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

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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?

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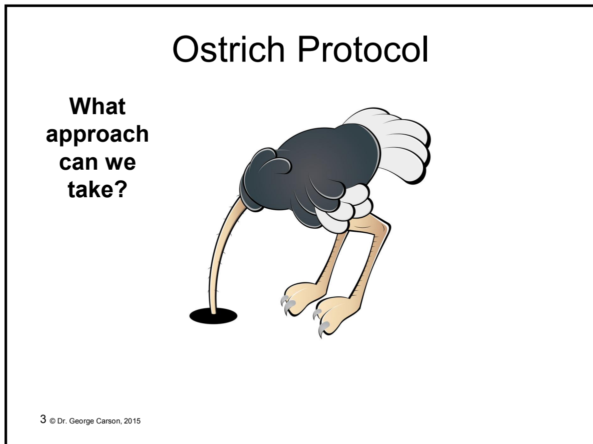
Ostrich Protocol

What approach can we take?



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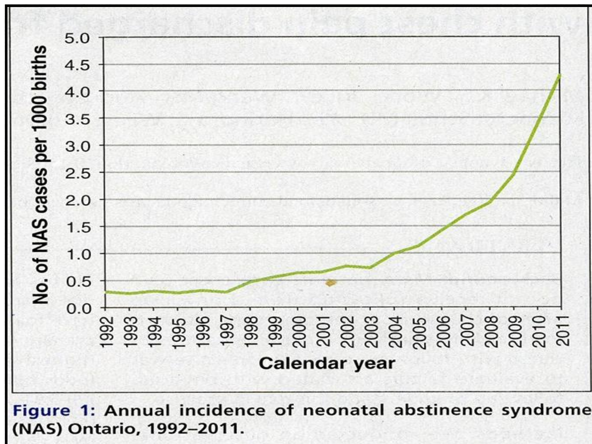

Figure 1: Annual incidence of neonatal abstinence syndrome (NAS) Ontario, 1992–2011.

Substance Use In Pregnancy

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

Lancet Editorial, 2012

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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

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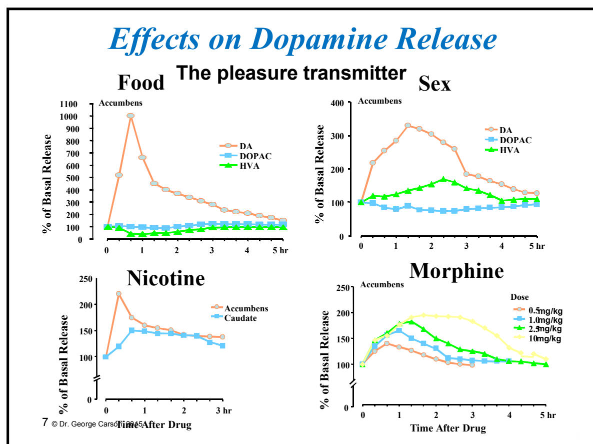
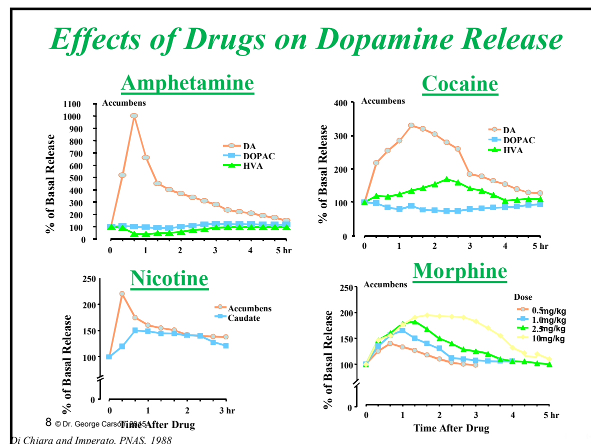
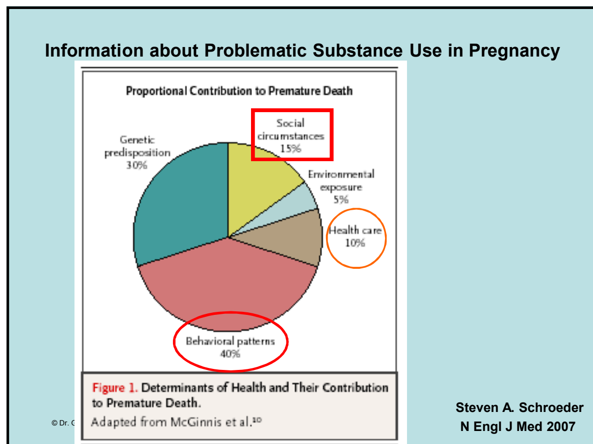






Why Be A User?

