Methadone (and pregnancy care) For Women With Problematic Substance Use

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Regina Qu'Appelle Health Region

OBJECTIVES

For substance using women on methadone who are pregnant:

What changes during/because of pregnancy?

Use the opportunity

What are we doing about it?

Ostrich Protocol

What approach can we take?

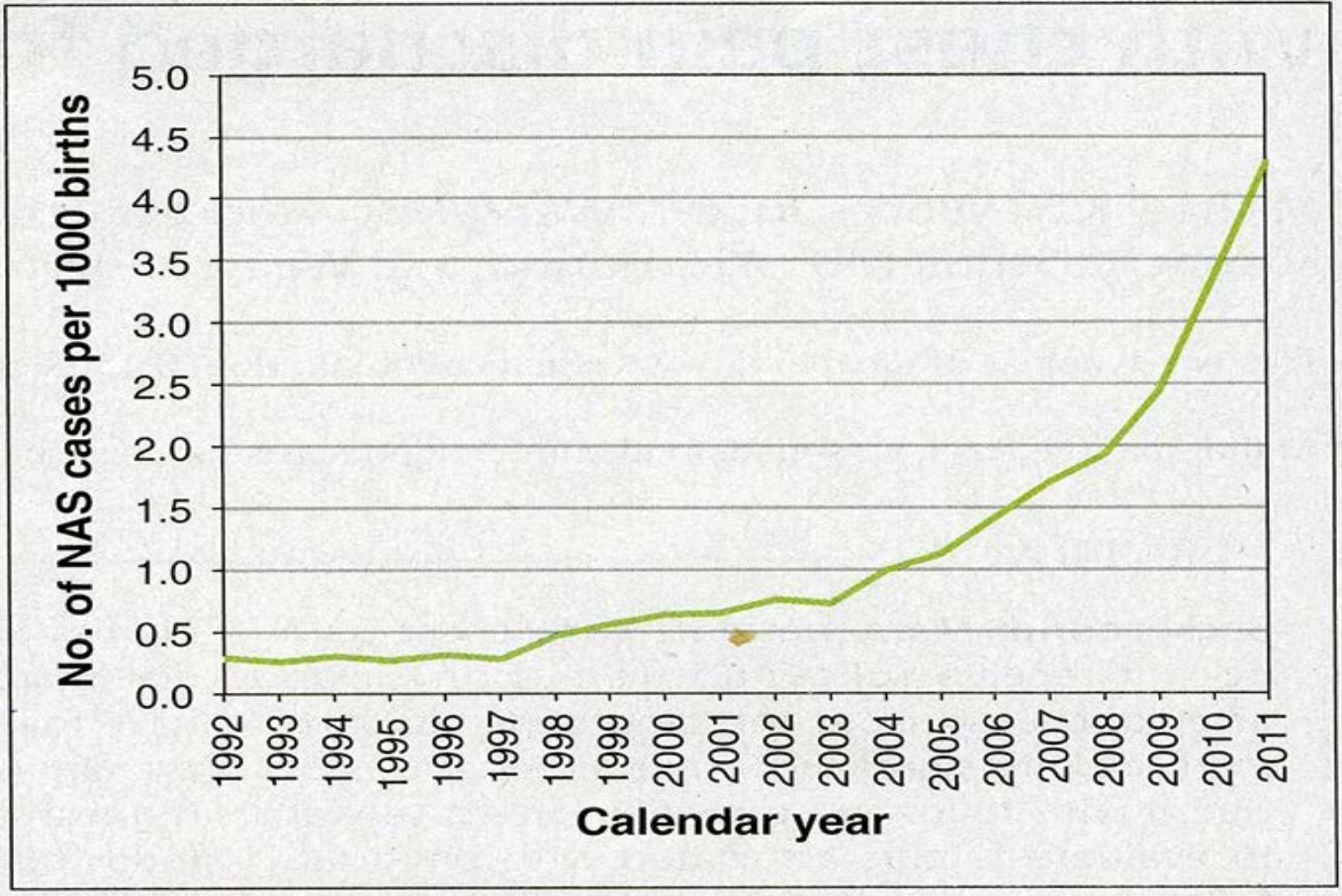


Figure 1: Annual incidence of neonatal abstinence syndrome (NAS) Ontario, 1992–2011.

Substance Use In Pregnancy

Few diseases can compete with addiction in their capacity to generate misinformation, misjudgment, or misunderstanding.

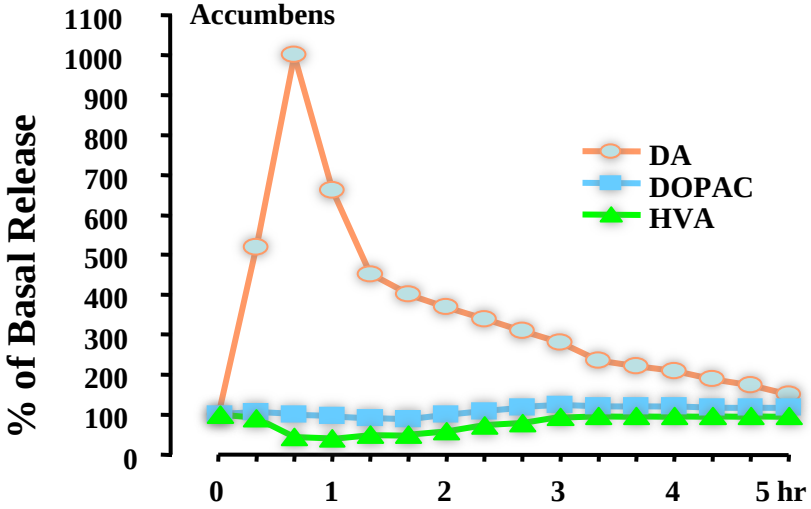
Lancet Editorial, 2012

Why Be A User?

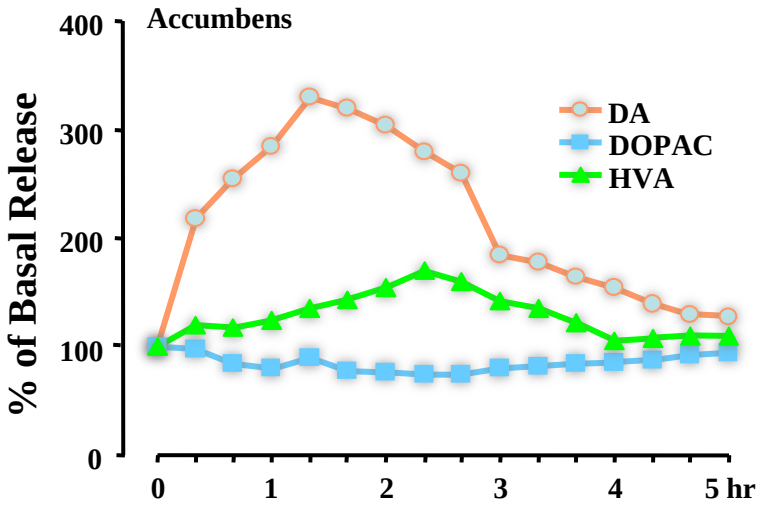
- Life hurts
- Substances reduce pain/increase pleasure
- Rapid delivery to the brain (e.g. IV or inhaled) gives a more pleasurable effect
- Everyone else is using

