Early Childhood Development as a Social Determinant of Health in Niagara

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Understanding the Early Years

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• Review definition of ‘Social Determinants of Health’
• Identify importance of understanding the early years
• Explore early childhood development as a SDOH
• Examine local data and its use in Niagara
• Questions and discussion
“Health is a universal human aspiration and a basic human need. The development of society, rich or poor, can be judged by the quality of its population’s health, how fairly health is distributed across the social spectrum, and the degree of protection provided from disadvantage as a result of ill-health.”

~ World Health Organization’s Commission on Social Determinants of Health
Social determinants of health are the economic and social conditions that influence the health of individuals, communities, and jurisdictions as a whole. (They) are about the quantity and quality of a variety of resources that a society makes available to its members.

~ Dennis Raphael, PhD - School of Health Policy and Management, York University, Presentation to the University of Waterloo Health Studies and Gerontology Department Seminar, October 30, 2007
Reflection on Political Ideologies

- Got some change?
- Look at this guy...
- He's a victim of wasteful social programs that sapped his incentive to work and deprived companies of money they could have used to hire him.
- That's bull!
- He's a victim of greedy, short-sighted corporations that view people as disposable and feel no responsibility to anything other than their bottom lines.
- Please help
Reflection on Media Coverage

- The mass media almost always cover health as a personal issue, with emphasis on individual behavior, choice, and habits. Risks become personal risks, and health issues become medical issues. News coverage rarely presents stories about community health.

~ Lindbladh and others, 1998.

- Stories on health “communicate personal responsibility rather than social accountability”

Benefits of SDOH Approach

“It bridges the artificial distinction between technical and social interventions, and demonstrates how both are necessary aspects of action. It seeks to redress the imbalance between curative and preventive action and individualized and population-based interventions. Also, by acting on structural conditions in society, a social determinants approach offers a better hope for sustainable and equitable outcomes.”

~ Baum, 2002.
Focus of Canadian SDOH Conference

- early life
- education
- employment and working conditions
- food security
- health services
- housing
- income and income distribution
- social exclusion
- social safety net
- unemployment
Why focus on the Early Years?

• Experiences before school impact all aspects of the rest of our lives.

• These experiences influence the # of brain cells, the # of connections among them, and the way these connections get “wired”.

• While individual children overcome disadvantage, the tendency established early on among the group persists. (the population health trajectory is set early)

• 86% of mothers giving birth are back working by the time the baby is a year old. (Statistics Canada, 2001)
An Investment Opportunity

The Mismatch Between Opportunity and Investment

- Brain's "Malleability"
- Spending on Health, Education and Welfare

Age
Providing Better Returns

Rates of Return to Human Development Investment Across all Ages

Cameiro, Heckman, Human Capital Policy, 2003
Many analysts and policymakers focus on symptoms and treatments, microanalysis of individual risk factors, and changing people’s behavior and lifestyles, not conditions or places.

They present options primarily through a biomedical model and remedial solutions, mostly associated with health care, rarely stressing social transformation.

How does UEY fit in?

Funder: HRSDC (sites across Canada)
Sponsoring agency: ECCDC
History: Niagara Falls from 2001-2007, Niagara Region from 2005-2008
Community Coalition: Early Years Niagara Planning Council and Research Advisory
Partners: Region of Niagara, Ontario Early Years Centres, DSBN, NCDSB, Niagara College, Brock 😊, various early years service providers, community groups, businesses and service clubs
Purpose of UEY

- Promote awareness and understanding concerning the importance of the early years
- Examine the relationship between community factors and early learning and development outcomes in Niagara
- Report on local and national findings
- Support evidence-based decision making and planning in the community (capacity building)
The Vision

Gather population-based data that:

• Takes stock of how well communities are supporting young children

• Measures readiness to learn in school across developmental domains

• Inspires small changes for large numbers of children

• Brings better population wide outcomes
UEY Knowledge Gathering

**UEY Timeline**

- **2001 EDI** – UEY Niagara Falls
- **2002 National Longitudinal Study of Children & Youth (NLSCY)**
- **2001 Census/Statistics Canada - UEY Niagara Falls & Niagara Region**
- **2002 EDI – UEY Niagara Falls/Ontario Early Years Niagara Region**
- **2003 EDI – UEY Niagara Falls**
- **2003 Community Resources Inventory Survey – Ontario Early Years Niagara Region/UEY Niagara Falls**
- **2005 EDI - UEY Niagara Falls/Ontario Early Years Niagara Region**
- **2005 NLSCY – UEY Niagara Falls**
Why School Readiness?

- Based on the concept of developmental health
- Assesses context of early experiences
- Reflects developmental outcomes and milestones achieved during first 4-6 years
- *Measurable* holistic concept spanning several developmental areas
- Looks for improvements in largest group possible
What is Readiness for School?

Refers to the child’s ability to meet the task demands of school, such as:

- being comfortable exploring and asking questions,
- listening to the teacher,
- playing and working with other children,
- remembering and following rules.