Because it hurts.
What hurts??

1. Back, head, etc., etc..

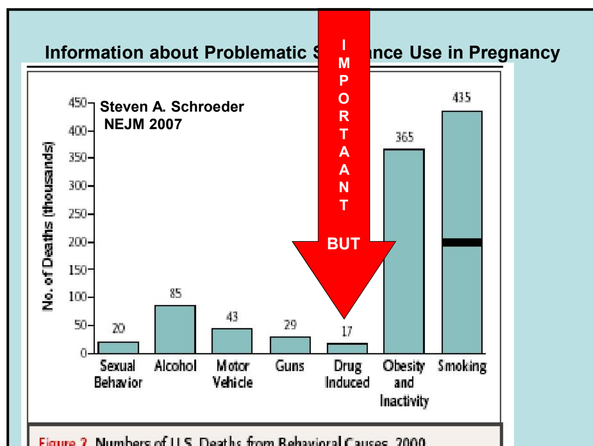
Opioids prescribed – and continued--and dependency

Deal with dependency. Deal with the pain if

2. Life

Opioids used, usually illicitly, usually with others

Deal with dependency and drug seeking.
Learn coping. Have non-user support.



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.

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Care For Substance Using Women

OUR REGION:
STRENGTHS AND CHALLENGES

What are some of the markers of our problems

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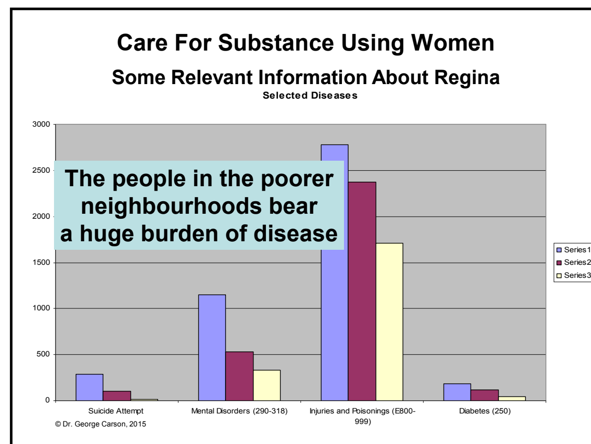
Care For Substance Using Women

Some Relevant Information About Regina



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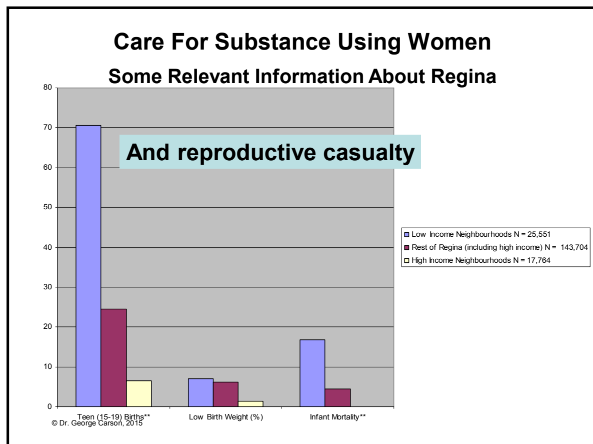
Some Relevant Information About Regina



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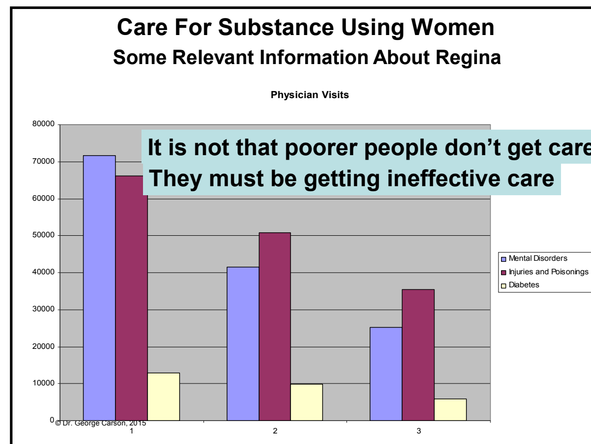

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Care For Substance Using Women

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.

