To: Mayor and Members
Board of Health

From: Elizabeth Richardson, MD, MHSc, FRCPC
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Public Health Services

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Date: October 4, 2007

Re: Child Health (0-6 years) Program Update BOH07042 (City Wide)

Council Direction:

This report is provided in keeping with the Board of Health policy on communication between the Medical Officer of Health and the Board of Health, as outlined in Report PH06038

Information:

BACKGROUND

The early years between birth and age three are pivotal in determining whether a child will develop to his or her full potential. Reports from the Hamilton Roundtable for Poverty Reduction indicate that approximately 25% of Hamilton’s children 0-6 years of age live in poverty. Many of these children live in less than optimal conditions and therefore face threats to development that can limit their life choices and future prosperity. Historically, early child development programs have been divided into distinct streams: public education, childcare, public health and community services. Although each sector supports healthy child development, separate mandates impeded access for families. Today, Public Health Services (PHS) works collaboratively with education, childcare and other community services through the Hamilton Best Start Network to facilitate access for all families in Hamilton.

MANDATORY HEALTH PROGRAMS AND SERVICES GUIDELINES

The Ontario Ministry of Health and Long Term Care’s Mandatory Programs and Services Guidelines requires PHS to promote the importance of immunization, injury prevention and safety, healthy nutrition and breastfeeding, preventive dental health practices, physical activity and effective parenting strategies that support healthy child development. Recommended services include parenting groups, health education
campaigns, telephone information lines, and working with coalitions and networks. PHS is also mandated to provide consultation and education to service providers including physicians, childcare, and early learning specialists on child health and development.

OVERVIEW OF CHILD HEALTH PROGRAM ACTIVITIES

Health Connections
Health Connections is a telephone information line staffed by Public Health Nurses (PHNs) in the Family Health Division. This service is available Monday to Friday from 0830-1630 hours. Health Connections provides health information to parents of children 0-6 years of age and facilitates referrals to other community services in Hamilton. Community service agencies and health care providers refer their clients to this line and use it themselves to obtain information about services for families. In the first six months of 2007, Health Connections received 4372 calls covering topics such as the ones listed below:

<table>
<thead>
<tr>
<th>Most Common Call Topics to Health Connections</th>
<th># Calls</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthy Babies, Healthy Children program</td>
<td>1422</td>
</tr>
<tr>
<td>Injury prevention</td>
<td>706</td>
</tr>
<tr>
<td>Breastfeeding</td>
<td>468</td>
</tr>
<tr>
<td>Nutrition</td>
<td>474</td>
</tr>
<tr>
<td>Parenting</td>
<td>390</td>
</tr>
<tr>
<td>Infant (0-1 yr)</td>
<td>366</td>
</tr>
<tr>
<td>Infectious diseases</td>
<td>75</td>
</tr>
<tr>
<td>General Health</td>
<td>68</td>
</tr>
<tr>
<td>Car seat safety</td>
<td>43</td>
</tr>
</tbody>
</table>

Postpartum Mood Disorder
The Ministry of Children and Youth Services' Best Start Initiative provides funding to enhance the work of the Post Partum Mood Disorder (PPMD) initiative. The PPMD initiative focuses on increasing knowledge, identification and access to support and resources related to perinatal mental health issues. Lack of knowledge about postpartum depression is the most frequently stated reason for delay in women seeking care. The multi-agency Perinatal Mental Health Coalition facilitates the coordination of services for all families in the City of Hamilton potentially at risk for, or experiencing perinatal mental health concerns.

Breastfeeding
The World Health Organization and Public Health Agency of Canada recommend that infants be exclusively breastfed for at least six months. PHS provides interventions in Hamilton in three key areas: direct client services, breastfeeding promotion and policy development.

Direct Client Services PHN/Lactation Consultants staff two community-based breastfeeding clinics in Hamilton. In 2006, there were a total of 3561 visits to the clinics. An evaluation of both sites has been completed with recommendations presently under review. In addition, a PHN/Lactation Consultant (0.5 FTE) is seconded to Hamilton.
Health Sciences Corporation to provide support and education to postpartum mothers and for transitioning mothers and infants from hospital to community.

