



Review Article

Tackling household food insecurity: An essential goal of a national food policy

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Abstract

Eradicating household food insecurity is key to the articulated vision of a national food policy that aims to promote healthy living and safe food for families across the country. Household food insecurity refers to the insecure or inadequate access to food due to financial constraints. Despite federal commitments to improve the situation, food insecurity in Canada increased between 2007-08 and 2011-12. It currently affects more than four million Canadians, and the situation is particularly grave in Indigenous communities. Food security takes a toll on individuals' health and well-being, and on our healthcare system. The social epidemiology of household food insecurity shows it to be inextricably linked to the social and economic circumstances of households. Federal and provincial policy interventions that improve the financial circumstances of very low income households have yielded reductions of up to 50 percent in household food insecurity prevalence, proving that effective, evidence-based policy responses are possible. Yet, high prevalence rates persist. A national food policy represents an opportunity to address food insecurity, but doing so requires the integration of policy actions, both horizontally—across social, economic, health and agriculture domains, and vertically—across the three levels of government. In addition, performance targets must be established, and ongoing monitoring and evaluation mechanisms implemented, to ensure that policies and programs meant to address food insecurity actually have a meaningful impact.

Keywords: Food insecurity, public policy, income, Canada

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The state of food insecurity in Canada

Scale of the problem

It is imperative that the 1.7 million households in Canada (Tarasuk, Mitchell, & Dachner, 2014) currently facing food insecurity be brought into the articulated vision of a National Food Policy that promotes the enjoyment of healthy and safe food for families across the country (Office of the Prime Minister, 2015). To realize the benefits associated with a long-term vision for the health, environmental, social, and economic goals related to food in Canada, Canadians must have the means to achieve adequate and secure access to sufficient food.

Food security is typically defined as the state that exists when “all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”(Agriculture and Agri-Food Canada, 1998). Household food insecurity is often presented as the absence of food security, but population-level assessments of this condition have focused on a much more tightly circumscribed set of experiences of food deprivation and dietary compromise rooted in financial constraints. Household food insecurity, as the term has been operationalized in the Canadian context, refers to the inadequate or insecure access to sufficient food because of financial constraints.

Questions related to food insecurity have been included on national population health surveys in Canada for more than two decades now. Household food insecurity is currently monitored through the Household Food Security Survey Module (HFSSM) administered on Statistics Canada’s Canadian Community Health Survey. The HFSSM captures a household’s experience of food insecurity through a series of questions ranging from concerns about running out of food before there is more money to buy more, to the inability to afford a balanced diet, to going hungry, missing meals, and in extreme cases, not eating for a whole day because of a lack of food and money for food (Health Canada, 2007). The questions differentiate between the experiences of adults and children because of an abundance of research showing that when families are struggling to manage with scarce resources, adults will deprive themselves of food as a way free up supplies for their children.

Household food insecurity now affects more than 4 million Canadians (Tarasuk et al., 2014), a number 4 – 5 times higher than the number reported to be using food banks (Loopstra & Tarasuk, 2015). Further, the problem is not diminishing. Despite federal commitments to improve the situation (i.e. *Rome Declaration on World Food Security and the World Food Summit Plan of Action*) (Mah, Hamill, Rondeau, & McIntyre, 2014), the prevalence of household food insecurity in Canada has increased significantly, with over 600,000 more people affected between 2007–08 and 2011–12 (Figure 1). These statistics understate the true prevalence of food insecurity in Canada because First Nations communities are not included in the Canadian Community Health Survey.

