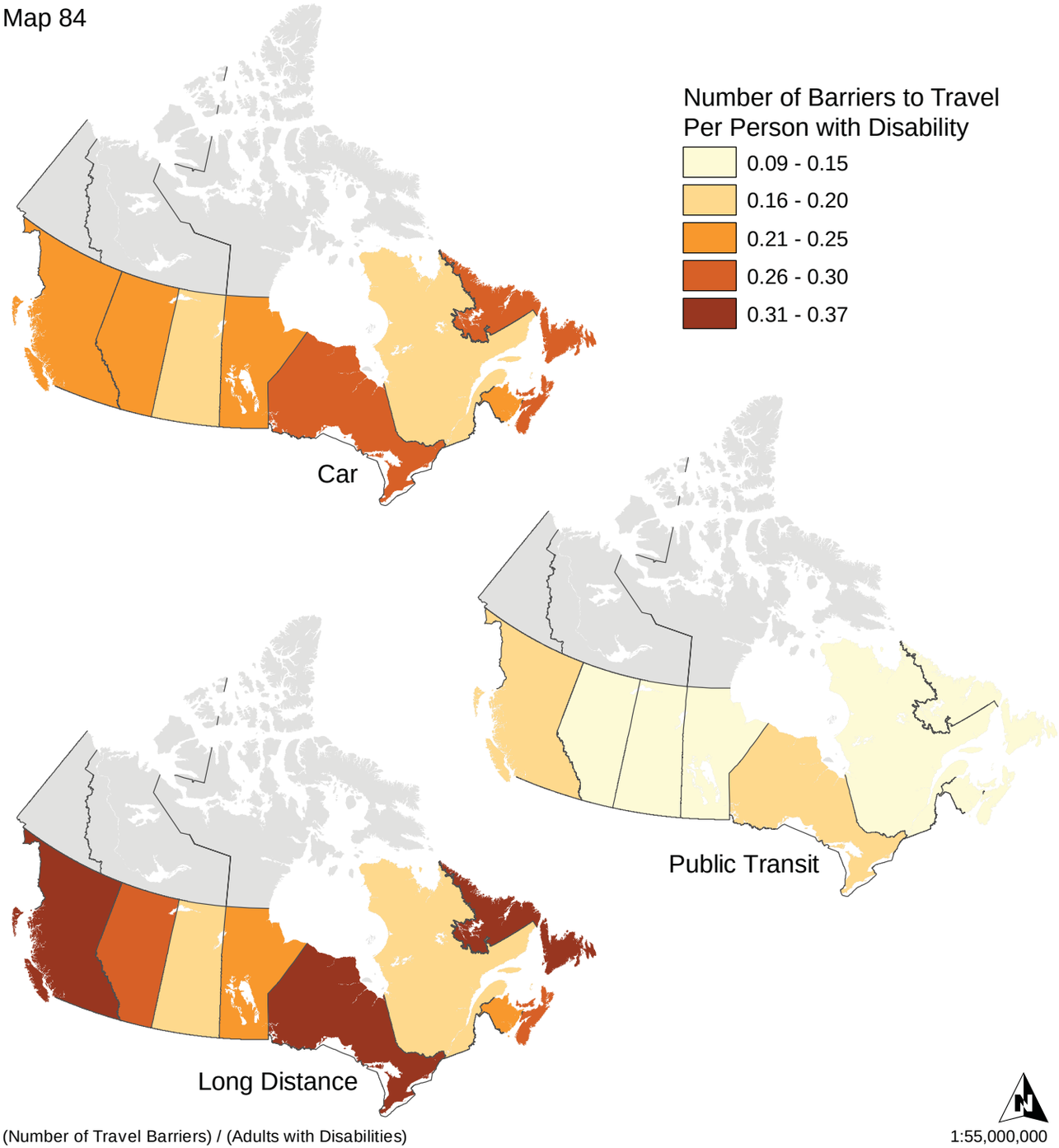
% of People with Disabilities with One or More Barrier

- 6.2 - 9.0%
- 9.1 - 11.5%
- 11.6 - 14.0%
- 14.1 - 16.5%
- 16.6 - 19.3%

(Adults with Disabilities who have One or More Barrier) / (Adults with Disabilities)

1:55,000,000

Map 84



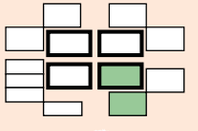
(Number of Travel Barriers) / (Adults with Disabilities)

