

SPECIAL
ISSUE

Healthcare Quarterly

ISSUE 4: INVESTING IN CHILDREN'S HEALTH

Child Health in Canada

The fourth of four special issues prepared with The Hospital for Sick Children, Toronto, Mary Jo Haddad, Editor-in-Chief

**"... now it's neither nature
nor nurture – it's both"**

- Alan Guttmacher, pg. 12



CHILDREN AND THE BUILT ENVIRONMENT
FAMILIES, CHILDREN AND SOCIAL MEDIA
INVESTMENTS THAT ARE PAYING OFF

In early 2010, I approached Longwoods Publishing with a bold idea: to develop a four-part *Healthcare Quarterly* series on child health in Canada. Anton Hart and Dianne Foster-Kent immediately embraced my plan. Since then, they and their hard-working team have provided immense support to collecting and publishing insightful, multidisciplinary studies that have expanded the boundaries of knowledge and practice relating to the health and well-being of children and youth in Canada.

The series launched in October 2010 with the publication of an issue devoted to the social determinants of health. That collection was followed in May 2011 by an issue exploring mental health and by a third, in October 2011, on health system performance. If you have not yet had an opportunity to peruse these issues, I encourage you to do so; they are all freely available online.

Investing in children's health

I am now pleased to bring you the fourth issue in the Child Health in Canada series. The essays gathered here take an in-depth look at various facets of *investing in children's health*. The fundamental tenet underpinning this issue is the belief that every child deserves to be healthy. Turning that conviction into reality takes, as our contributors show, major investments in time, money, policy-formation, monitoring, education and system change.

A recent report from the Canadian Coalition for the Rights of Children (CCRC) – chaired by Kathy Vandergrift, one of the authors included in this special issue – draws on evidence showing that “a positive return on investment in early childhood care and development” is paid not just at the individual but also the group level. The “benefits,” the authors argue, “include increased capacity for success as adults, reduced healthcare and other social costs over a lifetime, and greater social cohesion through participation in community-based initiatives focused on the common goal of raising healthy children who are integrated into society” (2011: 55). Taking a similar position, earlier this year the Canadian Paediatric Society (CPS) noted that children and youth not only are “our most powerful assets,” they also offer “the best possible return on public investment toward ensuring a strong economy and a healthy nation” (2012: 4).

Having spent most of my career in the child-health sector, I know that what these experts are saying is the truth. Time and again I have seen proof that securing a strong foundation for children and youth is essential for their health, well-being and prosperity as adults – a prosperity that encompasses the families and communities to which they will one day belong and the businesses and organizations they will build.

In August 2011, I had the good fortune to enjoy a lengthy conversation (published in this issue) with Alan E. Guttmacher, the director of the Eunice Kennedy Shriver National Institute

of Child Health and Human Development in Bethesda, Maryland. Drawing on decades of experience as a pediatrician and researcher, Guttmacher is crystal clear that investing in children's health is a moral duty. If we fulfill that duty by *prioritizing* children's health, he reasons, we will not only be better equipped to deal with kids' illnesses, but also to set young people on the road to lifelong wellness – physical, mental and social.

Investing in children's health is a moral duty.

Some may say that my vision of planning and building such a foundation for children is unattainable: It's too expensive, it's too complicated, it's unrealistic. Well, I disagree. My first-hand experience of Canadians' generosity and determination to do what's best for children drowns out the skeptics and raises my spirits. And my confidence is well supported by the essays in this special issue of *Healthcare Quarterly*. These nine articles provide insightful examples that focus our attention on what's possible when we target our investments at giving children the optimum start in life.

Policy perspectives

The first of our contributions outlines implications for policy-making in Canada arising from the United Nations' 1990 *Convention on the Rights of the Child*. Kathy Vandergrift and Sue Bennett carefully outline the main findings and recommendations of the CCRC report I mentioned earlier. As that report shows, Canada falls short of other similar countries on critical measures such as infant mortality, child poverty and early childhood development and care. Taking a rights-based approach coordinated at both the provincial and federal levels would, the authors contend, strongly support policy-making attuned to children's health and development by, for example, erasing “the current fragmented approach to health services” and buttressing community investments geared to reducing disparities and advancing equity.

The focus on rights continues in our second article. Here, Lynell Anderson asserts that, when compared to similar wealthy nations, Canada suffers from a “family policy deficit” and a lack of access to quality child care services. Exacerbating these problems is the absence of “an agreed-upon set of measurable objectives” for assessing and monitoring family policy-related progress. Anderson concludes with a call to support the recently proposed New Deal for Families (of which she is a co-author), a three-pronged policy framework that emphasizes both child care and families' desires to spend more time together. While not inexpensive, the New Deal is certainly a public investment that merits broader consideration.

Our first two articles' broad-based analytic approach continues in Kerry McCuaig's call for an "integrated" model that brings together education, child care and family and intervention supports. Too often, as her opening narrative makes clear, supports are designed and delivered in fragments, thus leading to lack of participation and impact. McCuaig's quick rendition

Canada suffers from a lack of access to quality child care services.

of Quebec's "natural experiment" in "enriching parental leave and expanding educational child care for preschoolers" is fascinating in its lessons for the rest of Canada. While she does not advocate one jurisdiction's approach as the final solution for all, McCuaig is persuasive in advocating for solutions that take "a life-cycle approach to human development."

Innovations

Our next two essays address specific innovations that, if correctly planned, implemented and evaluated, stand to have a real impact on children's health. James Dunn begins by illuminating how children's built environments – locally, regionally and nationally – can be designed to promote healthy child development (i.e., emotional development and maturity, language development, cognitive development and communication skills and general knowledge). Dunn's article tacks back and forth from general principles to specific "attributes." With regard to the latter, one of the most compelling calls-to-action in his piece is that, to effect health promotion for children, we must "specify which factors at what levels matter to which aspects of healthy child development."

Next up is a stimulating article by an expert who we in the healthcare sector probably do not hear from enough: a strategic director at an advertising agency. In his contribution, Max Valiquette urges everyone involved in providing medical and other sorts of care to young people to get up to speed and use social media both to understand and to reach out to our "digital native" patients and clients. One of Valiquette's main points is that young people's digitally-driven "fundamental need to share is transforming everything, including healthcare." I assume many (perhaps most) *Healthcare Quarterly* readers are, like me, "digital tourists." I therefore recommend Valiquette's brief social-media lesson – in particular, his thoughts on privacy challenges – as a valuable introduction to this swiftly evolving domain.

Interventions

To see it in print is deeply unsettling: the leading cause of death (30%) for children in Canada is unintentional injuries. Yet, as Pamela Fuselli and Amy Wanounou – of Safe Kids Canada – observe, there are "evidence-based, best practice strategies" that

could prevent many of these sad events. The authors begin by setting out the "key elements" contained by successful interventions. Emphasizing the importance of reliable data to intervention-planning, Fuselli and Wanounou shed light on their propositions through the examples of playground design and cycling helmets. While the former largely entails "environmental modification" and design standards to achieve safety, the latter is principally a matter of legislation (coupled with, I would argue, enforcement).

During my interview with Alan Guttmacher, one of the main impediments to progress he raised was the tendency "to erect healthcare systems to deal with the problems of the past rather than the ones of the future." A good example of the consequences of this approach, he offered, is the "obesity epidemic," the magnitude of which has "overwhelmed" both healthcare systems and providers. Childhood obesity, and strategies to help prevent it, is the topic of the essay by Catherine Birken and her four co-authors (all are affiliated with SickKids and carrying out obesity-related research there). Every one of us knows that the problem is large and growing. Mining the evidence on obesity prevention, Birken et al. enjoin us to consider the determinants of obesity (e.g., nutrition, physical activity) and their contexts (e.g., family, culture) when planning and implementing ways to combat it. On the matter of how and when to tackle the problem, I am particularly struck by their observation that, while young children often access the primary healthcare system, "the opportunity for obesity prevention in this setting is unrealized." Further, the "multi-level" approach the authors advocate chimes well with the "integrated" model discussed by Kerry McCuaig in her article.

Erecting systems to deal with future (or even present) problems often requires major reconceptualization of shortcomings, desired outcomes and resource (time, money, people) allocations. As discussed by Charlotte Moore Hepburn and Marilyn Booth, Ontario's Provincial Council for Maternal and Child Health (PCMCH) appears to be just such a comprehensive, forward-looking intervention. Designed to improve the province's maternal-child health sector, the PCMCH unites the maternal-newborn and child-youth sectors in a "single entity" geared to priority setting, service planning, care delivery and quality improvement. Hepburn and Booth describe the evolution, composition and methodologies of this collaborative "life-course" approach, yet another example of the power of integration that has already brought about several improvements for new mothers and young people in Ontario and from which other jurisdictions can learn.

One year ago, the second instalment of Child Health in Canada focused entirely on mental health. Now, in the final essay in this issue, we return to that topic through the lens of investment. Gail MacKean and her five co-authors contribute a literature review of family-centred care (FCC) in the context

of mental health services for children. Many of the challenges facing care providers and planners will be familiar, including, as we have heard several times in various contexts throughout this series, the transition to adulthood and the associated hand-off between child- and adult-oriented healthcare systems. One of the lessons in MacKean et al.'s article is the need to revisit and revise our models of care so that they embody FCC and make it a "best practice" and a "common standard of care" – not just in mental health, but in all facets of children's healthcare.

Multiple conversations

Towards the end of our interview, Alan Guttmacher mused that we need "to have multiple conversations in which we elevate children's lives." I trust that the essays presented in this issue of Child Health in Canada – and the entire series – will add to the richness and rigour of those elevating conversations as we all strive to ensure that young people in this country get the support and care they need to enjoy lives that are as healthy and

meaningful as possible. For my part, it has been an honour and a pleasure to steward this series to fruition, and I look forward to continuing to learn from all of you how best to care for children today and in the future. **HQ**

– **Mary Jo Haddad**, RN, BScN, MHSc, LLD, CM
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Child Health in Canada

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Mary Jo Haddad

INVESTING IN THE HEALTH OF CHILDREN

8 Prioritizing the Lives of Children

Mary Jo Haddad, in conversation with Alan Guttmacher
Recently, Mary Jo Haddad interviewed Alan E. Guttmacher, the director of the Eunice Kennedy Shriver National Institute of Child Health and Human Development, in Bethesda, Maryland. Over his long and impressive career, Guttmacher has proven himself to be one of the world's leading pediatricians and medical geneticists. The insights and observations Guttmacher shared during the conversation resonate profoundly with many of the essays found in this fourth issue of our Child Health in Canada series.

14 Children's Rights: A Framework for Health Promotion

Kathy Vandergrift and Sue Bennett

Children's right to health includes healthy living conditions as well as healthcare. For this reason, article 24 and related articles in the United Nations' Convention on the Rights of the Child could provide a useful balance for the overemphasis on clinical medicine in Canada's health system – that is, if we take children's right to health seriously.

18 From Rose-Coloured Glasses to Reality: Addressing the Family Policy Deficit in Canada

Lynell Anderson

While more than 70% of mothers in Canada participate in the paid labour force, 44% of their one- and two-year-old children (outside of Quebec) are cared for in unregulated home. It's time to take off our rose-coloured glasses and engage in a healthy dialogue about the implications of this reality. When we do, Canadians will likely agree on a family policy solution that advances our human rights commitments by providing more time and resources for families to care personally for their young children.

26 Serving All Children to Catch the Most Vulnerable

Kerry McCuaig

Children's programming in Canada is divided into three distinct streams – education, child care, and family and intervention supports. All promote the healthy development of children as their primary goal, yet they have little, or no, interaction. Each stream has its own bureaucracy, culture and mandate. The result is service silos. Children and families don't experience their lives in silos; their needs can't be dissected and addressed in isolation.

CHILDREN AND THE BUILT ENVIRONMENT

32 Levels of Influence in the Built Environment on the Promotion of Healthy Child Development

James R. Dunn

There has been a major explosion of research on the built environment and health in the social epidemiology, urban planning, geography and other disciplines over the past several years. The author discusses the effects of children's built environments on healthy child development – a departure from traditional approaches that are focused on child diseases, disorders and the avoidance of hazards and risks in the built environment.

FAMILIES, CHILDREN AND SOCIAL MEDIA

38 Social Media and the Medical Industry: A Whole New Sort of Healthcare Network

Max Valiquette

Social networks and social media are transforming absolutely every single industry, and healthcare is no different. As the author explains, the younger the patients are, the more this matters. For the child health system, this involves two groups for whom social media is huge: older kids and parents of the younger ones. Medical professionals dealing with tween and teen patients, as well as young parents of infants and kids, need to know whatever they can about social media.

INVESTMENTS THAT ARE PAYING OFF

42 Best Practice Interventions in Childhood Injury Prevention: A Review of What Works in Developing Successful Strategies

Pamela Fuselli and Amy Wanounou

Unintentional injuries are the leading cause of death for children in Canada. Injury accounts for 30% of all deaths and the largest environmental burden of disease. In other words, approximately 25 children die from an injury every month, the equivalent of one classroom. The good news? Unintentional injuries to children are predictable and preventable. Proven strategies are known and could significantly reduce the rate of injuries if adopted and implemented across all provinces and territories in Canada.

“More and more, we’re learning about things in childhood such as the role of epigenetics or other phenomena where the nature of one’s adult health is largely influenced or even set in childhood.”

48 Childhood Obesity Prevention: Opportunities in Healthcare

Catherine S. Birken, Jonathon Maguire, Brian W. McCrindle, Jill Hamilton and Patricia C. Parkin

Childhood obesity is a leading health problem in Canada and is associated with cardiometabolic disease, reduced quality of life and economic impacts. There is an emerging evidence base on obesity-prevention strategies in children that consider the determinants of obesity and that should be considered within the context of a child’s family, school, neighbourhood, culture and society. This article reviews approaches to obesity prevention in children, with a focus on the healthcare setting, incorporating both primary and secondary preventions.

54 Ontario’s Provincial Council for Maternal and Child Health: Building a Productive, System-Level, Change-Oriented Organization

Charlotte Moore Hepburn and Marilyn Booth

In the early 2000s, similar to many sectors in the current healthcare system, the maternal-child health sector in Ontario was fragmented, encumbered with redundant elements and challenged to deliver high-quality, efficient, cost-effective care. Acknowledging the strategic importance of the maternal-child health sector and recognizing the need to resolve this fragmentation, Ontario created the Provincial Council for Maternal and Child Health in late 2008. With a structure designed to engage the entire sector, together with the support of a dedicated secretariat, the council was able to rapidly build momentum by unifying the maternal-child health-care system and streamlining key elements of the organization and delivery of care.

64 Advancing Family-Centred Care in Child and Adolescent Mental Health: A Critical Review of the Literature

Gail MacKean, Wendy Spragins, Laura L’Heureux, Janice Popp, Chris Wilkes and Harold Lipton

Family-centred care (FCC) is a key factor in increasing health and related system responsiveness to the needs of children and families; unfortunately, it is an unfamiliar service model in children’s mental health. This critical review of the literature addresses three key questions: What are the concepts, characteristics and principles of FCC in the context of delivering mental health services to children? What are the enablers, barriers and demonstrated benefits to using a family-centred approach to care in children’s mental health? And how can we facilitate moving an FCC model forward in children’s mental health?



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Prioritizing the Lives of Children

Mary Jo Haddad, in conversation with Alan Guttmacher

In August 2011, I had the pleasure of conducting a lengthy interview with Alan E. Guttmacher, the director of the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), in Bethesda, Maryland. Over his long and impressive career, Guttmacher has proven himself to be one of the world's leading pediatricians and medical geneticists.

The insights and observations Guttmacher shared during our conversation resonate profoundly with many of the essays we have lined up for the fourth issue of our Child Health in Canada series. It seems fitting, therefore, to begin this issue on Child Health Promotion not with a traditional article but, instead, with this wide-ranging and illuminating conversation, which sets the thematic stage for much of what follows.

– Mary Jo Haddad
Chief Executive Officer
The Hospital for Sick Children, Toronto



MJH: I would like to begin our conversation with a bit of an introduction into who Alan E. Guttmacher is. Would you describe a little about your past, the position you hold today and the value your role brings to a broad dialogue in the United States on children's health?

AG: I am by training a pediatrician and medical geneticist, although my other lens that I use to think about child health is derived from the fact that before I went into medicine, I taught middle school for a couple of years. I first got interested in pediatrics through an interest in kids' problems with learning and with what was—in those days—diagnosed as dyslexia in several of my students.

It's been shown repeatedly that investments in children's health pay off incredibly well in the long run.

That experience drew my attention to how kids learn, which got me interested in pediatrics, which led to my career in children's healthcare and then to my specialization in medical genetics. After my fellowship and training period, I spent about 12 years at the University of Vermont (UVM), where I was primarily a clinical geneticist. And I was also founding director of UVM's Pediatric Intensive Care Unit.

Then, about a dozen years ago, I was invited to come down to the National Institutes of Health (NIH) to work at the National Human Genome Research Institute (NHGRI), which is the NIH institute charged with leading the Human Genome Project. The NHGRI's director at the time was Francis Collins, and he wanted to have someone who was focused on integrating genomics-related knowledge; essentially, to think about the questions, "What in the world does the genome sequence mean in terms of human health? and, especially, How do we use it in healthcare?"

I eventually became the deputy director and then the acting director of NHGRI, and for about a year now, I have been serving as the institute's permanent director. This role gives me a great opportunity to be engaged with and to have a positive influence on a lot of issues about which I happen to care deeply, both personally and professionally. NHGRI has a wonderful mission.

MJH: Alan, those of us working in children's health are very focused on the state of children's health and the challenges within children's health, as well as on the opportunities and the progress made to date. From your vantage point, would you share with us your thoughts on the progress we've made collectively in children's health and on where you think we absolutely need to focus as a society, as

providers and as governments as we look at how to improve children's health at a faster rate?

AG: Answering that question depends partly on the time frame one considers. In some areas of children's health, we've made progress that is so dramatic that former problems are virtually gone from our thinking. They have slipped off the radar, so we don't have much opportunity to pat ourselves on the back.

For instance, for the vast majority of the world, polio has essentially disappeared. That's certainly a dramatic change. And the case is similar with many infectious diseases. When I was an intern and pediatrics resident, not that long ago, we saw an incredible amount of *Haemophilus influenzae* ("H-flu"). If you ask health officers today about H-flu, they give you a quizzical look and say, "Gee, I've read about it in a textbook." They have no experience treating patients with H-flu, whereas I admitted lots of patients with H-flu meningitis and saw the devastating effects it could have.

If you talk about what pediatric practice was in the past, so much of what was treated and worried about were infectious diseases. Clearly, that's still a major issue in much of the developing world. But, even there, we're beginning to make some real inroads.

Other areas have changed as well. Acute lymphoblastic leukemia in kids used to be, essentially, a death sentence. Now, it is something that is usually cured in childhood. That doesn't mean we shouldn't worry about some of the toxicities of some of the medications we use to treat lymphoblastic leukemia, and it doesn't mean some children don't still die from it. But, again, in our lifetime, we've witnessed a dramatic change. In terms of sudden infant death syndrome (SIDS), the incidence rate has been knocked down by 50% over the past 20 years, simply by repositioning children so that they are sleeping on their backs instead of on their tummies.

Of course, while we've done a much better job dealing with infectious diseases, injury now actually occupies a larger proportion of serious morbidity and mortality in childhood than it used to. It's not that we're doing a worse job with injury in general than before; we're actually doing a better job (for example, through the more pervasive use of seatbelts and bicycle helmets for kids). But, since we've removed a lot of the other problems that used to affect kids, injury is relatively a much larger concern than before.

MJH: In light of all you have said about improvements, but also considering the challenges that remain, I'm interested to know how you would replace X in the following statement: "If only we could focus on X, it would have such a profound impact on improving children's health."

AG: I think one X would certainly be prematurity. If we could do a better job in terms of preventing preterm births, that's one way we could have a real impact on kids' lives, families and

communities. Again, this is clearly an area in which we have made some good progress; but, in fact, in some ways you could argue it's more of a problem than ever before. Because we're able to keep kids alive who are born earlier and earlier, those children live to have various sequelae of their early birth. And considering kids who have preterm births later in gestation, we know that, while on an individual level there might not be a huge impact, from a public health point of view the kids that are born at 37 weeks would do better if they had been born at 39 weeks.

MJH: Is that about public health per se or do you think it's a combination of issues and factors?

AG: I think it's really a combination. Part of the concern is that we still don't understand all the factors that combine to cause preterm birth. We need to understand all the pathways and causes – biological, environmental and cultural.

One of the cultural factors we often confront is the culture of obstetrics. That's one of the causes of preterm birth, in terms of the significantly higher rate of Caesarean sections in North American than was the case a couple of decades ago. Sometimes Caesarean delivery is clearly indicated for the health and well-being of a pregnant woman or her fetus. But, it's clear that there are times when the decision to perform a C-section really is more of a cultural than strictly medical one.

We also require education and public health campaigns (some of which we have); and, once we fully understand the causes of preterm birth, we must try to intervene so that those causes can be prevented. And even if the causes persist, we must be able to intervene to lessen their impact and either help women avoid preterm births or to at least move delivery later into pregnancy.

I think the preterm birth issue provides a good model for so much of children's health: because it involves multiple factors, it's not going to be as easy to deal with preterm births as it was with immunization. There won't be a shot that prevents it. We'll have to do more complex things.

To return to immunization, though, one of the things that I certainly worry about is that even though immunization made a larger impact on kids' lives than anything else that happened in the past century, immunization rates in some places are actually declining. That's because, I believe, we – as health and public health communities – have not done as good or as forceful a job as we need to do in order to convince parents that immunization is in the best interests of their children. So, even with issues with which we have been successful, we can't rest on our laurels.

MJH: Many of us involved in healthcare or who work with children have a good grasp of the complexities of systems and outcomes. There are so many competing priorities in healthcare, regardless of what country you're in or what societal challenges one might have. When we talk about health and

healthcare, we recognize a multitude of challenges – be they access to care or the poor health of populations or value for money of the services we're providing. What do you believe makes the strongest case for supporting investments in children's health?

AG: I think it's a number of things. One can argue, simply, the moral point: we have a duty to take care of kids, who can't take care of themselves. But, if you get beyond the moral argument to an economic one, it's been shown repeatedly that investments in children's health pay off incredibly well in the long run. If you prevent a health event in a child that would otherwise lead to that child being disabled in some way, you will have had an

I want anticipatory guidance to be about the next 60 years of a person's life.

effect that will impact over decades and decades in terms of that child's ability to function fully in society. He will be able to earn an income, to pay taxes rather than be supported by the state, to contribute his skills to the nation's economy and so forth.

I think one of the real new opportunities in children's health in the coming 10 or 20 years is going to be, for the first time, having tools that allow us to realize the ancient idea that the child is father of the man and mother of the woman. For a long time, we've acted as though there is "children's health" and then, as long as you get children somehow safely through childhood, some kind of switch goes off and a few years later they show up as adults. In fact, however, we're learning more and more about how health in childhood really has an impact on lifelong health. Very early life experiences, influences etc. have an effect not just on an individual's personality but on, for example, the person's risk of having chronic obstructive pulmonary disease or heart disease as an adult.

