## Early Childhood Development Services

Standing Committee on Community Services

December 2010

NOVA SCOTIA

### **DCS' Role in Child Care**

- Foster healthy child development
- Offer programs and services to support families and child care sector
- Monitor and license child care facilities / Family Home Day Care Agencies as per Day Care Act and Regulations





## **Child Care in NS**

- Annual DCS investment of \$50+ million in early learning & child care
- 397 licensed child care facilities
  - 15,187 licensed spaces
  - Approx. 50-50 non-profit / commercial
- 10 family home day care agencies
  - 90 approved provider homes
  - 412 children cared for
- 17 Early Intervention Programs
  - 2 satellite sites
  - 650 children served





### **Regulated Child Care & EI Programs**





### Early Learning & Child Care Plan Highlights

- More than \$154M invested since 2005/06
- 40+ Expansion Loans; 1,350 new licensed spaces
- 120+ repair & renovation loans
- 1,100 new subsidies; all subsidies now portable





## **ELCC Plan – Priority Area Checklist**

Increase licensed child care spaces

Decrease the cost of child care for families

Recruit & retain a stable child care workforce

- 1,350 new licensed child care spaces

- \$18.8M for 40+ expansion loans

- Launched Family Home Day Care Program
- 10 FHDC Agencies, 90 Homes; 400+ spaces
- 1,100 additional subsidies
- all subsidies now portable
- changes to income eligibility for subsidy
- reduced assessed daily parent fee
- Enhanced Stabilization Grant; implemented Child Care Operating Grant
- Replaced with Early Childhood Enhancement Grant; ECEG provides \$16M annually
- Launched Continuing Education Program and Early Childhood Education Assistance Program



## **ELCC Plan – Priority Area Checklist**

Increase operational and program grant funding for child care centres

 Provided \$25.9M in funding through Program Enhancement Grant, Outdoor Playspace Grant, Energy Upgrade Grant, CCOG, Repair & Renovation

Provide more accessible choices for parents of children with special needs  Increased Supported Child Care Grant funding \$4.2M annually to 194 centres

Increase info for parents about ECD and child care

- Directory of Licensed child care facilities
- Child care awareness campaign
- Identity stickers
- Feedback email ecdsservices@gov.ns.ca
- French materials



### **Current Loans & Grants**

- Early Childhood Enhancement Grant
  - \$16M annually for 382 centres
- Supported Child Care Grant
  - \$4.2M for 194 centres
- Family Home Agency Start-Up & Operating Grants
  - \$5000 start-up grants for new Agencies
  - Operating Grants dependent on number of homes



### **Past Loans & Grants**

- Expansion Loan Program
  - \$18.8M, 42 centres, 1350 new spaces
- Repair & Renovation Loan - \$3.15M, 129 centres
- Program Enhancement Grant
  - \$2.6M, 358 centres
- Energy Upgrade Grant - \$1.3M, 276 centres
- Outdoor Playspace Grant - \$5.1M, 272 centres





## **Child Care Subsidy**

- Helps eligible families pay for child care
- More than 4100 subsidies in Nova Scotia
- Over \$17M invested annually





### **Recruitment & Retention**

- Early Childhood Education Assistance Program
  - Supports full-time students pursuing ECE education
  - Debt reduction up to \$5,000 per year
  - 50 participants since 2008
- Continuing Education Program
  - Helps staff further their education while working
  - Reimbursement up to \$5,000 per year
  - 111 participants reimbursed for 277 courses since 2008



## **ECE Training Programs**

- Review and approve ECE training programs
- Funding for ECE training and support programs
  - \$750,000+ annually to 8 institutions





### **Early Intervention Programs**

- Deliver family-centered services for children with special needs or at risk of developmental delays
- 17 programs in Nova Scotia; 2 satellite sites
- DCS funding of \$2.5 million annually
- More than 650 children served



### Communication

- Directory of Licensed Child Care Facilities
- Child Care Awareness Campaign
- Enhanced Communication with Centres
- National Child Day





