

Seeing the big picture:  
Breastfeeding as part of a  
primary health care strategy  
*or*  
A paradigm shift: new ways of  
looking at “public health”



UNIVERSITY  
OF MANITOBA



Manitoba  
Centre for  
Health  
Policy

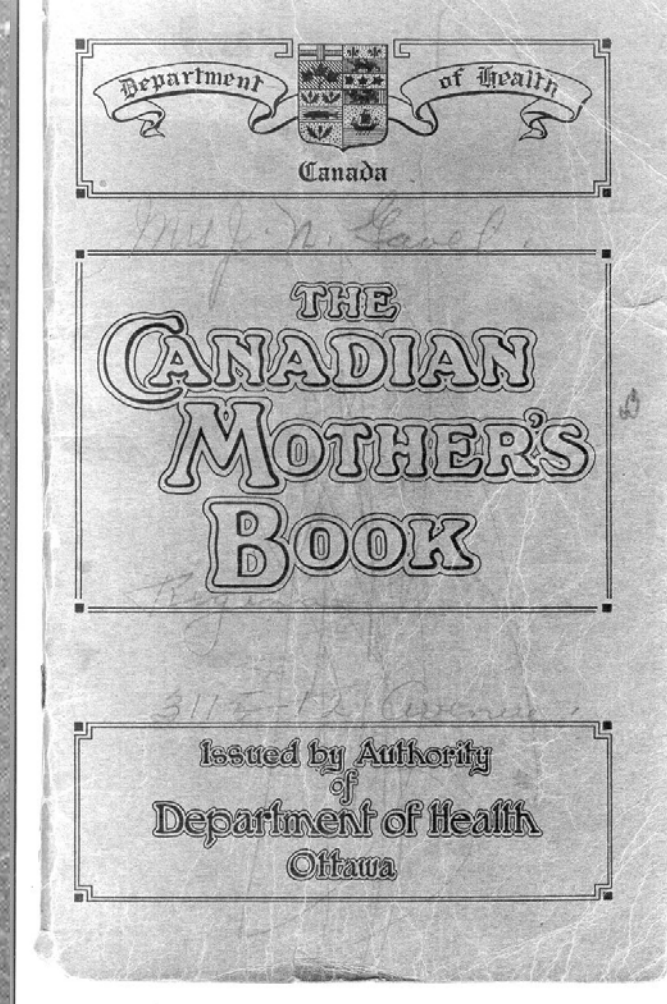
Patricia J. Martens IBCLC, PhD  
Associate Professor, Department of Community Health  
Sciences, Faculty of Medicine, University of Manitoba  
Director: Manitoba Centre for Health Policy  
CIHR/PHAC Applied Public Health Chair

# Outline of talk

- A look at public health issues
  - Globally
  - Infectious disease, chronic disease, obesity
  - Disaster management, food security issue
- Some basic epidemiology
  - Upstream, midstream and downstream intervention
  - Rose Theorem, Population Attributable Risk
- The big effect of small effects
  - Obesity, type 2 diabetes
- Making the right choice the easy choice
  - World-wide information (growth charts, food guides) and media ads
  - Attitude change (don't bet on it; on the other hand, The Tipping Point)
  - Program change/policy change in a community like Sagkeeng
  - Policy change (BFHI, Maternity Leaves, WHO Code)
- So what? Now what?
  - Meaning for the researchers, health care providers, lay counsellors, government planners, etc. – we ALL have work to do



# Public Health



- Pictures from the past
  - A historical trip into the past ...  
**Canadian Mother and Child books**  
from my grandmother's era (1920)

## THE CANADIAN MOTHER'S BOOK.

*"The greatest gift is a child, and the greatest honour is to be a mother."*<sup>1</sup>

**T**HIS book has been written for you—a Canadian mother. The Government of Canada, knowing that the nation is made of homes, and that the homes are made by the father and mother, recognizes you as one of the makers of Canada. No national service is greater or better than the work of the mother in her own home. The mother is "The First Servant of the State."<sup>2</sup>

an  
"A  
is  
in  
be  
Cl  
na  
yo  
tic  
th  
ch  
su

**No national service is greater or better than the work of the mother in her own home. The mother is "The First Servant of the State." ...**

**No Baby – No Nation.**

<sup>1</sup>The mother of a Canadian V.C.  
<sup>2</sup>London Times.

out children is a sad contrast. It lacks interest, happiness, reality, stability. Its end is in sight. It has lost the greatest loveliness and usefulness of the normal home. No Baby—No Nation.

"Look round about you. You shall see the wives in the houses as well as the men on the planks of peril . . . Blessed are they who find poetry in the white and purple heather, the yellow

**Nursing the baby yourself is the ONE BEST WAY. 'Bottle feeding' is one of the greatest errors of human history and it is dying out. .. Nursing by the mother is safer, easier, cheaper, wiser, and more successful and it is going to be the fashionable way, from the Queen on her throne down to the newest Canadian."**

the graves of mothers are green."

-F. J. Gould, "Stories for Young Hearts and Minds."

Quoted by the W.E.A., England.

# Public Health

Word association – what comes to YOUR mind!

- Public health “programs”
- Infectious diseases
- More recent focus
  - Chronic diseases (diabetes, heart conditions)
  - Underlying “determinants” (social inequity?)
  - Obesity
  - Food security





# The big picture: reducing child mortality and public health

- Jones et al. 2003; Bryce et al. 2003
  - How many child deaths can we prevent this year?
    - 42 countries with 90% of the 10.8 million child deaths under five years old
    - Most promising interventions include promotion of **breastfeeding**, oral rehydration therapy, education on complementary feeding, insecticide-treated materials
    - **13% of the deaths are avoidable** if the 42 countries could achieve 90% being exclusively breastfeeding up to 6 months of age





# MMWR™

Morbidity and Mortality Weekly Report

Weekly

March 31, 2006 / Vol. 55 / No. 12

## Racial and Socioeconomic Disparities in Breastfeeding — United States, 2004

The American Academy of Pediatrics recommends breastfeeding for at least the first year of life, and beyond for as long as mutually desired by mother and child (1). Not breastfeeding is associated with increased health risks for children, including otitis media, respiratory tract infections, diarrhea, and necrotizing enterocolitis (1,2). In addition, breastfeeding duration is inversely associated with risk for childhood overweight (3). Breastfeeding also is associated with health benefits for mothers, including reduced risk for ovarian cancer and premenopausal breast cancer (1,2). Breastfeeding rates differ substantially by race, socioeconomic level, and other demographic factors (4). For example, among

## 64% to 75% = \$3.6 billion savings

Increasing rates of breastfeeding is a crucial strategy for improving children's health, reducing childhood overweight, and reducing health-care costs. For example, increasing the proportion of children breastfed in the early postpartum period from 64% in 2000 to the *Healthy People 2010* goal of 75% would save an estimated \$3.6 billion in health-care costs annually (1). Although racial and economic disparities in breastfeeding initiation rates appear to have decreased in recent decades, they have not been eliminated. Barriers to breastfeeding initiation and continuation include lack of social support, lack of proper guidance from health-care providers, lack of adequate or timely postpartum follow-up care, and disruptive hospital maternity-care practices (e.g., delays in breastfeeding initiation, use of pacifiers by newborns, and hospital promotion of formula through the provision of free formula in hospital discharge packs) (1,9). Public health measures to promote breastfeeding should continue and should target groups with the lowest initiation rates, such as black

## Childhood overweight

# The Sunday Times - BRITAIN

October 10, 2004

## Britain 'four meals away from anarchy'

Will Iredale and Jack Grimst

MODERN civilisation may not be quite as safe as we thought. Britain's security services have been privately warning their staff that western societies are just 48 hours from anarchy.

**MI5's maxim is that society is "four meals away from anarchy"**. In other words, the security agency believes that Britain could be quickly reduced to large-scale disorder, including looting and rioting in the event of a catastrophe that stops the supply of food.

**Arnold Rimmer from Red Dwarf, third season, when he found Dave Lister burning books to stay warm:**

Rimmer: "They say that every society is only three meals away from revolution. **Deprive a culture of food for three meals, and you'll have an anarchy.** And it's true, isn't it? You haven't eaten for a couple of days, and you've turned into a barbarian."



# Disaster management – living in an uncertain world

- Hope in the darkest days: Breastfeeding support in emergencies (Heinig 2005)
- ILCA's Position on Infant Feeding in Emergencies



International Lactation Consultant Association  
**Position on Infant Feeding in Emergencies**

4. training of all humanitarian aid workers include essential breastfeeding messages:
  - Nearly every woman can breastfeed her baby (babies) ·· Mother's milk alone has everything a baby needs to grow well in the first six months of life ·· Breastfeeding is protective against infectious diseases, especially diarrhea and acute respiratory infections (ARI) ·· Even malnourished and traumatized mothers produce adequate quantities of good quality milk. The hormones released by the mother in the course of breastfeeding help the mother relax and counteract some of the results of stress.

- LLLI Fact Sheets

(<http://www.ilca.org/pressroom/positionpapers.php>)

Find local support Choose a Country...

Welcome 欢迎光临 Bienvenido Benvenute Добро пожаловать

### Breastfeeding During Emergencies

#### Q. How does breastfeeding save lives and prevent illnesses during an emergency?

A. Breastfeeding protects babies from the risks of a contaminated water supply. It provides protection against respiratory illnesses and diarrhea—diseases that can be fatal in populations displaced by disaster. This is especially important during disruption of power, water and other services.

Lawrence M. Gartner, M.D., chair of the Section on Breastfeeding of the American Academy of Pediatrics and Health Advisory Council Member of La Leche League International (LLLI) states: "Human milk is a valuable resource that can not only protect the vulnerable infant from disease, but can also promote psychological health and comfort during stressful times. Human milk reduces pain and promotes more rapid healing after injuries and infections."

As natural disasters in recent years have demonstrated, the ability to transport and store water, food and other necessities is greatly diminished during and following catastrophic destruction. Human milk is readily available and provides all the necessary nutrition needed by an infant. In fact, according to the American Academy of Pediatrics and other health organizations around the world, exclusive breastfeeding, i.e., breastfeeding without the introduction of any other foods or water is the ideal infant feeding method for all babies during the first six months.

In special situations such as when complementary foods are not available, many infants have been exclusively fed on human milk for more than six months.

#### Q. How does a mother breastfeed a baby during or after an emergency?

\* [Breastfeeding INFO](#)

\* [50th Anniversary Conference](#)



\* [See the new LLLI Apparel](#)

\* [Become a Member](#)

Resources

Breastfeeding Help

Breastfeeding and the Law

Lactation Support

and Health Care Providers

Leader Pages

Links

Publications

Out

ore

onate



# Important message #1

- We live in times where public health and population health issues are critical – so what should be our perspective?



# Some basic epidemiology to help us answer this ...

- The importance of looking at any health problem from an “upstream, midstream and downstream” approach simultaneously
- The importance of small effects over large populations
  - Rose’s Theorem
  - Population Attributable Risk





articles — articles search —

[toc](#) [previous](#) [next](#) [author](#) [subject](#) [form](#) [home](#)

## Salud Pública de México

Print ISSN 0036-3634

Salud pública Méx vol.40 n.4 Cuernavaca July/Aug. 1998

ENSAYO

# Paradigmatic obstacles to improving the health of populations -Implications for health policy\*

John B. McKinlay, Ph.D. <sup>(1)</sup>

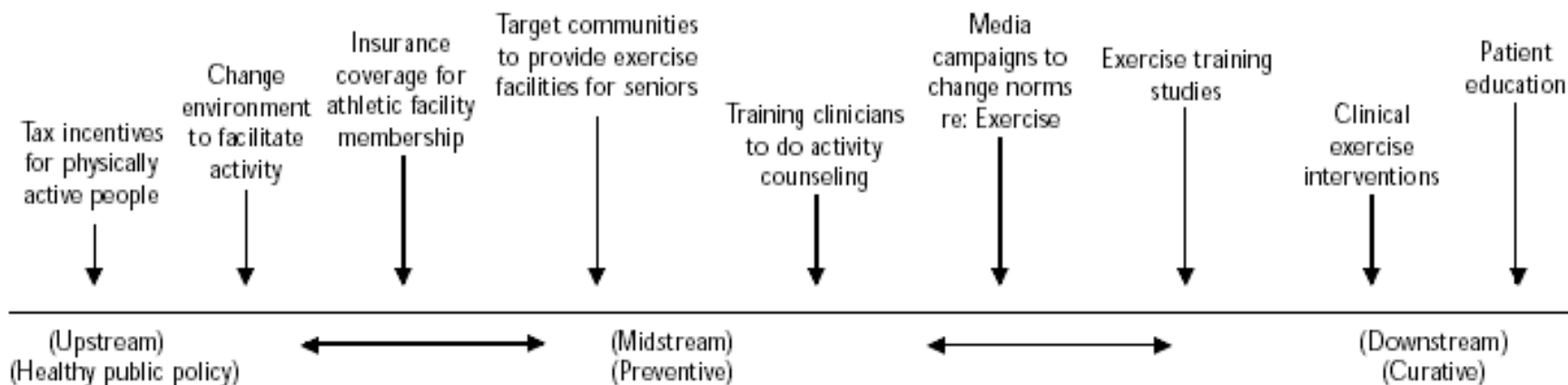
**Services**

- article in PDF format
- article in XML format
- How to cite this article
- Cited by SciELO
- Cited by Google
- Similar in SciELO
- Similar in Google
- Send this article by e-mail

### Abstract

*While there are promising developments in public health, most interventions (both at the individual and*





From: Jette, 1994

FIGURE 3. POINTS OF INTERVENTION FOR PHYSICAL INACTIVITY

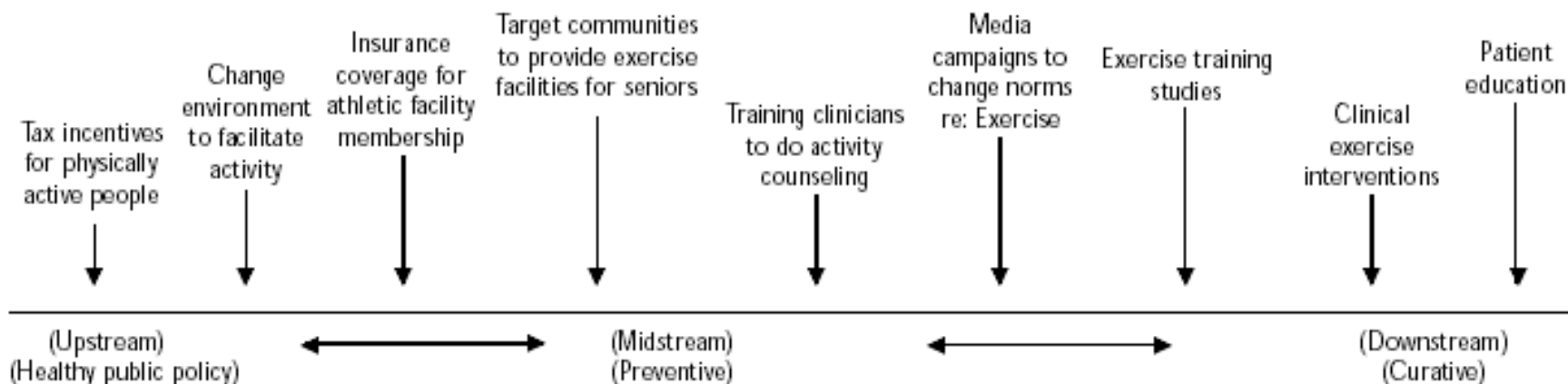
## Paradigmatic obstacles to improving the health of populations -Implications for health policy\*

John B. McKinlay, Ph.D.<sup>1)</sup>

McKinlay JB.  
Paradigmatic obstacles to improving the health of populations -Implications for health policy.  
Salud Publica Mex 1998;40:369-379.

McKinlay JB.  
Obstáculos paradigmáticos para mejorar la salud de las poblaciones: implicaciones para las políticas de salud.  
Salud Publica Mex 1998;40:369-379.

John B. McKinlay, 1998



From: Jette, 1994

FIGURE 3. POINTS OF INTERVENTION FOR PHYSICAL INACTIVITY

**A breastfeeding equivalent ? Where do YOU fit in, and How would you fill this in ...**

**Tax incentives**  
**Maternity legislation**  
**BFHI**  
**Public policies**

**training health care providers**  
**peer supports pre/postnatally**

**bf clinics**  
**“fixing”**

**Upstream**

**Midstream**

**Downstream**

# The importance of a population perspective on public health

- **Rose's Theorem:** "a large number of people at small risk may give rise to more cases of disease than a small number who are at high risk."
- **Reference**
  - Rose, G. The Strategy of Preventive Medicine. Oxford, England: Oxford University Press; 1992.



