Turning the Social Determinants of Health to Our Advantage

Policy Fundamentals for a Better Approach to Children's Health

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Role of Policy in Reframing Our Approach to Child Health

The first two articles in this volume provide a compelling case for improving child health and for the critical role to be played by social determinants. The goal of this article is more prosaic: to lay out the policy approaches that can support the case for improving child health by improving the social determinants of health.

But first, it's important to define what we mean by policy. *Policy* is often used as a synonym for anything that government does, and it can cover election platform commitments, capital investments, new legislation and the written and unwritten practices of bureaucrats as they administer government programs. However, this is too broad a definition of policy to address in a single article or even an entire edition of *Healthcare Quarterly*. Instead, we will work with a more traditional definition of policy – a standing or consistent position on repeated decisions. This means that policy takes the form of frameworks, that is, the conceptual models that decision-makers use when approaching any relevant problem. In this sense, a policy functions as a sort of checklist covering the set of factors that need to be addressed in any decision on how to improve child health.

There are several reasons for this more narrow focus, including the current economic situation, the focus across the country on broader policy questions around access to safe care and difficulties in deciding how to balance programs that favour one population group (e.g., children) against another (e.g., the elderly). The most important reason for the more narrow focus is the fact – already well described by Halfon et al. in this issue – that improving the social determinants of children's health requires joined-up action across government. This in turn requires decision-makers across the health and social services ministries, agencies and providers to approach their policy decisions in a consistent way that supports improvements in the determinants of health for children.

This is not the usual approach in parliamentary democracies, or in the health system itself. After more than a century focused on sanitation, nutrition and acute, intermittent infectious disease, contemporary Canadian child health systems are now heavily invested in caring for complex medically fragile children with multiple health needs. Technological innovations enabling the survival of newborns at earlier gestational ages mean that the largest share of child health expenditures in Ontario – and likely Canada – focuses on children under one month old. Bringing a more comprehensive, joined-up approach to child health policy deserves the focus of an entire article.

Reframing a Policy Approach to Child Health

An innovative concept called **population health inheritance** (PHI) enables reframing of complex child health questions. PHI focuses on policies improving the societal asset of health passed from adults to children in two forms: direct PHI, each generation's collective resiliency, lifespan and quality of life; and indirect PHI, the health system as a sustainable asset, in and of itself, and its capacity to meet enduring population health needs. This inter-generational frame enables us to consider the importance of child health outcomes within the context of a health system that overwhelmingly treats people much later in life and considers health improvement in the context of individuals rather than collectively, as passed between generations.

Critical to the notion of direct PHI is the **life course approach.** Strategies based on this approach reflect an understanding that a person's developmental trajectory can be substantially altered and improved based on factors present during pregnancy and early parenthood (Ben-Shlomo and Kuh 2002). As such, research using this framework tends to emphasize parenting education, an enriched preschool environment and various interventions for mothers and infants. Similarly, critical to indirect PHI are **transitions** out of the child or youth health system and into the adult health system. Thanks to the progress and success of medicine, children who would have died in infancy or adolescence from a range of health problems now survive into adulthood but enter into an adult healthcare system that is poorly prepared to deal with challenges that, in many cases, are entirely new to this system.

Almost by definition, a focus on PHI, the life course approach and *transitions* requires policy approaches that both recognize

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and engage the full range of issues surrounding a child. This necessitates that policies (1) be cognizant of the factors that define a child's social status including gender, ethnicity and the parents' social status and (2) engage policy responses across the range of available services. None of this should be surprising. A wealth of material has recognized the importance of the social determinants of health, including prominent made-in-Canada documents such as the Lalonde Report (Health Canada 1974) and the *The Ottawa Charter* (World Health Organization 1986). What is surprising is how long it has taken to engage **multidisciplinary teams** in the care of children and to create a truly joined approach within governments to child health. The challenge for policy makers becomes how to ensure that policies reflect a consistent emphasis on the importance of these approaches.

Implementing a New Approach to Child Health

Use of the life course approach, better attention to transitions and a focus on multidisciplinary teams and joined-up policy making can all help to improve the effectiveness of child health policy. The evidence behind these approaches is strong, and a number of articles and published frameworks from different countries point to how these factors can become part of policy making.