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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**

Saskatchewan and Canadian HIV Rates 2004 - 2009

SK Rate, Cdn Rate; Crude Rate per 100,000 Population; Year: 2004, 2005, 2006, 2007, 2008, 2009

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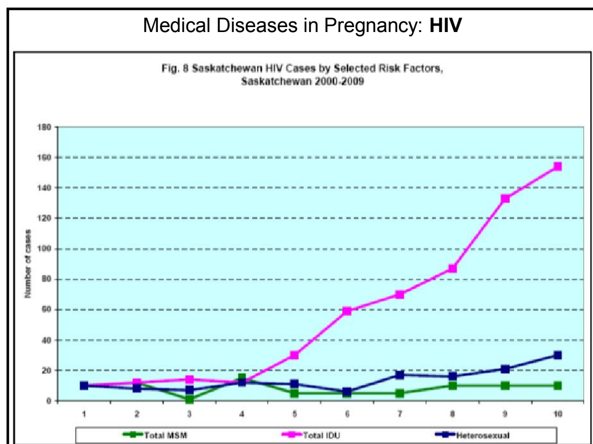
Medical Diseases in Pregnancy: **HIV**



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

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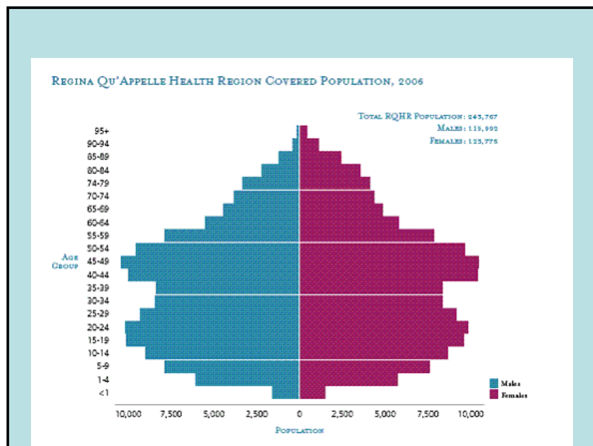

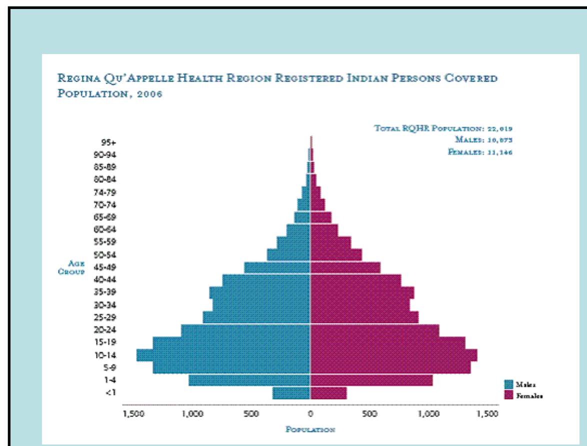

ABORIGINAL HEALTH

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

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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.

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A Model of Care For Substance Using Women In Regina

Some Things We Can Do

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Care that is Harm Reducing and Women Centered

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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

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Some Things We Can Do

Best Practices

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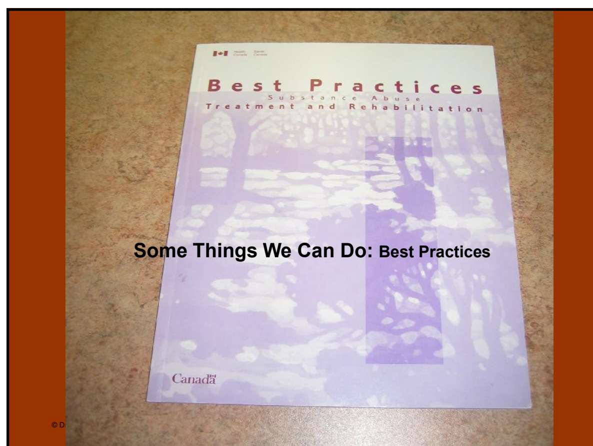

Some Things We Can Do: Best Practices

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.	