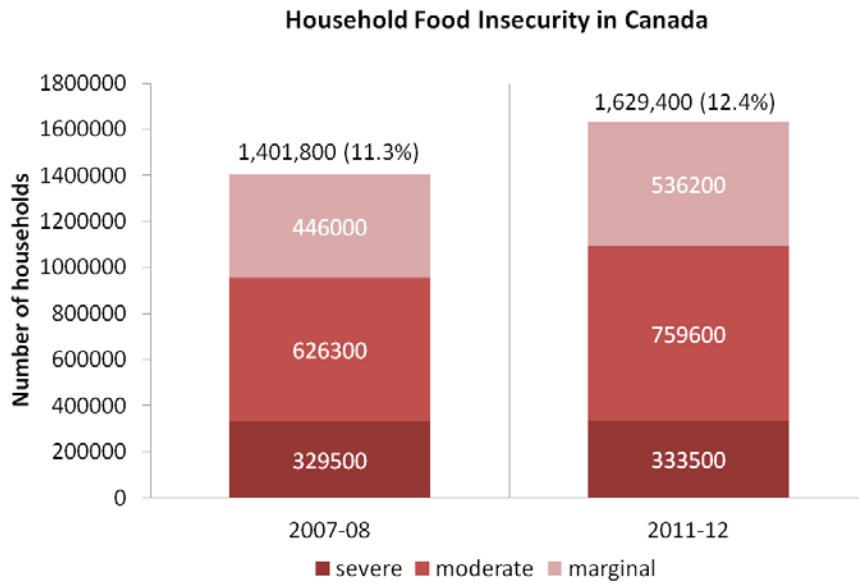
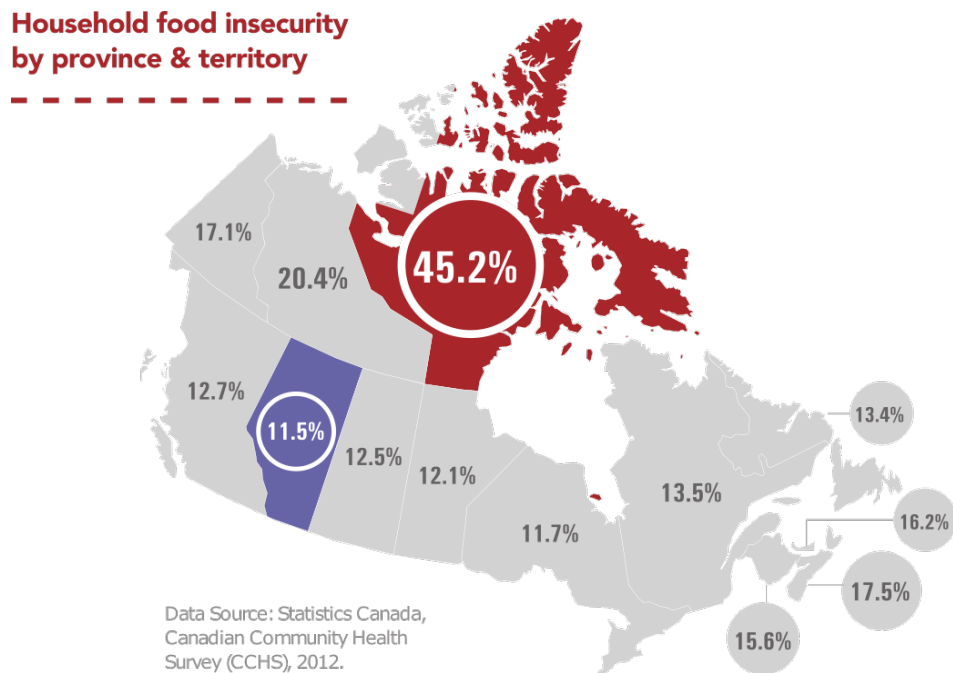


Figure 1: Household food insecurity in Canada, 2007-08 and 2011-12 (Source: PROOF, 2018)

Source: Statistics Canada, Canadian Community Health Survey 2007, 2008, 2011, 2012.

Figure 2: Household food insecurity in 2012 by province and territory (Source: Tarasuk et al., 2014)



Food insecurity is prevalent in every province and territory, but rates are highest in the Maritimes and the territories (Figure 2). Food insecurity is a particularly serious problem in northern and Indigenous communities. Based on data from the 2014 Canadian Community

Health Survey, 46.8 percent of households in Nunavut and 24.1 percent in the Northwest Territories reported food insecurity; almost two-thirds of children under the age of 18 in Nunavut were in food-insecure households (Tarasuk, Mitchell, & Dachner, 2016). The earlier Inuit Health Survey charted a food insecurity prevalence of 70 percent (Huet, Rosol, & Egeland, 2012). According to the 2012 First Nations Information Governance Centre (FNIGC), 54.2 percent of households in the 2008/10 First Nations Regional Health Survey, a survey of First Nations adults living on reserve and in northern First Nations communities, were food-insecure (40.1 percent moderate, and 14.1 percent severe).

