



KNOWLEDGE NETWORK

For

EARLY CHILD DEVELOPMENT

Analytic and Strategic Review Paper:

International Perspectives on Early Child Development

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Executive Summary

The present work builds on the affirmed desire of the Commission on Social Determinants of Health (CSDH) to be judged on both its scientific rigor and the policy implications that the Commission's work will generate. It contributes to the general discussion on the social determinants of health by complementing the work of the Commission's other Knowledge Networks and by focusing on the fundamental conceptual issues relating to Early Child Development and Education (hereafter ECD). The areas of focus for each of the Commission's Knowledge Networks—Globalization, Social Exclusion, Health Systems, Gender, Urban Settings, Employment Conditions, Priority Public Health Conditions, and Measurement—are critical to understanding the social determination of ECD, and as such will be integral to the work of the ECD network.

This work is the result of a review process which included a thorough literature review, input by the CSDH Commissioners, the CSDH WHO Secretariat, the September 2005 Ahmedabad, India 3rd meeting of the Commissioners, and site-visits to projects supported by the Self Employed Women's Association (SEWA) in Ahmedabad, India.

There are important reasons for conducting this work. With advent of technologies that facilitate communication and connections among researchers and policy makers across the globe, we can now better support the previously recognized value of international collaborations in reciprocal learning and policy development. The importance of international co-operation to protect the fundamental rights of children is also acknowledged in the UN Convention of the Rights of Children and encourages State Parties to undertake measures at the legislative and administrative levels to implement the rights of children recognised in the Convention “within the framework of international co-operation” (Article 4). While international co-operation is critically important, there are several challenges that limit the extent to which experiences, programs and research findings from one context related to early childhood be applied to other contexts and cultural realities. These challenges may range from cultural and language differences to differences in the extent to which some countries have the adequate resources to ensure that children's rights are protected and appropriate policies implemented. Thus, early childhood development issues require a discussion at the *global* level in order to effectively apply knowledge-based principles and implementation strategies across cultures and contexts internationally to promote healthy child development.

The critical importance of the first years of life is well acknowledged. Three broad domains of early child development contribute to health, and have a role to play in health equity, across the life course: physical, social/emotional, and language/cognitive. Early child development is influenced by early life factors and experiences that are underlying social determinants of health. At the most intimate level the ‘within family’ environmental attributes of stimulation, support, and nurturance influence all three key domains of ECD. There are a wealth of studies involving first world, immigrant, and developing country populations showing that nurturing qualities of family environments influence development and can be enhanced through intervention programs involving improved parenting skills,

nutritional supplementation, and quality childcare arrangements. Although long-term follow-up has occurred on only a subset of these studies, the results have been very promising.

At the next level of social aggregation, ‘neighbourhoods/communities’ influence ECD. The key aspects here are safety, cohesion, and the avoidance of ghettoization of poor and marginalized families. The Bernard van Leer and Aga Khan Foundations have both demonstrated that community development approaches to improving child development are feasible and effective in developing country contexts. The challenges here are greater in urban environments than they are in village contexts because urban environments tend to create spatial separation among people from different walks of life and, thus, large differences in the qualities of the neighbourhood environments for children. Nonetheless, taking ECD into account is important when considering the urban aspects of social determinants of health and their relationship to ‘sustainable cities’. In the urban context, the concept of spatial organization in the form of ‘neighbourhoods’ is especially salient. Frequently, the literature finds, inequalities for a variety of outcomes within urban areas are apparent at the neighbourhood-level, in strong part due to inequalities in neighbourhood conditions. The effects of neighbourhood conditions on ECD are a particularly important lens through which neighbourhood organization should be assessed. The development of ‘sustainable cities’ should explicitly incorporate those neighbourhood conditions which are conducive to providing all children with the fundamental resources for healthy development.

At the broadest level of social aggregation, socio-political and program delivery factors make a difference for ECD. Socio-political factors in this context refer to the national wealth and the economic trajectory of a given society; income distribution; patterns of employment and migration; and longstanding attitudes to mothers and children, all of which directly or indirectly influence the conditions under children grow up, live, and learn. At this level of social aggregation the programme delivery factors are much easier to modify than the socioeconomic/structural factors. The ‘gold standard’ for service delivery around the world would be the local neighbourhood ‘hub’, through which families could access quality child care (emphasis on stimulation, nutrition, and quality play spaces); infant and family support programs; a conduit to pre and post-natal, primary, and developmental health care services; family literacy programs; and a borrowing library of resources (books and toys) for young children. Examples of such hubs exist in many wealthy countries; in immigrant neighbourhoods; and among Aboriginal communities. Elements of the hub model also exist in developing country programs. *In principle, if a supportive community in a developing country has a well functioning hub, children should be able to reach school age at the same level of development as their counterparts in the wealthy world and improve their chances for succeeding in school.* Thus, compared with many of the social determinants of health that are deeply embedded in economic processes, we know that most of the social determinants of ECD are relatively easily modifiable.

The scope of this document is to integrate knowledge about the different levels of aggregation described above from an international perspective and to discuss the determinants and life course implications of early child development (ECD) at the global level. This review identifies general principles that can guide wealthy and developing countries in improving their children’s developmental outcomes during the early years of life

and through critical transitions such as entry to school. It presents to the Commission a series of strategic considerations to assist it in planning a successful approach to *ECD as a Social Determinant of Health*.

The Social Determinants of Early Child Development

There are fundamental principles of optimal physical, socio-emotional, and cognitive/language development that apply to all human beings across cultures and ethnic backgrounds.

Social determinants play a critical role in the early phases of conception, pregnancy, and post-natal periods of children's development. Sensitive periods in brain and biological development start prenatally and continue throughout childhood and adolescence. The extent to which these processes lead to healthy development depends upon the qualities of stimulation, support, and nurturance in the social environments in which children live, learn and grow (Richter, 2004). By school age, development has been influenced by factors at three levels of society: family, neighbourhood/village, and the broader societal level. Socioeconomic gradients in health across the life course begin as socioeconomic gradients in early child development. Thus, the social environment is a fundamental determinant of early child development and, in turn, *ECD is a determinant of health, well-being, and learning skills across the balance of the life course*. In the following sections we present an overview of the literature outlining the different levels of influence for the most important social determinants of health and development from conception to young school-age children. The scope of this work includes prenatal development to eight years of age from the standpoint of how it influences health across the life course taking a developmental perspective on schooling including education as a social determinant of health.

Prenatal and Perinatal Periods (from conception to birth)

The idea that maternal health and fetal development are critical determinants of adult health gained increased recognition throughout the 1990s. Particularly relevant to this emerging field of knowledge is what is now known as 'Barker's hypothesis'. Barker (1995) observed that low-birth weight infants had greater likelihood for developing coronary heart disease in their late middle age. The subsequent refinement of the Barker hypothesis (Osmond & Barker, 2000) focused on the idea that metabolism can become 'imprinted' during the prenatal period and that these permanent metabolic changes have an impact on health outcomes of individuals later in the life course. This hypothesis has given rise to a whole field of study of the developmental origins of adult disease (for a recent review see Chapin et al., 2004). Currently, researchers are trying to understand the prenatal conditions (including contextual experiences) that are associated with healthy fetal growth and how postnatal conditions modify the influences of fetal experience.

Epidemiological research in the area of fetal health has also focused on maternal lifestyle factors that affect the growing fetus. Maternal nutritional intake is one of these critical factors affecting fetal health, low birth weight and subsequent health outcomes during childhood into adulthood. Poor nutrition is most frequently associated with family poverty, little or no parental education, and unstable working conditions or unemployment for families (Karp, Cheng, & Meyers, 2005). This is particularly evident in developing countries

struggling with great socioeconomic disadvantages, lack of supply of nutritious food, and lack of effective prenatal education and preventive services. Thus, fetal nutrition is directly linked to structural factors. However, poor nutrition also affects fetal health outcomes in developed countries (Chapin et al, 2004) where rising rates of obesity are observed amongst poor and uneducated populations that can be traced back to maternal fetal nutritional habits (Drewnowski & Specter, 2004).

Poverty and malnutrition have been shown to negatively affect both maternal and fetal health and are two major factors responsible for higher infant and child mortality rates observed in developing countries. In 2000, about half of all child deaths globally occurred in India, Nigeria, China, Pakistan, Democratic Republic of Congo, and Ethiopia. Two thirds of these deaths were preventable, yet Jones et al. (2003) suggest that appropriate interventions were currently available in these countries but were not effectively implemented. Maternal malnutrition is also associated with poor physical development including essential brain development of the fetus. Particularly important is the presence of fatty acids in the maternal diet. Many studies have shown that insufficient presence of fatty acids in the fetus retinal and neural membranes is associated with, among other things, reduced visual function and behavioural abnormalities in infants (Innis, 2003; 2004). Because specific fatty acids (i.e., n-6 and n-3) cannot be produced by the human body, these need to be accumulated by the fetus and accessed through placental transfer. A diet poor in fatty acids will not provide the fetus with these essential elements that are associated with healthy physical and brain development.