**Breastfeeding Promotion** The Family Health Division promotes breastfeeding through the development and dissemination of resources in prenatal classes, breastfeeding clinics and home visits. Evidence demonstrates that promotion in combination with other interventions is effective in supporting breastfeeding.

**Policy Development** In June 2007, PHS determined to lead by example in approving a Breastfeeding Policy which supports and protects a breastfeeding-friendly environment within the workplace for all PHS employees. The Family Health Division is working with the Catholic Children’s Aid Society (CCAS) and the Children’s Aid Society (CAS) to develop a policy that will support breastfeeding mothers whose infants have been apprehended so that they can continue to express breastmilk and or breastfeed their infants.

**Healthy Growth and Development**

PHNs meet parents for drop-in consultations and provide presentations once per week in 23 of the 47 Ontario Early Years Centres (OEYCs) in Hamilton. The most common topics of concern for parents are nutrition, behaviour & communication, injury prevention and development. The Family Health Division works collaboratively with Healthy Living Division to provide access to programs such as the Community Health Bus, Women Alive, Walking Activities, and adult health information. PHNs provide training and information to OEYC staff through workshops, factsheets, displays and resource kits.

Child Development Clinics are offered once per month in designated OEYC locations across Hamilton. Public Health staff (PHN, Public Health Registered Dietitian and dental hygienist), Early Words (speech & language) CNIB (vision therapist), and Chedoke McMaster Child & Family, (infant parent program specialist, behaviour specialist) collaborate to provide families with the opportunity to speak to professionals about development concerns. This initiative ensures seamless access to consultation and referral to appropriate specialized services as required. Follow up appointments can be provided to parents where feasible in their neighbourhood OEYC, reducing the need for families to travel to specialized service locations.

Public Health Registered Dietitians also provide “Ask a Dietitian” and nutrition workshops to parents attending OEYCs and parenting groups. The Public Health Nutritionist has presented training workshops to the Catholic/Children’s Aid Societies, Associated Services for Children & Youth and OEYC staff.

**Best Start Primary Care Strategy**

Public Health Services collaborates with the Best Start Primary Care Strategy funded through the MCYS and the Ontario College of Family Physicians. This strategy promotes the 18 month enhanced well baby visit. In 2006-2007, this strategy reached 85% of Hamilton family physicians with a practical approach to the 18-month well baby visit and information about services for children with development concerns.
Recognizing the importance of positive parenting in healthy child development, the Family Health Division provides a continuum of parenting groups to meet the diverse needs of young families up to six years of age as described in the table below. The May 29, 2006 Board of Health Report Parenting Groups – Family Health Division (PH06017) provides detailed information regarding the continuum of parenting programs provided by PHS.

<table>
<thead>
<tr>
<th>Parenting Workshops</th>
<th>Description</th>
<th>2006 Data</th>
<th>Number of Registrants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beyond the Basics 10-week series</td>
<td>Play-based parenting group designed for parents who are recommended or required to attend a parenting group.</td>
<td>4 series</td>
<td>66</td>
</tr>
<tr>
<td>Incredible Years 12-week session</td>
<td>Teaches parenting skills: how to play with children, helping children learn, effective praise and use of incentives, effective limit-setting and strategies to handle misbehaviour.</td>
<td>7 series</td>
<td>108</td>
</tr>
<tr>
<td>Parent Link Weekly drop-in</td>
<td>Parents with children 0-12 months</td>
<td>7 weekly drop-ins</td>
<td>1706</td>
</tr>
<tr>
<td>Starbucks Monthly workshops</td>
<td>Topics such as nutrition, reading to your child, toilet readiness, development through play</td>
<td>12 sessions</td>
<td>400</td>
</tr>
</tbody>
</table>

**Fathering**

Involved fathers make a positive difference for children as well as family well being. Evidence indicates that involved fathers improve cognitive, emotional and social outcomes for children. In addition, involved fathers demonstrate increased confidence, community involvement and personal life satisfaction.

Family Health offers a fathering program Saturday mornings at Wesley Ontario Early Years Centre. Fathers interact and play with their children, build relationships with other fathers and consult with a Public Health Nurse. Support and education for high risk fathers is offered in collaboration with The John Howard Society.