### **Moving Forward...**

- Continue to deliver funding in a meaningful way that benefits children, families and child care professionals
- DCS will invest more than \$50M in early learning and child care in 2010-11
- Orientation to Child Care program for untrained staff
- Food & Nutrition Standards



### Child Care in Nova Scotia

### Non Profit Directors Association (NPDA) Presentation Notes

To the Standing Committee on Community Services, December 7, 2010

#### **Representatives:**

Laurie St. Amour Executive Director Wolfville Children's Centre Wolfville, Nova Scotia Margo Kirk Executive Director University Children's Centre Halifax, Nova Scotia

#### (Please check against delivery)

#### SLIDE #1

Today we have been asked to lend our thoughts to the state of child care in Nova Scotia. And we sincerely thank you for the opportunity. My colleagues and I last sat in this room in February 2008 when we were asked to comment on the Early Learning and Child Care Plan, initiated in May 2006. At the time, commenting was a difficult task because detailed information was sketchy, communication limited to generalizations only, and many of the initiatives were in such an infant state that informed analysis was not possible. Now the main investment or implementation phase has been completed and we are told that we are entering the five year "maintenance" period.

Certainly some positive changes have been made. ECE students have had several opportunities for tuition support as they gain professional training. A program grant (called the Supported Child Care Grant) was initiated to support centres who had yet to develop plans for inclusion, and while it does not address the inclusion of children with severe special needs, or those children who are medically fragile, it does allow a centre to include children from a broader spectrum of ability or need. Something that was not supported before.

However, there continues to be general themes or issues which hold grave concern for us. Disparity still exists. And we do not believe that the Department of Community Services is proceeding with policies that offer equal opportunities to all children, or that enhance and encourage community engagement.

Data collected from across the country continues to reinforce the already strong research evidence that demonstrates that targeted programs or programs which operate in isolation, may benefit a few, but miss the majority of children and families in need of services. And missing out in experiences in the early years has an impact for the rest of life.

The effect and impact the environment, including experiences, has on us is a fascinating emerging field of study called epigenetics: The nurture and nature concept.

#### SLIDE #2

This may look like a digression, but it is curiously relevant. Here we see two butterflies. Very different, but are they?

#### SLIDE #3

These two butterflies are actually identical. Both have the same DNA, same genetic makeup. The difference is the environment in which they grew. The message here is environments count; experiences count. And when we look at children and their brain development, it is the early years that have the most impact.

#### SLIDE #4

This slide shows that the "sensitive periods" in life, are early in life. As you can clearly see, all peaks are actually at the three year mark or younger. If the developmental needs of children are not met at this stage in life, if vulnerabilities exist or are allowed to grow, and not addressed, society as a whole will only pay for it down the road.

### SLIDE #5

Life course problems will need to be addressed.

In general, in Nova Scotia, at least compared to other jurisdictions, we do not believe we have done a really good job at tracking data, assessing community and family needs, nor assessing the impact of new initiatives. When the Stabilization Grant was introduced across the board, and then the Child Care

Operating Grant, we were told that increasing staff salaries and reducing costs to parents were the two main objectives. We were told, for example, that some centres had to charge higher fees or pay lower salaries, because they did not get the same grant support as other centres. But these grants should have essentially eliminated that argument. But what was the impact of these grant initiatives? Was there a parent fee reduction in any centre? And what was the total impact on salaries? This information has certainly not been made available to us, and I question whether the data (and by data, I mean strong, research based, detailed data, not anecdotal stories or generalizations), is even available in a meaningful way to the Department of Community Services. These two grants have since been merged, and they now go by the name of the Early Childhood Enhancement Grant (ECEG). This is the first full year of the ECEG; a perfect opportunity for a fresh start. Will we be able to track the changes, if any, this grant has initiated? Working from a strong, evidenced-based, approach to policy and initiative development is a must, if we are ever going to move ahead as a society and prevent some of what you see here in this slide. It should also be noted, that this slide very clearly shows that the Departments of Education and Health, especially, have a vested interest in what happens in early life. Their future expenditures depend on it.

There is one misconception that continues to persist that we would like to address.

