

# Child and Youth Health and Well-Being Indicators Initiative



**Eric Young – Deputy Provincial Health Officer**  
**Bernie Paillé – Special Projects Lead - CIHI**  
**Michael Egilson – Chair, Child Death Review Unit**

# Presentation Overview

- Project rationale
- Roles and responsibilities
- Collaborations – examples from project stages
  - Background work
  - Validation exercise
  - Indicator assessments
  - Evidence assessments & indicator selection
  - Documentation
- Final Recommended Suite of Indicators

# **A Report On the Health of British Columbians**

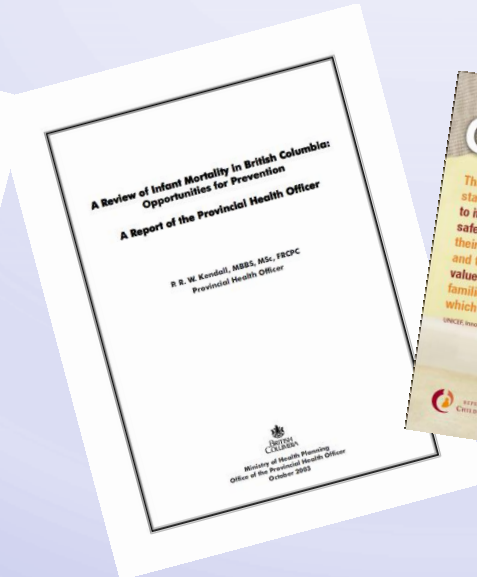
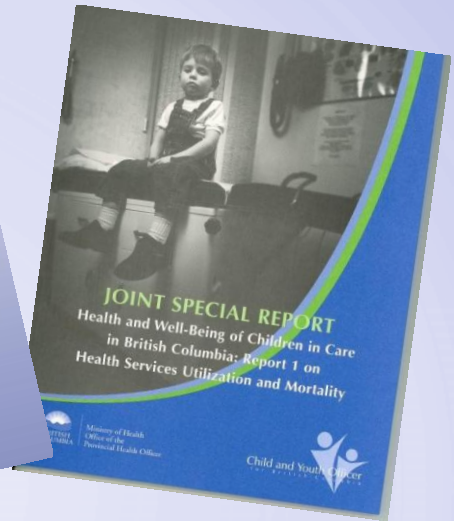
## **Provincial Health Officer's Annual Report**

# *1997*

**Feature Report:  
The Health and Well-being  
of British Columbia's Children**

1998  
Ministry of Health and Ministry Responsible for Seniors  
Victoria, British Columbia

# PHO Child Health and Well-being Reports



# Project Rationale

- Update PHO report on Child Health and Well-Being
- Evidence informed
  - Focus on contributing factors, modifiable conditions and actions that make the most difference to both positive and negative child and youth health and well-being outcomes
- Goal
  - a sustainable, solid measurement system that will support consistent and ongoing reporting over many years