Studies in neurobiology, neurodevelopment and early intervention show that conception to school age is a critically important time in brain development. The brain of the developing fetus produces brain cells (neurons) at a rate of tens of millions per week such that, by the time a baby is born, it has virtually all the neurons it will ever have. However, the neurons of a newborn are not connected together the way they are in an adult brain, but rather as a kind of random mass. Prior to school age there is a rapid process of “sculpting” of neuron-to-neuron connections, during which some connections are reinforced and others die away. This process is crucially important, because human experience is a crucial determinant of the manner and degree of connectedness. A well-sculpted brain is one with a dense network of connections between various sensing and expressive pathways within the brain. The brain sculpts itself in response to two influences. The first influence is the wide range of stimuli in the environment of the newborn: visual, verbal, emotional, physical, touch, smell and taste. The second influence is biological: pre-programmed “critical periods” in brain development, during which specific areas of the brain “turn on” and become ready to receive environmental stimuli. During critical periods, neuron-to-neuron connections are sculpted that, in turn, engender specific developmental competencies: cognitive (language and quantitative), sensory, muscular, emotional, behavioural and social. (Keating & Hertzman, 1999).

The current best understandings of the biological and environmental influences on children’s development may be summarized as follows. Spending one’s early years in an unstimulating, emotionally and physically unsupportive environment will affect brain development in adverse ways, and lead to cognitive, social and behavioural delays. The problems that

children so affected will display early in school will lead them to experience much more acute and chronic stress than others, which will have both physiologic and life-course consequences. Because the central nervous system, which is the centre of human consciousness, “talks to” the immune, hormone and clotting systems, systematic differences in the experience of life will increase or decrease levels of resistance to disease. This will change the long-term function of vital organs of the body and lead to socio-economic differentials in morbidity and mortality. This process, whereby human experience affects health over the life course, is called “biological embedding.”

As the preceding paragraphs make clear, the process of development is influenced not only by a child’s nutritional and health status but also by the kind of interactions - beginning *in utero* - an infant/child develops with care givers in their environment. The notions of biological embedding and neuronal sculpting highlight the importance of contextual influences upon physiological development; the association between psychosocial environments and immune responses; as well as bonding or attachment and neuroendocrine responses (Coe, 1999; Suomi, 1999). Thus, there is a biological foundation for understanding social processes that can create individual differences in how children interpret and respond to their environment. We know that early environments influence individual children's development independent of and in combination with a child's biologic characteristics and there is a growing awareness of specific periods in children's brain development that affect children's health outcomes over time (Barker, 1992; Bronfenbrenner, 1986; Wadsworth, 1997; Willms, 2002). Cynader and Frost (1999) corroborate this position, observing that “[d]uring development, information from genetic sources, the material environments, and biological and social environments all contribute in complementary ways and at critical times during neural differentiation to forge competencies” (p. 154). Thus, knowledge of the presence or absence of enriched environments during critical periods of development is of utmost importance from conception to eight years of age and beyond. Therefore, what happens to a child, and the opportunities provided to a child in the first years are crucial in determining lifelong outcomes.

Preschool and School Age (from birth to 8 years of age)

The social determinants of poorer birth outcomes (e.g., low birth weight) and higher rates of infant and child mortality are also critical determinants of child development and well-being among the survivors. While mortality rates are still unacceptable in most developing countries (avg)—88 per 1000 children—the rate in the world’s poorest countries is—120 per 1000—yet, many more children ‘survive’ and are exposed to environments and early experiences that *we need to pay attention to* as they can undermine the child’s ability to develop into healthy individuals (Victora et al., 2003). We need to *simultaneously* sustain attention to creating the conditions that decrease child mortality while maintaining focus on early child development. Thus, child survival and child development should not be conceived as two competing agendas but, rather, as synergistic agendas. A focus on survival to the exclusion of development begs the question *survival to what?* Indeed, we should be placing emphasis on the *synergy between all* the developmental domains, including not only physical growth, and nutrition for survival but also language/cognitive and social/emotional development.

A key requisite for optimal child development is secure attachment to a trusted caregiver, with consistent caring, support and affection early in life. A child's, adolescent's and, ultimately, an adult's emotional health and habitual way of reacting to new situations have their basis in the early relationships between the infant/toddler and the people primarily responsible for his or her care. An infant develops the capability of emotional control before his or her first birthday and a sense of "attachment" to his or her caregivers within the first year. This attachment is the extent to which the infant develops trust that the caregiver will respond promptly and appropriately, thereby providing a sense of security. If the level of trust is high, the attachment is described as "secure." Infants and toddlers with a secure attachment use the emotional and physical security that it provides as a base from which to explore things and people in the environment. Successful attempts at exploration increase the child's self-confidence and encourage more exploration. Thus the child begins to learn about and master his or her environment and to gain in both competence and self-confidence (Hertzman, 2000).

While the environments that children live in shape their long term health, nutrition for newborns and infants continues to play a critical role where adequate supplies of fatty acids need to be provided by the infant diet. During the first months of life, breastfeeding plays an important role in providing children with the necessary nutrients. The advantages of breastfeeding in the first year of life are well documented (American Academy Work Group on Breastfeeding, 1997). Not only is breastfeeding associated with healthier physical, brain, and social development but in developing countries exclusive breastfeeding can be protective of several types of diarrhoeal disease which is one of the primary cause of infant and child mortality (Mitra & Rabbani, 1995). Breastfeeding also encourages important attachment processes with the caregiver providing children with feelings of security. Beyond infancy, nutrition will continue to play a critical role in children's ability to learn. Children who are hungry during school are prevented from benefiting from education both in developed and developing countries (Pelto et al., 1999; Powell et al., 1998; Winicki & Jemison, 2003) while younger children may be impaired in their ability to interact effectively with their physical and social environments.

Latent, Cumulative and Pathway effects for Early Child Development

Exposure to both beneficial and adverse circumstances over the life course will vary and will constitute a unique individual "life exposure trajectory," which will manifest as different expressions of health and well-being. Three separate processes have been proposed to influence children's development—*latency*, *pathways* and *cumulative* processes—and are thought to operate in complex and interrelated manners (Hertzman, 2000). "Latent effects" occur when the exposure to biological or developmental factors at a specific point in the life course have their impact years and decades later, regardless of intervening experience. One vivid example is the "fetal origins hypothesis" (or Barker Hypothesis) ; early 20th century British birth records reveal that birth weight, placenta size, and first-year weight gain increase the risk of cardiovascular disease in the fifth decade, irrespective of factors that come in between [9, 10]. "Cumulative effects" refer to the accumulation of positive and negative exposures over the life course, influencing health and development based on

duration and intensity of exposure to these risk factors (Hertzman et al. 2001; Keating & Hertzman, 1999). Cumulative effects may occur either due to multiple exposures to a single recurrent factor or a series of exposures to different factors. An example of the former is that low parental occupational class throughout childhood is a stronger predictor of poor health in adulthood than parent's low occupational class at any single point in time (Power et al., 1999). The effects of multiple exposures are seen in the 1958 British birth cohort where chronic illness and disability at age thirty-three were predicted by factors in early life (childhood socioeconomic disadvantage and height), in adolescence (behavioural adjustment), and in adult life (injury and underweight/overweight (Jefferies et al., 2002; Power et al., 2000). Finally, "pathway effects" refer to the way that early events set individuals on well-worn life pathways that, in turn, lead to particular social destinations that influence health and well-being. For example, early life social origins influence readiness for school (Kohen et al, 1998; Duncan & Brooks-Gunn, 1997), and then, cognitive, emotional, and behavioural readiness for school subsequently affect school success and social adjustment (Hertzman & Wiens, 1996; Maggi et al., 2003; Power et al., 1991; Tremblay, 1999). Later, adults with less education demonstrate poorer self-reported health, higher rates of mortality (Kunst et al., 1995; Feldman, 1989; Pappas et al., 1993) more harmful health-related behaviours such as smoking and unhealthy diet, and failure to use of preventive health care (Winkleby et al., 1992; Davey-Smith et al, 1998).

Latent, cumulative and pathway effects interact with daily experiences to "explain" health status across the life course at various levels of social aggregation. Health status is an emergent property of the ongoing interactions between the individual (at each stage of development across the life course) and the conditions they encounter in the family, neighbourhood, and broader socio-political environments. In sum, the literature suggests both life course and societal factors need to be considered together in order to fully understand children's developmental trajectories of education and health. For children who survive the early years, the complexity of the influences on the outcome of their development dramatically increases in the first years of life. The influences on optimal development act at different levels such as the family, the neighbourhood/community, and the broader socio-political context.

Family Level Characteristics

Families are the first environments with which children interact from birth. They are critically important in providing children with stimulation, support and nurturance (Pelto et al., 1999). These qualities, in turn, are influenced by the resources that families have to devote to child-raising (strongly influenced by income); their style of parenting; and their tendency to provide a rich and responsive language environment (strongly influenced by parental levels of education). Thus, family-level characteristics may influence children's development in both a positive and a negative manner, as risk and protective factors (Bronfenbrenner, 1986). While the concept of 'family' may differ depending on the socio-cultural and historic context in which it is observed (e.g., immediate family, extended family, village, or clan) here we refer to family as relationships defined by kinship links to the child and the prospect of links of intimacy to the child. We suggest that the definition of "family" or "household" is less critical than defining the characteristics of "optimal early childhood

environments” that support child development and transcend any particular definition of “family” (Ramey & Ramey, 1998).

Experiential attributes of optimal early childhood environments



1.
Encouragement of exploration
2.
Mentoring in basic skills
3.
Celebration of developmental
advances
4.
Guided rehearsal & extension
of new skills
5.
Protection from inappropriate
disapproval, teasing or punishment
6.
A rich & responsive language
environment

Source: C.T. Ramey and S.L. Ramey, "Prevention of Intellectual disabilities," *Preventive Medicine*, Vol. 27 (1998), pp. 224-232.