#### SLIDE # 6

The NPDA has long advocated for equal opportunity. And this slide shows one very clear reason why. The research here, and it has been duplicated, clearly shows that vulnerability in children is not merely a function of socio-economic status or SES. And if we continue with our isolated or targeted programs and services approach, the majority of children will miss out. Here, we see that 31.9% of vulnerable children fall within the lowest SES category. Certainly a large segment. However, if we only focus on that area alone, we are in reality, missing over 60% of the children who are also vulnerable. Indeed, 36.8% of these children actually fall into the categories of "not poor" and "well off". Many of these children have

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avoidable vulnerabilities. That is, with support, and the appropriate early learning experiences, that % can be reduced. The potential to save on expenditures down the road is huge.

#### SLIDE # 7

The NPDA is committed to the development of a comprehensive delivery system for early childhood services that is based on commonly accepted standards of quality practice. These sources include but not limited to the Occupational Standards for Early Childhood Educators. We believe that services should be responsive to the needs of the local community and accountable to that community and government. We have a vision of a comprehensive, well supported system which involves families in the planning and delivery of services; a system that is designed to provide any child with the opportunity to participate in developmentally appropriate experiences; experiences that support all areas of development.

We cannot continue to work in isolation and expect meaningful change.

We would urge the Department of Community Services to openly, visibly, publically, formally partner with other departments such as Health and Education, even Justice, to develop public policy based on sound research, and which is monitored over time. And where accountability for public funds is demonstrated in program delivery, high standards of practice, and transparent financial responsibility which includes organizations submitting annual budgets as well as closing year end statements.

Certainly, we have moved beyond the notion that children are a welfare issue. Or that we are merely discussing somewhere to leave the kids so parents can work or study. We are discussing early human development and how best to support the whole child, within the context of his/her family and community. We need a collaborative, co-ordinated effort. Not ad hoc initiatives.

#### SLIDE #8

We would just like to close with an example of the potential at our feet. And the impact interactions can

have.

This slide shows an infant of about 12 days old. Look at her face. The focus on her sister. The eyes are wide open, the mouth is open. There is a connection.

#### SLIDE # 9

The sister turns away. The infants mouth is closed, the eyes are not as bright. The look is passive, flat. Certainly in this picture there are other things to look at, other items that should or could grab the infant's attention, but it was the human contact that held meaningful attention.

### SLIDE #10

The sister turns back. The infant's eyes are focused. Face is expressive, mouth open. Even the hand position has changed. This infant is developing the capacity to build relationships and interact with others, at the age of about 12 days. If nurtured and supported within the family, and the community, we can only imagine what life might bring.

Thank you.

## NON PROFIT DIRECTORS ASSOCIATION (NPDA)

Presentation to the Nova Scotia Standing Committee on Community Services December 7, 2010





wet season

dry season

Precis octavia

## Sensitive Periods in Early Brain Development



Graph developed by Council for Early Child Development (ref: Nash, 1997; Early Years Study, 1999; Shonkoff, 2000.)

## Life Course Problems Related to Early Life



•Violence

## Canada: % Vulnerable by SES



### Service, program and support organization for Early Child Development and Parenting









### The SCIENCE of EARLY CHILD DEVELOPMENT

### Introduction: The Long Reach of Early Experiences

The science of early child development encompasses the fields of neurobiology, genetics and the social sciences, including psychology, social work and medicine. Research conducted over the past few decades gives us a much better understanding of human brain development and the impact of experience from conception onwards. The first phase of life is one in which there are both great opportunities and great risks that can set trajectories across a lifetime. Early experiences affect how genes are expressed and how brain connections are built. Thus early life has a long reach forward.

### Studying the Brain

Neuroscience, the study of the brain and biological pathways, allows researchers to understand how the brain develops. The human brain is a jelly-like mass composed of billions of nerve cells, also called **neurons**, and glial cells.<sup>1</sup>

Before birth, neurons in some parts of the fetal brain start to sprout axons, the long branches that carry nerve impulses away from the cell body, and dendrites, the shorter branches that receive impulses from the axons of other neurons. Synapses, the connections between neurons connect to form millions of neural pathways in our brain and in the central nervous system. This is the brain's communication system throughout the body.<sup>2</sup>

At birth, a full-term baby's organs and brain structure are fully developed, but the brain's circuitry continues to develop long after birth. During the first few years of life, this development takes place at an incredible rate, with the brain tripling in size by the time a child reaches three.<sup>3</sup>

### **Epigenetics: Experience Matters**

One of the most dramatic discoveries in molecular biology over the past generation involves the interplay between early experiences and environments that impacts how, where, and when genes work.