More and more, we're learning about things in childhood such as the role of epigenetics or other phenomena where the nature of one's adult health is largely influenced or even set in childhood. One of the really intellectually exciting and important developments, again over the next decades, will be using the genome sequence. That will enable us to understand epigenetics and other related phenomena in order to comprehend how child health and child experience lead to adult health and well-being. It will also help us to plan various kinds of interventions in childhood that will affect long-term health.

One of the things I like to talk about is "anticipatory guidance" as a major part of pediatrics. One could argue that, because we're now dealing better with infectious diseases, anticipatory guidance has grown in importance. For pediatricians, it is taking on a larger role in terms of the contributions they can make to the lives of their patients and their patients' families. That's great, but I also look forward to the day when anti-

patory guidance is not simply about the next six weeks or six months or even six years of a child's life. I want anticipatory guidance to be about the next 60 years of a person's life.

Pediatricians today clearly don't have the tools to do this in the primary care setting; I'm hopeful, however, that we will in the not-too-distant future. Pediatricians will, based upon knowledge

We need to continue to be thinking ahead about how morbidity and mortality change, and also about how to seize opportunities to intervene in those changes.

of a kid's genome sequence and various environmental influences in the kid's life, be able – in an individualized way – to talk with a child and the child's parents about various kinds of things that could be done in childhood to increase (not guarantee) the odds for good health well into adulthood. That will be, I think, a wonderful day in terms of what we can do for our patients.

MJH: It also will challenge us as systems leaders to think about what it will take, what should look different, what should be different in terms of the way we deliver services, the way we deliver care, the silos that we currently have between adult care and pediatric care or between primary care and specialty care.

AG: We're already seeing such thinking in a more limited way as we attempt to deal with patients who used to die from their diseases but now live into adulthood. Who do we hand those patients off to? Whether it be patients with cystic fibrosis or sickle cell disease or Down syndrome, what happens when those kids become adults and there aren't very many internists who have ever had experience dealing with such diseases?

We've already been challenged by that somewhat; but you're absolutely right that if the vision I'm talking about becomes reality, which I think it will, then it's going to be even more challenging. How do we construct systems to deal with this, and how do we even pay for it?

MJH: I'm thinking about many of the diseases you spoke about, for example, congenital heart disease. In that area, we're seeing important changes that are required at the adult cardiovascular surgical level; so, how do we think about congenital heart disease or congenital disease in general in a perhaps more integrative way? In order to do so, the care models and our clinicians' education need to be adapted. There are some big, exciting challenges ahead.

AG: Absolutely; and it's constant because we tend to erect

healthcare systems to deal with the problems of the past rather than the ones of the future. That's why, I think, the obesity epidemic has to some degree caught us a bit flatfooted. Sure, we had some experience dealing with kids with obesity. But the magnitude of the problem has grown so exponentially that, both in terms of healthcare systems and individual healthcare providers, we've been a bit overwhelmed. The obesity example reminds us that we need to continue to be thinking ahead about how morbidity and mortality change, and also about how to seize opportunities to intervene in those changes.

MJH: Let me move on to the topic of research. I've heard you say that despite governmental fiscal constraints, we're at a historic moment in pediatric care and research. Can you elaborate on what you meant by that?

AG: I believe we are at a historic moment because we have new tools to think about both children's health and, again, the lifelong developmental origins of health and diseases. I'm a bit biased, but I believe the genome sequence is an important contributor. For instance, it's difficult enough to comprehend that there are such things as epigenetic phenomena. But now we understand that one's environment in some ways gets the last laugh because it modifies your genome in various ways. We don't yet understand all the mechanisms of exactly how that happens, let alone exactly what environmental influences there are on our genes, yet we are able for the first time to really deal with the complexity of disease by asking those kinds of questions and thinking about those issues.

In medicine, we have always had to come up with artificially simplistic models. We tend to bifurcate everything; for example, you're either obese or you're not obese, you're healthy or you're not healthy, you have ADHD or you don't. We have taken that approach rather than, for instance, looking at the spectrum on which so much of human existence and well-being exist.

It's the same thing when it comes to genes and the environment. For years, the argument was, "Gee, is it nature or is it nurture?" Now, we've happily answered that question perfectly. It's neither nature nor nurture – it's both.

It's great that we now have the tools to be able to see that; but now it becomes a matter of developing other tools to really unwind those very complicated interrelationships between multiple genes and environmental factors. By environment, I don't just mean toxins and smokestacks, but also birth-community influences, social influences and so on.

For the first time ever, that's the story of kids' health, it's the story of kids' disease, and it's the story of kids' well-being. That is to say, it's a very complex kind of interplay. We've entered an era in which we can begin to do research that models this complexity and begins to dissect it. That's really just an incredible opportunity.

Then, when you add the ability for the first time really to

begin to look at early development – whether during fetal existence or in childhood or maybe, to some degree, even pre-conception – to see how those factors influence health in adulthood ... well, that's just an incredible range of research opportunities.

MJH: It is an exciting and optimistic time as we think about children's health, both from where we've come and the trajectory we're on with both research and new knowledge and application. But as child health experts, leaders and policy makers, how do we ensure that we keep children's health a top priority? What are the types of issues we should be thinking about? How do we work either differently or more aggressively to take advantage of the momentum and the successes?

AG: It's a hugely important question, and I wish I had a better answer than I do. There's clearly not one answer to that issue of how to get the right prioritization for children's health or children's lives. I think we can see gradually that, while it's not a smooth curve and at times we go backwards, in general for

I believe the vast majority of people would say they're in favour of happy, healthy kids. But that's not the same as prioritizing it.

centuries now we have seen more and more of an elevation of children's issues. When NICHD was founded in the early 1960s, it didn't have a single pediatrician on staff.

Increasingly, we see children's lives as important for society to invest in for biomedical and other forms of research. That's the good news. The bad news is that the curve of the slope is not as steep as many of us would like to see.

There are lots of reasons for that. Some of them are political, in terms of who votes in elections and who doesn't. But I believe the solution lies in showing the value in terms of both social improvement and simple economics. Again, we need to demonstrate the contributions to child and adult health of investments in biomedical research.

The other, larger, more complex thing we need to do is to have multiple conversations in which we elevate children's lives. In doing that, people are pretty good about prioritizing the lives of their own children. As a society, we tend not to do generally as good a job of prioritizing the lives of children who are not our own.

If you were to ask, "Would you rather see healthy children or unhealthy children, and would you rather see happy children or unhappy children?" I believe the vast majority of people would say they're in favour of happy, healthy kids. But that's not the same as prioritizing it. That's not the same as saying that we as a society must refuse to let any child go to bed hungry each night.

We need to both talk about the value of children's lives and also actualize the fact that sometimes children literally cannot speak for themselves and, certainly, cannot fend for themselves.

We have a responsibility to society to make sure that kids have healthy, full, productive and safe lives. That kind of societal commitment takes more people talking about it and thinking more broadly, and being able to see beyond their own families. **HQ**

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**“no child should be deprived
access to healthcare... and the
right to play”**

- United Nations' convention on the rights of the child

Children's Rights:

A Framework for Health Promotion

Kathy Vandergrift and Sue Bennett

Children's right to health includes healthy living conditions as well as healthcare. For this reason, article 24 and related articles in the United Nations' *Convention on the Rights of the Child* (1990) could provide a useful balance for the overemphasis on clinical medicine in Canada's health system – that is, if we take children's right to health seriously.

In general, article 24 recognizes that every child has a right to the "highest attainable standard of health." Particular elements named in the article (see sidebar) illustrate the wide scope, from nutrition and clean water to environmental pollution, the prevention of accidents, access to health knowledge and ending traditional practices that threaten health. With regard to healthcare, article 24 states that no child should be deprived of access to healthcare services for the treatment of illness and rehabilitation of health. Other provisions in the convention reflect aspects of the social determinants of health, such as freedom from violence and exploitation, the right to education and the right to play. All of these are tied together by the basic principles of non-discrimination, giving priority to the best interests of the child, child participation and realizing the full potential of every child.

The convention, which applies to all children under the age of 18 years, provides an integrated framework for promoting children's health. It converges with findings from research into the social determinants of health for child development (British Medical Association 2011; National Scientific Council on the Developing Child et al. 2010). The benefits of a rights-based approach to children's health include the following:

Children's Right to Health

Article 24

1. States Parties recognize the right of the child to the enjoyment of the highest attainable standard of health and to facilities for the treatment of illness and rehabilitation of health. States Parties shall strive to ensure that no child is deprived of his or her right of access to such health care services.
2. States Parties shall pursue full implementation of this right and, in particular, shall take appropriate measures:
 - (a) To diminish infant and child mortality;
 - (b) To ensure the provision of necessary medical assistance and health care to all children with emphasis on the development of primary health care;
 - (c) To combat disease and malnutrition, including within the framework of primary health care, through, inter alia, the application of readily available technology and through the provision of adequate nutritious foods and clean drinking-water, taking into consideration the dangers and risks of environmental pollution;
 - (d) To ensure appropriate pre-natal and post-natal health care for mothers;
 - (e) To ensure that all segments of society, in particular parents and children, are informed, have access to education and are supported in the use of basic knowledge of child health and nutrition, the advantages of breastfeeding, hygiene and environmental sanitation and the prevention of accidents;
 - (f) To develop preventive health care, guidance for parents and family planning education and services.
3. States Parties shall take all effective and appropriate measures with a view to abolishing traditional practices prejudicial to the health of children.

Other Relevant Articles for Health

Article 2: Right to be grow up without discrimination

Article 3: The best interests of the child are always to be factored into decisions/policies

Article 6: Right to survival and development of full potential
Articles 7, 18, 30: Right to family, culture, identity and nationality

Article 12: Views of children and youth must be heard and given due weight

Articles 13–15: Right to be informed, express views and freedom of religion

Article 19: Right to protection from all forms of violence, abuse and neglect

Articles 26, 27: Right to an adequate standard of living for child development

Article 31: Right to play

Source: Article 24 is reproduced in part with permission from *Convention on the Rights of the Child* (1990).

- A clear focus on primary prevention, including a strong policy basis for a shift in the allocation of public resources toward prevention. All provinces and territories have ratified the convention and are obligated to implement it.
 - A coherent framework for putting into practice the findings of research into the social and environmental determinants of health. The convention integrates health policy with other factors in child development.
 - With the child at the centre, the convention speaks to the duties of parents, the community, and the state to give priority to the best interests of the child. While the accountability mechanisms for the exercise of duties are still weak, it provides a strong basis for shared responsibilities in children's health.
 - Developing the full potential of every child, the heart of children's rights, makes good economic sense and grounds a business case for increased investment in evidence-based measures that promote healthy development for every child.
- Infant mortality – 24th of 30 countries (Raphael 2010)
 - Child poverty – 20th of 30 countries
 - Child well-being – middle rank of 21 countries
 - Health and safety – 22nd of 30 countries (Organisation for Economic Co-operation and Development [OECD] 2009)
 - Early childhood development and care – last of 20 countries for access and level of investment in OECD study and last of 25 countries in a UNICEF comparison on 10 benchmarks
 - Inequality in child well-being – average overall; higher in educational equality, lower in material equality, average in health equality (UNICEF 2010b)

Priority Areas for Attention in Health Promotion

The CCRC's report recommends that both federal and provincial governments shift resources to address the following issues as high priorities:

We can no longer afford to let children fall through the cracks of fragmented health and social support systems.

A recent report by the Canadian Coalition for the Rights of Children (CCRC 2011) identifies several priorities for attention in Canada, if we take children's right to health seriously. The report, titled *Right in Principle, Right in Practice*, emphasizes that Canada needs to focus on developing the full potential of every child. We can no longer afford to let children fall through the cracks of fragmented health and social support systems. Investing in the healthy development of every child will pay big dividends for a productive society. Implementing the convention is good economics for Canada, as well as the right thing to do.

The CCRC report is an independent, strategic assessment of how well we are implementing children's rights in Canada. Researchers for the section on the right to health were struck by the high degree of consensus in the analyses of the current state of children's health in government, professional, academic and civil society reports. We know what needs to be done to improve children's health in Canada, but we lack the public will and leadership to do it. A rights-based approach shines a light on the duties of leaders, such as governments and healthcare providers, toward children. The business case for investing in the development of every child turns the affordability argument on its head. We cannot afford to ignore what we know about the conditions that affect child development.

Children's rights also bring international comparisons into play. Among comparable countries, Canada is not doing well. The CCRC report lists the following international rankings of Canada compared with other countries as another reason for giving greater attention to preventive health policy:

- **Health inequities and living conditions:** More than 12 percent of children live in unhealthy poverty. Over a third of food bank users are children who lack food security and adequate nutrition. Income security is a health issue. Canada's chief public health officer has publicly recognized that household income correlates with 80% of the key factors in healthy child development (Butler Jones 2009).
- **Preventing abuse and neglect:** National figures for reported child maltreatment in 2008 are unacceptably high, and research indicates that most maltreatment is not reported. Neuroscience research shows the impact of early life trauma on the developing brain and stress responses, which can contribute to a myriad of significant physical and health problems in adulthood (Lanius et al. 2010). Strategies that prevent all forms of violence and abuse against children provide the greatest return for investment and should be a high priority.
- **Injury prevention:** A rights-based approach would focus on preventing all forms of injury in addition to the current narrow focus on sports injuries.
- **Mental health:** Many mental health issues start before age 18. Estimates are that 15% of young people struggle with mental health issues at any given time, many without access to services that we know can make a major difference in their development. Implementing the youth components of the national mental health strategy should be addressed in the current federal-provincial discussions on a new health accord.
- **Promotion of healthy living:** Beyond physical exercise and prevention of bullying, strategies are needed to help young people make healthier consumer choices in the face of marketing that targets the vulnerabilities of young people, such as violent video games and junk food.

Key to addressing these priorities is a shift toward health policy as an investment rather than a drain on the economy. In the context of an aging population, Canada needs to increase the focus on developing the potential of every child to maintain our economic and social well-being, rather than using demographics as an excuse to cut preventive health programming for children.

Canada and most provinces/territories have no coherent family or child policy. That would change under a rights-based approach to health promotion, which considers the best interests of the whole child and his or her living conditions. It would challenge the current fragmented approach to health services for children and narrow approaches to preventive health, which are often based on statistics more than children's real lives. It would lead to investments in community services that benefit all children and help to reduce disparities. Cutting community services is a false economy, for which we will pay more later. Both federal and provincial governments should allocate more funding for preventive measures, based on evidence from existing research on the social determinants of health.

CCRC recommends a combination of targeted initiatives to remove barriers for specific groups, such as Aboriginal children, children with disabilities, newly arrived immigrant children and children in remote communities, with support for broad-based community programming that reduces inequities between individual children. This would require co-operation across departments and levels of government. Research done by UNICEF has shown that an equity-focused approach, based on removing obstacles to fulfilling every child's rights, is a cost-effective way of closing gaps in the achievement of child development goals, which is our major challenge in Canada (UNICEF 2010a).

Talk about national standards seems to be dead in Canada. CCRC proposes the establishment of a mechanism to investigate and address inequitable access to healthcare, as recommended by the UN Committee on the Rights of the Child in its second review of Canada. (UN Committee on the Rights of the Child 2003) In this way, rights-based mechanisms could be a solution to the challenges of federalism. They could help to ensure equitable treatment while allowing flexibility between provinces in specific program choices.

Taking children's rights seriously means looking at health policy and healthcare through the eyes of a child, and including young people in the planning and design of health policy and healthcare services. Health policy analysts and care providers need to shift from the current focus on specific, discreet interventions, to see the child as a whole person. This will require training for healthcare professionals to be familiar with and promote children's right to healthy development.

The necessary changes in children's health will happen when we recognize that all people under age 18 are fully persons and Canadian citizens who need to be treated with respect

for their rights and supported so that they can become fully contributing members of our society. This is *right in principle and right in practice*. **HQ**

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... multiple international assessments show that Canada, one of the wealthiest countries in the world, is among the weakest for family policy.



From Rose-Coloured Glasses to Reality

Addressing the Family Policy Deficit in Canada

Lynell Anderson

While more than 70% of mothers in Canada participate in the paid labour force (Beach et al. 2009), 44% of their one- and two-year-old children (outside of Quebec) are cared for in unregulated home settings (Cleveland et al. 2008). It's time to take off our rose-coloured glasses and engage in a healthy dialogue about the implications of this reality. When we do, Canadians will likely agree on a family policy solution that advances our human rights commitments by providing more time and resources for families to care personally for their young children, as well as high-quality, affordable child care services that help families balance their caring and earning responsibilities.

Canada's Public Reporting and International Standing

Improved public reporting by federal, provincial and territorial governments in Canada, particularly as it relates to the child care service component of family policy, is key to facilitating this national dialogue. Consider Canada's reporting to the United Nations (UN) Committee that monitors progress under the Convention on the Rights of the Child (CRC). At the completion of its last periodic review in 2003, the committee's concluding observations urged Canada to "undertake a comparative analysis at the provincial and territorial levels with a view to identifying variations in childcare provisions and their impact on children and to devise a coordinated approach to ensuring that quality childcare is available to all children, regardless of their economic status or place of residence" (CRC 2003). Canada's next CRC review is currently under way, but the 2009 public report submitted by Canadian governments to inform this review did not include the requested comparative child care analysis, nor did it present a coordinated child care plan. "The federal government defers most of the responsibility for public reporting on [child care] to the provinces and territories, each

of whom provide individualized, largely descriptive comments" about their current policies rather than evaluating the effectiveness of those policies in achieving measurable objectives for quality and availability (Child Care Advocacy Association of Canada [CCAAC] and Coalition of Child Care Advocates of BC [CCCABC] 2011).

The UN review process also invites the non-governmental organization community to submit alternative reports for the committee's consideration. In their 2011 submission, CCAAC and CCCABC describe their work in recent years to encourage improved public reporting on child care services as committed by federal, provincial and territorial (FPT) governments under a series of transfer agreements that were implemented between 2000 and 2005 (Government of Canada 2011). These commitments are reinforced by broader Canadian public performance reporting guidelines developed primarily by the professional accounting community (Public Sector Accounting Board 2007). For example, in 2007, CCAAC completed a three-year, federally funded citizen engagement project designed to support the child care community in reviewing and sharing feedback with governments on their public reports. The CCAAC's project findings showed that "few governments have clear public reporting that allows the public to easily track progress ... [and] none meet all of the performance and reporting requirements outlined in the FPT Agreements" (Anderson and Findlay 2007: 4).

Questions and concerns about Canada's public reporting on early childhood programs and services, including child care, have also been widely shared and discussed with governments by academics (Anderson and Findlay 2007), community organizations (First Call 2007) and the Canadian Senate (Anderson and Findlay 2007). Despite this feedback, the advocates' alternative report (CCAAC and CCCABC 2011) asserts that Canada's 2009 report to the CRC still does not meet public reporting commitments and guidelines in key areas, for the following reasons:

- **It lacks comparative data** analyses of child care service attributes (i.e., quality, access) between provinces, among industrialized countries, over time and in relation to a comprehensive plan and to UN CRC commitments.
- **It lacks key indicators** for critical performance measures including child care quality (e.g., staff training, compensation), access (e.g., average parent fees, percentage of children

In 2005, “the Committee on the Rights of the Child determined that early childhood was not receiving adequate global attention in deliberations on the UN CRC. Furthermore, the Committee recognized that early childhood was a critical period for the realization of rights. These concerns led the Committee to assist countries which have adopted the CRC (frequently referred to in UN reports as ‘states parties’) to better understand their commitments to young children through the development of General Comment 7 (GC7) – Implementing Child Rights in Early Childhood” (Child Care Advocacy Association of Canada and Coalition of Child Care Advocates of BC 2011: p. 5).

with access to regulated spaces) and public investment (e.g., cost per space or per child, percentage of gross domestic product [GDP] invested).

- **It lacks civil society input**, which is readily accessible online from a range of experts, community groups and associations. Where consultations and direct input have occurred, there is no synthesis of the evidence or any policy recommendations received.
- **It lacks transparency.** For example, the federal government does not discuss its decision to terminate the largest child care transfer agreement with the provinces and territories, nor does it acknowledge that this termination resulted in a 24% reduction in child care transfers between 2006–2007 and 2007–2008.

Meanwhile, a cross-sectoral range of civil society groups identify the need to substantially increase public investment in and access to child care services. The Canadian Paediatric Society, for example, produces a biannual assessment of key indicators of child and youth health, along with specific recommended actions “based on clear need and on evidence that government intervention is effective” (2012: 3). Their January 2012 report observes that “the vast majority of families find child care expensive and hard to access ... The Canadian Paediatric Society continues to call on the federal government to implement a national child care strategy, with an integrated system of services that are universal and publicly funded” (2012: 32).

These recommendations for child care system building are echoed in multiple international assessments that show that

Canada, one of the wealthiest countries in the world, is among the weakest for family policy (Organisation for Economic Co-operation and Development 2001, 2006; UNICEF Innocenti Research Centre 2008). Lack of access to quality child care services is consistently identified as a particular concern in these studies. For example, a 2008 UNICEF report assessed 25 economically advanced countries on 10 family policy benchmarks. The benchmarks chosen reflect both a comprehensive review of the research and the application, in developed countries, of the UN CRC’s “General Comment 7: Implementing Rights in Early Childhood” (2005). Research and rights converge in affirming the importance of adapting family policy for today’s world: to summarize, families need time, resources and services (such as child care) to help them balance caring and earning (Bennett 2008; CRC 2005). Canada ranked last in the UNICEF report, achieving only one out of 10 benchmarks (UNICEF 2008). (In the final report released by UNICEF, both Canada and Ireland achieved one out of 10 benchmarks. However, countries had originally been assessed on 15 benchmarks, and in this earlier assessment Ireland achieved three benchmarks whereas Canada achieved only one (Bennett 2008)).

Thus, when we compare governments’ public reporting to both the international assessments and the cross-sectoral calls for action at home, we see that Canadians do not yet have a consistent, shared understanding about the reality of child care services in Canada from which to initiate a healthy national dialogue on today’s families that have young children. It follows that we also lack an agreed-upon set of measurable objectives through which Canadians can assess and monitor the progress of our overall family policy toward realizing rights in early childhood. A 2011 national poll supports this assertion, finding that “the majority of Canadians (55%) ... do not yet believe that Canada ranks near the bottom of the international pack of countries with developed economies when it comes to investing in families with preschool-age children” (Kershaw and Anderson 2011a: 20).

The Situation in the United States

Our neighbours to the south provide an example of how governments’ public reports could be improved in order to promote shared understanding, updated family policy and effective monitoring of rights in early childhood. The February 2012 report of the US Government Accountability Office (GAO) to the Committee on Finance of the US Senate is illustrative for its grounding in research, aggregation of data from different levels of government, inclusion of a range of experts and comparative and contextual analysis. The report’s cover letter opens with an assessment and a summary of the research, noting:

Many of this country’s children spend time in nonparental care arrangements, making high-quality early child care

and education (ECCE) essential to the healthy development of children and the peace of mind of working families. Research indicates that a critical component of a high-quality ECCE program is qualified caregivers and teachers. A child's successful development depends on sensitive and stimulating relationships with adults, and well-trained and skilled ECCE caregivers and teachers are better able to develop such relationships. Yet the qualifications of this workforce vary due to differences in professional requirements across states and ECCE programs, and challenges in attracting and retaining well educated and trained workers. (US GAO 2012: 1)

The reality of children's current care arrangements and the research on the importance of quality care drove the objectives of the study: "Because of the importance of this workforce and the federal investment in it, GAO examined (1) what is known about the composition, education, and income of the ECCE workforce and how these characteristics relate to quality, and (2) what activities are the Departments of Health and Human Services (HHS) and Education, and the states financing to improve worker quality?" (US GAO 2012). The study included a literature review, data analysis and input from both federal and state staff as well as ECCE experts and researchers. The resulting report summarizes the data analysis and provides some contextual and comparative analysis, as shown in the following excerpts: "[The] ECCE workforce ... had relatively low levels of education and income ... nearly half of all child care workers had a high school degree or less as did 20 percent of preschool teachers" (US GAO 2012: Highlights). "In 2009, 77 percent of full- and part-time ECCE workers – and 61 percent of full-time workers – earned less than \$22,000 per year, approximately the federal poverty level for a family of four" (US GAO 2012: 13).