Over three decades ago North American researchers began observing that children who lived in families with very low income did not acquire the same level of verbal and cognitive skills as children who did not live in poor families (e.g., Birch, 1970). It was argued that poverty put children at risk because of the deficiencies in resources associated with poverty such as poor nutrition, including calcium, vitamins, and protein deficiencies, which are all essential elements for healthy physical development and cognitive growth. Recent studies have also documented that children from economically disadvantaged families have poorer academic achievement, social skills and cognitive functioning than children who are not from economically disadvantaged families (Conger et al., 1992, 1994; Duncan, Brooks-Gunn, & Klebanov, 1994; Liaw, & Brooks-Gunn, 1994; McLoyd, 1990; Smith, Brooks-Gunn, & Klebanov, 1997). These same studies have identified other important social aspects of a child’s environment that are associated with a healthy early child development. Factors such as adequate maternal nutrition, maternal mental and physical health, parental stress and depression, parenting styles, unemployment, limited or no income, housing conditions, and neighbourhood quality are some of the most important determinants of ECD identified in recent research—these family-level characteristics have important implications for both optimal child health outcomes and school achievement.

Living in family poverty has long been implicated in children's health, development, school performance and achievement (Engle, Castle, & Menon, 1996; Gissler, Rahkonen, & Hemminki, 1998; Wadsworth, 1997), and poor health in adulthood (Lundberg, 1993; Rahkonen, Lahelma, & Huuka, 1997; Wadsworth, 1997; West, 1997). For example, Hart and Risley (1995) found that race, ethnicity, and gender did not matter for language acquisition for young children but that social class did matter. Compared to their more economically advantaged counterparts, there were significant differences in the richness of the language environment for children from economically disadvantaged families, which resulted in the children having poorer language acquisition. Family poverty can also affect the extent to which children's basic needs are met: needs such as safe housing, nutritious meals, and high-quality childcare (Brooks-Gunn, 1995). Brooks-Gunn studied the effects of family income on behaviour and IQ, and found that psychological resources such as family networks of support, high maternal education, and positive maternal mental health mediated children's scores. In addition, Brooks-Gunn, Berlin, and Fuligni (2000) have demonstrated that the home environment can either buffer or exacerbate the effect of low family income on children's cognitive ability.

Family-level factors, such as low maternal education, poor maternal mental health, and lack of family networks, have been demonstrated to pose risks to ECD (Brooks-Gunn, 1995; Hertzman, 2000). In the case of poor parental mental health, in situations of extreme poverty, or high levels of family stress (which could be associated with either of the preceding factors), important parent-child interactions may be impaired, resulting in fewer opportunities for learning experiences in the home (Bornstein, 1995; Willms, 2002). Single parenthood has also been shown to be more highly associated with depression, three times the level found in co-parenting individuals. When socioeconomic factors are considered, the rate of single-parent depression drops to only twice that of co-parenting individuals (Somers & Willms, 2002). As stated earlier, depression and adverse child outcomes are linked. For instance, the severity and chronicity of maternal depression are predictive of disturbances in child development (National Institute of Child Health and Human Development [NICHD] Early Child Care Research Network, 2004).

Parenting style is a fundamental influence on child development. Infancy/early childhood is the period during which interactions with parents provide the foundations for development of trust that is an essential element for children to 'know' that they can safely explore environments and learn from those explorations (Ainsworth, Blehar, Waters, & Wall, 1978; Bornstein & Tamis-LeMonda, 1989; Bruner, 1975). A 'responsive' parenting style is what allows children to safely explore environments and that responsive parenting consistently provided in the early years puts children on a positive developmental trajectory throughout childhood and adolescence (Landry et al., 1997). In turn, children who have successfully explored environments and have had positive learning experiences during their infancy and early childhood are more likely to develop cognitive abilities that are needed to assimilate information from one learning experience and apply it to other similar contexts (Rovee-Collier, 1995). Parental behaviours such as positive reinforcement, displays of warmth and affection, and consistent disciplinary strategies (known as authoritative parenting) result in fewer child behaviour problems and relate positively to academic competence and positive

peer relations that, in turn, enhance a child's health (Brody & Flor, 1998; Conger, Elder, Lorenz, Simmons, & Whitbeck, 1994). The benefits of positive and responsive parenting have been widely documented and relate to the socio-emotional domain (Bornstein, 1995; Ainsworth et al., 1978; Sroufe, 1988) as well as to the development of cognitive abilities (Olson, Bates, & Bayles, 1984). While some literature associates negative parenting strategies with low income, Chao and Willms's (2002) study, using data from the Canadian National Longitudinal Survey of Children and Youth (NLSCY), demonstrated that both positive and negative parenting practices were found at all levels of socioeconomic status. Positive parenting strategies have also been shown to provide a buffer for poor child outcomes in families experiencing adverse circumstances. For instance, positive parenting has been found to buffer the expected effects of factors such as financial strain and parental divorce, through building children's coping resources (Armistead, Forehand, Brody, & Maguen, 2002; Hertzman, 2000).

The ability of parents to provide positive parenting can be hindered by socio-economic or personal circumstances such as unemployment, stress, and/or depression. Several studies have documented that women who live in poverty with young children are more likely to be depressed than non low-income women (Liaw & Brooks-Gunn, 1994; Kaplan, Roberts, Camacho, & Coyne, 1987; Radloff, 1975; Hall, Williams, & Greenberg, 1985). In turn maternal depression is associated with language and cognitive problems, poor social skills and behavioural problems in infancy and early childhood (Murray, Hipwell, & Hooper, 1996; Abrams, Field, & Scafidi, 1995; Murray, 1992; Cogill, Caplan, Alexandra, Robson, & Kumar, 1986). The effect of parental depression on the ability of children to engage in social interactions and object recognition are observable as early as two months of age (Campbell and Cohn, 1991). In addition, infants of depressed mothers show a greater degree of 'stress' response as indicated by higher heart rate and cortisol levels than infants of non-depressed mothers (Field, 1995). Furthermore, mothers with depression have been found to have difficulties in providing their children with positive and responsive parenting. (Gelfand & Teti, 1990; Goodman, 1992; Murray, 1997; Murray & Cooper, 1997; Webster-Stratton & Hammond, 1988; Burbach & Borduin, 1986).

Research on family and parental influences on ECD has produced some lessons that should apply world-wide. However, such research has also been primarily produced in developed western societies, limiting the extent to which our current knowledge applies to other cultures, especially those in developing countries. Yet, it is reasonable to conclude that fostering family environments that are stimulating, supportive, and nurturing will *benefit all children regardless of geography, ethnicity, language or societal circumstances* (Pelto et al., 1999). In fact, results from the OECD Program for International Student Assessment PISA (OECD, 2001) conducted with school age children indicate that educational success may be significantly linked to the degree to which parents and children communicate positively in the home. One public health sector intervention/approach involving child growth and development is the design, testing and implementation of an extension module to the Integrated Management of Childhood Illness (IMCI), called *Care for Development*. This module incorporates many of the insights from current neuroscience and developmental psychology. The IMCI is an approach to child health that focuses on well-being of the whole child and was developed by WHO and UNICEF. The program includes information for

parents on feeding practices, how to respond effectively to child illness, and encourages stimulation for growth and development through play and communication activities (IMCI Care for Development, WHO).

Neighbourhood-level Characteristics

At the level of the ‘neighbourhood’ (i.e., neighbourhood, village, or local community), children growing up in a safe area that is ‘cohesive’ in relation to children – where it mobilizes resources formally (creates programs) and informally (treats its children like they belong there) – are less likely to be vulnerable than children from similar family backgrounds living in unsafe and non-cohesive neighbourhoods. Neighbourhood characteristics influence children’s development in a variety of ways (Drukker et al., 2003; Beauvais and Jenson, 2003): through stresses (exposure to toxins, and social and psychological conditions such as high crime rates), through social organization (role models, collective efficacy, and shared values), through institutions (function of schools, police, neighbourhood services, etc.), and through ‘epidemic’ forces (power of peer influences).

Neighbourhood safety, cohesion, and crowding are a few of the factors that may influence family practices, family psychological well-being, and thus children’s development (Dunn & Hayes, 2000; Hertzman, 2000; Hertzman & Kohen, 2003; Kohen, Hertzman, & Brooks-Gunn, 1998; Sampson, 1991; Sampson, Raudenbush, & Earls, 1997; Shonkoff & Phillips, 2000; Wilson, 1987). For example, concerns regarding safety, for children as well as parents, might affect a child’s opportunity to participate in physical activity in venues such as neighbourhood playgrounds; such limitations have a domino effect, inhibiting a child’s social experiences. Research also shows that neighbourhood cohesion may act to diminish the effects brought on by safety issues, as social networks may provide supportive enclaves where families and children feel safe (Sampson et al., 1997).

Neighbourhood-level factors influence different child developmental outcomes to different degrees. Two recent reviews (Duncan & Raudenbush, 1999; Leventhal & Brooks-Gunn, 2003) have reported that the socioeconomic status of the neighbourhood demonstrates the most consistently powerful effects on children’s health, but that research with school-age children provides the most consistent evidence of neighbourhood-level effects. Once children enter school, they have an immediate increase in their social networks and *potential* resources from which they can draw, as the influence of teachers and other professional, as well as school dynamics (positive or negative), shape children’s lives at this age (Engle et al., 1996). School-aged children’s¹ interaction with their environments increases at a time when they may not have the resources for dealing with challenging neighbourhood conditions such as high crime, lack of cohesion, dangerous roadways and more. These reviews showed that neighbourhood effects are stronger for cognitive and academic indicators than for behavioural and mental health measures (Duncan & Raudenbush, 1999; Leventhal & Brooks-

¹ For instance, Hertzman, Brooks-Gunn, and Kohen (1999) found that family characteristics buffered the neighbourhood effects of school-readiness more for toddlers than for older children. These findings suggest that neighbourhood effects for school readiness measures may be stronger for children who have more interaction with their neighbourhoods.

