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COMMENTARY

Conceptualizing child care as a population health intervention: can a strong case be made for a universal approach in Canada, a liberal welfare regime?

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Child care, conceptualized as one area of social policy, is a good example of a population health intervention (PHI) that operates outside of the health sector. Exploration of child care as a PHI could help to clarify the scope of the PHI field, and contribute to a credible base from which to advocate for PHIs, yet such exploration is not yet prominent in the population health research literature. The purpose of this paper is to consider child care through the lens of PHI, and in particular, to consider whether a strong case can be made for a universal approach to child care in Canada and perhaps other liberal welfare regimes where targeted approaches are more commonly accepted. We first examine the peer-reviewed evidence on the impact of universal and targeted child care for later outcomes. We then interrogate other issues that are pertinent to making a strong case for universal child care in Canada as one example of a liberal regime; namely, (1) limitations and challenges of research on the impact of universal child care; (2) the intuitive appeal of targeting; (3) the fundamental differences between targeted and universal approaches; and (4) the values inherent in judgments about the equity of universal interventions. Notably, some of these issues do not lend themselves to empirical resolution, which raises interesting questions about the acceptable balance of ideology and empiricism in population health.

Keywords: child care; population health; population health intervention; social policy; universal

Introduction

Population health interventions (PHIs) are policies and programs that impact on health and health equity of whole populations (adapted from the website of the Canadian Institutes of Health Research, Institute for Population and Public Health). The study of PHIs is evolving, and despite significant efforts to clarify the parameters and scope of the field (e.g. Dunn and Hayes 1999; Labonté et al. 2005; Hawe and Potvin 2009), fuzziness remains about what constitutes a population (Krieger 2012) and what qualifies as a PHI (Potvin 2012). In a climate of increasingly neoliberal governing tendencies in liberal welfare regimes including Canada (Sewell 2009; White 2012), which discourage the ‘imposition’ of policies on whole populations (McLaren and Emery 2012), proponents of PHIs need strong arguments to sustain current PHIs and to credibly

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advocate for the introduction of new ones where such interventions may yield important health gains and health inequity reductions.

Many social policies, such as universal public education, public transit systems, and consumer protection standards, could be considered as PHIs. Although social policy is complex and could be defined in various ways (Titmuss 1974), it broadly refers to policy (i.e. guidelines, principles, legislation) enacted by various levels of government to impact social life and human welfare. The realm of social policy clearly aligns with the World Health Organization's (WHO) holistic (physical, emotional, and social) and positive (well being) conceptualization of health (World Health Organization 1948), and with the definition of public health laid out in the 1988 Acheson Report, 'the science and art of preventing disease, prolonging life, and promoting health through organised efforts of society' (Acheson 1988, 1). Further, the universal and targeted (means-tested) forms of administration and delivery of social policy (Lundberg et al. 2008; Baker 2011) have parallels with, respectively, Rose's population-level and high-risk approaches to prevention (Rose 1985, 1992). Still, social policy has not yet figured prominently in the PHI research literature (e.g. Canadian Journal of Public Health 2012), despite potential to contribute to the evolution and clarity of PHI research.

Arguably, exploring areas of social policy as PHIs is especially pertinent in liberal welfare regimes such as Canada, the United States of America, the United Kingdom, and Australia. Within Epsing-Andersen's (1990, 26) typology, liberal welfare regimes are characterized by "means-tested [i.e. targeted] assistance, modest universal transfers, or modest social insurance plans". They are also increasingly characterized by efforts to ensure the freedom and economic and social dominance of private business and wealth (Stanford 2008) and by a tendency to delegate responsibility for delivery of public programs and services to non-state actors (White 2012). Relative to the social democratic welfare regimes (Epsing-Andersen 1990), also described as Nordic (Lundberg et al. 2008; Stanford 2008) regimes, liberal regimes are also characterized by higher poverty rates, higher income inequality, and poorer population health (Commission on the Social Determinants of Health 2008; Lundberg et al. 2008; Wilkinson and Pickett 2009). The purpose of this paper is to examine whether and how population health scholarship could be mobilized to justify universal child care in liberal welfare regimes, which otherwise favor targeted delivery of social programs, with Canada used as an example.