# Indicator Selection

**Evidence based and expert supported:**

**Magnitude**

**Significance / Impact**

**Modifiability**

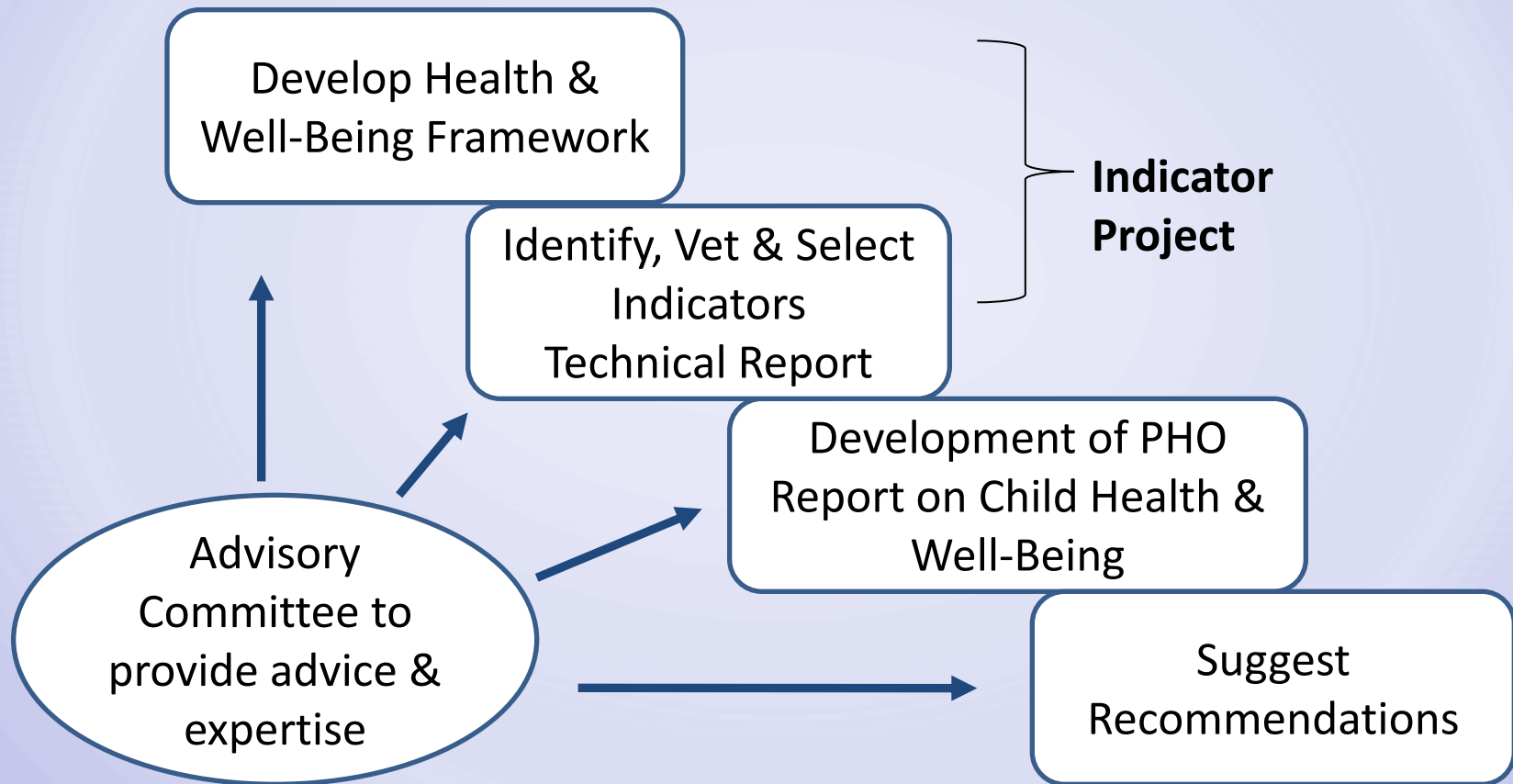
**Data availability / quality**

**Government Priorities**

# Governance and Roles

- **Three levels of governance**
  - **Advisory Committee: advice on policy implications and comprehensiveness**
  - **Technical Committee: advice on methods and data**
  - **Project Working Group: day to day operations**
- **Intersectoral**
  - **Ministries with responsibility for child and youth issues**
  - **Post project reporting “ownership”**
- **Interdisciplinary**
  - **Content experts involved throughout the process**

