"*More than just the pill*": An Update on Contraceptive Options for Adolescents

Telehealth Rounds – February 17th, 2017

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Children's Hospital of Eastern Ontario
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Objectives

- Review current trends in teen sexual behaviour, with a focus on trends in Northern Canada.
- Provide an outline for a basic sexual history with an adolescent-focus.
- Discuss the variety of contraceptive options available to adolescents, with an emphasis on updated recommendations to use long-acting reversible contraceptives (LARCs) as first-line.

****Thank you to Dr Bianca Stortini, CHEO Pediatric & Adolescent Gynecology, for shared use of slides*

Adolescent sexual development

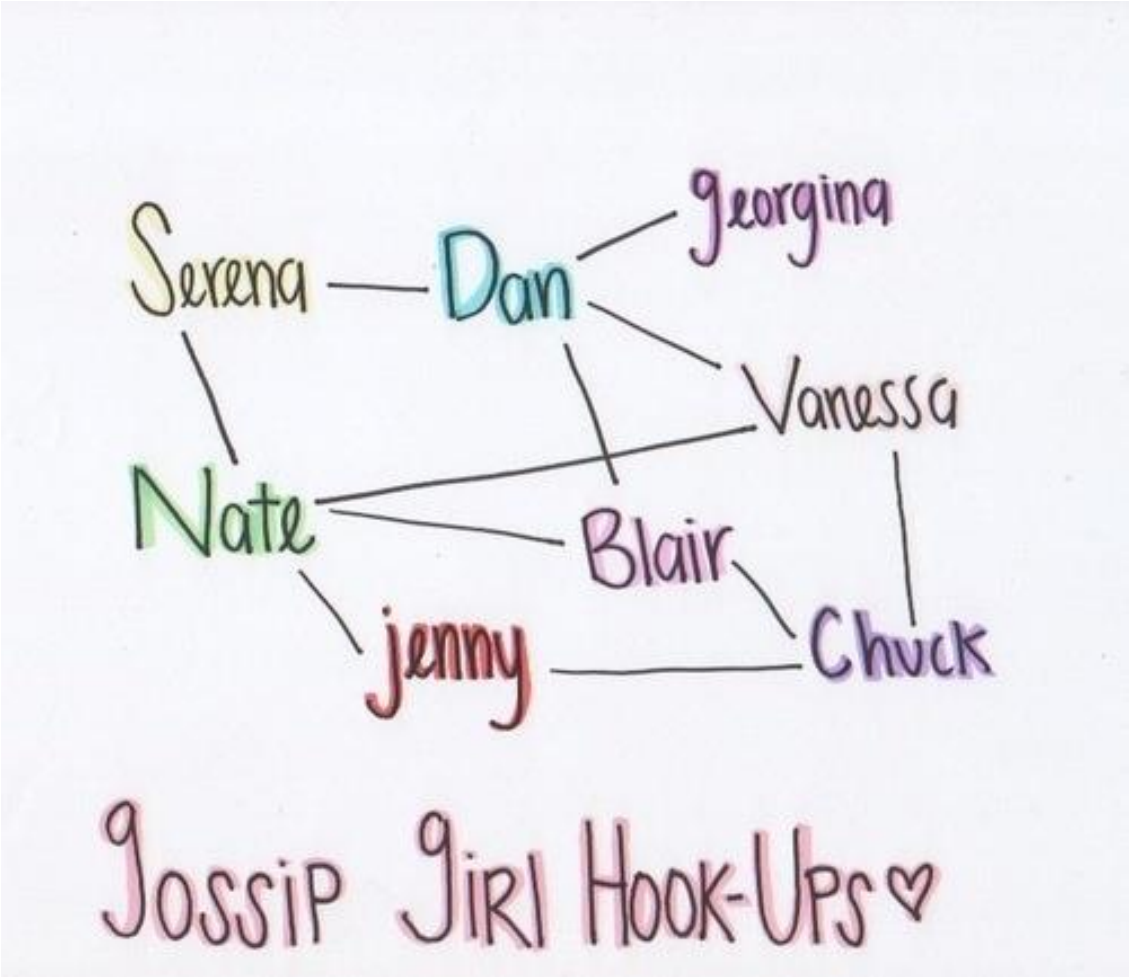
- Sexual development is a normal, anticipated adolescent process
  - A person's ability to engage in behaviors that facilitate intimate relationships and that create opportunities for sex and reproduction is the normative developmental outcome of puberty

Sexual health

- "…a state of physical, emotional, mental and social well-being in relation to sexuality; it is not merely the absence of disease, dysfunction or infirmity. Sexual health requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence. For sexual health to be attained and maintained, the sexual rights of all persons must be respected, protected and fulfilled."

World Health Organization

Trends in teen sexual behaviour

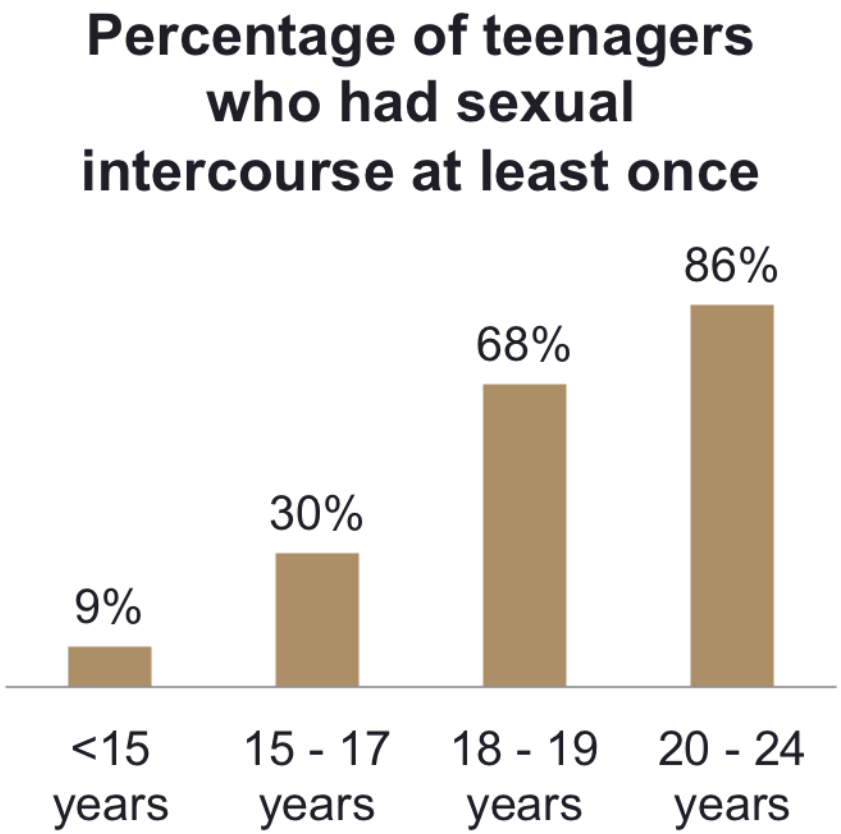


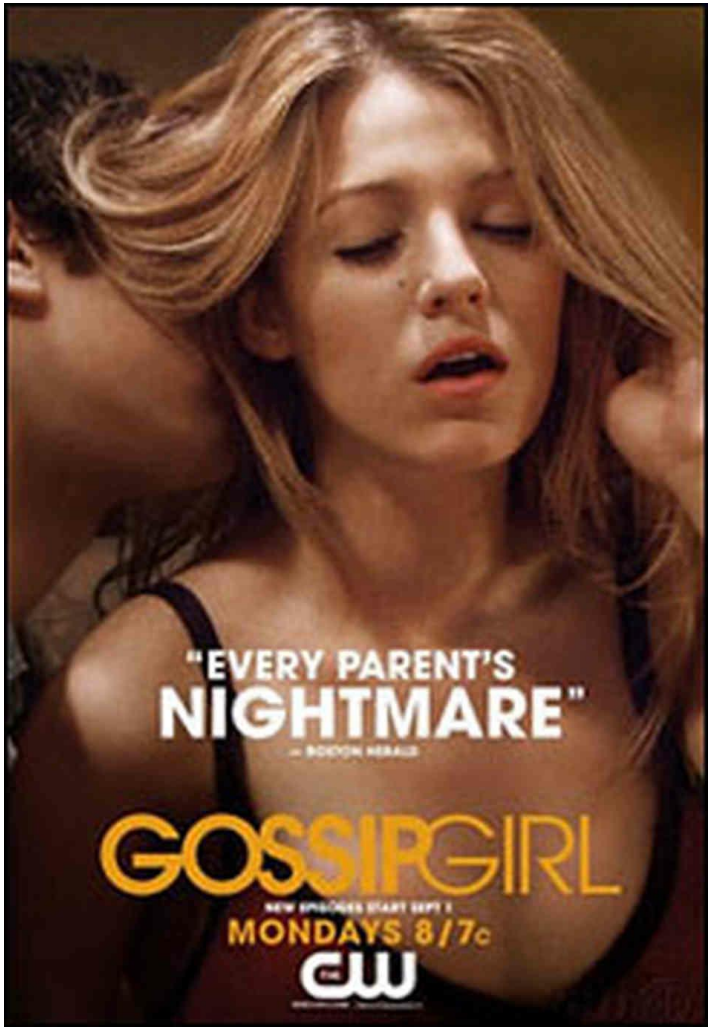
Age of sexual initiation

In Canada, what is the average age of the initiation of sexual intercourse?

a) < 14 years
b) 15 years
c) 16 years
d) 17 years
e) > 18 years

Are teens having sex?





Rotermann, Michelle. 'Sexual behaviour and condom use of 15 – 24 year olds in 2003 and 2009/2010.' Health reports, Statistics Canada, 2012.