Given the consensus about the importance of trained caregivers highlighted in this report, these findings clearly raise concerns about the quality of child care services young children in the United States are experiencing today. Taken together, the research and the results may challenge assumptions and beliefs about child care services such as these: caring comes naturally to women, so no training is required; women provide child care services because they love children, so the salary does not matter; and individual parents are responsible for finding and choosing quality care that works for them. In other words, Americans may be encouraged to remove any rose-coloured glasses and face a more complex reality. However, this government study's comprehensive, data-driven and evidence-based approach provides a solid foundation from which to build a broadly shared understanding of the current situation, and then move the dialogue on to problem solving and monitoring progress.

The Situation in Canada

Regrettably, and as discussed earlier, this solid foundation does

not exist in Canada today. The government's 2009 report to the UN CRC does not highlight critical performance measures (such as staff training and wages) for child care service attri-

Explanation of Terms: Unregulated Care versus Child Care

Unregulated care is provided by someone other than parents or immediate family members, either in the child's own home or another family's home. The care is not required to meet provincial or territorial standards, other than the legal limits established for the maximum number of children cared for, which varies across the country. The care is not monitored, and legal compliance is generally complaint driven. For Cleveland et al. (2008), unregulated care includes care by relatives outside of the child's immediate or nuclear family.

Child care refers to part-day or full employment-day "services that families access voluntarily in order to provide their children with early care and learning experiences in addition to those provided by parents" and other primary caregivers. Generally, centre-based child care services are "led by college-trained early childhood educators" and required to meet provincial health and safety standards (i.e., they are licensed or regulated programs). They operate in community centres, schools and other public facilities as well as in community- and privately owned facilities. Child care services are also provided in private homes. These family child care services are less likely to have trained early childhood educators and may be regulated or unregulated (the latter as outlined above) (Anderson and Harney 2012: 2).

"*Kindergarten*, available to 5 year olds in all provinces and 4 year olds in a few, is commonly voluntary, free, publicly-funded and provided for 2–6 hours per day for 10 months of the year. While Kindergarten could and should be considered part of the child care continuum, its policy characteristics differ so greatly from Canada's marketized approach to child care that the two are usually described separately" (Anderson and Harney 2012: 2).

"Child care may also be referred to by other names such as *early childhood education and care* (common in the [Organisation for Economic Co-operation and Development]); *early childhood care and education* (US), *early learning and child care* and, most recently, *early care and learning*. The latter name reflects a purposeful strategy by the child care community in British Columbia to retain *care* at the heart of early learning in a context where 'schoolification' of young children is a concern" (Anderson and Harney 2012: 2).

butes (such as quality). Nor are these measures and attributes addressed in the federal government's other recent reports on activities, expenditures and well-being in early childhood. While delegating primary responsibility for child care service outcomes to provinces and territories (Government of Canada 2012), the federal government's reports nonetheless assert that parents are "making use of a wide range of options" (Government of Canada 2008: 39) and choosing "the child care option that best suits their family's needs" (Government of Canada 2012: 1). Survey results on various current child care usage patterns for children

Facing reality means acknowledging that we have not yet fully realized our commitments to children's – and women's – rights.

aged one to five years with employed parents are presented as evidence of parental choice at work across Canada, without considering how the quality of various options may impact children's healthy development, or how affordability or accessibility may constrain the actual options available to parents.

Yet, "General Comment 7" of the UN CRC, to which Canada is a signatory, reminds us that "early childhood is a critical period for realizing children's rights" (2005: p. 3) ... "survival, well-being and development are dependent on and built around close relationships ... normally with a small number of key people, most often parents, members of the extended family and peers, as well as caregivers and other early childhood professionals" (2005: p. 4). Thus, states parties (i.e., governments) are responsible for the following:

- Rendering "appropriate assistance to parents, legal guardians and extended families in the performance of their child-rearing responsibilities" (CRC 2005: 9–10)
- Ensuring "that all young children (and those with primary responsibility for their well-being) are guaranteed access to appropriate and effective services, including programmes of health, care and education specifically designed to promote their well-being" (CRC 2005: 11)
- Monitoring and regulating "the quality of provision to ensure that children's rights are protected and their best interests served" (CRC 2005: 14)

With these responsibilities in mind, it is important to examine the above-noted child care usage patterns, as reported by the federal government, in more detail. Cleveland et al. (2008) provide this analysis for children of employed or studying mothers, outside of Quebec, for each individual year under age six. They found that, while 68% of children under age one are cared for solely by parents or immediate family

members, 26% of infants also experience care in unregulated home settings and 6% in regulated settings (licensed centres or family child care homes) (2008: 10). While it may be surprising to think of a large majority of employed parents caring for their infants personally, the report's authors remind us that parents are still categorized as employed when on maternity or parental leave. On the other hand, the finding that almost one third of these very young children receive additional care outside of the immediate family can likely be explained primarily by the fact that one third of all Canadian mothers are either not eligible for, or do not access, maternity or parental leave. The reduction in household income associated with these leave benefits helps to explain why they are not fully accessed (Marshall 2010).

Once maternity and parental leave ends, additional care arrangements increase for both one- and two-year-olds as 44% experience unregulated care and 28% have regulated care services, in addition to parental care (Cleveland et al. 2008). The significant use of unregulated care declines between ages three and five years, and the use of regulated care grows. By age five, 97% of children of employed or studying mothers (outside of Quebec) experience additional early care and learning arrangements: 70% mainly in regulated care (including kindergarten) and 27% mainly in unregulated home settings (Cleveland et al. 2008).

Thus, the child care usage data by age provide critical context for a healthy national dialogue about families with young children, asking Canadians to face the reality that most preschool-aged children, and many children under age three years, already experience some form of care in addition to that provided by parents and immediate family members. (The report by Cleveland et al. [2008] includes discussions of both the strengths and limitations of the data used to generate this analysis, which is primarily from the National Longitudinal Survey on Children and Youth.) The data also raise an important question: does the higher use of unregulated care for one- and two-year-olds genuinely reflect parental choice, or are there other factors at play?

Outside of Quebec, parents generally pay more for regulated child care for infants than they do for preschool-aged children. ("The Province of Quebec began to build a publicly-funded child care system in 1997. Although the system is not yet fully universal, nor does it consistently achieve high quality and affordability for all families, it is significantly further ahead than Canada's remaining provinces" [Anderson and Harney 2012: 3].) The higher cost to parents reflects the increased costs associated with operating infant care programs, which have fewer children for each caregiver in order to meet quality standards. In British Columbia, for example, families with a two-year-old child pay on average \$9,000 annually in child care fees, whereas those with a four-year-old pay \$7,000. Families in large cities such as Vancouver pay, on average, \$14,000 annually for children under age three years (Papadionissiou 2012). In comparison, the

average undergraduate tuition fee at a BC university is \$5,000 annually (Statistics Canada 2011).

Yet, higher child care fees do not fully offset the higher operating costs of infant and toddler care, and operating deficits are a particular concern for programs serving children under age three. As a result, these services are least likely to expand without additional funding sources (Anderson and Perryman 1998).

Considering parent fees for child care in the context of the nearly universal uptake of (generally voluntary) free kindergarten across Canada, as well as the dramatically increased use of \$7 per day regulated child care services in Quebec, there is a suggestion “that child care use and spending patterns in the rest of Canada are not driven purely by preference but represent difficult employment and child care decisions constrained by the affordability of care” (Cleveland et al. 2008: 22). In other words, when regulated programs are available and affordable, parents choose them. And from a child health perspective, that’s a good thing. Even though the quality of regulated child care programs in Canada today is inconsistent – staff training does not meet recommended standards and low wages exacerbate recruitment and retention issues (CCHRSC 2009) – there are no standards or monitoring for quality in unregulated homes that provide child care services. Commenting on recent criminal charges against a child care provider in British Columbia related to the death of a one-year-old child in her care, the local health authority explained that “because the daycare was in a private home and unlicensed, it was not subject to regular inspections” (Woo 2012, January 10).

A 2005 study of quality in Quebec child care programs was unique for its inclusion of child care services provided in unregulated homes. The study found that unregulated care was of lower quality, on average, than regulated services. In addition, one in four unregulated homes was assessed as inadequate or below minimal levels of quality (Cleveland et al. 2008). Despite concerns about the quality of child care services provided in unregulated home settings, the fees parents pay for these services are eligible for the federal Child Care Expense Deduction. In other words, public funds (through forgone taxes) support this form of care.

Given all of the above-noted concerns about child care in Canada today, it is important to acknowledge that many Canadian provinces and territories are taking steps to increase access to regulated, affordable programs. Some have recently increased the number of child care spaces; however, the public funding involved is relatively small, so growth is slow and concerns about quality and affordability remain. More significant is the trend toward expansion through the public education system. Six provinces and territories now provide full-day kindergarten for five-year-olds, and several have introduced or expanded programming for some three- and four-year-old children as well (McCain et al. 2011).

The growing involvement of public education reflects an international trend with widely recognized advantages. Public

education is valued and respected, led by trained, reasonably compensated staff and universally available to all children with no fees for parents. Public education also has an infrastructure in place from which to plan, build and operate. At the same time, there are challenges associated with the implementation to date. The full employment-day needs of families have not consistently been addressed, so parents still struggle to find and afford before- and after-school care. A related concern is the lack of planning to address the impact of new, education-sponsored programs on existing child care services.

Finally, to date, education ministries have prioritized older preschool-aged children in their expansion plans. While one can appreciate the logic in starting with an expanded day for the five-year-olds who are already in the school system, this approach increases access to regulated care for those already most likely to have it, and it leaves Canada’s youngest children largely in unregulated home care settings. Yet, outside of Quebec and Prince Edward Island, it does not appear that provinces and territories have a plan in place to address this situation.

The absence of a comprehensive plan is one of the weaknesses in governments’ public reporting on child care, described above. But public reporting issues are not the only barriers to progress. Others include concerns about the level of public investment required and the role of government. Underpinning these concerns, however, is one fundamental question: what about the time for families to care personally for their young children?

When Canadians’ rose-coloured glasses stay firmly in place, supported by weak public reporting, discussions about child care stay in the private domain of individual family choice and responsibility. Facing reality means accepting the fact that family choice and responsibility are constrained by factors beyond individual control, and that these constraints have consequences for all of us today. It means acknowledging that most mothers are in the paid labour force, that most of their children are already experiencing additional forms of care and that the quality of that care matters. Finally, it means acknowledging that we have not yet fully realized our commitments to children’s – and women’s – rights.

But even those who accept these realities may struggle to prioritize child care system building in Canada because an emphasis on child care appears to de-emphasize parental care. Deep down, we know we need to do something about child care. But we are torn because we also want families to have more time together. How do we reconcile these two realities? We do both.

New Deal for Families

Kershaw and Anderson (2011b) propose a New Deal for Families that recognizes the reality facing families with young children in Canada today relative to a generation ago. After adjusting for inflation, the authors observe that household incomes for young couples have flatlined, “even though the share of young

women contributing to household incomes today is up 53 per cent. Meanwhile, housing prices increased 76 per cent across the country since the mid-1970s” (Kershaw and Anderson 2011b: 1). Thus, “the generation raising young children today is squeezed for time at home, squeezed for income because of the high cost of housing, and squeezed for services like child care that would help them balance earning a living with raising a family” (Kershaw and Anderson 2011b: 1). This decline in the standard of living helps to explain why 27% of young children from across the socio-economic spectrum arrive at school vulnerable in one or more developmental domains (Kershaw et al. 2010). And, it’s no wonder work-life conflict is particularly high for parents with young children.

The New Deal for Families proposes three policy solutions that substantially improve the enabling conditions both for healthy child development and for parents to realize their

How do we reconcile these two realities? We do both.

individual choices and aspirations for family and career. Consistent with Canada’s human rights commitments, the New Deal recognizes that parents have primary responsibility for their children (with mothers and fathers recognized as equal caregivers) and that government’s role is to ensure that families have the support necessary to carry out these responsibilities (CCAAC and CCCABC 2011; CRC 2005).

Specifically, a New Deal for Families would provide New Mom and New Dad Benefits that would give all parents, including the self-employed, time and resources to be home until their children were at least 18 months old. All parents would also have access to free parenting support and healthy child check-in programs, to help them in their new roles (Kershaw and Anderson 2011a).

Thereafter, the New Deal would provide parents with more quality regulated child care options. By building on existing services, including support for any unregulated caregivers who chose to become trained early childhood educators, the New Deal would provide part- and full employment-day programs in child care centres, schools and licensed family homes to all who chose to use them. These services would be publicly funded to ensure that parents would pay a maximum of \$10 per day, with no fees for families earning less than \$40,000 per year (Kershaw and Anderson 2011a). Even with affordable, regulated options in place, however, some families might still choose to make private arrangements for unregulated care to be provided by extended family members.

Kershaw and Anderson project that, overall, the use of child care services would not increase substantially under the New

Deal. In fact, there would be no increase for children under three years old. Rather, the New Deal would help families move from unregulated care to parental care when their children were under 18 months old, and from unregulated care to regulated care afterwards (Kershaw and Anderson 2011a). Finally, these policies would “be supported by flex-time for employees and employers to remedy workplace standards that too often make it standard practice to ignore the family” (Kershaw and Anderson 2011b: 1).

The benefits of this New Deal would extend well beyond families. In the short term alone, the New Deal would reduce work-life conflict for parents raising young children, which currently costs employers across Canada more than \$4 billion annually in excess absenteeism, employee turnover and private healthcare costs. The implementation of the New Deal would also address the rising public cost of healthcare, as improvements to work-life balance and healthy child development would lead to healthier families. The New Deal would also benefit the public purse through additional taxes paid because more employees – mainly mothers – would be retained in the labour market. Finally, the New Deal could reduce carbon emissions by encouraging “Canadians to spend more time together, and less [money] on stuff” (Kershaw and Anderson 2011a: 19).

Of course, there would be an up-front cost to the public purse: \$22 billion annually or about 1.5% of our economy (GDP) (calculated from Kershaw and Anderson 2011a). This is the cost of addressing the family policy deficit in Canada today and, simultaneously, of substantially fulfilling Canada’s commitments to young children and their families under the UN Convention on the Rights of the Child. It is the cost of moving from “generation squeeze” to “a Canada that works for all generations.”

Some will suggest that given current economic constraints and restraints, Canada cannot afford this investment in families with young children. Yet the reality is, when Canadians decide something is a national priority, we find the funds. For example, between 2007 and 2010 – a time period that included an economic downturn – Canadians increased public medical care expenditures by \$22 billion annually (Kershaw and Anderson 2011a: 4).

So, welcome to a healthy national dialogue. **HQ**

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About the Author

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A young child with short brown hair, wearing a light blue polo shirt and shorts, is sitting on a windowsill. The child is looking out a window to the right. The room has a textured, light-colored wall and a dark curtain on the right side. The lighting is soft, coming from the window.

Serving All Children to Catch the Most Vulnerable

Kerry McCuaig

A young mother of three, Susan came to the early learning centre in the local school at the urging of her social worker. In Susan's words, "I went to get my worker off my case. I hated walking in the doors of that red brick building which brought back bad feelings of my own experiences at school" (names changed to protect privacy; Morrison et al. 2012: 14). Susan's oldest daughter has been diagnosed with autism; her two younger children have developmental delays. She wants more than anything to give her children a different upbringing than she experienced but by her own assessment: "Most days, I'm not a very good mother."

An extensive intervention plan has been developed for the children, which now includes an early interventionist, speech and occupational therapy, a physiotherapist and social worker. But to Susan, the help is sometimes a burden. "It felt like we

In the integrated-centre model, specialists do not work in isolation with the child but involve the family and the entire staff team.

were always running from place to place. A lot of times I just cancelled because I was too tired" (Morrison et al. 2012: 14). According to the case file this family is well served. But for all the help offered, Susan doesn't consider herself a more competent parent. She feels observed, judged and a failure. From a service perspective, it is counterproductive to refer a child to a support program if the parent is doesn't attend.

Fortunately, the early learning centre has provided Susan with some welcomed options. It is one of a dozen in the Maritime Provinces now showcasing the benefits of delivering early education, child care, family support and intervention programs from a service platform anchored to local schools. Called Early Childhood Development Centres, they are designed to inform public policy by showcasing effective forms of early childhood service delivery. Operations and research are supported by the Margaret and Wallace McCain Family Foundation in partnership with the governments of New Brunswick, Nova Scotia and Prince Edward Island. Modelled on the 10-year-old Toronto First Duty experiment, the centres offer a seamless continuum of supports, beginning with pre- and post-natal information and nutrition resources, parent-infant activities and programs that encourage parents to choose appropriate behaviour guidance and to read and talk more with their children. As children progress through play groups to enrol in the flexible preschool program and move into the elementary grades, they and their families have continuous access to child care, health screening, special needs interventions and family counselling and referrals to employment, immigration and housing services.

By integrating staffing, resources, administration and facilities, the school, health, family support and community partners are able to create a nurturing and supportive cocoon. Children are not segregated from their families. The family and staff form a devel-

A great change is coming over childhood in the world's richest countries. Today's rising generation is the first in which a majority is spending a large part of early childhood in some form of out-of-home child care. At the same time, neuro-scientific research is demonstrating that loving, stable, secure and stimulating relationships with caregivers in the earliest months and years of life are critical for every aspect of a child's development. Taken together, these two developments confront public and policy makers in OECD countries with urgent questions. Whether the child care transition will represent an advance or a setback – for today's children and tomorrow's world – will depend on the response.

UNICEF. 2008. *The Child Care Transition, Innocenti Report Card 8, 2008*. Florence, Italy: UNICEF Innocenti Research Centre.

Number of Benchmarks Met for Early Childhood Programs by Country

Sweden, 10
Iceland, 9
Denmark, 8
Norway, 8
France, 8
United Kingdom, 5
Germany, 4
Japan, 4
United States, 3
Canada, 1

Source: Reproduced with permission from UNICEF (2008).

opmental team. Parents in integrated programs consider the school part of their family's support network. They report feeling more empowered to engage with staff and show more positive interactions with their children at home. This capacity building works for parents who are new to Canada as well as for those born here, and for families at risk and those with adequate resources. Research also suggests that the integrated model is able to serve more families in ways in which they want to be served and with higher-quality programming for the same costs as traditional "siloed" delivery. (Information on programming and research is available at Toronto First Duty's website: www.toronto.ca/firstduty.)

"I didn't expect to be treated so kindly from the minute we arrived," Susan relates. "They asked our advice about our

kids and asked us if we could help them out too. It was a good feeling, and we have been at the centre since. The best part is we no longer have to take a bunch of buses for all of the kids' appointments. Everyone meets us at the centre. I don't miss our appointments anymore" (Morrison et al. 2012: 14). In addition to compliance, evaluators are finding other positive spillovers. Short-term, sporadic interventions are not sufficient for sustainable improvement. In the integrated-centre model, specialists do not work in isolation with the child but involve the family and the entire staff team, raising the bar in everyone's practice

The reduced need for social supports coupled with the tax revenues from mothers who are able to work because of low-cost children's programming pays for the entire cost of Quebec's system.

and creating an environment that reinforces interventions. The intensity and consistency provided by the entire staff team often reduces the length of time the child requires specialized supports. Professionals are relieved of travel and administrative duties, allowing them to spend more time with the children and families.

Supports provided in early childhood can change developmental trajectories, thereby influencing life outcomes. Susan's family appears to be on a new path; too many others are still running around to appointments. Parents and kids are frustrated, and professionals are often disheartened. And these are the lucky ones who receive our attention. What about those children whose exceptionalities are not identified, who linger on waiting lists or who are deemed "good enough"?

Changing Families, Stagnating Services

The needs of modern families have changed; the services designed to support them have not. Children's programming in Canada is divided into three distinct streams – education, child care, and family and intervention supports. All promote the healthy development of children as their primary goal, yet they have little, or no, interaction. There are pockets of innovation and increased levels of investment, but service overlap prevails alongside large gaps. Each stream has its own bureaucracy, culture and mandate. The result is service silos. Children and families don't experience their lives in silos; their needs can't be dissected and addressed in isolation.

In a comprehensive review of the early childhood systems in 20 of its member countries, the Organisation for Economic Co-operation and Development (OECD 2006) found Canada spends the lowest amount per child on early childhood programs. As a result, Canadian children are much older than their European counterparts when they enrol in kindergarten

and are the least likely to access child care, preschool or other early years services. (Starting Strong [OECD 2006])

Siloed delivery is an impediment. The OECD review found that in jurisdictions where the policy and delivery of education, child care and related supports are divided, the following similar challenges prevail:

- Coverage is sparse.
- Not all families receive the services for which they are eligible.
- Service location and affordability are barriers.
- Services hours and parents' work schedules often conflict.
- Families with multiple needs have difficulty fitting services together.
- Families lose needed services as children age or their circumstances change.

Service providers have the following challenges:

- There is no ongoing contact with families during their children's early years.
- Inflexible mandates and funding criteria leave providers unable to provide cohesive support.
- Services are funded on the basis of inputs rather than outcomes, making it difficult to tailor services to families' diverse needs and circumstances.
- Services are typically focused on treatment, rather than prevention or health promotion, making it difficult to adapt to meet emerging needs.
- Payment is by piece work – the number of children seen – rather than program quality or child outcomes.

Early Years Study (McCain and Mustard 1999), co-chaired by the Honourable Margaret Norrie McCain and Dr. Fraser Mustard in 1999, and Early Years Study 2 (McCain et al. 2007) brought the science of early human development to the attention of policy makers and the public. The researchers' work acknowledges that modern families need a modern support system, one that places the healthy development of children at the centre but also recognizes that children do not exist in isolation from their families. Noting that Canada's youngest citizens are highly underserved, the reports called on governments to invest in the early years at the same rate as for older children.

In Canada's family policy mix infancy receives some attention. Mothers are supported with universal pre- and post-natal care. Babies are screened at birth, and newborn home visiting is widespread. It is between the end of parental leave and the beginning of schooling that supports break down and public policy is confused about what to do.

Early Years Study 3 (McCain et al. 2011) recommends building on the asset we already have in public education. It envisions the transformation of elementary schools into child and

family centres that work with parents to welcome all children – from infants to adolescents – and operate year round. The report argues that all the elements required to create a consolidated program that can actually work for families already exist in the hodgepodge of child care, public health, education and family support services. In an era of declining birth rates, expanding education's mandate to include younger children and families is cost-effective. It can help maintain the viability of schools, and in rural areas, preserving the school can preserve the community.