Using the Life Course Approach

The life course approach to child health policy steers policy away from single interventions toward clusters or packages of interventions aimed at children and mothers. Studies have shown that "when children or families at risk receive interventions that transform basic context and relationships (e.g., through parenting education and enriched preschool environment) their developmental trajectory can be significantly altered, compared with the trajectories of children who did not receive such interventions" (Karoly et al. 1997, as cited in Halfon and Hochstein 2002: 460). These health-promoting interventions may also be more effective if organized into integrated health management pathways (addressing biological, emotional, cognitive and environmental determinants of adult diseases) and if they recommend the organization of developmental health services in a way that recognizes the value of improvements in the health of the entire population over their life course (Halfon and Hochstein 2002)

In a 2007 review article, Kerber and colleagues (2007) proposed eight packages to promote health for mothers, babies and children. These packages can be used to deliver more than 190 separate interventions. Three of the packages were limited to interventions that were delivered through clinical care (reproductive health, obstetrical care and care of sick newborns and children); four packages were delivered through outpatient and outreach services (reproductive health, antenatal care, postnatal care and child health services); and one package was delivered through integrated family and community care throughout the life cycle. Using a broader lens, Ekman and colleagues found that "maternal-newborn-child health can be improved through integrated packages of cost-effective interventions that are implemented incrementally in accordance with the capacity of health systems. Such packages should include community-based interventions that act in combination with social protection and intersectoral action in education, infrastructure, and poverty reduction" (2008: 990). In order to pay better attention to social context, they also suggested that interventions should be planned and implemented at the local level. This attention to context, however, extends to the individual level. Browne et al. (2004) found that programs that address a specific problem or problems and that are sensitive to cultural or gender-based differences have a greater effect than broad, unfocused interventions.

This bundled and context-sensitive approach to child health policy development has been captured in a number of policy statements and child health strategies. A recent World Health Organization (WHO) report describing a global strategy for diet, physical activity and health emphasized the need for a life course perspective for the prevention and control of non-communicable diseases, noting in particular that infants who suffer prenatal and possibly postnatal growth restrictions appear to be at higher risk for non-communicable diseases in adulthood (WHO 2004).

Table 1 shows how a number of jurisdictions have attempted to model a life course approach in their own child health strategies. In each case, the strategies required joined up action across social and health services, a common set of goals around health and well-being and a strong understanding of the social context in which children grow.

Paying Attention to Transitions

Transitions in the child health system occur at developmental interfaces, that is, maternal to infant and youth to adulthood, and along the continuum of acuity from health promotion/prevention to quaternary care. Transitions also take place between health and social services in contexts where the collaborative linkages should be across preschools, elementary schools and others in the community in ways that support congruency across programs (Pianta et al. 1999; Rous et al. 1994). There are a number of examples of how transitions can be managed. Rous et al. (2007) conducted a series of 10 focus groups with a total of 43 participants including practitioners, administrators, trainers, faculty/researchers and family members of children with disabilities. Positive transitions occurred with the consistent use of developmentally appropriate practices across programs, especially for children with disabilities. Two major themes emerged from this study. The first was the critical role of *inter-agency collaboration* (defined as strategies that support an inter-agency process involving multiple parties). Common

Table 1. Overview of four jurisdictions' life course approaches to a child health strategy

Australia: Health Gain for Children and Youth of Central Sydney (Alperstein et al. 2008)

Ten main strategies or categories of interventions, with detailed rationale for each, were proposed:
1. Nurse home visiting program
2. Health promoting schools program
3. Health worker education initiatives
4. Early intervention strategies through community development, early literacy and parenting programs
5. Multidisciplinary assessment and multimodal therapy for children with attention deficit disorder and attention deficit/hyperactivity disorder
6. Individual and public health education
7. Local community-based health promotion
8. Targeted screening for some conditions and reduction of universal screening for certain conditions
9. Universal screening for congenital sensorineural hearing loss
10. Advocacy around child and youth health issues and services

United Kingdom: The Children's Plan (UK Department for Children, Schools and Families 2008)