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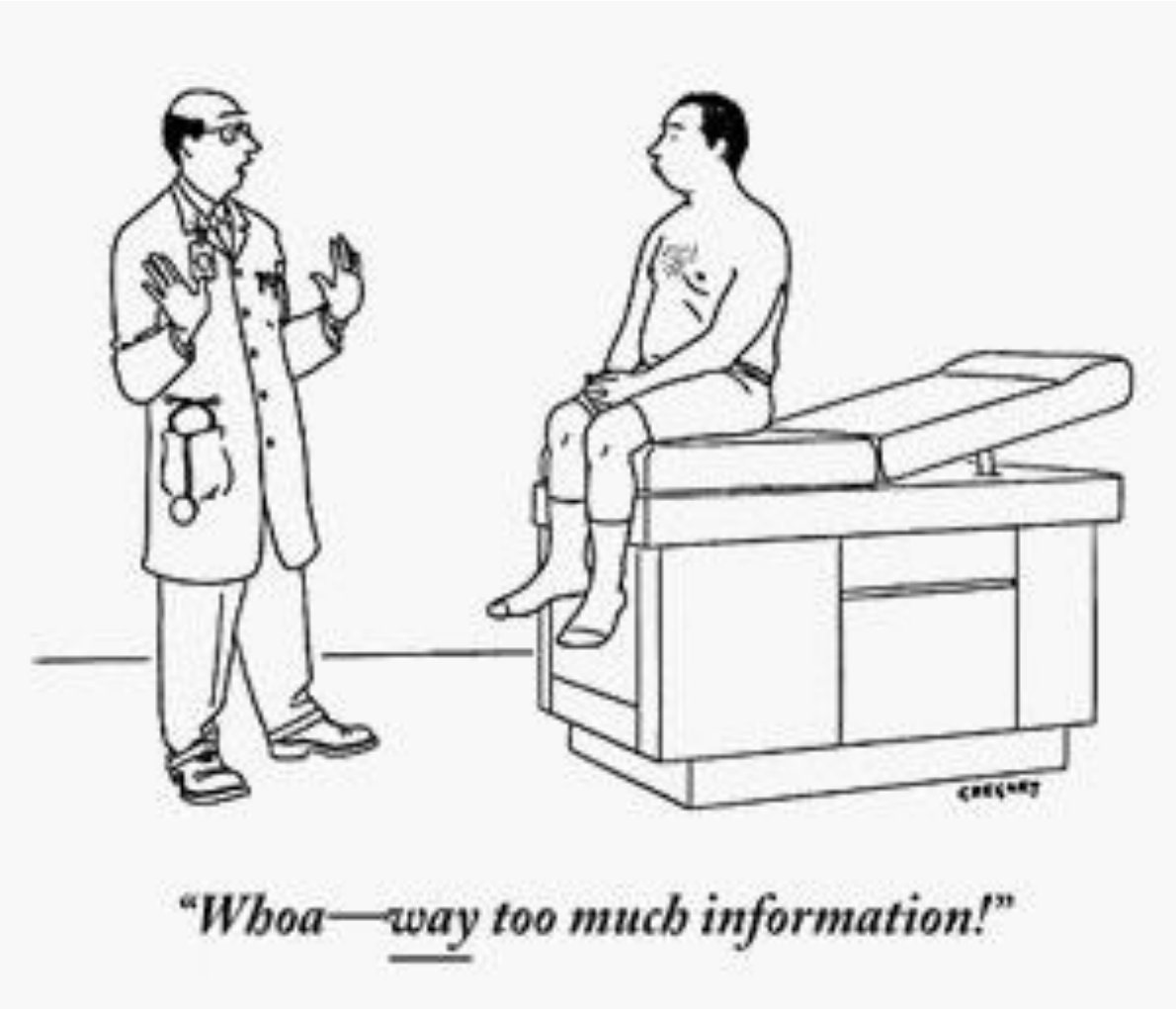
16.5 years

Sexual history



Confidentiality

An essential component of health care for adolescents because it is consistent with their development of maturity and autonomy and without it, some adolescents will forgo care

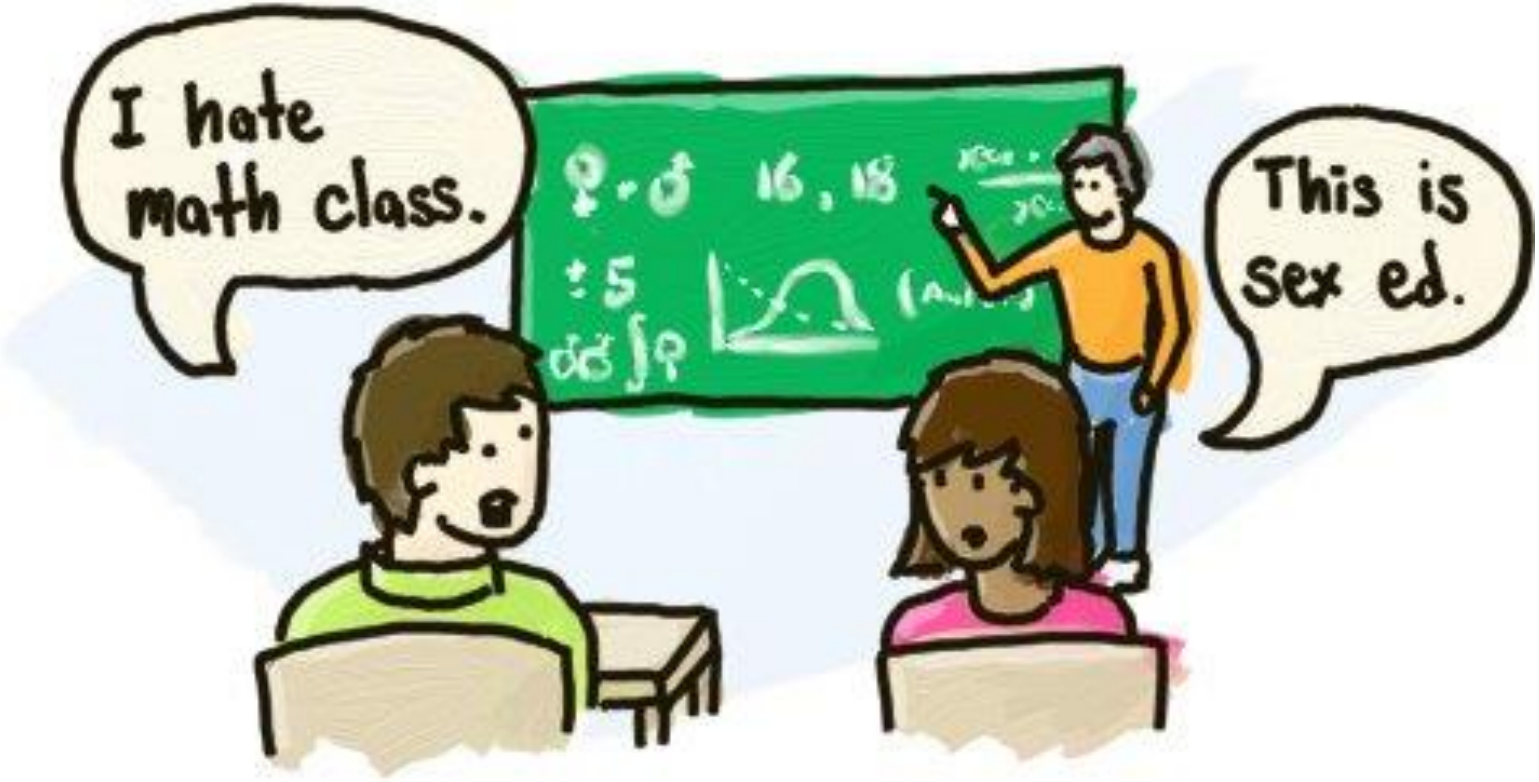
- In large studies, up to ¼ of middle and high school students reported that they did not seek health care they needed
  - 35% of students who did not seek care reported one reason was "*not wanting to tell their parents*"

Society for Adolescent Health & Medicine Position Paper. Confidential Health Care for Adolescents. Journal of Adolescent Health, 2004.

Sexual history – "SEx ASAP"

- **S**ituation
  - Current relationship (age, length, ?monogamy)
- **Ex**es
  - Number of past partners
- **A**ctivities
  - Vaginal, anal, oral sex
  - "Attracted to men, women or both?"
  - Social media, i.e. sexting
- **S**TIs
  - Previous history or symptoms of infection (?treated)
  - Last test for STIs
  - History of STIs in partner
- **A**buse
  - "Have you ever had an unpleasant sexual experience?"
- **P**rotection
  - Against pregnancy
  - Against STIs

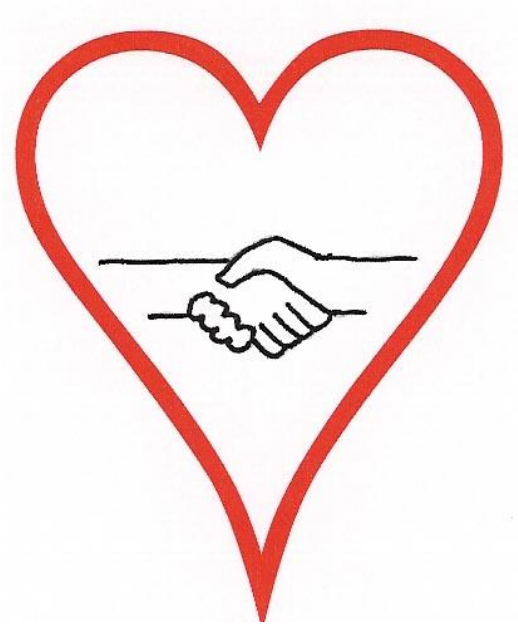
Age of sexual consent in Canada



Age of sexual consent in Canada

According to the Criminal Code of Canada, what is the legal age for non-exploitive sexual consent?

a) 12 years
b) 14 years
c) 16 years
d) 18 years
e) No particular age, as long as it is consensual



Age of sexual consent in Canada

- Legislation changed in 2008, changing the age of consent for sexual activity from 14 to 16 years
  - "Nonexploitative sexual activity" – no prostitution or pornography; no relationship of trust, authority or dependency (i.e. coach, spiritual leader, teacher, principal, guidance counsellor, family member)
- "Close-in-age" exceptions:
  - Youth 12 or 13 years can consent with peers within 2 years age different
  - Youth 14 or 15 years when age difference no more than 5 years
- *Children younger than 12 years can never consent to sexual activity with anyone*

Bellemare, Steven. Age of consent for sexual activity in Canada. Paediatr Child Health, 2008.

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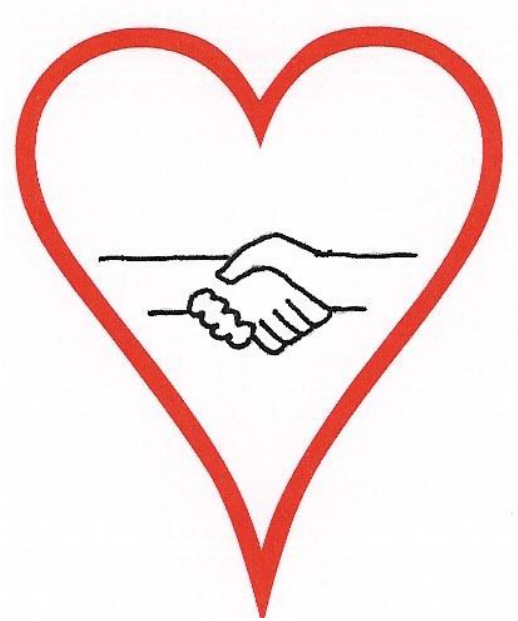