Quebec's Natural Experiment

Quebec has largely grasped this concept by enriching its parental leave and expanding educational child care for preschoolers. Full-day kindergarten begins at age five, and school boards are required to provide out-of-school care for children up to age 12. Academics from many fields have tracked the outcomes of Quebec's children's initiatives, and the results have been truly amazing. In just a decade, Quebec has gone from the bottom to the top on many important social indicators. Whereas it once had Canada's lowest female labour participation, it now has the highest (Roy et al. 2006). And whereas Quebec women were once less likely to attend post-secondary education than their counterparts in the rest of Canada, today they dominate (Roy et al. 2006). At the same time, student scores on standardized tests have gone from below the Canadian average to above it. Despite working more, Quebec women are also having more babies (Statistics Canada 2007, June 28), and Quebec dads are more involved in child rearing. Eighty-two percent of Quebec fathers take paid leave after the birth of their infants, compared with just 12% in the rest of the country (Statistics Canada 2011). In addition, childhood programs designed to allow mothers to work have slashed Quebec's child poverty rates by 50% (Campaign 2000).

Finally, in an analysis that should catch the attention of policy makers everywhere, a team of Quebec economists revealed that the reduced need for social supports coupled with the tax revenues from mothers who are able to work because of low-cost children's programming pays for the entire cost of Quebec's system (Fortin et al. 2011).

Despite Quebec's documented success, policy makers in the rest of Canada and much of the public believe that families are managing just fine as is. Schools are scary enough places to send a six-year-old; they can't imagine allowing a two-year-old to attend. They fret over unmanageable costs and inexhaustible demands. The costs are high, but not in the way most imagine.

Most provinces determine children's readiness for school learning during kindergarten using the Early Development Instrument. Kindergarten teachers assess children on scales related to their social, emotional, cognitive and physical development. Country-wide data show that more than one in four kindergarten-aged children have vulnerabilities that make them more

likely to fail in school (Offord Centre for Child Studies n.d.).

Abilities at school entry can be traced to experiences in and out of home, from birth on. How children do in kindergarten is a measure of the developmental opportunities available in a community, just as rates of infant mortality and low birth weight reflect the supports and resources available to pregnant women. Children who have trouble coping in kindergarten are less likely to graduate from high school or to go on to post-secondary education. As adults, they are more likely to fail in their personal relationships and have difficulties finding steady work. They are also more likely to become sick, addicted or depressed.

Poverty increases children's chances of delayed development, but it is not the only factor. Most vulnerable kids do not dwell in poverty; they live in middle- and upper-income households and neighbourhoods (Janus and Duku 2000). The learning gap between middle-income children and those born to the wealthy is just as big as the gap that separates low-income children from those of the middle class. Middle-class children, particularly boys (Gilmore 2010), drop out of school at alarming rates and with lifelong consequences (Stack 2011). In addition, income does not inoculate children against learning disabilities or less-than-ideal home lives.

What difference could it make to families with young children – indeed to all of us – if every school welcomed kids of all ages? Supports in one generation can bring benefits to successive generations by breaking intergenerational cycles of illiteracy, poverty, social isolation and poor health. Let us revisit Susan's story: "I help the centre now by collecting clothes that are too small for my kids so they can be given to someone else. The centre helps us when we need it and shows us how we can help others when they need it too. We like it here and wouldn't go anywhere else because our kids are happy and learning a lot for school" (Morrison et al. 2012: 14). In her short interview, Susan identifies daily challenges that, if not addressed, could become long-term problems. Instead of being stressed and depressed, she has escaped the isolation that fulltime caregivers often experience. Rather than bequeathing her distaste for school, Susan's new-found positivism is being conveyed to her children.

Stress and depression are not restricted to those who are struggling financially, new immigrants or single parents. The "sandwich generation" is looking after both young children and aging parents. These individuals are working longer and harder, and job security is not an option (Kershaw 2011). A survey by the Conference Board of Canada found that the most frazzled employee is the professional mother (Higgins and Duxbury).

Stressed-out parents are not great for their children. Stress disrupts parents' ability to manage their own conduct, leaving them with fewer resources to regulate their children's behaviour. The more harried parents are, the less likely they are able to engage positively with their children. Chronic parental stress "drips down" on children. Researchers have connected

chronic parental stress to the poor academic record of their children (Harold 2007). Conversely, researchers have found that parents whose children attend programs that are integrated into their school are much less anxious than their neighbours whose kids are in the regular, jumbled system (Toronto First Duty 2009). Direct gains have also been documented for

Just as healthcare costs are unmanageable without health promotion, cleaning up after children who have fallen through the cracks is equally unsustainable.

children. Evaluations of Sure Start in the United Kingdom (Siraj-Blatchford and Siraj-Blatchford 2009), Communities for Children in Australia (Government of Australia n.d.) and Toronto First Duty (2008) found that children in neighbourhoods with integrated children’s services showed better social development, more positive social behaviour and greater independence/self-regulation compared with children living in similar areas without an integrated program.

Canadians must make the hard and important job of raising children a little easier. As a society, we cannot have it all. We rely on women’s labour and expect families to shoulder the social and financial load of rearing the next generation. But we pay a big price when families flounder and their children get left behind. Just as healthcare costs are unmanageable without health promotion, cleaning up after children who have fallen through the cracks is equally unsustainable.

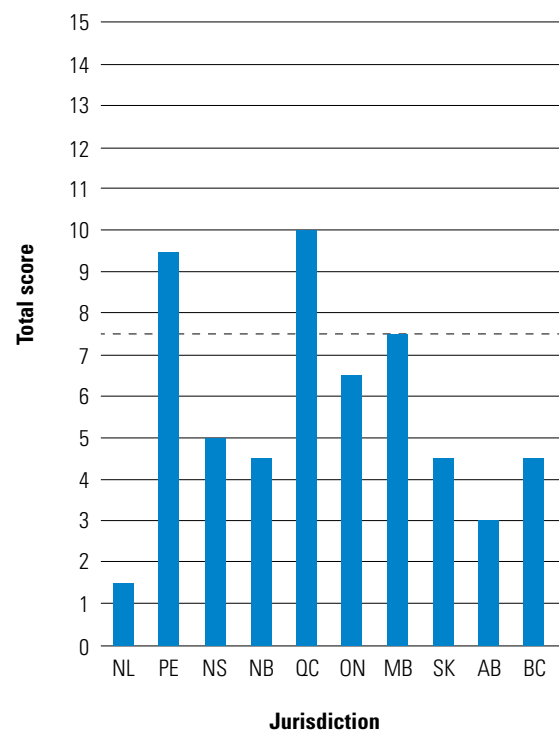
We are making some progress. An environmental scan featured in Early Years Study 3 (McCain et al. 2011) found that provincial spending on early childhood programs has doubled since the OECD delivered its failing grade to Canada in 2006. Half of all three-year-olds now regularly attend a preschool program, up from 20% in 2006. But spending more doesn’t necessarily mean spending smart. Split oversight and delivery still require too many parents to piece together arrangements to cover their work schedules. The results are stressful for children and parents alike, but they also negate the wonderful payback that comes from delivering early education in a way that simultaneously supports children’s learning and their parents’ work.

Index Reveals Progress in Systems Design

To monitor development in the provinces’ early childhood systems, the authors of Early Years Study 3 created the Early Childhood Education Index, a 15-point scale that assesses the governance, funding and accountability of early childhood programming by province. In 2011, only three jurisdictions made it past the halfway mark in this first iteration (Figure 1). Yet there are reasons for optimism. In 2006, Quebec would have stood alone. At that time, only three provinces offered full-day

kindergarten; today six do. Province-wide curricula anchored in learning through play were the exception instead of the norm. No province had merged oversight for education and child care; today four have a single lead ministry, and the monitoring and reporting of vulnerability in preschool-aged children is no longer a rarity. We now have many examples of good practice and the steps that jurisdictions took to achieve their results. Their experiences can serve as a guide to others. The index does not suggest that there is only one route to success. Indeed, the two leading jurisdictions (Quebec and Prince Edward Island) reached their destinations using very different methods. The index is now housed at the Atkinson Centre at the Ontario Institute for Studies in Education, University of Toronto. It will undergo additional validation before going into the field again in 2013–2014.

FIGURE 1.
Early Childhood Education Index, total scores for 2011



Source: Reproduced with permission from the Margaret and Wallace McCain Family Foundation.

An explosion of made-in-Canada research contributes to an understanding of lifelong learning and a life-cycle approach to human development. It provides a powerful policy framework that recognizes that support interventions are cumulative. At the

provincial level, governments must lead with coherent resources and oversight. At the local level, the challenge is to transform schools into vibrant centres of their community, housing rich learning environments and nurturing social networks. From these centres, a holistic and democratic approach to learning can emerge. Schools would no longer be seen as a public expense but, rather, a lively public place that welcomes children and families before, during and after the ring of the bell. **HQ**

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Levels of Influence in the Built Environment on the Promotion of Healthy Child Development

James R. Dunn

There has been a major explosion of research on the built environment and health in the social epidemiology, urban planning, geography and other disciplines over the past several years. Of the portion of this recent research that focuses on children, the bulk of it targets the degree to which the built environment enables or constrains physical activity levels for children, especially routine physical activity such as walking to school, and the impact of such active transportation on outcomes such as obesity (Pabayo et al. 2010; Spence et al. 2008). Another branch of more established research examines the potential for hazards and risks in the built environment to cause harm to children, such as indoor and outdoor air pollution and outcomes such as asthma (Cummins and Jackson 2001).

Obviously, it is important to keep children safe and protected from risks and hazards in the built environment. But in this article, I adopt a different target: understanding the effects of children’s built environments on healthy child development. This is a departure from traditional approaches that consider child diseases, disorders and the avoidance of hazards and risks in the built environment, and instead focuses affirmatively on the conditions of the built environment, at multiple geographical scales (i.e., locally, regionally, nationally), that *promote healthy child development*.

In order for the built environment to be an effective target for child health promotion, it is imperative that we get beyond relatively simple concepts such as the built environment and the mere avoidance of disease and illness and the reduction of hazards. Similarly, there are a number of conceptual models that argue that factors at different levels of social organization matter to healthy child development (e.g., Bronfenbrenner 1977, 1979, 2004), and specify which factors at which levels matter to which aspects of development.

Based on evidence from a study in Vancouver of the effects of the household and neighbourhood scales on kindergarten children’s readiness to learn, which I discuss in more detail below (Oliver et al. 2008), there are now clues to tell us which attributes matter at different levels and to what aspects of healthy child development. This will go a long way to directing research that seeks to understand the mechanisms by which our environments affect healthy child development and to subsequently designing health promotion efforts for children.

In the first section of this article, I describe the approach to healthy child development that guides the remainder of

the discussion. In the second section, I review seminal work from Urie Bronfenbrenner that describes how built and social environments promote healthy child development. In the final section, I describe some of the challenges that are associated with the adoption of an approach that focuses on the role of built environments in the promotion of healthy child development at a population level.

Domains of Healthy Child Development

In order to conceptualize the impact of the built environment on healthy child development, it is necessary to establish the key elements of child development so that the relative influence of specific built environment factors can be investigated for each element. Following the work of Kagan (1992), Doherty (1997) and Janus and Offord (2007), I adopt the position that the key elements of child development are social knowledge and competence, emotional development and maturity, language and cognitive development, healthy physical development, and communication skills and general knowledge. *Social knowledge and competence* refers to an “awareness of the general standards of acceptable behaviour in a public place, the ability to control one’s own behaviour, the ability to cooperate with others in working together on assignments, appropriate respect for adult authority, and the skills to communicate feelings and wants in socially acceptable ways” (Doherty 1997).

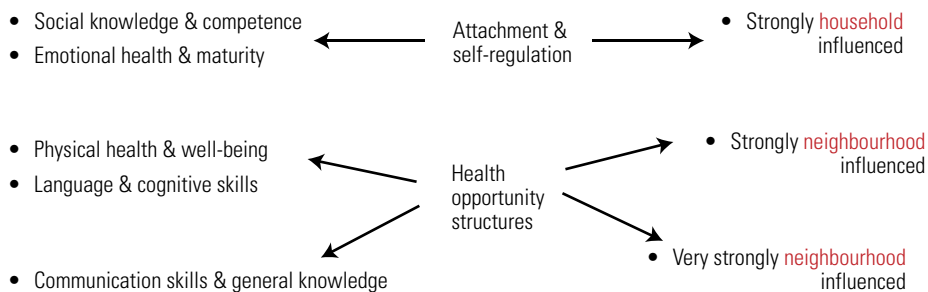
Emotional development and maturity refers to such traits as the self-confidence to try new tasks and to not fear failure. It also includes the abilities to defer immediate gratification, to persist in repetitive exercises that are required for learning complex tasks and to cope with momentary failures without emotional outbursts (Doherty 1997).

Language development refers to such things as understanding the ways in which language can be used symbolically to represent remote or even imaginary events (Doherty 1997), as well as the ability to “understand adults’ and other children’s verbal communication ... and verbally communicate experiences, ideas, wishes, and feelings in a way that can be understood by others” (Doherty 1997: 23). *Cognitive*

FIGURE 1. Neighbourhood- and household-level influences on health child development domains

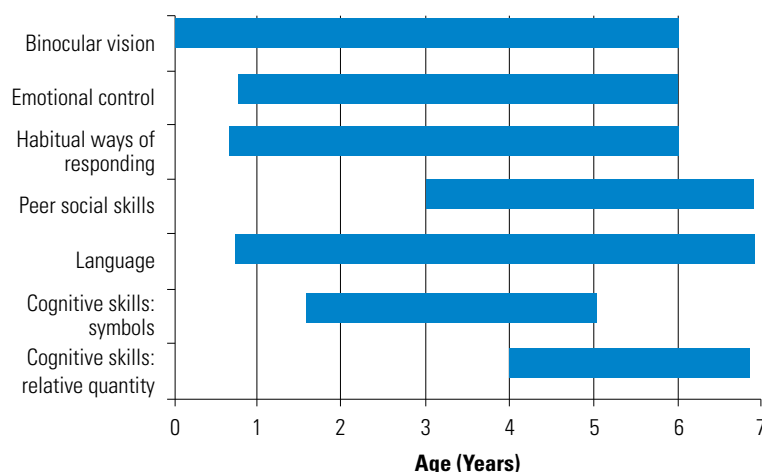
Levels of influence and pathways

According to a Vancouver study by Oliver, Dunn, Kohen & Hertzman (2007)



Source: Reproduced with permission from Oliver et al. (2007).

FIGURE 2.
Sensitive periods for various domains of healthy child development



Source: Adapted from Begley (1996, February 19: 58–59).

development, on the other hand, “refers to the ways in which children perceive, organize, and analyze the masses of information provided by their social and physical environments. Adequate cognitive skills are essential for both the retention and retrieval of information, and for the effective exploration of new experiences” (Doherty 1997: 24). *Healthy physical development* “goes significantly beyond the concept of freedom from major disease or gross neurological impairment” (Doherty 1997: 21). It includes such factors as physical readiness for activities of daily life, physical independence, gross and fine motor skills and general vitality and resistance to illness (Council on Early Child Development n.d.; Doherty 1997).

Finally, *communications skills and general knowledge* includes the ability to clearly communicate one’s own needs and to understand others, active participation in story-telling and interest in general knowledge about the world (Council on Early Child Development n.d.; Doherty 1997).

Influence of Built Environments at Different Levels on Healthy Child Development

According to Bronfenbrenner (1977, 1979, 2004), there are several necessary propositions about the influence of the environment on child development. Of relevance to this article, Bronfenbrenner suggested that children develop healthily and competently when they benefit from repeated, complex and bi-directional interactions with other people (particularly the primary caretaker) and objects in their everyday life. Healthy interactions are characterized as positive in nature and respectful of the child’s person and emotions. He further suggested that

development occurs as a joint function of the characteristics of (1) the developing person, (2) the environment – both immediate and remote – in which the processes are taking place, (3) the nature of the developmental outcomes under consideration and (4) the continuities and changes occurring in the environment over time, over the life course and over the historical period in which the person lives (Dunn et al. 2009). Finally, he proposed that mutual emotional attachment between the child and the child’s primary caregiver motivate the child’s interest in the immediate physical, social and symbolic environment, inviting exploration, manipulation, elaboration and imagination. Given the basic propositions about the processes of healthy child development (in the previous section) and the role of environments in

shaping those processes (based on Bronfenbrenner), it becomes possible to develop a more robust conceptualization of the influence of built environments on healthy child development. The combination of these two perspectives invites a very different view on the built environment and child health promotion. It suggests that we need to understand specifically how, and to what extent, specific features of children’s environments at different levels affect specific elements of healthy child development. In the next section, I turn to some empirical research that helps with the first steps in such a quest.

Toward a More Specific Model of Built Environments and Healthy Child Development

One of the challenges with most perspectives on how our built environments affect healthy child development is their lack of specificity. Bronfenbrenner (1977, 1979, 2004) described the types of experiences of the environment for children (as above). Moreover, Bronfenbrenner and many after him argued that there are factors at multiple levels or geographical scales (in Bronfenbrenner’s terms, these are the microsystem, the exosystem and the mesosystem) that affect healthy child development, but we have relatively little research that tells us what factors, at what levels, are most strongly connected to which developmental processes.

Some recent research suggests a first step in this quest, however. Oliver et al. (2007) investigated the determinants of variations in the Early Development Index (EDI; Janus and Offord 2007) – a measure of kindergarten children’s readiness

to learn – among the 3,666 kindergarten children (excluding children with special needs) in the Vancouver School District in 2000. The EDI is a teacher-rated scale that consists of 113 questions grouped into five domains (Janus and Offord 2007). It measures the construct known as *readiness to learn*, which is defined as “the state of a child’s neurosystem being ready to develop various skills and neuropathways based on the stimuli it will receive. A child is ready to learn right from birth, and likely even in utero” (Janus et al. 2007: 1). In the EDI, physical health and well-being are assessed by questions that evaluate gross and fine motor skills and the child’s independence in looking after his or her own hygienic needs. Social knowledge and competence are assessed by questions that evaluate a child’s ability to follow rules, co-operate with others and behave appropriately. Emotional health and maturity are evaluated by questions that gauge a child’s ability to deal with his or her own feelings and to respond appropriately to others’ feelings. Language and cognitive development are assessed by questions that evaluate reading skills, writing skills, numeracy skills and reading-memory appropriate to the child’s age. Communication skills and general knowledge are evaluated by questions that assess a child’s ability to communicate in English and his or her age-appropriate knowledge about the world.

Oliver, et al. (2007) use multi-level modelling, a statistical technique that can separate out the proportion of total variance in the outcome that can be attributed to the neighbourhood level, and the proportion of variance that can be attributed to the household level. Overall Oliver et al.’s (2007) findings suggest that different domains of healthy child development are affected more strongly by some levels of social organization than others. Specifically, physical health and well-being, language and cognitive development and communication skills and general knowledge are more strongly influenced at the neighbourhood level, indicating that neighbourhoods can act as ‘health opportunity structures’ (Macintyre, et al. 2002) (Figure 1). Aspects of social and emotional well-being, on the other hand, are more strongly affected at the household level.

Based on Oliver et al.’s (2007) findings, there is an obvious role for what we normally think of the built environment. The large literature on aspects of the built environment that promote and inhibit physical activity (e.g., Pabayo et al. 2010; Singh et al. 2010) suggests that the built environment could be altered to enhance at least one aspect of physical well-being – physical activity. Additionally, it is possible to imagine that community recreation facilities and early learning programs addressing cognitive, language and communication skills could be expanded on a neighbourhood basis to significantly increase the stimuli that we now know children require to develop the skills and neuropathways needed for healthy trajectories (Janus et al. 2007).

The more challenging finding from Oliver et al.’s (2007) analysis is that there are two domains of healthy child devel-

opment that are strongly household influenced, namely, social knowledge and competence and emotional health and maturity. As Figure 2 shows, the sensitive periods for areas such as emotional control and habitual ways of responding occur at very young ages. These are outcomes that are influenced by the development of parental attachment and the early establishment of emotional self-regulation. It follows that policy or program efforts in the built environment would be most effectively targeted at parents and the immediate environments of children. Moreover, the specific emphasis would need to be on providing built environment conditions that would help caregivers to have a stronger attachment with their newborn and infant, and help parents to regulate their own emotions so as to aid the child to establish its emotional regulation system.

It follows that the component of the built environment that would exert the greatest influence on social knowledge and competence and emotional health and maturity would be housing conditions. Unfortunately, there is very little research that investigates this question (Leventhal and Newman 2010). According to Bartlett (1998), “There seems to be little doubt that factors in the home environment can buffer children from the effects of other stressors in their lives (or add to those stressors) over the early years, but there is no convincing body of evidence on the effect that housing may have over the longer term.” A study by Bartlett (1998) shows that housing inadequacies create stress and conflict among family members and can restrict opportunities for supportive parenting. Evans (2004) has shown that parents in crowded homes are more likely to be less responsive and employ harsher parenting practices. Similarly, Evans et al. (2001) have shown that children who report that they have a place to go to where they can be alone show better task persistence and fewer behavioural problems than children who do not, even with the same crowding levels. Ultimately, however, Leventhal and Newman (2010) argue that almost no research on children has focused on associations between crowding and social and emotional well-being, although there have been studies that examined the relationships between crowding and grade retention and school achievement.

This research need goes well beyond crowding, however, because there is a complex relationship between housing conditions, parenting and child attachment and self-regulation outcomes. On the one hand, it is possible to imagine that studies of housing affordability, design, satisfaction and security would show differences in parental and child outcomes, as Bartlett’s (1998) research has shown. But there are undoubtedly other factors that are independent of the built environment that are at work as well, including parenting style, family history, time-use routines etc. Most importantly, the social conventions about the privacy of domestic space protect parenting practices from outside scrutiny and make it challenging for public policy to intervene to improve the outcomes that are related to domestic

family relationships: emotional maturity, attachment and self-regulation. Although there are parenting classes, playgroups and other resources offered in communities, the supply of such programs is limited relative to the need, leaving the challenge of achieving a wide reach still to be achieved.

Conclusion

This article has argued that there is a great deal of interest in ensuring that built environments are safe for children and have features that promote their healthy development; this interest has existed for a long time. But in order for the built environment to be an effective target for child health promotion, we need to get beyond relatively simple models that state that factors at different levels matter to healthy child development; we must specify which factors at which levels matter to which aspects of healthy child development. Based on evidence from a study in Vancouver of the effects of the household and neighbourhood scales on kindergarten children's readiness to learn (Oliver et al. 2007), there are now clues to tell us what attributes matter at what levels to what aspects of healthy child development. These clues suggest that there are initiatives that can be undertaken at the neighbourhood level and that such efforts should target language and cognitive skills, communication skills and physical health and well-being. These can also be targeted at older children (i.e., age three years and up), which is appropriate because children of this age have a greater geographical range than younger children. For promoting healthy child development among younger children, the focus must be directed to the household level and on outcomes related to social knowledge and competence and emotional health and maturity. It will be challenging for public policy to address housing affordability, quality, security and design issues. But even more challenging will be penetrating into the domestic lives of families to ensure that very young children get the kind of early stimulation needed to promote healthy child development. **HQ**

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A young girl with dark hair, wearing a light blue tank top and brown shorts, is sitting cross-legged on a polished wooden floor. She is looking down at a silver laptop computer that is open in front of her. The room has large, multi-paned windows in the background, showing a view of green trees and a bright sky. The floor is highly reflective, showing a clear reflection of the girl and the laptop.