Tax incentives for physically active people  
 Change environment to facilitate activity

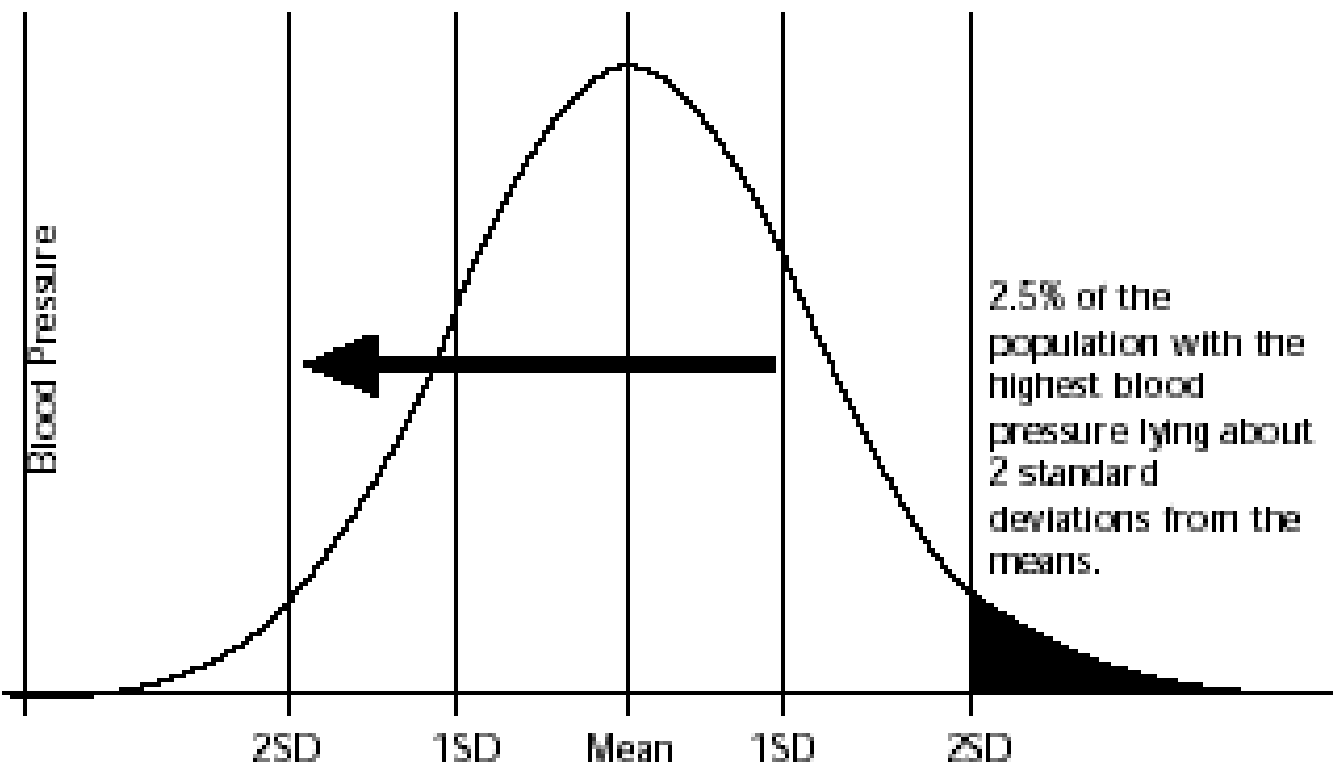
(Upstream) (Healthy public policy)

From: Jette, 1994

FIGURE 3. POINTS OF INTERVENTION

Paradigm  
 the health

Paradigm  
 the health  
 Salud P



The public health approach involves a shift in the entire distribution to the left.

From: reference 64

FIGURE 2. THE NORMAL DISTRIBUTION OF BLOOD PRESSURE IN A HUMAN POPULATION

# The importance of a population-based approach

31% "unhealthy"

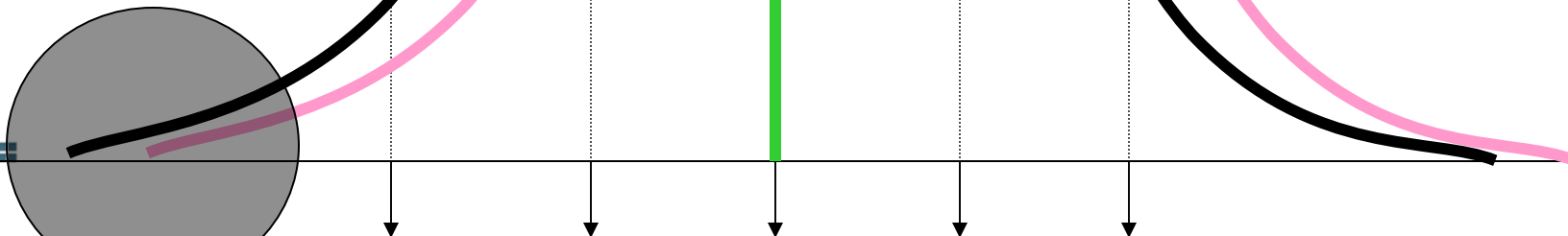
50% "unhealthy"

slide curve  
over 1/2 a  
Standard  
Deviation

An approach for only  
the very high risk –  
limited overall  
population effects

LESS healthy

MORE healthy





# The meaning of a “shift”

- IQ: mean is 100, SD is 15.
- Breastfeeding and cognitive development often finds a 4 to 7 point difference
  - A slide of  $1/4$  SD makes a 10% difference
  - A slide of  $1/3$  SD makes a 13% difference
  - A slide of  $1/2$  SD makes a 19% difference



50% < IQ 100  
SD=15

$\frac{1}{4}$  SD slide:  
40% < IQ 100

$\frac{1}{2}$  SD slide:  
31% < IQ 100

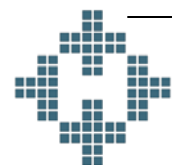
70

85

100

115

130

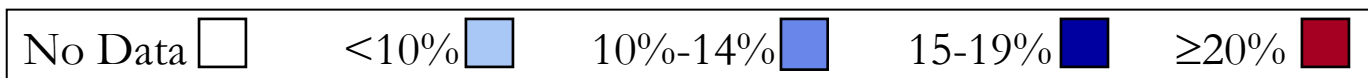
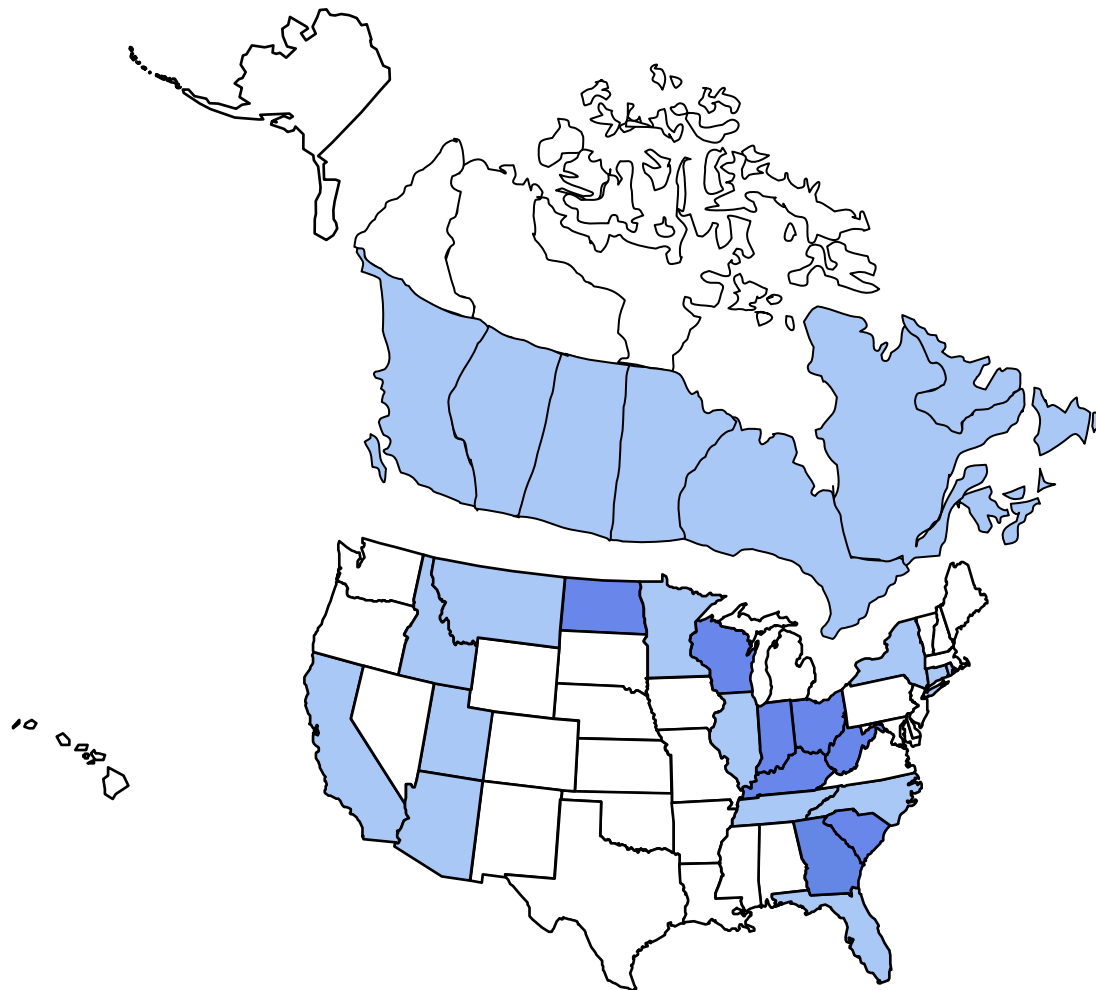


# Important message #2

- THINK BIG
  - Downstream, midstream and upstream
  - The **Rose Theorem** is important to all of us ...  
Even a small population “mean” shift can have profound effects on the % of the population who become healthy or unhealthy



# Obesity Trends Among Canadian and U.S. Adults, 1985

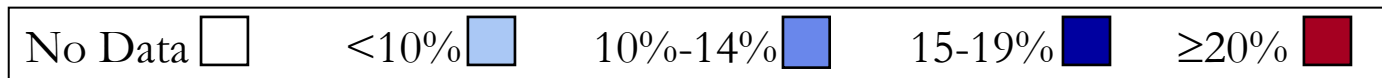
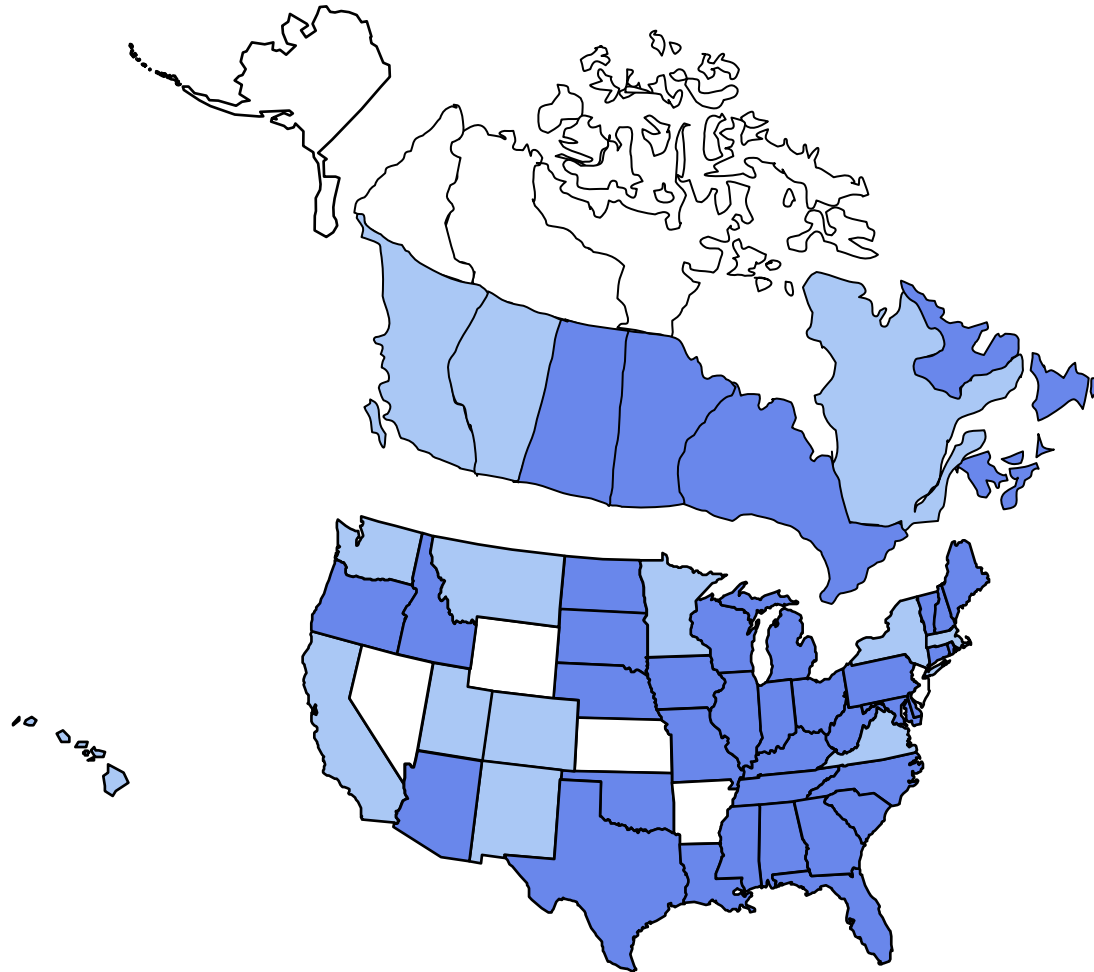


Mokdad AH. *Unpublished Data.*

Katzmarzyk PT. *Can Med Assoc J* 2002;166:1039-1040.



# Obesity Trends Among Canadian and U.S. Adults, 1990



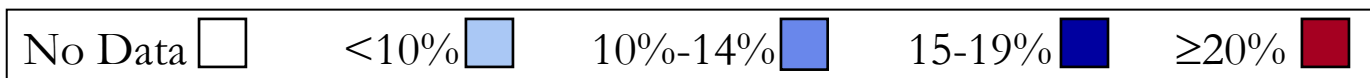
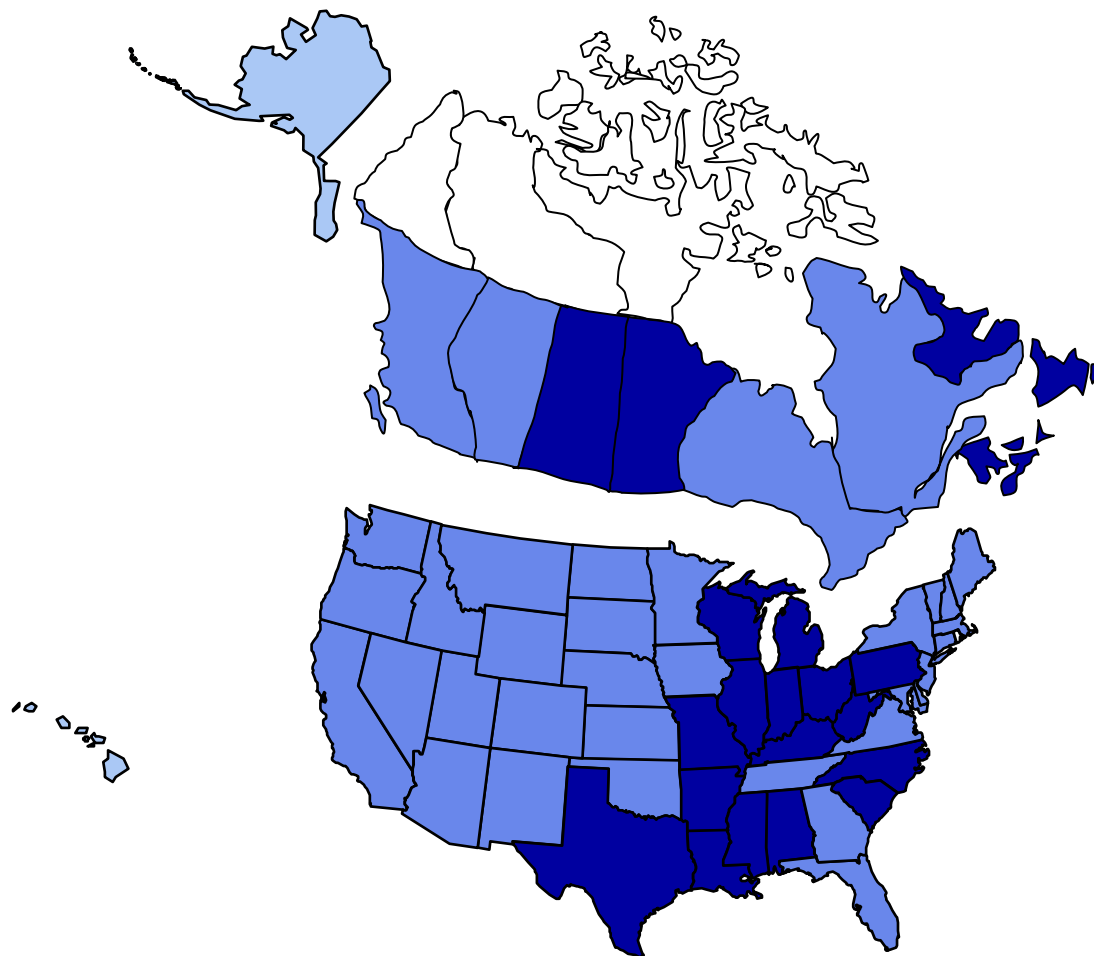
Mokdad AH. *Unpublished Data.*

Katzmarzyk PT. *Can Med Assoc J* 2002;166:1039-1040.