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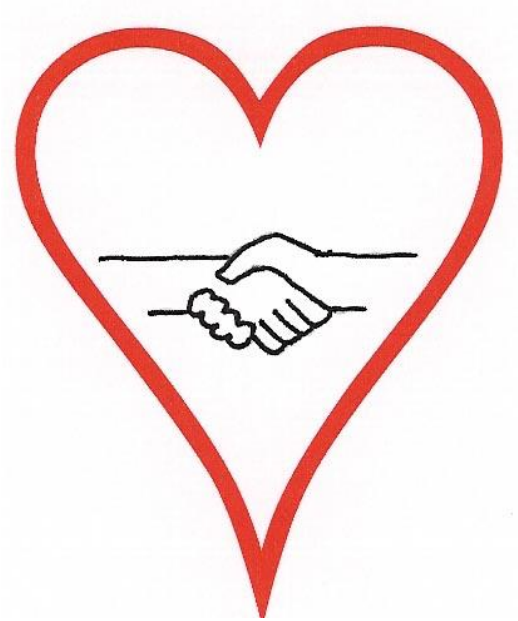
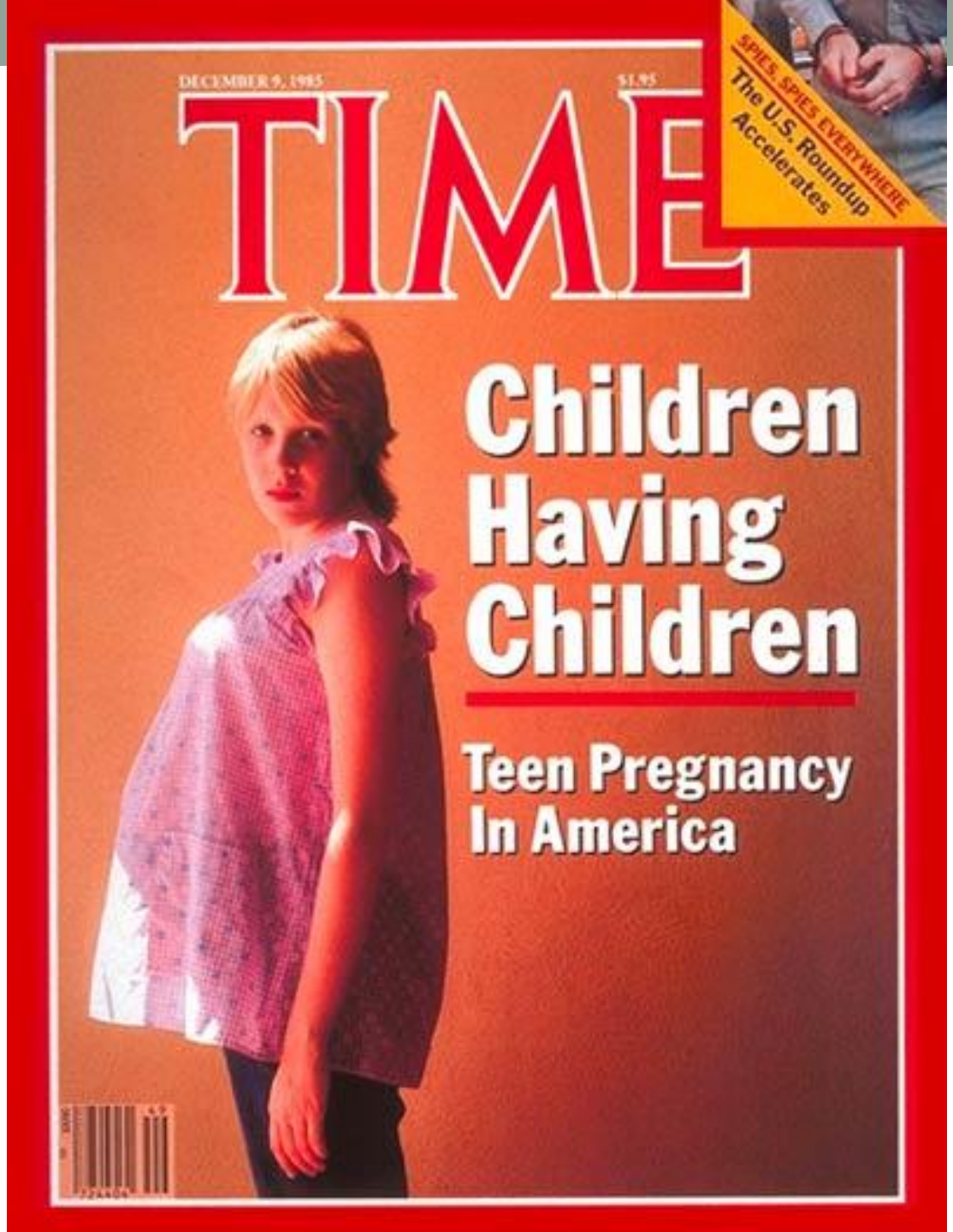
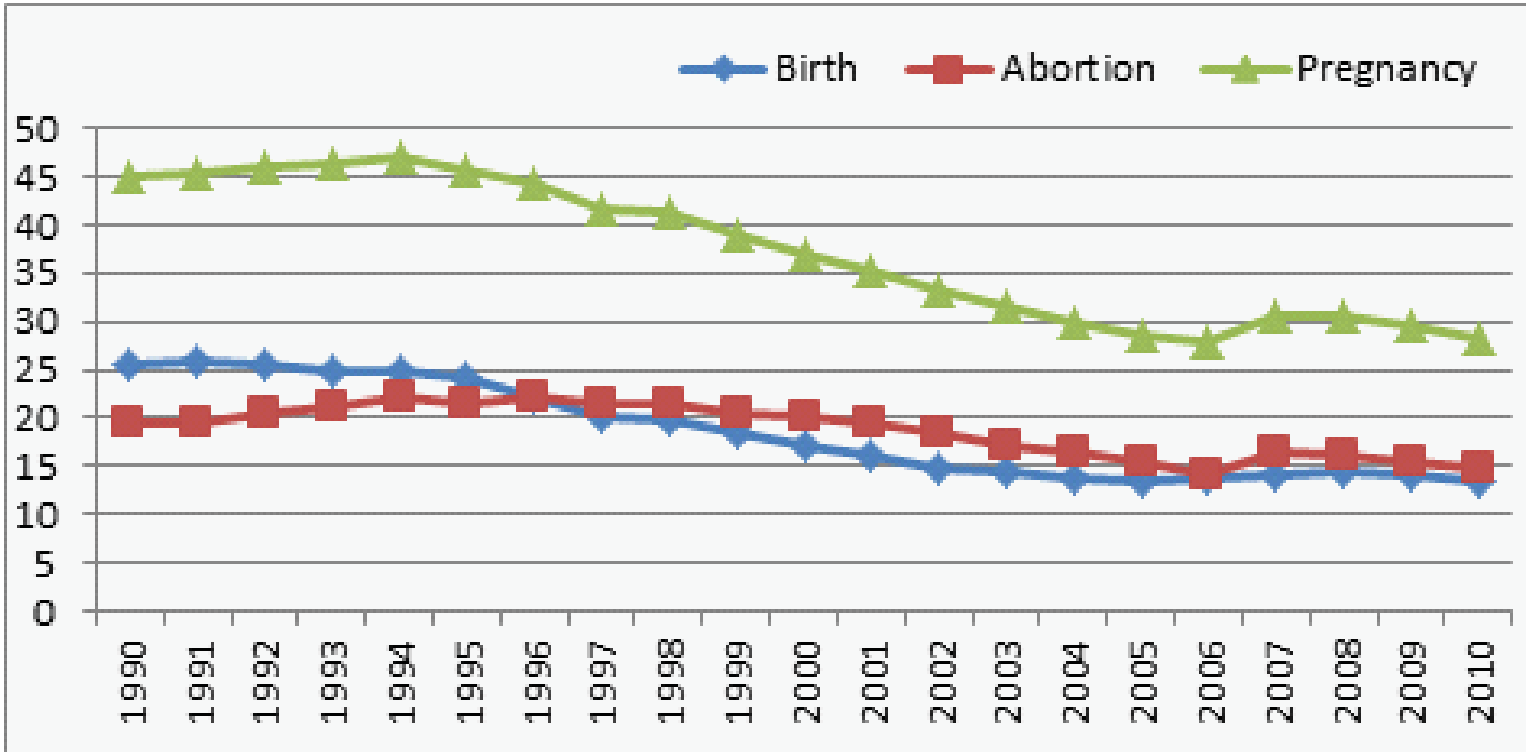



DECEMBER 9, 1985
$1.95
TIME
SPIES, SPIES EVERYWHERE
The U.S. Roundup Accelerates
Children Having Children
Teen Pregnancy In America

Teenage pregnancy



- 80% of teenage pregnancies are unintended
  - Most teenage pregnancies occur within the ***first six months*** after teens begin to have intercourse (average age for both sexes is ~ 16.5 years)
- 50% end in abortion

McKay A. Trends in Canadian National and Provincial/Territorial Teen Pregnancy Rates: 2001-2010. The Canadian Journal of Human Sexuality 2012;21:3-4.

Teenage pregnancy

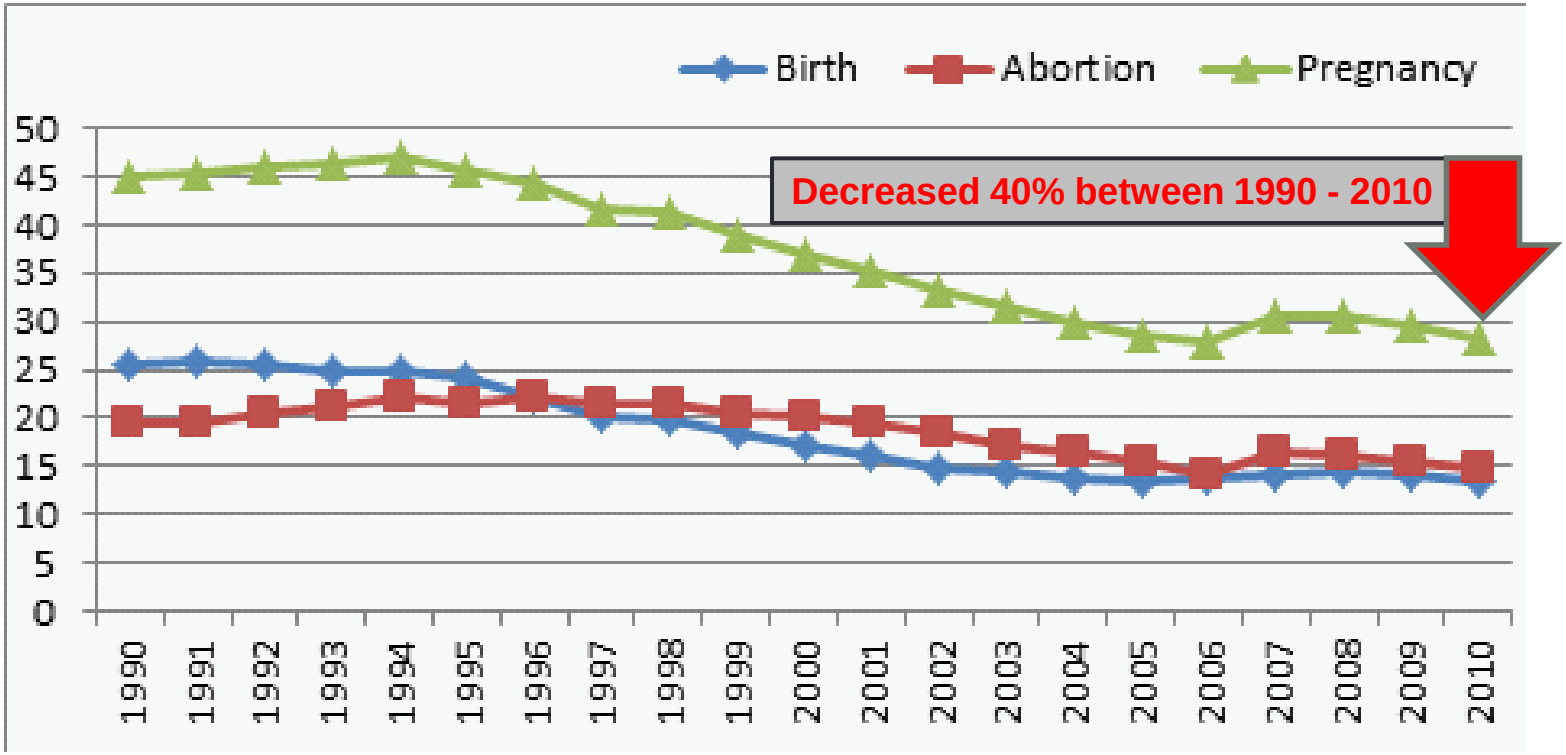
Risk to fetus, with higher risks of preterm deliveries, low birth weight, neonatal mortality

Risk to mother, with higher risks of school drop-out, poverty and depression

Risk to public health system, with higher financial burdens

Black AY, Fleming NA, Rome E. Pregnancy in adolescents. Adolescent Medicine: state of the art reviews 2012;23:123-138, xi.