## Advisory Committee Role in the Project





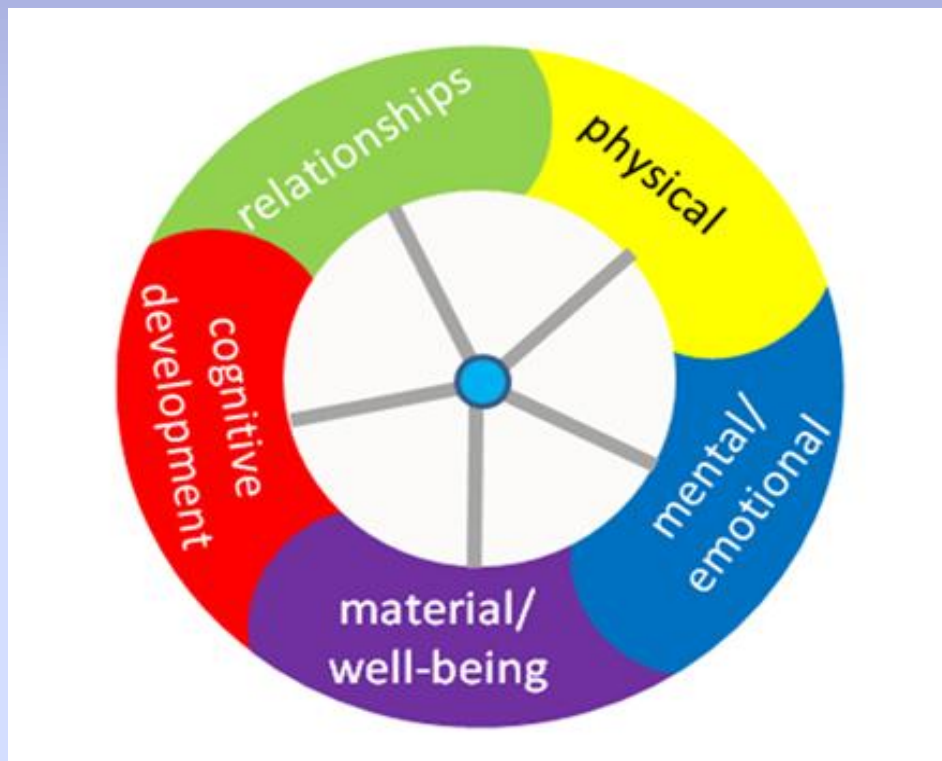
# Advisory Committee

<p>Chair <b>Dr. Eric Young</b> Deputy PHO</p>	<p><b>Marilee Allerdings</b> Manager, Research &amp; Analytical Projects CIHI</p>	<p><b>Dr. Clyde Hertzman</b> Human Early Learning Program</p>
<p><b>Dr. Richard Stanwick</b> CMO VIHA</p>	<p><b>Andrew Hazlewood</b> ADM MoH</p>	<p><b>Sandra Griffin</b> ADM MCFD</p>
<p><b>Molly Harrington</b> ADM, MSD</p>	<p><b>Dr. Maureen O'Donnell</b> Director Child Health BC</p>	<p><b>Paige MacFarlane</b> ADM MoE</p>
<p><b>Dr. Ian Pike</b> BC Injury Research and Prevention Unit</p>	<p><b>Dr. Malcolm Ogborn</b> Associate VP, Research, UNBC</p>	<p><b>Jeremy Berland</b> Associate Deputy Representative for Children and Youth</p>
	<p><b>Dave Nikolejsin</b> Chief Information Officer</p>	

# Project Phases

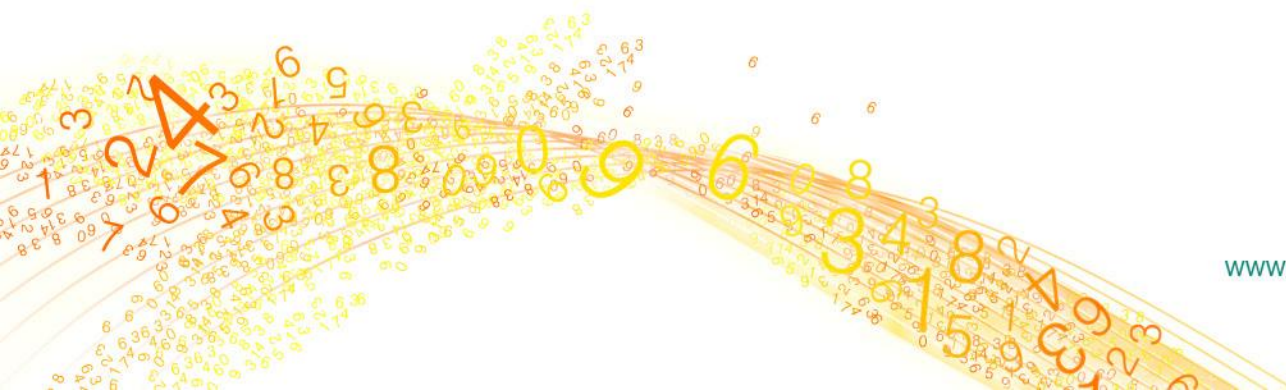
1. Framework Development
2. Indicator Relevance Review (Delphi)
3. Indicator Evidence Review (systematic)
4. Indicator Recommendation & Selection

# Health and Well-Being – A Dynamic Balance





# The difference **data** makes



[www.cihi.ca](http://www.cihi.ca)



Canadian Institute  
for Health Information

Institut canadien  
d'information sur la santé

# CIHI – Office of the PHO Partnership

- CIHI wants to work on indicators and data development that are important to its stakeholders
- Public reporting of data and using data to identify areas for improvement inevitably leads to better data (more standardized, more comparable)
- Pushing the boundaries of health reporting beyond “health services” is where we need to be heading
- Leveraging the work (and leadership) of one jurisdiction to inform the work of CIHI and other jurisdictions benefits us all