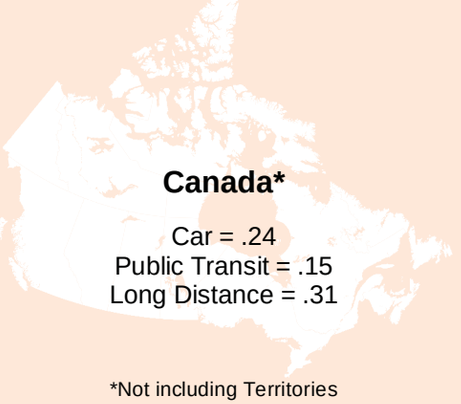
1:55,000,000

Number of Travel Barriers Per Person with Disability (RBAI)

Adults - Age 15 & Older

While more people with disabilities face barriers to travel by car than by public transit or long distance (see map 83) there were more and multiple barriers encountered by people travelling long distances. Of course this measure is limited by the questions asked in the PALS survey. More questions were asked about barriers to long distance travel than for the other types of travel and this results in more barriers measured.





Canada*

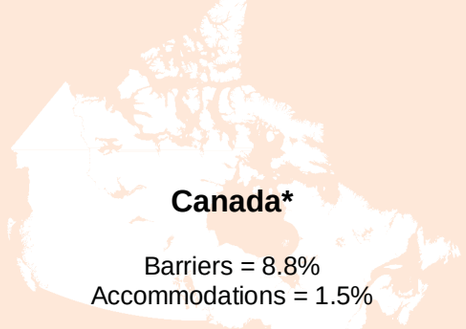
Car = .24
Public Transit = .15
Long Distance = .31

*Not including Territories

Environment Transportation School & Work (RBAI)

Adults - Age 15 & Older

Only three of the seven questions used from PALS to measure barriers to transportation in the school & work environments could also be used to measure accommodations. This explains, in part, why the percentage of adults with disabilities who have been accommodated is so much smaller than the percentage with barriers.