Gunn, 2003), while Drukker et al.'s (2003) research suggests that children's mental health was associated with the degree of informal control in the neighbourhood.

One notable gap in our knowledge base is evidence on the degree to which village environments in developing countries provide successful nurturance for their children. It has often been suggested that developing country village life provides a social/emotional environment and a sense of belonging that reinforce children's well-being in what might, otherwise, be an unbearable encounter with the living conditions of their society. The Knowledge Network in ECD will do what it can to highlight this issue and bring informal understandings into the realm of formal knowledge.

Socio-Political Context

An important mandate of the ECD network is to further our collective understanding of the how the socio-political context shapes ECD. As mentioned previously, the socio-political context refers to the national wealth and the economic trajectory of a given society; income distribution; patterns of employment and migration; and longstanding attitudes to mothers and children, all of which directly or indirectly influence the conditions under children grow up, live, and learn. Embedded in these socio-political factors are *fundamental* causes of lack of attention to early child development and, also, to preventable inequalities in ECD. In the case of the family, there are practical issues of the degree to which the public sector (state) or civil society in some form has the capacity, or political or cultural will, to intervene in private life. This raises a large question that will be addressed in one of the major papers that will be produced during the course of the Commission's work.

Here we refer to the broad socio-political context, rather than solely to that which governs programs that are explicitly intended to affect ECD. Accordingly, we have grouped social policies and their related factors into *the effects of broader social policy context on ECD outcomes* and *policies that directly address ECD programming* including literature on examples of 'what works' for ECD programming. While the overlap in the mandate of the CSDH Knowledge Networks crosses many issues, we have chosen to use *policy* to highlight one of the many areas in which the Knowledge Network's interests intersect.

The effects of the broader social policy context on ECD outcomes

In the developing nation context, societies struggle with the atrocities of war, slavery, gender selection and discrimination, HIV/AIDS pandemic, and other basic survival issues such as access to clean water and proper sanitation infrastructure. In the developed nation context, poverty, its causes and its consequences are vastly different than for developing countries. However, even in these nations, socio-political context has major implications for the well-being of children, influencing the proportion of the childhood population exposed to poverty, and the availability of resources crucial for ECD. Equally important are the differences that exist *within* each country with respect to special populations and/or geographical areas. For example, one of the greatest challenges for countries such as Canada, the United States, Australia and New Zealand is the elimination of the gap between the health and educational

outcomes of Aboriginal children and those same outcomes among non-Aboriginal children. To use a parochial example, the infant mortality rate for Aboriginal children living in the central interior of British Columbia, Canada is almost three times as high as the rest of the population (Interior Health Authority, 2004). The interior region of British Columbia is considered as a rural area and where a greater proportion of Aboriginal people live in remote reserve communities. In fact, more than 50% of the Aboriginal population live in rural communities and the incidence of low income people among the Aboriginals of British Columbia is about 32% compared to 13.5% among the non-Aboriginal population (Statistics Canada, 2003). This is only one example of significant health inequality in a developed country (i.e., urban versus rural, Aboriginal versus non-Aboriginal) that would be overlooked if the Commission did not focus on both the between countries and the within country differences.

Family economic circumstances are a well-known influence on ECD. Within any given society the *average probability* that families with children will lack the resources to provide for them will be set by the overall wealth of that society. However, across the planet, child outcomes differ dramatically among developing countries with similar Gross Domestic Products *per capita*. Thus, if family conditions matter for ECD then it follows that policy that affects families matter, too, whether directly through provision of income or indirectly through policies that shape the environments where children grow up, live, and learn.

While the evidence on the influence of redistributive policies on family poverty is relatively robust, the relationship between macro-policy factors and other key determinants of ECD (such as parenting and neighbourhood conditions) is less well understood. We know that socioeconomic gradients exist in all countries; we know that policies influence the level of child poverty; and we know that neighbourhood/village conditions are determined in part by social policies, for example: the rationalization of services and downsizing of health care, welfare and social services policy, and community programming. Broader social, health, and environmental policies (upkeep and presence of playgrounds and green space, presence of neighbourhood policing office, placement of public libraries, availability of enrichment programs and quality preschools) influence neighbourhood conditions, which affects children's development. It has been posited that the social meanings that people attach to their environmental circumstances ultimately affects their health and contributes to the social gradients of health observed in population-health studies (Hertzman & Wiens, 1996; Wadsworth, 1997).

Nonetheless, while we can make these intuitive connections whether about direct or indirect effects on ECD, there remains a dearth of literature specifically linking social policy to Early Child Development. One of the goals of the KN-ECD will be to make explicit the link between non-ECD program policies and ECD through a synthesis of the relevant literature and/or identifying areas of research so that we can make the link between social policy and ECD explicit. In the short term we intend to foster a dialogue with our international experts and partners to highlight the importance of understanding how social policy affects ECD and its determinants.

Policies that directly address ECD programming

ECD Programming-- Access to 'quality' programs matters. ECD programs that provide children with high quality care, which incorporate some principles of responsiveness and positive learning experiences, may be able to prepare children for entry into formal school programs. These programs are most effective when children start as young as possible; are engaged for a relatively long duration; and are provided with opportunities for care on a full-time basis (Hertzman & Wiens, 1996; Doherty, 2001). High quality early childhood education and care programs have the potential to prepare children for the difficult transition to school. Children are required to attend primary school at different ages in different countries. For example, in Europe age for mandatory primary education ranges from 4 to 7 years (European Commission, 2000). However, most children in the OECD countries start school at six years of age (Kamerman, 2000). Greater cooperation between early childhood education and school could facilitate the transition to school and promote continuity of learning under a cohesive educational plan (Newman, 2000).

A notable example of an ECD program that promotes development through interactions with a responsive and positive environment is the Reggio Emilia approach in the Emilia Romagna region of Italy. It is based on the principle that early consistent responsiveness which 'builds upon' the children's natural curiosity to learn more about their environments, supports long term cognitive and socio-emotional development. What has made the Reggio Emilia approach appealing to early childhood educators worldwide is the dynamic nature of the pedagogical tools whereby the educator needs to quickly adapt their 'teaching' strategies to provide children with learning experiences that are relevant to their fast changing abilities. What has made it appealing to the policy community is that it is widely understood to be a central, not a peripheral, element in the regional strategy for social and economic development.

There is compelling evidence of the relationship that exists between the types and amounts of activities that young children engage with (e.g., family activities involving the child, books and toys for learning, opportunities for parent-child interactions) and performance on cognitive assessments in infancy and childhood (e.g., Aylward, 1997; Bee et al., 1982; Bradley, 1993; Longstreth et al., 1981; Molfese, DiLalla, & Bunce, 1997) The more they are offered opportunities for stimulating interactions with objects, physical environments, and responsive adults, the more likely children are to develop adequate physical, cognitive, language, and social skills.

The network of cooperative child care centers created by the Self Employed Women's Association (SEWA) in India is another notable example of an innovative child care program that addresses children's developmental needs as well as the social and economic needs of working mothers. The child care program facilitates children's cognitive, physical, social and emotional development, by incorporating age appropriate learning activities, field trips and social time for the children. Furthermore, children receive nutritious meals and regular medical check ups(e.g., immunizations). The indirect benefit that these child care centres offer is that the eldest daughters of working mothers are able to attend school, because they are relieved of child care duties, increasing their chances for literacy and staying in school longer. Child care staff take an active role in encouraging mothers to send their older children

to school. Furthermore, locating the SEWA child care centres in local primary schools increases girls chances of school enrolment because they can shared the same social and geographic sites as their younger pre-primary school aged siblings (Dayal, 2001).

In summary, the role that societies can play in ECD is to support initiatives like our examples that bring young children in contact with environments that have the following six characteristics: exploration is encouraged; mentoring in basic skills is provided; the child's developmental advances are celebrated; development of new skills is guided and extended; there is protection from inappropriate disapproval, teasing, or punishment; and the language environment is rich and responsive (Ramey and Ramey, 1998). The fact that infants and young children are particularly receptive to responsive and interactive environments frames a very important challenge for ECD policy and programs. Influencing ECD globally requires that we take initiatives that are supported by the international community, but that must nonetheless penetrate to the most intimate realms of early life. Few other social determinants of health are of this character.

Policy: The intersection of the CSDH's Knowledge Networks with ECD

Given that the conditions of daily life shape a child's life chances, we can begin to envision the overlap of interest in the Commission's other KN's with ECD in the area of policy. For instance:

Globalization—household income level and lifestyles affect ECD; employment opportunities and policies as a result of globalization (e.g. effects of NAFTA on children in Mexico); influence of aid dependency and terms of aid on children (e.g. strings attached to world bank loans, etc.)

Social Exclusion—marginalization of children can take shape in day-to-day social emotional and material effects of racism, at the family level for opportunities in employment and social networks, and for both opportunities for education; neighbourhood inequalities are manifest through social inclusion/exclusion.

