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The Developmental Systems Approach to Early Intervention in Canada

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This article examines current policies and early intervention services for children with disabilities and their families in Canada within the principles of the Developmental Systems Approach (M. J. Guralnick, 2005, 2011). The article considers the sociopolitical context of Canada, especially with respect to diversity and equity. Applying the components of the Developmental Systems Approach as a framework, the authors compare aspects of services for children with disabilities by region across Canada that illustrate systemic strengths and weaknesses. The authors note policy trends that may affect the future delivery and efficacy of early intervention services, specifically those that build on existing strengths and support the continued dialogue between provinces, territories, and the federal government to develop a national agenda for early intervention. Key words: early intervention, inclusion, Canada

The Developmental Systems Approach (DSA), developed within a U.S. context, is useful as a theoretical framework to understand and assess early intervention in Canada. This theoretical approach permits a strengths-based focus on children’s competencies, family patterns of interaction, and family resources, while identifying the stressors that impact positive developmental outcomes for children (Guralnick, 2011). The DSA is compatible with work we have been doing to theorize early childhood education and intervention in a Canadian context (Frankel & Underwood, 2011). The DSA appreciates the importance of considering the inherent tension that exists between the individual characteristics of children and families and the sociopolitical context in which early intervention services are defined and delivered (Underwood, Valeo, & Wood, in press). Furthermore, the complexity of the approach acknowledges the environmental circumstances, such as community supports, economic circumstances, or experiences of discrimination, that affect the behaviors and interactions between children and families.

This article uses the lens of the DSA proposed by Guralnick (2011) to examine the principles of early intervention for children with disabilities and their families in Canada, with particular attention to examples of how components of the DSA have been implemented in their regional contexts. The current trend in social policy in Canada to focus on shared responsibilities of early intervention between social service agencies and schools is described. The application of this trend includes implementation of full-day kindergarten in many jurisdictions, models for interagency collaboration, and an emphasis on school readiness as an outcome of early childhood services. The implications of the social policy trends that may affect the future delivery and efficacy of early intervention services are reported.
THE CANADIAN CONTEXT

Canada is a pluralistic society composed of approximately 34 million people, 10 provinces, three territories, two official spoken languages (English and French), and a vast geographic area (Statistics Canada, 2010, 2012). Canada’s diversity has been defined by its indigenous peoples, a tradition of encouraging immigration from around the world, and the changing demographics of the populations that live in remote, rural, and urban communities. Within this context, early intervention services and programs have evolved across the nation to support the healthy development of young children and their families.

Early intervention

In Canada, the term early intervention encompasses a broad range of policies, programs, and services that promote the healthy development of vulnerable children and their families from conception to age 6 or 7 (Frankel & Gold, 2007). Children are considered vulnerable if their development is at risk due to established conditions such as chromosomal disorders, biological predispositions including very low birth weight, and/or the prevalence of an array of environmental factors that affect the developmental trajectory. However, no agreed-upon definitions of these risk conditions are applied consistently across all the provinces and territories. In the absence of federal legislation on early intervention, eligibility for and the availability of services and programs can vary widely across the nation.

Health

Canada is a strong proponent of international and national efforts to support the health and well-being of young children with disabilities and their families. As a participant in the international discourse on social, health, and education services, Canada is a signatory to the UN Convention on the Rights of the Child (United Nations, 1989) and the International Convention on the Rights of Persons With Disabilities (United Nations, 2007). Although the latter document outlines the right to access early intervention services, under health services, it does not explicitly discuss education for young children.

Canada is a federation of provinces and territories and has federal legislation regulating the provision of health care through the Canada Health Act (1985). All citizens and permanent residents of Canada are entitled to health insurance coverage under the Canada Health Act (1985). Federal legislation requires that health services are publicly administered, not-for-profit, comprehensive in providing medically necessary services, universal, accessible, and portable across provinces (Canada Health Act, 1985). However, the definition of what is considered “medically necessary” is defined within provincial rather than the federal legislation. Many early intervention services are listed under health care, but this federal legislation means that different provinces may list different services as medically necessary. This discrepancy between provinces was highlighted by the Auton case, in which funding for Intensive Behavioral Intervention and or Applied Behavior Analysis (IBI/ABA) services were denied for a child with autism by the province of British Columbia, where he lived. Subsequently, this decision was upheld by the Supreme Court of Canada on the grounds that IBI/ABA was not considered a “core” service under the Canada Health Act (Auton v. British Columbia, 2008). Although some provinces/territories will provide funds for certain interventions such as IBI/ABA, the lack of consistent early intervention services provided under the Canada Health Act results in children and families having variable entitlement to government-funded intervention depending on the jurisdiction in which they live.