**Injury Prevention**

The Family Health Injury Prevention Program uses strategies that focus on individuals, families and groups. Education is provided through partnerships with many community partners including local businesses, Hospitals, Child Care facilities, Community Policing Centres, Ontario Early Years Centres, Children’s Aid Societies, Community Services Department, Ontario Works, St. John’s Ambulance and Central-West Public Health Departments.
Car Seat Safety: PHS interventions focus on education, community development, policy development and advocacy. In 2006, 562 car seats were checked at a total of eight clinics. As is often the case, only 12% were installed correctly. PHNs provide education and hands-on instruction to families to ensure that all car seats are installed correctly prior to leaving the clinic.

Car Seat Donor Project: This project provided a total of 271 car seats to 190 low-income families in 2006 to keep their children safe while travelling in a car. An education session was provided to all individuals prior to receiving their car seat. The initiative was initially funded through the Early Child Development Program and ended in 2005. Low-income families can now attend a car seat safety presentation held monthly at one of the Ontario Early Years Centres. Following the presentation the parents are given a car seat voucher, an information pamphlet, and a list of car seat clinics/car seat check locations.

Home Safety: Until 2007, the National Child Benefit (NCB) program provided funding for safety gates and home safety devices to be provided for low-income families attending monthly Home Safety Presentations for 336 families in need. In a follow-up of 336 families:

- 100% of the participants utilized some or all of the safety proofing devices provided.
- 100% were utilizing the safety gates and 80% identified increased knowledge pertaining to safety proofing their home and decreasing the risks of injuries to their children
- 95% applied the Home Safety Checklist

PHS continues to offer home safety presentations and promotes home safety with community partners in the OEYCs. Due to the completion of the NCB funding, safety gates and home safety devices are no longer provided to families.

Shaken Baby Syndrome Prevention The Neurotrauma Foundation has provided funding for 1 year to deliver a prescribed information presentation to new parents about the dangers of shaking an infant. Evidence shows a 42% reduction in incidents of Shaken Baby Syndrome where this practice is implemented. PHNs in the Family Health Division are sharing this information in home visits and in community groups and programs such as father groups, parenting groups and prenatal classes. The program is being formally evaluated with a six month post-program follow-up with the parents. It is expected that the SBS prevention program will become a core component of PHN home visiting with families with newborns prior to completion of the program.

Collaboration with the Children’s Aid Societies

Catholic Children’s Aid Society (CCAS) and Children’s Aid Society (CAS) second PHNs from Public Health Services (CCAS 0.5 FTE; CAS 1.0 FTE). The positions are shared by two senior PHNs who visit the homes of high risk C/CAS involved families who have infants 0-6 months of age, often accompanied by the C/CAS worker. Their focus is on physical assessment of the infant, postpartum and emotional assessment of the mother, health and safety teaching to the parent(s), and linking the family to community resources. As of August 31, 2007, 157 family health assessments have been completed.
The PHNs also serve as consultants to CAS workers and provide quarterly growth and development workshops to newly-hired C/CAS workers as part of C/CAS orientation. Resource PHNS from the Family Health Division also provide nutrition, breastfeeding, and safety presentations to these agencies. The C/CAS/PHS liaison committee of staff and managers meets quarterly to communicate agency updates and problem solve issues as they arise.