In short, it is the ability to benefit from the educational activities that are provided by the school.
EDI Domains of School Readiness

1. Physical Health & Well-being
2. Social Competence
3. Emotional Maturity
4. Language & Cognitive development
5. Communication Skills & General Knowledge
Factors Increasing Risk

- Child health (low) 2.35
- Gender (boy) 2.32
- Income (low) 2.02
- Family status (not intact) 1.83
- Age (younger half) 1.36

Source: Janus & Duku 2007
A large number of children at a small risk for school failure may generate a much greater burden of suffering than a small number of children with a high risk.

~ Based on Rose 1992, Offord et al., 1998.
The Intended Outcomes

Give communities a set of factual and understandable results that can:

- Predict how children will do in elementary school
- Monitor groups of children over time
- Support planning for action
- Justify and report on community initiatives
- Influence policy research and decision-making
- Make a difference for parents and children 0-6
How to mobilize knowledge?

Dilbert comic strip:

Our special guest is Tod, from our research department.

We recently did a study to assess the value of our previous research.

Sadly, all of our past work was either ignored or totally misinterpreted by idiots...

...such as yourselves.

So from now on, rather than do research, we'll just lie!

Play along and we'll make sure the "industry salaries" study goes your way.

Well, it's two o'clock, and that's quitting time in the research department.

You're not my role model anymore... I've found another.
Research Products and Activities

• Maps, Studies, Reports, Charts/Graphs, Inventories and Action Plans

• Community Updates, School Board Reports, Parent Brochures, Calendars, Videos, Posters

• Research Communiqués and Articles

• Community and custom Presentations, Workshops, Forums, Conference Sessions, and Event Displays

• Website with documents available for downloading (www.uey.eccdc.org)

• Partnering on research and planning initiatives
What’s happening in early learning & development in Niagara?
2006 EDI Sample

Distribution of EDI Sample in Niagara by Neighbourhoods
(Sample Size = 3,014)
Overall Good Results 😊

% of Children On Track and Not On Track for School

- 77% On Track
- 23% Not On Track
2006 EDI Means by Municipality

Overall EDI Means in Niagara Region
(Sample Size = 3014)

Comparison of 2006 Overall EDI Means to National Average
(Scores Range 0-50)

Overall National Average: 41.22

Data Sources:
Base Map Features: Statistics Canada's Public Use Microdata from 2001 Census
EDI Data: UHE & Orford Centre for Child Studies, 2008
Produced by: UHE & CRCHS, 2007
© 2007, UHE & CRCHS
Niagara Region 2006: Comparison of Children's Mean Scores and the National Average

EDI Domains

- Physical: 8.9 (Niagara), 8.8 (National)
- Social: 8.5 (Niagara), 8.3 (National)
- Emotion: 8.2 (Niagara), 8.1 (National)
- Language & Cognitive: 8.7 (Niagara), 8.4 (National)
- Communication & General Knowledge: 8.0 (Niagara), 7.7 (National)
Shifting trends...

Multi-Year Comparison of EDI Mean Scores, Niagara Region, 2002-2006

Communication Skills & General Knowledge
Language & Cognitive Development
Emotional Maturity
Social Competence
Physical Health & Well-Being
Also Vulnerability 😞

% of Vulnerable Children by Neighbourhoods in Niagara Region

(Vulnerable: Children who scored below the 10th percentile on one or more readiness to learn domains)

Range of Percentages
- Less than 20%
- 20% - 25.9%
- 26% - 37%
- More than 37%

National Average
% Vulnerable: 25.9%

Data Sources:
- Ontario Early Years and Off-Stage Centre for Child Studies, 2006
- Base map provided by Statistics Canada on an administrative basis from 2001 Census
- Analyzed neighborhoods: 2001 Early Years Niagara Region & Off-Stage, 2007
- Produced by: UEY & Off-Stage, 2007
- © 2007 UEY & Off-Stage
EDI and School Performance

2001/02 SK EDI Scores in Niagara Region
(Percentage Scoring Low/Vulnerable i.e. Bottom 10th Percentile)

- Low on No Domains: 73.7%
- Low on one or more domains: 26.3%
EQAO Scores below Standard

2004/05 Grade 3 EQAO Scores in Niagara Region (Percentage Scoring Below Provincial Standard)

- Reading: 34.3%
- Writing: 35.2%
- Math: 29.4%
2006 Vulnerability by Domain

% Vulnerable in Communication Skills & General Knowledge by Neighbourhoods in Niagara Region

(Vulnerable: Children who scored below the 10th percentile)

Range of Percentages
- Less than 9.00%
- 9.01% - 16.00%
- 16.01% - 22.00%
- More than 22.00%

% Vulnerable in Niagara Region Overall: 15.00%
Digging Deeper...