Most brain scientists no longer consider "nature vs. nurture," but instead focus on the effects of both nature <u>and</u> nurture. In other words, brain development is not determined solely by either genes or the environment, but rather through an interaction between the two.

*Epigenetics* describes how environmental factors affect genetic activation and expression.<sup>1</sup> Everything in the infant environment contributes to her experience and brain development—noise, light, changes in temperature, nutrition and the touch, voice and smell of her caregivers. The quality of exchanges between caregiver and infant serves as the foundation for the infant's brain and biological systems and influences the child's subsequent mental and physical health. The relationship between caregiver and infant plays a pivotal role in the child's capacity to interact with others and influences neural pathways for language and higher cognitive functions.<sup>1</sup>















### Sensitive Periods: The Sequencing of Brain Development

How brain connections develop depends upon their use. Repeated use leads to strong connections, while connections used infrequently weaken and can be lost. This process is often called *synaptic pruning*, or *wiring and sculpting* of the brain.<sup>1</sup>



Wiring and sculpting are possible because of the brain's ability to change, also known as **brain plasticity**. All parts of the brain change as a result of experience, but not all parts of the brain are equally plastic. As illustrated in the "Sensitive Periods" diagram, some parts of the brain, such as those that govern hearing and vision are highly plastic at, or shortly after, birth. Wiring and sculpting in response to early experiences is very active as new neural connections build the neural circuitry for

these functions. Other neural circuits, such as those related to peer social skills, are highly plastic several years after birth. Experience during critical or **sensitive periods** when the brain is highly plastic modifies the brain's circuits in fundamental ways, causing neural pathways to become highly stable and therefore difficult to change later on.<sup>1</sup>

### A Critical Period in the Development of Vision

The development of vision is one example of how experience can shape the brain's architecture and how important experience during sensitive periods can be.

A baby can be born with perfect eyes, but what happens during her first year of life will affect how well she will be able to see. The baby requires appropriate experiences of light, shape, colour and motion for the proper development of the part of her brain that controls the coordination of her two eyes and how she understands & interprets what she sees.

Studies have demonstrated how visual stimulation builds the neural circuit that transfers signals from one part of the brain to another. In animal experiments, it was found that if signals did not pass from the eye to the visual cortex within a set period, the neurons would not develop normal functions for vision.

Further research provides evidence of a critical period for the development and wiring of the brain for vision. All studies confirm that when visual stimulation is not available in the critical period and deficits occur in the development of the region of the brain responsible for vision, these deficits are not correctable later on in life.<sup>1</sup>

Developmental neurobiology has revealed that these sensitive periods occur in a sequence, with what happens in earlier ones affecting what happens in later periods. Thus, the formation of neural pathways is a hierarchy: the pathways that develop early are crucial for the next stage of neural pathway development. For example, the development of the visual and auditory areas of the brain precedes receptive language systems, which in turn precede speech.<sup>1</sup>













## Early brain development affects lifelong health, learning and behaviour

As described above, early experiences influence the development of the visual system in the brain. Early experiences and brain development also affect a number of other senses and abilities. A large body of research points to the fact that what happens in the prenatal period and in the first few years of human development set trajectories for lifelong health, learning and behaviour.