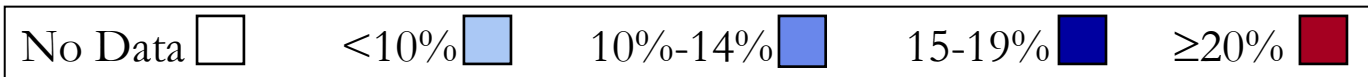
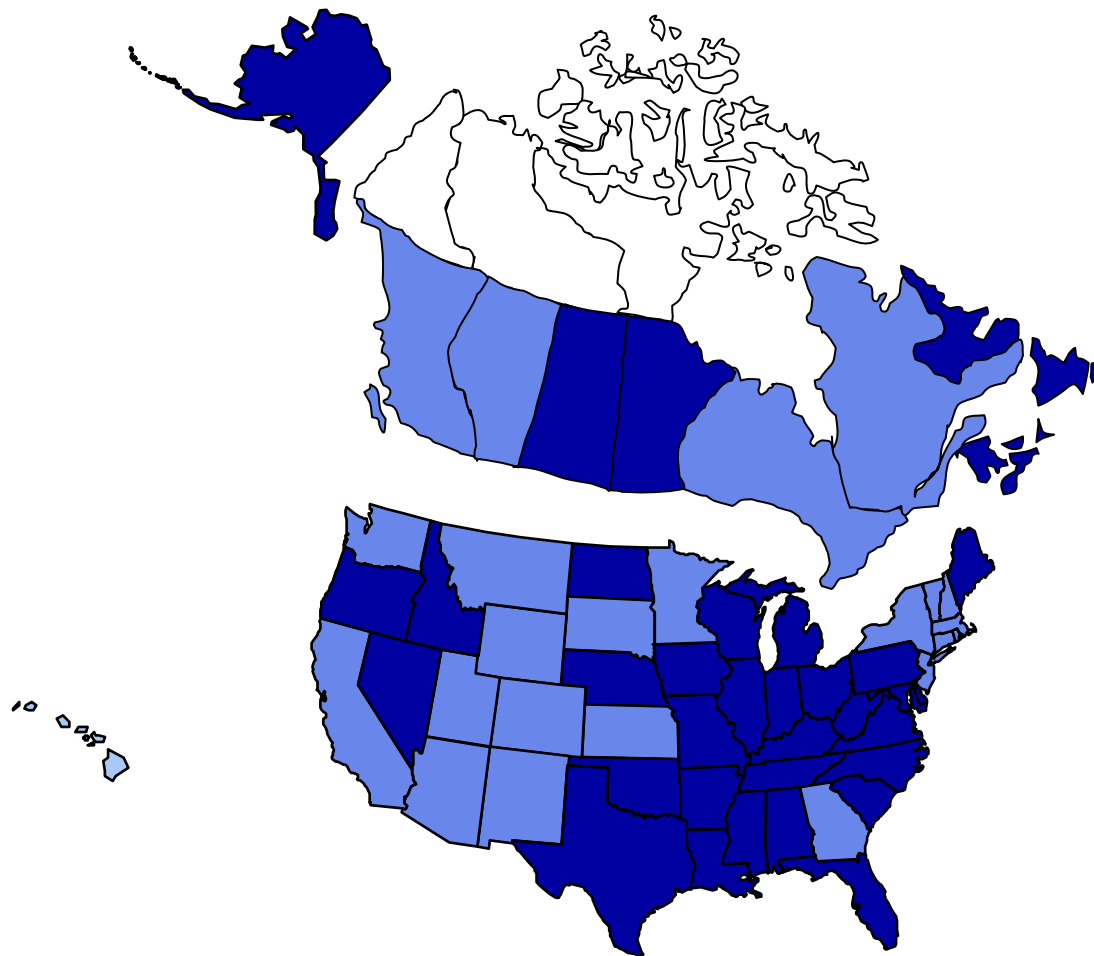
# Obesity Trends Among Canadian and U.S. Adults, 1994



Mokdad AH, et al. *J Am Med Assoc* 1999;282:16.  
Katzmarzyk PT. *Can Med Assoc J* 2002;166:1039-1040.



# Obesity Trends Among Canadian and U.S. Adults, 1996

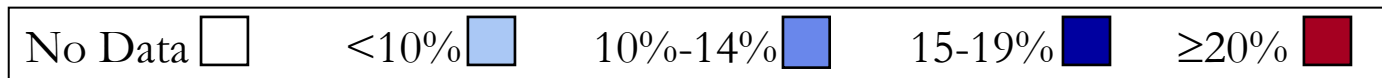
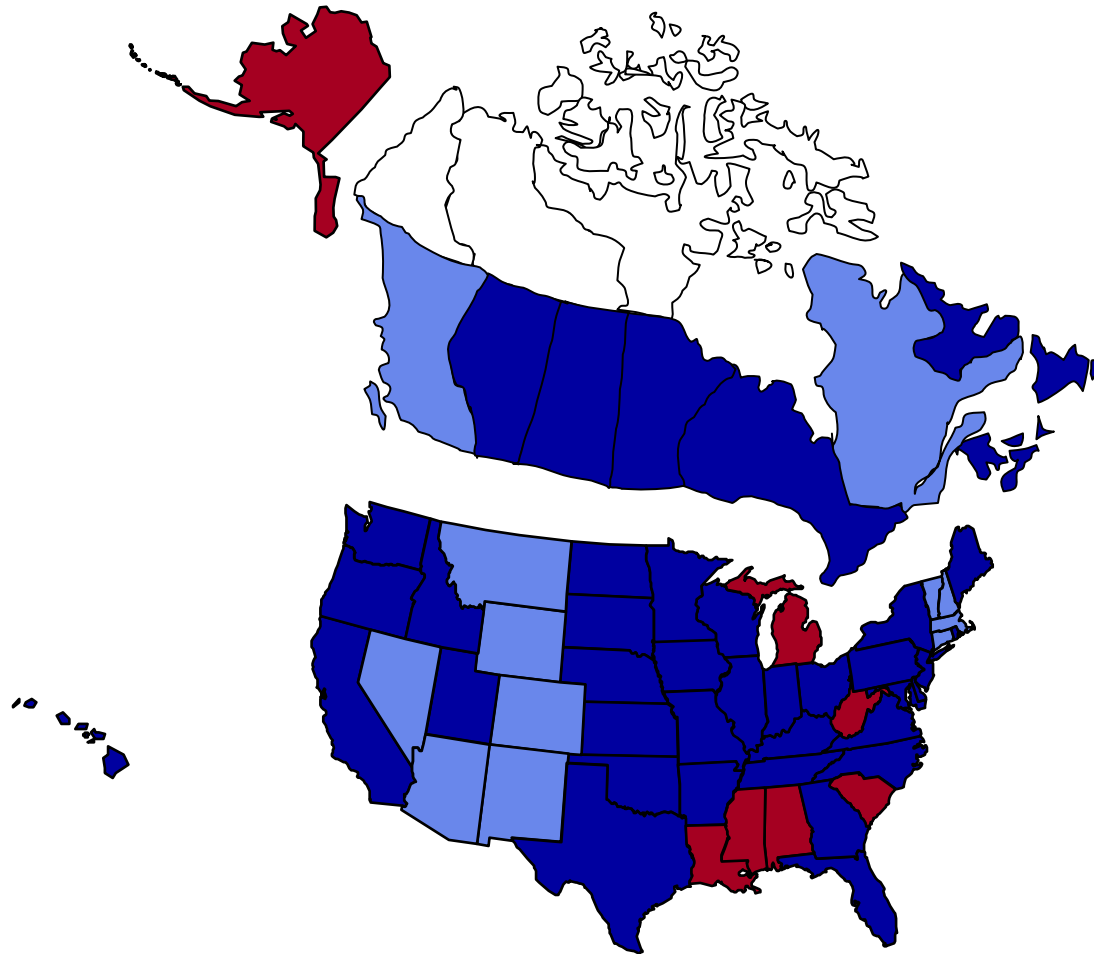


Mokdad AH, et al. *J Am Med Assoc* 1999;282:16.

Katzmarzyk PT. *Can Med Assoc J* 2002;166:1039-1040.



# Obesity Trends Among Canadian and U.S. Adults, 1998

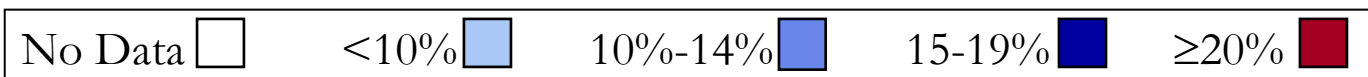
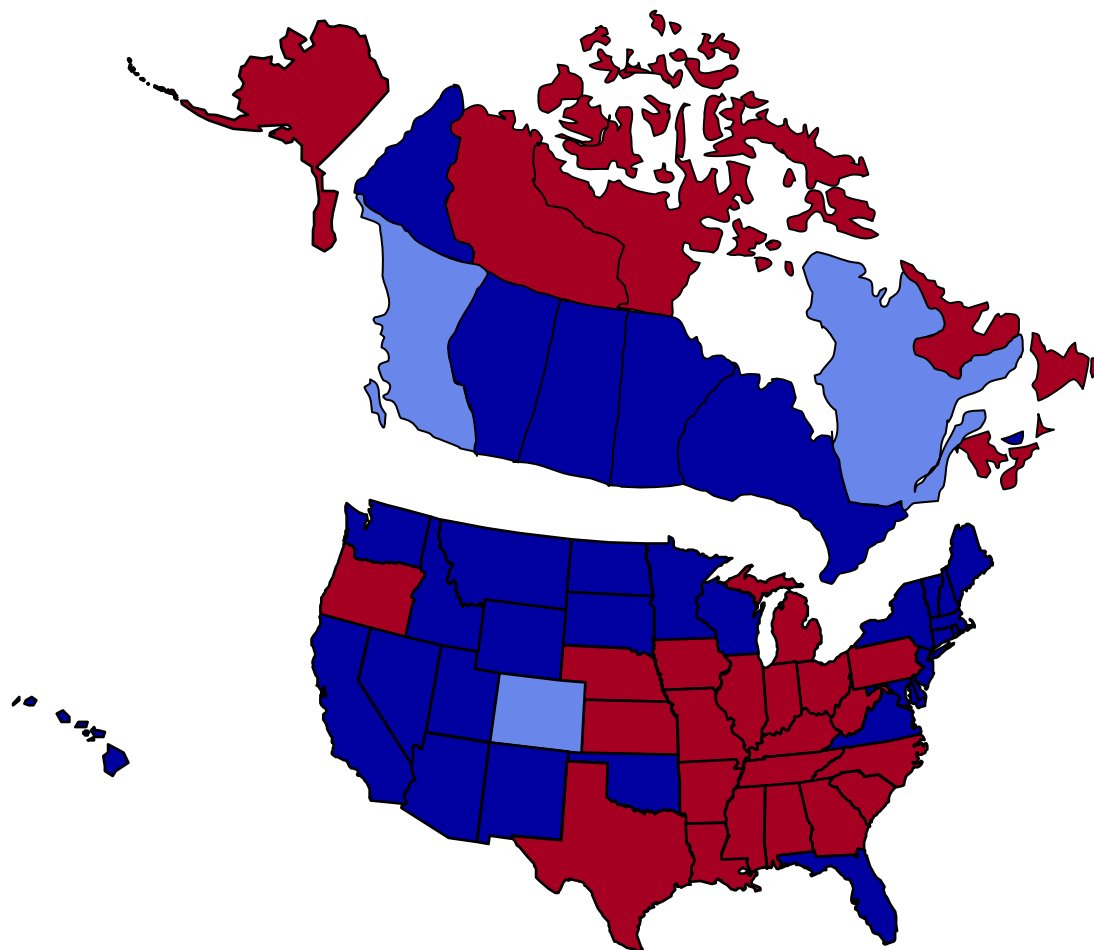


Mokdad AH, et al. *J Am Med Assoc* 1999;282:16.

Katzmarzyk PT. *Can Med Assoc J* 2002;166:1039-1040.



# Obesity Trends Among Canadian and U.S. Adults, 2000



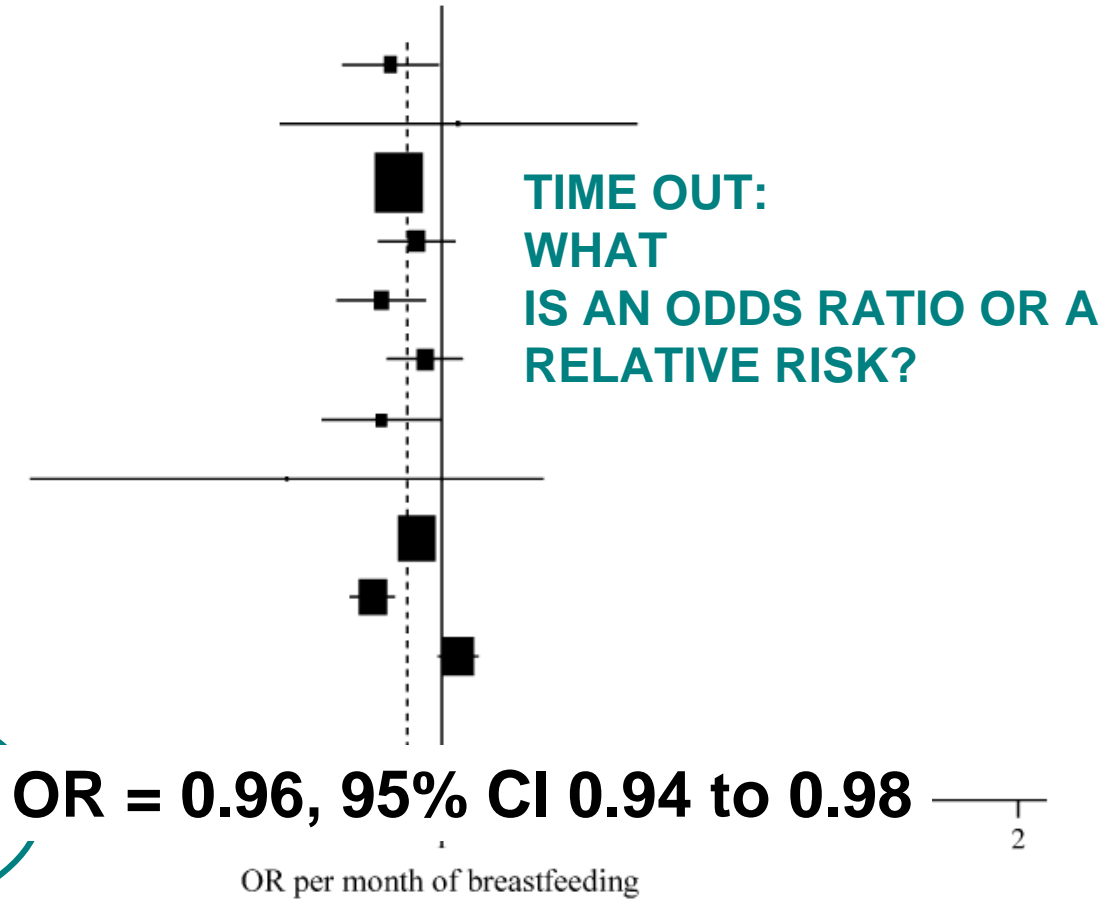
Mokdad AH, et al. *J Am Med Assoc* 2000;284:13.  
Statistics Canada. *Health Indicators*, May, 2002.



# Harder et al. 2005

Czajka-Narins and Jung (19)	0.94 (0.89, 1.0)
Dubois et al. (20)	1.02 (0.82, 1.26)
Gillman et al. (21)	0.95 (0.94, 0.97)
Hediger et al. (22)	0.97 (0.93, 1.02)
Langnäse et al. (23)	0.93 (0.88, 0.98)
O'Callaghan et al. (25)	0.98 (0.94, 1.03)
Richter (28)	0.93 (0.87, 1.0)
Thorogood et al. (29)	0.83 (0.61, 1.13)
Toschke et al. (30)	0.97 (0.95, 0.99)
Von Kries et al. (31)	0.92 (0.90, 0.95)
Wadsworth et al. (32)	1.02 (1.0, 1.05)

Combined 0.96 (0.94, 0.98)



**FIGURE 2.** Odds ratios (with corresponding 95% confidence intervals in parentheses) for overweight, per month of breastfeeding. Studies are ordered alphabetically by first author. The pooled or “combined” odds ratio (OR) was calculated by a random-effects model.

# Individual versus population risk

- Relative Risk and Odds Ratios
  - Talks about individual risk
  - Need to think at a **POPULATION PUBLIC HEALTH** level
  - **Even a small benefit/risk can become a large population effect when a very large number of people are “exposed” (Rose Theorem)**
- Meta-analyses: Odds Ratios (OR) of obesity
  - .93 (Owen et al. 2005)
  - .78 (Arenz et al. 2004)
  - .94 for each 3.7 month increment of additional breastfeeding (Gillman et al. 2006)
  - .96 for each month of additional breastfeeding (Harder 2005)



# Population Attributable Risk (Etiologic Fraction)

- Focuses on entire population, and benefits of an intervention to the entire community
- What **proportion of the disease** experience in the **WHOLE population** is attributable to a particular exposure?
  - Depends upon how much of the population is exposed to the risk factor
  - *Can be thought of as exposed to a benefit, with a beneficial effect on risk of disease (OR less than 1); or exposed to a disease, with a detrimental effect on risk of disease (OR greater than 1)*



# Population Attributable Risk (Etiologic Fraction)

$$PAR = [P(RR-1)] / [P(RR-1)+1]$$

Assume 70% of children are breastfed for a month.

Assume small RR of .96. So let's flip that to 30% NOT breastfed, RR of 1.042.

$$PAR = [.3(.042)] / [.3(.042)+1] = .0126 / 1.0126 = .012$$

So 1% of obesity is attributable to NOT being breastfed in this population (and this is only 1 month of breastfeeding as the “protection”).