Health Systems—are health systems being taxed in some countries by overuse of technology for gender selection for example; availability of primary care - in terms of geographic accessibility, availability of personnel, ability to pay/availability of free care.

Gender—policy related to gender selection, preferential feeding of boys, enforcement and monitoring of bias in how long girls stay in school, women's economic empowerment and the economic prospects of the sectors in which they work are big issues here – what are/should girls be learning – what will they be doing after school is a salient factor in terms of getting support for their schooling. Moreover, we make a distinction between gender issues and things that occur due to gender discrimination, in order to address both. Many of the social dynamics that undermine the life chances of girls and women are related to longstanding conceptions of gender that can also undermine the life chances of boys and men. Thus, boys will not be neglected in this equation.

Urban Settings—environmental conditions of daily life, crowding, slum dwelling, and crime affect ECD. What should child care settings look like in urban areas of developing countries? For example, the SEWA child care program fits its urban context very well in terms of its location and the services it provides. Highlighting such developments is a place of overlap here.

Employment Conditions—family poverty affects ECD on various levels, work-life/home-life conflicts shape child care provision, occupational prestige affects child ECD outcomes, and child labour affects children in the 0-8 age range.

Priority Public Health Conditions—policy related to immunization affects mortality and ECD outcomes. The organization of primary care is key to access to basic developmental programs for vision, hearing, and dental. Thus, the issue of equitable access to health care is an important area of overlap.

Measurement – here, we intend to lead an international discussion on promulgating a global standard for measuring ECD, based upon the EDI (Early Development Instrument).

Overview of International ECD Programs and Lessons Learned

While for the most part the studies reported above have been conducted in western societies, especially in North America, Australia and Europe, the review of the studies presented below indicates that there are principles of effective ECD programs that apply to many different cultures, languages and contexts. The following section summarizes current knowledge of the fundamental principles associated with enhancing ECD. In order to review this knowledge from a global perspective several sources were consulted, especially reports from non-governmental sources including the European Commission Childcare Network, OECD/PISA, UNESCO, the Consultative Group on Early Childhood Care and Development, UNICEF, World Bank, WHO, Bernard van Leer Foundation, and Aga Khan Foundation.

As indicated in the previous section, the most important influences on early child development originate from within the family environment, the neighbourhood/village where children live, and the type of ECD programs that children are exposed to during their early years. One of the challenges in providing a global perspective of ECD is that, unlike the processes of brain, physical, and socio-emotional development which are common to all human beings, *there is great variability across cultures in the specific ways in which family environments, the neighbourhoods/villages and ECD programs may influence child development.* At the same time, studies conducted in developed as well as developing countries have been identifying a set of fundamental environmental conditions that are associated with healthy child development among different cultures, languages, and ethnic backgrounds. For example, a wealth of studies involving first world, immigrant, and developing country populations show that the nurturing qualities of family environments that influence development can be ameliorated through intervention programs involving improved parenting skills, nutritional supplementation, and quality childcare arrangements. At the next level of social aggregation, some key aspects of neighbourhoods/communities that influence ECD are safety, neighbourhood/community cohesion, and the avoidance of ghettoization of poor and marginalized families. The Bernard van Leer and Aga Khan Foundations have both demonstrated that community development approaches to improving child development are feasible and effective in developing country contexts.

In order to ‘measure’ program effectiveness, specific criteria and procedures need to be put in place. In fact, programme evaluation is a discipline in and of itself that many wealthy societies rely upon to provide evidence of the extent to which programs are effective at the community level. However, for many countries struggling with a lack of resources, these forms of program evaluation may be neither feasible nor affordable. Traditional programme evaluation can be expensive and often times inflexible. While there may be limited ‘scientific’ evidence of the effectiveness of ECD programs implemented in many developing countries there has been ample documentation of the effectiveness of these programs gathered according to different standards of evidence than those put forward by the western academic research community. Given the relevance of their findings these studies cannot be ignored and have to be included in the discussion of a global perspective such as that taken on by this Commission on the Social Determinant of Health.

In the words of Ruth N. Cohen of the Bernard van Leer Foundation: "...academic research is valuable but it is also expensive and, by its very nature, often long term and inflexible. We were looking for another form of research, one that would be more immediate, achievable by smaller programs that did not have access to vast resources, and adaptable to local needs and capacities. The point was to gain useful insights about actual impact – or the lack of it – on children, people, families and communities, and how this looked when considered in relation to the aspirations of the project. We recognized early on that these insights would often be personal and subjective rather than objective; would be hard to substantiate by, for example, statistical measures; and would need sympathetic sifting and consideration. In addition, we soon saw that some of the emerging data could be linked to something that is often underrated: intuition about what is happening. That doesn't mean that the data necessarily confirmed intuitions or feelings, rather that they helped us to see how accurate these were" (Early Childhood Matters, December, 2002 – No. 100).

The Effectiveness Initiative (EI) of the Bernard van Leer Foundation was created to conduct systematic evaluations of the effectiveness of community based programs promoting ECD. Ten projects were evaluated as part of this initiative each of these having at least a ten year track record, representing geographic diversity and illustrating a variety of different approaches. These ten projects are summarized in the Appendix.

The EI objective was not to examine *whether* a programme was effective or to measure to *what extent* it was effective by assembling evidence on the basis of 'quantitative' indicators but rather to learn *why* a program was effective. Below are reported some of the general lessons that were learned from this EI. Each of these lessons learned have important global and international implications for ECD programming and policy development.

The historical moment in which the program is implemented, and the receptivity (at the local and government level) of the environment are critical in determining the success of a program. The consciousness within the community of its problems and needs and an ability to recognise the long-term potential benefits of the program are also critical factors. The relationship between a program and whoever finances it should be properly defined at the outset. Such relationship should be characterised by a friendly spirit of collaboration. It should be based on a common view of desired outcomes and the donation of funds should not imply or legitimize authoritarian management practices.

One major component of program effectiveness is the consistency of contribution of those implementing the program in the community; those working in it; and those supporting the program with funds and other assistance. The commitment of the personnel can be more significant for program success than the programs' design was a theme that emerged repeatedly in the EI evaluations. "People who are intensely involved in the program, who are willing to work long hours and who confront barriers and the needs of a target community with vigour, enthusiasm and selfless dedication can be the difference between failure and success even of a poorly planned and poorly organised project. Being an effective community worker or organiser also means being reliable and lending a helping hand in good times and bad. Such sentiments, as well as a spirit of unity, hard work and community

service, should be reinforced as much as possible among the personnel, but also among the other stakeholders” (Zimmermann, 2004, p. 177).

Understanding the social conditions of the target community that could help refine a program was also found to be an important factor contributing to program success. The direction of the program should be shaped by the priorities and needs of the community. The program staff should be considerate of problems raised by stakeholders and beneficiaries, particularly if this occurs repeatedly, as signals that there may be unmet demands that require attention. Community workshops or discussion groups among parents, or other stakeholders can be reliable sources of information on community needs and priorities. These can also provide stakeholder with the opportunity to provide input and release tensions. The notion that the people constituting the target of the program may precisely understand what they need for self-actualization and advocacy cannot be overlooked.

The traditions and the culture of the community where the program is going to be implemented should not be ignored. Culture and tradition regulate several aspects of the relationship between parents and children, including feeding and eating routines, the behaviours that are tolerated and those that are punished, and the household economic arrangements. For programs promoting changes in the community, program approaches should be applied incorporating cultural and traditional practices as much as possible. We recognize that, historically those from wealthy countries who come to work in developing countries often arrive with preset ideas and do not do this effectively.

In several cases the implementation of the programs required that community ‘insiders’ as well as ‘outsiders’ be involved. This approach had the advantage of overcoming some of the limitations that are implicit in having only insiders or outsiders involved in the program. Some stakeholders have argued that insiders ‘understand’ the traditions and the needs of the target population better than outsiders and thus they could act as important mediators between the community and the programs. In addition, insiders may be more successful in communicating with other local stakeholders. Thus, the success of a program may as well depend to a great extent on the positive attitude among insiders towards that specific program. On the other hand, outsiders may be people who bring with them greater expertise thus addressing a lack in the community of qualified members. In addition, outsiders may be able to bring to the community a less biased perspective and they tend to be less motivated by personal interests. “If mothers find warmth and a caring attitude among the insiders who are their points of contact with a programs, or if they find competence and professionalism among the outsiders, then their relationship with the program is more likely to be positive even if their perceptions about the insiders and outsiders are due to bias. A model for the use of insiders and outsiders suggests itself. If the outsiders are resented by a community, then insiders should be encouraged to join the staff in some capacity. If the insiders are criticised because they are considered less skilled, then they should be offered more training, and outsiders might be brought in to supervise the technical aspects of their work” (Zimmerman, 2004)

For example, in Israel an Ethiopian paraprofessional (an ‘insider’ to the Beta Israel immigrant community) was paired with a local non-Ethiopian Israeli professional social

worker (an 'outsider') to run some components of early childhood programs of Almaya. In this 'dyad' of insider-outsider, the Israeli professional was responsible for the technical aspects providing support to the Ethiopian insider that in turn provided the Israeli professional with expertise with respect to the culture and the values of the target community. The technical abilities that the outsider brought to the community combined with the insider's knowledge of the community culture and values enhanced to the benefit of the community and contributed to a more positive outcome of the program.