# Collaboration 1 – Background Paper

## Key Highlights

- **Framework**
- **Criteria**
  - **Structure**
  - **Guards against single interest**

## Collaboration

- > **Academics**
  - **Local**
  - **International**
- > **CIHI**
- > **Ministry of Health**
- > **Other Ministries**

# BC Child and Youth Health and Well-Being Framework

DIMENSIONS	CHILD CENTERED ECOLOGIES				
	Individual	Family & Peers	Schools	Community	Society & Culture
Physical Health					
Mental/ Emotional Health					
Social Relationships					
Cognitive Development					
Economic and Material well- being					



# Collaboration 2 – Workshop

## Key Highlights

- Refine framework
- Obtain buy-in

## Collaboration

- > First meeting of Advisory Committee
  - **Participate in process**
- > Applying theoretical to local context
- > Required broader representation



# Indicators Workshop November 2009

Health Authorities

Ministries &  
Agencies

PHAC

Aboriginal Health

Researchers

Academics

Hospitals

# Collaboration 3 – Relevance Survey

## Key Highlights

- **Relevance vs. evidence**
- **Application of theory to real situation**
  - **Why track issues that constituents don't think are relevant**

## Collaboration

- > **Constituent collective wisdom**

# Relevance Assessment Ranking Example



## BC Child Health & Well-Being Indicator Evaluation

**59. Please rank the ten (10) MOST important MENTAL/EMOTIONAL HEALTH DIMENSION indicators. For the most important indicator, rank it using a 1, for the tenth most important indicator, rank it using a 10. Only one ranking is allowed per column.**

**If there are indicators that are not included here, but you think are important and should be included in the report, please enter them in the space provided at the bottom of this list.**

	#1	#2	#3	#4	#5	#6	#7	#8	#9	#10
Mental Health Disorders	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Emotional Health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-rated Mental Health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-rated Emotional Health	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-esteem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Self-efficacy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Optimism	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Life Satisfaction	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Spirituality	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Suicide & Suicidation	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Family Functioning	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parenting Style & Practices	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parental Mental Health Status	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parental Depression	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Parental Criminal Records	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Mental Health System Utilization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anti-psychotic Prescription Drug Utilization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Methylphenidate Utilization	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Other (please specify)	<input type="text"/>									

# Collaboration 4 – Evidence Reviews & Indicator Selection Process

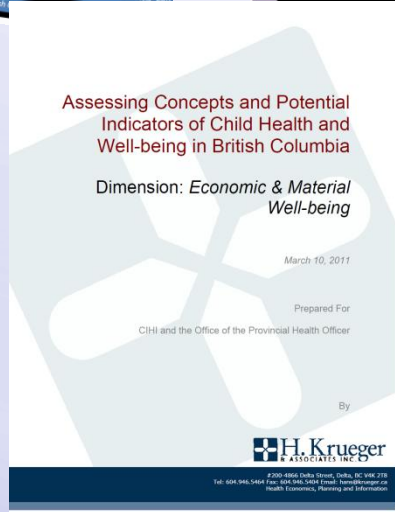
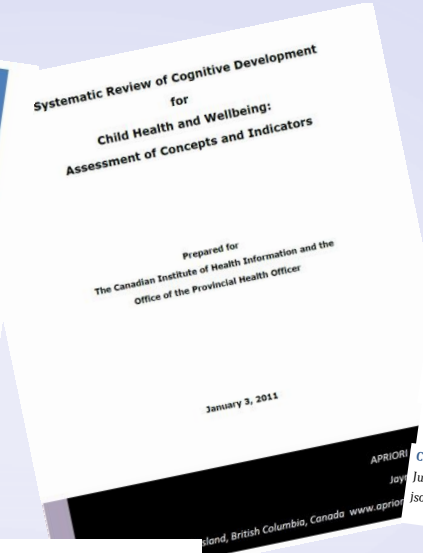
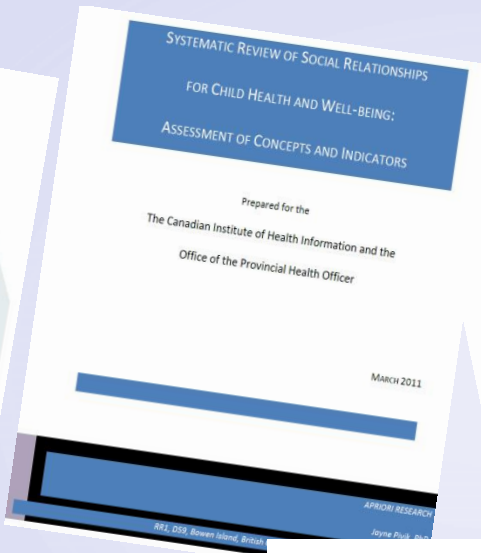
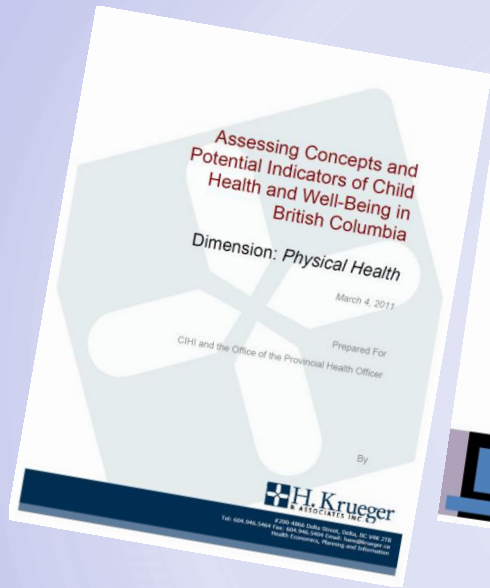
## Key Highlights