Nutrition and health impacts

Analyses of population survey data, coupled with smaller in-depth studies of particularly vulnerable groups, have yielded a solid understanding of the nutrition and health impacts of food insecurity on Canadians, clearly establishing household food insecurity as a potent social determinant of health. Food insecurity is associated with poorer diet quality (Danyliw, Vatanparast, Nikpartow, & Whiting, 2011; Kirk et al., 2015; Kirkpatrick & Tarasuk, 2008; Mark, Lambert, O'Loughlin, & Gray-Donald, 2012), and increased risk of micronutrient inadequacies (Kirkpatrick et al., 2015; Kirkpatrick & Tarasuk, 2008; McIntyre et al., 2003; Vatanparast, Calvo, Green, & Whiting, 2010). In addition, there is a substantial body of literature documenting disturbingly high levels of nutritional vulnerability among food-insecure adults and children in Canada's North (Egeland, Johnson-Down, Cao, Sheikh, & Weiler, 2011; Egeland, Pacey, Cao, & Sobol, 2010; Huet et al., 2012; Pirkle et al., 2014).

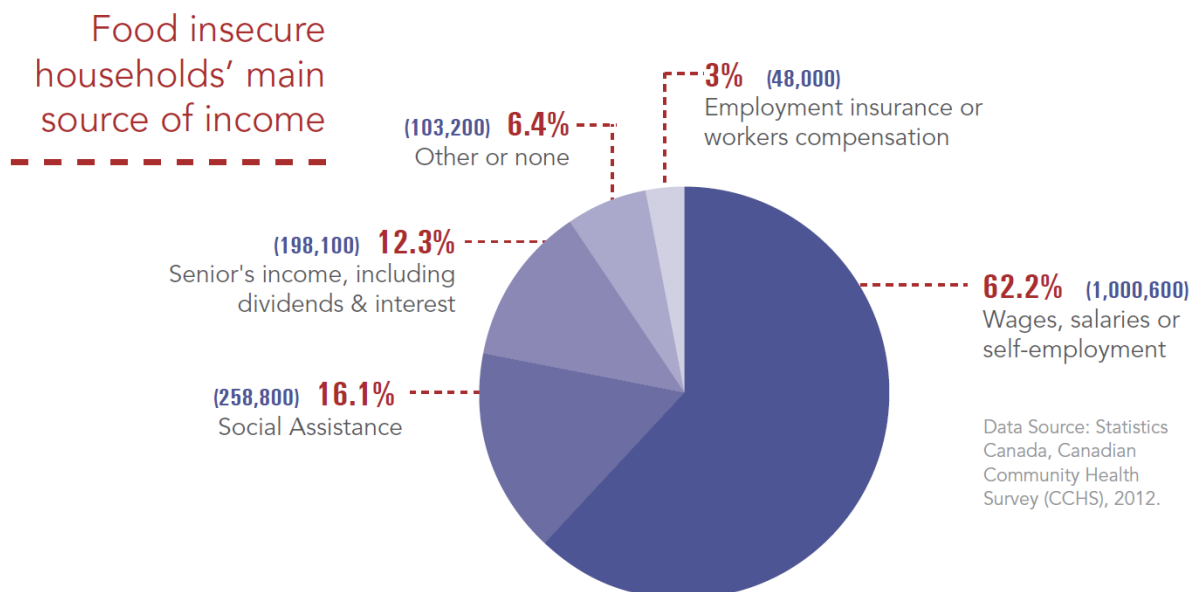
Apart from its effects on nutritional well-being, household food insecurity in Canada is associated with increased risk of negative physical and mental health problems, and among children, it is linked to poorer educational outcomes. Young children exposed to hunger are more likely to have mental health problems (e.g. hyperactivity and inattention) (Melchior et al., 2012), and a recent study of grade five students in Nova Scotia documented poorer academic achievement among those exposed to severe levels of household food insecurity (Faught, Williams, Willows, Asbridge, & Veugelers, 2017). Exposure to “hunger” in childhood increases the risk of developing various chronic health conditions (e.g. asthma, depression) in adolescence and early adulthood, independent of family poverty or other socio-demographic characteristics (Kirkpatrick, McIntyre, & Potestio, 2010; McIntyre, Wu, Kwok, & Patten, 2017). It has also been associated with increased likelihood of dropping out of high school (McIntyre, Kwok, & Patten, 2017). Among adults, food insecurity is associated with increased likelihood of numerous chronic mental and physical conditions (Che & Chen, 2001; Davison, Marshall-Fabien, & Tecson, 2015; Jessiman-Perreault & McIntyre, 2017; Muldoon, Duff, Fielden, & Anema, 2012; Tarasuk, Mitchell, McLaren, & McIntyre, 2013; Vozoris & Tarasuk, 2003; Willows, Veugelers, Raine, & Kuhle, 2011), and it impedes the management of chronic diseases (Anema, Chan, Weiser, Montaner, & Hogg, 2013; Cox et al., 2016; Gucciardi, DeMelo, , & Stewart, 2009; Jessiman-Perreault & McIntyre, 2017; Marjerrison, Cummings, Glanville, Kirk, & Ledwell,