RESOURCES: BUDGET AND SOURCE

<table>
<thead>
<tr>
<th>Program Activity</th>
<th>Funding Source</th>
<th>Budget</th>
<th>FTE</th>
<th>Staff/Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>Child Health</td>
<td>MOH-LTC &amp; City of Hamilton</td>
<td>$2,233,050</td>
<td>2.00</td>
<td>Program Manager</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>2.50</td>
<td>Program Secretary</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>23.50</td>
<td>Public Health Nurse</td>
</tr>
<tr>
<td>Postpartum Mood Disorder</td>
<td>MCYS (Best Start funding)</td>
<td>$166,667</td>
<td>1.00</td>
<td>Public Health Nurse</td>
</tr>
<tr>
<td>PHN Secondments:</td>
<td>Neurotrauma Foundation</td>
<td>$225,334 *</td>
<td>0.75</td>
<td>Injury Prevention **</td>
</tr>
<tr>
<td></td>
<td>Children’s Aid Societies</td>
<td></td>
<td>1.50</td>
<td>C/CAS</td>
</tr>
<tr>
<td></td>
<td>Hamilton Health Sciences</td>
<td></td>
<td>0.50</td>
<td>Breastfeeding</td>
</tr>
<tr>
<td></td>
<td>St. Joes Community Health Centre</td>
<td></td>
<td>0.10</td>
<td>CATCH Clinic</td>
</tr>
<tr>
<td>Total Budget</td>
<td></td>
<td>$2,625,051</td>
<td>31.85</td>
<td></td>
</tr>
</tbody>
</table>

* Salary, wages and benefit only. Mileage, Parking, Professional Development are reimbursed based on actual costs.
** Ends March 31, 2008

HOW ARE WE DOING

Program service utilization data clearly indicate PHS is reaching a large number of families with children 0-6 years of age:
- ~8,500 calls annually to Health Connections
- 1706 parents attending Parent Link
- 3561 visits to the breastfeeding clinics

Canadian data show that although many mothers initiate breastfeeding relatively few exclusively breastfeed for the 6 months. Hamilton data show that close to 100% of women are breastfeeding upon discharge from hospital. However, of these women, 22.6% are already supplementing with formula putting them at high-risk of stopping breastfeeding in the early postpartum period. PHS staff work closely with our hospital partners and family physicians to promote and support breastfeeding. A Public Health Nurse is seconded to Hamilton Health Sciences who provides in-patient breastfeeding support. All new mothers are offered a home visit though the Healthy Babies, Healthy Children Program. In the visit, breastfeeding is assessed and if there is an identified problem the mother is offered additional support which may include a referral to a PHS lactation clinic.
Breastfeeding Rates 2004-2007: Hamilton Compared to Other Health Units

<table>
<thead>
<tr>
<th>Averages</th>
<th>Hamilton 2007 (Jan-March)</th>
<th>Hamilton 2005</th>
<th>Other Health Units 2004 (n=22)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BF Initiation Rate</td>
<td>22.6% Breastfeeding + Formula 77.4% Exclusive Breastfeeding</td>
<td>84.8%</td>
<td>79.0%</td>
</tr>
<tr>
<td>Exclusive breastfeeding duration rate @ 6 months</td>
<td>Not available</td>
<td>19.0%</td>
<td>15.9%</td>
</tr>
<tr>
<td>Breastfeeding + formula duration rate @ 6 months</td>
<td>Not available</td>
<td>22.5%</td>
<td>31.6%</td>
</tr>
</tbody>
</table>

The Early Development Instrument (EDI) is a diagnostic tool that measures a child’s readiness to learn in domains such as physical health, social competence and language development. In 2002, average scores for Hamilton were close to national averages. Though Hamilton is considerably lower in the language and cognitive development domain. In both Hamilton and Canada, there are strong gender differences across all the domains, with female children scoring much higher than male children. Early identification and intervention is the key to achieving better scores. Best Start Ontario Early Years Centres are often the first point of contact for parents. Public health nurses, in collaboration with primary care practitioners, promote the regular use of the Nipissing District Developmental Screen with parents so that concerns can be identified early. Parents are given information about strategies to promote development and are referred to a specialized service if required. Data regarding EDI scores comparing children in Hamilton and Canada is presented below. PHS will do a follow-up report to the Board of Health when more current data becomes available.