We first define and discuss what we mean by child care and by universal and targeted means of delivery, and why this matters in the conceptualization of child care as a PHI. We then briefly summarize the evidence on the impact of targeted and universal child care on later outcomes, which shows strong support for a positive impact of targeted child care and mixed (though limited) evidence for a positive impact of universal child care. We then draw from population health and related scholarship to interrogate other issues that are pertinent to making a case for universal child care; namely (1) limitations and challenges associated with research on the impact of universal child care; (2) the intuitive appeal of targeting; (3) the fundamental differences between targeted and universal approaches; and (4) the values inherent in judgments about the equity of universal interventions. We conclude that it is possible to make a case for universal child care in Canada and perhaps other liberal welfare regimes, drawing on population health scholarship, but doing so requires persistent and compelling articulation of the limited quantity and significant challenges of research on the impact of universal child care, as well as recognition that making a case for universal child care goes beyond what may be answered empirically. Our findings raise interesting questions about the acceptable balance of ideology and empiricism in population health.

Definitions and conceptualization of child care as a PHI

By ‘child care’ we mean publicly funded physical settings, such as child care centers, nurseries, and preschools. The primary function of child care settings may vary between settings and over time, but prominent contemporary functions are provision of early childhood education and permitting parents to participate in the paid labor force (Friendly 2009). Child care is one aspect of the broader category of early childhood interventions, which rests on a significant and compelling research literature on the importance of the early childhood period for later health, social, psychological, cognitive, and economic outcomes (Kuh and Ben-Shlomo 1997; Kuh and Hardy 2002, Hertzman and Power 2006; Cunha and Heckman 2010; Boivin and Hertzman 2012). In targeted child care, families must meet eligibility requirements, usually pertaining to socioeconomic disadvantage. Universal child care has no such eligibility requirements, and is available to all (usually within a particular age range) within a jurisdiction (Offord et al. 1998; Baker, Gruber, and Milligan 2008). Universal child care, for our purposes, can take the form of child care centers, preschools, nurseries, or pre-kindergarten; and thus may be an extension of the public school system. ‘Child care policy’ thus refers to the set of principles and procedures (or absence thereof) adopted by government with respect to child care as defined above.

Child care policy can be conceptualized as a PHI for three reasons. First, child care represents “organized efforts of society” as per the Acheson definition of public health; and the many intended outcomes of child care align with the WHO’s conceptualization of health. These outcomes include: (i) benefits to children (well-being, healthy development, and lifelong learning); (ii) benefits to parents and families (supporting parents in education, training, and employment); and (iii) benefits to community and society (exposure to diversity and opportunity for development of tolerance, which contributes to equity; opportunity to interact with others with whom one might not otherwise cross paths, and the potential outcomes of such interactions [e.g. finding out about employment opportunities by word of mouth]) (European Commission 2009; Friendly 2009; Boivin and Hertzman 2012). Second, child care policy is concerned with whole populations and with narrowing health inequities. Proponents of child care, and proponents of universal child care in particular, emphasize the importance of child care being accessible (available and affordable) regardless of family income, parental employment status, special education needs, and ethnic/language background (Friendly 2009). Third, child care policy is a governmental instrument that typically falls within departments or ministries other than health, such as education or human services. Child care, thus, aligns with a social determinants of health approach, favored by PHI (Dunn and Hayes 1999; Raphael 2009), with interventions largely arising outside of the health sector.

The impact of child care on later outcomes: the evidence base

Many studies have examined the impact of child care – in general – on later social, cognitive, psychological, economic, and health outcomes; and several reviews and multiprogram studies now exist (Wong et al. 2008; Burger 2010; D’Onise et al. 2010; Baker 2011; Barnett 2011). Based on these publications, there appears to be a beneficial impact of child care on later outcomes. For example, a study of five US state pre-kindergarten programs, which varied in terms of program attributes and funding, revealed “generally positive short-term effects” in terms of receptive vocabulary, math, and print awareness skills (Wong et al. 2008, 147). A review of 23 diverse early childhood care and education programs identified positive short-term and in some cases

long-term effects on cognitive development (Burger 2010). Another review, which included both research trials and large-scale programs across diverse social and economic contexts concluded that overall, these programs ‘can have substantive short- and long-term effects on cognition, socioemotional development, school progress, antisocial behavior, and even crime’ (Barnett 2011, 977). On the other hand, a review of controlled studies that assessed the implications of center-based preschool for later health in particular (absence of disease, disease risk factors, health behaviors, and well being) found ‘generally null effects’, though with some evidence for obesity reduction, improved social competence and mental health, and crime prevention (D’Onise et al. 2010, 1423).

For the most part, research has been dominated by a focus on targeted child care programs (e.g. Barnett 2011), or it conflates targeted and universal child care in pursuit of a different research question (Burger 2010; D’Onise et al. 2010; Wong et al. 2008). Thus, it is important to ask, what is the evidence on the impact of universal child care in particular on later outcomes?