Effects of Drugs on Dopamine Release

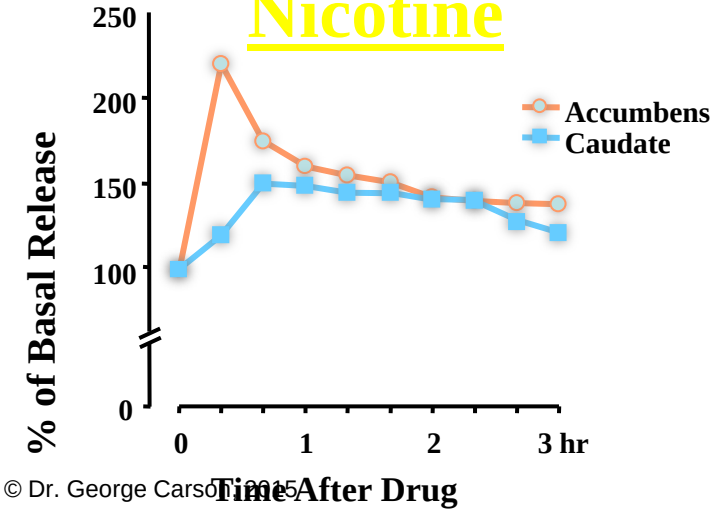
Amphetamine



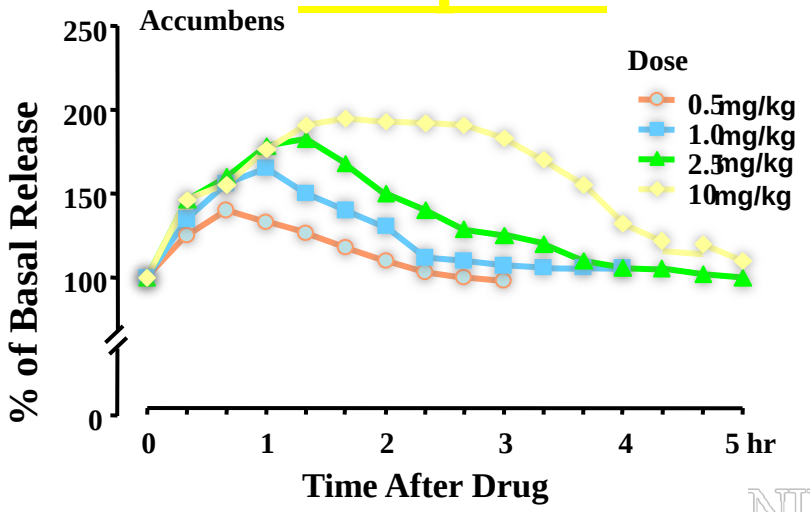
Cocaine



Nicotine



Morphine



Di Chiara and Imperato, PNAS, 1988

Information about Problematic Substance Use in Pregnancy

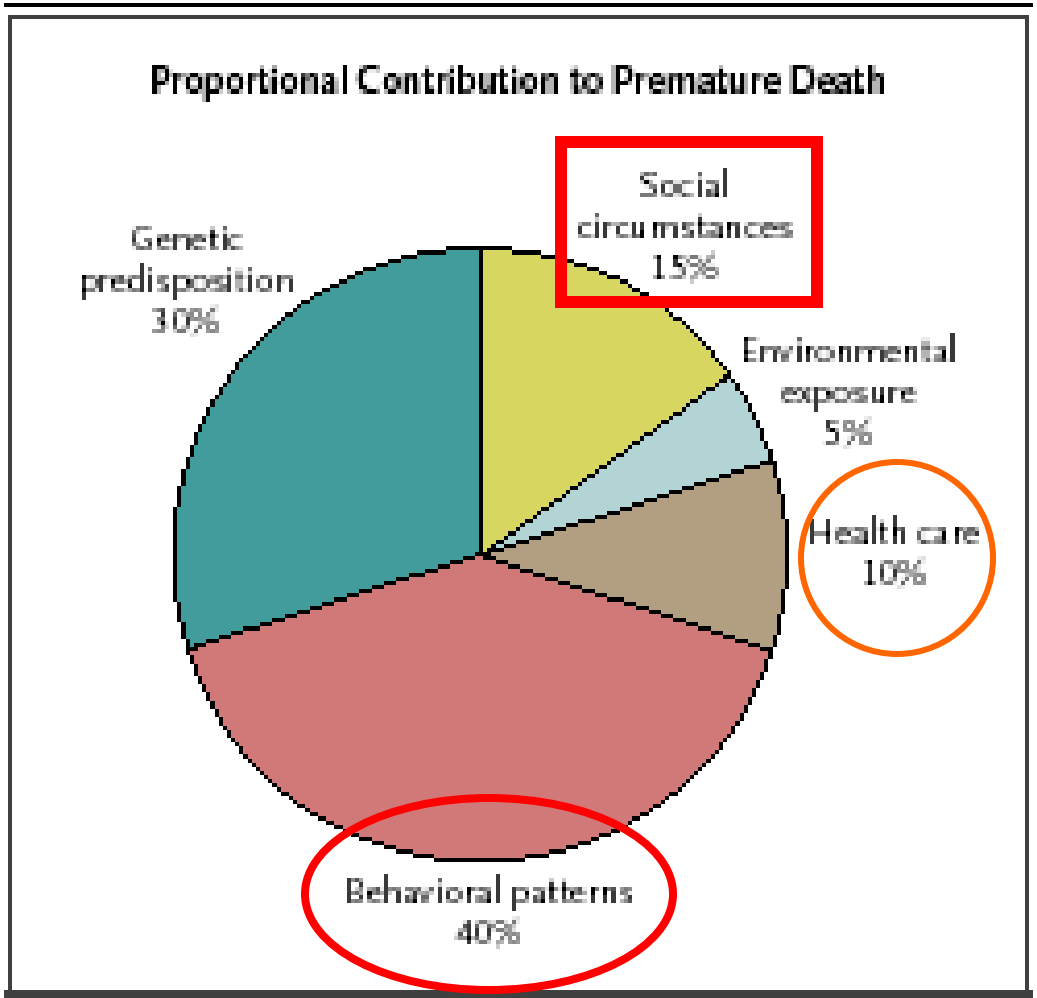


Figure 1. Determinants of Health and Their Contribution to Premature Death.

Adapted from McGinnis et al.[10]

Steven A. Schroeder

N Engl J Med 2007

Information about Problematic S ance Use in Pregnancy

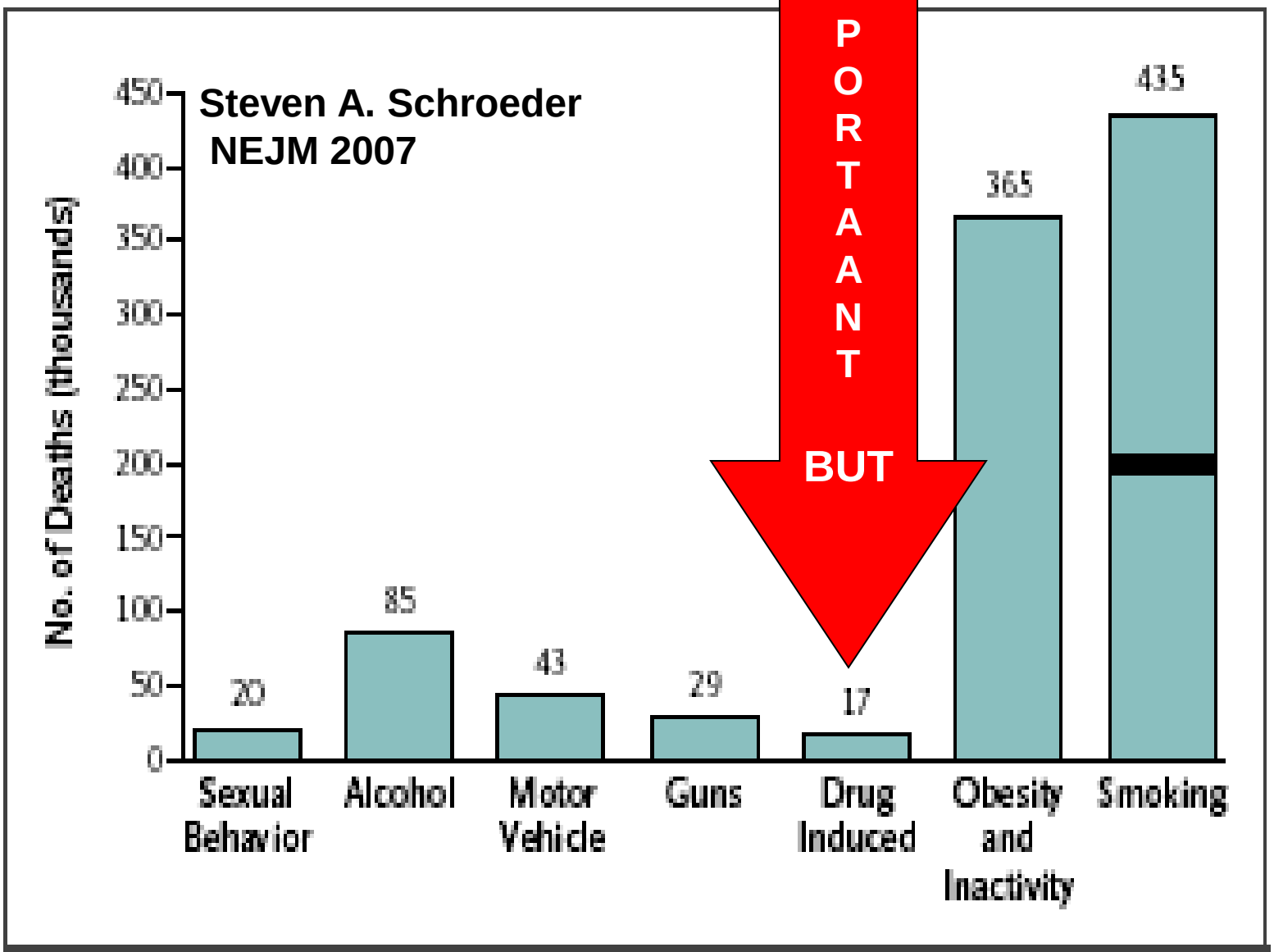


Figure 2. Numbers of U.S. Deaths from Behavioral Causes, 2000.