# Population Attributable Risk (Etiologic Fraction)

$$PAR = [P(RR-1)] / [P(RR-1)+1]$$

California breast cancer rates for women:  
... out of the 13,000 cancers, 1400  
attributable to **never breastfeeding**



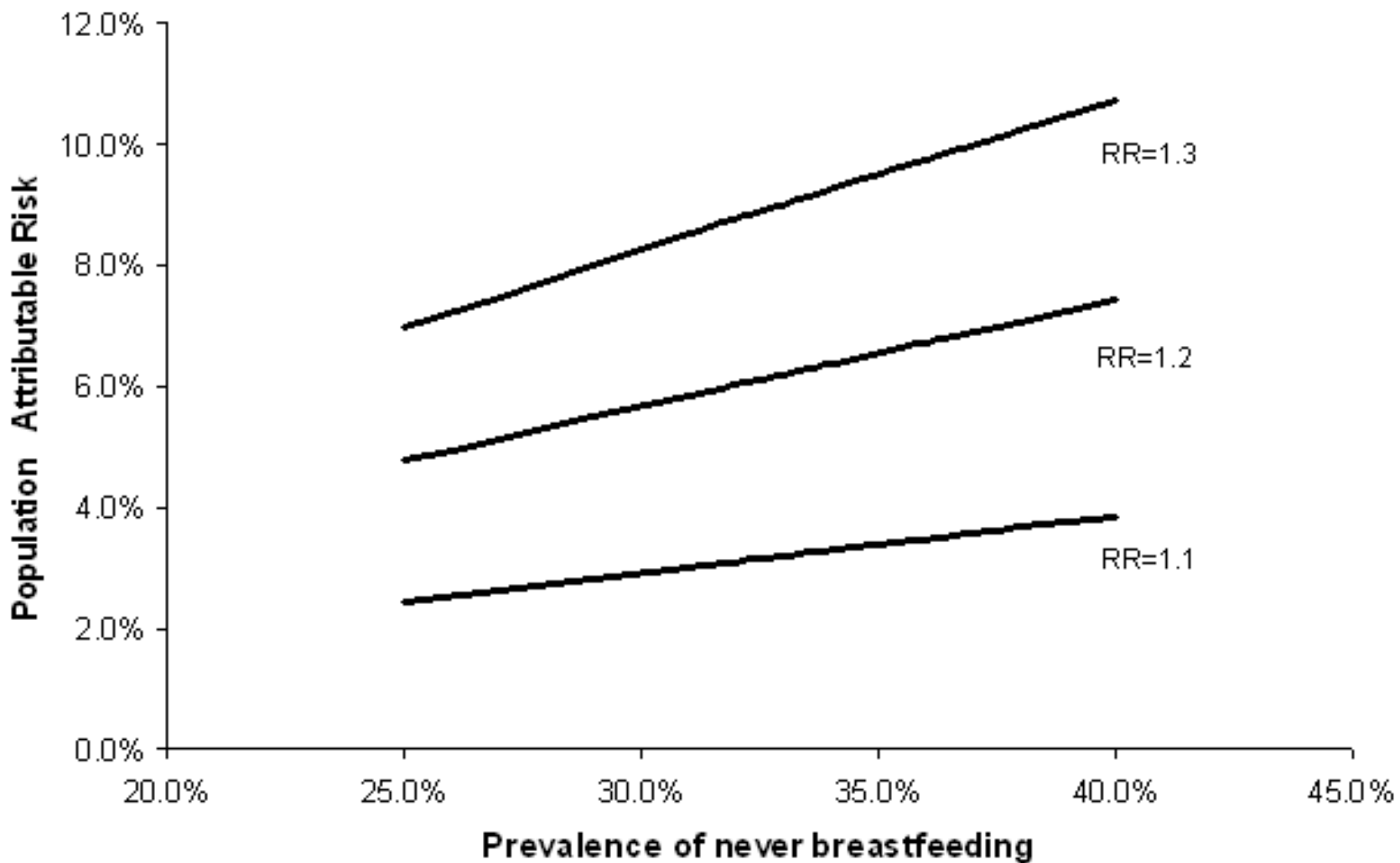


Figure 4: Population attributable risk of breast cancer associated with not breast feeding (compared to breastfeeding for 31 months or more over a lifetime) for various levels of population prevalence and relative risk.

from: Clarke CA, Purdie DM, Glaser SL. Population attributable risk of breast cancer in white women associated with immediately modifiable risk factors. *BMC Cancer* 2006, 6:170

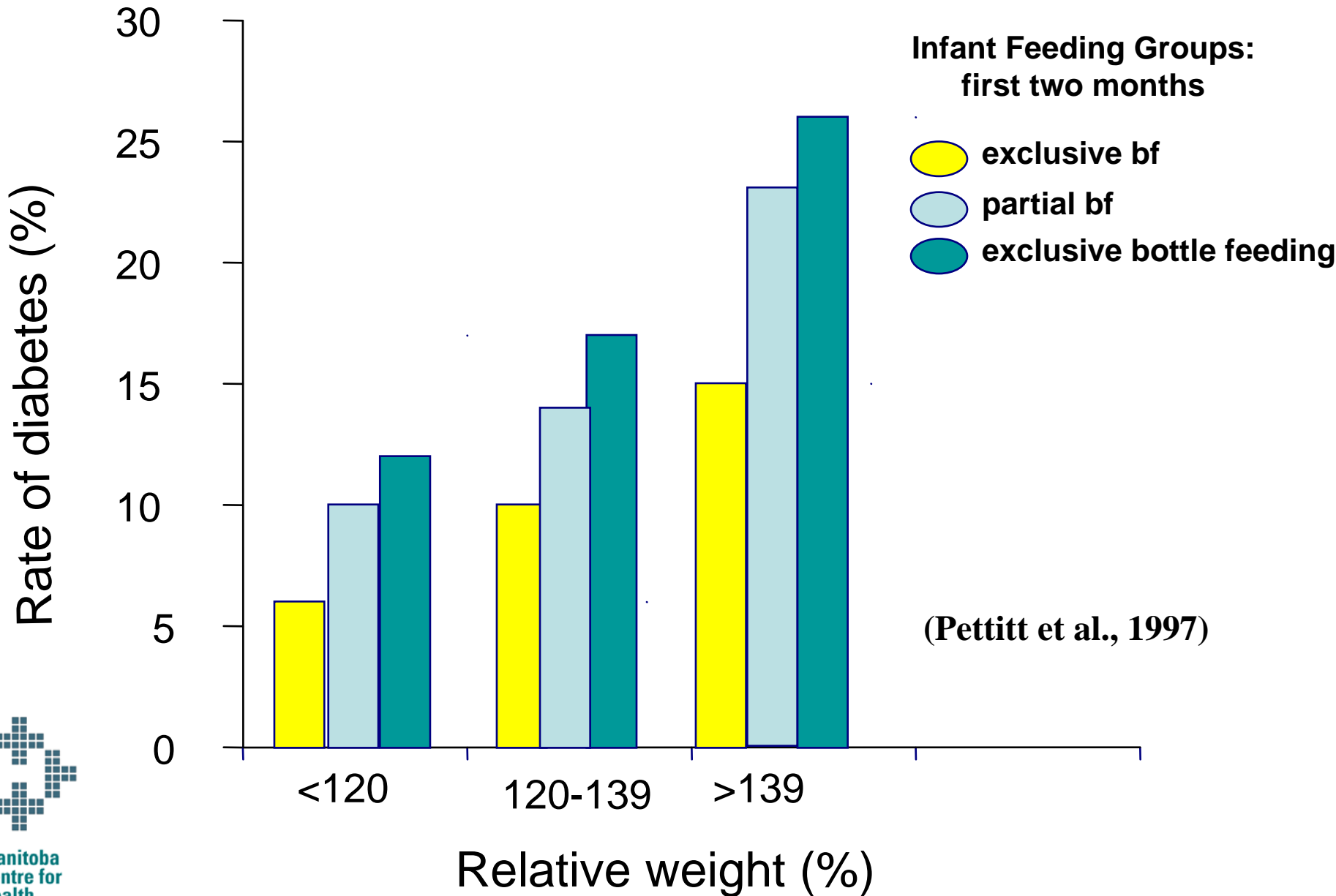


# Linking breastfeeding and Type 2 diabetes

- Prospective study of Pima First Nations
  - Pettitt et al. 1997; Pettitt and Knowler 1998
- Case-control study of Manitoba First Nations adolescents
  - Young, Martens et al. 2002
- Other studies
  - Kjos et al. 1993; Stuebe et al. 2005
- Review
  - Taylor 2005
  - Breastfeeding may lower both the maternal and child rates of type 2 diabetes

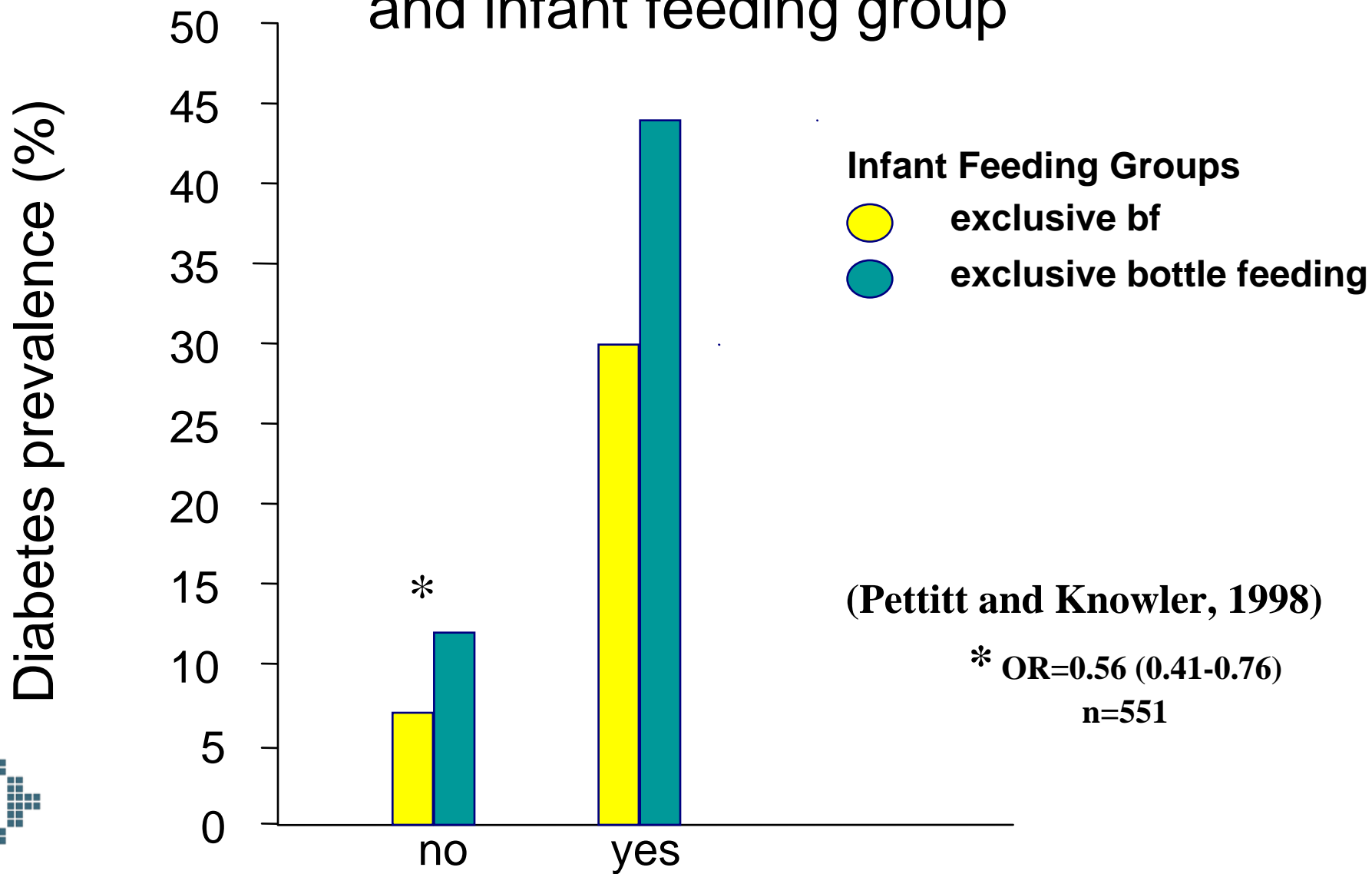


# Rate of Type 2 diabetes by infant feeding group



(Pettitt et al., 1997)

# Rate of Type 2 diabetes by maternal diabetes and infant feeding group



Maternal diabetes during pregnancy



# Type 2 Diabetes Mellitus in Children: Prenatal and Early Infancy Risk Factors among Native Canadians (Young, Martens, et al. 2002)

- pre-existing maternal diabetes
  - » OR 14.4, 95% CI 2.86-72.5
- maternal gestational diabetes
  - » OR 4.40, 95% CI 1.38-14.1
- breastfeeding
  - » 12 months or longer: OR 0.24, 95% CI 0.07-0.84
  - » 6 months or longer: OR 0.36, 95% CI 0.13-0.99



# Looking at the mother: Stuebe et al. 2005

- Nurses' Health Study
  - For those reporting a birth in the past 15 years (young and middle-aged women)
  - Hazard Ratio = 0.85 (95% CI 0.73-0.99) in study 1, 0.86 (0.79-0.93) in study 2, for each additional year of breastfeeding
  - Larger effect for each year of **exclusive** breastfeeding
  - Controlled for confounding effects such as diet, exercise, smoking
  - Benefits begin after 6 months of breastfeeding
- Longer duration of breastfeeding associated with lower incidence of type 2 diabetes in women (may improve glucose homeostasis)



# Kjos et al. 1993

- Effect of lactation on glucose metabolism
  - n=809 Latina women with gestational diabetes, 4-12 weeks breastfeeding vs. bottlefeeding
  - breastfeeding reduced the risk of diabetes ( $\pm$  SD)
    - Mean fasting glucose:  $93 \pm 13$  vs.  $98 \pm 17$  mg/dL,  $p < .0001$ 
      - 1/3 SD shift
    - mean two hour glucose levels:  $124 \pm 41$  versus  $134 \pm 49$  mg/dL,  $p < .01$ )
      - 1/4 SD shift
    - diabetes at half the rate (4.2% versus 9.4%,  $p < .01$ ), controlling for BMI, age and insulin use during pregnancy

**TIME OUT - What is  $P < .0001$ ,  $P < .01$ ,  $p < .05$**





# Population Attributable Risk (Etiologic Fraction)

- As to Type 2 diabetes, what is the risk to the whole population of not breastfeeding?
  - Depends upon how much of the population is not breastfed
- RR = somewhere around 2 (ie, twice as likely to get Type 2 diabetes if not breastfed)
  - Exposed to a detriment (not being breastfed), with a risk of disease (type 2 diabetes), i.e., greater than 1



# Population Attributable Risk (PAR)

RR = 2, ie, non-breastfed people are at 2 times the risk for Type 2 diabetes

Prevalence of breastfeeding	Prevalence of artificial baby milk feeding (bottlefeeding)	PAR Population attributable risk of Type 2 diabetes due to NOT being breastfed
90%	10%	9%
80%	20%	17%
70%	30%	23%
60%	40%	29%
50%	50%	33%
40%	60%	38%
30%	70%	41%



# Important message #3

- Even a small OR or RR, if it involves a huge proportion of the population (for example, all newborns), can have a BIG effect on “population attributable risk” of a disease

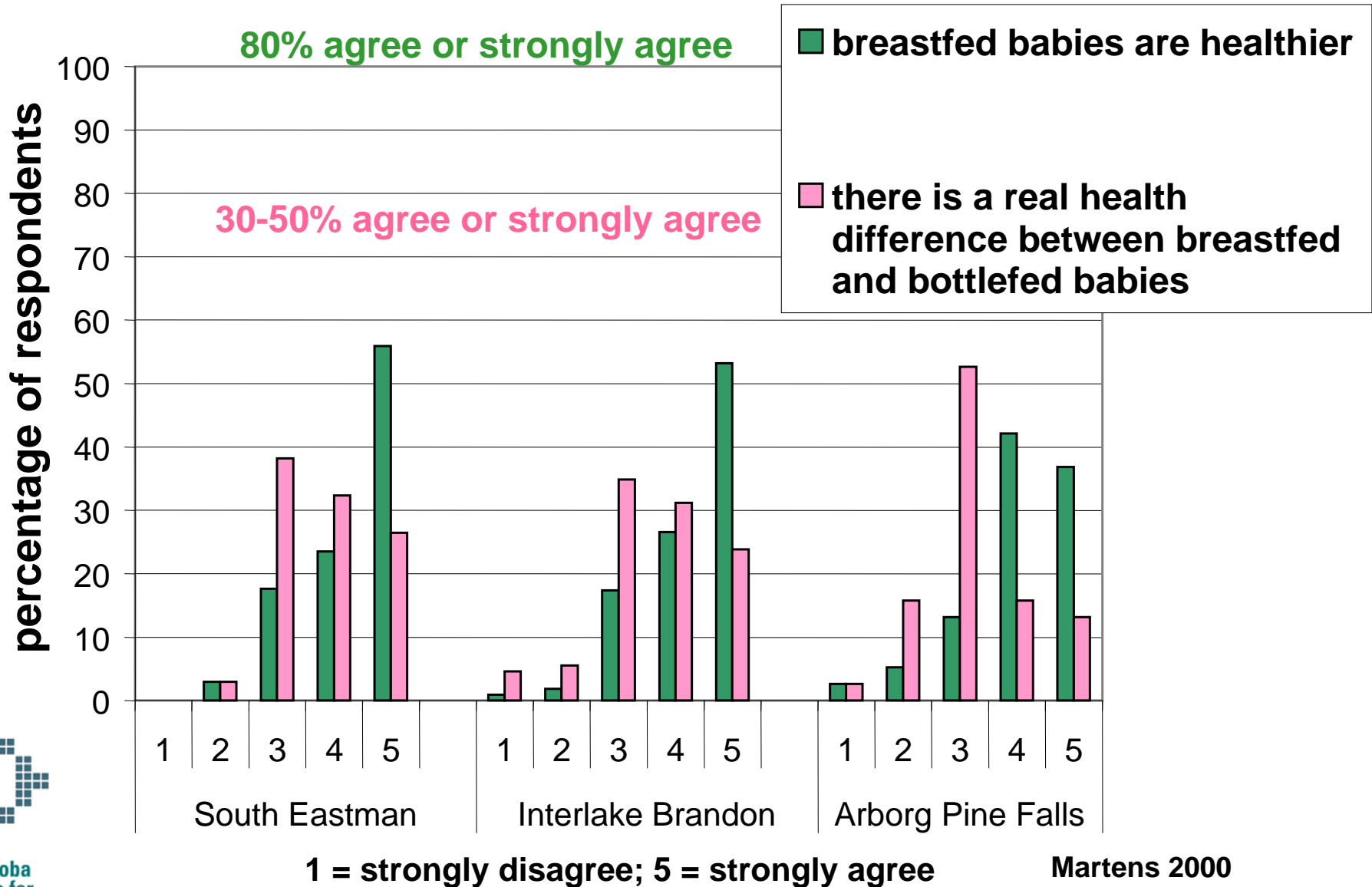


# Attitude change is hard

- My own research on nurses' attitudes
  - Martens 2000
- Public attitudes research
  - Hannan et al. 2005
  - "... the American public seems to agree that breastfeeding is healthier but disagree that formula-fed babies are sick more often. Thus, a successful breastfeeding campaign needs not only to educate people about the health benefits of breastfeeding but also to increase the awareness of people about adverse consequences of not breastfeeding."
- Hmm, not so sure!
- Work on it, but don't wait for it!