Teenage pregnancy



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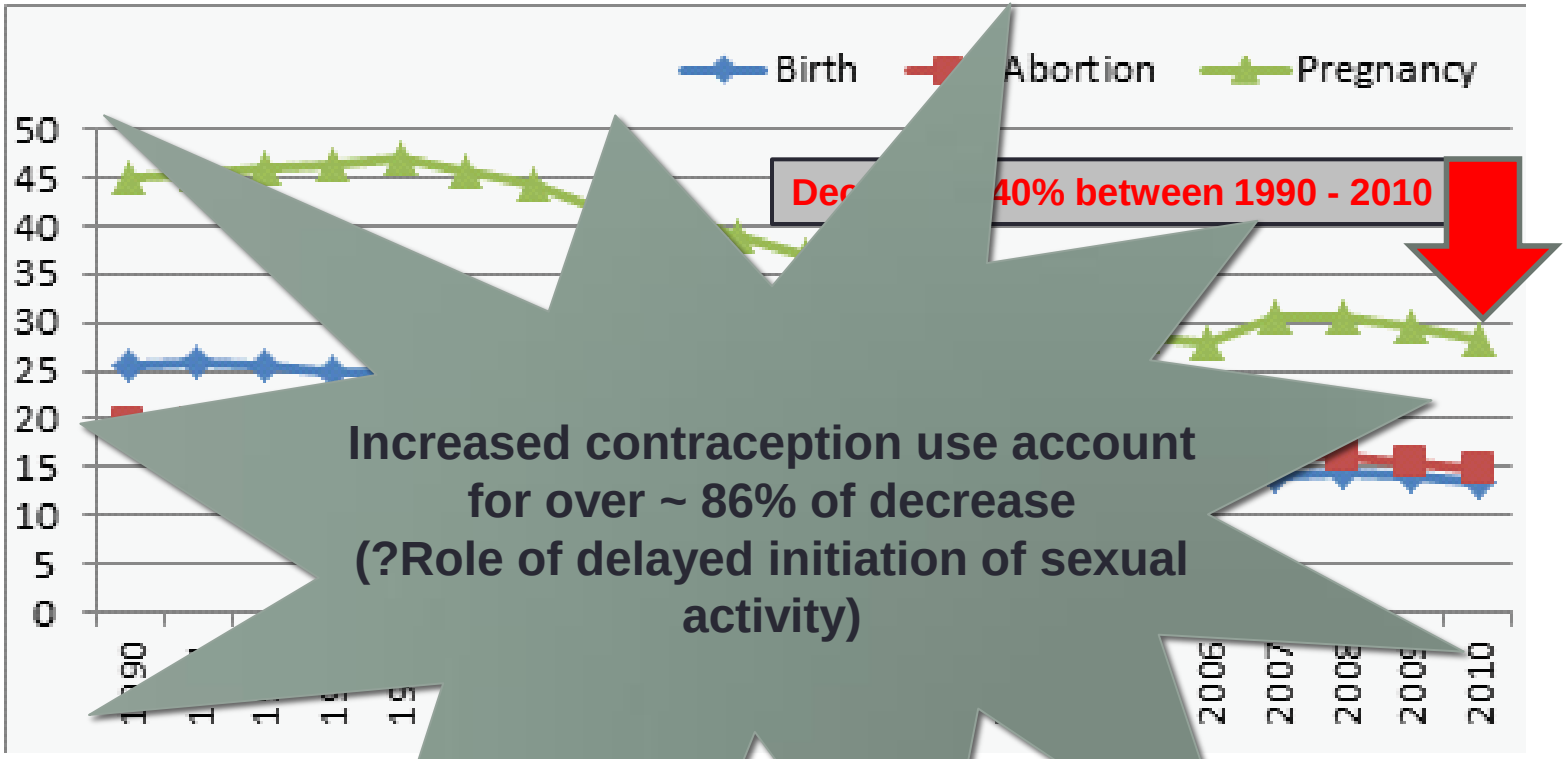

Increased contraception use account for over ~ 86% of decrease (?Role of delayed initiation of sexual activity)

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Provincial/territorial pregnancy rates

Table 2 **Provincial/territorial/national pregnancy rates per 1,000, ages 15-19, 2001-2010**

	2001	2005	2006	2010	% change 2001-2005	% change 2006-2010	% change 2001-2010
NFLD	26.4	22.5	24.1	32.7	-14.8	+35.7	+23.9
PEI *t*	23.3	18.9	15.2	14.9	-18.9	-2.0	-36.0
NS	28.2	23.7	27.1	31.8	-15.6	+17.4	+12.8
NB *t*	29.6	22.6	24.9	34.8	-23.6	+39.8	+17.6
QUE*	37.7	32.4	31.1	28.5	-14.1	-8.3	-24.4
ON	30.6	23.0	22.8	21.2	-24.8	-7.0	-30.7
MN *t*	53.6	40.5	42.3	48.7	-24.4	+15.1	-9.1
SK	43.4	42.4	44.5	44.1	-2.3	-0.9	+1.6
AB	42.1	33.0	34.4	34.8	-21.6	+1.2	-17.3
BC *t* **	34.7	29.3	30.3	29.5	-15.6	-2.6	-15.0
YK	49.8	31.4	56.4	59.5	-36.4	+5.5	+19.5
NWT***	89.4	73.0	75.2	40.0	-18.3	-46.8	-55.3
NV***	148.3	139.4	149.8	115.2	-6.0	-23.1	-22.3
CAN	35.4	28.6	27.9	28.2	-19.2	+1.1	-20.3

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Despite decrease, still four times Canadian average

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20% of births in Nunavut occurred among women aged between 15 and 19 years versus 4% for rest of Canada

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Population pyramids

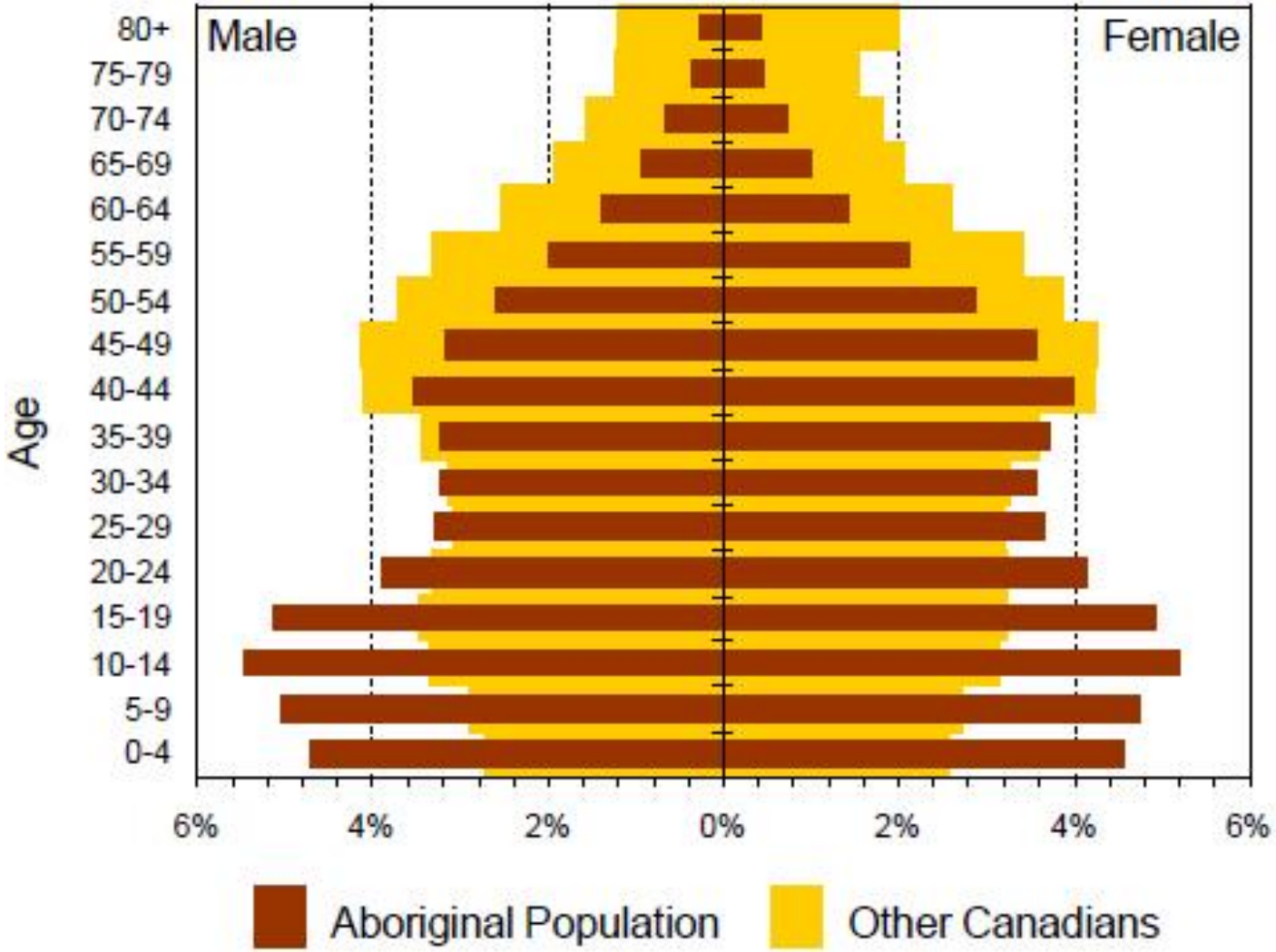

Table I. Likely determinants known to be related to teenage pregnancies.

	Inuit	AI/AN	General population
Psychological and socio-economic factors			
Low education of teen	x	x	x
Single/divorced/separated/unmarried teen mother	x	x	x
Low household income	x	x	x
Single-parent household or large family living in teen's house	x	x	x
Overcrowding and house in need of major repairs	x		
Low education of teens' parents			x
Divorced/separated parents of teen			x
Teenage pregnancy of the mother/siblings of the teen			x
Substance use of teen			x
Mental illness (distress, depression) of teen		x	x
Low self-esteem of teen			x
Sexual behaviours			
Lacking access to or making poor use of contraception		x	x
Early sexual activity		x	x
Frequency of sexual intercourse		x	x
Substance use before sexual intercourse		x	x
Diverse sexual risky behaviours (ever having sex, multiple partners, recent sexual intercourse)		x	x

AI/AN, American Indian/Alaska Native.

Moisan C et al. 'Teen pregnancy in Inuit communities – gaps still needed to be filled. International journal of circumpolar health, 2016.

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AI/AN, American Indian/Alaska Native.

Protective factors among Aboriginal youth:
- self-efficacy to abstain from sex
- valuing school achievement
- support from parents
- having a positive Native identity/sense of belonging to a Native community

Moisan C et al. 'Teen pregnancy in Inuit communities – gaps still needed to be filled. International journal of circumpolar health, 2016.