Average EDI Scores for Children in Hamilton and Canada ¹, 2002

<table>
<thead>
<tr>
<th>EDI Domains ²</th>
<th>Average Scores Hamilton</th>
<th>Average Scores Canada</th>
<th>Average Female Scores Hamilton ³</th>
<th>Average Female Scores Canada</th>
<th>Average Male Scores Hamilton ⁴</th>
<th>Average Male Scores Canada</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Health and Well-being</td>
<td>8.75</td>
<td>8.82</td>
<td>8.91</td>
<td>8.98</td>
<td>8.61</td>
<td>8.68</td>
</tr>
<tr>
<td>Social Competence</td>
<td>8.23</td>
<td>8.35</td>
<td>8.66</td>
<td>8.72</td>
<td>7.84</td>
<td>7.99</td>
</tr>
<tr>
<td>Emotional Maturity</td>
<td>8.05</td>
<td>8.10</td>
<td>8.45</td>
<td>8.55</td>
<td>7.67</td>
<td>7.80</td>
</tr>
<tr>
<td>Language and Cognitive Development</td>
<td>8.19</td>
<td>8.42</td>
<td>8.52</td>
<td>8.73</td>
<td>7.89</td>
<td>8.18</td>
</tr>
<tr>
<td>Communication Skills and General Knowledge</td>
<td>7.72</td>
<td>7.83</td>
<td>8.03</td>
<td>8.13</td>
<td>7.43</td>
<td>7.58</td>
</tr>
</tbody>
</table>

¹ Special needs children (i.e., those children already identified by the school as needing special assistance due to various conditions) are not included in these results.
² Each domain is scored on a 0 – 10 scale; the higher the score the greater the readiness to learn.
³ Gender differences for Hamilton are statistically significant (p<.001).
EMERGING ISSUES AND OPPORTUNITIES

Poverty
Public Health Services, as a member of the Best Start Network, is collaborating with the Hamilton Roundtable on Poverty to develop strategies that increase the health of children and families in poor neighbourhoods. Local data suggest higher-income mothers are more likely to have an intention to breastfeed in Hamilton emphasizing the importance of tailoring programs to specific populations.

Obesity
Childhood obesity in Canada is a growing health concern. A comprehensive approach to healthy weights in children 0-6 years should include promotion of nutrition and physical activity. Family Health Division staff have increasing opportunities to positively influence the health of children and families through the many contacts with families in the community (e.g. Health Connections, home visits, groups, on-site work with OEYCs).

Integration with the Best Start Initiative
Wherever possible child health programs are delivered in an integrated manner with Best Start. This increases PHS’ capacity to reach a large number of children and families and promotes seamless care.

Filling the need for local data
There is very little local data on child health (0-6 years). However, there are new opportunities through the Best Start Evaluation workgroup and the Policy Planning and Continuous Improvement Division of PHS to gather data regarding the health and development of children in Hamilton. Accurate and meaningful local data will help measure the impact of PHS’ programs and services in comparison to other communities, and assist in planning how best to deliver services.

Breastfeeding
PHS is undertaking a program review of the breastfeeding services and interventions that we provide. The purpose of the review is to provide relevant information to assist PHS in making informed program and resource allocation decisions. Elements of this program review process include:

- A review of the research evidence re effective interventions
- Program description re services currently provided
- Hamilton-based data
- Benchmarking data from other health units
- Identification of current gaps in service
- Recommendations for any necessary changes in service delivery

Upon completion of the Program Review, a Board of Health Report will be forthcoming with details regarding the key findings.

Injury Prevention
A formal program review regarding injury prevention initiatives for children 0-6 years of age is planned for early 2008. Components of the program review will be similar to the elements described in the breastfeeding section (see above). The provision of safety gates and home safety devices will be specifically explored as part of this process.
Ontario Public Health Standards (OPHS)

PHS programs and services currently provided under Child Health are consistent with the new Ontario Public Health Standards. The new Child Health goal is: To enable all children to attain and sustain their optimal health and developmental potential.

SUMMARY

The early years shape brain development and influence lifelong learning, behaviour, and health. This is also a period of increased risk that can compromise optimal development for life. PHS staff work collaboratively with community partners to promote optimal healthy child development in the first six years of life. There is strong research evidence that supports the effectiveness of the services provided by PHS. A range of programs are offered, some universal and some targeted to specific populations, ensuring that families have access to a variety of effective, accessible, and fiscally accountable services. Child Health Programs make a significant contribution towards making Hamilton the Best Place to Raise a Child.

Elizabeth Richardson, MD, MHSc, FRCPC
Medical Officer of Health
Public Health Services