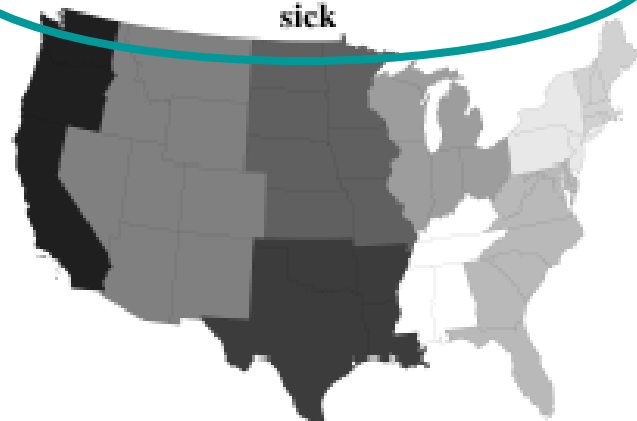
# Hospital Nurses' Attitudes: health benefits of breastfeeding



Martens 2000  
 Martens & Romphf 2003  
 Martens et al. 2003



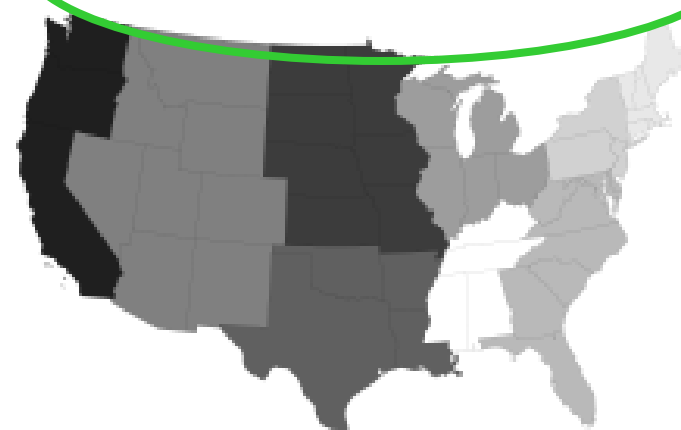
Feeding a baby formula instead of breast milk increases the chance the baby will get sick



Highest: 38% agree

Region	%	(SE)
Pacific	38.1	2.7
West S Central	24.9	3.0
West N Central	24.4	4.0
Mountain	23.8	3.7
East N Central	21.1	2.5
South Atlantic	20.8	2.5
New England	19.7	4.3
Mid Atlantic	18.6	2.5
East S Central	13.7	3.0

Breastfeeding is healthier for babies than formula feeding



Highest: 75% agree

Region	%	(SE)
Pacific	75.1	2.4
West N Central	72.4	3.5
West S Central	70.0	4.5
Mountain	69.7	3.8
East N Central	69.2	2.6
South Atlantic	67.9	2.6
Mid Atlantic	62.2	3.0
New England	55.5	4.9
East S Central	55.3	4.5

(The shading scheme of the maps is based on the percentage agreement with each statement)

**Figure 1.** Breastfeeding knowledge.

The shading scheme of the maps is based on the percentage agreement with each statement.

Hannan et al.  
JHL 2005;21(3):284



# Why anti-smoking ads don't work

- Canadian Tobacco Control Research Initiative
  - Neuroscience and marketing
  - MRI scans of the brain
    - “few images elicited a negative reaction, and smokers in the group were untroubled by even the most disgusting ones, possibly due to a combination of habituation and denial”
    - “the few anti-smoking messages that had an effect on volunteers were shown to activate brain regions linked to feelings of aversion (ads should show that smoking makes you poor, or if you smoke you'll get ugly)”

- Be careful of how we “advertise” breastfeeding

# Systems change:

“If you build it, they will come”

- Policy interventions  
(upstream, midstream)
- Make the healthy choice the easy choice
  - BFHI
  - Maternity leave
  - Essential documents
    - Growth charts
    - Food Guides

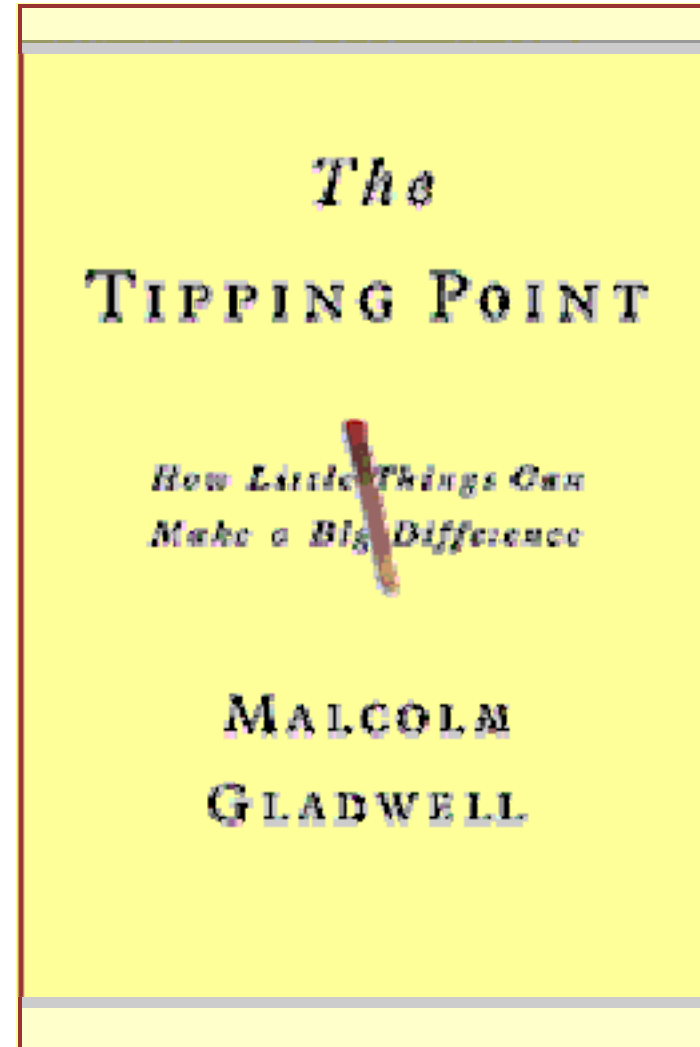




# Change can happen quickly: WHO and UNICEF ... thank you!!

## The Tipping Point

- Ideas must be “sticky”
- Ideas require information mavens, connectors and salespersons

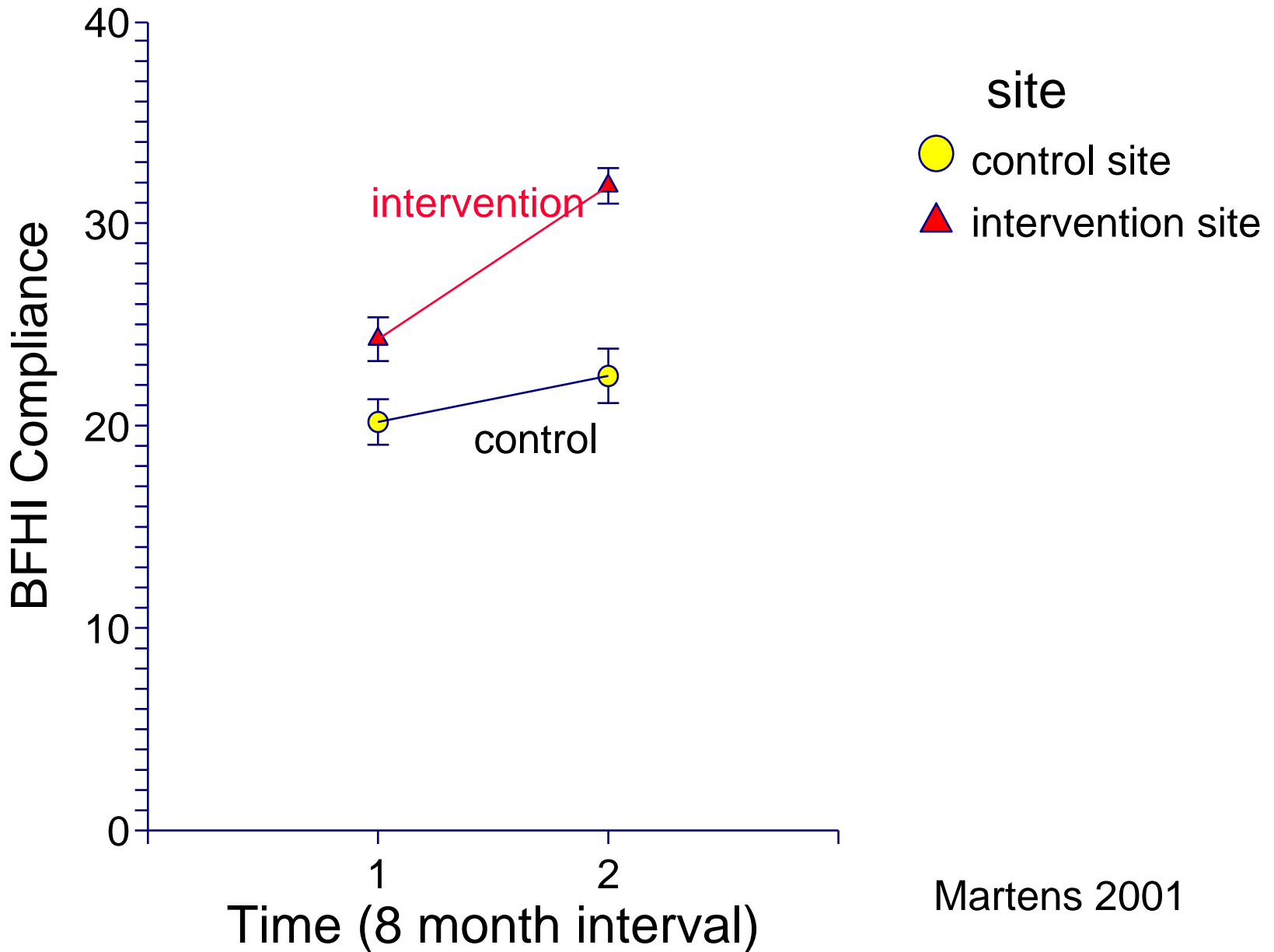


# Baby Friendly Hospital Initiative: definitely UPSTREAM!

- Kramer et al. 2001
  - PROBIT study in Belarus
  - 19.7% vs. 11.4% still breastfeeding at 1 year (OR = .47, 95% CI 0.32-0.69)
  - 43.3% versus 6.4% exclusively breastfeeding at 3 months
- Grizzard et al. 2006
  - Levels of implementation of Ten Steps in Massachusetts hospitals
    - Acceptance of free formula, and no control over pacifier use was associated with lower levels of implementation of Ten Steps



# Hospital BFHI Compliance Scores



Martens 2001

# Positive changes in hospitals

## † Step 1:

- Have a written breastfeeding **policy** that is routinely communicated to all health care staff (40% to 87%)

## † Step 6:

- Give newborn infants **no food or drink** other than breastmilk, unless medically indicated (rare/never: 45% to 87%)

## † Step 9:

- Give **no artificial teats or pacifiers** to breastfeeding infants (advise avoidance of bottles always/most of the time: 30% to 67%)

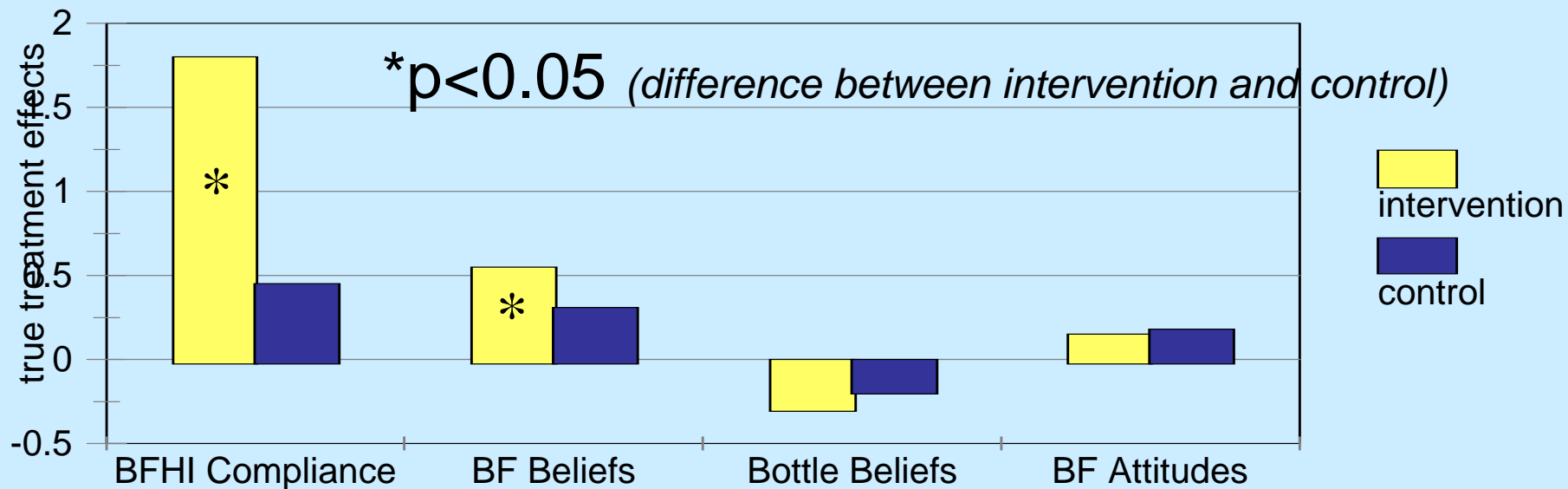
## † Step 10:

- Foster the establishment of **breastfeeding support groups** and refer mothers to them on discharge from the hospital (45% to 67%)



# Hospital Intervention Effects

true treatment effects of survey



**Also: more exclusively breastfed babies at intervention site**  
**Intervention site: 30% to 55% ( $p < .05$ ) pre- to post-intervention**



INFACT  
Canada



IBFAN  
North  
America

Infant Feeding Action Coalition, 6 Trinity Square

Toronto, ON M5G 1B1 tel: (416) 595-9819 fax: (416) 591-9355

**Newsletter**  
**Fall 2005**

# Maternity benefits and breastfeeding

*Providing structural support for breastfeeding is good for all*

Canada's maternity benefits for mothers returning to the workplace rank among the best in the world. We share this honoured position with countries such as Sweden and Norway, long known for

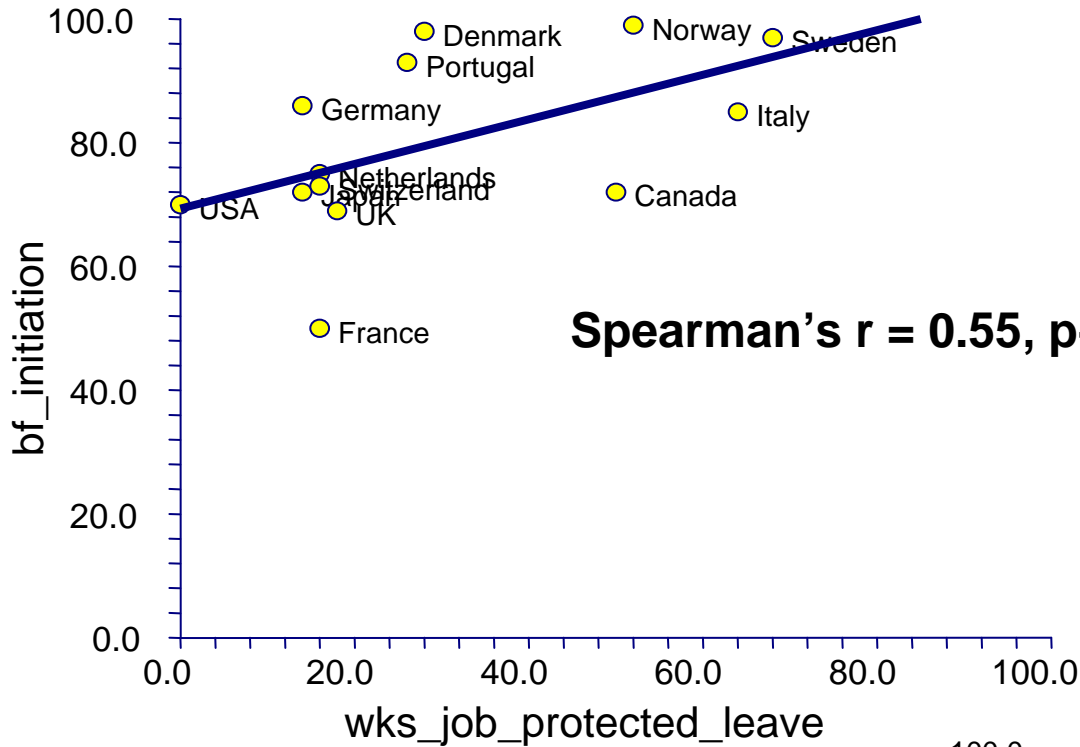
feeding to expand eligibility to include self-employed new mothers. This important step can be seen as a precedent for other provinces to plug the loopholes and improve eligibility to these important supports.