Community empowerment through training for local people is another critical element involved in the success of a program. People within the community can be trained to perform key functions in programs interventions which can have a pivotal role in enhancing the commitment of the target population to support and sustain the program. It also fulfills an added purpose which is that of increasing the human resources involved in the program delivery. By promoting capacity building through training, a given program will assign responsibility to community members and encourage their commitment in the solution of community problems. Assigning a more active role to community members can lead to a more proactive approach to problem solving and to greater continuity of the program after the outsiders leave.

Community mobilization is also an important factor that contributes specifically to the sustainability of programs. When assistance for program implementation arrives in a community in the form of external expertise community members become knowledgeable of the specific program and may take initiative to either create more programs or expand the program offered. Community mobilization is in fact another means of building local capacity and promotes program sustainability.

It has been documented that open communication is an important ingredient of program effectiveness. Such communication has to be open and there need to be different channels of dialogue between the program providers and the target community. Open communication promotes understanding and consensus between different members of the community and it helps linking community members socially; it encourages the recognition of accomplishments that in turn consolidates individual and collective achievement. When people have a chance to exchange experiences and to share experiences that worked or didn't work for them, motivation to continue participate in the program is enhanced as a result. Venues for open communication may include frequent and regular meetings within and across groups of mothers, ECD educators, and other members involved in the program. These opportunities for communication can take many different forms depending on each specific context and program.

It is important to have an appropriate management plan that allows quality control and assessment of the program progress. A program could promote a positive sense of competition among component activities which could act as an incentive to achievement but that also functions as a system of checks and balances. "Mutual support and accountability create a sense of responsibility towards the success of a program. Problems and progress should be discussed openly at frequent meetings among stakeholders. This would also help ensure that experiences and innovations are shared. Likewise, simple but comprehensive

structures for research and for monitoring and evaluation should be put in place. These structures should take into consideration all the beneficiaries and stakeholders and provide pathways to receive stakeholder feedback. The capacity of staff to receive and properly assess this feedback must be built up. One measure of effectiveness may be the extent to which a program can make adjustments to take advantage of positive openings or turn crisis into opportunity.” (Zimmerman, 2004)

The Early Child Development portfolio of the Aga Khan Foundation provides additional examples of successful ECD programs. In 2004 Syria began implementing a national programme of ECD that involves the participation of the Ministry of Education, other ministries, national and international agencies, and academic institutions. This extensive network of collaboration has led to the design of a pilot community based early childhood programme implemented in existing nurseries and kindergartens. These nurseries and kindergartens function as ‘hubs’ or base for further outreach and services. At the local level, professionals and volunteers are trained in the areas of childhood care and education and participate in organizing six-week summer camps for children under 12 years of age. The pilot conducted in the village of Taltout has been completed successfully and will be implemented in other villages and communities.

The Consultative Group on Early Child Care and Development is another important hub where several ECD programs conducted around the world are documented, especially those implemented in developing countries. Within this consultative group a number of successful ECD programs and strategies have been identified.

The following are examples of the type of programs that have been found to be most associated with positive outcomes:

Programs that involve parent participation including parent education, parent support groups, and home visiting programs. One example is a mother-education project in Turkey that has shown that helping mothers develop greater parenting skills has long-term effects on children’s development. This programme has also demonstrated effective use of an adult education network to house and disseminate the mother education model on a broad scale throughout the country, adding in elements of mother literacy and retraining of unoccupied adult educators to provide the services.

Programs that add an early childhood care and stimulation component to already existing health or community development efforts. For example, adding health and nutrition to a child care setting creates an integrated programme that meets the holistic needs of the child. Research has shown that care and nutrition enhance the potential for physical, mental, and emotional development. Experience in feeding programs in Guatemala have demonstrated that programs that emphasise the interaction between children and adults in feeding situations are more effective than just providing children with additional food. This type of programme is an example of the importance of holistic approaches that may be more appropriate for a wide range of cultures.

Programs that integrate traditional caregivers in the delivery of quality child care practices. Supporting traditional caregivers in their training and personal development involves building on care giving situations that are already provided in the community. An example comes from a programme in Mali where older women in the community serve as caregivers supported by the community youth. This group of caregivers receives additional training to enhance their role and their ability to respond to young children's needs.

Programs that use media such as the radio have been used to reach parents and caregivers and disseminate information about ECD and the needs of young children and their families. Radio is being used effectively as part of a parent education programme in the Philippines to provide hard-to-reach families with child development information.

Programs involving an active participation of older siblings who are often the primary caregivers in the households of many countries. These child-to-child programs aim at engaging both older and younger children in new behaviours and informational activities. For example, in Botswana, school children help younger children in the community make the transition into the primary school by bringing the younger children to the primary school and socialize them into school activities.

Programs that focus on facilitating the transition from ECD programs to primary school. These programs build on the concept of 'readiness for school' and envision training to primary teachers in exposing children to developmentally-appropriate learning experiences. In Kenya, preschool teachers and primary school teachers are provided joint training sessions aimed at enhancing understanding of child growth and development and appropriate methodologies to be used in teaching young children.

Programs that address the children's needs in conjunction with women's programs. An example of these programs is a family day care home programme developed in Vietnam and provides quality child while women are engaged in income-generating activities.

Programs that build on existing resources or networks. For example, in Nepal literacy programs have been in place for many years but new topics and materials for newly literate women were needed. A series on child development and parenting was thus created to meet women's need for more relevant reading material, while at the same time it provided them with useful information in their role as parents.

The Basis for Policy and Programs at the Regional, Country, and Global Level

Below are 10 strategic considerations for giving a fresh impetus to ECD policy and strategic development. These strategic considerations are listed beginning with the macro or structural determinants to the micro determinants of health.

1. *Early Child Development should be promoted as something occupying a policy/program space that complements current agendas for the 'rights of the child,' 'child survival,' 'gender equality' and 'access to education' --* At present, the principal foci of

international development assistance are in these four areas. Although each of them either influences, or is influenced by, ECD, none of them lead directly to a global agenda to create environments/programs for young children that promote healthy child development across the three key developmental domains described in this report. Thus, a potential ‘early win’ for the Commission would be to achieve international agency agreement on the positioning and complementarity of ECD in relation to existing international development agendas.

2. *The long-term goal of a strategy for ECD should be to create global access to the conditions that support healthy child development, with the objective of ‘raising and levelling the (developmental) bar’* -- ECD is influenced both by programs/services and by the nurturant qualities of the families, neighbourhoods/villages, and societies where children grow up, live and learn (Richter, 2004). This implies that we need a two-pronged strategy: one that deals with the quality of programs designed to provide early learning and care, and another that addresses families, neighbourhoods/villages, and societies from an environmental perspective. The overall criterion for success would be ‘raising and levelling the developmental bar’; in other words, *both* improving child developmental outcomes, overall, within societies *and at the same time* reducing social inequalities such that developmental gradients become ‘flatter’.
3. *Countries should be encouraged to develop comprehensive intersectoral strategies for ECD; and to do so in ways that create a broad base of support* -- The determinants of healthy child development, and the opportunities for improvement, cut across many government ministries and exist at all levels of society, from the most intimate of family processes to the broadest realms of social policy. To date, those societies that have achieved the most in ECD are those that have developed and implemented a coherent intersectoral, multi-level policy that is broadly understood and supported. Although it may be too much to ask of a weak state, struggling to fulfill traditional government functions, to match countries like Sweden in this regard, it is not unrealistic to promote the idea that every society strives to create a credible framework of understanding and action around which national and international initiatives can be aligned. The action corollary to this is not a single new program initiative in a given society, but rather a basket of initiatives with a common rationale.
4. *Although the global trend for mothers to enter the formal economy is exacerbating the challenge of work-life/home-life conflict, it should also be seen as an opportunity to bring ECD out of the realm of exclusively private life, into the social sphere* -- The trend towards increased female participation in the formal economy has been gradual in many societies. Moreover, since the care of children is often seen as a mother’s responsibility, systems are rarely put in place to ensure that quality child care is available for the children of working mothers. In some settlements around the world, this problem has led to a crisis where young children are swaddled to control them during working hours, or they are brought into dangerous working environments and cared for there. In neighbourhoods and villages where collective arrangements are worked out, there is the prospect of providing early learning and care programs of equal quality to the best in the wealthy world. The international community has shown that the training, housing,

health/safety and equipment needs in this regard are feasible to address in receptive communities around the world. Championing a linkage between maternal labour force participation and quality early learning and care is something that the Commission should closely consider.