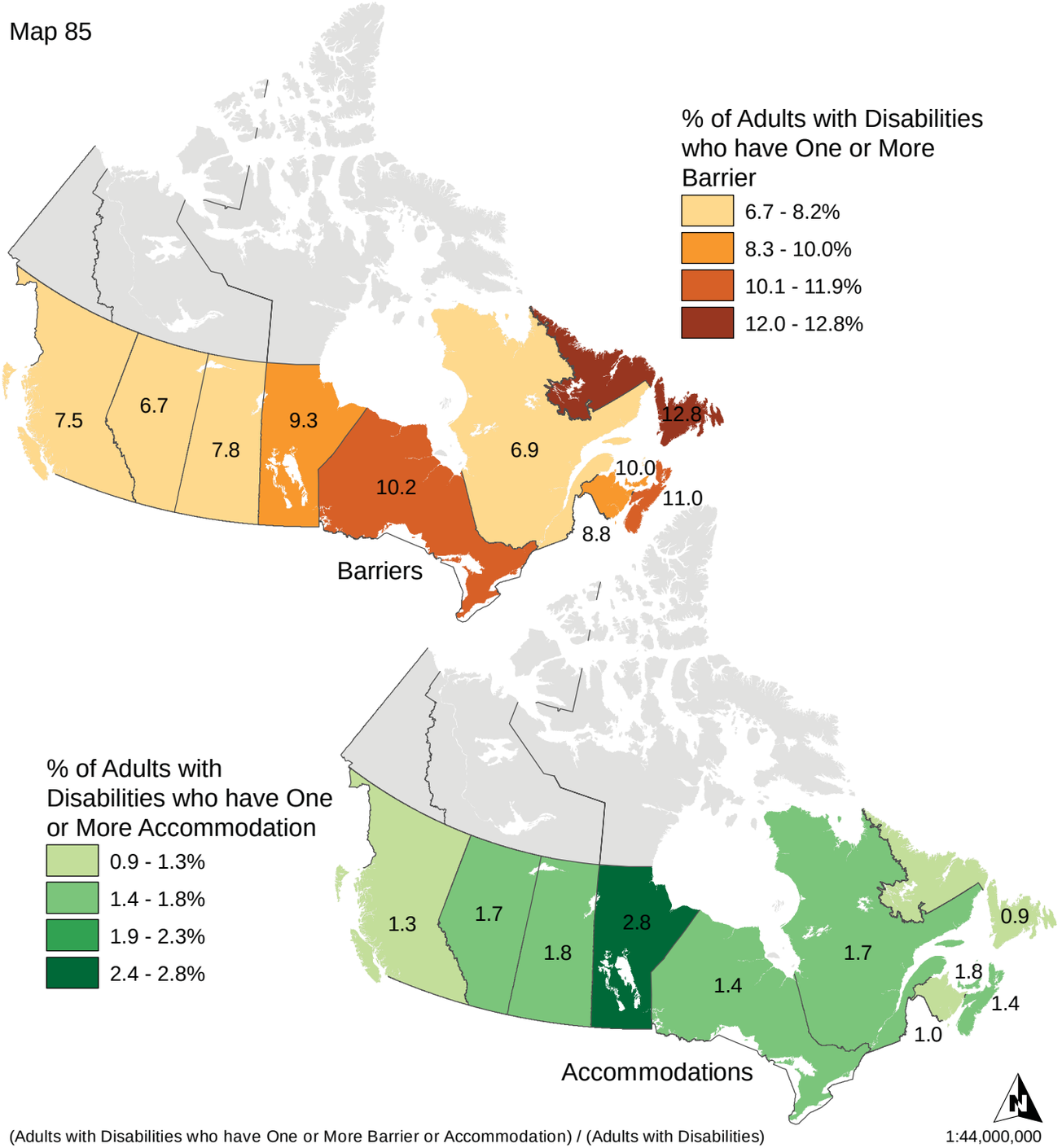


Canada*

Barriers = 8.8%
Accommodations = 1.5%

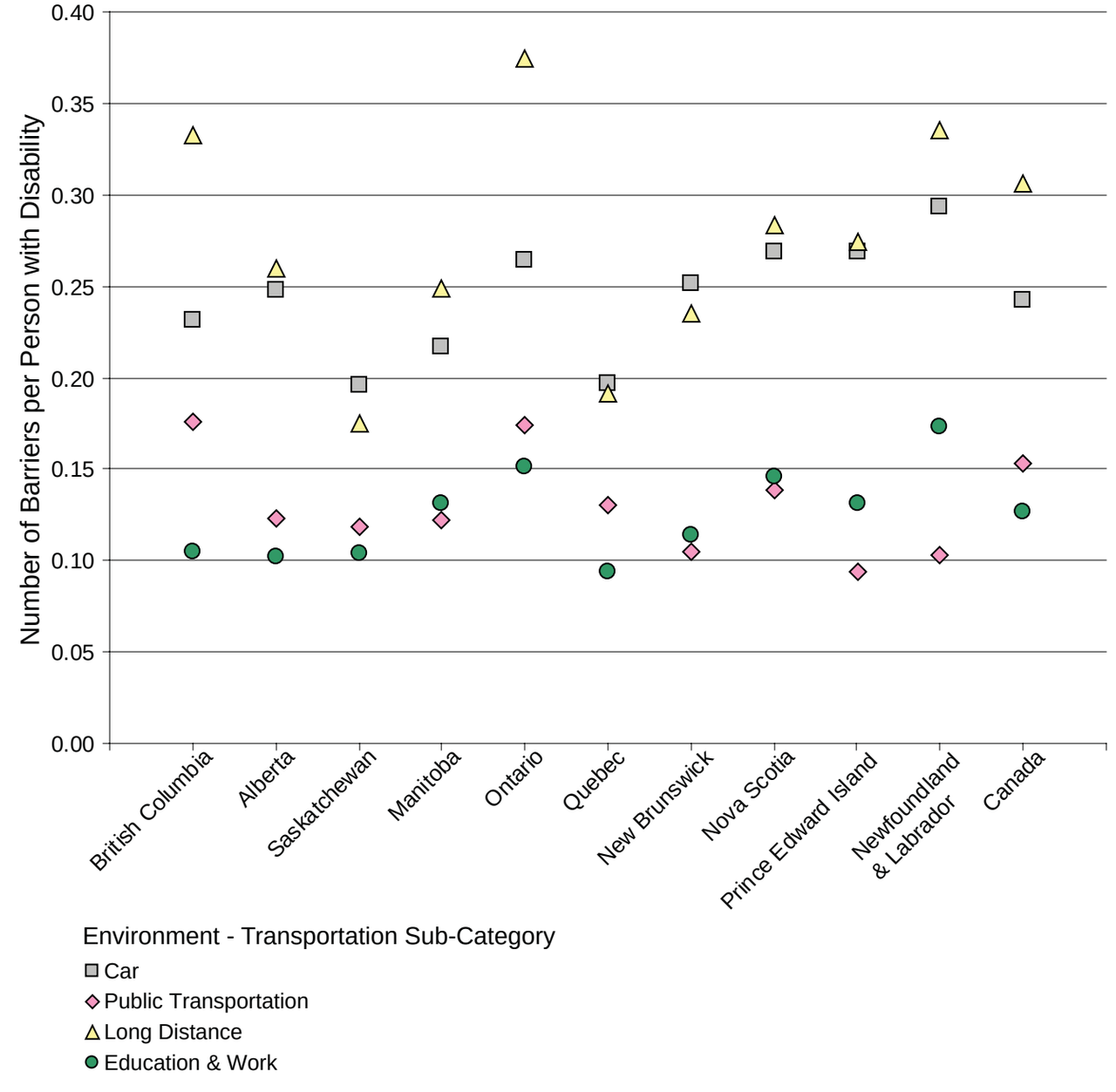
*not including Territories

Map 85



(Adults with Disabilities who have One or More Barrier or Accommodation) / (Adults with Disabilities)

Chart 16



(Number of Barriers) / (Population with Disabilities)

Transportation Barriers per Person with Disability

Adults - Age 15 & Older

The average number of barriers per adult with disabilities was more variable across provinces for the travel by long distance sub-category than for other sub-cateogies of the RBAI. There were more barriers to long distance travel faced in Ontario, British Columbia, and Newfoundland and Labrador than in the other provinces. Saskatchewan and Quebec both had a relatively low rate of barriers per person for both long distance travel and travel by car.