### Health

Scientists have determined that a part of the brain called the hypothalamus, as part of the limbic hypothalamus-pituitary-adrenal (LHPA) axis, plays a key role in physical health. Brain circuitry and the LHPA axis, which are established early in life, are implicated in adult health and disease. For example, a Swedish longitudinal study found that when compared with children in healthy environments, children who experienced neglectful and abusive early environments were seven times more likely to develop cardiovascular problems. Studies of the Kaiser Permanente program in California found that children who experienced neglect and abuse were at high risk for drug and alcohol abuse in adult life. Other health problems associated with negative early experiences include coronary health disease, hypertension, Type II diabetes and mental illness.<sup>1</sup>

### Learning

There is much evidence that the effects of early experiences on the brain influence later learning. For example, numerous studies demonstrate that language exposure in very early life has a significant effect on later verbal skills. Research shows that a baby's ability to distinguish between phonemes (speech sounds) is greatest before he reaches seven months. After this point, it becomes increasingly difficult to distinguish between these different sounds, making the acquisition of new phonemes—and entire languages—all the more challenging. There is also evidence that the quality of early experiences, including the types of nutrition and stimulation a child receives impact upon literacy later in life.<sup>1</sup>

### Behaviour

Early brain development also influences later behaviour. One example of this is the "natural" experiment that occurred among children raised in orphanages in Romania. Researchers compared the outcomes for those orphans who were adopted by Canadian families before they reached four months with those who were adopted after at least eight months in an orphanage. Those adopted earlier exhibited relatively fewer developmental problems than did those orphans who were left for longer periods in orphanages. At eleven years of age, those Romanian orphans who had been adopted later experienced abnormal brain development (small brain, low metabolic activity, abnormal EEG), social and cognitive problems (IQ loss) and high vulnerability to behavioural problems (ADHD, aggression, quasi-autism).<sup>3</sup>







### Citations

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- 3. Kolb, B. & Whishaw, I.Q. (2006) *Introduction to Brain and Behavior, 2<sup>nd</sup> Edition*. New York: Freeman-Worth.

### **Further Reading & Resources**

#### General

Centre on the Developing Child. (2010). "How Early Experiences Alter Gene Expression and Shape Development." Available at:

www.developingchild.harvard.edu/library/multimedia/interactive\_features/gene-expression/.

- Cloud, John. (2010). "Why Your DNA Isn't Your Destiny" in *Time*.
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- Tremblay RE, Barr RG, Peters RDeV, Boivin M, eds. *Encyclopedia on early childhood development* [online]. Montreal, Quebec: Centre of Excellence for Early Childhood Development; 2008:1-6. Available at: http://www.child-encyclopedia.com.

#### **For Parents**

- Canadian Association of Family Resource Programs. (n.d.) *Play for the Brain.* Available at: www.frp.ca/\_data/n\_0001/resources/live/Play-for-the-brain\_ENG.pdf
- Centre of Excellence for Early Childhood Development. (multiple dates). Key messages: Information sheets for parents and service providers. Available at: www.childencyclopedia.com/en-ca/key-messages-list.html.
- Eliot, L. (2000). What's going on in there? How the brain and mind develop in the first five years of life. New York: Bantam Books.
- Fraser Mustard Chair in Childhood Development. (2010). Supporting your baby's brain development: What Can Parents Do? Available at: www.frasermustardchair.ca/2010/03/supporting-your-babys-brain-development-what-canparents-do.

### Websites - For Parents & Professionals

- Changing Brains, University of Oregon (www.changingbrains.org). [This website offers free video clips, illustrating various aspects of brain development, including brain plasticity, vision, the motor system and attention.]
- Invest in Kids (www.investinkids.ca) [Translates the science of parenting and child development into engaging, easy-to-understand, relevant resources for parents.]
- Zero to Three (www.zerotothree.org)- [Offers free resources about children's development in the first three years of life (USA).]

### The Council for Early Child Development

The Council for Early Child Development is a not-for-profit, charitable organization. Founded in 2004 by Dr. Fraser Mustard, the Council's mission is to close the gap between what we know about early human development and what we do for children in their earliest years. For more information please visit: www.councilecd.ca.