*The principles and components of the Developmental Systems Model are highlighted in italics throughout the article.*
Education and early childhood education and care

Canada, although having extensive legislation with regard to the provision of health care, is the only federation in the world without a national department of education (Friendly & Prentice, in press). Early childhood education and care (ECEC) in Canada takes place in many settings, including child care, preschool, kindergarten, and at home. According to the 2011 Census, the fastest growing sectors of the Canadian population are toddlers 4 years and younger. The size of this age group has increased by 11% since the previous census in 2006, with indications that a high proportion of these children live in families where mothers work (Statistics Canada, 2012). These children require quality care and educational services to ensure healthy developmental growth. Yet, Canada has no universal system of ECEC, and no federal legislation ensures that Canadians have access to ECEC. In fact, federal spending for ECEC has declined since the 1990s (Friendly & Prentice, in press), and Canada has the lowest spending per capita on ECEC among the Organization for Economic Co-operation and Development (2011) countries. Thus, fewer child care and early education spaces are available, making early intervention service more difficult to access and perhaps less inclusive.

PRINCIPLES OF EARLY INTERVENTION IN CANADA

The principles of the DSA can serve as a foundation for understanding early intervention in Canada. Many of these principles are apparent in current service delivery, whereas others are less evident. For example, early intervention programs in Canada are founded on the principle that a developmental framework and family-centered orientation should guide service delivery (Frankel & Gold, 2007; Frankel & Underwood, 2011). However, many professionals working in the early intervention system follow other philosophies and orientations to service such as those in the fields of health care, rehabilitation, and education; they may focus on different treatment modalities rather than the child’s developmental strengths (Bruder, 2010). These professionals are also more likely to see the child rather than the family as the focus of intervention (Dunst, 2002).

Early detection and identification procedures are provided through a variety of screening methods in each province and territory, but there is no universal access for all families. Screening and assessments to determine which children are eligible for services vary from province to province, as do the types of programs that require documentation for access. Many services are provided by specialists, such as developmental pediatricians, as a health entitlement. Assessments for specific disabilities requiring additional professionals, such as psychologists and speech-language pathologists, are often provided at no charge if accessed through hospitals, schools, and multiservice agencies. However, parents can bypass the waiting lists for publicly funded assessment if they have the resources to access private practitioners, generating inequity in the provision of services.

The integration and coordination of services and professionals across health, education, care, and social services are critical for effective service delivery. Beginning from infancy, young children with established and/or biological risk factors and their families commonly receive services from various service providers, including physicians, public health nurses, early childhood interventionists, infant development specialists, occupational therapists, physiotherapists, speech-language pathologists, psychologists, social workers, behavior therapists, audiologists, and vision specialists (Underwood, 2012). These various service providers are likely to define evidence-based practices depending on the specific discipline and focus of the practitioner.

The inclusion and participation of young children with disabilities in typical community child care programs have been used as an early intervention strategy in Canada since the
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1980s. The principle of inclusion is founded on the democratic right of all children to belong, provincial and international policies that support these beliefs, an attitude of respect for the cultural and linguistic diversity of children and families, and practices that are developmentally based (Frankel, Gold, & Ajodhia-Andrews, 2010). In many regions, inclusive early education and care centers are the only settings available outside the home for children with disabilities, but as described earlier, without an affordable and universal ECEC system, access to community child care centers is limited. Many provinces in Canada have adopted a resource teacher and itinerant resource consultant model of service delivery to support inclusion through collaborative consultations with family, center staff, and specialists (Frankel, 2006). In British Columbia, a policy of supported child care ensures that all children with extra support needs who attend child care programs receive consultative support (Frankel, 2004); other provinces and territories provide similar child development specialists for this role. Resource consultants in Canada are well positioned to collaborate with and coordinate the myriad of services and specialists with which a family must associate and often assist as the child and family transition from preschool programs into kindergarten.