Some Relevant Information About Regina

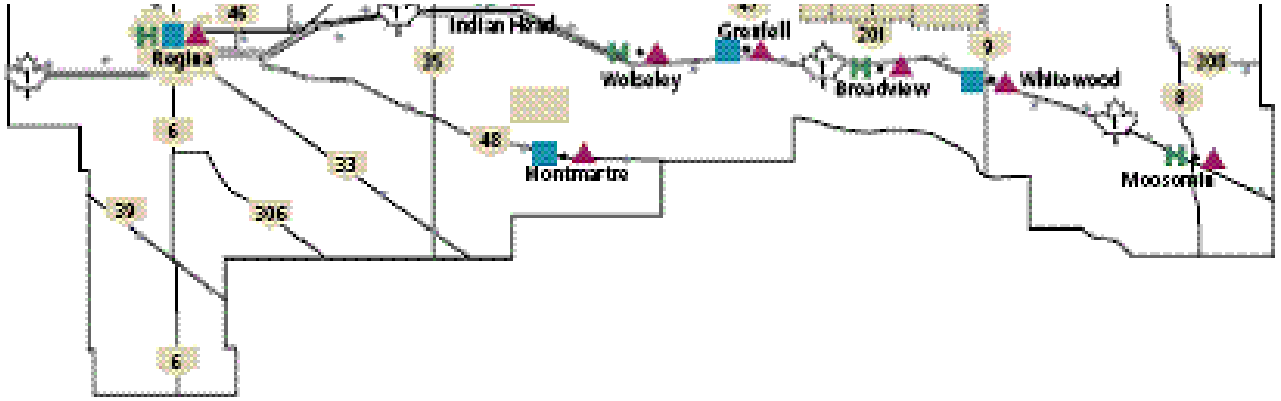
Population and Public Health Services: Health Status Report

The Report provides information on the health of the population in the Regina Qu'Appelle Health Region. This provides not only a “benchmark” about where the health of the population stands, but also serves as a basis for future health planning in terms of recognizing diverse needs associated with demographic structure, health status, health behaviours and prevention measures, and determinants of health.

Care For Substance Using Women

OUR REGION:
STRENGTHS AND CHALLENGES

What are some of the markers of our problems



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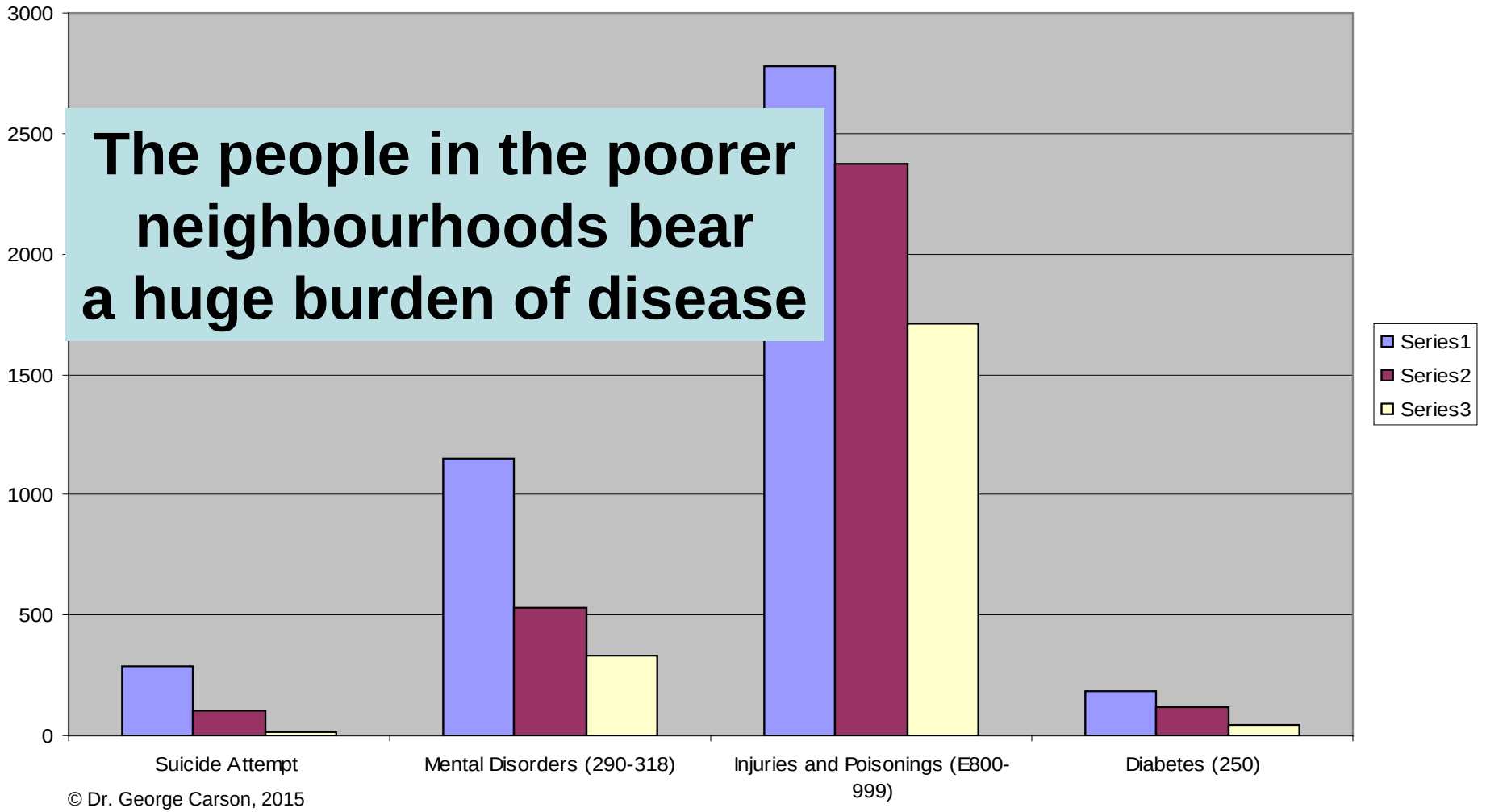
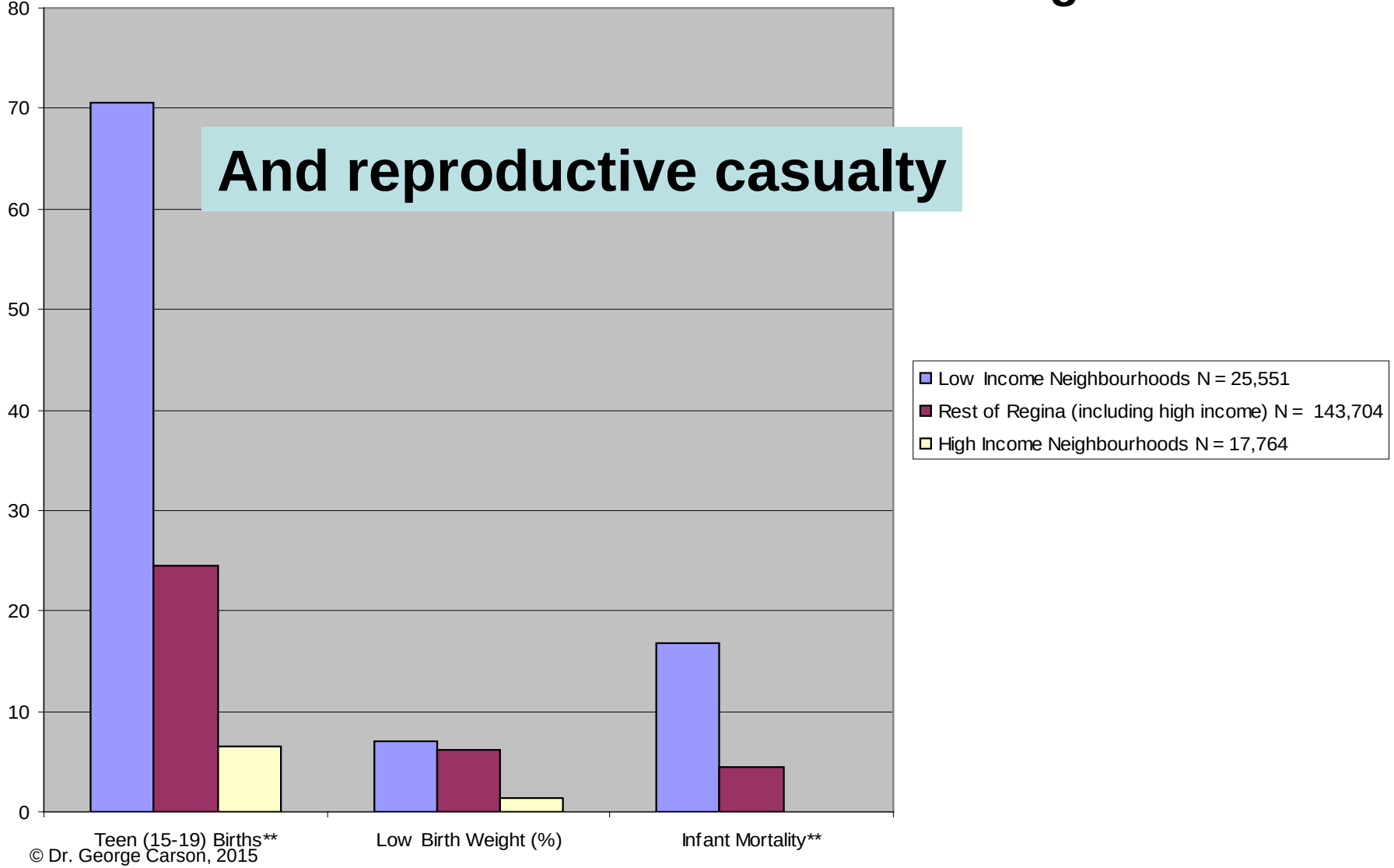
Some Relevant Information About Regina