Contraception

Contraception

Which reversible method of contraception offers the highest effectiveness and highest continuation rates at 1 year?

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b) Oral contraceptive pill
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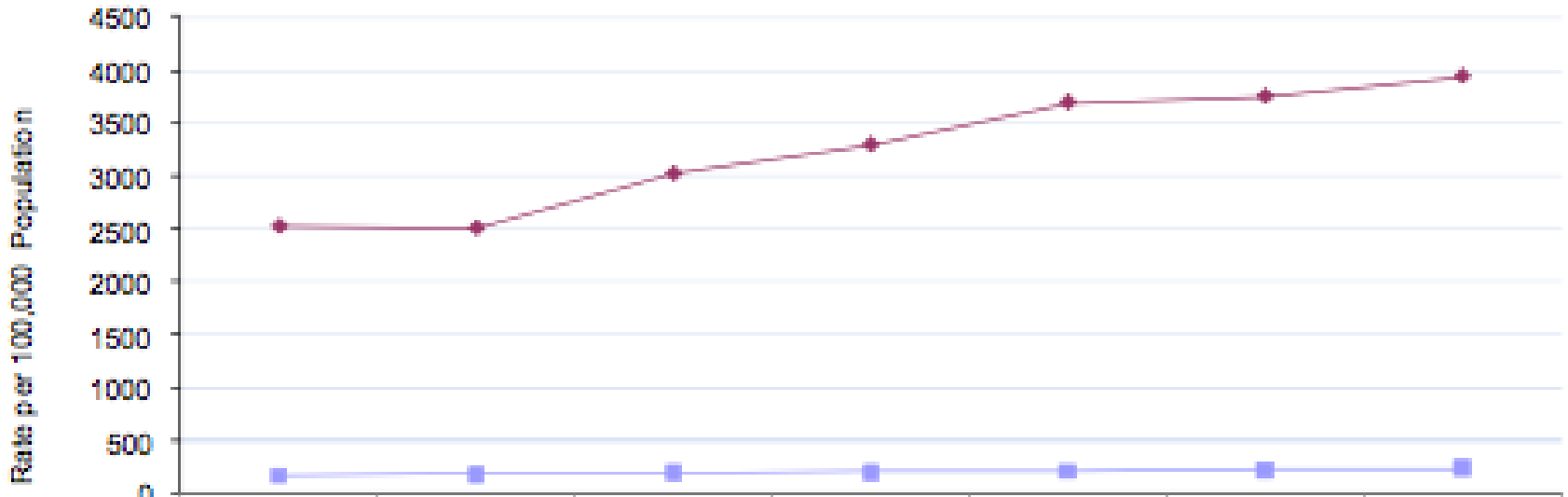
LARCs

Contraception

Contraception

Chlamydia

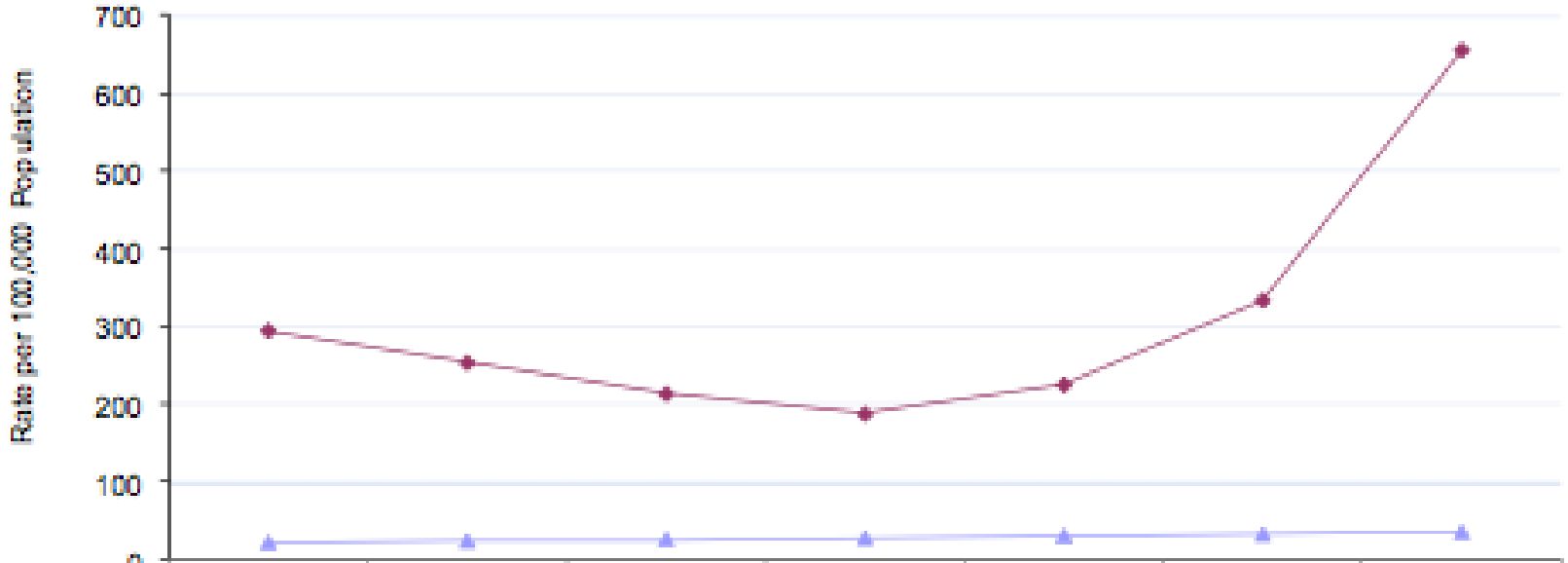


	2002	2003	2004	2005	2006	2007	2008
CANADA	163.9	176.7	189.7	198.4	206.1	214.0	228.4
NUNAVUT	2519.4	2503.5	3016.1	3292.3	3690.2	3747.3	3937.2

Figure 30. Reported Chlamydia Rate per 100,000 Population[1], Three-Year Rolling Averages, Canada and Nunavut, 2002–2008 *(Source: Surveillance and Epidemiology Section, Community Acquired Infections Division, Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada, 2000–2008)*

[1] Data are crude rates and not age-standardized; due to the age distribution of Nunavut's population, presented rates may not be representative of true incidence in the territory.

Gonorrhea

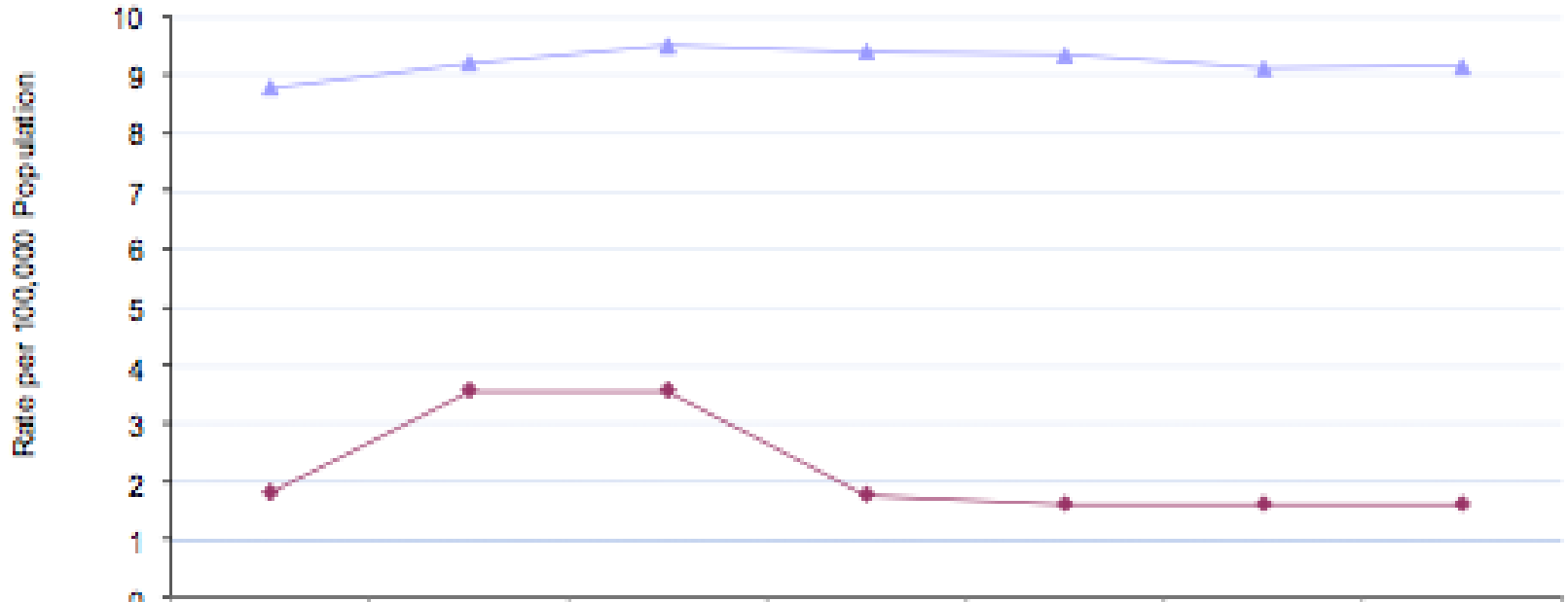


	2002	2003	2004	2005	2006	2007	2008
CANADA	21.8	23.8	26.2	27.9	30.8	33.1	36.3
NUNAVUT	294.9	253.7	214.2	188.2	225.8	334.1	655.5

Figure 31. Reported Gonorrhea Rate per 100,000 Population[1], Three-Year Rolling Averages, Canada and Nunavut, 2002–2008 *(Source: Surveillance and Epidemiology Section, Community Acquired Infections Division, Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada, 2000–2008)*

[1] Data are crude rates and not age-standardized; due to the age distribution of Nunavut's population, presented rates may not be representative of true incidence in the territory.