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Some Things We Can Do
A Philosophy Of Care

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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.

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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

Study	Methadone MT n/N	Control n/N	Relative Risk (Random) 95% CI	Weight (%)	Relative Risk (Random) 95% CI
Newman 1979	38/50	5/50		22.6	7.60 [3.26, 17.71]
Strain 1993a	44/84	17/81		35.2	2.50 [1.56, 3.99]
Vanichseni 1991	91/120	41/120		42.2	2.22 [1.70, 2.90]
Total (95% CI)	254	251		100.0	3.05 [1.75, 5.35]

Total events: 173 (Methadone MT), 63 (Control)
Test for heterogeneity chi-square=8.01 df=2 p=0.02 I² =75.0%
Test for overall effect z=3.91 p=0.00009

0.01 0.1 1 10 100
Favours control Favours Methadone

The Cochrane Library 2007, Issue 3

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A Model of Care For Substance Using Women In Regina
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

Study	MMT n/N	Control n/N	Risk Difference (Random) 95% CI	Weight (%)	Risk Difference (Random) 95% CI
Vanichseni 1991	70/120	109/120		66.2	-0.32 [-0.43, -0.22]
Yancovitz 1991	22/75	56/94		33.8	-0.30 [-0.45, -0.16]
Total (95% CI)	195	214		100.0	-0.32 [-0.40, -0.23]

Total events: 92 (MMT), 165 (Control)
Test for heterogeneity chi-square=0.06 df=1 p=0.80 I² =0.0%
Test for overall effect z=7.48 p<0.00001

-1.0 -0.5 0 0.5 1.0
Favours treatment Favours control

The Cochrane Library 2007, Issue 3

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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

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Some Things We Can Do

Antepartum Care

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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

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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

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Beyond the Epidemic November 2007 George D. Carson

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

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It may be necessary to take chances

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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.

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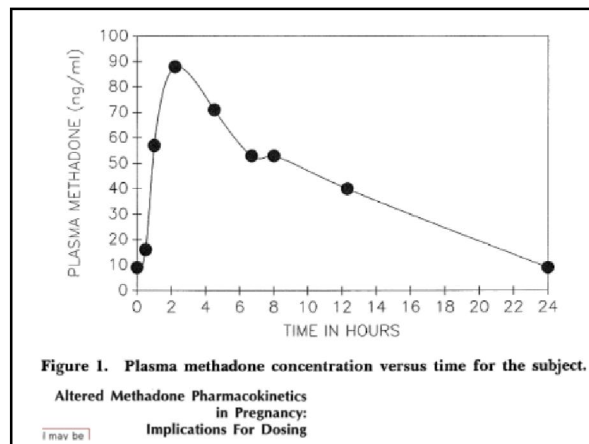

Figure 1. Plasma methadone concentration versus time for the subject.

Altered Methadone Pharmacokinetics in Pregnancy: Implications For Dosing

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 (Too High)
Trough	9.9 (Too Low)	18.8	14.8

Better

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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

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Ultrasound Scans

Dating Will often be unsure

Anatomy

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

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Screen for MRSA
- If enough negatives then avoid isolation

Prenatal classes Select carefully

Prepare for coming to the hospital

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Some Things We Can Do

Care in Labour

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PPO for methadone
Any one can continue it

Lots of non-judgmental support

Epidural analgesia

Point of care HIV testingPPO for methadone

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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**

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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

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Beyond the Epidemic November 2007 George D. Carson

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

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Beyond the Epidemic November 2007 George D. Carson

Some Things We Can Do

Care After Delivery

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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

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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

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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	0.41 (0		
Discharged in custody of mother	23 (71.9)	12 (31.6)	2.23 (1.43–		

Less Morphine

Less NICU Admission – more for others

MORE BABIES WITH THEIR MOTHERS

Abrahams e ysician 2007; 53:1722 - 1730

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Caring After Delivery

Detox

Addiction counselling

Tapering methadone

Treat Hepatitis C

Immunize for Hepatitis A and B

Continue HIV medication

Contraception

Depo Pro Vera

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Long acting forgettable

Provide Care that is Harm Reducing

and Women Centered

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"The secret of caring for the patient is caring for the patient"

Sir William Osler

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