*not including Territories

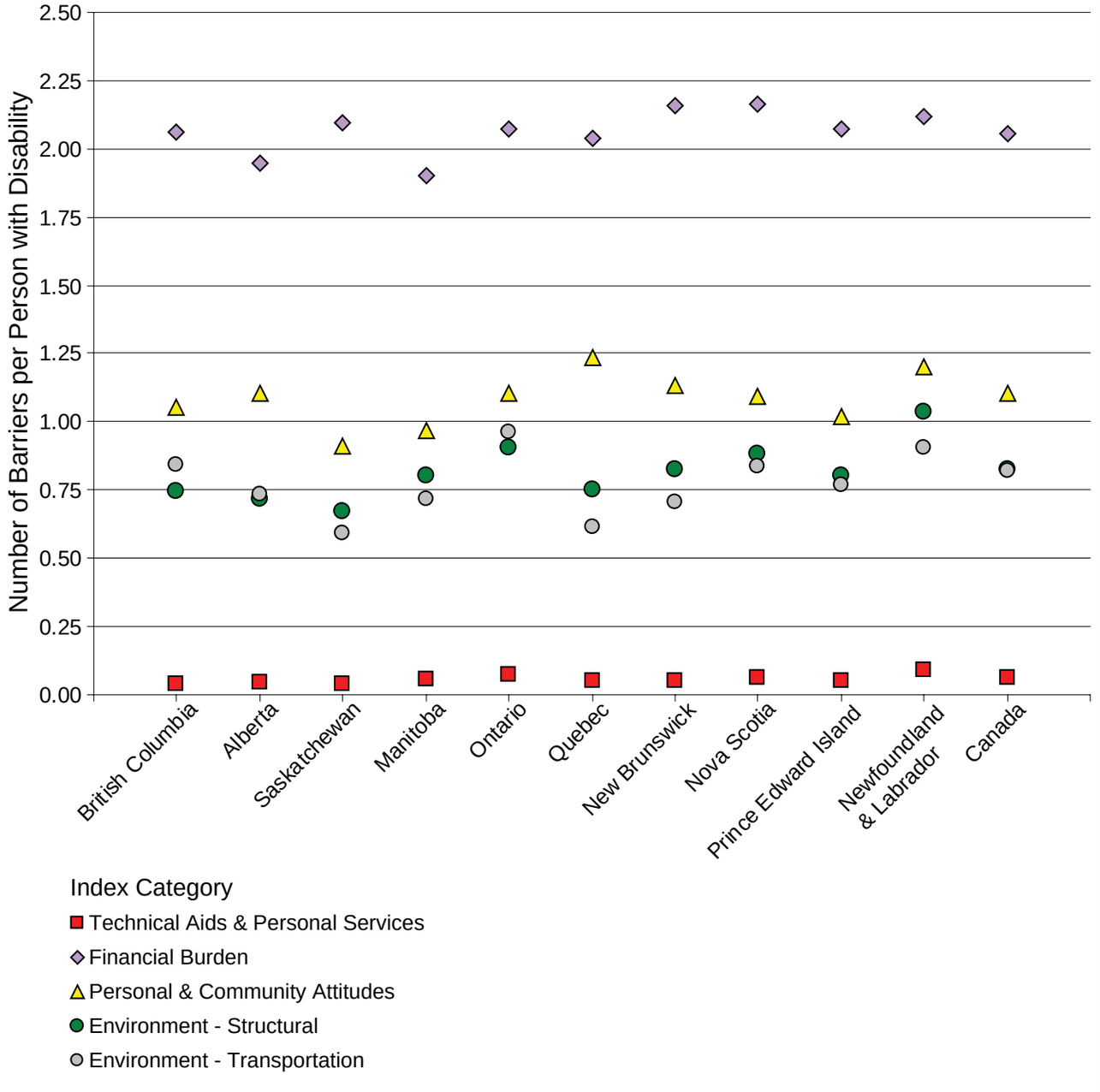
Barriers per Person with Disability

Adults - Age 15 & Older

Adults with disabilities faced more financial barriers than other types of barriers - nearly 2 barriers per person. Of course this data is heavily influenced by the questions asked in PALS so these results may also indicate that more or better questions are asked in regards to financial barriers tan other types of barriers. The fewest barriers were recorded for the technical aids and personal services category of the revised barriers and accommodations index.