2010). The gravity of the health consequences, especially those associated with severe food insecurity, is evident in the high burden that food insecurity places on our healthcare system (Fitzpatrick et al., 2015; Tarasuk et al., 2015; Tarasuk, Cheng, Gundersen, De Oliveira, & Kurdyak, 2018). Research in Ontario has shown that over the course of a year, the healthcare costs for adults in severely food insecure households are more than double that of those in food secure situations (Tarasuk et al., 2015).

What drives vulnerability to food insecurity?

Household food insecurity is tightly linked to household resources. Research into the household circumstances that mitigate or exacerbate risk indicates that food insecurity is primarily the product of household income, including both the amount and stability/security of the income (Leete & Bania, 2010; McIntyre, Dutton, Kwok, & Emery, 2016a), but it is also influenced by households’ access to savings and assets (chief among these being home ownership) (Guo, 2011; Huang, Guo, & Kim, 2010; Leete & Bania, 2010; McIntyre, Wu, Fleisch, & Emery, 2015) and costs of living (Emery et al., 2012; Gregory & Coleman-Jensen, 2013; Nord, Coleman-Jensen, & Gregory, 2014; Sriram & Tarasuk, 2016). Other household characteristics repeatedly documented to increase risk include reliance on social assistance, Aboriginal status, lower education, and being a lone-parent female-led family (Che & Chen, 2001; Li, Dachner, & Tarasuk, 2016; McIntyre, Connor, & Warren, 2000; McIntyre et al., 2015; Tarasuk & Vogt, 2009; Willows, Veugelers, Raine, & Kuhle, 2009)—all markers of profound social and economic disadvantage. Employment does not guarantee household food security (McIntyre, Bartoo, & Emery, 2012). As shown in Figure 3, in 2012, almost two-thirds of all food insecure households in the country were reliant on salaries and wages (Tarasuk et al., 2014).

Figure 3: Food insecure households’ main source of income, 2012 (Source: Tarasuk et al., 2014)



Consistent with the understanding of risk that has emerged from analyses of cross-sectional population survey data, a growing body of research indicates that household food insecurity status is impacted by policies that improve the adequacy and stability of the incomes of low income households. The strongest evidence comes from research into the relative protection against household food insecurity enjoyed by Canadian seniors (Emery, Fleisch, & McIntyre, 2013; McIntyre et al., 2016a). The risk of food insecurity among low-income adults in their fifties drops by more than 50 percent when they become eligible for an old-age pension (McIntyre et al., 2016a). The protection afforded by this guaranteed annual income is not only a function of the amount of income provided by Old-Age Security and the Guaranteed Income Supplement (which together provide more than double the income of someone on welfare in most provinces), but also the predictability and stability of this income (McIntyre et al., 2016a).