The impact of universal child care on later outcomes: the evidence base

A recent review by Baker (2011) specifically set out to compare the impact of universal and targeted early childhood interventions, including child care, on later outcomes. Baker (2011, 1074) reviewed observational studies of universal child care that exploited “policy-based variation in program availability”; these were: center-based preschool in Denmark, public child care in Norway, and publicly regulated, heavily subsidized child care in Quebec, Canada. He reviewed studies of targeted child care that used an experimental design; namely the Perry Preschool Project, the Early Training Project, the Carolina Abecedarian Project, the Milwaukee Project, Project STAR (Tennessee), and Head Start.

Baker (2011, 1074) concluded that the evidence base for targeted child care is methodologically high quality (due to the “intellectual heft” of the randomized design), sizeable in quantity, and points to sustained positive effects (with an exception being apparent fade-out effects of Head Start). He also concluded that the evidence base for universal child care is smaller, methodologically weak, and mixed in its findings, with several studies showing mean negative effects, some showing mean positive effects, and some showing differential effects.

Can a strong case be made for universal child care in Canada, a liberal welfare regime?

Limitations and challenges associated with research on the impact of universal child care

Baker’s (2011) focus on the impact of universal and targeted child care on later outcomes merit specific consideration in terms of whether and how we can make a case for universal child care. His paper is, to our knowledge, the only review of its kind, and it can be used to illustrate limitations and challenges associated with research on this topic. First, Baker’s (2011) methodological exclusion criteria were stringent. Such criteria particularly influence the size of the pool of studies on universal child care, a pool that is already limited because the scale and mode of implementation limits the number of opportunities for research on impact. Baker’s criteria meant, for example, that studies on the longstanding Swedish public universal child care system were

excluded. Yet this system has demonstrated, using more conventional observational methods, a sustained positive effect associated with early age of entry, independent of family background including socioeconomic status (e.g. Andersson 1992). One could argue, as Baker does, that the ability to draw any conclusions about the impact of universal child care on later outcomes is currently limited by the small number of studies that fulfill normative review criteria.

Baker's (2011) focus was on the impact of child care for later outcomes, and within population health it is recognized that research questions about impact (or effectiveness) are best answered using designs that privilege and maximize internal validity (e.g. Petticrew and Roberts 2003). However some nuance is required. Although it is reasonably well-recognized that the randomized controlled design is often inappropriate (i.e. unfeasible or unethical) for public health and other social interventions, there is indication that the hierarchy of evidence that privileges the randomized controlled design has nonetheless "crept" into the evaluation of more complex interventions (Bell 2012). The creep has occurred despite the observation that several assumptions underlying the hierarchy do not hold; for example, randomized controlled designs presume a relatively short and straightforward causal chain between the exposure/agent and the outcome (Victoria, Habicht, and Bryce 2004), and they are generally blind to, or presume the constancy of, context (Bell 2012); neither of which is accurate for most population and public health interventions.

These points apply directly to research on the impact of universal child care. First, studies of universal child care reflect rather different contexts. Just looking at those studies included in the Baker review, while Denmark and Norway evince a shared history and a contemporary social democratic welfare regime (Lundberg et al. 2008), the Province of Quebec is situated within the liberal welfare regime of Canada (briefly, Quebec, while part of the federation of Canada, has evolved a 'distinct' society, and that status pervades its social policies). Although the significant variation within welfare regime types should not be discounted (Epsing-Andersen 1990), the differences between them are important and findings must be interpreted against these different contexts. Secondly, the causal chain between child care and later outcomes is not simple or straightforward. Although studies on the impact of the Quebec child care system are consistent in demonstrating adverse effects on child and family outcomes (Baker, Gruber, and Milligan 2008; Kohen et al. 2008; Beaujot, Du, and Ravanera 2013; Lehrer and Kottelenberg 2013; Stalker and Ornstein 2013), others argue that these findings reflect factors such as lack of strong governance or regulation, and program expansion that permitted for-profit centers, circumstances which have both contributed to child care of variable quality (White 2012; White and Friendly 2012).

The intuitive appeal of targeting

Within Canada and other liberal welfare regimes, making a strong case for universal child care requires addressing the intuitive appeal of a targeted approach. There is a powerful logic to directing efforts and resources to those who need them most. To make a case for universal child care and other PHIs, population health researchers must be able to articulate the drawbacks of targeting.