*not including Territories

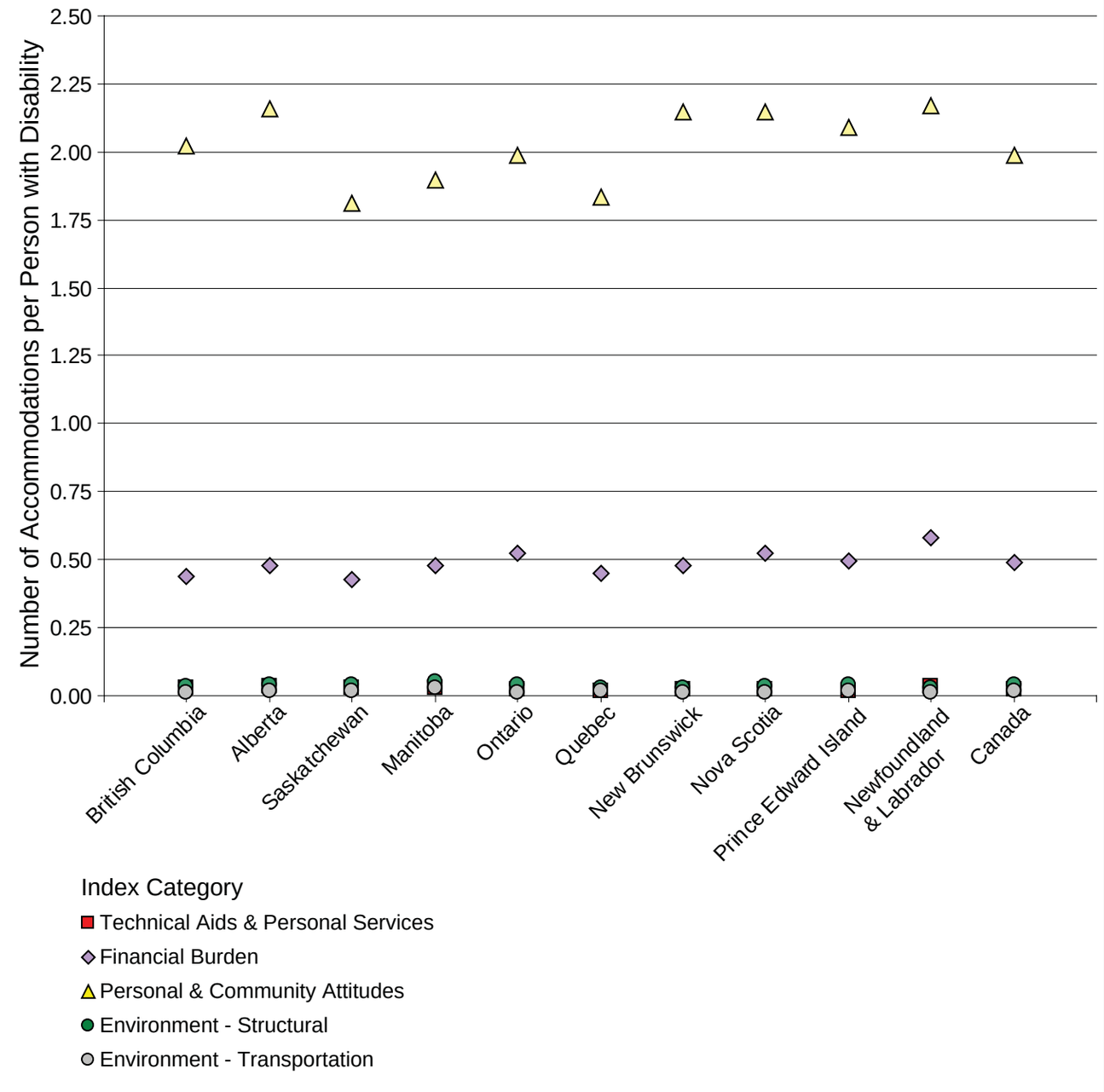
Chart 17



(Number of Barriers) / (Population with Disabilities)

2001 Participation & Activity Limitation Survey

Chart 18



(Number of Accommodations) / (Population with Disabilities)

Accommodations per Person with Disability

Adults - Age 15 & Older

According to the questions asked in PALS, the number of accommodations made in the personal and community attitudes domain of the RBAI average to about 2 per adult with disability, much higher than for any other domain. These results probably reflect more the lack of questions asked regarding accommodations for the other domains of the RBAI and not the current degree to which people with disabilities are accommodated.