Social Media and the Medical Industry:

A Whole New Sort of Healthcare Network

Observations on healthcare and social media from a marketer

Max Valiquette

Consumers of media are now creators of media, and we can all shout whatever we want, to whomever we want, whenever we want.

First things first: I'm not a doctor, or any sort of health-care professional (but do keep reading, anyway). I'm a marketer – I know! – and even more gallingly, I'm a social media consultant, which is actually a thing now. I exist. Broadly speaking, what I do is called strategic planning, in that I help organizations solve their problems through a greater understanding of their users, and I've focused on the youth market for most of my career. This has meant that I've had to also focus on social networks and social media – a whole channel of communication that has essentially been invented by young people. So to better understand social media and health-care, we first have to understand social media, period.

The ad agency I work for, Bensimon Byrne, publishes a report called *Consumerology* (you can read it at consumerology.ca) every few months in which we survey a minimum of 1,200 Canadians about a range of subjects. The most recent survey was about social networks, and our findings confirm a couple of things: young people are more active in these networks, and young people set trends that older generations follow. This is the data's way of saying that the way young people act in social media is relevant not only if you have to deal with young clients but also because this generation increasingly sets trends that adults follow. We believe, and the data support this, that social media is an “and-the-youth-shall-lead-them” sort of thing.

You're still reading (hooray!), but you're also probably wondering what the relevance of all this is *to you*. It's simply this: social networks and social media are transforming absolutely every single industry, and medicine is no different. And the younger your patients are, the more this matters. For those of you treating young people, you've essentially got two clients for whom social media is huge: the older kids whom you're treating and the parents of the younger ones. *Medical professionals dealing with tween and teen patients, as well as young parents of infants and kids, need to know whatever they can about social media.*

So, here's a tiny history lesson: the single biggest development in digital culture in the past decade or so has been the development and proliferation of social networks. Broadly speaking, an online social network is a dedicated web-based service that allows a person to construct a profile and connect with others who have done so as well. In the beginning, through networks such as Friendster and MySpace, these were almost like an online dating profile that could be shared with everyone. And these were used almost exclusively by young people.

You've seen the movie *The Social Network*, so you know what happened next (and, if not, you probably feel like you saw the

movie anyway): Facebook changed everything. Also initially youth focused (available only to students, even), it's now being used by people of all ages (but still most used by younger people). About 900 million people worldwide are on Facebook – it would be the third-largest country in the world now were it a nation – and it's become embedded into the fabric of our lives. Almost 20 million Canadians are on Facebook – more than the number of us who voted in our last federal election.

It's Not Just Facebook

We've also seen other social networks follow in Facebook's wake. The most important of these is Twitter. It follows the same basic format – start a page, connect to people and start a network, and engage with that network to share things or exchange information – but it works in “tweets,” bursts of 140 characters in length at a time. So it's even faster and facilitates even more sharing. There's foursquare, a mobile-based network in which users “check in” to locations to alert people to where they are; Instagram, a photo-sharing based mobile network; and lots of others. Increasingly, these networks aren't just accessible via a laptop or desktop computer – they all have mobile versions, meaning that we quite literally take our networks with us wherever we go. This has led to more and more people signing on to mobile social: millions of Canadians are on Twitter (often through their smartphones); and foursquare and Instagram, which are only available in mobile, more than tripled in size in the past year.

So there's our history lesson – if we can refer to the past decade as history, really – and now it's time to think about what this means for you.

The Social Media Revolution Is Not the First Digital Revolution in Healthcare

Let's start by clarifying something: *social media is not the first great revolution that the Internet has brought to the medical industry.* It's the second or third. Prior to social media, your patients already had access to WebMD and (shudder) Wikipedia and other online sources for self-diagnosis (which, I'm guessing, makes your jobs more difficult, not less so). They also were able to read reviews of you and your colleagues at sites like RateMyMD.ca. But, up to that point, the change had involved an instantaneous connection to news sources and reference materials and websites that were created by others. This revolution is different – it's about giving people access to everyone they know whenever they want it, and also about giving them the ability to *broadcast* to that network whenever they see fit. Consumers of media are now

Social Media Resources for Engagement in the Healthcare Sector

Interested in learning more about how social media is being used in healthcare? See below for some excellent examples of blogs, twitter feeds and web-based resources.

Blogs

- Canadian Living Health & Wellness Blog: <http://www.canadianliving.com/blogs/health/>
- CTV Health Blog: <http://healthblog.ctv.ca/>
- Weighty Matters Blog: <http://www.weightymatters.ca/>
- The Dr. Oz Blog: <http://www.doctoroz.com/blogs>
- The OMA President's Blog: <https://www.oma.org/Mediaroom/PM/Pages/default.aspx>
- The Health Care Blog: <http://thehealthcareblog.com/>
- Well – NYTimes Health Blog: <http://well.blogs.nytimes.com/>

Twitter Feeds

- @Mashable: <http://twitter.com/#!/mashable>
- @MarkRaganCEO: <http://twitter.com/#!/markraganceo>
- @PicardonHealth: <https://twitter.com/#!/picardonhealth>
- @SanjayGuptaCNN: <https://twitter.com/#!/sanjayguptacnn>
- @CTV_AvisFavaro: http://twitter.com/#!/ctv_avisfavaro
- @ChildrensBoston: <http://twitter.com/#!/childrensboston>
- @SunnybrookHSC: <http://twitter.com/#!/sunnybrookhsc>
- @LeeAase: <http://twitter.com/#!/leeaase>
- @MayoClinic: <http://twitter.com/#!/mayoclinic>
- @JohnSharp: <http://twitter.com/#!/johnsharp>
- @ClevelandClinic: <http://twitter.com/#!/clevelandclinic>
- @HospitalGroup: <http://twitter.com/#!/hospitalgroup>
- @EdBennett: <http://twitter.com/#!/edbennett>
- @UMMC: <http://twitter.com/#!/UMMC>
- @Colleen_Young: http://twitter.com/#!/colleen_young
- @HCSMCA: <http://twitter.com/#!/hcsorca>
- @SickKidsNews: <http://twitter.com/#!/sickkidsnews>
- @HEALTHCANADA: <http://twitter.com/#!/HEALTHCANADA>
- @Deb_Matthews: http://twitter.com/#!/deb_matthews
- @Leonaaglukkaq: <http://twitter.com/#!/leonaaglukkaq>

Websites and Other Resources

- The Mashable Twitter Guidebook: <http://mashable.com/guidebook/twitter/>
- Parent Central (ofThe Toronto Star): <http://www.parent-central.ca/>
- AboutKidsHealth: <http://www.aboutkidshealth.ca/En/Pages/default.aspx>
- Today's Parent: <http://www.todayparent.com/>

With thanks to the Public Affairs Department at The Hospital for Sick Children

creators of media, and we can all shout whatever we want, to whomever we want, whenever we want. That represents a huge change – I would argue the biggest change we've seen in the history of media. We are all broadcasters now, and we've all got access to everyone we know whenever we want it. Every industry is being transformed – not just medicine. But this is a part of a larger process that has gradually taken a lot of the things that we used to keep off-line and moved them online. You probably accept that your patients are going to attempt a self-diagnosis through the Internet before they come and see you; now you have to accept a few other realities of the new social world.

The Rise of the Digital Native

Remember, this is a trend driven by young people; those 35 and under represent over half of Facebook users. Young people are early adopters of social networks, and their uptake is often what starts the ball rolling with those of other ages. At the same time, what we call “digital natives” – those young people who have essentially had the Internet for their whole lives – have a fundamentally different relationship with *being* online. And the older you are, or the more venerable your industry, or the longer a period of time your particular part of the medical field has been around, well, the harder it can be to change. So to understand the field of social media, try to think like a young person. If you've got younger people working with you, don't be afraid to pick their brains or even let them have a say in how the social media of your organization is managed. As scary as this may sound to some of you, it's the best way to do this.

The Younger Your Patients, the More They Share

This is the fundamental truth of social media: the single biggest difference between “digital natives” and “digital tourists” – those who grew up and then got wired – is that the natives share pretty much everything. The Internet isn't just a tool for information and communication; it's about sharing – really personal sharing. And that fundamental need to share is transforming everything, including healthcare. If you've got kids of your own, you're probably already aware of this. (You may have had to pry a mobile device from their hands or deal with the fallout from some sort of status-updating-related overshare.) *The reality of dealing with younger people in any industry is that one has to be prepared for how much they are going to share.* In healthcare, this refers to how much they are going to automatically broadcast about where they are going, what they are feeling what's happened to them. I've found out that friends are at the hospital because they've “checked in” to one (meaning they've alerted their mobile social network as to their location). It may seem trivial, but this sort of reflexive sharing is having a massive impact on privacy. As well, we sometimes share too much when we're upset or when we've received difficult news. This had different consequences when we could only communicate with one person at a time. But imagine

getting a tough piece of news from a doctor and automatically tweeting about it. People are doing this, and it means that *we may need to change the sort of advice we're giving younger patients about what it means to broadcast their medical condition.*

Your Network Is Always with You

There is a great likelihood that when you started working, hospitals were essentially self-contained organisms. Patients and their families would arrive and, once those doors shut, they pretty much left the outside world behind. Your teenage patients and – more importantly – the parents of your younger patients don't arrive in your waiting room alone anymore: they bring their network with them. And that means, on average, a network of close to 200 Facebook friends, or dozens and dozens of followers on Twitter, and often both of those. Earlier this year, a friend of mine had to wait a particularly long time to see her doctor – and this drove her nuts. So she told people about it. That may not sound so odd, except for a couple of things: one, she was able to tell everyone she knew about this simply by updating her Facebook status; and, two, she did this *while she was still in the process of waiting*. There is no gap between something happening and one's entire network finding out about it, even in medicine.

This matters more with every passing day as people learn to better use these networks to get what they want out of them. For patients, that's going to mean everything from referrals and recommendations about the right healthcare practitioner, to support and even updating. It is incredibly common now for people to update their entire network with big medical announcements – a baby is born, someone is out of the hospital – and paying attention to this reality is going to be an increasingly large part of how we practise medicine. If you're good at your job, one of your patients has already linked to you online on Facebook as a way of telling his or her network about you. Come to think of it, though, if your patients think you're bad at your job, they've probably done the same thing too.

Communication Happens Online, as Do Empowerment and Lawsuits

You're also going to be expected to communicate with your patients in these social arenas. It's not just that they are going to be looking for you to tweet about your field of practice; this is going to table stakes in the near future, in that you won't be considered legitimate without having some sort of social media presence. It's also where your patients are going to expect to be empowered about the medical issues that they have to deal with. There are lots of Facebook groups with titles such as "Premie Parents" and "Breast Cancer Awareness" and everything else. This is where your patients want to go for communication, to get support from a larger group of people who understand their situation and even to learn about ways to cope. Knowing that level of communication, and empowerment, exists online

is important in delivering a standard of care for your patients. And there's more: patients and doctors are live-tweeting events as they occur, and sometimes even going too far. Doctors (in the United States, not surprisingly) have already been sued for compromising the standard of care by revealing too much about particular patients online. This is going to be an especially tough line to balance: as patients expect – even demand – more to exist in social channels, *medical professionals are going to have to communicate and connect with their patients in social media, but they must be certain to be cautious and not go too far.*

One Last Thing: Manage Your Own Privacy as Well

This level of connection and sharing can also have consequences not only for patients but for practitioners as well. Understanding how privacy is changing is also understanding that it's a two-way street: you may have patients who are looking for you in social networks, and if you value your own privacy – or simply want to transfer whatever boundaries you've created in real life into your social networks – you'll want to manage your social media privacy settings. If you don't want people to be able to see your non-professional life, you have to make absolutely certain you manage that. This has actually been pretty significant in other industries – notably education – in which more than one teacher has had to deal with the professional fallout from students or parents discovering photos that were thought of as being less than professional. And it's not necessarily anything overly salacious or illegal – we're talking photos of alcohol consumption and the like. *If you don't want to be explaining to your patients about your personal life, make certain that they can't see it online.* Some – not all, but some – will look for you with purpose, and some even just out of curiosity. If you don't want them to have access to your life, then don't give it.

So, as managing young patients and young parents means understanding their lives, it therefore means having some experience in social media. Get on Facebook, and Twitter, and foursquare and Instagram and anywhere else you think might be useful, and start by observing. Search within the networks of your choosing for the most famous people in your field, and see what they do. Find out what your hospital uses as social media guidelines. Enter your particular field of practice as a search term, and see what's happening. You don't have to start a Facebook page right away or start tweeting back and forth with your patients; you can just see what others are doing, and then slowly start to do your own thing. But social networks aren't going anywhere, so *it's critical that the entire medical field learns to adapt to this new reality.* Your patients are changing, and patient care should too. **HQ**

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Best Practice Interventions in Childhood Injury Prevention:

A Review of What Works in Developing
Successful Strategies

Pamela Fuselli and Amy Wanounou



Many are surprised to learn that unintentional injuries are the leading cause of death for children in Canada. Injury accounts for 30% of all deaths and the largest environmental burden of disease. On average, this translates to about 300 deaths annually for children less than 14 years of age (Public Health Agency of Canada 2005, 2006). In other words, approximately 25 children die from an injury every month, the equivalent of one classroom.

The good news? Unintentional injuries to children are predictable and preventable. Proven strategies are known and could significantly reduce the rate of injuries if adopted and implemented across all provinces and territories in Canada.

The good news? Unintentional injuries to children are predictable and preventable.

Central to implementing effective strategies to prevent unintentional injuries is knowing what works. Unintentional injuries in children offer a unique and pressing case requiring the implementation of evidence-based, best practice strategies. Best practice strategies enable Canadian injury prevention practitioners to make worthwhile investments in prevention strategies that are known to work and have the greatest probability of success. This article explores the pillars of injury prevention best practices and offers an illustrative case study examining interventions in playgrounds and cycling. It provides guidelines (based on the Canadian edition of the *Child Safety Good Practice Guide* [Mackay et al. 2011]) for decision-makers, practitioners and legislators to inform their work on injury prevention.

Why Are Injury Prevention Strategies Needed?

Unintentional injuries are often described as “accidents,” which by definition are unpredictable and unpreventable random events and the result of chance, bad luck or something else over which we have no control. In reality, we can predict and,

therefore, can prevent unintentional injuries (Drago 2007). Injuries generally result from combinations of adverse environmental conditions, equipment, behaviour and personal risk factors, any or all of which can be changed. Furthermore, injury prevention measures reduce the likelihood and severity of injuries (Baker 1998).

Injury prevention is sometimes erroneously viewed as an attempt to “bubble wrap” children in a “padded world.” On the contrary, injury prevention strategies based on best practices seek to ensure interventions are based on childhood development, of which taking risk is a key component but at age-appropriate milestones. Risk taking in childhood contributes to a child’s holistic development, formulating positive self-image as well as a host of life skills. In order to grow physically, mentally and socially, children need experiences that test their abilities.

Although risk generally carries a negative connotation, it is actually on a continuum that is both positive and negative. Risk can be managed by striking a balance between challenge and hazard. “A hazard is something a child doesn’t see; a challenge is a risk that a child can see and chooses to undertake or not” (Moore et al. 1992). Best practice interventions address the paradox that there is nothing more important than ensuring a healthy, safe setting, but that it is equally important to ensure a challenging setting for children. Danger is not so much related to children taking risks as it is to unforeseen consequences and hazards they cannot control. “Safety is not the absence of risk but rather assumed, calculated, controlled risk” (Maufette 1999: 21).

What Is “Best Practice” for Injury Prevention?

So much is needed to address the safety of Canadian children. There are pressures on time and limited resources, making it all the more important to focus on best practices to provide a road map to the strategies that are most likely to reduce the rate and burden of unintentional injuries in children. Best practice is defined in four separate ways (Mackay et al. 2011):

1. A prevention strategy that has been evaluated and found to be effective
2. A prevention strategy where rigorous evaluation is difficult but expert opinion supports the practice and data suggest it is an effective strategy
3. A prevention strategy where rigorous evaluation is difficult but expert opinion supports the practice and there is a clear link between the strategy and reduced risk
4. A prevention strategy that has been implemented in a real-world setting so that the practicality of the intervention has also been examined

Successful interventions based on best practices contain four key elements. First, context serves as the underpinning of

successful interventions. Broad social determinants of injury, as well as local needs and resources within target populations, are considered. Second, they involve the crucial element of cross-sectoral collaboration, involving action by multiple stakeholders. Third, they run the gamut between active and passive approaches (Mackay et al. 2011). In contrast to active interventions that require conscious action at the individual level to be effective, passive interventions are preferred because they are automatic, protect everyone and require no action or co-operation from the individual. In doing so, they reduce the need for constant vigilance by individuals to protect themselves or their families and allow for human error and fatigue, which are inevitable. Fourth, they emphasize the concept of “layers of protection,” which emphasizes that there is no single tool that is magical and foolproof. Instead, multiple tools working in concert are most effective.

The principle of layers of protection is best expressed through the “three Es of prevention” – engineering, enforcement and education. These three Es are tools for establishing large-scale changes in healthy public policy and the creation of environments, both social and physical, that allow the safe behaviour to be the easy behaviour. The combination of these methods in any one intervention provides for a “synergistic” effect (Towner et al. 2001).

Education is usually the first and most commonly used strategy to implement an intervention. Education seeks to share information, encourage people to change their unsafe behaviours and modify their knowledge and attitudes about injuries. Despite their usefulness, evaluations of educational programs show that our ability to affect significant behaviour change is often limited and that education is most effective as part of a broader set of initiatives that incorporate the other Es of prevention. Similarly, engineering and enforcement approaches are less likely to be effective if they do not include supporting educational elements (Mackay et al. 2011).

Engineering the environment is a particularly useful passive intervention. In the case of product design, it is often easier and more effective to change the design of a product to make it safer, than it is to teach everyone to be careful whenever they use it.

Legislation has proven to be the most powerful tool in the prevention of injury. With strong enforcement and supporting educational campaigns, legislation can help to reinforce and sustain behavioural changes that promote long-term and cost-effective injury prevention (Mackay et al. 2011).

Case Study: Playgrounds and Cycling – Are Helmets Safety Tools or Strangulation Devices?

Playgrounds and cycling are two significant sources of unintentional injuries in children. Although they have similar elements to address in formulating successful interventions, they also demonstrate the importance of determining the most appro-

priate and effective best practice interventions based on data.

In the case of playgrounds, at least 29,000 children under 15 years old receive treatment at hospital emergency departments for playground injuries each year in Canada (Norton et al. 2001). In the period between 1994 and 2004, 44,577 hospitalizations occurred due to cycling incidents in Canada, representing 2% of all hospitalized injuries. Twenty-four percent of these hospitalizations were due to head injuries, of which 61% occurred among those five to 19 years of age (Canadian Institute for Health Information 2006).

Both playgrounds and cycling have benefits to the overall health and development of children. A healthy lifestyle that includes exercise is vital to promoting overall health and preventing chronic health conditions, such as obesity. As a result, play and recreational activities such as cycling are critical to a child's health in the short and long term.

Furthermore, best practice interventions for playgrounds and cycling need to understand children's behaviour in the real world. Children will use equipment in all possible ways, regardless of design intention. For example, rungs at the entrance of slides are used for tumbling, children slide on top of tubes instead of inside them and kids like to experiment and test the limits of their bikes. Best practice interventions for playgrounds and cycling demonstrate the need to strike a balance between challenge and hazard. Well-designed playgrounds and cycling interventions encourage a child to take risks within a semi-controlled environment that protects them from a hazard they may be unable to foresee (Mitchell et al. 2006).

But this is where the similarities between playground and cycling interventions end. The juxtaposition of playground and cycling best practice interventions demonstrates that context is critical and that the same intervention can be both beneficial and detrimental.

Of major importance is an understanding of the mechanism of injury in a particular setting. Playground injuries primarily occur because of falls to hard surfaces. A fall on cement or asphalt from a height of only 30 centimetres (12 inches) can cause severe head trauma. As a result, proper surfacing and overall construction of a playground are crucial elements in an intervention strategy. Ensuring proper surfacing of the landing area in proportion to height decreases the risk of injury but not the child's ability to experiment and therefore develop other life skills (Maufette 1999).

As a result, playground injury prevention is primarily achieved through environmental modification and, specifically, design standards developed by organizations such as the Canadian Standards Association. The goal of the standards is to help manufacturers design child-scaled and hazard-free equipment and to aid installers and operators to position and maintain the equipment so as to reduce the frequency and severity of injuries. Behind each measure prescribed is a

rationale based on injury analysis, anthropometric research (regarding the size of children's body parts) and the study of children's play behaviours. It recommends a number of safety measures, audits, inspection and maintenance routines that should help keep well-designed play spaces as safe as possible at all times. Since falls are the most frequent cause of injury in young children, special attention is given in the standards to the surfaces on which they fall (Norton et al. 2004). Standards are not intended to provide risk-free environments but, rather, to specify the minimal acceptable standard for play equipment and surrounding environments (Mitchell et al. 2006).

Although falls are the predominant cause of injury on playgrounds, the primary cause of death on playgrounds is strangulation (Maufette 1999). Helmets are considered a "hidden hazard" for a child playing on playground equipment, potentially resulting in fatal strangulation, as has been the case in the past. Strangulation deaths to children have occurred in the United States, Canada, Australia and Scandinavia when bike helmets became stuck in openings on playground equipment, resulting in hanging (Consumer Product Safety Division 1999). There have also been incidents on playgrounds when helmet straps led to choking. Openings in playground equipment have been built for bodies, not bodies with helmets (Bicycle Helmet Safety Institute 2011).

On the bicycle, these same helmet straps are necessary to keep a helmet on a child's head during a crash. In such cases, helmets have saved countless lives. Indeed, helmets are considered the most effective means to prevent head injuries while cycling. Research shows that a properly fitted helmet can decrease the risk of a serious head injury by over 85% (Attewell et al. 2001; Thompson et al. 2009). This means that four out of five head injuries could be prevented if every cyclist wore a helmet. The most effective means to ensure everyone wears a helmet while cycling is legislation.

A variety of interventions have been shown to have some impact on helmet-wearing rates among children and the general population. There is some evidence that bicycle training schemes can improve safe riding behaviour. Discount purchase programs and giveaway programs for helmets have been shown to facilitate some uptake and use (Towner et al. 2001). Educational programs have been shown to provide some advantages because they allow educational messages to be targeted to different age groups and have a captive audience ready to learn (Christoffel et al. 1995). Yet, as with other education-based interventions, there has been limited success in changing people's behaviour around helmet use with education alone.

Consequently, the introduction of mandatory laws for helmet wearing has become a principal strategy for promoting helmet use during cycling. The evidence bears out the beneficial effects of helmet legislation. While any legislation will increase the use of helmets (Karkhaneh et al. 2006), universal helmet

legislation, in which helmets are mandatory for all ages, has been shown to have a significant impact on the helmet-wearing rates of children and adults while cycling. In Canada, four of 10 provinces mandate helmet use for all ages and two mandate helmet use for those less than 18 years of age. No territory-wide legislation exists in the three Canadian territories. A recent study found that 95% of children riding with a helmeted adult wore helmets, compared with only 41% of children riding with a non-helmeted adult (Dennis 2010). Furthermore, helmet legislation has not been associated with changes in ridership, thereby maintaining the societal-level health benefits of cycling as a recreational activity. It should be noted that legislation is often the final step in developing an effective intervention strategy for cycling. Legislation in general requires public acceptance and, therefore, needs educational campaigns to influence both public opinion and policy makers (Towner et al. 2001).