The seven chapters of the plan discuss the following:
- The Every Child Matters framework and how it is being used to put health, enjoyment and well-being at the heart of services for children and young people, and on an equal footing with other outcomes
- Arrangements to safeguard the most vulnerable children
- Early years settings and children with special educational needs as well as those with disabilities
- Leadership and collaboration
- Young people developing the right skills and opportunities to participate in further and higher-education work, and developing the skills they need to succeed in life
- Supporting children and young people to make positive contributions and stay on the path to success
- The vision of the Children's Plan for world-class services in every local area

The Children's Plan was based on discussions with children, young people, parents and professionals across the country, and focuses on five fundamental principles:
1. Parents bring up children, not government – but families need help and support to do their job.
2. All children have the potential to succeed and should go as far as their talents can take them.
3. Children and young people need to be safe and healthy and enjoy their childhood as well as grow up prepared for adult life.
4. All children and families deserve services that work together for them and meet their individual needs.
5. It is always better to prevent failure than to tackle a crisis later.

Nova Scotia, Canada: Our Kids Are Worth It: Strategy for Children and Youth (Government of Nova Scotia 2008)

The report contains a mix of both immediate and longer-term priorities. There are five key areas the report targets to ensure the success of implementing this strategy:
1. Build a strong foundation
2. Identify problems, help early
3. Coordinate programs, services
4. Improve access, close gaps
5. Engage youth, promote shared accountability

New Zealand: Child Health Strategy (New Zealand Ministry of Health 1998)

The principles include the following:
- Children/tamariki [young children] should have their needs treated as paramount.
- Child health and disability support services should be focused on the child/tamariki and the family and whänau [extended family].
- Child health and disability support services should be available as close to home as possible, within the bounds of quality and safety.
- Child health and disability support services staff should work together with each other and with staff from other sectors to benefit the child.
- Child health and disability support services should be provided to achieve equity.
- Child health and disability support services should be based on international best practice, research and education.
- Child health and disability support services should be regularly monitored and evaluated.
- Child health and disability support services should be culturally safe and culturally acceptable and value diversity.
- Child health and disability support services should take into account the available resources.

"strategy sets" identified by the focus groups for this theme included guidelines for transition, communication and collaboration, and continuity across programs (i.e., coherence across programs in terms of curricula and expectations). *Comprehensive transition practices and activities* (defined as practices that address child, family, staff, program and community-specific activities) was the second theme. Common strategy sets included family participation in meetings, sharing of information and program-wide activities (i.e., those designed for both child and family members that include home visits, formal orientation events and individualized materials).

Continuity across programs is considered an optimal principle within which to ensure common approaches to child health. Case studies have highlighted inter-governmental and social service policy opportunities to set common criteria for complex care to Aboriginal children regarding eligibility, funding and performance management (Indian and Northern Affairs Canada 2007). Many studies discussed the *transition* from youth to adulthood as related to a specific condition, for example, diabetes (Allen and Gregory 2009), learning disabilities (King et al. 2006), chronic physical health conditions (King et al. 2006; Paone et al. 2006) and mental disorders (King et al. 2006; Wright et al. 2006). Several of these articles identified problems with such transitions (Allen and Gregory 2009; Davis and Sondheimer 2005; Lotstein et al. 2009), but all noted their importance to positive health outcomes. Notably, several articles identified the benefit of high-quality parent-provider relationships in terms of successful transitions (Lotstein et al. 2009; Scal and Ireland 2005).

PHI requires policy makers to reach across traditional divides, define shared goals, align their strategies and – in essence – share control over their programs.

However, successful transition models have several common factors that emphasize the importance of a joined-up approach to policy and to care: "Such comprehensive transition services should address skill instruction and self-awareness; provide customized informational, emotional, and instrumental supports to meet the needs of youth and families; provide direct opportunities and experiences for skill development; and address the welcoming nature of community activities and settings" (King et al. 2006: 155). These sorts of multidisciplinary models can be helpful even for children within quaternary acute care settings. The ON TRAC (Taking Responsibility for Adolescent/Adult Care) model of transition of care for adolescents with chronic health conditions, as applied to pediatric transplant transition (Paone et al. 2006), is associated with better outcomes. Interestingly, much of the literature concerning children and youth strategies in general focuses on the transition from childhood to youth or youth to adulthood for children and youth with special needs (i.e., disabilities, specific health conditions).