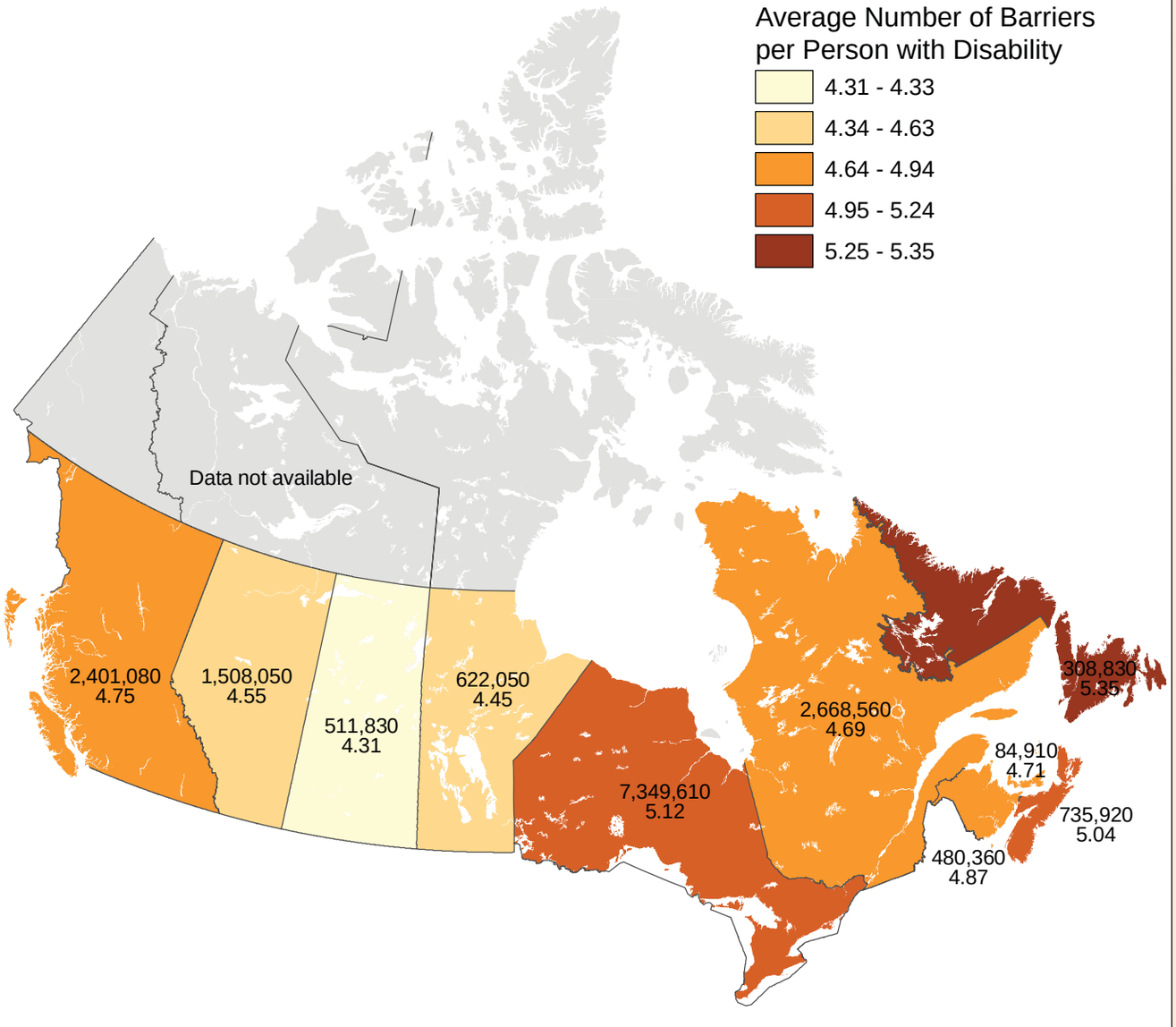
*not including Territories

Chart 18

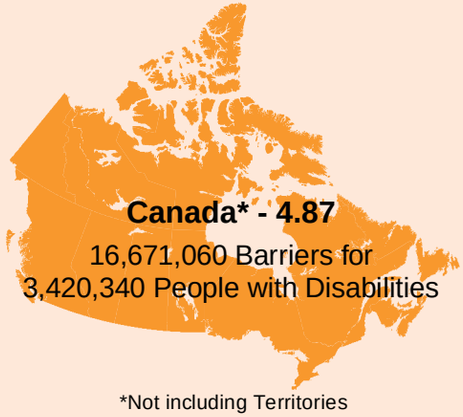
Number of Barriers per Person with Disabilities (RBAI)

Adults - Age 15 & Older

Map 86



Newfoundland & Labrador had the highest rate of barriers