Conclusion

Best practice strategies offer opportunities to significantly reduce and prevent unintentional injuries in children while allowing healthy child development. When children are the focus of the work, several important factors need to be considered when implementing intervention strategies:

- Children live in a world built for adults, and the types of injuries that they experience are closely linked to their age and their stage of development, which includes physical, psychological and behavioural characteristics.
- Injuries disproportionately affect the most vulnerable in society, including children. The likelihood of a child being killed or injured is associated with a variety of factors that constitute the social determinants of health.
- Best practice strategies must be based on evidence. Our case study highlights the importance of context and data when developing injury prevention interventions: whereas wearing a helmet prevents head injuries when cycling, the same intervention can be a hazard in the playground.

We encourage decision-makers, practitioners and legislators to base their work and recommendations on the available evidence. The Canadian edition of the *Child Safety Good Practice Guide* (Mackay et al. 2011) is an excellent primary resource to help those working in injury prevention to develop best practice interventions. We owe it to the health of all Canadian children to invest in the interventions with the greatest probability of success. Their lives may depend upon it. **HQ**

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Abstract

Childhood obesity is a leading health problem in Canada and is associated with cardiometabolic disease, reduced quality of life and economic impacts. Obesity prevention is a major imperative in child health. There is an emerging evidence base on obesity-prevention strategies in children. Obesity-prevention strategies need to consider the determinants of obesity, and these determinants should be considered within the context of a child's family, school, neighbourhood, culture and society. This paper reviews approaches to obesity prevention in children, with a focus on the healthcare setting, incorporating both primary and secondary prevention.



Childhood Obesity Prevention

Opportunities in Healthcare

Catherine S. Birken, Jonathon Maguire, Brian W. McCrindle, Jill Hamilton and Patricia C. Parkin

Childhood Obesity: A Leading Health Problem in Canada Today

Obesity is considered to be the leading public health problem facing children today in Canada and other developed countries. In Canada, the rate of obesity is reported as 8.6% for children and youth aged six to 17 years and as 6.3% for children aged two to five years (Canadian Institute for Health Information [CIHI] and Public Health Agency of Canada [PHAC] 2011; Canning et al. 2004; Shields 2006). Studies examining trends in childhood obesity rates in developed countries worldwide show a consistent increase in the prevalence of overweight and obesity over the past three decades, at a rate of approximately 5% per decade (O'Dea and Eriksen 2010). The rate of overweight and obesity in Canadian children has been increasing at a slightly increased rate per decade (6.6%) over the same time period, even among children as young as preschool age (O'Dea and Eriksen 2010; Tremblay and Willms 2000). Complications of childhood obesity carry significant morbidity and are increasing in prevalence; these include type 2 diabetes mellitus, hypertension, obstructive sleep apnea, non-alcoholic fatty liver disease, orthopedic problems such as slipped capital femoral epiphysis and psychosocial problems including poor self-esteem, depression and reduced quality of life (Freedman et al. 2004; Hannon et al. 2005; Sabin et al. 2006; Sorof and Daniels 2002; Taylor et al. 2005; Taylor et al. 2006; Verhulst et al. 2007; Williams et al. 2005). Children who are obese are at increased risk of becoming obese adults and have increased risks of developing atherosclerotic heart disease, diabetes and certain cancers (Baker et al. 2007; Freedman et al. 1999). Obesity

also has important economic impact. A recent systematic review showed that the direct costs of obesity account for between 0.7 and 2.8% of a country's total healthcare expenditures (Withrow and Alter 2011). It has been estimated that obesity in adults and children cost the Canadian economy approximately \$4.6 billion in 2008 (CIHI and PHAC 2011).

Challenges with Definitions and Measures of Obesity in Children

Body mass index (BMI), a ratio of weight to height (kilograms/metres squared), is considered the most important and feasible screening measure for obesity in children (Barton, 2010). BMI has been shown to be associated with cardiometabolic risk in both children and adults (de Kroon et al. 2010; Janssen et al. 2005). It can be calculated from either direct measure or a self-/parent report of a child's weight and height. Self-reported measures often underestimate BMI in children and adults and, unfortunately, have been the most common method of reporting BMI in children in Canada until recently (Elgar and Stewart 2008). There still remains a paucity of BMI data in children, especially young children (CIHI and PHAC 2011).

The calculation of BMI is the same as for adults, but the cut-points for weight status (underweight, healthy weight, overweight, obese) vary by age and sex. There are also different systems of BMI cut-points, and obesity estimates can vary among systems. For example, using the International Obesity Task Force system, the rate of obesity among children and youth aged two to 17 years in the 2004 Canadian Community Health

Survey was 8.2%. However, the rate of obesity in this age group was 12.7% based on the World Health Organization (WHO) child growth standards (zero to five years) and growth reference (five to 19 years), and 12.5% based on US Centres for Disease Control and Prevention (CDC) cut-points. The size of the difference between estimates also appears to vary by age group (Shields and Tremblay 2010). A collaborative statement from the Dietitians of Canada, the Canadian Paediatric Society, the College of Family Physicians of Canada and Community Health Nurses of Canada recommends that growth monitoring should be a routine part of healthcare for all Canadian infants, children and adolescents (Dietitians of Canada and Canadian Paediatric Society 2010). It recommends that the growth of all full-term infants and preschoolers should be evaluated using growth charts from the WHO Child Growth Standards (birth to five years of age), and that the growth of all school-aged children and adolescents should be evaluated using growth charts from the WHO Growth Reference 2007 (five to 19 years of age). These are recommended as the charts of choice for use by Canadian family physicians, pediatricians, dietitians, public health or community nutritionists, nurses and other health professionals in the primary care, community and hospital settings (Dietitians of Canada and Canadian Paediatric Society 2010).

Prevention of Obesity in Children: A Major Imperative

There is a substantial and growing base of evidence showing the effectiveness of obesity treatment in childhood, especially in school-aged children. Overall, however, childhood obesity treatment effects are modest and, importantly, require intensive multidisciplinary approaches and sustained contact with the healthcare system over time (Oude Luttikhuis et al. 2009). Treatment programs outside of the research context are often under-resourced and not accessible.

Prevention of obesity in children has become a major imperative. There is an emerging evidence base on obesity-prevention strategies in children. Such strategies need to consider the determinants of obesity (O'Dea and Eriksen 2010). Causes of obesity are often described as simply the imbalance of an individual's energy intake and energy expenditure. However, the "causes of the causes" of obesity – including the determinants of nutrition, feeding behaviours, physical activity and sedentary behaviours of the individual child – need to be taken into account. These determinants should be considered within the context of the child's family, school, neighbourhood, culture and society.

In addition to the determinants of obesity, obesity-prevention strategies need to consider the setting for such interventions, including the healthcare setting, a public health setting, the school, the community and the home. Strategies may need to be tailored for different age groups and for high-risk groups. Aboriginal children in Canada represent a particularly high-risk

group. Obesity among Aboriginal children and youth is very high, varying from 16.9% among Metis to 25.6% among the Inuit (ages six to 14 years) (Willows et al. 2012). Unique determinants of obesity in Aboriginal children and families include experiences of colonialism, racism and social exclusion, and inequities in the social determinates of health, and these need to be considered in prevention strategies (Willows et al. 2012).

Finally, obesity-prevention strategies should be guided by health promotion theory (Glanz and Bishop 2010). Important theories relevant to obesity prevention include a focus on individual factors such as beliefs, knowledge and skills. Other theories include ecological perspectives and focus on interpersonal, organizational and environmental factors influencing health behaviours (Kok et al. 2008). Examples of important theories for consideration in the development of obesity-prevention strategies include the theory of planned behaviour, stages of change and the social ecological model.

Evidence for Effective Prevention Interventions

A recent systematic review (updated to September 2010) conducted by the Cochrane Collaboration identified 55 controlled trials designed to prevent obesity in childhood (Waters et al. 2011). A study was included if the intervention had a minimum duration of 12 weeks and was conducted in a broad range of settings (community, school, home, child care, preschool and healthcare settings). Results of the review showed that the studies were predominantly conducted within high-income settings. Eight studies targeted children aged zero to five years, 39 targeted children aged six to 12 years and eight targeted children aged 13–18 years. The most common setting for interventions were schools (43 studies), and most interventions took a combined dietary and physical activity approach to obesity prevention. A meta-analysis of the change in BMI from baseline to post-intervention was conducted of 37 studies with a combined sample of 27,946 children (18 studies could not be included due to a lack of appropriate BMI data reported). The meta-analysis identified a reduction of BMI of 0.15 kg/m². The authors noted that the limitations of the included studies may be associated with inflation in their estimate of effect and that their findings should therefore be interpreted with caution.

Emerging Evidence for Obesity Prevention in the Healthcare Setting: Primary Prevention

For healthcare providers, it is notable that there is a paucity of evidence regarding effective obesity-prevention strategies in healthy weight children in the healthcare setting; only two studies were included in the Cochrane review, and the authors of the systematic review concluded that interventions need to be developed that can be embedded into ongoing practice. An example of a primary prevention intervention was conducted in

primary care practices in San Diego County, California (Patrick et al. 2006). This was a one-year randomized trial of an intervention that was initiated in primary care practices and continued in home settings using the computer, mail and telephone for 878 healthy adolescents aged 11–15 years. At the completion of the trial, there were improvements in some diet, physical activity and sedentary behaviours but no between-group differences in BMI.

There is increasing focus on the preschool years for opportunities for obesity prevention since parents have control over feeding and activity when their children are young. The Institute of Medicine recently published policy recommendations for the prevention of obesity in infancy and early childhood in the following domains: growth monitoring, physical activity, healthy eating (and breastfeeding), screen time and exposure to food and beverage marketing, and sleep (Institute of Medicine 2011). A recent review of 38 studies in preschoolers identified several modifiable behaviours that appear to be associated with obesity. These include the intake of sugar-sweetened beverages, television use and inadequate sleep (Kuhl et al. 2012). Of the 13 studies of obesity prevention in preschoolers that were included in this review, seven were conducted in daycare/preschool settings; none were conducted in healthcare settings (Kuhl et al. 2012). Emerging evidence suggests that pregnancy may be an important time to consider obesity-prevention interventions. Key factors that may be associated with infant weight gain include in utero glucose exposure (Catalano et al. 2009), maternal pre-pregnancy BMI (Whitaker 2004), maternal diet (Moses et al. 2006), physical activity during pregnancy (Hopkins et al. 2010) and smoking (Mizutani et al. 2007).

Secondary Prevention: Screening Followed by Treatment

Screening may be intended to occur in the primary care practice setting; however, the subsequent treatment may be undertaken either in the primary care practice setting or in another healthcare centre. The screening test most often recommended is the calculation of the BMI percentile score based on age- and sex-specific norms since it is feasible and reliable in primary care practice settings. The Live, Eat, Play 2 (LEAP2) trial was conducted in 45 family practices in Melbourne, Australia, in children aged five to 10 years (Wake et al. 2009). Almost 4,000 children were screened, and those identified as overweight or obese were randomized to a brief, physician-led counselling intervention. At 12 months following the intervention, there was no improvement in the children's BMI, physical activity or nutrition. The authors concluded that the findings of the trial cast doubt on current policies that support universal surveillance. Another interpretation is that the BMI screening was effective in identifying children at risk, yet the brief physician-led intervention was not effective in reducing BMI.

The United States Preventive Services Task Force recommends

that “clinicians screen children aged 6 years and older for obesity and offer them or refer them to intensive counselling and behavioural interventions to promote improvements in weight status” (Barton 2010). This recommendation was based on a systematic review of medium- to high-intensity behavioural interventions that were found to result in improvements in weight status up to 12 months later (Whitlock et al. 2010). It was noted that such interventions would not be feasible to implement in primary care practice settings but could be conducted in facilities such as pediatric obesity referral clinics. The Canadian Task Force on Preventive Health Care is currently developing a recommendation for screening in Canadian primary care practice settings (Birtwhistle et al. 2012).

Recognition of the Importance of Optimal Health Systems to Support Obesity-prevention Efforts

The Kaiser Permanente Southern California Pediatric Weight Management Initiative included the development of clinical practice guidelines for the management of pediatric weight and enhancements to patients' electronic medical records to provide computer-assisted decision tools (Coleman et al. 2012). This initiative led to a substantial increase in the proportion of children and adolescents with height and weight measured, the proportion of those who were overweight or obese receiving this diagnosis, and the documented counselling rates for exercise and nutrition.

“Do No Harm”: Integrating Obesity and Eating Disorder Preventions

There are potential adverse effects of activities aimed at obesity prevention in children, and few obesity-prevention activities have been examined for unintended negative outcomes (Waters et al. 2011). For example, there is controversy regarding some obesity-prevention strategies, such as BMI screening in schools, that may put children at risk for stigmatization if not addressed appropriately (Ikeda et al. 2006). Training of school professionals to use behaviour change techniques as well as dealing with weight bias are some approaches to address these issues (Yager and O'Dea 2009). There is some important work in Canada to develop integrated and sensitive approaches to the prevention of weight-related disorders, including obesity and eating disorders, and to develop common priorities in research, advocacy and policy (Adair et al. 2008).

Addressing the Evidence Gap for Obesity Prevention in Primary Care

To address the limited capacity in preventive research in early childhood in Canada, our group at The Hospital for Sick Children, in Toronto, Ontario, developed a primary care-based research network called Toronto Applied Research Group for Kids! (TARGeT Kids!). This research network represents

the development of a novel platform for obesity-prevention research embedded in primary care practice to advance evidence using surveillance, cross-sectional, longitudinal and pragmatic randomized controlled trial methods. As of February 2012, we have recruited over 4,000 children under six years of age to TARGET Kids! and are collecting survey data on behavioural determinants of obesity (nutrition, sedentary lifestyle, sleep, child temperament, parent stress), anthropometrics (BMI and waist circumference) and cardiometabolic risk measures (blood pressure, laboratory measures including insulin, glucose). We hope to fill the research gaps identified in the Cochrane review and to develop, test and implement effective prevention strategies embedded in practice.

Summary

In summary, research is now emerging regarding effective prevention of obesity in children. Strategies have largely been focused on school-aged children and in the school setting. Despite the acknowledged importance of focus on early childhood, there are large gaps in knowledge regarding effective prevention interventions in this age group. Young children and families access the primary healthcare system frequently, yet the opportunity for obesity prevention in this setting is unrealized. There are no studies reporting research integrating prevention interventions in multiple settings. The complex problem of childhood obesity likely requires the development, evaluation and implementation of complex prevention strategies and policies that are multi-level, across age groups and integrated within multiple settings such as homes, schools, the community, public health and healthcare. **HQ**

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Ontario's Provincial Council for Maternal and Child Health

Building a Productive, System-Level,
Change-Oriented Organization

Charlotte Moore Hepburn and Marilyn Booth

In the early 2000s, similar to many sectors in the current healthcare system (Ahmed et al. 2010; Breton et al. 2009; Plsek and Greenhalgh 2001), the maternal-child health sector in Ontario was fragmented, encumbered with redundant elements and challenged to deliver high-quality, efficient, cost-effective care. Acknowledging the strategic importance of the maternal-child health sector and recognizing the need to resolve this fragmentation, the Ontario Ministry of Health and Long-Term Care (MOHLTC) created the Provincial Council for Maternal and Child Health (PCMCH; www.pcmch.on.ca) in late 2008. With a structure designed to engage the entire sector, together with the support of a dedicated secretariat, PCMCH was able to rapidly build momentum by unifying the maternal-child healthcare system and streamlining key elements of the organization and delivery of care (Day 2011; “New Bassinets = Better Access” 2011; Turner 2011). With an articulated function designed to focus on issues of mutual concern to the funder and provider, PCMCH has led to significant improvements in access, care quality and productivity (Moore Hepburn and Booth 2011; “SickKids Wins Celebrating Innovations in Health Care Award” 2011).

History of PCMCH

During the prior decade, multiple formal and informal provincial organizations focused on maternal-newborn and child-youth health were established in Ontario. Each group crafted a meaningful vision, engaged the passion and experience of selected leaders in the sector and contributed to enhancements

in health system performance on a local, regional or provincial level. However, while each was independently valuable, the scope, scale, profile and support for each of these organizations created unproductive redundancies and critical service gaps across the provincial maternal-child healthcare system.

For the first time in the history of the province, the maternal-newborn and child-youth sectors were united under one umbrella organization.

For example, in 2002, MOHLTC convened and funded the Specialized Paediatric Coordinating Council to focus on the delivery of specialized pediatric services. A year later the province’s six children’s hospitals (five acute care and one rehabilitation) created a separate organization, the Ontario Children’s Health Network, supported by membership fees and designed to fill service planning and coordination gaps across the province. These two groups operated in parallel, despite significant overlap in membership, and focused on complementary issues, until merging in 2006 as the Provincial Council for Children’s Health. Concurrently, an informal group called the Ontario Provincial Perinatal Partnership focused on the coordination of maternal and high-risk newborn care, and the Multiple Maternal Marker Screening Advisory Committee, an ad hoc group of clinical and laboratory experts dedicated to

prenatal screening in Ontario, were both seeking a more formal means of influencing the system of maternal-newborn health-care. Across all of these organizations, the maternal and child health sectors remained distinct, representation from community, rural and remote settings was limited and few opportunities existed for structured cross-talk with the domains of mental health, health promotion and public health.

The scope of PCMCH enables it to address issues that cut across clinical specialties and operational divides to truly reflect a life-course trajectory.

As MOHLTC increased its strategic attention on the vital maternal-child population, these system leadership and organizational challenges became apparent. Simultaneously, capacity pressures on the Level III (intensive care) obstetrical and neonatal system reached a critical state, resulting in the widely reported transfer of a number of Ontario's pregnant women and neonates out of the region or out of the country for care (Priest 2007, July 24; 2008, May 5). To resolve this high-profile issue swiftly and effectively and to optimize sector governance for the management of future maternal-child health system challenges, there was an urgent need to formalize a productive, system-level, change-oriented, sector-wide leadership table.

The scope and mandate for a single entity, capable of meeting the needs of the entire maternal-child population, was defined through dialogue between sector leadership and government. This shared desire to align system change efforts, to ensure comprehensive sector and regional representation and to participate meaningfully in the crafting of a provincial response to the tertiary obstetrical and neonatal capacity crisis resulted in the creation of PCMCH. For the first time in the history of the province, the maternal-newborn and child-youth sectors were united under one umbrella organization. Furthermore, this leadership table was designed to reflect the full diversity of the sector: all levels of care (primary, secondary and tertiary), domains of care (acute care, rehabilitation, community care, mental health care, public health and health promotion) and the full geographical diversity of the province.

In order to populate the new PCMCH, a call went out for expressions of interest in membership on council or on one of its advisory committees. A Nominations Committee reviewed the 86 applications and recommended 11 respected and highly accomplished system thinkers from across the province to serve as the inaugural council. In order to facilitate continuity, the chair of the former Provincial Council for Children's Health was asked to be the inaugural chair of PCMCH. Representatives from MOHLTC, the Ministry of Children and Youth Services

and the former Ministry of Health Promotion and Sport established relationships with council.

Overview of Current Structure and Function Structure

The council is composed of esteemed experts and senior representatives from a variety of disciplines from both the health and social services sectors across the province, representing maternal, newborn, child and youth health services planning and delivery across the continuum of care. Operationally, council is supported by a secretariat composed of an executive director, project managers and administrative staff.

The work of PCMCH is supported by both standing committees and focused, time-limited, volunteer expert panels, all sharing a set of common goals: enhancing access, improving quality and working together as a system (Figure 1). Recently, council has been working directly with the provider community to share and promote the understanding and adoption of its clinical recommendations and the use of its evidence-based clinical guidelines to support enhanced delivery and quality of care.

PCMCH is hosted by The Hospital for Sick Children (SickKids). SickKids is the signing authority for the annual transfer payment agreement from MOHLTC for PCMCH and, therefore, has responsibility for oversight regarding PCMCH's annual deliverables. The annual deliverables are identified through a process of priority setting within the advisory committees with final recommendations being reviewed and approved by council. PCMCH's annual work plan is included in the transfer payment agreement. An annual report on the deliverables is provided to MOHLTC at the end of each fiscal year.

PCMCH Function

The *vision* of PCMCH is "the best possible beginnings for lifelong health." PCMCH's *mission* is as follows:

- **Be the provincial forum** in which clinical and administrative leaders in maternal and child health can identify patterns and issues of importance in health and healthcare delivery for system support and advice.
- **Improve the delivery** of maternal-child healthcare services by building provincial consensus regarding standards of care, leading practices and priorities for system improvement.
- **Provide leadership and support** to Ontario's maternal and child healthcare providers, planners and stewards in order to maximize the efficiency and effectiveness of health system performance.
- **Mobilize information and expertise** to optimize care and contribute to a high-performing system, thereby improving the lives of individual mothers and children, providers and stewards of the system.

Structural Enablers of Success
A Scope Inclusive of the Comprehensive Maternal-Child Continuum

The scope of PCMCH includes the full range of maternal-child care from an optimal preconception period through a healthy pregnancy and a vigorous childhood and culminating in the successful transition to adulthood. This scope enables PCMCH to address issues that cut across clinical specialties and operational divides to truly reflect a life-course trajectory. This represents the first formal effort in Ontario to unite these two highly interdependent healthcare sectors for purposes of priority setting, service planning, care delivery and quality improvement.

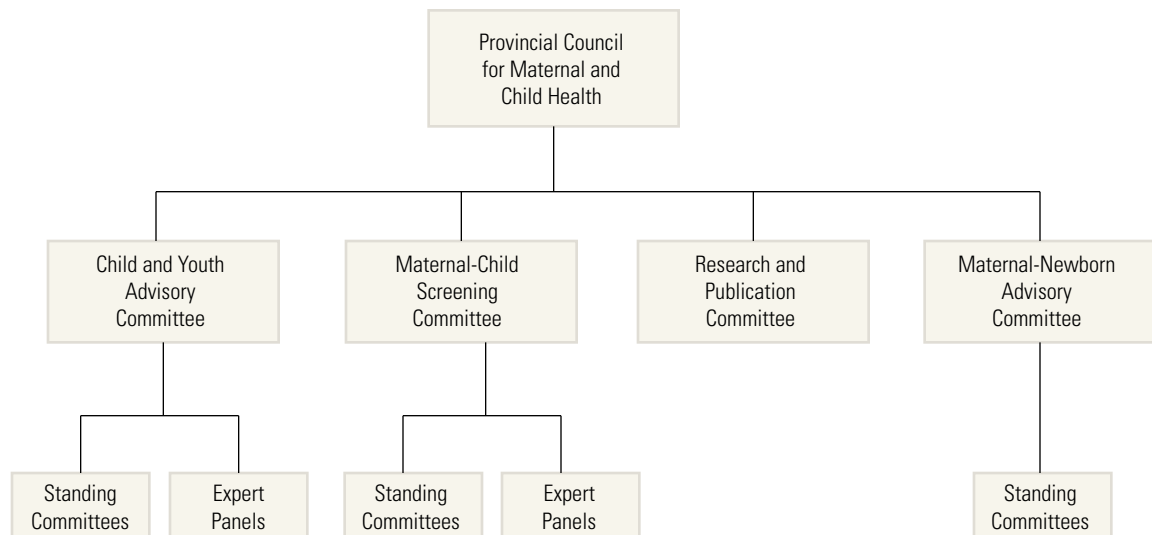
There is significant evidence documenting the physiological, social, emotional and economic benefits (Kahn et al. 1999, 2002; Wang et al. 2002; Zuckerman and Beardslee 1987) of delivering maternal and child health services holistically. The global health community has long recognized the need to approach population health using a life-course approach (Bhutta et al. 2008; Kerber et al. 2007) and has developed sophisticated frameworks for integrating maternal, newborn, child and youth health – as a whole – into health, healthcare delivery and broader social development agendas (Ekman et al. 2008). Certainly tensions exist within the diverse facets of the maternal-child community, namely the perception of “competing” for limited resources (McCoy et al. 2010). However, the interconnectedness and inseparable nature of maternal and child health compel us to reframe our approach to health system planning away from

sector- or service-specific design to a more robust, interrelated, life cycle-oriented enterprise.