5. *The international lending and granting agencies should be encouraged to use an investment framework, in addition to a traditional a welfare framework, in evaluating ECD program proposals* -- There is now a body of evidence, endorsed by internationally credible economists (such as van der Gaag and Heckman) showing that ECD programs that are effective in improving developmental trajectories are better seen as ‘investments’ than as ‘expenditures’. There are two reasons for this. First, successful ECD programs pay for themselves many times over in reduced remedial education, juvenile delinquency, incarceration, and teen pregnancy expenses. Second, as adults, those who benefited from ECD programs as children have higher levels of successful participation in the economy than those who did not. In other words, the Commission is in a position to argue to the international lending agencies that ECD is *literally*, not just *rhetorically*, about investment, and proposals should be evaluated that way.
6. *Despite many holes in our knowledge base, we know enough about the characteristics of social environments and interventions that support healthy child development to make intelligent choices about the sorts of initiatives that the international community should support* – Because ECD is about environments as well as programs, and because it is inherently inter-sectoral and multi-level in character, an ECD agenda is fundamentally one of social change. Thus it is difficult to apply, in a straightforward way, the rules of evidence that were developed for discrete health interventions unmediated by broader social processes. Put simply, a new basket of ECD initiatives (see point 5 above) should be implemented and evaluated according to three criteria: is the basket of proposed initiatives based upon principles that have succeeded in other societies with healthier child development? are the programs within the basket ‘as evidence-based as possible under the circumstances’, fully implementable, broadly supported, and sustainable in their new context? and, are the population-level indicators of ECD moving in a positive direction over time with the implementation of the new basket of initiatives?
7. *There is need for an international program of monitoring progress in ECD at the population level* – At present, there are no internationally agreed-upon outcome indicators for ECD. Yet, without population level indicators that can parallel infant mortality and life expectancy, it will be impossible to monitor progress over time. At present, an opportunity comes from the fact that there are several indicators being implemented on an *ad hoc* basis in developing and wealthy societies. The danger is that, like multi-attribute health status indicators, so many different instruments will proliferate globally that we will never achieve an international benchmark. An unambiguous success of the Commission process would be achieving consensus on a single indicator that stood for ECD the way life expectancy, GDP, and carbon dioxide emissions stand for mortality, economy, and sustainability, respectively. One evaluation instrument that has caught the attention of the international community is the Early Development Instrument (EDI). This tool is quick and inexpensive to administer and addresses the three key

domains of child development (physical, social/emotional, language/cognitive). Although it has been used extensively in wealthy countries and successfully piloted in some developing countries, a shortened version for use in developing countries is currently being created. It is hoped that, during the course of the Commission, the KN-ECD will hold the EDI up as a 'target to shoot at' and attempt to address the problems of implementation, interpretation, bias and relevance in developing, as well as wealthy, countries.

8. *Modern communications technology should be exploited to create a global platform for local groups to share successes; learn from one another; and make progress even if/when senior governments are not supporting ECD* -- Although the Commission has a key role to play in raising the profile of ECD and institutionalizing it internationally, it also can and should play a leading role in creating a horizontal network of local and regional leaders in ECD through internet platforms. Unimaginable even 10 years ago, this technology can now allow individuals and groups working with children throughout the world to learn from one another, and receive support and encouragement in contexts that would otherwise be isolated. In this case, we intend to build upon the work already done by the (Canadian) Centre of Excellence in Early Child Development in creating a bilingual (English-French) platform and their link to the World Bank in expanding and promulgating it.
9. *The KN-ECD should build upon the work already done by the small family of international agencies that are currently in the ECD field, and on the lessons from their work that have been summarized in the previous section of this report* -- Positioning ECD as an internationally recognized 'Social Determinant of Health' has obvious potential advantages for advancing a successful agenda. Without 'health' the ECD agenda tends to be an institutional orphan, in that there is no network of ministerial responsibility through which it can operate. By bringing in health, the global network of national Ministries of Health creates for ECD an institutional home. Although this is an opportunity, it also brings potential challenges. Until now, international ECD has largely operated as a series of community-based projects and *ad hoc* initiatives. Although these are low profile on the international stage, they have been very efficient in the sense that a high proportion of energy and resources have gone directly to communities and front-line training, rather than politicking and other high-level interchange. Bringing strong institutional partners, such as Ministries of Health, into ECD must be done in a way that expands upon this current strength and does not undermine it through bureaucratization. In this regard, building on the leadership of the small family of international agencies already doing ECD is essential.
10. *The domain of social/emotional development must be given equal priority to physical and language/cognitive development* -- Until now, the principal domains of child development that have been addressed through global agencies have been the physical and the language/cognitive. This is because these domains are passively (though very partially) addressed through existing initiatives in child survival and schooling. The social-emotional domain has been largely neglected until now. There are many reasons for claiming that this should be remedied. Just one will be stated here. A knowledge of

brain and biological development leads to the conclusion that the social-emotional domain is a principal 'gate-keeper' for other domains. In other words, poor early social-emotional development undermines language/cognitive development (*in extremis* even physical growth is affected) and, as the life course unfolds, *limits the development of empathy necessary for global citizenship*.

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Appendix A: Initiatives and ECD Programs

The initiatives and ECD programs presented below are not meant to represent an exhausted and comprehensive selection of the many programs that are available internationally. Rather, they represent some key examples of what type of programs can be implemented in the context of many different countries and with the application of different implementation strategies.

Effectiveness Initiatives

The EI project was started in 1999 when the Bernard van Leer Foundation partnered with the Consultative Group on Early Childhood Care and Development. This investigative project lasted three years. The goals of this project were to identify and examine the crucial aspects of an effective ECD program, and to create avenues for communication between nations to increase understanding of how to create effective ECD programs.

EI Columbia:

Partner Organisation: Centro Internacional de Educación y Desarrollo Humano (CINDE)

This community development project started in 1978 in the isolated villages of the Pacific coast of Colombia. This project is funded by CINDE (Centro Internacional de Educación y Desarrollo Humano or in English, “International Center for Education and Human Development”) and carried out under PROMESA (Proyecto de Mejoramiento Educativo, de Salud y del Ambiente or in English “Program for the healthy physical, emotional and intellectual development of young children”). ECD and other activities are conducted by a community organisation. Local committees meet regularly and carry out activities. Local Promesa groups carry out systematic planning to design projects and are often asked by others outside the community to help design projects. A number of the programs that began as part of Promesa have been taken over by other institutions. Contributions and services to communities by Promesa include: operation of a community pharmacy, involvement in obtaining local land titles, management of a rotating loan fund, and a community library functioning in Nuqui. Also, many new habits have been incorporated into the culture through the work of Promesa; positive results achieved include the reduction of malaria through modification of local beliefs, attitudes and practices. In addition to these changes, most homes have sanitary facilities, there is a garbage collection system, nutrition has improved, children are less likely to be abused, conversation with children is more frequent, and continuing in school is accepted/encouraged.

EI Honduras

Partner Organisation: Madres Guías-Guide Mothers

This is an ECD program with family, community and centre strategies. This project is funded by the Christian **Children’s Fund Honduras** (CCFH) and run by the **Madres Guías** program. They effectively provide assistance and networking to communities affected by hurricane. The program was implemented in Honduras because of high poverty and low school enrolment. The CCFH seeks to improve child health and education through different venues, including: raising basic literacy, increasing access to clean water, providing medical

care, implementing vocational training for youngsters and other training initiatives, and providing a training module for personnel. There are 55 local programs servicing 220 communities. CCFH ensure community responsibility for child welfare by requiring the local programs be run by a committee consisting of mothers and fathers in the area. Women who show leadership are chosen to be “Madres Guias” (guide mothers), trained in proper child health care, nutrition, early childhood stimulation and educational practices and then put in charge of small groups of families. The results of this program have included: improved health care, controlled common childhood illnesses, reduced malnutrition among children, successful preparation for primary school, systematic responses to other childhood problems, favourable change in behaviours/ attitudes regarding child health/development, and noticeably enhanced self-esteem and confidence of mothers.

EI India

Partner Organisation: Self Employed Women’s Association (SEWA)

The Self-Employed Women Association, SEWA, was founded to provide support to working women in India. Early childhood daily care was needed and consequently created as a social service for women. These care centres increased child health and development in multiple ways: mothers were able to make more money resulting in better nutrition for children, care centres provided immunizations for children, older siblings (most female) were freed of childcare responsibilities and therefore able to attend school, children with special needs were identified and referred to the appropriate services, and children in care centres were provided with a stimulating and enriched learning environment. SEWA ran several informational programs covering topics such as nutrition, child education, and disease prevention/control. Between 1998 and 2002 India experienced cyclones, drought, flooding, earthquakes, and communal violence. SEWA and childcare teams worked together to provide shelter, clothing, food, and medical supplies to affected communities in affected areas.

EI Israel

Partner Organisation: The Association for the Advancement of the Ethiopian Family and Child in Israel (ALMAYA)

This program, established in 1985, works with Ethiopian families that have migrated to Israel. It provides children with experiences that honour their traditional culture and prepares them to enter primary school. It is funded and run through ALMAYA (**The Association for the Advancement of the Ethiopian Family and Child in Israel**). Community based programs are run by Ethiopian madrichot (para-professionals), paired with a local Israeli professional educator or social worker. Madricha’s are given training in various areas, including leadership, nutrition, and education. Almaya runs pre-school and after-school enrichment programs. Almaya also organizes for children a toy-lending library, a “big brother” program, and choral groups. The children who took part in the ECD program showed: increase in self-awareness, independent behaviour and decisiveness; a better developed capacity to express their feelings and their needs and to apply their talents; increase in communication skills; a greater tendency to show leadership; smaller tendency to be embarrassed by their Ethiopian heritage. These children also showed better organisation of activities and ideas, more initiative, positive perception of the importance of school, home and family, and the tendency to embrace positive social interactions. Parents of these

children were more likely to be involved in school activities and see themselves as responsible for their children's future.

EI Kenya

Partner Organisation: Madrasa Resource Centre (MRC)

This program, funded by the Aga Khan Foundation (AKF), the Bernard van Leer Foundation and UNICEF, provides preschool services to Muslim families in Kenya through Madrasa (Qur'anic schools). These preschools were implemented in response to a cycle of poor education leading to poor jobs, leading to poor education, as well as widespread malnutrition and disease. Teacher training/mentoring and community development are carried out at the Madrasa Resource Centre (MRC). The MRC is committed to encouraging and supporting communities in creating sustainable pre-schools, continuing teacher training and mentorship, implementing accepted pre-school curricula, creating a database for monitoring and evaluating clients, and exploring the long-term impacts of its own activities on its clients. The Madrasa program has been quite successful: in the last 5 years 150 new preschools have been constructed, hundreds of community members have received training in finance and organisation, over 1000 women have been trained as teachers, and almost 10,000 children have been exposed to early childhood education.