HIV



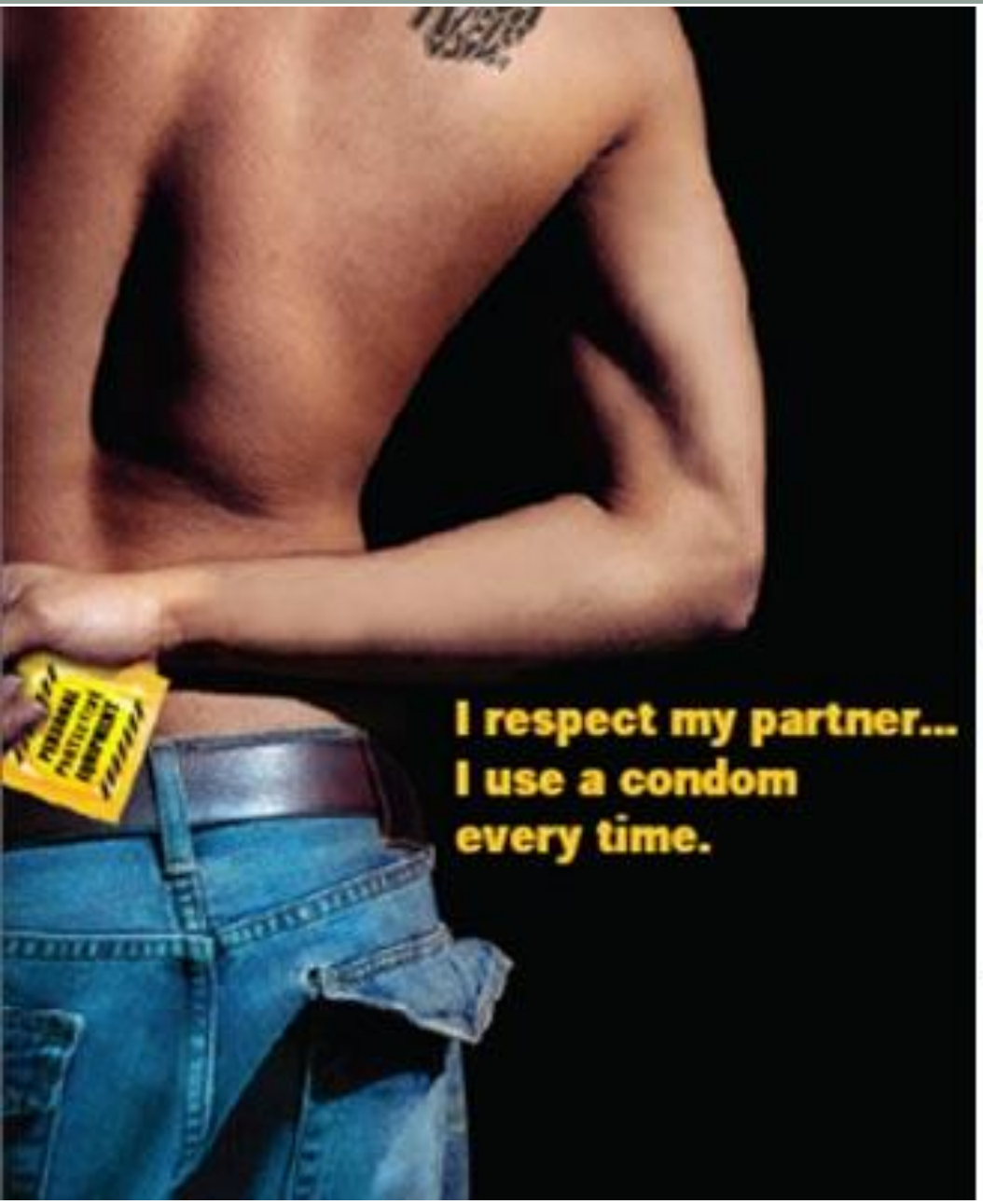
	2002	2003	2004	2005	2006	2007	2008
CANADA	8.8	9.2	9.5	9.4	9.3	9.1	9.1
NUNAVUT	1.8	3.6	3.6	1.8	1.6	1.6	1.6

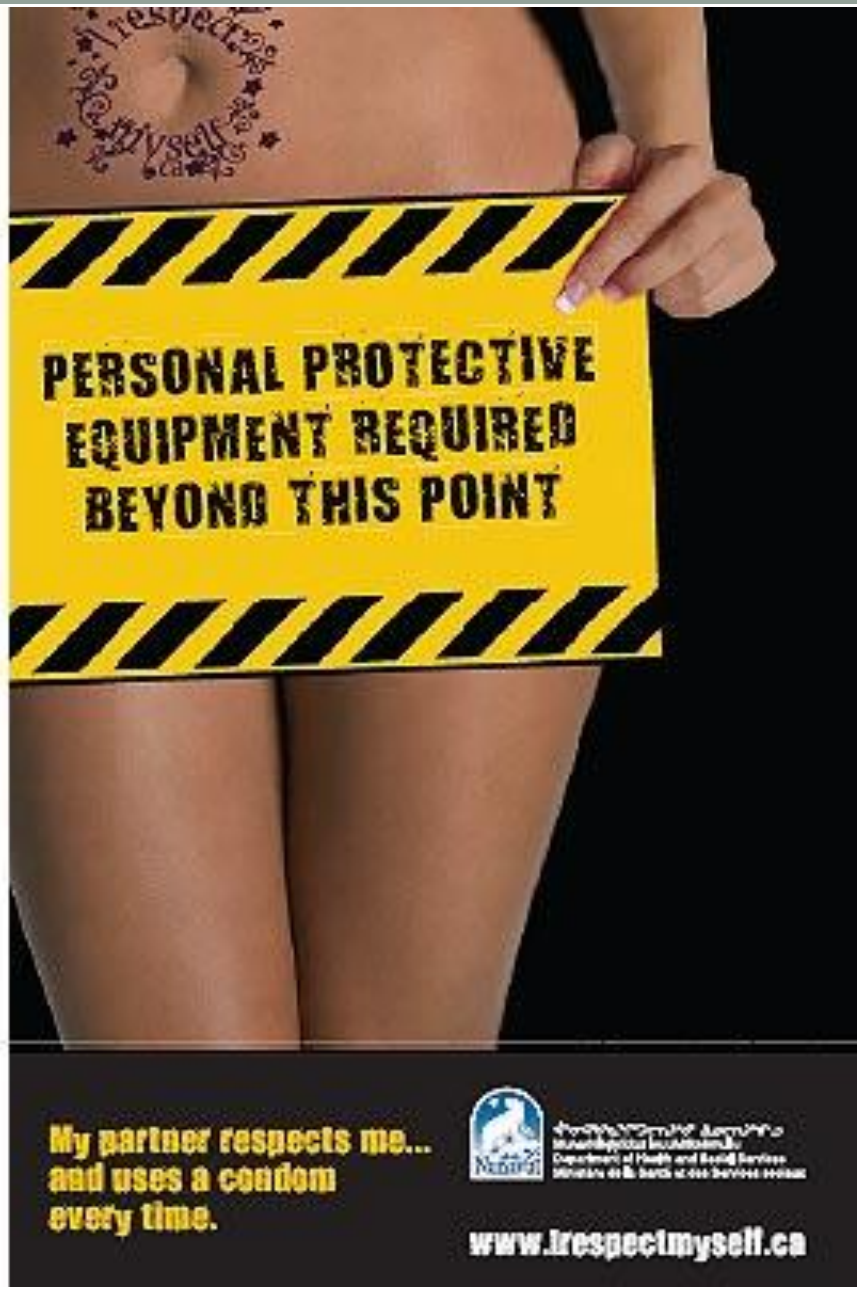
Figure 32. HIV Positive Test Rate per 100,000 Population Aged 15 and Over[1], Three-Year Rolling Averages, Canada and Nunavut, 2002–2008 *(Source: Surveillance and Epidemiology Section, Community Acquired Infections Division, Centre for Communicable Diseases and Infection Control, Public Health Agency of Canada, 2000–2008)*

[1] Data are crude rates and not age-standardized.

“I Respect Myself”

- Sexual health campaign launched in 2010 by the Department of Health and Social Services in Nunavut
  - Aimed at youth to raise their awareness of safe sex, sexual health and lower the incidence of sexually transmitted diseases
    - Informational website: www.irespectmyself.ca
    - Promotional materials
    - Safer sex products for distribution


I respect my partner...
I use a condom
every time.


PERSONAL PROTECTIVE
EQUIPMENT REQUIRED
BEYOND THIS POINT
My partner respects me...
and uses a condom
every time.
www.irespectmyself.ca

PERSONAL
PROTECTIVE
EQUIPMENT

Put On Something Sexy

Opt Options for Sexual Health

Contraception

Contraception

What does L-A-R-C stands for?

Long-**A**cting **R**eversible **C**ontraception

- Intrauterine contraception (IUC)
  - Copper-releasing (intrauterine device, “IUD”)
  - Progesterone-releasing (levonorgestrel) (intrauterine system, “IUS”)
    - LNG-IUS 52 mg (Mirena)
    - LNG-IUS 13.5 mg (Jaydess)
- Implant (not available in Canada)

Long-acting reversible contraception

- Hormonal intrauterine system (IUS):
  - Mirena - *can last up to 5 years*
  - Jaydess – *lasts 3 years, smaller diameter*

  - First-line contraceptive choices for adolescents
    - *Good choice re: for lowering to the risk of repeat pregnancies*

  - Side effects:
    - Expulsion in 5%
    - Irregular bleeding
    - Pain, cramping at insertion

  - Contraindications:
    - Current purulent cervicitis, PID
    - Pregnancy
    - Known distorted uterine cavity

Effectiveness:

- Perfect use: 99.9%
- Typical use: 99.9%

Long-acting reversible contraception

- Non-hormonal intrauterine device (IUD):
  - Copper IUD
    - Contains copper wire on vertical stem
    - Mechanism of action:
      - Prevention of fertilization
    - Lasts up to 10 years
    - Side effects: irregular bleeding, increased menstrual flow, pain or dysmenorrhea
    - Advantages:
      - Cost, duration of effectiveness
      - Can be used for emergency contraception up to 7 days after unprotected intercourse

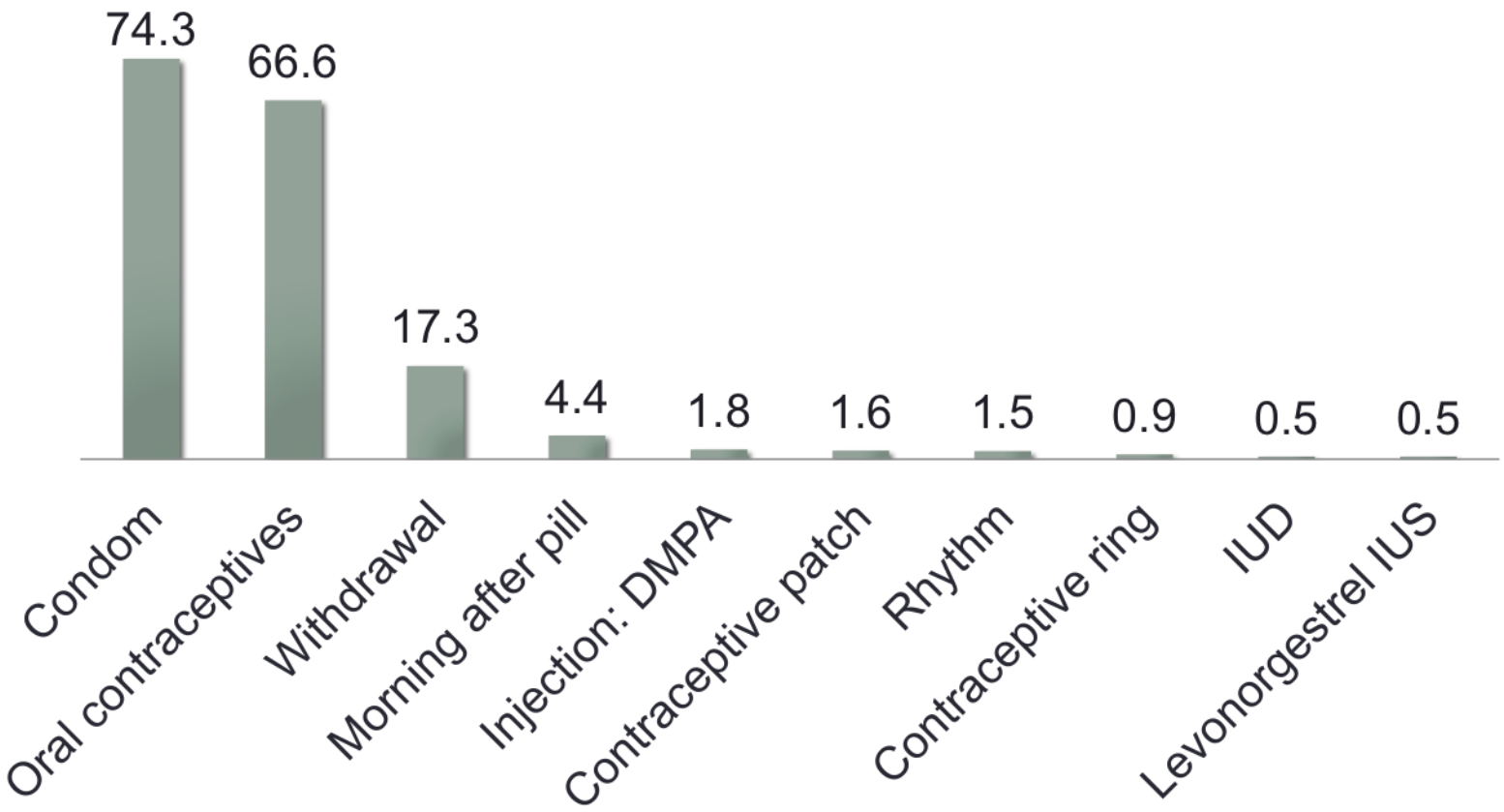
Contraception

Why do LARCs have the best effectiveness and have the highest continuation rate at 1 year?