While certain principles of the DSA have been implemented in early intervention across Canada, other principles of the DSA are less prevalent. Surveillance and monitoring of outcomes, individualized services, and a strong evaluation and feedback process are present in some programs and service systems but still require further development. An understanding of the family’s values, beliefs, and priorities is necessary as professionals and parents seek creative solutions to problems and individualized approaches to service delivery and family support (Ali, Corson, & Frankel, 2009).

Finally, the principle of maintaining a systems perspective is most evident at a provincial and territorial level. Provincial/territorial initiatives for early intervention are evolving in local and regional communities across Canada, but a national approach is not in place.

COMPONENTS OF THE DEVELOPMENTAL SYSTEMS APPROACH

Each province and territory in Canada has adopted unique approaches to providing early intervention and ECEC services. As Guralnick (2005) notes, it is necessary for local communities to have a degree of control in decision making and service delivery. However, given the funding and policy context in Canada, it is important to consider whether adequate mechanisms are in place to ensure that children and their families have equal access to support and opportunities for development. This section focuses on components of the DSA in Canadian early intervention systems. The components are presented in three groups (Guralnick, 2005): (1) entry points (screening and referral, monitoring and surveillance, points of access); (2) intervention design and implementation (comprehensive interdisciplinary assessment, eligibility, assessment of stressors, implementation of comprehensive programs); and (3) monitoring and transitions (continued monitoring and evaluation of outcomes, and transition planning).

Entry points

Across Canada, there is a social policy trend to link early-years services and educational services. This trend has created an interest in identifying family and child needs as soon as possible to match them to programs that will optimize early development. The result is a great deal of emphasis on school readiness, and child development as a whole. Although not all provinces/territories have linked early-years and educational services yet, early identification and intervention are a priority in all jurisdictions.

Across Canada, screening points and referrals are realized through universal screening programs. Screening strategies across the country include postnatal home visits from
a public health nurse or other culturally appropriate agent (such as an Aboriginal home visitor) and distribution of standardized developmental screening tools, such as the Ages & Stages Questionnaire (ASQ; Squires, Bricker, & Potter, 1999) or the Nipissing District Developmental Screen (Nipissing District Developmental Screen Intellectual Property Association, 2000). Physicians are also part of the screening strategy, with some provinces encouraging 18-month screening when children visit their doctors for vaccinations. Williams and Clinton (2011) found in a national scan that public health nurses in Prince Edward Island, Alberta, and Newfoundland and Labrador are conducting physical assessments and referring families to community resources when they vaccinate young children. Saskatchewan, Manitoba, and Nova Scotia are conducting pilot projects to test a combination of physician and public health strategies for universal screening of young children.

Screening programs for vision and hearing are also in place in many parts of the country. However, Patel and Feldman (2011) report that only British Columbia and Ontario have fully funded universal hearing screening programs. Universal vision screening programs are also underway in both of these provinces (Ministry of Health, British Columbia, n.d.). In other provinces, screening is conducted when a concern arises, such as when an infant is admitted to the neonatal intensive care unit (Patel & Feldman, 2011).

Many provinces and territories have a comprehensive system for screening, assessment, and referral. The province of Ontario has made the standardized Nipissing District Developmental Screen available at no cost to all Ontarians, and it has been distributed widely through early-years programs and by health care providers. Although these tools are widely distributed, they may not be culturally appropriate or relevant. Alberta has an initiative to make the ASQ universally accessible. However, a study that examined the use of the ASQ in culturally diverse communities showed problems with the use of standardized measures developed in Western contexts and used with immigrant and refugee families. For example, non-Western feeding practices and cultural perspectives on independence affected the use of the tool (Gokiert et al., 2010).