at 5.35 per adult with disability. Saskatchewan had the lowest at 4.31.



Canada* - 4.87

16,671,060 Barriers for
3,420,340 People with Disabilities

*Not including Territories

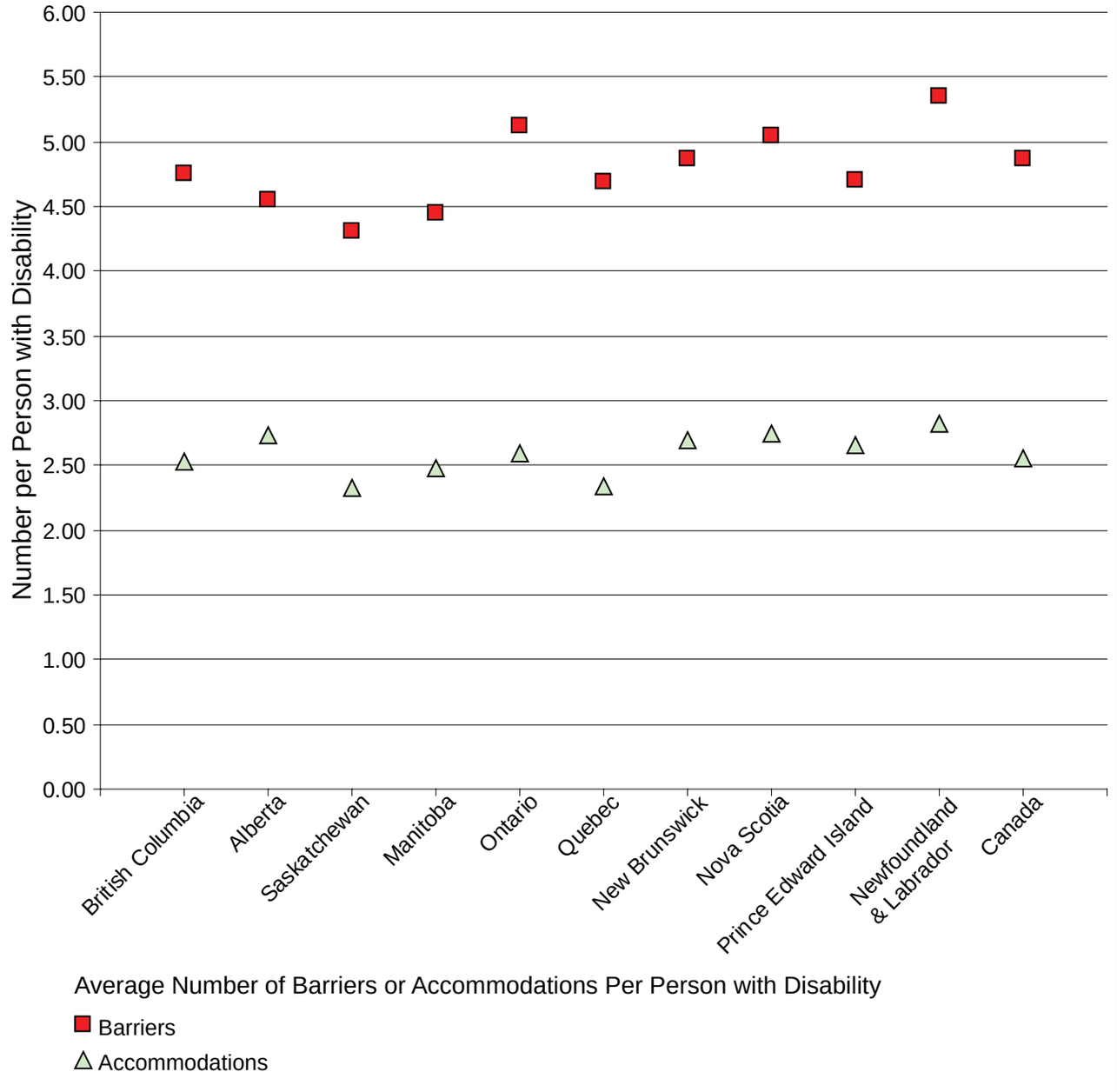
(Number of Barriers) / (People with Disabilities)