A key example of the importance of the maternal-child continuum is the Neonatal Abstinence Syndrome (NAS) project. *NAS* is a term used for neonatal withdrawal symptoms resulting from maternal use of drugs of addiction. Maternal substance use during pregnancy is an important risk factor for negative pregnancy and neonatal outcomes. The rising incidence of NAS and the resulting impact on provincial neonatal resources was raised by one of the province’s neonatal leaders during discussions about access to neonatal services. After quantifying the alarming trend (see Appendix), PCMCH convened a panel of clinicians and administrators from across the spectrum of maternal-newborn care, addiction medicine, pharmacology and child protection to address approaches to care for this rapidly increasing population of pregnant women and infants.

Another valuable example of the comprehensive continuum of care effectively serving sector improvement relates to the inclusion of mental health as an integral component of health system planning and improvement (Kirby and Keon 2006). A recent expert panel brought together primary care providers, emergency medicine specialists and those with community- or hospital-based mental health expertise to focus on the development of a care pathway for children and youth who present to an emergency department (ED) with a mental health or addiction issue. The richness of the discussions between groups that rarely interact with each other resulted in an innovative approach to the

FIGURE 1.
Organization of the Provincial Council for Maternal and Child Health



care pathway and a strategy and tools for strengthening hospital provider–community provider relationships for the improved transition of patients back to the community post-ED visit. The resulting pathway, risk assessment tools and supporting templates have been shared with and applauded by hospital and community-based providers alike.

A Scope Inclusive of All Levels of Care

A second significant advantage to the new PCMCH structure involved the deliberate inclusion of all levels of care (primary, secondary and tertiary) and all regions of the province (urban, rural and remote) in deliberations and decision-making. Prior planning activities created artificial separations between academic and non-academic settings, and community and acute care settings, and rarely considered the varying challenges of providing service in a densely populated urban centre in comparison to a large and sparsely populated rural or remote region (Ricketts 2000).

An excellent example of the success of this new structure was the Access to Care Work Group (Bhutta et al. 2008), which was convened to address capacity issues in maternal-newborn services. Members represented all levels of maternal-newborn care and all areas of the province. Impressively, members were able to put their institutional and regional interests aside and identify level II neonatal care (intermediate or special care) as the single most pressing concern for the system. Approaching the problem from a system-wide perspective, the shortfall in level II neonatal capacity was identified as negatively impacting access to level III maternal and neonatal beds and was compromising Ontario's ability to provide high-quality care close to home. Data analysis identified the relative shortfall of level II bassinets by region, thus providing MOHLTC with an evidence-driven rationale for allocating their investment of 49 additional bassinets in specific low-capacity, high-demand locales. The Access to Care Work Group also recommended a number of practice changes aimed at improving the use of the province's maternal-newborn beds and recommended standardized definitions for the levels of maternal and newborn care in Ontario. Several of the key practice changes have been implemented, and the standardized levels of care have since been applied in partnership with Ontario's regional health authorities (the Local Health Integration Networks or LHINs) and Ontario's critical care communication and referral service (Criticall) (MOHLTC 2008).

In summary, by designing a structure that facilitates working together as a single sector, the following valuable objectives are met:

- The historic tendency to vie for limited resources and policy attention between the maternal-newborn and child-youth communities, acute care and primary care communities, and urban, rural and remote communities is greatly reduced. This streamlines the use of time, energy and resources of both

sector leaders and decision-makers. The sector also positioned itself to effectively set its own priorities, allowing the advancement of shared interests in novel and effective ways.

- PCMCH is able to benefit from the varied wisdom and experience of individuals across the entire sector. The PCMCH forum created new relationships across specialties, disciplines, interests and geographies that facilitates innovative practice changes and opportunities for creative, new efficiencies.

A Robust, Well-Supported and Highly Engaged Expert Panel System

Expert panels are an effective method to bridge the gaps between the best available evidence, applied clinical practice and health system policy and planning (Fink et al. 1984; Jones and Hunter 1995). In addressing the annual work plan, PCMCH uses focused, time-limited, all volunteer expert panels, directed by council and supported by the staff of the secretariat. Based on their known expertise, expert panel members are nominated by council and the advisory committees. Attention is paid to balancing panel representation by level of care, discipline and geography. By structuring a well-supported expert panel system, the following objectives are achieved:

- A significant number of front-line physicians, nurses, allied health professionals and administrators have been engaged in system change-oriented expert panel activity. In addition to expert panel deliberations generating the best possible recommendations for the Ontario maternal-child sector, practitioner engagement in identifying issues and developing solutions has created an expansive and energetic network of system advocacy and practice change champions. A timely response from government to some of the recommendations has helped to build and maintain momentum for subsequent volunteer panels.
- Many of the expert panel recommendations require neither policy change nor additional funding. Experienced, well-informed front-line providers can detail the required changes to everyday clinical practice that will strengthen the sector system-wide. They recommend changes *for* practitioners in response to issues identified *by* practitioners. This “we can do it” mentality has been a powerful motivator and engagement tool and has allowed the sector to, in large part, direct its own agenda.

Functional Enablers of Success

A Focus on Change Management

Continuous improvement, once considered an “ideal” in health-care delivery and health system planning (Berwick 1989), is now an expectation. To achieve this expectation, forward-thinking health sectors embrace the complexity associated with health system change (Plsek and Wilson 2001), function to encourage change behaviour and facilitate a culture of creative solution-

oriented transformation at every level of the health system (Grol and Grimshaw 2003). By focusing on change management, PCMCH is priming the maternal-newborn sector for ongoing evolution in clinical practice and system planning patterns and is equipping the sector with the tools to identify new areas for system-level change attention.

Key lessons from this important focus are as follows:

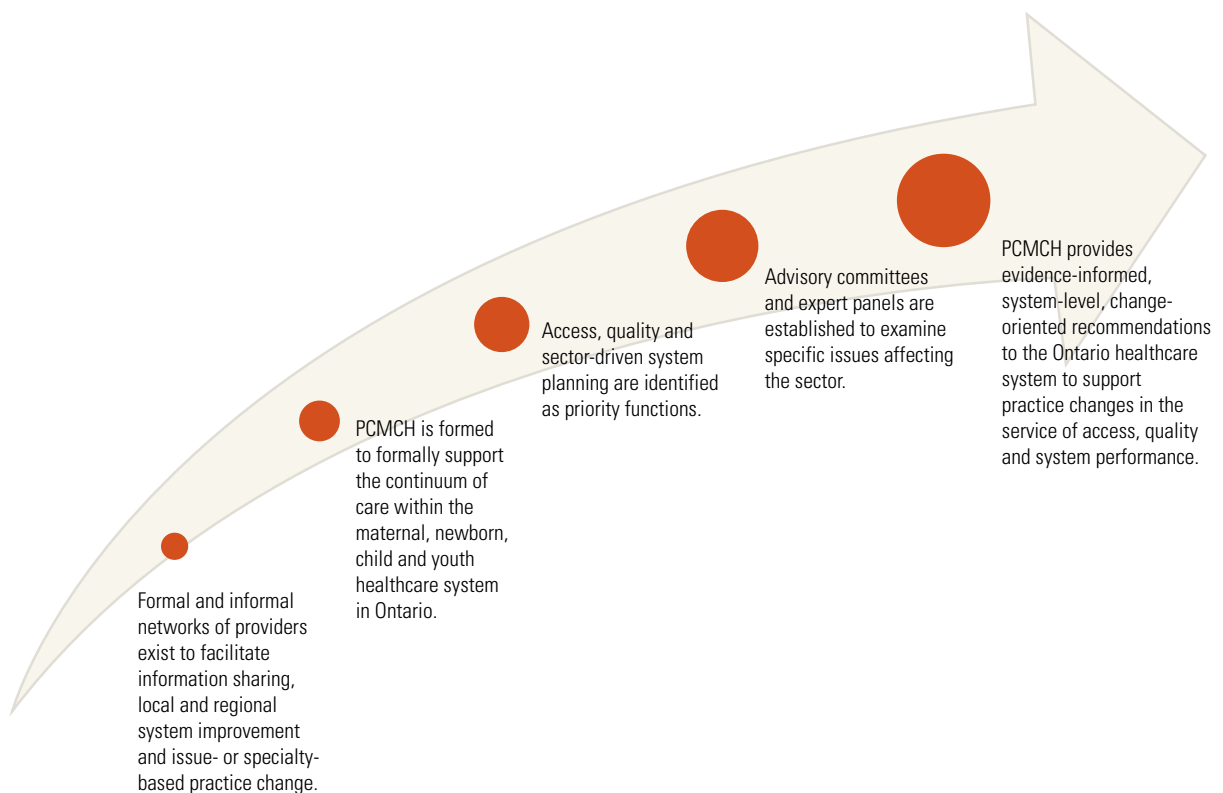
- Expectation management is essential. This is achieved through rigorous annual priority-setting processes and transparent communication regarding the focus of current and future activities.
- The avoidance of “scope creep” is critical. Terms of reference for expert panels are clearly written to focus the purpose of the project by stating the goals and expected outcomes of the work and directing feasible timelines. Care delivery and system change dimensions that are “out of scope” are carefully detailed to ensure that deliberations result in realistic recommendations that can translate into workable system change.

A Focus on Improvement through Organizational Change and Efficiency

As governments face the challenging combination of constrained resources and increasing public demands, scrutiny over health system investments will continue to intensify. While the current epidemiological, demographic and technological realities in healthcare provide near-limitless capacity to rationalize further investments in the health sector, continued spending growth is a fiscal and political impossibility.

By concentrating on areas of improvement that do not require, or require only minimal, investment PCMCH has improved access, quality and system performance through a focus on innovative organizational change and operational efficiency. For example, a PCMCH recommendation to ensure the province-wide availability of fetal fibronectin testing – an inexpensive test used to identify women unlikely to deliver within two weeks of presentation with symptoms of preterm labour – has led to the avoidance of unnecessary hospital admissions and transfers, through a modest investment in testing kits and supportive technology (Moore Hepburn and

FIGURE 2.
Evolution of Ontario's Provincial Council for Maternal and Child Health (PCMCH)



Booth 2011). Parental satisfaction is simultaneously maximized as pregnant women prefer being able to remain at home, having been assured that delivery is not imminent.

Similarly, a PCMCH program to expand screening for retinopathy of prematurity – a necessary eye-screening service for premature babies at risk of developing a potentially blinding eye disease – enhanced access for this vulnerable population with minimal up-front costs and significant long-term cost savings. A relatively modest investment in technology and training has enabled three community hospital–tertiary hospital partnerships to create the local ability to capture images of at-risk newborns’ eyes. The images are then transferred electronically to the teaching hospital, where they are read by a pediatric ophthalmologist. Infants are thus able to either avoid a transfer to

tertiary care for screening or return to their local hospital earlier in their stay in the neonatal intensive care unit. These projects have resulted in significant cost avoidance, decreased the risk incurred in transferring vulnerable infants between centres for screening and been welcomed by families and providers alike.

The key lesson from this focus is this: Significant progress can be made when an organization is deliberately oriented away from the “more is better” view to the “not more, but different” philosophy. These early and influential PCMCH successes, focused on low-cost, high-yield system solutions, have cemented this focus in the operating practice of the organization and the sector.

Future Focus

Over the past year, PCMCH has broadened the focus of its

APPENDIX.

Rising incidence of NAS in Ontario and its impact on neonatal resources

Year	No. of Infants with NAS as a Diagnosis*	Average LOS [†]	Beds per Day Used Across the Province	Top Three LHINs Regarding No. of Cases
2003–2004	171	11.9	5.6	Hamilton Niagara Haldimand Brant – 38 Toronto Central – 17 Central East, North East – 16
2004–2005	199	13.9	7.6	Hamilton Niagara Haldimand Brant – 32 Toronto Central – 22 Central East – 19
2005–2006	265	13.0	9.5	Hamilton Niagara Haldimand Brant – 47 North West – 33 Central East – 27
2006–2007	249	15.4	10.5	North West – 35 Hamilton Niagara Haldimand Brant – 35 Central East – 33
2007–2008	358	14.5	14.2	Hamilton Niagara Haldimand Brant – 67 North West – 58 South West – 36
2008–2009	380	14.6	15.2	North West – 77 Hamilton Niagara Haldimand Brant – 57 South West – 38
2009–2010	482	15.0	20.0	North West – 88 Hamilton Niagara Haldimand Brant – 78 South West – 44
2010–2011	654	13.1	23.4	North West – 156 Hamilton Niagara Haldimand Brant – 112 South West – 59

LHIN = local health integration network; LOS = length of stay; NAS = neonatal abstinence syndrome.

*Not just the most responsible diagnosis.

[†]The average LOS for a term newborn in 2004–2005 was 1.4 days.

[‡]The range of LOS is highly variable, with some hospitals reporting >42 days (Moore Hepburn and Booth 2011).

attention to include not only the generation of expert panel recommendations for system change, but also the implementation of initiatives informed by *previous* expert panel recommendations. Specific emphasis has been paid to those initiatives that do not require government policy change or additional funding. This requires the application of knowledge transfer strategies and a collection of tools to assist the sector with both direct implementation efforts and the development of permanent change management capacity. One of these tools is the publication of widely circulated communication materials designed to highlight positive examples of PCMCH-sponsored initiatives implemented locally by front-line providers. These success stories serve to promote broader uptake and foster innovative communities of practice dedicated to access, quality and system thinking across the sector. A second tool directs the

Significant progress can be made when an organization is deliberately oriented away from the “more is better” view to the “not more, but different” philosophy.

ability of similar institutions to benchmark their performance on a number of sector-derived variables. This similarly promotes the uptake of PCMCH-sponsored initiatives and encourages a culture of continuous quality improvement.

Moving forward, a second area of dedicated focus will be the advancement of sector-wide standardization. Recognizing that standardization is essential to optimize both efficiency and quality of care, PCMCH is well positioned to serve as the forum to develop provincial practice and clinical policy standards and to translate those standards into the lived environment. Also in the near term, PCMCH will refine its already-transparent process for identifying priorities for action. The incorporation of sophisticated priority-setting tools, such as horizon scanning, long-range scenario planning and effective stakeholder consultation, can be used to ensure that the focus of future work is of the highest impact and will benefit the needs of Ontario's maternal-child sector.

Finally, it is essential that PCMCH continues to develop approaches to measure and evaluate the impact of its work. The identification of indicators and data sources, the frequency of monitoring and the appropriate group for reviewing evaluation information are all areas of development for council.

Conclusion

The creation of PCMCH has transformed Ontario's capacity to respond to maternal-child health challenges and to advance productive, evidence-informed system-change agendas (Figure 2). The structure of PCMCH successfully united the entire

maternal-newborn-child-youth health sector and facilitated a comprehensive life-course approach to practice improvement and health system planning. The explicit function of PCMCH supports a culture of continuous improvement appropriate for this time of fiscal restraint. The resulting improvements in access, quality and efficient and cost-effective care have been valuable for both the sector and the province. The specific objectives sought and the valuable lessons learned from the PCMCH experience may inform the development of similarly valuable, system-level, change-oriented organizations in other sectors or jurisdictions. **HQ**

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A Critical Review of the Literature

Gail MacKean, Wendy Spragins, Laura L'Heureux, Janice Popp, Chris Wilkes and Harold Lipton

Abstract

Family-centred care (FCC) is a key factor in increasing health and related system responsiveness to the needs of children and families; unfortunately, it is an unfamiliar service model in children's mental health. This critical review of the literature addresses three key questions: What are the concepts, characteristics and principles of FCC in the context of delivering mental health services to children? What are the enablers, barriers and demonstrated benefits to using a family-centred approach to care in children's mental health? And how can we facilitate moving an FCC model forward in children's mental health?

A range of databases was searched for the years 2000–2011, for children ages zero to 18 years. Articles were selected for inclusion if a family-centred approach to care was articulated and the context was the intervention and treatment side of the mental healthcare system.

This literature review uncovered a multiplicity of terms and concepts, all closely related to FCC. Two of the most frequently used terms in children's mental health are *family centred* and *family focused*, which have important differences, particularly in regard to how the family is viewed. Initial benefits to FCC include improved child and family management skills and function, an increased stability of living situation, improved cost-effectiveness, increased consumer and family satisfaction and improved child and family health and well-being.

Significant challenges exist in evaluating FCC because of varying interpretations of its core concepts and applications. Nonetheless, a shared understanding of FCC in a children's mental health context seems possible, and examples can be found of best practices, enablers and strategies, including opportunities for innovative policy change to overcome barriers.



Family-centred care (FCC) is a key factor in increasing health and related system responsiveness to the needs of children and families; unfortunately, it is an unfamiliar service model in children's mental health. This critical review of the literature was commissioned in 2007 by the Southern Alberta Child and Youth Health Network (SACYHN), a dynamic, voluntary collaboration among individuals and organizations in southern Alberta concerned with the health and well-being of children, youth and families. The following key questions guided this critical review of the literature:

- What are the concepts, characteristics and principles of FCC in the context of delivering mental health services to children? (References to *child* and *children* in this document include children, adolescents and young adults.)
- What are the enablers, barriers and demonstrated benefits to using a family-centred approach to care in children's mental health?
- How can we facilitate moving an FCC model forward in children's mental health?

Literature Review Methods

A range of databases (e.g., MEDLINE, PsycINFO, ERIC, Cochrane, Social Sciences Abstracts) was initially searched for the years 2000–2007, for children ages zero to 18 years; it was updated in 2010–2011. A search for grey (unpublished) literature was undertaken as well, reviewing materials and websites noted by local experts and referenced in the literature. Google and Google Scholar search engines were also used.

A paradigm shift is required in which families are viewed as a key part of the solution rather than as part of the problem.

Articles were selected for inclusion if a family-centred approach to care was articulated (see "Multiplicity of Terms and Concepts," below, for the conceptualization of FCC used) and the context was the intervention and treatment side of the mental health care system. The initial search yielded a total of 270 full-text articles that were retrieved and reviewed; of these, 68 articles – 42 from the peer-reviewed literature and 26 articles/reports from the grey literature – were included in the literature review report (Spragins 2007). The update search conducted in 2010–2011 yielded an additional 10 articles for inclusion in this review.

Conceptualizing Family-Centred Care in Children's Mental Health

There are many definitions and descriptions of family-centred care (FCC; Allen and Petr 1996; Dunst et al. 2002; Institute for

Family-Centered Care n.d.; MacKean et al. 2005), but central to most are these core principles (MacKean et al. 2005):

- Placing the patients and their family at the centre of every care decision
- Providing care that is focused on the persons as individuals, rather than the diseases, in the context of their family and community
- Considering patients and their families as the experts on their own needs and values
- Enabling patients (and their families) to be active participants in the decision-making around their own (or their family member's) care
- Developing a truly collaborative relationship or partnership between health professionals and patients and their families that is based on mutual respect

Because partnership is so critical to FCC, it is important to be clear about what *partnership* means. True partnership involves working together to achieve something that would be difficult or impossible to do alone, and it is characterized by the following (Jeppson and Thomas 1997; MacKean et al. 2005; Thompson 2007):

- The identification of a common goal to work toward and joint evaluation of progress
- Mutual respect about what each partner brings to the partnership
- Open and honest communication and two-way sharing of information
- Shared planning and decision-making
- Ongoing negotiation about the role that each partner can and wants to play in the partnership over time

A Multiplicity of Terms and Concepts

This literature review uncovered many terms and concepts closely related to or used synonymously with *family-centred care*. *Family-centred care*, *family-centred service*, *family-centred practice*, *family-focused care*, *family-focused service* and *family-focused practice* are the most commonly used terms in the literature reviewed. In the children's mental health literature from North America, the terms *system(s) of care* and *wraparound* are also commonly seen. Another term closely related to FCC predominant in the adult mental health literature is *recovery*, and there is increasing discussion about how recovery might be used in the context of child and youth mental health. The concept of recovery is the foundation for transforming adult mental health systems across much of the developed world, including here in Canada where *Out of the Shadows at Last* (Kirby and Keon 2006) called for recovery to be placed at the centre of mental health reform (Mental Health Commission of Canada 2009).

Is It Family Centred or Family Focused?

Family-centred and family-focused approaches are often portrayed as similar or equal to each other, but there are important inherent differences between the two, especially in relation to how the family is perceived (Dunst et al. 2002). The differences (Table 1) are clearly reflected in the early literature on FCC from the disability sector.

Benefits of a Family-Centred Approach

In the literature reviewed, many benefits of a family-centred approach to care were described. These benefits, identified through evaluation or research (American Academy of Pediatrics 2003; Centre for Addiction and Mental Health 2004; Chenven 2010; Cook and Kilmer 2004; Huang et al. 2005; Kaas et al. 2003; MacKean et al. 2005; President's New Freedom Commission on Mental Health 2003; Winters and Pumariega 2007), include those shown in Table 2.

Given these potential benefits of taking a family-centred approach to care, increasing interest is being expressed by policy makers, service delivery organizations and mental health practitioners in advancing FCC in a variety of settings. Many children with mental health issues and their families, realizing that the traditional mental health service delivery models are not meeting their needs, are also advocating for change.

Advancing FCC in Policy and Practice Barriers and Challenges

Moving from theory to practice is never an easy thing to do, and putting FCC into practice generally, and specifically in the context of children's mental health services, is no exception. Many challenges and barriers to the implementation of FCC were noted in the literature reviewed (Canadian Medical Association 2004; Cavanaugh et al. 2008; Handron et al. 2001; Hanna and Rodger 2002; Kaas et al. 2003; Kamradt 2001; Kirby and Keon

TABLE 1.
Comparison of family-centred and family-focused approaches to patient care

Family-Centred Approach	Family-Focused Approach
Sees the patient and family as the experts on themselves. Patients and their families are active participants in all aspects of services and involved in decisions about care.	Believes that professionals are the experts on patient and family issues. Patients and their families can be helpful to professionals.
Feels patients, families and professionals bring different strengths and resources to the working relationship.	Sees the patient and family as having important information about themselves to share with professionals.
The helping relationship is set up as a partnership based upon trust, respect, honesty and open communication. Patients, families and professionals work collaboratively in addressing needs and concerns.	Professionals are friendly and respectful to families and want to have a positive working relationship. Family education is a focus of intervention.
The purpose of any intervention is patient and family empowerment.	The purpose of treatment is patient and family progress as defined by professionals.
Family-centred care begins with the first contact.	Family involvement begins after intake, eligibility and assessment take place, but before placement.
The identification of concerns and needs, family strengths and resources from various sources of support is the ongoing work of the partnership.	Patient and family input about long-range goals and plans is solicited, but professionals assume primary responsibility for planning interventions. Plans are made yearly and reviewed quarterly.
A broad-based perspective of patient and family needs permits flexibility for planning outcomes and for seeing different options for addressing outcomes.	Families are consulted about the appropriateness of existing services and agencies.
Each helping interaction is an opportunity for patients and their families to use their abilities and capabilities (strengths) or to learn new skills and abilities.	Family strengths are identified through an assessment process but not utilized in ongoing helping interactions.
Efforts are made to use and build patients' and families' informal support systems rather than to rely solely on professional services.	Professionals make information available on a variety of community services or assign a staff person to take care of patient/family needs and support as identified during assessment.