To the extent that a targeted approach is analogous to Rose's high-risk approach, we can draw on limitations of a high-risk approach articulated by him (Rose 1985, 1992), all of which apply to at least some extent to targeted social policy. An important drawback to highlight is the strong potential for stigma. Particularly in social policy, where targeting

involves identification of the target group on the basis of socioeconomic disadvantage (i.e. means testing), targeting carries with its significant risk of further marginalizing, excluding, and compromising the dignity of those who are already most disadvantaged (Commission on the Social Determinants of Health 2008; Lundberg et al. 2008).

Targeting and the stigma it engenders can affect uptake, and thus impact, of an intervention. An empirical example is provided by Emery and Matheson (2012) who examined the relationship between a different social policy arena – public pensions – and mortality among seniors in Canada. The history of public pensions in Canada includes periods of targeted delivery (i.e. provided only to those seniors who are eligible based on their income) and periods of universal delivery (provided to all seniors). Emery and Matheson found that universal pension delivery was associated with lower mortality among seniors, whereas targeted (means-tested) pension delivery showed no association with mortality. The authors explored possible reasons for the different relationships with mortality. During the period of universal pensions, both universal and targeted pensions were in fact in place, such that those seniors who qualified for the targeted pension would be receiving both. Emery and Matheson argued that because the incremental benefit of universal pension would decrease with increasing income (i.e. extra money coming in would make less of a difference to higher income than to lower income seniors), the lower mortality effect likely reflected gains among those who had been eligible for the targeted pension, but who did not apply because the cost (effort, bureaucratic barriers, and risk of embarrassment) was deemed too high. This scenario pertains to social policy more broadly, including child care: to the extent that the targeted program is perceived by families as difficult to access or embarrassing, it will fail to reach the intended population, and its impact at the population level will be reduced.

The fundamental differences between targeted and universal approaches

One of the challenges with making a case for universal child care is an assumption that universal child care is nothing more than a larger, diluted version of targeted child care. Writing from the perspective of liberal welfare regimes, Baker (2011) and others have expressed concern that, assuming a fixed budget, a universal program may not deliver the same level of instruction and support to at-risk children as a targeted program would. From this point of view, universal child care is viewed as a diluted version of targeted child care, and a diluted program will, by definition, have a diluted benefit.

A response to this challenge, drawing from population health and related scholarship, is twofold. First, the challenge rests on an assumption that a universal program is simply a quantitatively bigger version of a targeted program. An alternative viewpoint is that the two are qualitatively different. Targeted and universal child care differ in terms of the nature or logic of the intervention: targeted child care, through its focus on vulnerable groups, is remedial in nature: the objective is to offset or mitigate vulnerability. For example, the Perry Preschool program had the aim of reducing the “special risk” that characterized participating children (www.highscope.org). On the other hand, major objectives of universal child care include enabling healthy child development, facilitating women’s participation in the labour force, and contributing to societal equity (European Commission 2009; Friendly 2009). To the extent that these objectives are qualitatively different, the dilution argument is invalid.

Second, the qualifier ‘assuming a fixed budget’ may be flawed. As articulated by Korpi and Palme (1998) among others, the fact that a universal program includes the middle class means that a large proportion of the population may be willing to pay the

taxes needed to sustain the initiative. The budget, then, is not fixed, but becomes larger and more sustainable in the universal scenario. In contrast, a targeted program has a smaller, and likely less powerful, support base such that the budget remains small. With a small budget, a service for poor people (the targeted social policy) is likely to become a poor service (Alcock et al. 2001). Whether this is borne out in liberal welfare regimes, such as Canada, could be examined empirically.

Values inherent in judgments about the equity of universal interventions

One interpretation of universal is one-size-fits-all; this interpretation has prompted resistance in the form of concern about differential effects. While proponents assert that high-quality child care ‘benefits all children’ (e.g. European Commission 2009; Friendly 2009), others (e.g. Lehrer and Kottelenberg 2013) highlight significant “treatment effect heterogeneity” (i.e. differential effects). Whether universal child care in fact benefits all children is of interest to the population health research community, where a lively debate has emerged about PHIs and their implications for social inequities in health (Popham, Dibben, and Bambra 2013; Harper and Lynch 2007; MacIntyre 2007; Frohlich and Potvin 2008; McLaren, McIntyre, and Kirkpatrick 2010; Sumar and McLaren 2011; McLaren and Emery 2012; Lorenc et al. 2013).

Whether or not universal child care benefits all children may be interrogated via disaggregated analysis, which has – to a limited extent – been done. Of the three findings reported by Baker (2011), two were disproportionate benefits for low-income children, and the third was a negative effect for low-income males. In Burger’s (2010) review, of the 18 studies that examined effects by socioeconomic status (which were not limited to universal programs), seven showed particular benefit for disadvantaged children, 10 showed a benefit for both disadvantaged and privileged children, and one showed particular benefit for privileged children.