- Degrees and quality of evidence
- Definitional challenges
- Context matters

## Collaboration

- > Advisory Committee
  - Government context vs Academic evidence
- > Reviewer content expertise
- > Working group cohesiveness

# Evidence Reviews 805 pages total



# Evidence Review Indicator Summary Template

<b>Concept / Indicator</b>	<b>Magnitude</b>	<b>Significance / Impact</b>	<b>Modifiability</b>	<b>Data Availability</b>
	Proportion of B.C. child/youth population to which concept applies (include # and/or %)	Association between concept and health/well-being dimension	Can the concept/indicator(s) be reasonably changed through public policy or other intervention	Existence and quality of information for the component indicator(s) for each concept
1.				
2.				
3.				
...				

# Collaboration 5 – Documentation

## Key Highlights

- Required significant input on technical details from data providers

## Collaboration

- > Data source providers
  - Understand data requirements and measures
- > Understand that people who do the work understand what matters
- > Respect the intelligence and expertise of people in “the field”

# Measurement

## Data Dictionary:

Definition
Data source
Coding
Method of calculation
Sample Size
Reference Population
Data Availability
Comprehensiveness
Treatment of Missing Values
Risk Adjustment
Rationale for Inclusion
Standards/Benchmarks
Limitations
Comments



## Sexually Transmitted Infections

<b>Definition</b>	Incidence of Chlamydia incidence among youth age 15 – 19 years of age, expressed as a rate per 100,000 population by gender.
<b>Data source</b>	BC Centre for Disease Control
<b>Coding</b>	n/a
<b>Method of calculation</b>	(Number of new cases of Chlamydia reported annually / total population aged 15 – 19, by gender) * 100,000
<b>Sample Size</b>	n/a
<b>Reference Population</b>	Youth aged 15 – 19 years of age.
<b>Data Availability</b>	Annually
<b>Comprehensiveness</b>	Covers all youth aged 15 – 19, whether sexually active or not.
<b>Treatment of Missing Values</b>	n/a
<b>Risk Adjustment</b>	n/a
<b>Rationale for Inclusion</b>	Chlamydia is one of the most common sexually transmitted infections, and also one of the most preventable through the use of condoms. Rates have been increasing steadily since 1998, and it is important to monitor the incidence to assess the impact of prevention and treatment programs.
<b>Standards/Benchmarks</b>	In 2010, the rate for females was 1,556.2, compared to 1,028.8 in 2001 (peaking at 1652.2 in 2009). Over the same time period, the rate for males increased from 151.4 to 297.0 (but peaked at 317.8 in 2009).
<b>Limitations</b>	Many genital Chlamydia infections are asymptomatic and thus diagnosed infections reflect only a fraction of the total population burden.
<b>Comments</b>	Chlamydia infection rates are highest among females aged 20 – 24 and 15 – 19 and among males aged 20 – 24.