Current status requires mothers to negotiate their lactation needs with their employer. The right to a workplace negotiated arrangement to continue lactation was an important legal precedent won in 1997 by Michelle Poirier

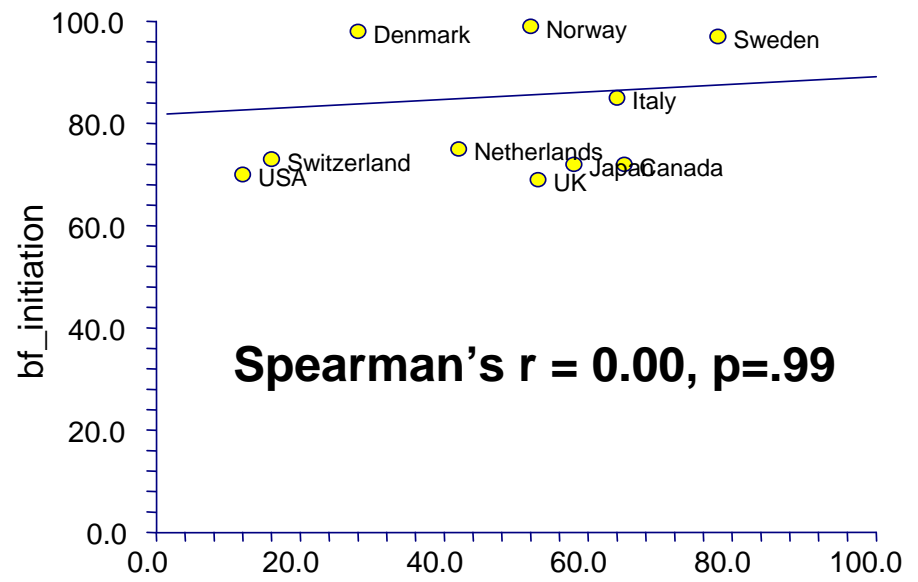
## Weeks of maternity and parental leave in some European countries, Canada, the US and Japan<sup>1</sup>

Country	Weeks of job-protected leave	Weeks of other leave
Canada	50	15
Denmark	28	0
France	16	146
Germany	14	148
Italy	64	0
Japan	14	44
Netherlands	16	26
Norway	52	0
Portugal	26	104
Sweden	68	10
Switzerland	16	0
UK	18	35
US	0	12

# Weeks job-protected leave vs bf initiation



# Total weeks versus bf initiation rates







WIKIPEDIA  
The Free Encyclopedia

Sign in / create account

article discussion edit this page history

You can give the gift of knowledge by donating to Wikipedia!



Tax-deductibility of donations - Daily report

# Wikipedia

## Breastfeeding

From Wikipedia, the free encyclopedia.

navigation

- Main Page
- Community Portal
- Current events
- Recent changes
- Random article
- Help
- Contact us
- Donations

search

Search input field with Go and Search buttons

toolbox

- What links here
- Related changes
- Upload file
- Special pages
- Printable version
- Permanent link
- Cite this article

in other languages

- Dansk
- Deutsch
- Español

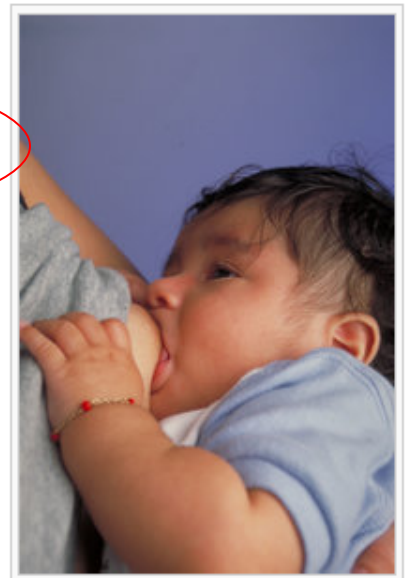
**Breastfeeding** is when a woman feeds an **infant** or young child with **milk** produced from her **breasts**, usually ~~directly from the nipples~~. Babies have a **sucking urge** that usually ~~enables them~~ to take in the milk, provided there is a good latch, a detached phrenulum, and a milk supply.

Breast milk has been shown to be best for feeding a child if the mother does not have any transmissible infections. Nevertheless, some mothers do not breastfeed their children, either for personal or medical reasons. Some diseases, such as **HIV** and **HTLV-1**, which are transmitted through bodily fluids, ~~can be passed through the breast milk, and may therefore preclude~~ breastfeeding in these cases. Some medicines may also transfer through breast milk. However, most medicines are transferred in very small amounts and are considered safe to take during breastfeeding. Therefore most women are not precluded from breastfeeding, and doctors and governments are keen to ~~promote the practice~~. Nevertheless, many medications are still required by law to be labeled as not safe when breastfeeding.

Many governmental strategies and international initiatives have promoted breastfeeding as the best method of feeding a child in its first year. So does the **World Health Organization (WHO)** [1] and the **American Academy of Pediatrics (AAP)** [2] and many others.

### Contents [hide]

- 1 Beginning lactation
- 2 The let-down reflex
- 3 Benefits
  - 3.1 Benefits for the infant
  - 3.2 Benefits for the mother
  - 3.3 Bonding



A breastfeeding infant

# A YEAR AGO (summer 2006)



WIKIPEDIA The Free Encyclopedia

article discussion edit this page history

Your continued donations keep Wikipedia running!

# Breastfeeding

From Wikipedia, the free encyclopedia

**Breastfeeding** is the feeding of an **infant** or young **child** with **milk** from a woman's **breasts**. Babies have a **sucking reflex** that enables them to suck and swallow milk.

Experimental evidence suggests that, **with few exceptions**, human **breast milk** is the best source of **nourishment** for human infants.<sup>[1]</sup> Experts still disagree about how long breastfeeding should continue to gain the most benefit, and how much extra risk is involved in using **breast milk** substitutes.<sup>[2][3][4]</sup>

An infant may be breastfed by its own mother or by another lactating female, a **wet nurse**. Breast milk may be **expressed** and fed to a baby through a bottle, and **pasteurized** donor human milk may also be used. Breast milk substitutes are available for mothers or families who cannot or prefer not to breastfeed their children. While there are conflicting studies about the relative value of breast milk substitutes, the use of commercial **infant formulas** is acknowledged to be inferior to breastfeeding for both full term and **premature** infants.<sup>[5]</sup> In many countries, artificial feeding is associated with a greater mortality from **diarrhoea in infants**<sup>[6]</sup> but where there is clean water, many consider artificial feeding to be acceptable.<sup>[3]</sup>

Governmental strategies and international initiatives promote breastfeeding as the best method of feeding infants in their first year and beyond. The **World Health Organization** (WHO) and the **American Academy of Pediatrics** (AAP) also promote breastfeeding.<sup>[7][8]</sup>



An infant breastfeeding

**Contents** [hide]

- 1 Lactation
  - 1.1 Hormonal influences
    - 1.1.1 Lactogenesis I
    - 1.1.2 Lactogenesis II
    - 1.1.3 Lactogenesis III

## A YEAR LATER (summer 2007)



- navigation
- Main page
  - Contents
  - Featured content
  - Current events
  - Random article

- interaction
- About Wikipedia
  - Community portal
  - Recent changes
  - File upload wizard
  - Contact Wikipedia
  - Make a donation
  - Help

search

Go Search

- toolbox
- What links here
  - Related changes
  - Upload file
  - Special pages
  - Printable version

# The Toronto Star editorial: Facebook “loses face”

Sep 16, 2007

**Facebook, the social networking website, unfairly stigmatized nursing mothers when it deleted pictures of breastfeeding babies, calling them "obscene content." It also closed the account of an Edmonton mother after she asked for a clarification of its policy on obscenity.**

**That led to a groundswell of protest from around the world and a new Facebook group called "Hey Facebook, breastfeeding is not obscene!" Its membership swelled to almost 15,000 in a few days, many posting their own nursing pictures.**

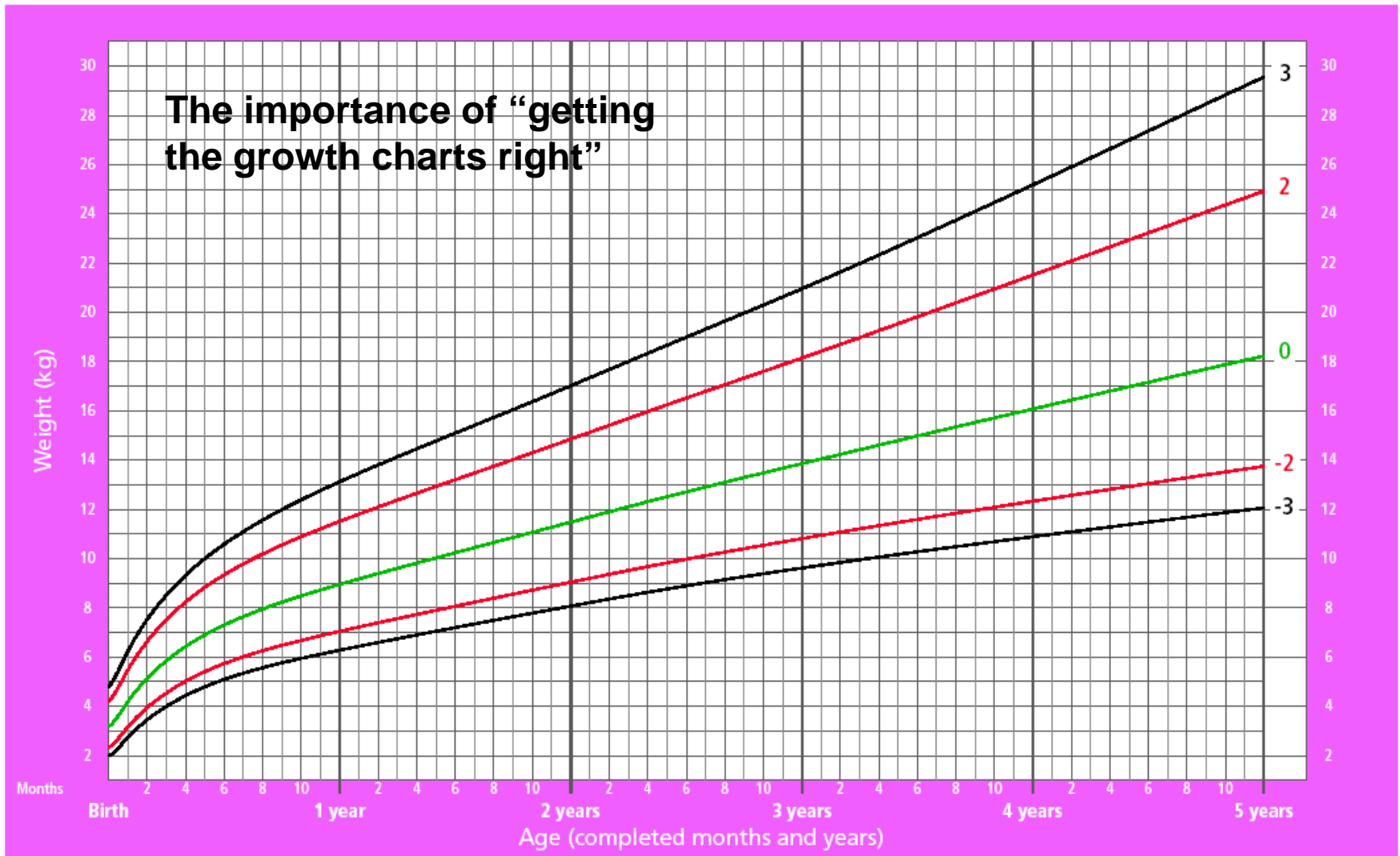
With Canadian physicians and the World Health Organization recommending breastfeeding up to two years of age, nursing mothers everywhere need to be encouraged. So it is good news that Toronto's public health department is calling on restaurants here to post decals, starting next year, that would indicate they are breastfeeding-friendly. The plan, which next week goes to the board of health for approval, would see decals and information pamphlets sent next spring to 6,100 restaurants as well as all city-run boards, commissions and agencies. While each business can decide for itself whether to take part in the voluntary program, customers should encourage them to do so.



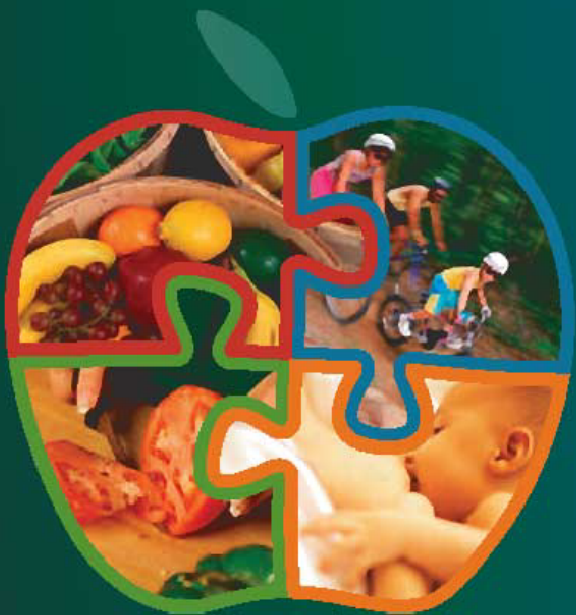
# Weight-for-age GIRLS



Birth to 5 years (z-scores)



# Food for health



Dietary guidelines for Australians **A guide to healthy eating**



Australian Government  
Department of Health and Ageing  
National Health and Medical Research Council

*Enjoy a wide variety of nutritious foods*



*Prevent excess weight gain*



*Prepare and store food safely*



*Encourage and support breastfeeding*



Manitoba  
Centre for  
Health  
Policy

[http://www.nhmrc.gov.au/publications/\\_files/n31.pdf](http://www.nhmrc.gov.au/publications/_files/n31.pdf)



# Encourage and support breastfeeding

Breast milk is the best and most natural food for infants. It is ideally suited to their needs. It not only provides nutrients for the baby but special growth factors and protection against infection and disease. The best start a baby can have is to be exclusively breast fed for the first six months of life.

## How does breastfeeding work?

Close contact between mother and baby immediately after birth helps to establish breastfeeding. The high protein milk produced immediately after birth is called colostrum. Breast milk changes over time. After a week or two the colostrum is gradually replaced by mature breast milk, which is higher in fat.

Breast milk also changes during a feed. Part of the benefit of breastfeeding is that babies can satisfy their thirst first and their hunger second from the one feed. The amount of fat in breast milk is low at the start of a feed and high at the end. Fast-growing babies, who need plenty of kilojoules, will stay on the breast a little longer to get the benefits of the rich milk available at the end of the feed.

It is important that breastfeeding women themselves have a good diet and that they limit their consumption of alcohol and stimulants such as caffeine.

## Why is breast milk so special?

Breast milk is uniquely suited to the needs of infants. It provides all the nutrients needed for the first six months of life and ensures no deficiencies occur. Breast milk provides protein, carbohydrates, fat, omega 6 and omega 3 fatty acids and all the vitamins and minerals a baby needs to grow and thrive.

The benefits of breast milk go beyond good nutrition. Breast milk:

- contains unique growth factors
- has anti-infective agents, which protect against diarrhoea
- protects against asthma and lung infections
- protects against eczema.

Breast milk has its greatest health benefits in the first three months of life. It is also hygienic, inexpensive, convenient and available on demand. Breastfeeding has benefits for the mother too, assisting in the recovery after childbirth and the return to normal body weight.



### dietary guidelines

Adults, children & adolescents

- ▶ Encourage and support breastfeeding.