Effectiveness is **independent** of the user

Methods of contraception

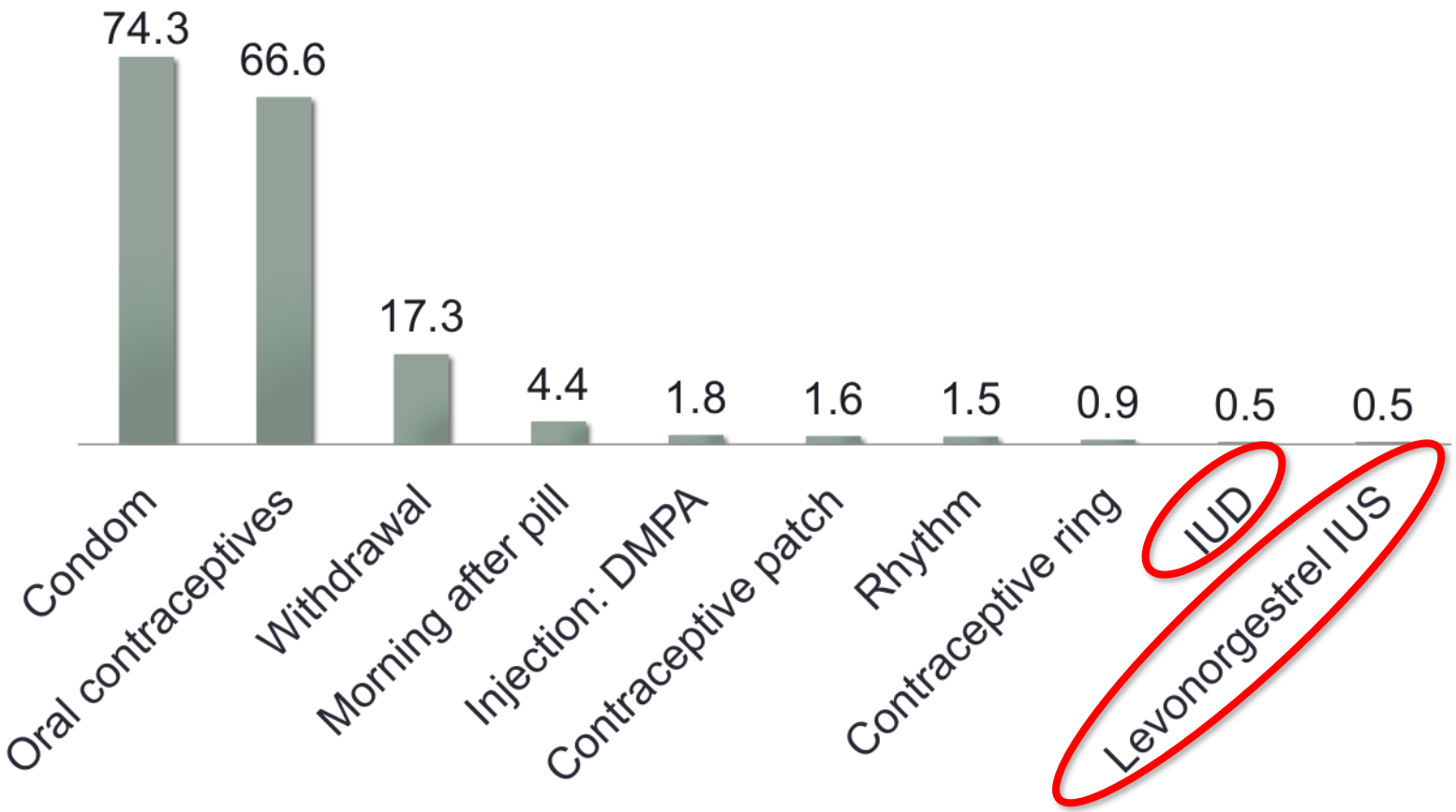
Age 15 – 19 years



Black, A. ‘Contraceptive use among Canadian women of reproductive age: Result of a national survey.’ JOGC, 2009.

Methods of contraception

Age 15 – 19 years



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THE

CONTRACEPTIVE

CHOICE

PROJECT

THE CONTRACEPTIVE CHOICE PROJECT

www.choiceproject.wustl.edu/#CHOICE

THE CONTRACEPTIVE CHOICE PROJECT

- Promotion of the use of LARC in order to reduce the number of unintended pregnancies
- Removed 3 barriers to use of LARC:
  - Cost
  - Education
  - Access

THE CONTRACEPTIVE CHOICE PROJECT

- Promotion of the use of LARC in order to reduce the number of unintended pregnancies
- Removed 3 barriers to use of LARC:
  - Cost
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Provided reversible method of choice at <u>no cost</u> for 2 – 3 years

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THE CONTRACEPTIVE CHOICE PROJECT

- Promotion of the use of LARC in order to reduce the number of unintended pregnancies
- Removed 3 barriers to use of LARC:
  - Cost
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  - Access

Standardized contraception counselling, with emphasis on benefit of LARC methods

www.choiceproject.wustl.edu/#CHOICE

THE CONTRACEPTIVE CHOICE PROJECT

- Promotion of the use of LARC in order to reduce the number of unintended pregnancies
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13 recruitment sites
(university-affiliated clinics
and community clinics)

www.choiceproject.wustl.edu/#CHOICE

9256 total participants

Table 1. Baseline Characteristics of Study Participants Overall and According to Age Group.

Characteristic	Total Cohort (N=1404)	14–17 Years of Age (N=484)	18–19 Years of Age (N=920)	P Value*
Race — no. (%)†				<0.01
Black	877 (62.5)	328 (67.8)	549 (59.7)	
White	416 (29.6)	119 (24.6)	297 (32.3)	
Other	111 (7.9)	37 (7.6)	74 (8.0)	
Low socioeconomic status — no. (%)‡	623 (44.4)	163 (33.7)	460 (50.0)	<0.01
Health insurance — no./total no. (%)				<0.01
None	392/1361 (28.8)	78/453 (17.2)	314/908 (34.6)	
Private	583/1361 (42.8)	218/453 (48.1)	365/908 (40.2)	
Public	386/1361 (28.4)	157/453 (34.7)	229/908 (25.2)	
Lifetime male sex partners — median no. (range)	3.0 (0–175)	2.0 (0–30)	3.0 (0–175)	<0.01
Parity — no. (%)				<0.01
0	1059 (75.4)	397 (82.0)	662 (72.0)	
1	289 (20.6)	79 (16.3)	210 (22.8)	
≥2	56 (4.0)	8 (1.7)	48 (5.2)	
Previous unintended pregnancy — no./total no. (%)	671/1403 (47.8)	219/484 (45.2)	452/919 (49.2)	0.16
History of abortion — no. (%)	259 (18.4)	70 (14.5)	189 (20.5)	<0.01
History of sexually transmitted infection — no. (%)§	331 (23.6)	88 (18.2)	243 (26.4)	<0.01
Baseline chosen contraceptive method — no. (%)¶				<0.01
Hormonal IUD	445 (31.7)	119 (24.6)	326 (35.4)	
Nonhormonal IUD	75 (5.3)	14 (2.9)	61 (6.6)	
Etonogestrel implant	485 (34.5)	242 (50.0)	243 (26.4)	
DMPA injection	127 (9.0)	51 (10.5)	76 (8.3)	
Oral contraceptive pill	175 (12.5)	39 (8.1)	136 (14.8)	
Ring	69 (4.9)	11 (2.3)	58 (6.3)	
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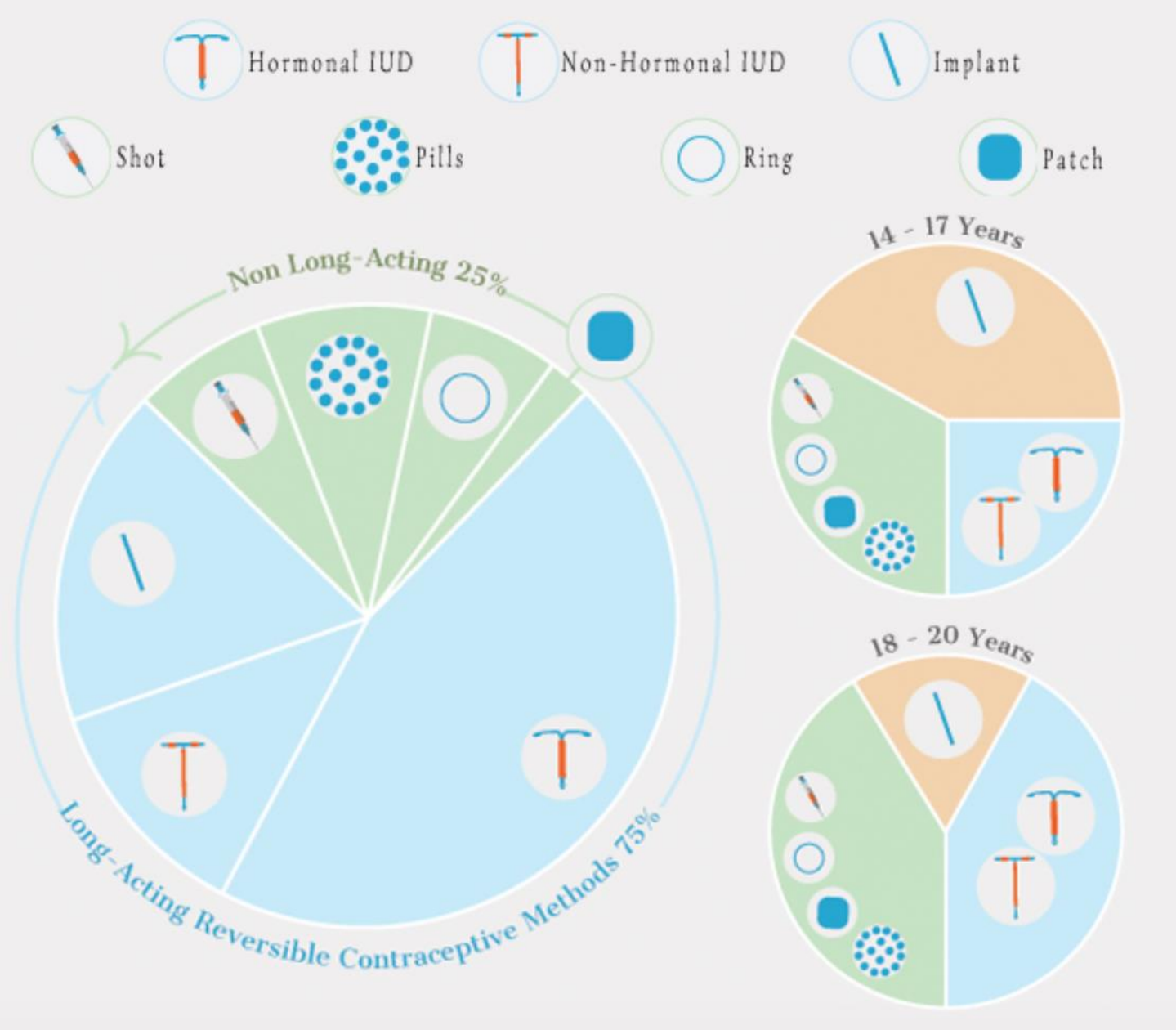