# Indicator Selection



# Recommended

## Physical Health

- Low Birth Weight
- Alcohol use during pregnancy
- Smoking during pregnancy
- Breastfeeding
- Self-rated health
- Physical Activity
- Tobacco Use
- Binge Drinking
- Healthy Weight
- Marijuana Use
- Healthy eating – fruit & vegetable consumption
- Oral Health – Dental Caries
- Immunization Rates
- STIs
- Asthma
- Major Childhood Injuries
- Teen births
- Vision Screening
- Hearing Screening

# Recommended

## Mental/Emotional Well-being

- Mental Health Disorders
- Self-rated mental health
- Life satisfaction
- Suicide
- Suicidal ideation
- Self-esteem
- Prescription Drug Use

## Economic & Material Well-being

- Children in families living below LICO
- Parental Employment
- Children in Families with Core Housing Need
- Food Security
- Idle Youth

# Recommended

## Social Relationships

- Relationship with Parents
- School Connectedness
- Physical Abuse/Neglect
- Sexual Abuse
- Community Connectedness
- Relationship with Adults
- Discrimination
- Children in Care
- Bullying
- Youth Justice Convictions
- Constructive Use of Time

## Cognitive Development

- Personal Social Behavioural Skills
- Communication Skills
- High School Completion
- Motor Skills
- Grade 10 Literacy
- Reading/ Writing FSA Gr 4 & 7
- Math FSA Gr 4 & 7
- Grade 10 numeracy

## Gap Indicators

- Evidence based and expert supported
- Issues with defining the indicator
- Issues with measuring the data

# Gap Indicators

## Physical Health

- Cause specific disability
- Cause Specific Emergency Department use
- FASD
- Sleep Levels

## Mental/Emotional W-B

- Family Functioning
- Parental Mental Health Status
- Spirituality
- Stress

# Gap Indicators

## Social Relationships

- Parental alcohol/substance misuse
- Children who witness domestic violence
- Neighbourhood safety

## Economic & Material

13. Homelessness
14. Recreation Program Registrations
15. Adequate Child Care

## Cognitive Development

15. Early Childhood Education
16. Reading by an Adult
17. School Attendance



## Indicators not Recommended

- **Not supported by Evidence**
- **Doesn't meet the criteria set out**
- **Better indicator exists**

# Indicators Not Recommended

<p><b>Physical Health</b></p>	<ol style="list-style-type: none"> <li>1. Sexual behaviour</li> <li>2. Health services accessibility</li> <li>3. Major childhood infectious diseases</li> <li>4. Newborn screening</li> <li>5. Environmental exposures</li> <li>6. Antenatal care</li> <li>7. Cause specific mortality</li> </ol>
<p><b>Mental and Emotional Well-Being</b></p>	<ol style="list-style-type: none"> <li>8. Parenting style and practice</li> <li>9. Self-rated emotional health</li> <li>10. Self-efficacy</li> <li>11. Optimism</li> <li>12. Mental health system utilization</li> </ol>
<p><b>Social Relationships</b></p>	<ol style="list-style-type: none"> <li>13. Child protection caseload</li> <li>14. At-risk children and youth supported to stay at home</li> <li>15. Social support of parents</li> <li>16. Prenatal parental alcohol/substance abuse</li> <li>17. Relationship with peers</li> <li>18. Youth receiving alternative sentences</li> </ol>
<p><b>Economic and Material Well-Being</b></p>	<ol style="list-style-type: none"> <li>19. Lone parent families</li> <li>20. Children in families receiving social assistance</li> <li>21. Children SES circumstances</li> <li>22. Family income</li> </ol>
<p><b>Cognitive Development</b></p>	<ol style="list-style-type: none"> <li>23. Number knowledge skills</li> <li>24. Copy and writing skills</li> <li>25. English language skills</li> <li>26. Education expenditures</li> <li>27. Reading as a leisure activity</li> <li>28. Early school leavers</li> <li>29. Readiness to learn</li> </ol>

# Acknowledgements

- Core Organizations
  - Office of the BC Provincial Health Officer
  - Canadian Institute for Health Information
  - BC Ministry of Health
  - Office of the Representative for Children & Youth
- Supporting Organizations
  - Ministries of Education, Children and Family Development, Housing and Social Development, Citizen Services
  - Advisory Committee and Technical Committee members
  - Workshop participants

# Questions