% Poor/Very Poor in Welland - Communication Skills & General Knowledge

- Knowledge about the world
- Ability to articulate clearly, without usual dilution
- Ability to understand what is being said
- Ability to communicate own needs
- Ability to take part in imaginative play
- Ability to tell a story
- Ability to listen in English
- Use language effectively in English

Percentages of Children
Looking at Neighbourhoods…
Looking at Neighbourhoods…
Socioeconomic Data-2001 Census

Average Household Income in Niagara Region

Income Range:
- Less than $15,000
- $15,001 - $25,000
- $25,001 - $35,000
- $35,001 - $45,000
- More than $45,000
- Data Unavailable

National Average: $36,359

Data Sources:
- Statistics Canada: Federal Centre for Census Analyses
- Canadian Communities Project: Ontario Early Years Research, 2008

Prepared by: LCH-F Pilot Project, 2007

Scale: 1 inch = 5 miles
2001 Census

Family Structure in Niagara Region

% of Population Comprised of Lone Parent Families
- Less than 10.1%
- 10.1% - 24.7%
- 24.8% - 45.0%
- More than 45.0%
- Data Unavailable

National Rate: 24.7%

Data Sources:
Base map features: Statistics Canada custom labeled only from 2001 Census
Neighbourhoods: Neighborhood Creation Project, Ontario Early Years Niagara Region, 2006
Produced by: UPEI, 2007
© 2007, UPEI, ECOSO
2001 Census

% of Niagara Region Population without High School

Range of Percentages (Age 20 and over)
- Less than 20.0%
- 20.1% - 29.9%
- 30.0% - 40.0%
- More than 40.0%
- Data Unavailable

National Rate: 29.9%
Housing Stress Index in Niagara Region

% of Population Spending 30% or More of Income on Shelter
- Less than 7.00%
- 7.00% - 22.95%
- 22.96% - 40.00%
- More than 40.00%
- Data Unavailable

National Rate: 22.95%

Data Source:
- Data map created by Statistics Canada census tabulation areas from 2001 Census Neighbourhoods, Niagara Region
- Produced by URBIS, Inc. 2007
- © 2007 - URBIS Inc.
2001 Census

Immigration in Niagara Region

% of Population Immigrating (1996-2001)

- Less than 1.1%
- 1.1% - 3.3%
- 3.4% - 10.0%
- More than 10.0%
- Data Unavailable

National Rate: 3.3%

Data Sources:
- Map Features: Statistics Canada and local boards from 2001 Census
- Map Production: Clean Map Solutions, Niagara Region, 2007
- Produced by: UCK E. O'Farrill, 2007

© 2007 - UCK E. O'Farrill
2007 Community Resource Inventory

Distribution of Health and Wellness Resources in the Niagara Region

Number of Resources
- 0
- 1 - 4
- 5 - 7
- 8 - 11

Data Sources:
Community Resource Inventory: UEY & Information Niagara, 2005
Neighbourhoods: Neighbourhood Creation Project, Ontario Early Years Niagara Region, 2006
Base map features: Statistics Canada custom tabulation(s) from 2001 Census
Produced by: UEY & Olford, 2007
© 2007 - UEY/ECCO/C
2007 Community Resource Inventory

Distribution of Social Resources in the Niagara Region

Number of Resources
- 0
- 1 - 3
- 4 - 6
- 7 - 9

Data Source:
- Community Resource Inventory: UECF & Information Niagara, 2006
- Neighbourhoods: Neighbourhood Creation Project, Ontario Early Years, Niagara Region, 2006
- Base map features: Statistics Canada custom tabulation(s) from 2001 Census

Produced by: UECF & Offord, 2007
© 2007 - UECF/EOC
Almost 1 in 4 Niagara children ‘not ready for learning’ and vulnerability is widely dispersed.

Larger %’s of children living in poverty and/or lone parent families are scoring vulnerable.

However, the largest # of children at risk live in middle/upper income, two-parent families.

Therefore, ‘universal’ services as opposed to targeted ones seem in order.

Currently, a variety of initiatives addressing quality child care (QCCN), child poverty (RMN) and municipal/neighbourhood needs.
What else seems to help?

- Canadian children who received high quality early childhood education enjoyed academic advantages that were apparent as early as grades one and two (n=10,600).

- The findings were consistent no matter what the mother’s education level or the child’s socio-economic background.


- At-risk children who’ve had early childhood education have 30% more high school completions and 50% fewer arrests than those who don’t.

Use of UEY Data in Niagara

• PD needs identified and sessions provided
• School Board and service delivery planning influenced
• Regional and neighbourhood needs identified and used in community plans
• New programs developed, existing ones revised
• New resources allocated, existing re-allocated
• Successful proposals, grants, and reports written
• Research, event, training, and product development partnerships formed
• Community action inspired
• New resources provided to parents and early years professionals
“It is one of the greatest of contemporary social injustices that people who live in the most disadvantaged circumstances have more illnesses, more disability and shorter lives than those who are more affluent.”

The early years and your efforts on behalf of children matter!

~ Glory