Further evidence of the sensitivity of household food insecurity to policy interventions that affect household finances comes from an examination of the effects of the poverty reduction strategy implemented in Newfoundland and Labrador between 2006 and 2012 (Province of Newfoundland and Labrador, 2014). In tandem with a series of substantial improvements to the province's income assistance program, the food insecurity prevalence among recipients fell, from 60 percent in 2007 to 34 percent in 2012 (Loopstra, Dachner, & Tarasuk, 2015). It is impossible from the available data to delineate the specific changes that precipitated this drop, but among the policy reforms enacted, the province increased Income Support rates, indexed them to inflation, and raised the earnings and liquid assets exemptions for people on Income Support (Loopstra et al., 2015). Consistent with the findings in Newfoundland and Labrador, a small decrease in food insecurity was documented among social assistance recipients in British Columbia immediately following a very modest one-time increase to benefits in that province (Li, Dachner, & Tarasuk, 2016). These studies suggest that the extraordinarily high rates of food insecurity among social assistance recipients stem from inadequate benefit levels.

The reduction in food insecurity charted among families with young children following the introduction of the Universal Child Care Benefit (Ionescu-Ittu, Glymour, & Kaufman, 2015) provides further evidence of the capacity for income interventions to ameliorate this problem. This benefit, introduced in 2006, gave all families \$100 per month for each child under the age of six. In the years that followed, it yielded a 25 percent decrease in food insecurity among families who received it, with even greater reductions among lower income and single-parent families (Ionescu-Ittu et al., 2015). The Universal Child Care Benefit was discontinued in 2016, when the Canada Child Benefit came into effect. How this new benefit will impact food insecurity rates among families with children remains to be seen.

Food insecurity rates are also sensitive to macroeconomic conditions. In Canada, we have evidence that prevalence is impacted by heating cost inflation (Emery et al., 2012), increases in the rate of unemployment (Sriram & Tarasuk, 2015), and shelter costs (Sriram & Tarasuk, 2016). Additionally, temporal trends in the US suggest that food insecurity rates are sensitive to shifts in food prices (Gregory & Coleman-Jensen, 2013; Nord et al., 2014). Although analogous research has not yet been conducted in Canada, the last decade here has been characterized by an

unprecedented rise in food prices (Charlebois et al., 2014; Rollin, 2013). For those whose incomes are indexed to inflation or augmented by periodic cost of living increases, the effects of rising prices have been buffered. But for households most at risk of food insecurity (e.g. those reliant on social assistance or low-waged and possibly precarious work), such protection is likely non-existent.

While there is an abundance of evidence linking food insecurity to households' social and economic circumstances, this condition appears unrelated to food literacy or food retail access. National population survey data indicate that the probability of household food insecurity is not associated with individuals' skills in grocery shopping, food preparation, or cooking (Huisken, Orr, & Tarasuk, 2016). Adults in food insecure households appear acutely aware of the nutritional compromises they make as they struggle to accommodate the food preferences and nutrition needs of family members while working within a limited budget (Beagan, Chapman, & Power, 2017; Dachner, Ricciuto, Kirkpatrick, & Tarasuk, 2010; Frank, 2015; Hamelin, Beaudry, & Habicht, 2002; Williams et al., 2012). Consistent with these findings are studies suggesting that interventions designed to improve the nutrition knowledge or cooking skills of those experiencing food insecurity have limited capacity to lessen problems rooted in abject poverty (Engler-Stringer & Berenbaum, 2005, 2007; Engler-Stringer, Stringer, & Haines, 2011; Hamelin, Mercier, & Bedard, 2010, 2011; Loopstra & Tarasuk, 2013; Tarasuk, 2001). There has been less study of the relationship between household food insecurity and the food retail environment, but studies conducted in Toronto and Montreal found that food insecurity was unrelated to one's physical access to grocery stores (Kirkpatrick & Tarasuk, 2010; Perez, Roncarolo, & Potvin, 2017).

In contrast to evidence in the general population, issues of food insecurity appear tightly intertwined with the food environment for Indigenous peoples in Canada (Council of Canadian Academies, 2014). In northern Indigenous communities, food insecurity occurs in the context of diminishing access to traditional foods (Council of Canadian Academies, 2014; Egeland et al., 2011; Ford & Beaumier, 2011), concerns about affordability of food through market and traditional channels (Action Canada, 2013/14; Lambden, Receveur, Marshall, & Kuhnlein, 2006; Veeraraghavan et al., 2016), and ongoing questions about the effectiveness of the federal food subsidy program, *Nutrition North Canada*, in improving food access (Galloway, 2014, 2017). Within Indigenous communities, households most at risk of food insecurity appear to be those with the least economic resources (as indicated, for example, by a reliance on social assistance (Pirkle et al., 2014), highlighting the centrality of purchasing power to food access through market channels, but also the increasing need for financial resources to engage in traditional food acquisition practices. Community food security initiatives grounded in local experiences and working to improve food access to the most vulnerable are now well-established in many northern communities, but the limits of these efforts to address severe problems of household food insecurity are well recognized (Seed, Lang, Caraher, & Ostry, 2014; Wong & Hallsworth, 2016).