Presentation to the Standing Committee on Community Services



**Private Licensed Administrators' Association** of N.S. Child Care Centres

December 7, 2010



## Agenda

- > Brief update on our Association's purpose, membership etc.
- > Communications with members and with government
  - > o Email, networking
  - > o Bulk buying, challenging each other, sharing of information, petitioning
  - > o Meetings
- Loss of the Working Group
- Licensing Division
  - o Checklist
  - > o Consistency
- Grants to open centers and Expansion
  - > o Validity of allocation and determination
- > Necessity of Needs Assessments for Child Care programs growth
  - o Accountability of government funds usage
- > Recruitment & Retention of Early Childhood Educators
  - o Number one indicator of quality is decreased staff turnover
  - o Salaries
  - > o Federal Funding earmarked purpose & Community Services budget
- > Distribution of Grant monies: slicing the pie
- > Enhanced Program Review
  - > o Process, information and participation

## Update

### Brief update on our Association's purpose, membership etc.

Our primary purpose is connecting with each other as private child care programs, sharing a common voice and common goals.

Of all the licensed child care centers in the province, those that are private constitute 55% of these programs as of April 2010.

Of all the child care spaces in the province, 63% are in private child care centers as of April 2010.

## Communications

> Communications with members and with government

- Email, networking: Most of our communications with each other is carried out via email.
- This past year has brought in a new wave of information sharing for us with has included: bulk buying, challenging each other, sharing of information, online petition development & lobbying
- Meetings: we have Executive meetings, General Meetings and Meetings with the government. We have had two meetings with the Minister this past year.



## The Working Group

The Working Group, which was a representative group of individuals in our field, served in an advisory / consultative role with the Department to offer direct interaction and communication on issues, tasks, etc. This Group's dissolution is a tremendous loss. The lack of a vehicle for direct participation and communication is disappointing and there have been several cases this year when our members have specifically asked why it cannot be resurrected. While it's original task was completed, we ask for a new working group to be struck to récreate direct involvement with appropriate representation.

## **Licensing Division**

- The transition to the new processes and division led to many questions and issues brought from our members.
- Checklist: we requested this be posted and were happy that this was able to be achieved through Ministerial request.
- Consistency: interpretation
- Example of working together with ease and positive results



## **Expansion Grants**

The determination for which centers get grants and the factors involved needs to be more transparent. There are centers to be opened in unusual locations, with declining populations and unclear needs assessments. Lengthy periods of time pass without ground breaking. This does not meet the terms and conditions. Retaining the grants should not be an option with these violations. These things need to be more transparent for the public. There should be a section of the website dedicated to this.

## Necessity of Needs Assessments for Child Care programs growth

• We believe a commitment that anyone applying for government grant money must be required to complete a detailed validation and needs assessment that must be built into the terms and condition of the ECEG grant. Our position is that too many centers in areas with specific populations are negatively impacted which could result in reduced capacity and/or affect staffing. The purpose of the funds is to both stabilize and to recruit & retain staff yet this would go against the purpose. The number one indicator of quality in a program is low staff turnover.

## **Recruitment & Retention ECEs**

- The increase in minimum wage has led to ECEs being closer to minimum wage then they have been in years.
- Centers that developed salary scales are fighting a difficult battle to take the scale to the next level let alone retain a scale
- Many centers are advertising abroad.
- Predictions regarding meeting trained requirement in future are not good.
- End result: quality is negatively impacted

## **Grant Monies Distribution**

- As numerous centers have opened this year and are slated to open, with expansion grants as well increasing capacities, we are looking for answers with regards to Grant dispersal.
- We were informed that the Department of Community Services will be cutting 5% of its budget.
- With salaries being so seriously affected by minimum wage change, to decrease quantity delivered to ECEs would make staff retention go from challenging to dire.

 The Grant should be increased rather then decreased. Children and Families will be negatively impacted by huge reduction in quality of service.

## Enhanced Program Review

- Several of our members are part way through this process and shared the documents involved with some concerns. There were positive elements considered but the overall implications of the process and the documents utilized are riddled with negative aspects
- The process was unclear and not communicated to all daycares in the province. The message and intent was unclear. The need to participate was unclear as well. The ultimate goal & purpose were unclear.
- The Minister agreed to meet about this. All of our points and concerns were heard.
- We recommended this process be put on hold / cut or have direct involvement in development with purpose and goal becoming clear.



# Questions?