Similarly, Nunavut has identified a lack of culturally and linguistically appropriate screening tools as a barrier to early identification and intervention in their communities. To address this problem, Nunavut has translated the ASQ into Inuktitut and adapted it for cultural factors with the help of community elders (Department of Education, Nunavut, 2007). In addition, many northern communities (including Nunavut) have a shortage of professionals trained to do identification and intervention, an obvious barrier to supporting the development of young children and their families in these communities. The process of evaluating and adapting screening tools to reflect cultural differences in families is an example of a first critical step in the assessment of stressors recommended by the DSA.

Points of access to early intervention services vary by family. Access to these services is often dependent on families being aware that the services exist. In some circumstances, such as adoption or home birth, families have fewer opportunities for referral (Underwood, Killoran, & Webster, 2010). In a country as large as Canada, problems arise when children and families require referrals but the services are not uniformly available because of funding cuts, which may lead to reduced availability in rural and remote northern communities, or a lack of interagency coordination (Graham, 2011). Monitoring and surveillance of referrals are important components of any system to ensure consistency on a national basis. These processes can be affected by the local resources. In the Northwest Territories, the government states that although they do have an infant hearing program, in more remote communities, it is only offered where there is a concern. On the contrary, they do provide resource consultant support to all early learning programs on request (Department of Health, Northwest Territories, 2007).
flexibility in the use of resources provides a mechanism for ongoing monitoring for support needs in the community.

**Intervention design and implementation**

The criteria for participation in early intervention programs and eligibility vary depending on the focus of the service agency and their programs. The majority of early intervention services are targeted to support early childhood development where certain social conditions or experiences are the underlying risk factor. These include programs in low-income neighborhoods and programs that support families after assessing family stressors. The Northwest Territories’ Healthy Family Program aims to promote positive parent–child relationships and to enhance family function for those with positive screening results through a voluntary survey parents take to assess risk. Home visitors are available to support families (Department of Health and Social Services, Northwest Territories, 2007). Healthy Babies, Healthy Children in Ontario provides home visitors to assess preventive and risk factors that may impact on the family’s ability to promote the child’s development and provides ongoing support to reduce stressors (Ministry of Health and Long-Term Care, Ontario, 2009).

One of the few federally funded early intervention strategies, Community Action Program for Children, supports programs targeted to families whose children are at risk for developmental delay. This program provides funding to community agencies to support healthy child development for children from birth to age 6 (Public Health Agency of Canada, 2009). Many other supports, with more comprehensive developmental programs, are focused on particular areas of development. The most common of these services involve support for speech and language development, but comprehensive programs also support children with intellectual disabilities, behavioral and psychosocial developmental needs, multiple disabilities, physical disabilities, and medical conditions (Underwood, 2012). When all of these systems are working together, there is the potential for comprehensive interdisciplinary assessment of individual children as well as the system itself. Several provinces are working to develop service hubs or community sites to bring these various professionals together as teams for assessment, intervention, and family support.

Situating responsibility for early intervention within the education system is being closely examined as a strategy to promote accessibility and integration of services. In Newfoundland and Labrador, a provincial strategy for early learning and child care prompted several responses from professional organizations. The provincial Association of Early Childhood Educators recommended the integration of Child Care with the Early Learning divisions in the Ministry of Education (Association of Early Childhood Educators Newfoundland and Labrador, 2012). The provincial association of social workers noted the complexity of the recommendations and warned that [t]he development and implementation of an early childhood learning strategy needs to intersect with, and support, other initiatives that are happening within Newfoundland and Labrador (e.g., poverty reduction strategy, immigration strategy, strategy for the inclusion of persons with disabilities, provincial wellness plan, and the early learning and child care strategy). (Newfoundland and Labrador Association of Social Workers, 2010, p. 2)

The integration of care and education services for the purpose of universal access and coordination has seen similar challenges in other provinces.