Though disproportionate benefit to low-income or socially disadvantaged children (the dominant finding from Baker 2011 and Burger 2010) would appeal to the equity focus of population health researchers, it raises two other questions for which a response seems important. First, if a program only, or disproportionately, benefits low-income children, would not a program targeted at that group be more expedient? For example, Lehrer and Kottelenberg (2013) argue that ‘given substantial treatment effect heterogeneity [i.e. differential effects], policymakers should consider targeting childcare rather than developing policies that would introduce universal coverage.’ And second, do wealthier people, in such circumstances, suffer a lost opportunity (e.g. the option to opt out of a universal system and use a different, private system instead), and is such a loss fair?

Of relevance to answering the first question is a distinction between inequality, which is a population-level attribute, and poverty or low income, which describes a subgroup. Graham (2004) argues that these approaches, though both focused on socioeconomic issues, differ in their conceptualization of the problem and thus in their scope of potential policy solutions. A focus on improving the health of the poor (analogous to targeted child care) is limited in that the problem becomes seen as an attribute of the poor, and the solution accordingly becomes focused on that group. In contrast, a focus on tackling the socioeconomic gradient in health (which, in its population scope is analogous to universal child care) embraces a focus not on the disadvantaged circumstances of the poorest groups but rather on the broader, systemic forces that operate at the population level, creating rich and poor (Commission on the Social Determinants of Health 2008; Raphael 2009). In liberal welfare contexts that privilege targeted social policy,

articulating the distinction between poverty and inequality, and assessing the implications of the distinction, would appear to be important though challenging components of making a case for universal child care.

The second question is whether a universal system that disproportionately benefits the poor, is unfair to the rich. This conundrum is apparent in the Canadian health care system and was at the heart of the *Chaoulli v. Province of Quebec* case at the Supreme Court of Canada (Flood and Xavier 2008; Yeo, Emery, and Kary 2009). Canada's health care system is characterized by universal access to publicly funded physicians and hospitals, and there are regulations that prohibit private insurance for these publicly funded services. The public system, for various reasons and for some procedures, incurs significant waiting times, and because of the regulations prohibiting private insurance, patients have no choice but to wait. In the *Chaoulli* case, it was argued that compelling those who could afford other options (i.e. private payment to those delivering privately-funded health care outside of the universal system), to wait in the public system constituted a violation of federal and provincial charters of rights and freedoms (Flood and Xavier 2008; Yeo, Emery, and Kary 2009). The decision on this case, according to Yeo, Emery, and Kary (2009), ultimately centered around the empirical question of whether permitting private payment compromised the quality or integrity of the public system. When presented with empirical evidence and expert opinion on this question, the court was not convinced that the public system would suffer if private insurance were permitted; in other words, the court sided with Chaoulli, and the Province of Quebec was required to relax regulations on private insurance.

However a closer analysis (Yeo, Emery, and Kary 2009) suggested strong values at play, particularly with regard to how the purpose of the prohibition of private insurance was understood and conceptualized by the court, which in turn reflected different assumptions about equality. Justification of private insurance from a welfare egalitarian point of view hinges on whether it affects equality in the narrow sense that people dependent on the public system would be worse off with respect to the quality of the services available to them in that system. From an absolute egalitarian point of view, on the other hand, private insurance is opposed on principle, which by definition goes beyond the public system: removing the prohibition on private insurance would increase the differential access in society at large (Yeo, Emery, and Kary 2009). In the *Chaoulli* case, within the constraints of the court setting, the welfare egalitarian position, which was neither explicit nor demonstrable amongst the empirical evidence, prevailed.

Conclusion

As PHI research evolves, it is important to identify opportunities to contribute to the field's evolution and clarity. Social policy generally, and child care in particular, provides such an opportunity because it embodies the attributes of a PHI (focus on social determinants, operates outside of the health sector, impacts large numbers of people) yet is so far not prominent in the population health literature.

Is it possible to make a strong case for universal child care in Canada and perhaps other liberal welfare regimes, drawing on population health and related scholarship? Our answer is 'yes', but to do so is challenging. Such a case requires empirical research on the impact of universal child care; substantive qualification of that research in terms of its limitations and challenges; and an interrogation of additional issues, some of which cannot be empirically resolved. Our findings raise interesting questions about the acceptable balance of ideology and empiricism in population health.

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