# Dietary Guidelines for Children and Adolescents in Australia

## Encourage and support breastfeeding

### Children and adolescents need sufficient nutritious foods to grow and develop normally

- Growth should be checked regularly for young children
- Physical activity is important for all children and adolescents

## Enjoy a wide variety of nutritious foods

*Children and adolescents should be encouraged to:*

- Eat plenty of vegetables, legumes and fruits
- Eat plenty of cereals (including breads, rice, pasta and noodles), preferably wholegrain
- Include lean meat, fish, poultry and/or alternatives
- Include milks, yoghurts, cheese and/or alternatives. Reduced-fat milks are not suitable for young children under 2 years, because of their high energy needs, but reduced-fat varieties should be encouraged for older children and adolescents
- Choose water as a drink. Alcohol is not recommended for children

*and care should be taken to:*

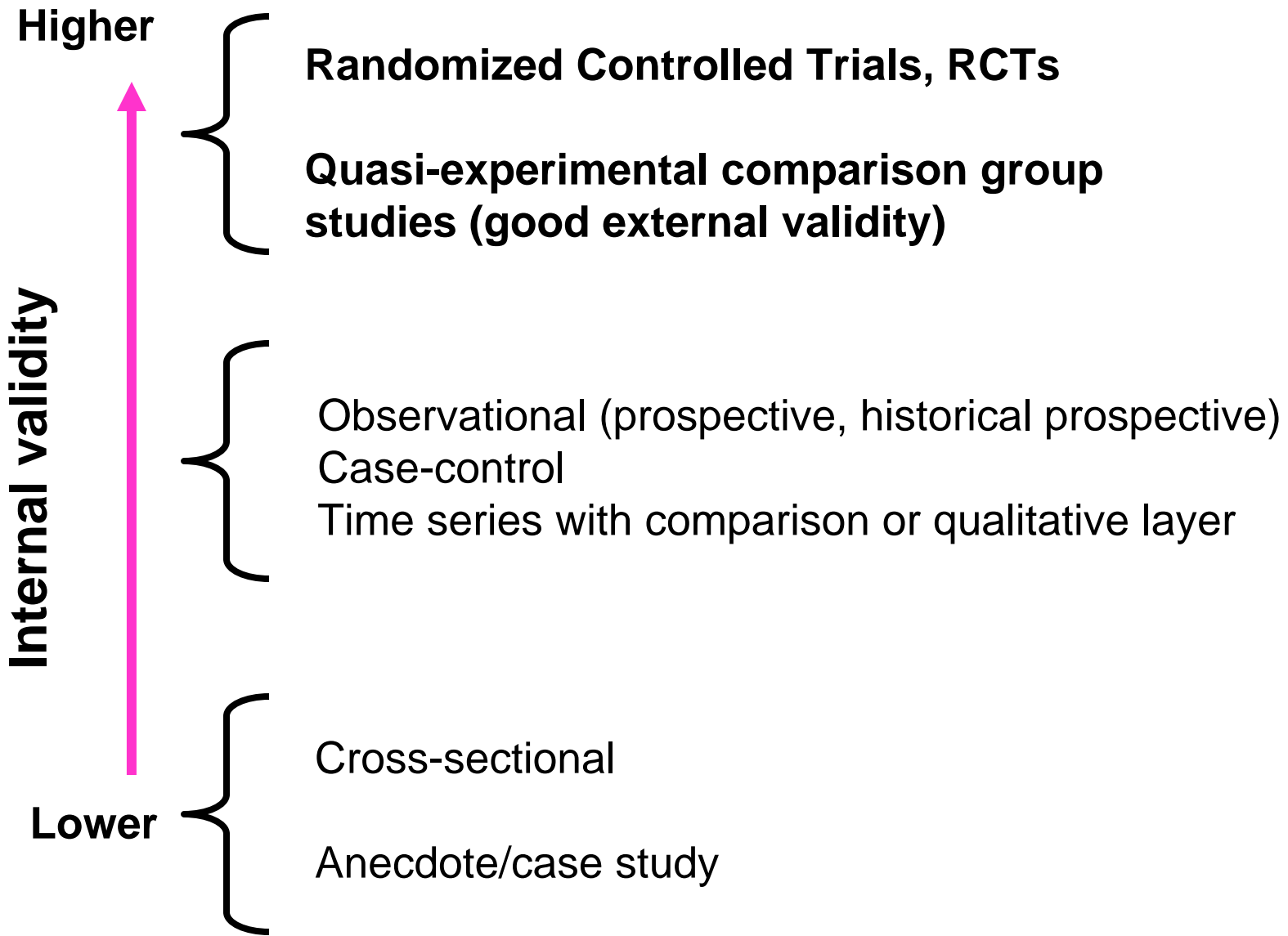
- Limit saturated fat and moderate total fat intake. Low-fat diets are not suitable for infants
- Choose foods low in salt
- Consume only moderate amounts of sugars and foods containing added sugars

## Care for your child's food: prepare and store it safely

# Important message #4

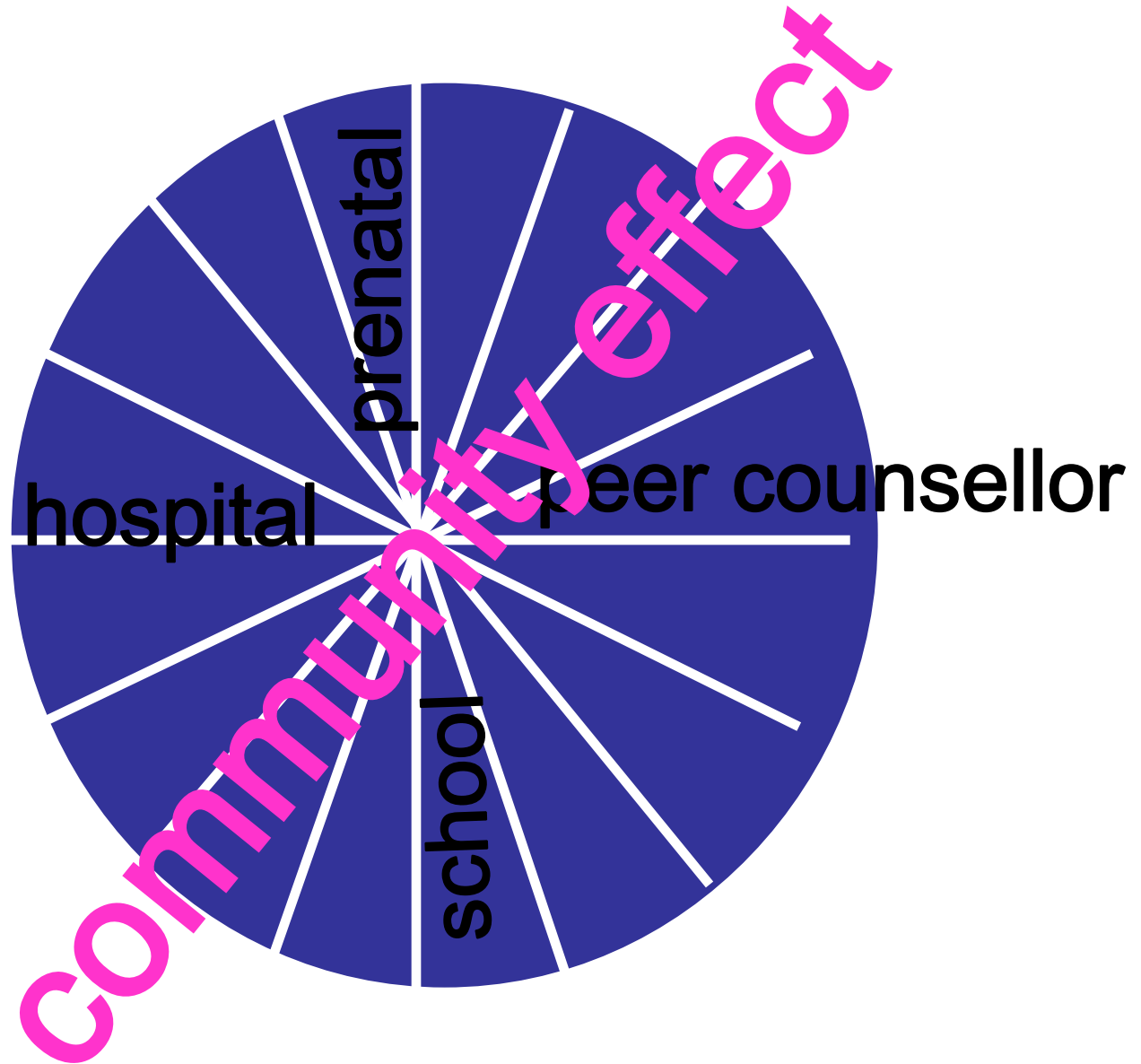
- Although downstream and midstream programs are also important ...
  - Upstream approaches are very important in shifting population behaviours for the **WHOLE** population (which is where the action is from a perspective of public health)







# *Coming Full Circle: Sagkeeng's story*



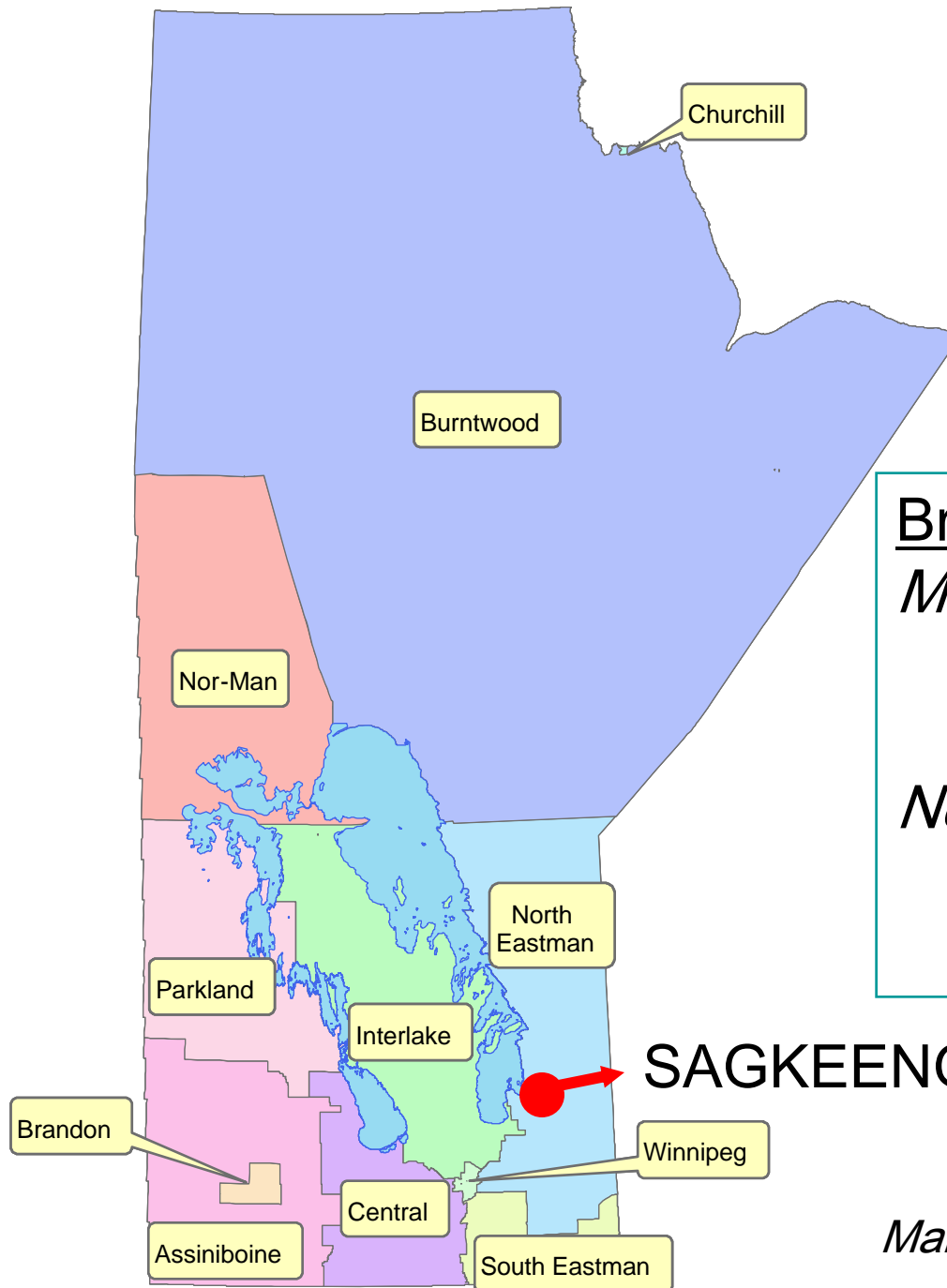
# Community Effect

Evaluate the population-based effects of multi-faceted community initiatives to promote breastfeeding

- 1993-1994 (prospective survey, semi-structured interviews)
- 1997: community chart audits 1992-1997 data, plus evaluation of better prenatal education and resources, pilot postpartum PC program, [adolescent education](#), [hospital policy](#)
- 2000-2002: community charts 1998 - 2000 data, plus qualitative contextual information from key informants
- 2002+: in the midst of a third study, community chart data plus semi-structured interviews



# Manitoba's 11 RHAs



## Breastfeeding initiation

### *Manitoba*

- First Nations 58%
- All others 82%

### *North Eastman*

- First Nations 44%
- All others 80%

**SAGKEENG**

*Martens et al 2001*



Video  
and  
Breastfeeding  
Booklet

1995/96

*So you  
want  
a healthy  
baby*

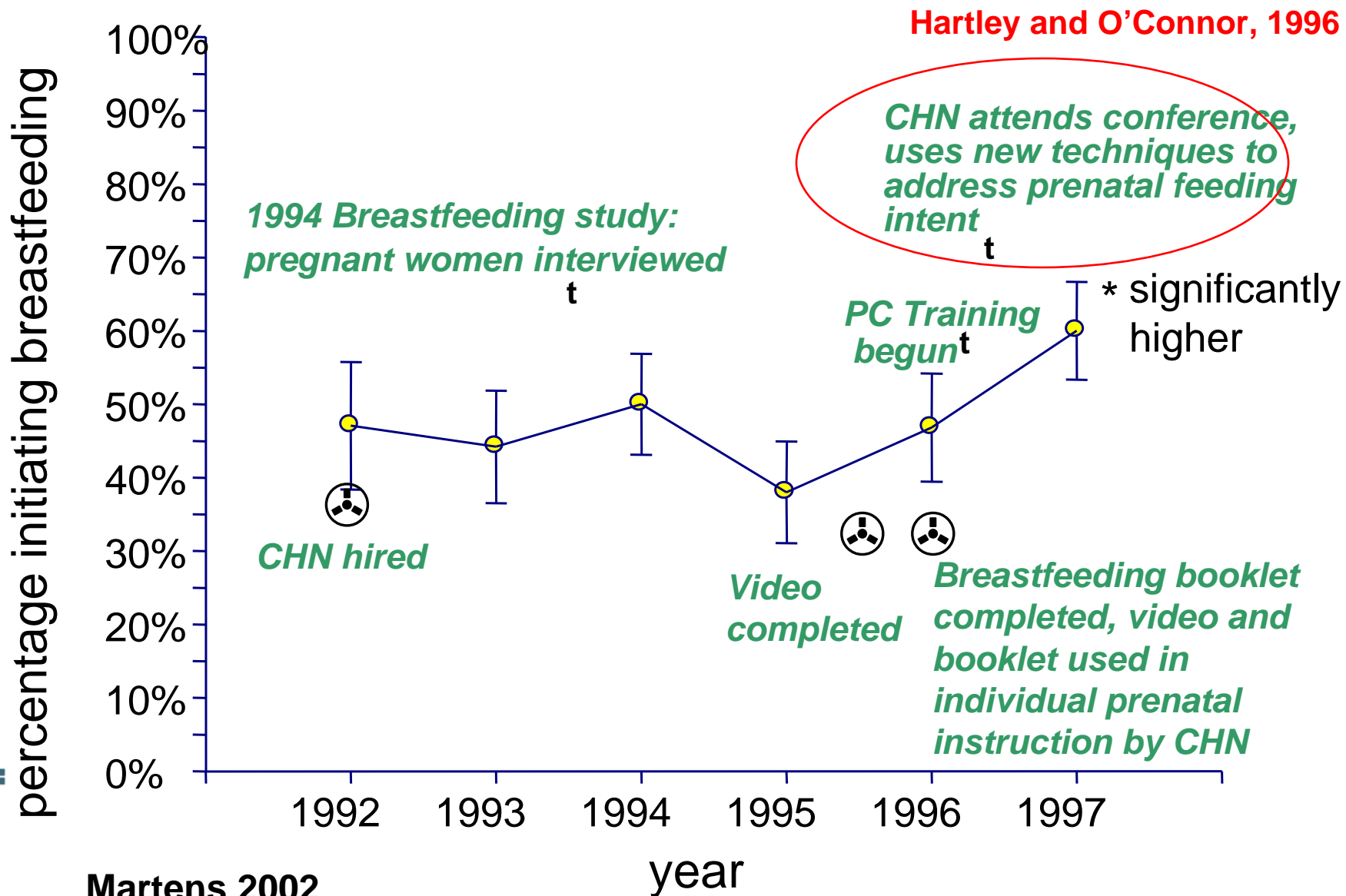
*So you  
want  
a healthy  
baby*

*Breastfeeding is a great choice  
for you and your baby*

*As long as we have children in our lives  
we'll always have meaning  
and purpose for living*