The people in the poorer neighbourhoods bear a huge burden of disease

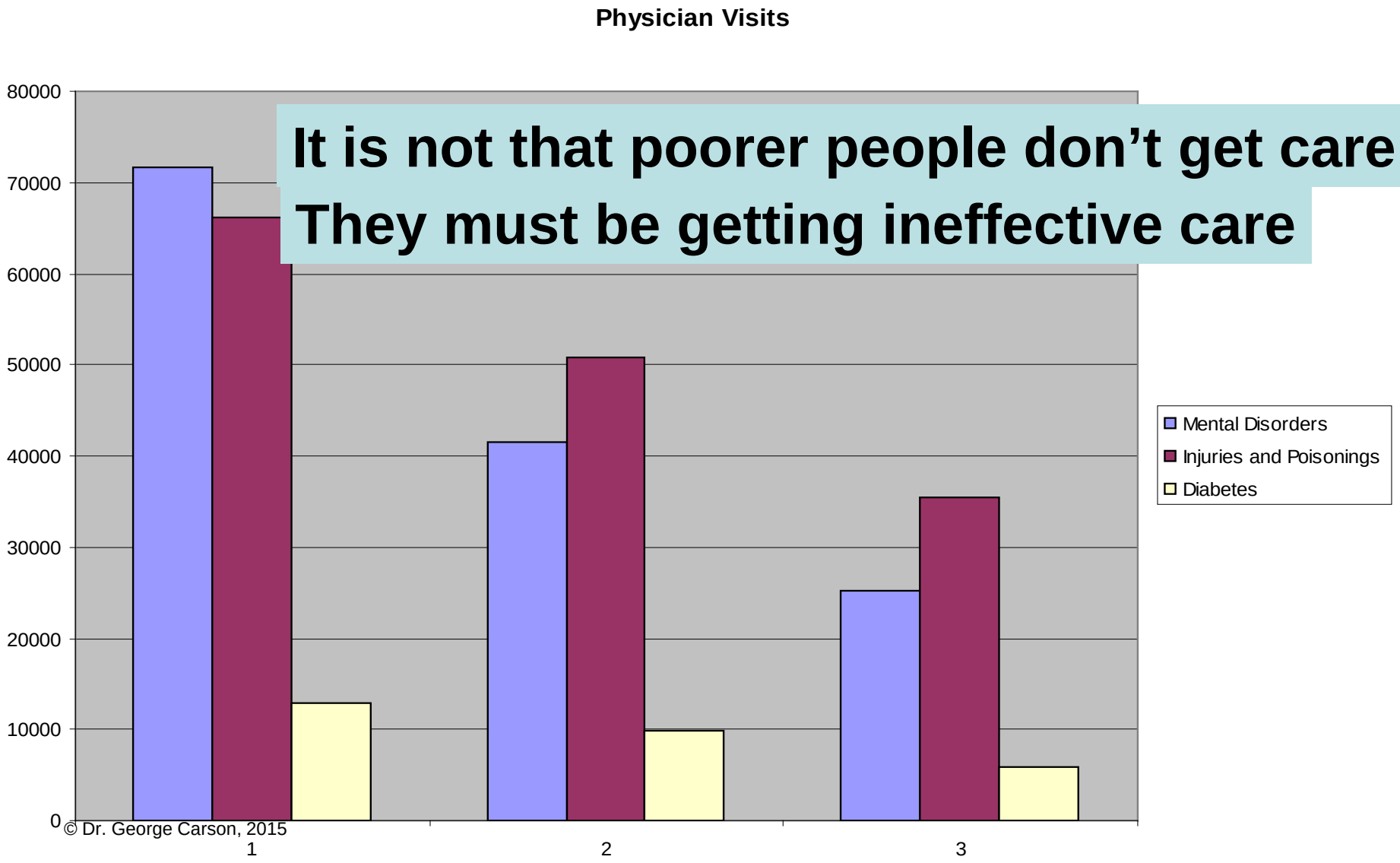
Care For Substance Using Women

Some Relevant Information About Regina



Care For Substance Using Women

Some Relevant Information About Regina



It is not that poorer people don't get care

They must be getting ineffective care

Care For Substance Using Women

In summary, our study shows that, despite the availability of essential health care services at no out-of-pocket expense,

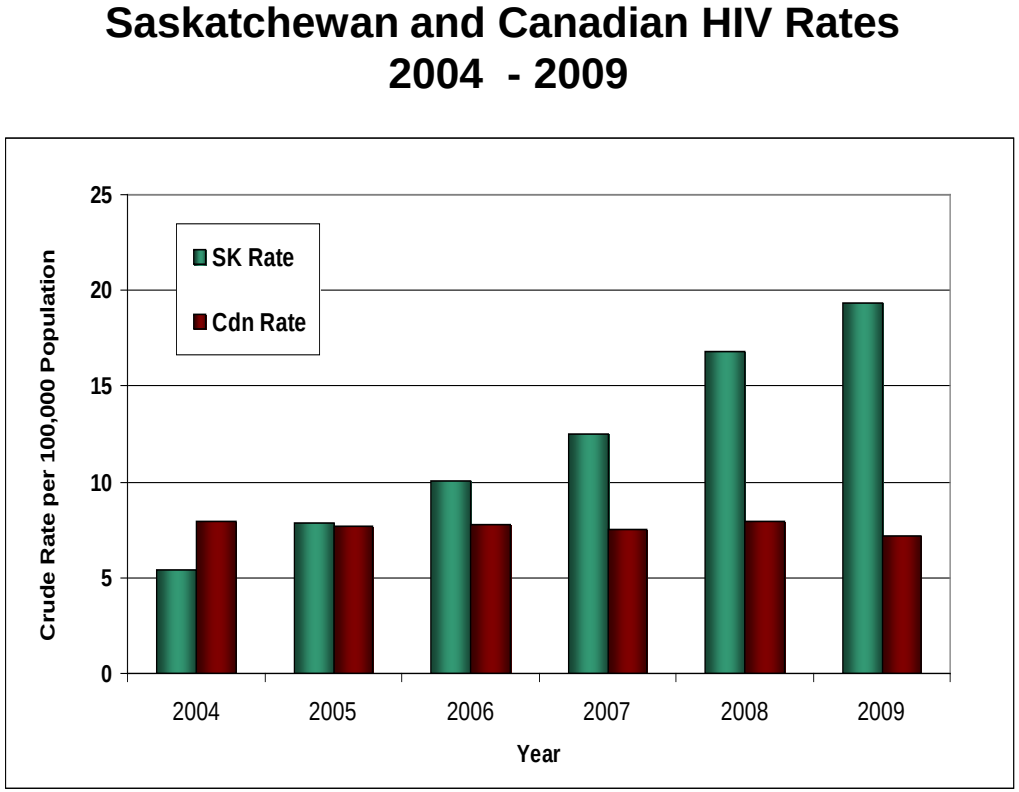
family income and other socioeconomic factors are strongly associated with some adverse perinatal outcomes, including gestational diabetes, small-for-gestational-age live births and infant death.

These findings highlight potential gaps in health information and in social support for socioeconomically vulnerable mothers and families in the year after birth.