Source: Adapted from Western Carolina Centre (n.d.).

TABLE 2.
Benefits of a family-centred approach

At the Child and Family Levels	At the Service and System Levels
Improved child and family management skills and function	Improved cost-effectiveness of services
Increased stability of living situation	More effective use of healthcare resources
Greater educational attainment	Earlier access to services
Enhanced medication compliance	Reduced reliance on healthcare services
Hastened recovery from mental illness and addiction	Reduced out-of-home placement
Decreased family/caregiver stress	Reduced rate of re-hospitalization or relapse
Increased family/caregiver employment	Improved quality of care or services
Fewer contacts with law enforcement	Increased professional satisfaction
Lowered risk of mortality from substance abuse and suicide	Reduction of stigma through creating opportunities for dialogue
Increased child and family satisfaction	
Improved health and well-being of the child and the family	

2004; MacKean et al. 2005; McCammon et al. 2001; Osher and Osher 2002; Pierpont et al. 2001; Powell et al. 2001; Robinson et al. 2005; Rose et al. 2004; Tolan and Dodge 2005; Winters and Pumariega 2007). Some of the most critical are described below.

Defining Family

In today’s context, family diversity should play a key role in the development and delivery of children’s mental health care services. In a family-centred approach to service delivery, it is important to recognize that families define their own bound-

There is a shift from a crisis-oriented, professionally directed, acute-care approach focusing on unique episodes to a model that stresses continuing care, an ecological approach and long-term supports.

aries based on function, not form (Around the Rainbow 2006). They may not necessarily resemble a traditional nuclear family with children and their biological parents. Families may be temporary and live under many roofs; and they may include foster parents, step-siblings, grandparents and friends, to name a few examples. Families also vary greatly in their “beliefs, values, normative expectations for development and adaptive behaviours, parenting practices, relationship and family patterns, symptomatic expressions of distress, and explanations of mental illness” (Winters and Pumariega 2007: 290).

Transition to Adulthood

The transition to adulthood, which entails moving from the child to the adult healthcare system, is rarely smooth for children with chronic health conditions and can be a particu-

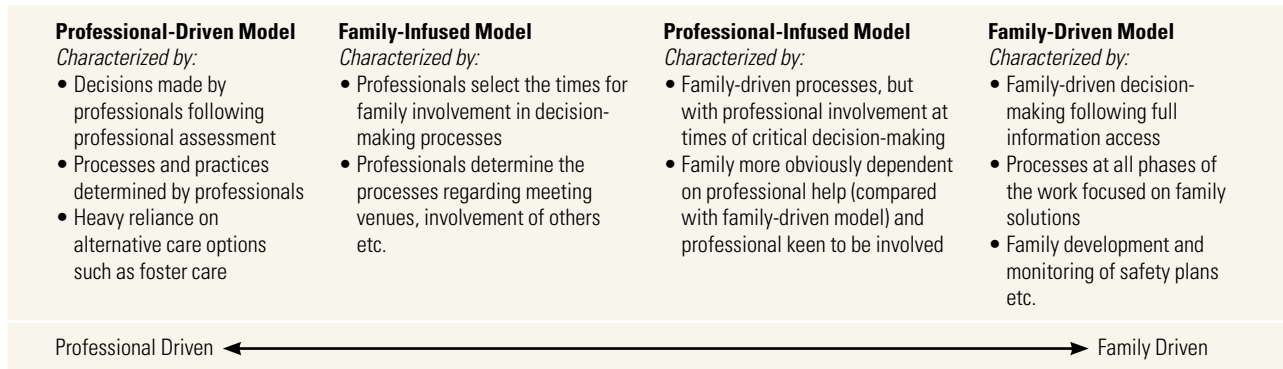
larly challenging time for children with mental health problems. In many jurisdictions, the decision to transition a youth to the adult mental health system is most often guided by bureaucratic constraints and not a young person’s developmental needs (Davis 2003). The result is that many youth receive services in settings designed either for younger children or older adults, neither of which address their particular needs. New approaches to transition planning are described as an important component of any system of care that emphasizes long-term recovery support (United Way of Calgary 2011; White et al. n.d.).

Working in partnership with children and their families can become increasingly complex in this context. While protecting the rights of children, legislation and guidelines about confidentiality and consent can cause major difficulties for families. In some cases, personal information cannot be shared without the young person’s permission (Kirby and Keon 2006).

Stigma and Blame

The stigma associated with childhood mental illness – specifically that the parents or caregivers are at the root of the problem – has been linked to the reluctance of some professionals to include families as full partners in treatment plans (Osher and Osher 2002). In the areas of children’s mental health, child welfare and juvenile justice, families have traditionally been blamed for the children’s problems, and children have been seen as too young, too troubled or too disobedient to participate in decision-making (Osher and Osher 2002). Children with mental illness and their families often feel ashamed, with a major contributing factor being the perception they are responsible for the illness. As Michael Kirby stated, “My vision is that public attitudes will shift so much that parents won’t feel stigmatized and discriminated against if their children need mental health help” (Haddad and Kirby 2010: 80). Pursuing a family-centred approach requires addressing the stigma associated with mental illness.

FIGURE 1.
An ideological orientation continuum



Source: Adapted from Connolly (2007).

Traditional Training of Health Professionals

Traditional models of training in the healthcare professions have provided little orientation to working with families (Chenven 2010; Kaas et al. 2003; McCarthy et al. 2009) and inter-professionally (Handron et al. 2001). FCC can present a challenge because of its emphasis on collaboration. Recent evolving collaborative mental health care services require professionals from various disciplines to work together. These collaborative services do not, however, necessarily incorporate FCC approaches, in that the child and the family are often not considered to be part of the inter-professional team.

Provider-Driven or Medical Model

A healthcare providers' lack of collaborative orientation is closely related to the *provider-driven* or *medical model* that dominates the culture of healthcare (Chenven 2010; MacKean et al. 2005; Osher and Osher 2002). Osher and Osher (2002) describe a provider-driven model of service delivery where professionals and agencies are viewed as key to solving problems and, by virtue of their training, are assumed to possess the expertise and tools to diagnose problems and prescribe solutions. Treatment failures are often attributed to a lack of co-operation from the child and family.

Other authors (Lawlor and Mattingly 1998, cited in Hanna and Rodger 2002) describe this as a clinic culture, features of which include the persistence of the *therapist as expert* view; the idea that spending time to develop rapport with and elicit perspectives and priorities from parents and the child themselves does not constitute real work or involves "soft skills"; and the tendency for services to be provided in a fragmented and specialized way, where each professional presents to the family a different definition of the child's problems. It is not possible to simply add the principles of an FCC philosophy to these traditional models of care – an ideological shift is required. Connolly (2007), for example, describes an *ideological orientation continuum* from a

professional-driven model to a family-driven model (Figure 1). A family may ask for more professional help either in making difficult decisions or in providing specialized care or treatment (i.e., the professionally infused model in the continuum). This is still a family-centred approach to care as the family members are determining the role they want to play and what they feel comfortable handling at a particular point in time.

Enablers

An awareness of these barriers and challenges provides important contextual knowledge that can be used to identify enablers for moving a family-centred approach to services into practice. There are promising practices where mental health services have been transformed to be more family centred, with clear benefits to the children they serve, their families and the mental health professionals themselves (American Psychiatric Association 2002; Cavanaugh et al., 2009; Chenven 2010; Huang et al. 2005; Kamradt 2001; Lepage 2005; Taccheri 2005; Winters and Metz 2009; Winters and Pumariega 2007). Through the research done in this field, and the documentation and evaluation of promising practices, some clear enablers for advancing FCC are emerging. System-wide change efforts are more likely to be successful if applied at multiple levels.

The Macro- or System Level

Central to the concept of FCC is the development of true collaborative relationships with children and their families. Such relationships can only be developed if mental health systems and the people working within them recognize and build upon the strengths and capabilities of children and families. Closely related is the importance of recognizing that people who access children's mental health services have valuable expertise about what does and does not work in our systems from a client perspective (Canadian Mental Health Association 2006). There

is increasing recognition that this client expertise contributes toward the development of a safer mental health care system (Brickell et al. 2009), and one that is more responsive to the needs of children and their families.

A family advocacy movement, in the context of other societal trends, has driven the move to FCC in child health at a policy level. However, the required shift in thinking from seeing families as part of the problem to seeing them as part of the solution has been particularly slow in coming in children’s mental health (Kirby and Keon 2006). Due to the stigma associated with mental health issues, families have not been as strong in advocating for change in mental health as they have been in other areas of child health, but this is beginning to change (Winters and Pumariega 2007). There are recent signs of positive change occurring in Canada. The Institute of Families for Child and Youth Mental Health, founded in 2009, acts as a catalyst for connecting families with service providers, educators, researchers, policy makers and others, all of whom have a common desire to improve mental health outcomes for children, youth and families. Its first initiative was to establish “Family Smart™, an identity that will be used to identify and endorse programs, practices, policies, services and research that families have identified as meaningful and helpful to them” (Institute of Families, n.d.).

The principles of FCC need to be incorporated into the research and education agendas. The more opportunities that mental health professionals and researchers have to work with

and hear the perspectives of children and their families, the more likely they are to see them as part of the solution and the greater the relevance of research and education. The more opportunities that children and families have to be involved in shaping these agendas and in sharing their perspectives, the greater their confidence in their own strengths and capabilities (McCammon et al. 2001). Once again, the Institute of Families has identified this as one of their priorities, hosting a child mental health research forum where families and youth worked collaboratively with researchers, service providers and policy makers to identify user-defined research directions (Davidson et al. 2010).

The Meso- or Organizational Level

Advancing FCC across an organization requires a commitment from the very top to support mental health professionals and staff to work in a family-centred way. This can involve multiple strategies, including the development of a vision, mission and values that promote FCC; the creation of enabling organizational policies (e.g., flexible visiting policies); hiring staff who believe in and wish to practise in a family-centred way; orienting mental health professionals and providing ongoing opportunities for them to learn about family-centred approaches, including learning from children and families; engaging children and families to work with organizations in the development and evaluation of services; and celebrating and rewarding exemplary family-centred practice (Bruns et al. 2006; Canadian Mental Health Association 2006;

TABLE 3.
Examples of enabling a family-centred approach at the direct service level

<p>Partnership between families and direct service providers</p> <ul style="list-style-type: none"> • Use child- and family-driven team treatment planning, where the child and family define the desired outcomes and select individuals to add to the team • Include children as fully franchised members of the team • Use a strengths-based orientation that looks at needs rather than problems • Promote hope and optimism • Involve children and their families meaningfully in multiple aspects of intervention • Provide children and their families with accurate, understandable and complete information so they can make informed choices • Make decisions collaboratively that reflect family rather than therapist goals • Include foster parents as partners in the treatment of children in their care • Recognize and celebrate family diversity
<p>Ecologically targeted interventions</p> <ul style="list-style-type: none"> • Address barriers to care • Access strengths and resources in the natural environment of the child and family, including peer support • Use system resources strategically to meet the child and family’s needs in multiple domains • Provide services that are flexible and responsive to child and family needs, concerns and priorities • Provide services in primary care settings, pediatric settings and schools • Adopt culturally specific therapeutic modalities • Promote the active involvement of children and families in decision-making, including pharmacology decisions

Sources: Data from Austin (2004); Friesen (2005, 2007); Hanna and Rodger (2002); Osher and Osher (2002); Tolan and Dodge (2005); Winters and Metz (2009); and Winters and Pumariega (2007).

Centre for Addiction and Mental Health 2004; Institute for Family-Centered Care n.d.; MacKean et al. 2005; McCammon et al. 2001; Winters and Pumariega 2007). Both front-line service providers and children and their families need forums where they can voice their positive experiences as well as the challenges with working together in this new way (Cavanaugh et al. 2009; Institute for Family-Centered Care n.d.).

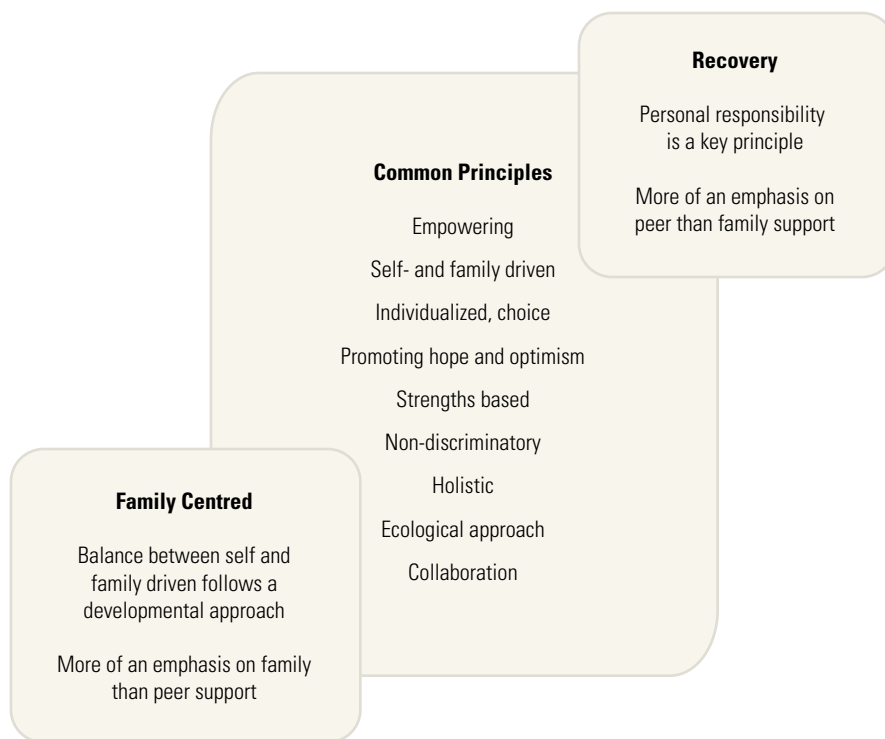
The Micro- or Direct Service Level

In a family-centred approach to services, assessment and treatment are guided by the ecological context of the family, incorporating information about formal and informal community supports (Winters and Metz 2009; Winters and Pumariega 2007). Consideration is given to both the immediate and extended family systems, as well as to extra-familial systems such as school, work, peers, primary healthcare and community or cultural institutions (National Advisory Mental Health Council Workgroup on Child and Adolescent Mental Health Intervention Development and Deployment 2001; Storck and Vander Stoep 2007; Winters and Pumariega 2007). Systemic

issues related to legal, social and financial concerns that affect care are also considered (Winters and Pumariega 2007). A social ecological assessment facilitates the development of targeted interventions that are matched to the particular circumstances of the child and family and address any barriers to care (Tolan and Dodge 2005; Winters and Pumariega 2007). Some practical examples of enabling FCC are outlined in Table 3.

Two interconnected models of care that exemplify a family-centred approach in children’s mental health – systems of care and wraparound – have been evolving in the United States in particular over the past 20 years. *Systems of care* was developed in the 1980s to address the needs of children with serious mental and emotional disorders (Chenven 2010; Huang et al. 2005; Winters and Metz 2009; Winters and Pumariega 2007). In a systems-of-care approach, agencies work together and collaboratively with families to ensure that children and their families have access to the services and supports that they need to succeed (US Department of Health and Human Services, Substance Abuse and Mental Health Services Administration n.d.). The systems of care model is described as a community-based,

FIGURE 2. Common values and principles underlying the concepts of family-centred care and recovery, as well as some key differences



Sources: Data from Cavanaugh et al. (2009); Friesen (2007); MacKean et al. (2005); and White et al. (n.d.).

child-centred, family-focused, culturally appropriate service approach in which care is tailored to the needs and preferences of individual children and families (Chenven 2010; Huang et al. 2005). Within the context of their families, the children are placed at the centre of the clinical process, and their families are acknowledged as full partners at all levels of system planning (Winters and Metz 2009). Families are included at every level of the process, and services are collaborative, integrated and provided in the least restrictive settings possible (Chenven 2010; Huang et al. 2005; Winters and Pumariega 2007).

Only by openly inviting the child and family perspectives will the development of truly collaborative working relationships at all levels of children’s mental health systems continue to evolve.

A core component of the systems of care model is its use of wraparound. *Wraparound* is an “integrated assessment and planning process” (Winters and Pumariega 2007: 287) that literally wraps services around the children by using the strengths, needs and goals of individual children and their families along with services in the families’ natural support system in developing the treatment plans (Huang et al. 2005; Winters and Metz 2009). In the United States, wraparound has become the national standard for service planning for children and youth with complex mental health needs and their families, and systems of care is the national standard for service delivery (Cavanaugh et al. 2009; Chenven 2010; Winters and Metz 2009). Although systems of care and wraparound are described here as direct service level examples of FCC, moving forward with these care models requires policy changes at the organizational and systems levels.

A parallel movement in the adult mental health and addictions field has been the advancement of the *recovery* concept. A recovery approach to mental health service delivery is one that focuses on the strengths and capabilities of individuals, and on people recovering a meaningful life in their respective communities while striving to achieve their full potential. Peer support is an important component of any recovery-oriented service delivery system. Underlying key recovery principles include hope, empowerment, choice and responsibility (Mental Health Commission of Canada 2009).

While the concepts of recovery, systems of care and family-centredness originate from different sources and use different words, there are common key values and principles that cut across these concepts (North Carolina Division of Mental Health, Developmental Disabilities and Substance Abuse

Services 2011): they all indicate a shift from a crisis-oriented, professionally directed, acute-care approach focusing on unique episodes to a model that stresses continuing care, an ecological approach and long-term supports (Cavanaugh et al. 2009; White et al. n.d.). Figure 2 outlines the common values and principles that underlie both FCC and the recovery model, as well as some of the key differences.

There is ongoing debate about how the benefits and limitations of recovery as an organizing concept fit for child and youth mental health and addictions services (Cavanaugh et al. 2009; Friesen 2005, 2007; White et al. n.d.). Certainly, the related elements of hope, optimism, planning for the future and peer support that are central to the recovery concept are greeted very enthusiastically by youth and family members (Friesen 2005, 2007). A major concern about using recovery is the confusion associated with the actual term or definition of recovery (Cavanaugh et al. 2009; Friesen 2005, 2007; Mulvale and Bartram 2009; White et al. n.d.). Confusion arises because the term applies to so many different concepts in everyday usage. For example, in the Canadian context, *recovery* may refer to anything from “recovering from a bout of flu” to “recovering the puck” in a hockey game (Mulvale and Bartram 2009). With respect to the healthcare context, the term *recovery* implies “cure” (Friesen 2007).

Implications for Policy, Practice and Research

This critical review of the literature indicates that there has been a sufficient body of evidence accumulated to support FCC as best practice in children’s healthcare, including mental health. There are, however, unique challenges in moving forward with FCC in children’s mental health. The emphasis in the literature is clearly beginning to shift away from trying to understand the concept of FCC and whether it represents a positive systems change, to how to practise FCC in the varied contexts in which children’s mental health services are delivered. Keeping both this shift in focus and the complex context of children’s mental health service delivery in mind, implications for policy, practice and research are raised here for consideration.

An important implication relates to the definition of *family*, with a particular focus on the transition between adolescence and adulthood. There is a need to identify the best approach, with a goal of ensuring that care is not interrupted or compromised, to supporting families who are able to remain involved when the young person wants their continued participation. As children mature, it becomes increasingly important to pay attention to who they identify as their main source of support. Although evidence indicates that parents and other immediate family are often still major sources of support, this is not always true. Mechanisms need to be developed that enable young people to identify and engage additional or alternative support systems.

A second implication relates to the issue of stigma and blame.

Children do not live in isolation; they are cared for and nurtured in their families and communities. A paradigm shift is required in which families are viewed as a key part of the solution rather than as part of the problem. Professionals working in children's mental health services should actively invite youth and families to be involved at all levels. Policies need to be developed that both support this social ecological approach and enable the identification of and building on strengths and function. The Mental Health Commission of Canada has recently been established, a major focus of which is addressing stigma. It has identified advancing a patient- and family-centred approach to care as a key strategy for doing so (Kirby and Keon 2006). As Haddad and Kirby recently stated, "The system is very much organizationally driven ... but we've got to get beyond that approach and focus on how we're going to build a patient-centred system" (2010: 79).

Third, issues of acuity, competence and children's stages of development mean that FCC may look very different throughout the continuum of a child's mental illness. At times when a child requires immediate and critical intervention, it may not be possible to involve the family in treatment planning and decision-making to the extent one would like. The child's involvement in treatment decisions will evolve with their development and fluctuate with acuity and competence. Ultimately, FCC is occurring as long as the child is continuously viewed as an individual in the context of the family and community, and the ultimate goal is to work collaboratively with the child and the family in the contexts of their everyday lives.

A fourth implication relates to the education of, and ongoing professional development for, children's mental health professionals. Service providers must be supported in acquiring the skills needed to practice FCC. Working collaboratively, with children and families recognized as part of the interdisciplinary team, viewing children in the context of their families and communities, and being able to identify and build on child and family strengths with a focus on instilling hope and optimism require new knowledge and skills.

Fifth, organizational structures and policies need to support service providers in using their new knowledge and skills. Compensation options for physicians and allied health professionals, for example, must support professionals working together with each other and with children and families, recognizing that relationship development takes time. Professional practice standards and codes of ethics also need to incorporate these new ways of working.

Finally, policy development is required that enables child and family involvement at all levels (i.e., system, organization, direct service provision) so that children's mental health service delivery systems are safe and responsive and support service providers to work in partnership with children and families. Only by openly inviting the child and family perspectives will the development of truly collaborative working relationships at

all levels of children's mental health systems continue to evolve. This is true not only for service policy, planning and delivery but also for research and evaluation.

As noted previously, the concept of recovery is providing the foundation for transformation in adult mental health and addictions services. The distinction between recovery and FCC is more related to the developmental stage of children than to differing underlying values and principles. The relationship with the children's families is more central to the concept of FCC, but this is developmentally appropriate given that children and youth are more dependent on their families. As youth transition to adulthood and they become more autonomous and responsible, the weight shifts from being largely family driven to being more youth driven. Ultimately, the difference is more on the emphasis as, ideally, all individuals have families (broadly defined) that are central in their lives and continue to support them on their recovery journey.

In conclusion, FCC is the standard of practice for child healthcare. Many children have both mental and physical health issues, so having a common standard of care across child healthcare is essential. The literature clearly shows that a family-centred approach must be integrated into policy and practice if we are to move forward with developing a high-quality, safe children's mental health system. FCC will become increasingly important as more mental health services are delivered in the community, where the majority of ongoing care and support of children is being provided by families. Our role as practising health professionals and policy makers is to continue to work in partnership with children and their families, in all their diversity, to optimize the mental health and well-being and, thus, the present and future quality of life of children and youth. **HQ**

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