Another mechanism designed to ensure interdisciplinary collaboration in Ontario is the introduction of autism consultants and mental health care specialists into the school system. This strategy may increase the opportunities for specialists to connect with children. Universal access to schools is desirable, but this needs to be integrated with other agencies to ensure interdisciplinary and collaboration across the early intervention system as described in the DSA.
The trend to integrate community service agencies into schools is not happening in all provinces. Some social service agencies or departments provide early intervention. For example, in Manitoba, Children’s Special Services provides services to families that have children with disabilities up to the age of 18. This includes a preschool Child Development Program (Manitoba Education, n.d.). All of the provinces and territories acknowledge the importance of the early years in children’s development, the need for coordinated services, and the importance of access for all families that need intervention services. There are, however, differences in the approaches to addressing these systemic priorities. The organizations that provide these services are primarily funded through provincial and territorial governments and are typically delivered through municipal or regional government agencies.

Some provincial networks have been established to ensure a comprehensive, cohesive, and integrated system of ECEC services that includes early intervention. There are differences in the scope of each provincial system, in part because of the significant variability in the size of provinces and territories. For example, in Ontario, the most populous province in Canada with more than 13 million residents, the provincial government has invested in local communities establishing networks known as “Best Start.” These networks have a range of objectives, but, primarily, they link service providers that support young children and their families in communities across the province to ensure a strategic approach to ECEC and early intervention. These networks are the impetus for the creation of Best Start Child and Family Centres, which are intended to “consolidate and reengineer” early identification and intervention programs (Pascal, 2009). The plan for these centers is for staff to be qualified both to identify developmental delays and to initiate an appropriate response; these staff should be able to provide direct service or refer children to other more intensive intervention programs and ideally should act as resource supports for ECEC personnel (Pascal, 2009). Thus, staff members are expected to act as advocates and liaisons between the children and families and other community agencies. As these centers are developed, they will make use of the existing components of the early intervention system.

This community-based approach is evident in many parts of the country. In several provinces, networks of early intervention professionals provide standards and coordination of services that support children with disabilities and their families. For example, in British Columbia, the third most populous province, several different early intervention programs support children who have developmental disabilities and their families. Some of these programs are tailored to Aboriginal families. These programs are provided through 52 different agencies across the province of British Columbia (Ministry of Children and Family Development, British Columbia, 2011). Similarly, Infant and Child Development programs in Ontario provide services that support children, from infancy to age 5, who have developmental delays and their families. These services, which are available in all parts of the province, are delivered through a range of agencies that provide prevention, early identification, early intervention, and family support.

In contrast, the Yukon, a territory with a population of just over 35,000, has a single-service agency, The Child Development Centre, which coordinates early intervention services throughout the territory (Ministry of Health and Social Services, Yukon, 2007). Nunavut, which officially became a distinct territory in 1999, is beginning to establish a system of early intervention. The Department of Education, Nunavut (2007), reports that health and social service agencies are responsible when a child has a significant area of need or delay.

**Monitoring and transitions**

One of the most significant trends across the country is a move to full-day kindergarten. School-based programs have the advantage of universality, because there are schools in
most communities and there is a constitutional right to education, with the aim of having a more comprehensive system of services. Although kindergarten attendance is optional in some provinces, there has been a growing reliance on kindergarten to address the need for universal access to early-years programs. The leader in accessible child care is Quebec. Quebec has invested heavily in universal child care in recent years, with $7 per day child care for all children from birth to age 12. The program began in 1997 with full-day kindergarten for 5-year-olds and $5 per day after-school care. Along with subsidizing child care, Quebec has integrated center-based and home-based child care under one agency, Centre de la Petite Enfance, governed by the Ministère de la Famille et de l’Enfance. School-age child care is delivered by school boards and governed by the Ministère de l’Éducation (Tougas, 2002).

Like Quebec, provinces such as New Brunswick have had universal full-day kindergarten for many years. Others, such as Saskatchewan, provide full-day kindergarten in select communities. Seven of the 10 provinces now offer full-day kindergarten programs across the province or are in the process of implementing universal access to full-day kindergarten (Macdonald, 2010). In Ontario, universal access to full-day kindergarten is currently being implemented for all 4- and 5-year-olds. There is a mandate for early childhood educators, with expertise in child development processes and outcomes, to work collaboratively with kindergarten teachers in each full-day kindergarten classroom.