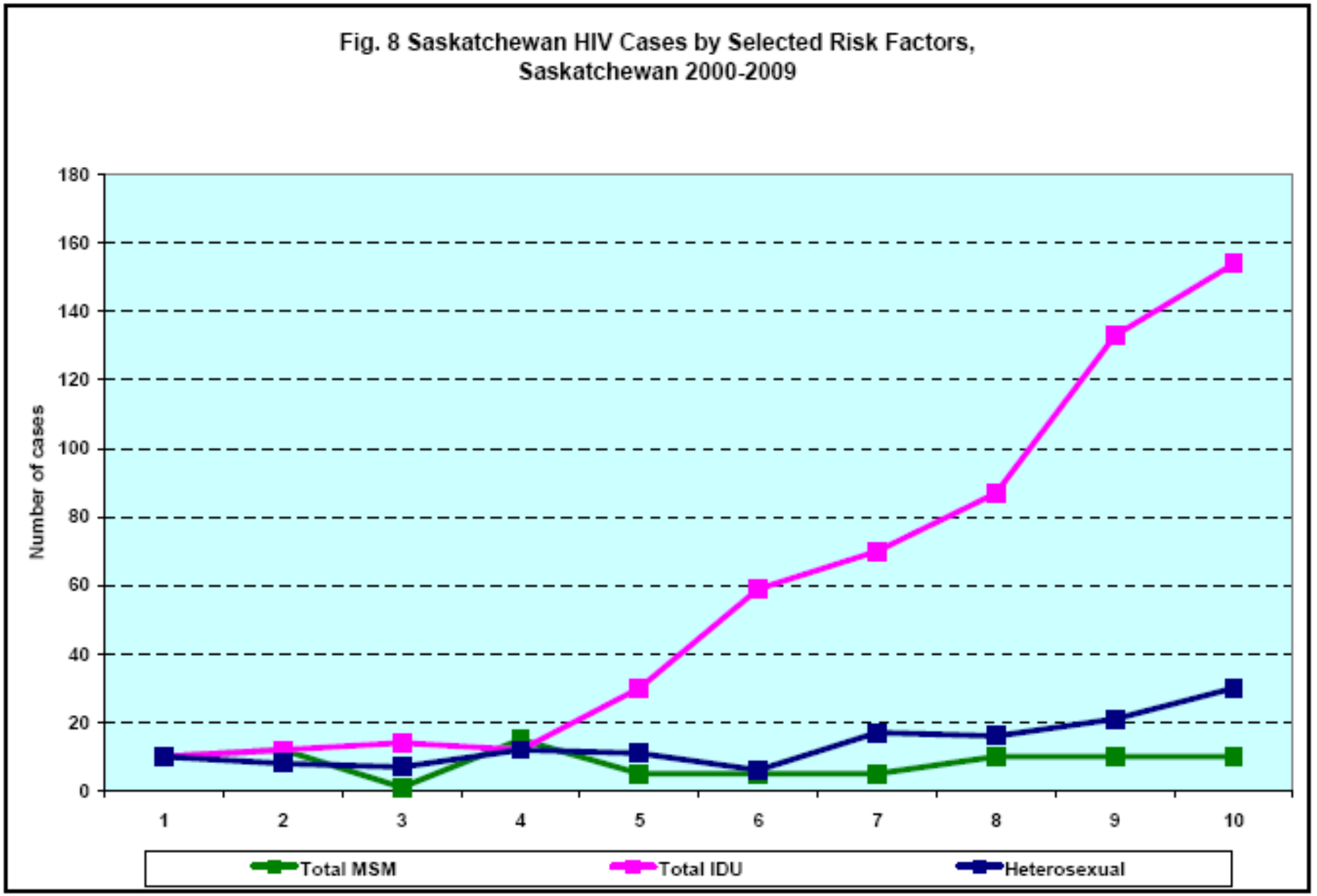
KS Joseph et al. CMAJ 2007;177(6):583-90

HIV in Saskatchewan

- Provincial rates of new HIV infections:
- steady **increase** in rates from 5.4 to 19.3 per 100,000 population
- **significantly different from Canadian rates which remained steady**
- **more younger Aboriginal women are becoming infected**



