

Incidence and Prevalence of FASD in Alberta and Canada

Suzanne Tough, PhD

Scientific Director, Alberta Centre for Child, Family and Community
Research

Professor, University of Calgary

Calgary, AB

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IHE Consensus Development Conference on

**Fetal Alcohol Spectrum Disorder
(FASD) – Across the Lifespan**

October 7 to 9, 2009, The Westin Edmonton, Edmonton, Alberta



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Overview

- Definition of Incidence and Prevalence
- Considerations in Data Interpretation
- What We Know in General
- What We Know about Subpopulations
- Gaps in the Data
- Opportunities and Next Steps



Rates

Incidence	Prevalence
<ul style="list-style-type: none">• New cases occurring as a proportion of a population<ul style="list-style-type: none">– # per 1000 live births• Requires a defined population and a defined criteria for diagnosis	<ul style="list-style-type: none">• All new <u>and</u> existing cases<ul style="list-style-type: none">– # per 1000 people• Important for providing resources and support• More commonly reported than incidence for FAS/FASD



Considerations

- When is FAS/FASD a new case?



Considerations

- Different diagnostic definitions

Broader

FASD	FAS	FASD
FASD	FAS	FASD
FASD	FAS	FASD

Narrower

FA\$D	FAS	FASD
FASD	FAS	FASD
FA\$D	FAS	FASD

- 2005 Canadian guidelines for diagnosis of FASD
 - Comprehensive multidisciplinary diagnosis
 - Limited capacity & expertise → low identification

Chudley et al., 2005



Considerations

- Low incidence and prevalence rates could mean:

Prevention is working.

OR

There is low identification of the disease.

- Methodology limitations and consequences
 - Different ways of studying FASD incidence and prevalence → different rates



Considerations

May et al., 2001

Methodology	Advantage	Disadvantage
Passive Surveillance	<ul style="list-style-type: none"> • Use of existing resources • Costs less • Easy to conduct 	<ul style="list-style-type: none"> • Difficult to diagnose at birth • Relies on non-specialist physicians
Clinic-Based Studies	<ul style="list-style-type: none"> • Maternal history • Large # of pregnancies • More control and rigor 	<ul style="list-style-type: none"> • Self-selection bias • Reflects clientele of clinic
Active Case Ascertainment	<ul style="list-style-type: none"> • Diagnose at suitable age • More likely to uncover children with FAS • Wide representation 	<ul style="list-style-type: none"> • High cost (labour) & time • Need community support • Often study high-risk populations



Considerations

- Sub populations and generalizability
 - Generalizing is difficult due to variation:
 - between subpopulations and methodologies
 - in reporting and diagnosis
 - in prevalence and detection of alcohol use

Abel et al., 1995
Williams et al., 1999

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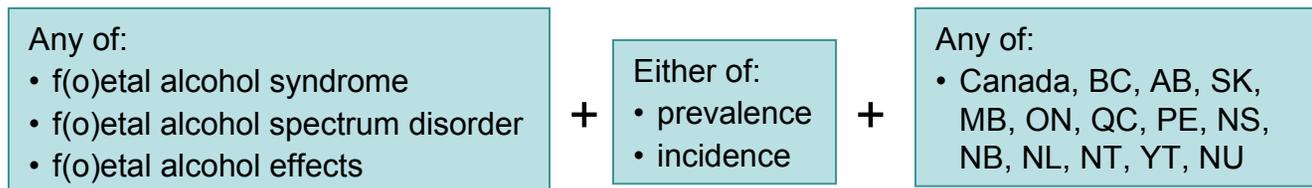
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Search Strategy