EI Mozambique

Partner Organisation: Associação da Criança Família e Desenvolvimento (CDF)

There is currently an EI in partnership with Associação da Criança Família e Desenvolvimento (CDF). This program evolved from an effort during the war to reunite children with their families. It now focuses on a variety of community based activities, one of which is ECD.

EI Netherlands

Partner Organisation: Stichting Samenspel Op Maat.

In 1999 the Stichting Samenspel Op Maat organization joined the Bernard van Leer EI. The Samenspel program provides a preschool/playgroup setting that helps integrate migrant (primarily Turkish and Moroccan) women and children into the Dutch culture.

EI Peru

Partner Organisation: Servicios Urbanos y Mujeres de Bajos Ingresos (SUMBI)

This program began in 1968 and then consisted of a nutrition education project and a non-formal preschool program among poor ethnic minorities in Puno state. The low-cost program was funded by Caritas Peru, Ministry of Education and UNICEF. The program was named Programas no Escolarizados de Educación Inicial (Non-Formal Early Education Programs), or 'PRONOEI' in the Spanish acronym. Teachers were trained in Piagetian theories to provide early education and paraprofessionals were trained to provide health, nutrition and early education activities. Currently there are over 17,000 PRONOEI preschools in Peru, providing education, nutrition, and health care to children. In 1999 PRONOEI was chosen to become part of the EI. Children who had the advantage of attending PRONOEI preschools were advanced cognitively and socially as compared to children who had not attended the preschools.

EI Philippines

Partner Organisation: Community of Learners Foundation

The Pinatubo Family Education Program in the Philippines came into being in 1992, shortly after Mt Pinatubo erupted in 1991 and almost 1,000,000 indigenous Aeta people were displaced. The volcanic eruption resulted in ruination of farm lands, destruction of homes, death of livestock, and a plummet in health conditions. The German Agro Action, which was funding much of the disaster relief partnered with COLF (Community of Learners Foundation) to provide early childhood education to the disaster victims which gave rise to the Pinatubo Family Education Program. This program attended to many of the needs of these communities, including ECD, and focused on rebuilding cultural values, adaptation to new living environments, and increasing parent education about early childhood education. The program implemented preschool services and a Parent Education Program (PEP). As the years went on the program expanded to encompass the whole family, including activities for children ages 7-15 and adult literacy classes. The program has resulted in success academically and socially for children who participated. The program also resulted in improved parental attitudes towards play, education and health.

EI Portugal

Partner Organization: Ageuda Movement

In 1999 an EI was established in Portugal through the Agueda Movement (started in 1981), and funded by the Bernard van Leer Foundation. The EI allowed the Agueda Movement to analyze and reflect upon its role in the lives of Portuguese children and families. When the Agueda Movement was first started it provided resources and education for children with special needs. The program has grown to cover health education and services, identification of families at risk for having children with special needs, formation of community development groups, and training seminars for parents, teachers and community members.

Tracer Studies

The tracer studies were conducted under the Following Footsteps program. The goal of the tracer studies was to trace former participants of selected EI and other ECD programs and determine any lasting impacts these programs had on their lives.

Botswana

The challenges of change: a tracer study of San preschool children in Botswana

This study was carried out between 1993 and 1995. It traced children who had attended the Bokamoso Preschool Program. The San people were traditionally hunter-gatherers, but no longer have access to the natural resources they once relied upon. As a group, unemployment and alcoholism rates are high. San children have difficulty in the formal education system adapting to a different culture and language. A preschool program was implemented with goals of reducing the San drop-out rate, involving parents in their children's education, and exposing children to other languages. A lunch program was implemented to encourage students to attend. Most students who attended the preschool are still in school. These preschools are successful in exposing children to other languages while still using the native San language, a strategy the formal education system does not use. There is a chance however that the positive experiences San children have in preschools

adapted especially for them will cause them to dislike even more the elementary schools they must later attend. The report stated that the main reasons San children leave the school system early are: the language gap, excessive use of corporal punishment, comparison of the school system to the preschool program, and lack of cultural understanding.

Colombia

Twenty years on: a report of the PROMESA programme, Colombia

This study was carried out in 2004. The purpose was to describe the activities and achievement of the program PROMESA. As a result of PROMESA (implemented in 1978), children tended to stay in school longer; on average their parents had 3.5 years of schooling, while the children had an average of 10 years of schooling. Children also had improved scores in math, language and critical thinking. Health and nutrition had improved; children were taller and heavier than their parents, and 95% had had vaccinations. Infant mortality rates dropped. State of the environment, community economics and use of technology had all improved which in turn improved health conditions. Adult literacy and self-concept of women had also improved which in turn helped the communities and families. Some important factors in the implementation of PROMESA include: utilization of community leaders, training of local peoples to run programs, and encouragement of cooperation between organizations.

Honduras

The future will be better: a tracer study of CCF's Early Stimulation Programme, Honduras

This study was carried out in 2004. It examined the effects of the Early Stimulation Program (ESP) run by the CCFH (Christian **Children's Fund Honduras**). The CCFH's preschool program resulted in beneficial emotional and social development, improved performance in difficult school subjects, and increased hygiene and health in children. The program also increased parental awareness of the importance of their children's wellbeing and what factors contributed to their child's wellbeing (e.g., love, respect, etc.). Parents involved in the ESP showed more respect towards their children and were less likely to use beatings as a way of training children. Children who participated in the ESP were more likely to form mixed-gender groups of playmates.

Ireland

Still going strong: a tracer study of the Community Mothers Programme, Dublin, Ireland

This study was carried out in 2002. The purpose of the study was to report on the progress of mothers and children who took part in a home visiting program during the child's first year of life. The Community Mothers Program (CMP, established in 1988) delivers this program. The goals of the program are to assist and sustain parenting skills to improve parent empowerment. Children who participated in this program were more likely to be up to date with immunizations and dental care. These children also were more likely to read to or be read to by their mothers, and more likely to enjoy school and achieve school success. Mothers who took part in the program were more likely to place value on playing games with their children and less likely to use physical punishment with their children. Mothers who took part in the program also reported more positive attitudes both towards themselves and towards motherhood.

Israel

A sense of belonging: A tracer study of ALMAYA's Parents Cooperative Kindergarten, Israel
This study was carried out in 2003. It assessed the impacts of the Parents' Cooperative Kindergarten program implemented by the Almaya Association. The purpose of this study was to determine whether this program was effective. Children who participated in the intervention showed more organized thinking and better communication skills. As well, these children saw homework as a way to learn and understand while children who did not participate in the program saw homework as something that must be done to keep the teacher happy. Participant children also had a greater sense of connection to community and family. These children also had a greater tendency to express feelings and emotions.

Jamaica

A new door opened: A tracer study of the Teenage Mothers Project, Jamaica

This study was carried out in 2001. It assessed the impacts of the Teenage Mothers Project (TMP) which operated between 1986 and 1996. This program had three main objectives: to decrease to rate of teenage pregnancy in the area, to facilitate training of teenage mothers, and to reduce the number of repeat teenage pregnancies. Participants of the program had higher employment rates and had pursued further education. The program was effective in decreasing the number of repeat teenage pregnancies. Mothers who took part in the program also had a greater sense of control over themselves and their situation and were more assertive. On average, children who had taken part in the program showed a greater success in school, including superior language and leadership abilities. The report suggests that should a project like the TMP be repeated, some important characteristics of this program successful program would include: involving fathers in the program, putting emphasis on bonding of the mother and child, the importance of nutrition, supportive/concerned/sensitive staff, and small group counselling.

Kenya

In the web of cultural transition: A tracer study of children in Embu District, Kenya

This study was carried out in 2001. It assessed the impacts of training the teachers who are employed by the preschool and the effect of that training on the children who attended. These training programs included information about the following: child development, the importance of play, child centered learning, community management and community organization. This training affected participating children in the following ways: better academic performance in the formal school system, children had a better learning environment (better learning tools, child-teacher relationships, etc.), and children were found to be more helpful, kind, and honest.

Trinidad

To handle life's challenges: a tracer study of Servol's Adolescent Development Programme in Trinidad

This study was carried out in 2002. It assessed the impacts of the Adolescent Development Program (ADP). Females who had taken part in the program showed a tendency to postpone having children (average age of first pregnancy in Trinidad is 16/17). Males did not show this tendency. Parents who had taken part in the training reported increased patience and attentiveness with their children as a direct result of the training. They also reported

increased self esteem. The training equipped participants with the ability to express their feelings and emotions.

USA

Supporting families with young children, the High/Scope Parent-to-Parent dissemination project.

This study was carried out in 2002. The purpose of the study was to examine the Parent-to-Parent program that was active between the years of 1978 and 1984. The locally controlled program was originally designed to provide low-income parents with in-home visits by health professionals. These visits included information sessions for parents regarding child development and developmentally appropriate practices while utilizing pre-existing family strengths. Some deficits in the original program to be addressed in futures programs include: recognizing and dealing with hopelessness and despair, providing easily accessible yet affordable health care, keeping the welfare of children in the forefront, establishing good relationships with parents, securing a stable source of funding, and increasing the emphasis on providing parenting skills.

Information taken from the Bernard van Leer Foundation website:
<http://www.bernardvanleer.org/page.asp?pid=2>