Medical Diseases in Pregnancy: **HIV**



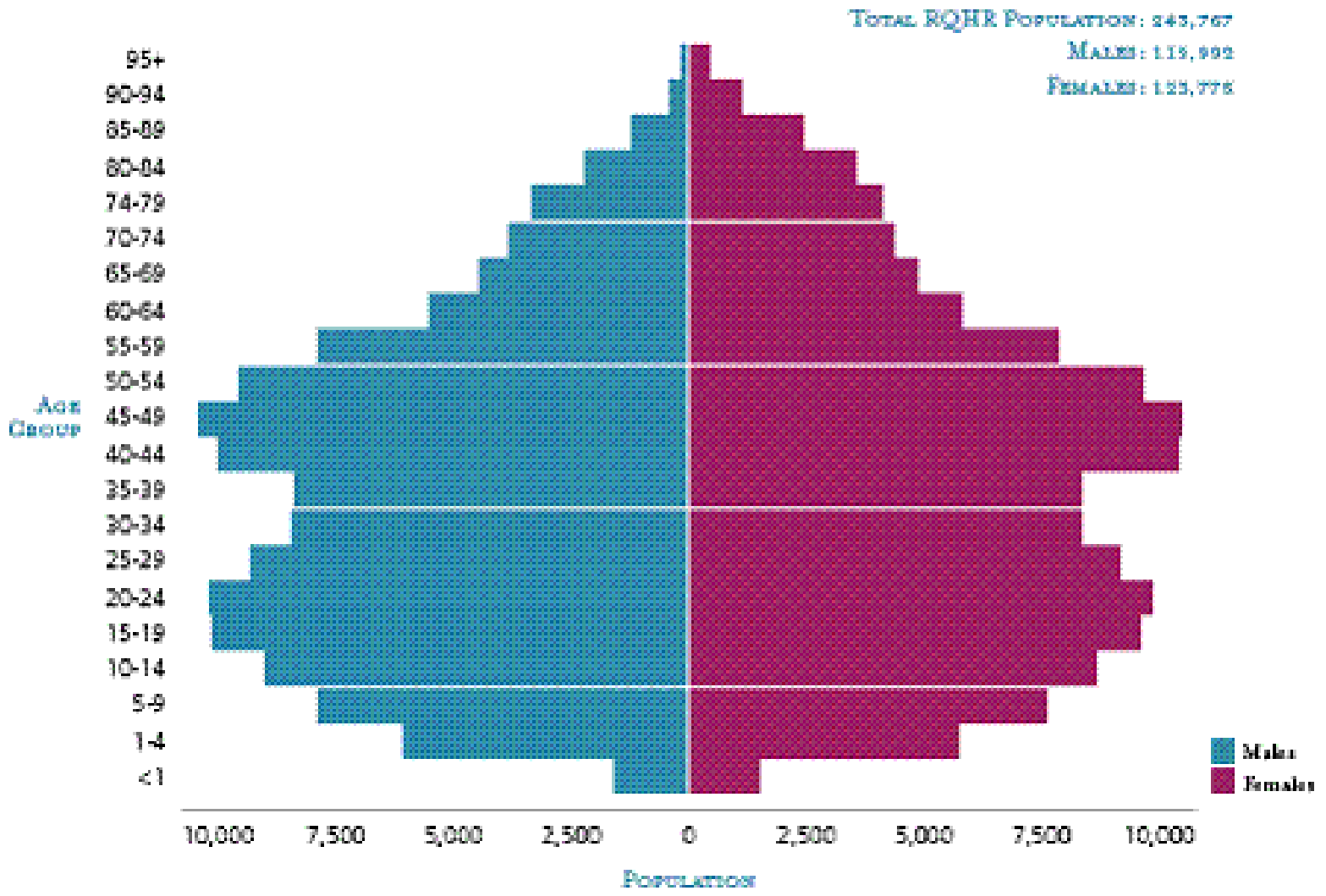
Medical Diseases in Pregnancy: **HIV**

Risk Factors and Aboriginal Status

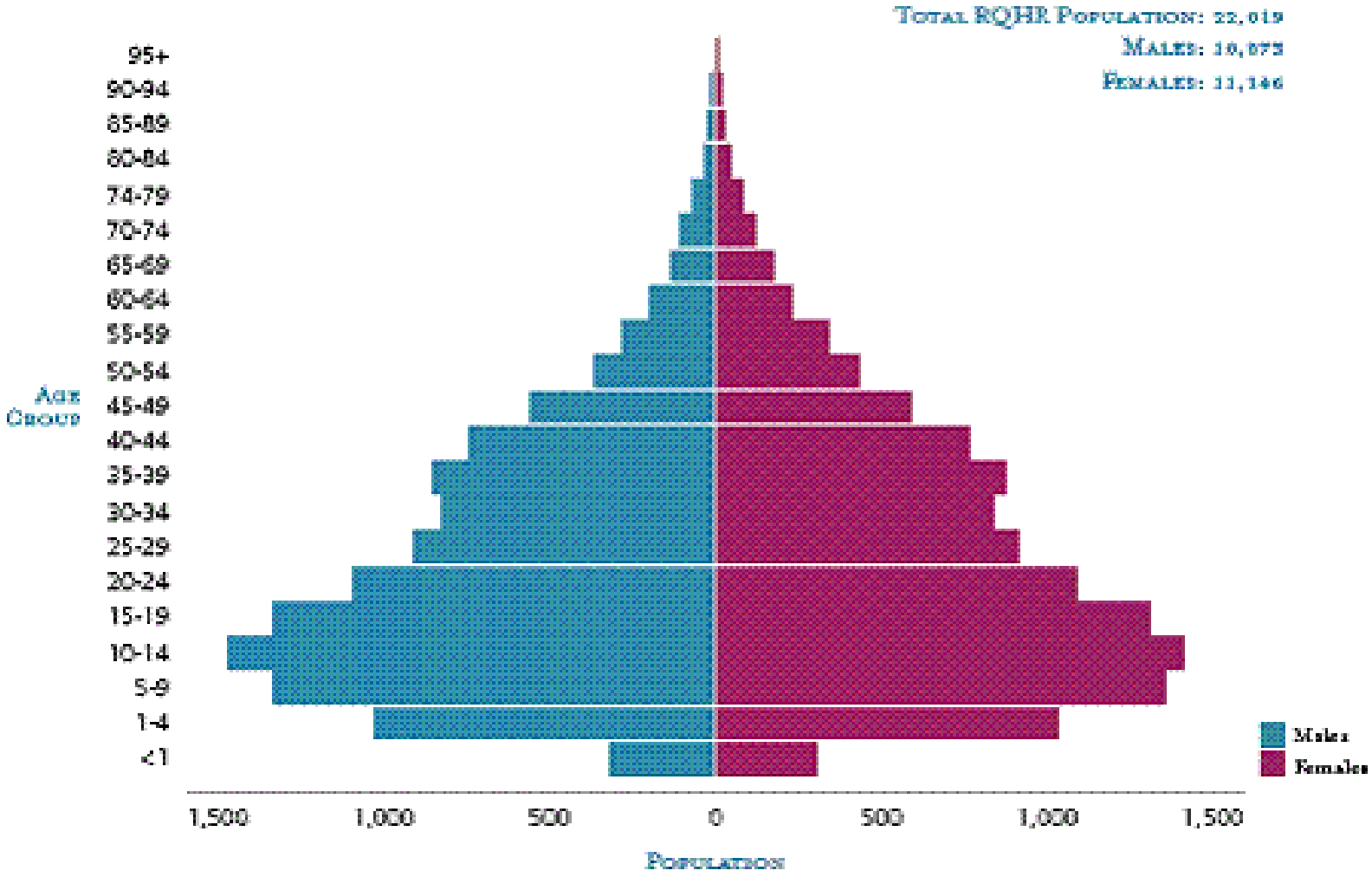
Circumstance	Aboriginal	Non-aboriginal
New HIV Infection Caused by IDU	53%	14%
Female Affected	45%	20%

CMAJ November 2006:175:1359

Regina Qu'Appelle Health Region Covered Population, 2006



Regina Qu'Appelle Health Region Registered Indian Persons Covered Population, 2006



ABORIGINAL HEALTH

This both <u>is</u>

and <u>is not</u>

an aboriginal health issue

Clearly substance use is not limited to First Nations people

and

First Nations people are not necessarily substance users

ABORIGINAL HEALTH

BUT
it is a poverty, disadvantaged issue
and First Nations are
disproportionately disadvantaged

And
there are particular factors of
a post-colonial country, marginalization,
cultural fragility, decreased sense of self-worth etc.

Some Things We Can Do

Care
that is
Harm Reducing
and
Women Centered

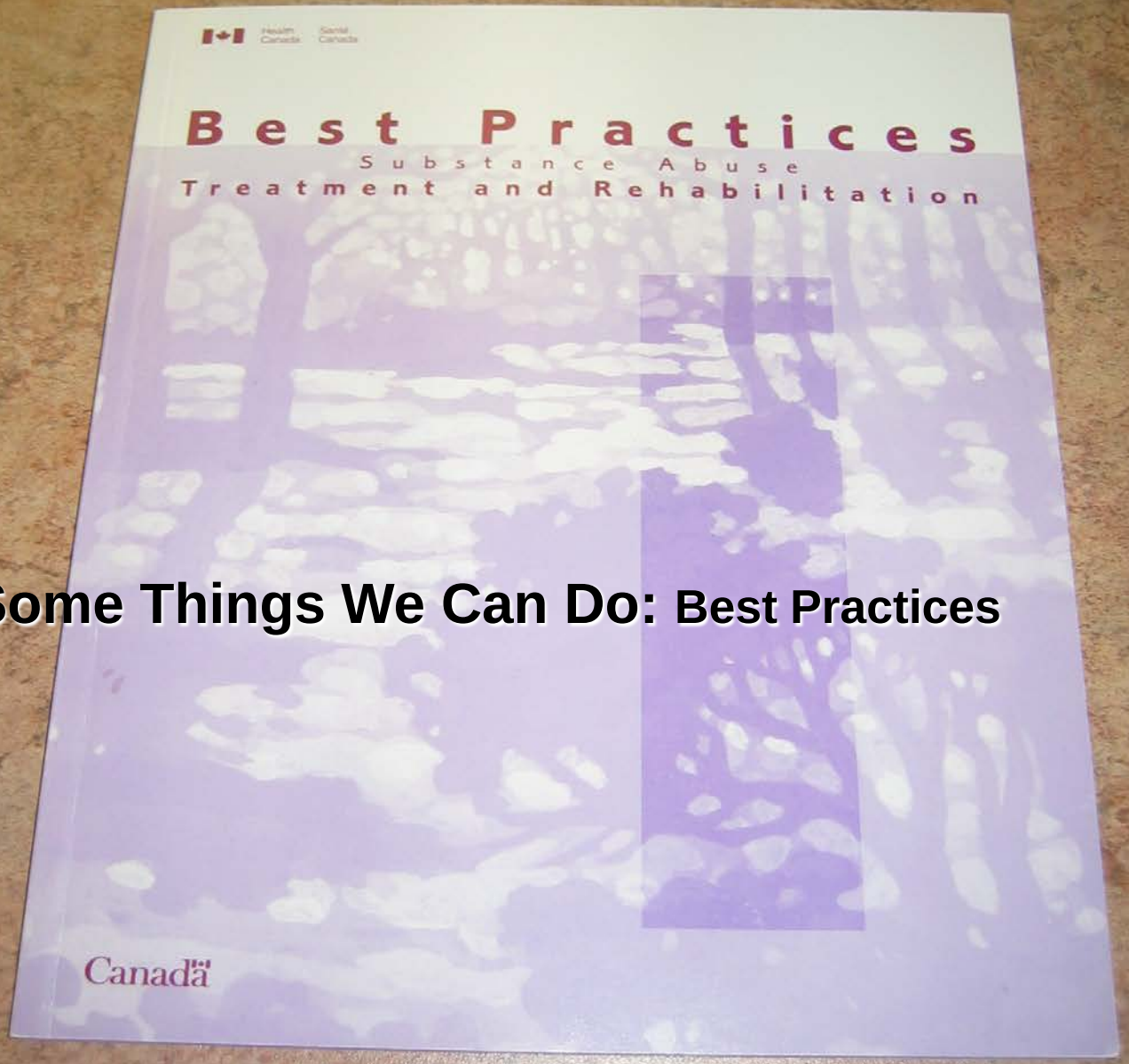
Harm Reduction

Expecting a woman to stop using drugs and/ or alcohol when she is not ready is unrealistic and can be harmful

Sarah Payne in *With Child,* 2007

Some Things We Can Do

Best Practices



Some Things We Can Do: Best Practices

Some Things We Can Do: Best Practices

INTERVENTION	Poor Effect	Indeterminate /Insufficient	Good Effect
Social skills			+18
Self-Control training			+17
Stress Management			+6
Accupuncture		+1	
Psychotropic medication		--2	
Aversion therapy		--2	
Psychotherapy	--4		
Educational Lectures	--5	Holder et al.	

Some Things We Can Do A Philosophy Of Care

Some Things We Can Do

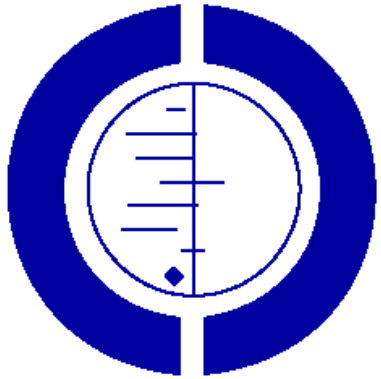
A Philosophy of Care for Problematic Substance Use in Pregnancy

Our goal is to provide the best care reasonably possible, including harm reduction.