However, decision-making partitions between governments, ministries and social service sectors along chronological interfaces of care (i.e., between maternal and child health services) and/or acuity levels (i.e., between health promotion, primary and acute services) can pose challenges for health system policy makers seeking overall improvements to child health outcomes. Continued attention to inter-governmental (federal, provincial/territorial) and inter-ministry/-sector collaboration on measurement, funding and accountability is warranted to support establishing, communicating and achieving improved child health targets.

Focusing on Multidisciplinary Care

A number of multidisciplinary care interventions have been shown to improve care coordination/access, particularly for children with special healthcare needs and at-risk mothers or children. For example, an evaluation of the Starting Early Starting Smart (SESS) initiative, an intervention to integrate behavioural health services (parenting, mental health and drug treatment) into the pediatric healthcare setting for families with young children, indicated that SESS caregiver participants were 4.6 times more likely to receive parenting services, 2.1 times more likely to receive outpatient mental health treatment and 1.8 times more likely to receive drug treatment than comparison group participants (Morrow et al. 2009). Parent/patient satisfaction also appears to improve with multidisciplinary care. For example, an evaluation of the Maternity Centre of Hamilton, Ontario (a pilot project to help family physicians provide full obstetrical care), noted that 94.3% of patients reported that they would return to the centre for subsequent births (Price et al. 2005). And several studies have shown an impact on reducing healthcare utilization. For example, one intervention targeting children with special healthcare needs found a statistically significant decrease in hospitalizations (58% versus 43.2%) at baseline compared with post-intervention (Palfrey et al. 2004). An exception was Healthy Steps for Young Children, an early childhood intervention targeting all children that found no impact on hospitalization and overall emergency department use in three- and five-and-a-half-year follow-ups (Minkovitz et al. 2003, 2007).

Throughout the literature, some of the key characteristics of the various multidisciplinary models for child health include (1) the provision of coordinating services by a team member, (2) a general goal to provide comprehensive care through the provision of various support and information services and (3) patient-centred services (e.g., culturally appropriate services, family collaboration). Providing coordinating services is also a common function, particularly for children with special healthcare needs and at-risk families (see, for example, Farmer et al. 2005; Gilles et al. 2007; Kelly 2008; King et al. 2009; Palfrey et al. 2004). Examples of this type of role include the coordination of patient appointments as well as ensuring that clinical information is accessible to be shared with other child health professionals (Palfrey et al. 2004).

Comprehensive care through the provision of various support and information services that goes beyond the healthcare sector is another common feature of multidisciplinary models. This ranges from the provision of family help such as emotional support and encouragement (Farmer et al. 2005; King et al. 2009), to health education (see, for example, Harris et al. 2003; Reece et al. 2002), to intensive social work appraisal (Quinlivan and Evans 2004) and to information and education resources through websites, brochures and toll-free numbers (see, for example, Gilles et al. 2007; Piotrowski et al. 2009). Home visits were another common service provided in a number of these models (Farmer et al. 2005; Morrow et al. 2009; Piotrowski et al. 2009; Reece et al. 2002; Stevens-Simon et al. 2001).

There is also an emphasis on providing patient-centred care in a number of studies, for example efforts to provide culturally sensitive and appropriate services (Gilles et al. 2007; Harris et al. 2003; Morrow et al. 2009; Reece et al. 2002). In models that focus on children with special healthcare needs, promoting family-centred aspects of care is also emphasized by providing a parent consultant or advocate (Farmer et al. 2005; Morrow et al. 2009; Palfrey et al. 2004), sponsored outreach and social activities (Palfrey et al. 2004) and collaboration between families and physicians (Farmer et al. 2005; McMenamy and Perrin 2004).