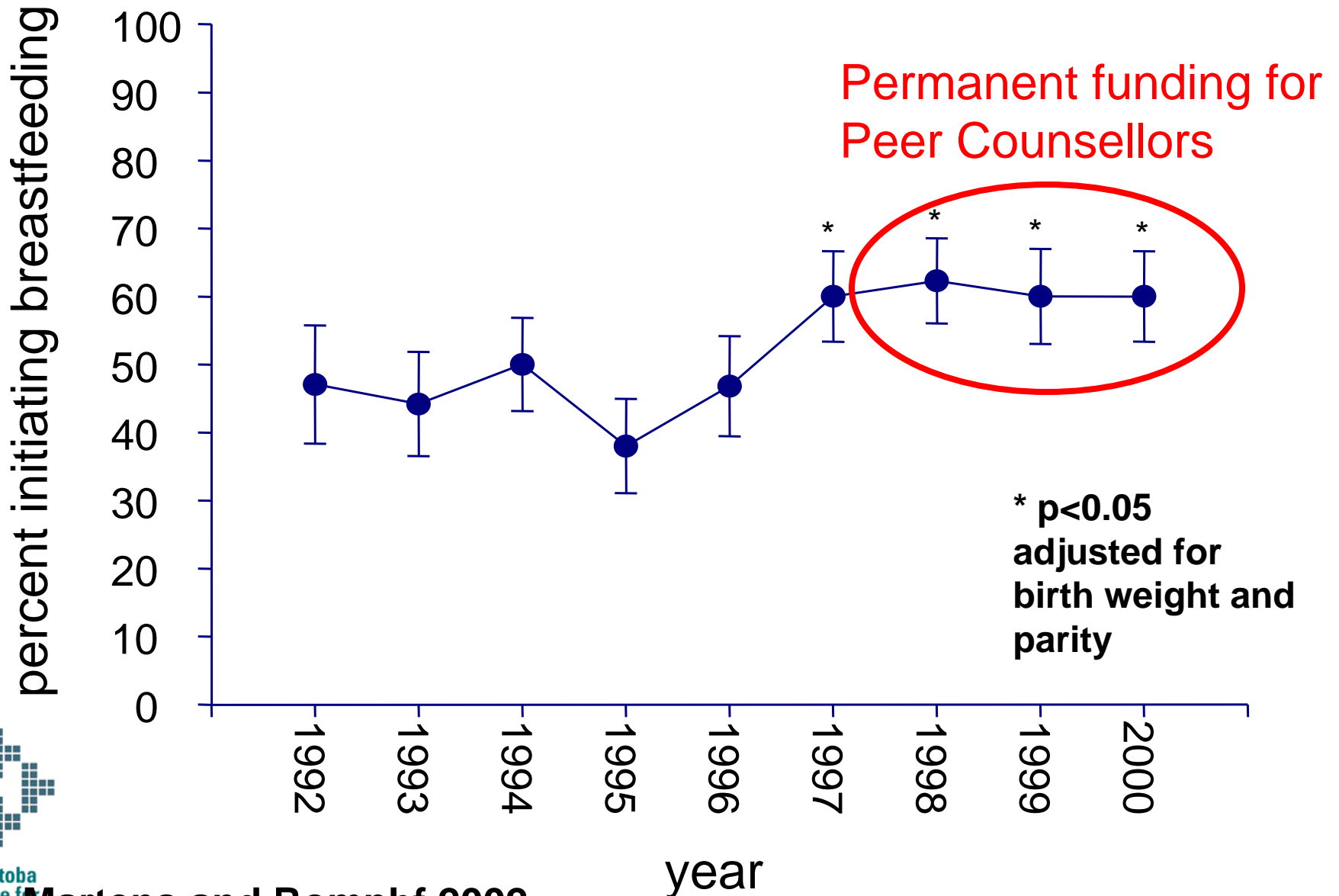
# Breastfeeding Initiation 1992-97



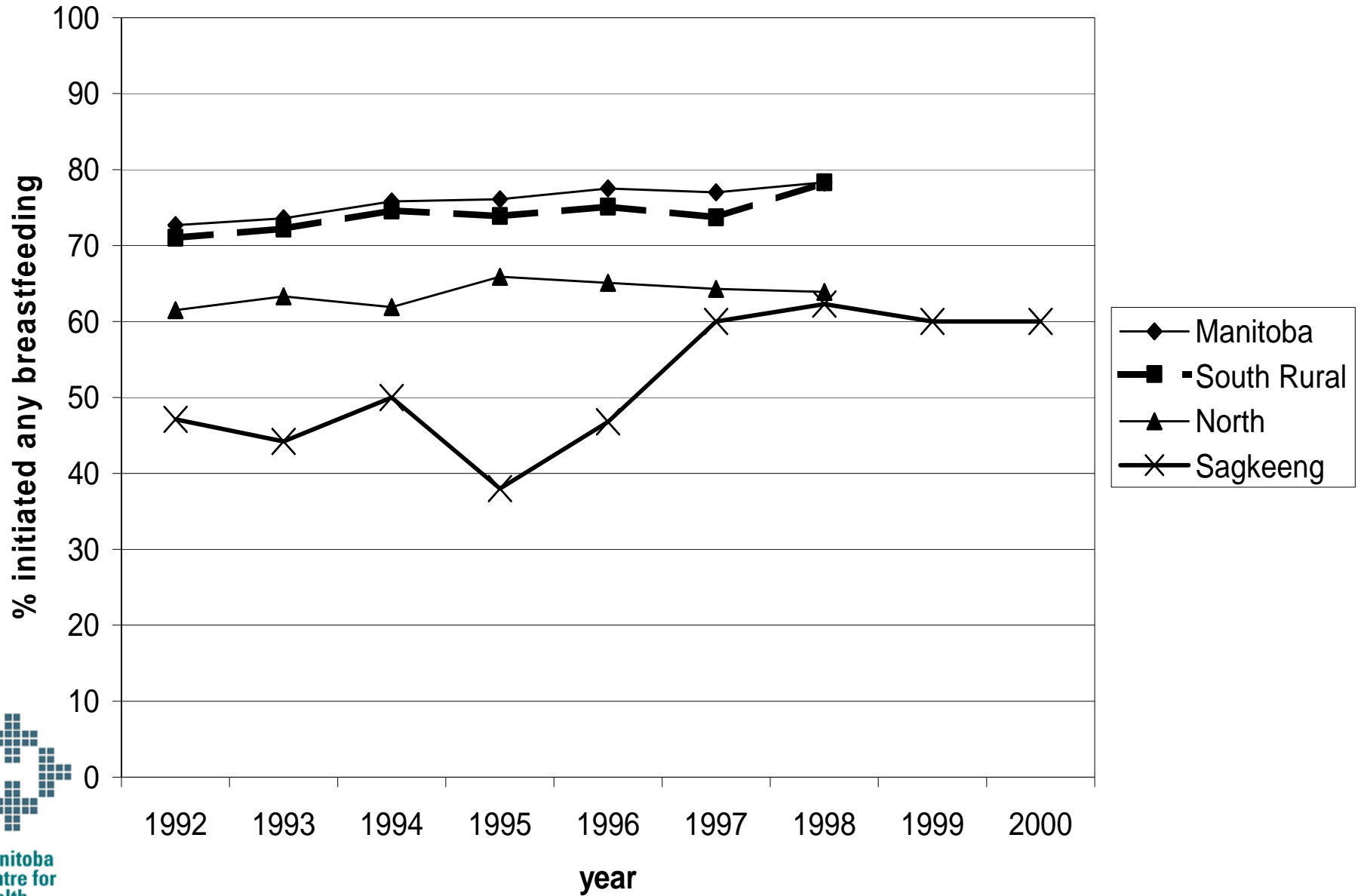
Martens 2002



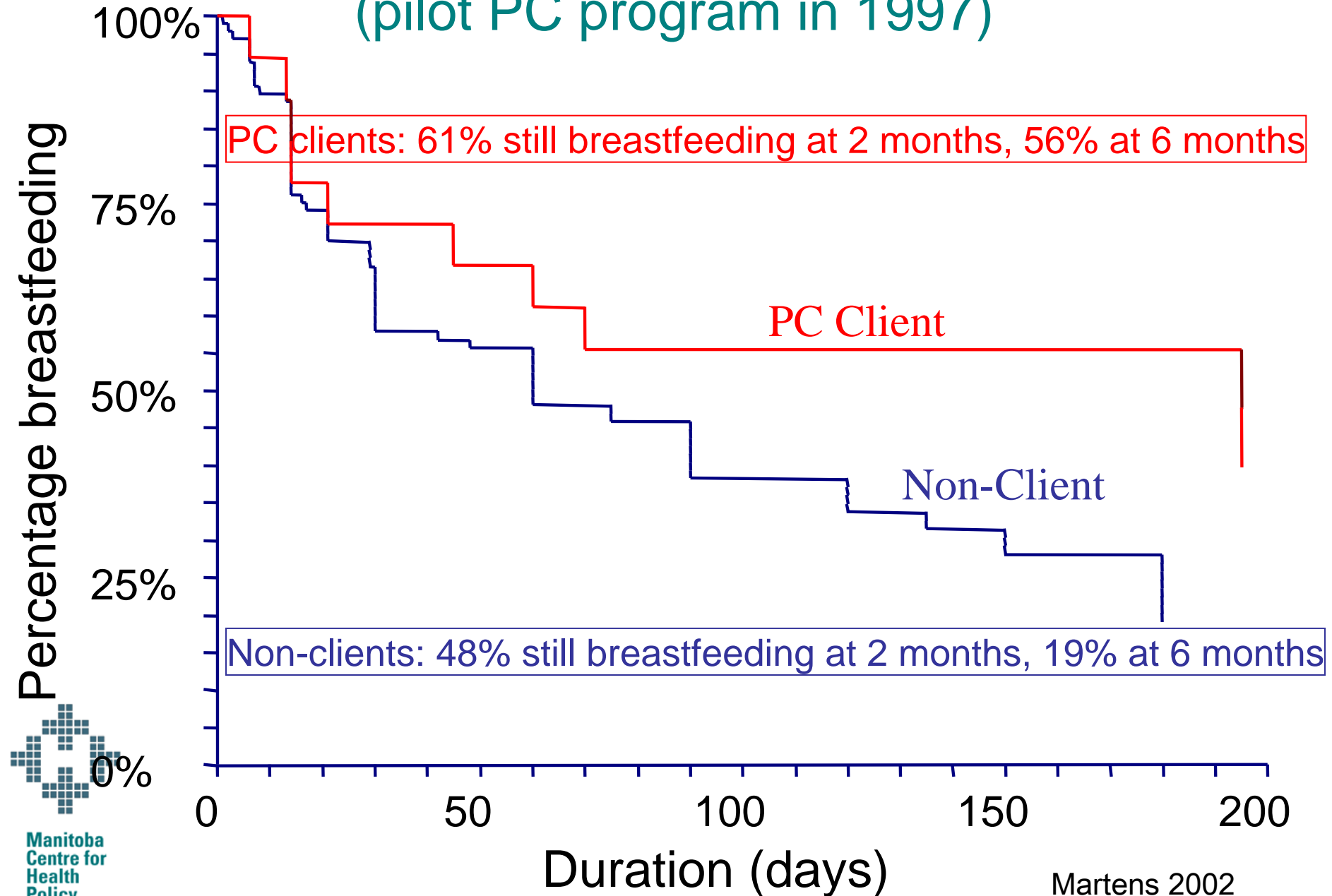
# Sagkeeng breastfeeding initiation rates 1992 to 2000



# Breastfeeding initiation rates by region of Manitoba, 1992-1998

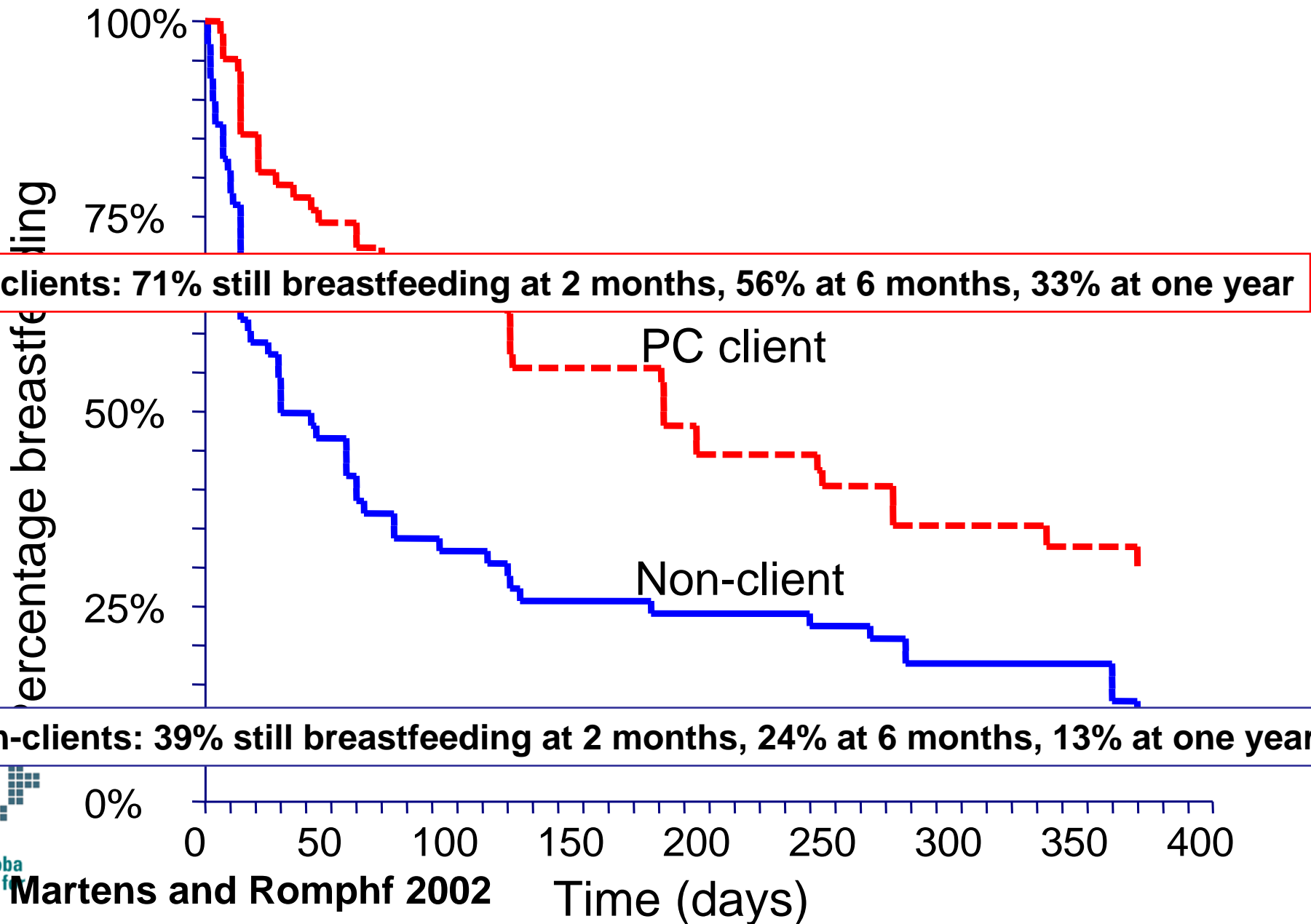


# Breastfeeding Duration by PC Program, 1992-1997 (pilot PC program in 1997)





# Breastfeeding duration by PC program 1997-2000



Dena & Zoe  
Henderson

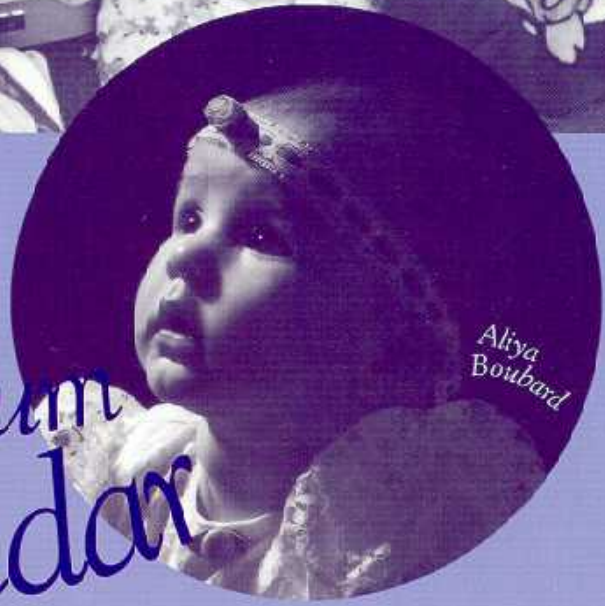
Wanda & Athena  
Alexander

Janice & Brenton  
Dorie

Tanya & Kevin  
McPherson

Celena & Destiny  
Guimond

Tammy & Payton  
Morrisseau



Millennium  
Calendar

Aliya  
Bouvard

So you  
want  
a healthy  
baby



*So you  
want  
a healthy  
baby*

*Breastfeeding teachings*



*Breastfeeding is a natural  
traditional gift that the Creator  
gave to women to nourish their babies.*

*So you want a healthy baby:  
Breastfeeding teachings*

Released spring 2004

# Important message #5

- make a population and public health difference by thinking along the entire spectrum



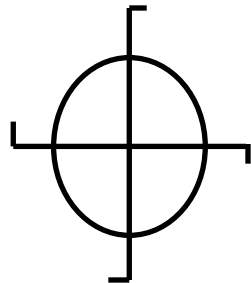
# Breastfeeding determinants and a suggested framework for action in Europe (Yngve and Sjöström 2001)

“Promotion , protection and support should be provided to *all* breastfeeding mothers and their babies, in order not to perpetuate today’s situation when a child is provided the benefits of breastfeeding depending on nationality, economic circumstances, and their mother’s educational level and age.”

# *Population health and the Medicine Wheel*

“The lines intersecting at the centre of the circle signify order and balance. They help people examine experience by breaking down complex situations into constituent parts, while reminding them not to forget the whole. The centre of the wheel is the balance point where apparent opposites meet. The flags at the ends of the intersecting lines signify the four winds whose movement is a reminder that **nothing is fixed or stagnant, that change is the normal experience and transformation is always possible.**”

Royal Commission on Aboriginal Peoples (1996:647)





# Manitoba Centre for Health Policy

[www.umanitoba.ca/centres/mchp/](http://www.umanitoba.ca/centres/mchp/)