Some Things We Can Do: Methadone

Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence (Review)

Mattick RP, Breen C, Kimber J, Davoli M



This is a reprint of a Cochrane review, prepared and maintained by The Cochrane Collaboration and published in
The Cochrane Library 2007, Issue 3

A Model of Care For Substance Using Women In Regina

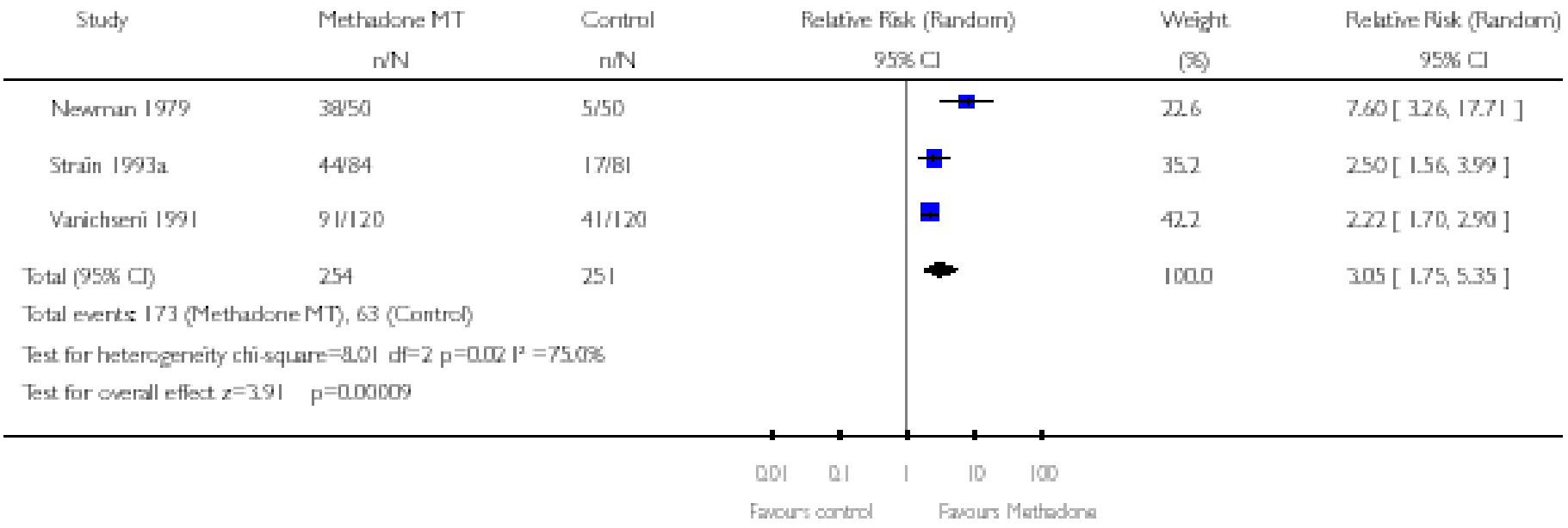
Some Things We Can Do: Methadone

Analysis 01.01. Comparison 01 Methadone maintenance treatment vs no methadone maintenance treatment, Outcome 01 Retention in treatment

Review: Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence

Comparison: 01 Methadone maintenance treatment vs no methadone maintenance treatment

Outcome: 01 Retention in treatment



***The Cochrane Library* 2007, Issue 3**

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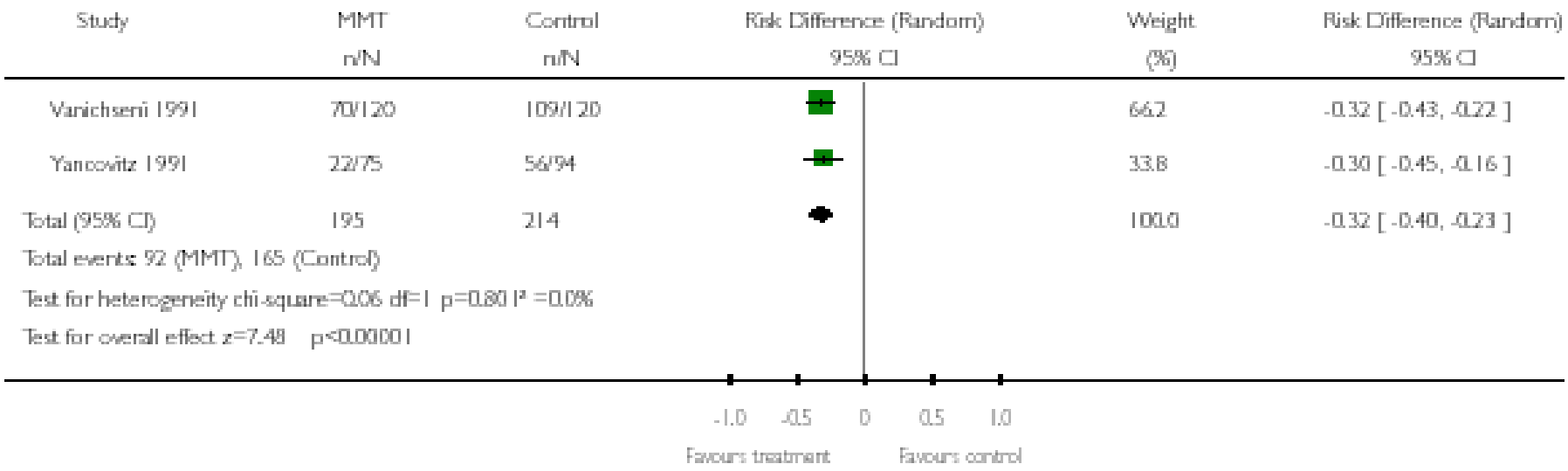
Some Things We Can Do: Methadone

Analysis 01.02. Comparison 01 Methadone maintenance treatment vs no methadone maintenance treatment, Outcome 02 Morphine positive urines

Review: Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence

Comparison: 01 Methadone maintenance treatment vs no methadone maintenance treatment

Outcome: 02 Morphine positive urines



***The Cochrane Library* 2007, Issue 3**

Maternal and Fetal Benefits of Methadone Treatment

- **Reduces illegal opiate use as well as the use of other drugs, thus diminishing the risk of hepatitis, HIV/AIDS, and other sexually transmitted diseases**
- **Helps to remove the opiate-dependent woman from the drug-seeking environment**
- **May eliminate illegal behaviors, such as prostitution**
- **Prevents fluctuation of the maternal drug level over the course of the day**
- **Reduces maternal mortality and severe morbidity**
- **Permits a more stable intrauterine environment for the fetus, with a decreased the risk of hypoxia**
- **Leads to improvement in the mother's nutrition and infant birth weight**

Maternal and Fetal Benefits of Methadone Treatment

Improves the woman's ability to participate in prenatal care and substance abuse treatment

Enhances the woman's ability to prepare for the birth of her infant and begin homemaking.

Stabilized mothers on methadone are more likely to retain custody of their children.

Children are more closely monitored when the mother is part of a rehabilitation program

Some Things We Can Do

Antepartum Care

Use the opportunity

- Infections
- Anemia
- Dental
- Life skills/ prepare for parenting

Establish dating

LMP “sometime”
Cycle irregular

Follow fetal growth

- Use ultrasound images to “make it real”

Be the methadone prescriber

- Enhance compliance
- Make getting care easier

A Model of Care For Substance Using Women In Regina

Some Things We Can Do: Methadone

THE METHADONE- MAINTAINED PREGNANCY

Problematic Substance Use in Pregnancy

- Medical detoxification
- Leave untreated
- Methadone programs

Pregnancy is an opportunity to bring women into obstetrical, medical and drug treatment

Stephen R. Kandall, Tatiana M. Doberczak, Maria Jantunen, Janet Stein

Clinics in Perinatology

Explain about methadone changes

- The clearance increases
- She is not more addicted, she is more pregnant
- Involve the partner
- Use split dosing

It may be necessary to take chances

Clinical Study

Evaluation of a Low-Threshold/High-Tolerance Methadone Maintenance Treatment Clinic in Saint John, New Brunswick, Canada: One Year Retention Rate and Illicit Drug Use

Timothy K. S. Christie,[1,2] Alli Murugesan,[1,3] Dana Manzer,[4] Michael V. O'Shaughnessey,[5] and Duncan Webster[6]

Journal of Addiction

95% retention **67% abstinent from illicit opioids**

The one-year retention rate was 95%, 67% of the cohort achieved abstinence from illicit opioids and an additional 13% abstained from cocaine use. *Conclusion.* The novel feature of the LTHT *MMT* clinic is that patients are not denied methadone because of lack of ancillary services. Traditional comprehensive *MMT* programs invest the majority of financial resources in ancillary services that support the biopsychosocial model, whereas the LTHT approach utilizes a medical model and directs resources at medical management.