1:30,000,000

2001 Participation & Activity Limitation Survey

Map 86

Chart 19



(Number of Barriers or Accommodations) / (Population with Disabilities)

Average Barriers & Accommodations

Adults - Age 15 & Older

Summing the number of barriers and accommodations faced by people with disabilities in Canadian society across all of the domains we examined gives a relative picture of the situation in each province. The results also so how different the rate of barriers is compared to accommodations. This is in part due to the types of questions asked in PALS. There were fewer questions that measured accommodations which means that they are possibly under represented.

*not including Territories

CHAPTER 8

CONCLUSION

We have shown that persons with disabilities face significant obstacles to full participation in all aspects of Canadian society. In general, for almost all the determinants and consequences of quality of life for people with disabilities or for people with literacy issues, conditions are better in Western Canada than in Eastern Canada. In other words, for people with disabilities or for people with literacy issues, it appears that it is better and easier to live an inclusive life in British Columbia and Alberta than in other areas of Canada.

The obstacles faced should be understood beyond the removal of physical barriers and structural adaptations. These issues, including participation in work and society, are recognized as fundamental rights under the new UN Convention on the Rights and Dignity of Persons with Disabilities, the International Covenant on the Economic, Social and Cultural Rights and other UN treaties in order to achieve a society in which people with disabilities are free to fully and equally participate (Rioux & Daly, 2006).

Though the United Nations recognizes economic, social, and cultural (ESC) rights and civil and political rights as being "indivisible, interdependent and equally important" (UN, 1993), western countries often ascribe second-class status to ESC rights. Ability to fulfill these rights is sometimes regarded as the responsibility of the individual. Thus, these rights and the systems for ensuring their protection tend to be less developed than others. However, economic, social and cultural rights are central for people with disabilities and other marginalized groups to achieve the goal of redressing inequality and disadvantage, and protecting those who are vulnerable and marginalized.

To achieve that the way we measure and monitor those rights also needs to be addressed. First, it is clear from this study that there needs to be greater consultation with people with disabilities who have issues with literacy and the people who are researching those issues. Second, there needs to be considerable thought given to definitional consistency and transparency across the surveys. Third, there should be more thought given to self reporting in combination with other means of evaluation. Finally, our study has made it evident that future surveys needs to find a way to have clear symmetry between barriers and accommodations. The clarity of the information in surveys is essential to being able to develop a detailed monitoring process to evaluate the programs, policies and services to ensure that they are effectively and efficiently meeting the commitments of inclusion, equality and autonomy.

The UN Convention on Economic, Social and Cultural Rights, including the right to literacy, while not explicitly referring to the rights of persons with disabilities, are inextricably linked with other rights, including those in the new disability convention and their implementation is central to the promotion of equal and effective enjoyment of human rights for people with disabilities.

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