In sum, household food insecurity is a serious problem in Canada, taking a very real toll on individuals' health and well-being. After more than two decades of research and population-level measurement, the social epidemiology of this problem is well understood, and there is a growing body of evidence demonstrating the sensitivity of this problem to federal and provincial policy interventions that impact household resources. Yet, high prevalence rates persist.

The role of a national food policy

A national food policy represents a critical opportunity to address food insecurity in this country. National leadership is badly needed to spearhead effective and enduring policy responses. However, the policy levers to address food insecurity in Canada transcend the conventional boundaries (scope of work) of Agriculture and Agri-food Canada, a ministry whose primary focus is policies and programs related to the growth and development of the agriculture and agri-food sectors in Canada (Government of Canada, 2016). Addressing food insecurity requires coordinated action across several federal ministries and all three levels of government. Thus it challenges Canada to move toward a “joined up” food policy (MacRae, 2011).

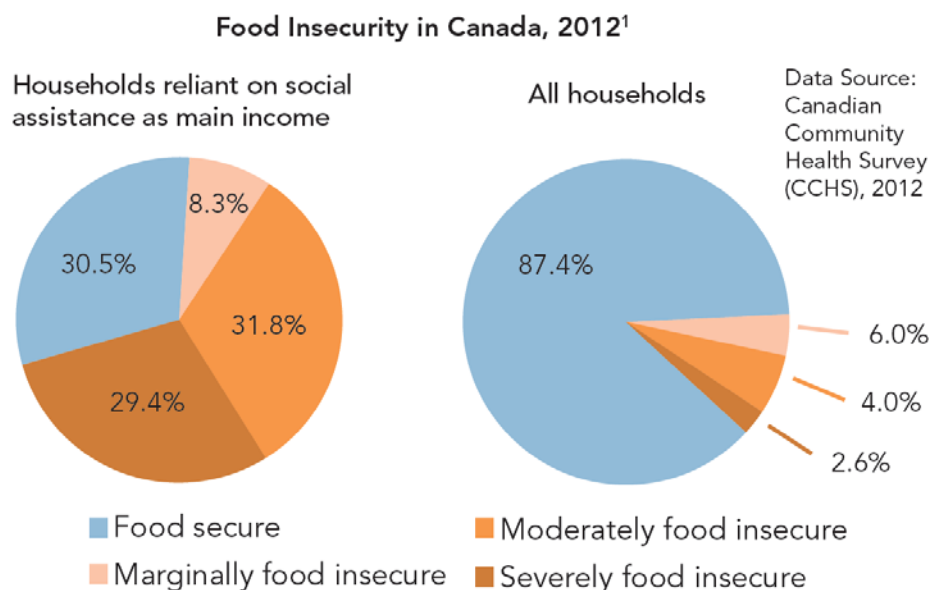
Although Canada has a long history of income transfer programs to support lower income households, these programs have not been explicitly designed to support household food security and none are accountable to this outcome. The aforementioned examinations of income-related policies on food insecurity prevalence have all been conducted by academic researchers, not government departments. As awareness of problems of hunger in our midst has grown, government actions have been limited to measures to support ad hoc, community-based initiatives, in particular the food charity system (McIntyre, Lukic, Patterson, Anderson, & Mah, 2016b). These include “Good Samaritan” laws that absolve corporations of liability for the health and safety of the food they donate, tax credits for farm donations, and public funds supporting food bank infrastructure. There is also continued public investment in community gardens, kitchens, meal programs, and food buying programs, partly based on the argument that they mitigate problems of food insecurity. This piecemeal approach has persisted despite legislators' clear recognition of the relationship between food insecurity and structural issues associated with poverty (McIntyre et al., 2016b; McIntyre, Patterson, Anderson, & Mah, 2016c).