- Known and accessible papers and reports
- Medline search

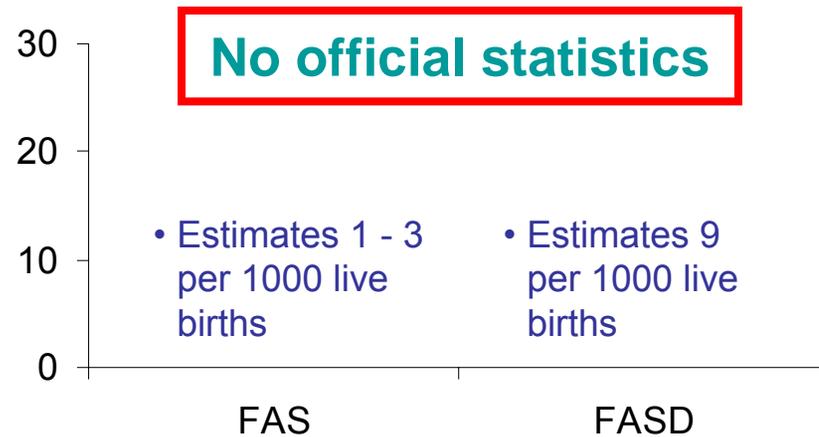


- Searching reference lists
- Provincial/Territorial government web sources



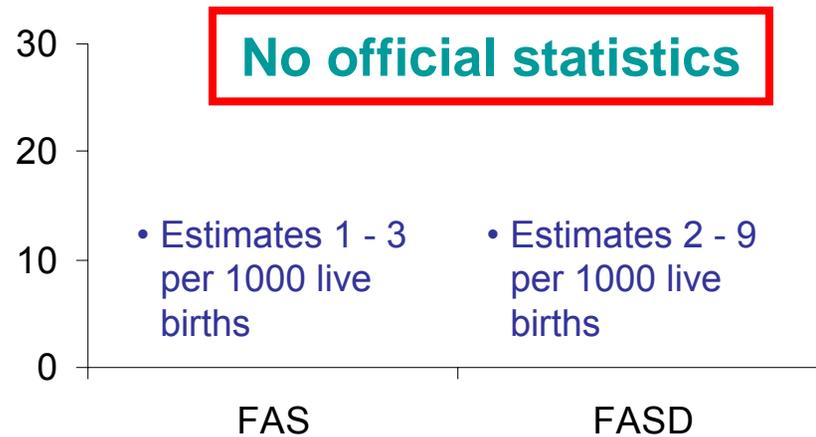
Incidence Rates

Canada



Incidence Rates

Alberta



Children and Youth Services Ministry

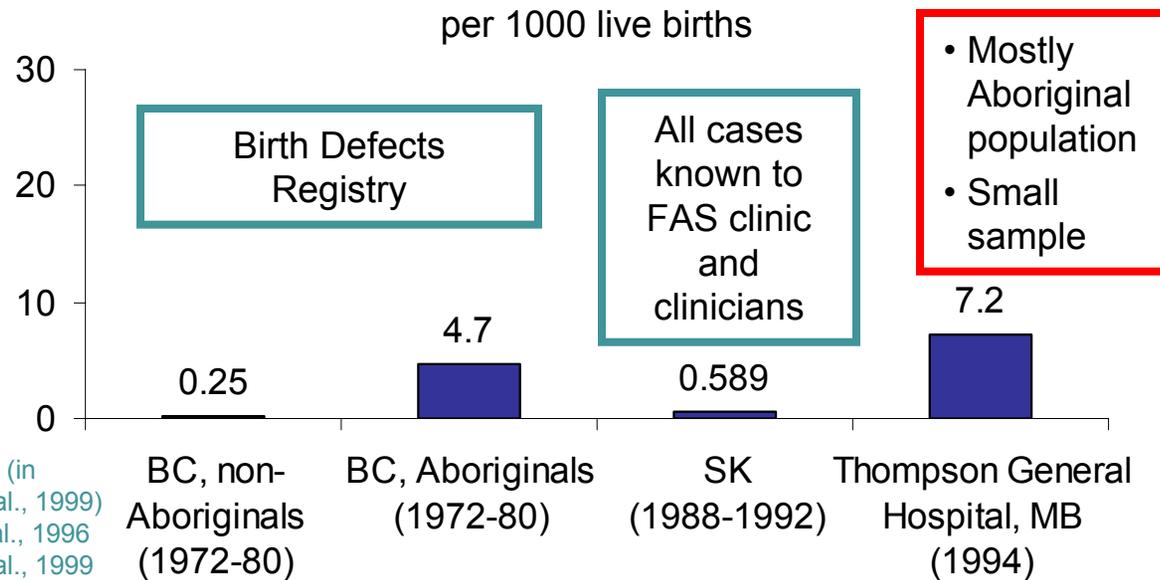
A new information system will provide the ability to gather information on FASD on **children in care** in a systematic way