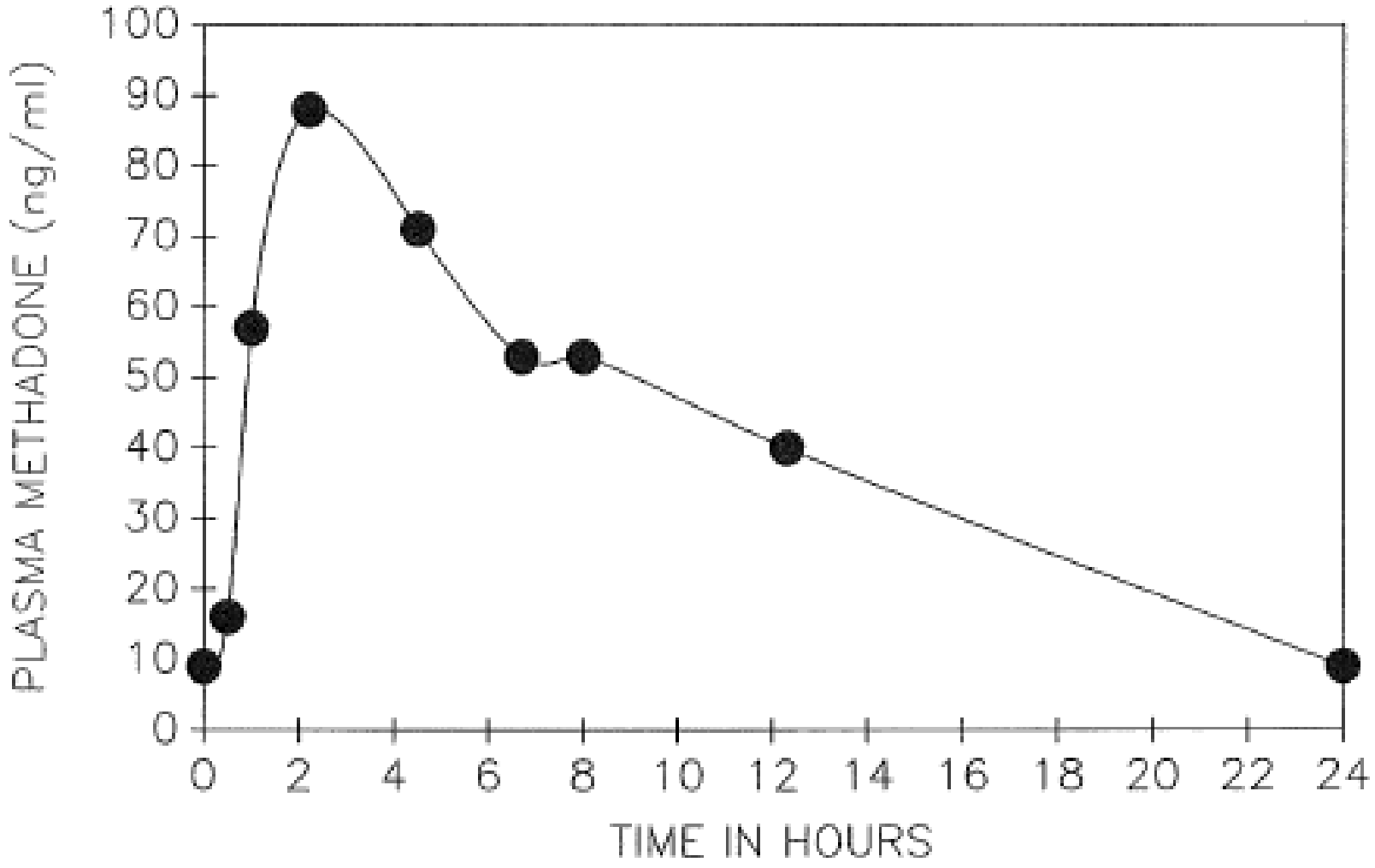


Figure 1. Plasma methadone concentration versus time for the subject.

Altered Methadone Pharmacokinetics in Pregnancy: Implications For Dosing

l may be

Table 2. Predicted Peak and Trough Plasma Methadone Values for Various Doses and Dosing Intervals

	Dose		
	30 mg QD	*15 mg BID*	*45 mg QD*
Methadone (ng/ml)			
Peak	76.5	52.1	115
Trough	9.9	18.8	14.8

Too High

Too Low

Better

Manage the pregnancy issues

- Indomethacin for pain
- Nausea with and without the methadone
- Constipation

Partner issues and safety

Anticipate social services/custody

- I would hate to be a social worker
- Will the child be safe? How did she do as a pregnant woman

Contraception planning

- Give the prescription

Ultrasound Scans

Dating Will often be unsure

Anatomy

***Motivational* - with feed back and pictures**

Screen for MRSA

If enough negatives then avoid isolation

Prenatal classes Select carefully

Prepare for coming to the hospital

Some Things We Can Do

Care in Labour

PPO for methadone
Any one can continue it

Lots of non-judgmental support

Epidural analgesia

Point of care HIV testingPPO for methadone

Some Things We Can Do: Pain Relief in Labour

Intrapartum and Postpartum Analgesia for Women Maintained on Methadone During Pregnancy

OBJECTIVE: To determine whether methadone maintenance alters intrapartum or postpartum pain or medication requirements.

Labor and delivery is a painful process.
The treatment of acute pain during hospitalization has emerged as an important health care concern among both providers and patients.

Marjorie Meyer, MD, Katherine Wagner, MD, Anna Benvenuto, Dawn Plante, RN, and Diantha Howard, MS

VOL. 110, NO. 2, PART 1, AUGUST 2007 **OBSTETRICS & GYNECOLOGY**

A Model of Care For Substance Using Women In Regina
Some Things We Can Do: Pain Relief in Labour

Labour Hurts For Everyone

An Epidural Regional Anesthetic Works For Almost Everyone

An Epidural Does Not Use Systemic Narcotics so patients and staff feel better about that

A Model of Care For Substance Using Women In Regina
Some Things We Can Do: Pain Relief in Labour

CONCLUSION:

Methadone-maintained women have similar analgesic needs and response during labor, but require 70% more opiate analgesic after cesarean delivery.

Meyer et al *Analgesia for Methadone-Maintained Pregnancy*
OBSTETRICS & GYNECOLOGY 2007

Some Things We Can Do

Care After Delivery

Caring After Delivery

It is a long-term commitment

Safe care and custody

Babies are: delightful

scary

stress causing

It takes a team

It takes preplanning

It takes changing the plans

A Model of Care For Substance Using Women

Some Things We Can Do: Care After Delivery

Rooming-in compared with standard care for newborns of mothers using methadone or heroin

PARTICIPANTS We selected 32 women in the city of Vancouver known to have used heroin or methadone during pregnancy between October 2001 and December 2002. Comparison groups were a historical cohort of 38 women in Vancouver and a concurrent cohort of 36 women cared for in a neighbouring community hospital.

MAIN OUTCOME MEASURES Need for treatment with morphine, number of days of treatment with morphine, and whether babies were discharged in the custody of their mothers.

Ronald R. Abrahams, MD FCFPC, S. Ann Kelly, MPH, Sarah Payne, RN MA, Paul N. Thiessen, MD FRCPC, Jessica Mackintosh, Patricia A. Janssen, PhD Can Fam Physician 2007; 53:1722 - 1730

A Model of Care For Substance Using Women

Some Things We Can Do: Care After Delivery

Table 4 Infant outcomes by study cohort and adjusted relative risks

OUTCOMES	BCWH ROOMING IN N = 32 N (%)	BCWH HISTORICAL (NOT ROOMING IN) N = 38 N (%)	RELATIVE RISK (95% CONFIDENCE INTERVAL)	SURREY HOSPITAL (NOT ROOMING IN) N = 36 N (%)	RELATIVE RISK (95% CONFIDENCE INTERVAL)
Treated with morphine*			0.40 (0.20–0.78)	19 (52.8)	0.39 (0.20–0.75)
Admitted to an NICU	12 (37.5)	34 (89.5)	0.41 (0		
Discharged in custody of mother	23 (71.9)	12 (31.6)	2.23 (1.43–3		

Less Morphine

Less NICU Admission – more for others

MORE BABIES WITH THEIR MOTHERS

Abrahams e ysician 2007; 53:1722 - 1730

Caring After Delivery

- Detox
- Addiction counselling
- Tapering methadone

- Treat Hepatitis C
  - Immunize for Hepatitis A and B
- Continue HIV medication
- Contraception
  - Depo Pro Vera
  - Long acting forgettable

Provide Care that is Harm Reducing

and

Women Centered

“The secret of caring

for the patient

is caring for the patient”

Sir William Osler