Research on the impact of policy interventions that address low income is clear: In Canada, we have seen declines of up to 50 percent in household food insecurity prevalence and severity among vulnerable groups as a result of policy reforms that have improved their financial circumstances (Loopstra et al., 2015; McIntyre et al., 2016a). Thus effective policy responses are possible. However, more direct policy evaluations by the federal, provincial, and territorial governments are required to develop effective, evidence-based strategies to prevent household food insecurity. We need studies to determine the specific levels of income needed to minimize risks of food insecurity, identify the most effective mechanisms to ensure income adequacy (e.g., whether through a mix of targeted income supplements and universal benefits or through the

implementation of a basic income guarantee), and delineate the other services and programs required to support household food security. Ontario’s Basic Income Pilot (Government of Ontario, 2017) should yield some insight into the food security effects of setting a modest income floor for working-aged adults, but this small-scale social experiment is only one step. Examination of the food insecurity effects of the full spectrum of federal, provincial, and territorial policies and programs that determine income adequacy and security for households at the bottom end of the income spectrum is needed to design effective policy responses. This includes evaluating the impact of the Canada Child Benefit on families’ food insecurity, but also assessing the effects of minimum wage levels, Employment Insurance, and targeted benefits for low-waged, precarious workers to determine how best to address food insecurity in the labour force. A framework and action plan rooted in policy integration, both horizontally (across policy domains), and vertically (across the three levels of government) is required to reduce the prevalence and severity of household food insecurity in Canada.

Forging an effective response requires the alignment of policy objectives across departments. Whereas much of the responsibility for policies that impact household incomes lie within the federal departments of finance, employment and social development, housing and energy policies are also relevant to this problem. Within Agriculture and Agri-Food Canada, there is a need for ongoing monitoring of food costs to ensure that the after-tax (and after-shelter) incomes of our most vulnerable households are sufficient for them to meet basic food needs, and that vital income support programs are insulated from inflationary pressures. Additionally, given the strong intersection of household food insecurity with low-waged, seasonal, and precarious employment, measures to improve the labour conditions of those in the agri-food sector are part of addressing food insecurity (Weiler, McLaughlin, & Cole, 2017).

Figure 4: Food insecurity in Canada, households reliant on social assistance and all households (Source: PROOF, 2017)



It is also imperative that the provincial and territorial governments be actively engaged in any comprehensive policy response to food insecurity because of their responsibility for minimum wages and programs such as social assistance. Although there is considerable interjurisdictional variation in the design and delivery of social assistance programs, nationally, 70 percent of households reliant on social assistance in 2012 reported food insecurity, with 29 percent reporting severe food insecurity (Tarasuk et al., 2014) (Figure 4) (a rate that is more than 10 times the national prevalence of severe food insecurity). Addressing food insecurity requires the commitment and coordinated actions of all levels of government.

A national food policy must also include the establishment of performance targets and mechanisms for ongoing monitoring and evaluation to ensure that the policies and programs implemented under the guise of food insecurity reduction actually achieve these goals. The continued monitoring of household food insecurity through the inclusion of the Household Food Security Survey Module on the Canadian Community Health Survey is an effective means to track the progress of efforts to address this problem in the general population. As the research on household food insecurity in Canada has already demonstrated, this measure is highly policy-sensitive. However, the current practice of permitting provinces and territories to opt out of food insecurity measurement on some survey cycles has resulted in sporadic measurement in most jurisdictions. National, annual measurement is required to inform policy interventions and effectively track progress towards the goals of national food policy. Additionally, it will be important to implement appropriate food insecurity monitoring in First Nations communities to support the development and ongoing evaluation of interventions to reduce food insecurity among this highly vulnerable group.

In conclusion, addressing household food insecurity in Canada is a necessary prerequisite to achieving the articulated vision of national food policy. Building on the vast body of evidence that now exists, an action plan for effective policy intervention to reduce, and ultimately eradicate, household food insecurity needs to be a core element of national food policy. Given the cross-cutting nature of this issue, effective intervention will require horizontal and vertical policy integration, engaging other federal departments and all three levels of government. In addition, national food policy should include performance targets and mechanisms for ongoing monitoring and evaluation to ensure that the policies and programs implemented to reduce household food insecurity actually achieve this goal.

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