Incidence Rates

FAS in other provinces

per 1000 live births



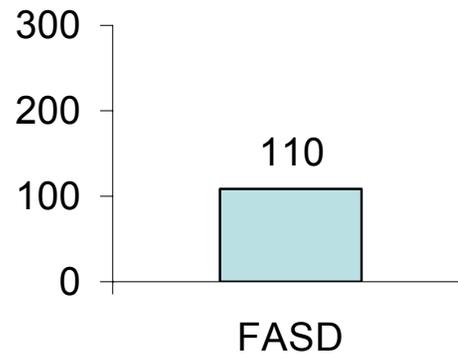
Wong, 1983 (in Williams et al., 1999)
Habbick et al., 1996
Williams et al., 1999



Prevalence Rates: Children in Care (Manitoba, 2004/05)

FASD

per 1000 children in care

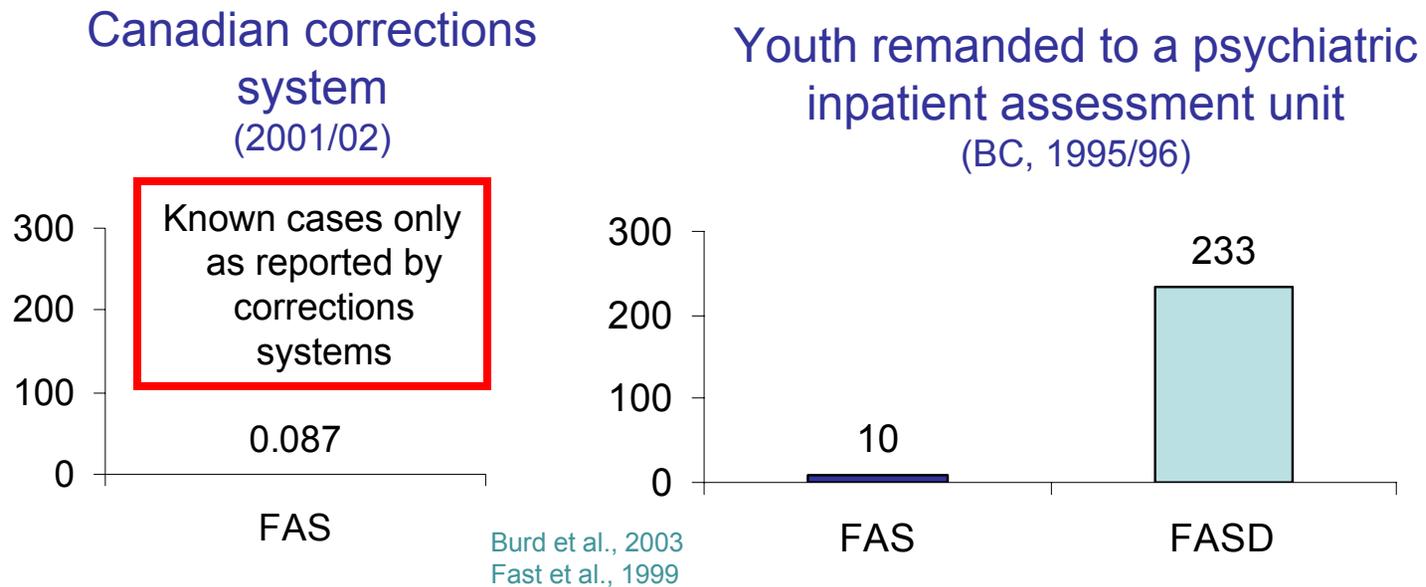


Fuchs et al., 2005



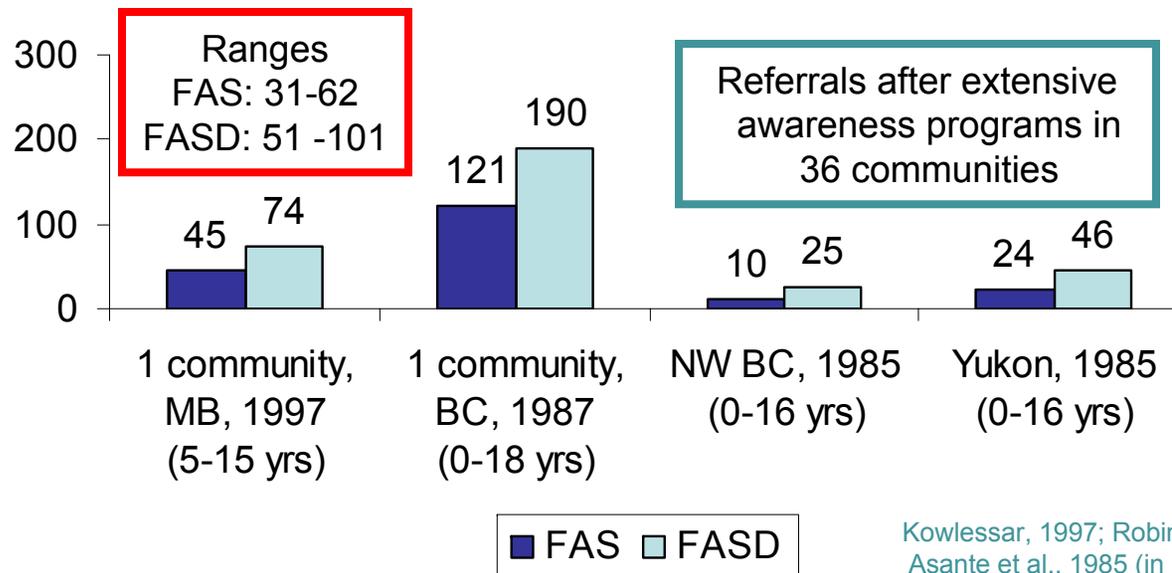
Prevalence Rates: Corrections Systems

per 1000 people



Prevalence Rates: Aboriginal Children

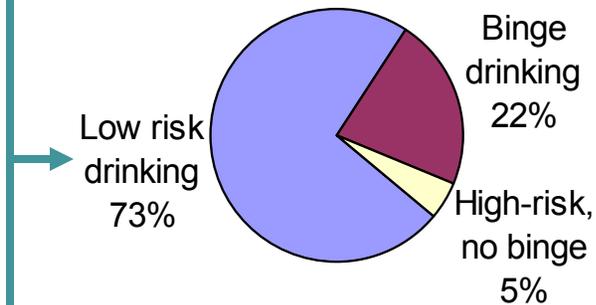
per 1000 children



Prenatal Alcohol Use

- Risk of FASD is related to an exposure
- May need information on the rate of exposure in the population to interpret the incidence

50% of first-time Alberta mothers reported drinking some alcohol **before they knew they were pregnant**



Sampson et al., 1997
Tough et al., 2006



Complexities of FASD

- Development of FASD is a complex interaction between maternal alcohol ingestion, fetal susceptibility, maternal biology including nutrition and pattern of alcohol use



Gaps

- Absence of actual rates
 - Canada
 - some provinces
 - cities and subpopulations
- Statistics are often dated
- Inconsistent diagnostic and reporting criteria
- Variation in study methodologies



Summary

	FAS	FASD
Incidence per 1000 births	0.25 to 7.2	Estimates 2 to 9
Prevalence per 1000 people	0.087 to 121	25 to 233

Interpret with caution



The Future

- Low incidence and prevalence rates could mean:

Prevention is working.

OR

~~There is low identification
of the disease.~~



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