In British Columbia, some schools have been designated as Neighbourhood Learning Centres. These sites are unique in each community, but they all offer community services and early learning opportunities to engage families and support communities. These centers provide a link between community services and schools, and many of them operate year-round. In Manitoba, the Early Childhood Development Initiative provides grants for school divisions to implement programs that support school readiness. These programs include early literacy programs, parent programs such as toy lending, parent resource packages and child development, and preschool screening (Manitoba Education, n.d.). The government of Ontario is following a similar model and has committed to develop “Best Start Child and Family Centres” to deliver family support, child care, and early prevention and intervention in collaboration with schools. There are concerns about the effect of these centers on existing child care and preschool programs and how the proposed transdisciplinary teams will work together.

Although integration of early childhood supports with school-based programs addresses some of the challenges of transitions between systems, there remains a need for monitoring and outcome evaluations to determine the efficacy of services at the systems level. The Early Development Instrument (EDI) is now being used in at least part of every province in Canada to gather community-level data about children’s school readiness. In several provinces, EDI data are being collected in all jurisdictions, including Prince Edward Island, Ontario, British Columbia, Manitoba, and most of Saskatchewan (Offord Centre, 2008). The EDI is administered by classroom teachers in senior kindergarten (age 5) and measures five domains (physical well-being, social competence, emotional maturity, language and cognitive development, and communication skills and general knowledge). The EDI includes information about children identified by their teachers as having special needs and allows communities to evaluate how well they are preparing children for school (Janus & Offord, 2007). The EDI provides a standardized measure that is important for monitoring community-level needs.

Although outcomes are measured at the community level, there is a gap in the sharing of child-level data across service systems. Health, education, and social service agencies have yet to develop a mechanism for
sharing information while protecting the privacy of children and their families. The result is that as children transition to school, they may lose the gains made through early intervention programs and may be asked to repeat assessments (Janus, Lefort, Cameron, & Kopechanski, 2007). The implementation of coordinated services can improve communication between professionals. The Newfoundland and Labrador social workers have recommended that an evaluation process be implemented with the provincial early learning strategy, with a preliminary discussion of how success is defined and how programs will be accountable, and include a measure of community awareness of programs (Newfoundland and Labrador Association of Social Workers, 2010).

Discussion

The provinces and territories of Canada have acknowledged the importance of ECEC for healthy development. Despite the lack of a national strategy for child care, early intervention, and educational objectives (Canadian Council on Learning, 2011), each province is developing systemic approaches to support the optimal development of children and their families. Recent reforms in early intervention are designed to increase access to early childhood education opportunities and provide early intervention to support vulnerable children and their families. At the local level, many agencies have formed networks to develop partnerships and already focus on providing family support, information, resources, and services based on local community and family needs.

The components of the DSA provide a conceptual framework for understanding and assessing current early intervention programs and services to vulnerable children and families. Within the context of current initiatives, this approach helped us identify certain essential priorities within the recent systems change:

- Universal screening of school readiness as an outcome measure of early childhood programs.
- Interagency coordination among family support, child care, and school service agencies.
- Facilitation of transition to kindergarten.

Within the Canadian sociopolitical context, it is important to ensure the rights of all children and families to receive early intervention services in response to their needs. At the local level, services must be responsive to families with diverse beliefs, priorities, and needs. Although the Canadian Charter of Rights and Freedoms (1982) and provincial human rights codes and legislation protect the right of all citizens to participate equally in community life, clearer, agreed-upon definitions for eligibility to services are required. The DSA supports identification of broad systems-level strategies along with local decision making. The following priorities should be considered within each provincial and territorial context to support equitable access to services for children throughout Canada:

- Expanded representation of professional bodies in educational decision making.
- Development of a clear vision of inclusive practice consistent with Canada’s international commitments.
- Clear legislation and funding for early intervention and inclusive services.

With the common trends in early intervention, Canada can benefit from a national agenda for early intervention. A dialogue between provincial, territorial, and federal governments could ensure stable funding, legislation for equitable access, and coordination for consistency in services across provinces and territories. The DSA provides a framework both for identifying the common components of provincial/territorial early intervention systems and for setting national goals for consistent and equitable early interventions for all Canadian children and families.
REFERENCES


Canadian Charter of Rights and Freedoms. Part I