It should be noted that there have been challenges at the service provider level identified in the literature for multidisciplinary care. These challenges can occur at the professional, personal or interpersonal level (King et al. 2009). Differences in vision and philosophy, competing beliefs and practices in the various professions and threats to professional identity or status, to name a few, are potential issues that can affect the success of multidisciplinary care (Kateman and Herschderfer 2005; King et al. 2009; Malin and Morrow 2007). Finally, multidisciplinary care is not always necessary. According to Choi and Pak, some projects are relatively "simple and straightforward [and] are best performed by one expert, or experts from one discipline. Other projects may be more complex and require multiple disciplines, but the expertise may not be available or exist" (2006: 360). Patel et al. also note that while it is "presumed and intuitive that these approaches are cost-effective, improve quality of care, and reduce errors in delivery of health care … there is little evidence that multiple discipline approaches to education, service delivery, and research are always necessary" (2008: 1387). The challenge – and one area still requiring further research – is to develop decision rules that can help guide policy makers in determining whether particular problems require the creation of multidisciplinary teams.

Conclusions: The Way Forward for Policy Makers

The PHI approach presents a significant challenge to policy makers. It requires them to reach across traditional divides, define shared goals, align their strategies and – in essence – share control over their programs with their sister institutions. The Health in All Policies (HiAP) model provides some guidance to policy makers wishing to pursue this sort of goal. Pioneered in several European jurisdictions, HiAP is a high-level approach to population health predicated on the evidence that policies across government may negatively impact health and its social determinants such as socioeconomic status and systemic exclusion. HiAP provides structures and processes that allow policy makers in all sectors to identify and mitigate the unintended health consequences of their decisions, most often through Health Impact Assessment tools (St.-Pierre 2008; Wismar et al. 2007). Unlike traditional approaches to health promotion and the prevention of disease, HiAP is uniquely equipped to align policies across government rather than containing all policies that affect health within a designated sector. It has been recognized as an effective joined-up approach to addressing health inequities and the social determinants of health (Stahl et al. 2006; WHO 2008), and Health Impact Assessment has been explicitly recommended as a standard procedure by the Senate Subcommittee on the Social Determinants of Health (Standing Senate Committee 2009). By educating policy makers about health pathways and furnishing them with tools to assess their effects on health, HiAP is a promising strategy for responding to the needs of vulnerable populations such as medically fragile children and for introducing a more holistic approach to health promotion.

Given that the HiAP approach has not yet taken root in North American policy making in a significant way, this article provides some guidance on how policy makers can integrate key elements of a PHI approach into their decision-making around a life course approach, transitions and multidisciplinary care. However, this does not yet capture the full implications of the PHI approach. It is still important for policy makers to consider the impact of their investments on the sustainability of the healthcare system.

Unfortunately, the financial literature on child health strategies is relatively limited. One systematic review (Romeo et al. 2005) on economic evaluations of child and adolescent mental health interventions noted such evaluations are few in number and generally poor in quality, although the number of studies being undertaken now appears to be rising. Studies on behavioural disorders tentatively suggest child behavioural gains and parent satisfaction from parent and child training programs, although the cost-effectiveness of the location of delivery (e.g., day versus residential treatment, community versus clinic based) for behavioural therapies is less clear. One US-based study found that in comparison to a historical control group, a crisis intervention program for children at risk of harm to themselves and others resulted in a 23% reduction in the use of psychiatric treatment beds and a savings of approximately $20,000. Another article that briefly discussed the economic analysis of early intervention programs introduced to provide at-risk children with a better start in life found that there is some increase in earnings income for participants versus control subjects, though the greatest return on investment is societal. Specifically, this is due to a decreased need for special education, a decreased amount of time spent on welfare and a decreased need for prison cells (Herrod 2007).

As work progresses toward the implementation of a PHI approach, it will be important for researchers and practitioners to structure the data sets and evaluations that will provide greater evidence on the financial impact of child health strategies. Shared child health improvement strategies may be championed through joint health and social policy ministries at the provincial level and via federal/provincial/territorial partnerships, where mandates and standardized targets can be jointly managed. As inter-disciplinary care contexts continue to develop, it will be important to advance as well as evaluate joint education and training opportunities, shared accountability for outcomes and team approaches to transition. Sufficient evidence exists to support Canadian policy decision-makers to advance early interventions in women's, maternal and infant health to maximize the improvement of social determinants of health and life course health. Stronger partnerships across policy makers will remain the best way to ensure Canadian child health systems deliver the greatest population health inheritance for young Canadians. HQ

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