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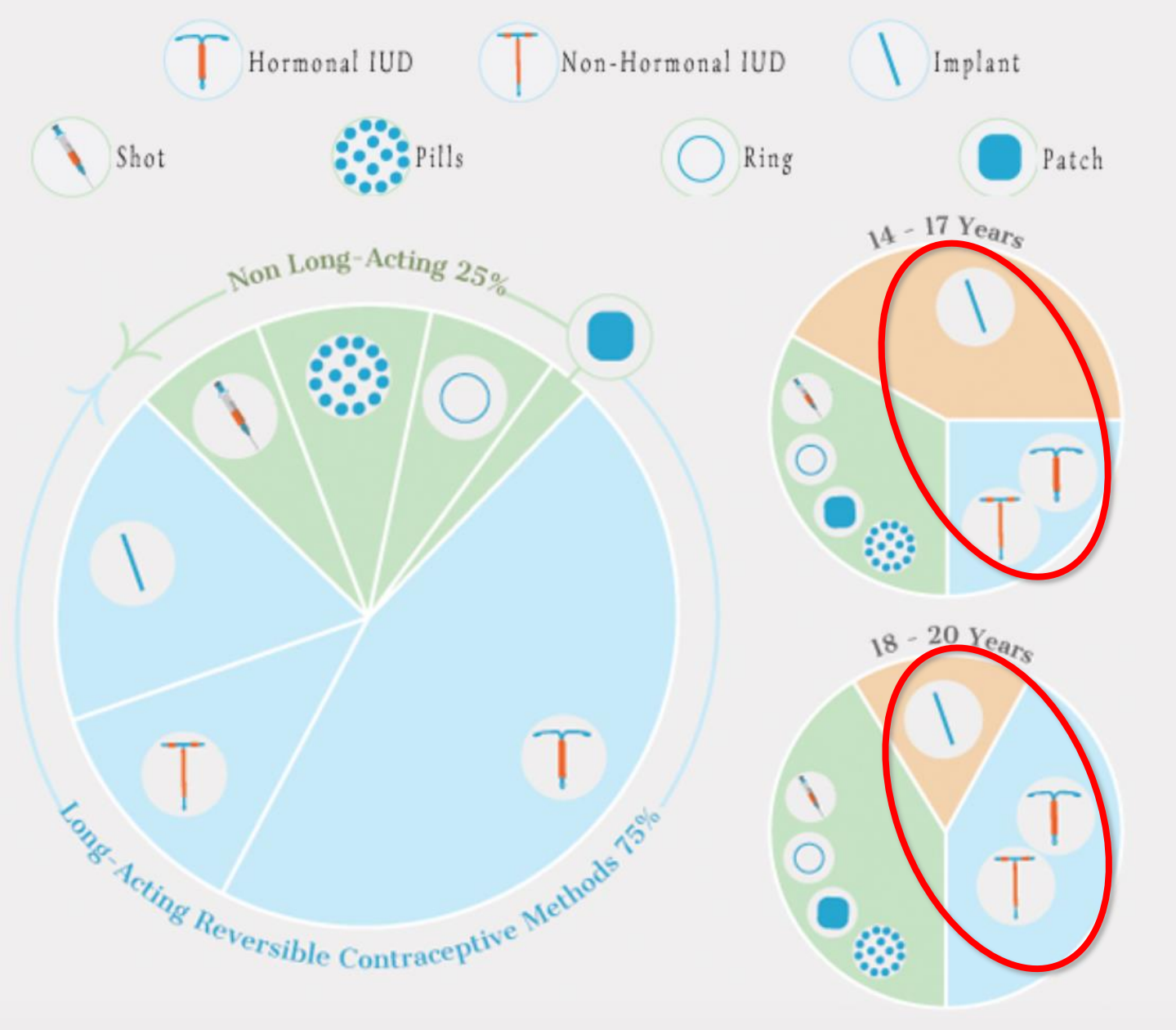

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TABLE 2

Kaplan-Meier estimates of 1-, 2-, and 3-year continuation of baseline method chosen

Variable	Continuation, % (95% confidence interval)		
	1 Year	2 Year	3 Year
Overall	76.7 (75.4–77.9)	64.2 (62.6–65.5)	56.2 (54.5–57.5)
Intrauterine device			
Levonorgestrel	87.3 (85.8–88.6)	76.7 (74.8–78.5)	69.8 (67.6–71.8)
Copper	84.3 (80.7–87.3)	76.2 (72.1–79.9)	69.7 (65.1–73.7)
Implant	81.7 (78.3–84.7)	68.7 (64.7–72.3)	56.2 (51.8–60.3)
Depot medroxyprogesterone acetate	57.1 (51.6–62.3)	39.3 (33.8–44.7)	33.2 (26.9–37.7)
Oral contraceptive pill	60.6 (56.3–64.6)	42.2 (37.9–46.5)	31.5 (27.3–35.8)
Ring	54.3 (49.7–58.6)	37.5 (33.1–41.9)	30.0 (25.8–34.4)
Patch	48.2 (38.3–57.4)	35.0 (25.7–44.5)	28.4 (19.5–37.9)
Long-acting reversible contraceptive	85.8 (84.5–87.0)	75.2 (73.6–76.7)	67.2 (65.4–68.9)
Non-long-acting reversible contraceptive	55.8 (54.2–59.4)	39.5 (36.9–42.1)	31.0 (28.5–33.5)
Adolescents, 14–19 y			
Long-acting reversible contraceptive	82.1 (78.0–85.6)	68.0 (63.0–72.5)	52.6 (47.2–57.7)
Non-long-acting reversible contraceptive	48.5 (42.1–54.6)	34.5 (28.5–40.6)	23.1 (17.6–29.0)
Adults, 20–45 y			
Long-acting reversible contraceptive	86.3 (85.0–87.6)	76.2 (74.5–77.8)	69.2 (67.4–71.0)
Non-long-acting reversible contraceptive	58.6 (55.7–61.3)	40.5 (37.7–43.4)	32.6 (29.8–35.4)

Diedrich. Three-year contraceptive continuation. Am J Obstet Gynecol 2015.

Diedrich JT et al. ‘Three-year continuation of reversible contraception’. American Journal of Obstetrics & Gynecology, 2015.

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Patch	48.2 (38.3–57.4)	35.0 (25.7–44.5)	28.4 (19.5–37.9)
Long-acting reversible contraceptive	85.8 (84.5–87.0)	75.2 (73.6–76.7)	67.2 (65.4–68.9)
Non-long-acting reversible contraceptive	55.8 (54.2–59.4)	39.5 (36.9–42.1)	31.0 (28.5–33.5)
Adolescents, 14–19 y			
Long-acting reversible contraceptive	82.1 (78.0–85.6)	68.0 (63.0–72.5)	52.6 (47.2–57.7)
Non-long-acting reversible contraceptive	48.5 (42.1–54.6)	34.5 (28.5–40.6)	23.1 (17.6–29.0)
Adults, 20–45 y			
Long-acting reversible contraceptive	86.3 (85.0–87.6)	76.2 (74.5–77.8)	69.2 (67.4–71.0)
Non-long-acting reversible contraceptive	58.6 (55.7–61.3)	40.5 (37.7–43.4)	32.6 (29.8–35.4)

Diedrich. Three-year contraceptive continuation. Am J Obstet Gynecol 2015.

Diedrich JT et al. ‘Three-year continuation of reversible contraception’. American Journal of Obstetrics & Gynecology, 2015.

TABLE 5

Reasons for discontinuation of baseline contraceptive method in Contraceptive CHOICE Project

	Long-acting reversible contraception, n (%)			Non-long-acting reversible contraception, n (%)			
Variable	Levonorgestrel-intrauterine device	Copper-intrauterine device	Implant	Depo medroxyprogesterone acetate	Oral contraceptive pill	Patch	Ring
Bleeding changes	136 (19.1)	75 (35.2)	133 (45.5)	58 (25.6)	49 (12.3)	4 (4.8)	39 (10.4)
Pain	82 (11.5)	37 (17.4)	8 (2.7)	4 (1.8)	3 (0.8)	2 (2.4)	9 (2.4)
Did not like "side-effects"	181 (25.4)	20 (9.4)	81 (27.7)	76 (33.5)	62 (15.6)	34 (41.0)	100 (26.7)
Desired pregnancy	67 (9.4)	22 (10.3)	17 (5.8)	4 (1.8)	8 (2.0)	3 (3.6)	15 (4.0)
Method failed	9 (1.3)	3 (1.4)	0	2 (0.9)	25 (6.3)	4 (4.8)	11 (2.9)
Expulsion/came off /fell out	96 (13.5)	26 (12.2)	—	—	—	5 (6.0)	14 (3.7)
Difficult to use	0	0	0	0	0	0	20 (5.3)
Logistics[a]	0	0	0	22 (9.7)	169 (42.5)	14 (16.9)	89 (23.7)
All others	142 (19.8)	30 (14.1)	53 (18.2)	61 (26.7)	82 (20.6)	17 (20.5)	78 (20.8)
TOTALS	713	213	292	227	398	83	375

[a] Time, hard to get, remember.

Diedrich. Three-year contraceptive continuation. Am J Obstet Gynecol 2015.

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TABLE 5

Reasons for discontinuation of baseline contraceptive method in Contraceptive CHOICE Project

	Long-acting reversible contraception, n (%)			Non-long-acting reversible contraception, n (%)			
Variable	Levonorgestrel-intrauterine device	Copper-intrauterine device	Implant	Depo medroxyprogesterone acetate	Oral contraceptive pill	Patch	Ring
Bleeding changes	136 (19.1)	75 (35.2)	133 (45.5)	58 (25.6)	49 (12.3)	4 (4.8)	39 (10.4)
Pain	82 (11.5)	37 (17.4)	8 (2.7)	4 (1.8)	3 (0.8)	2 (2.4)	9 (2.4)
Did not like "side-effects"	181 (25.4)	20 (9.4)	81 (27.7)	76 (33.5)	62 (15.6)	34 (41.0)	100 (26.7)
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Table 2. Pregnancy, Birth, and Abortion Rates among Girls and Women 15 to 19 Years of Age in the CHOICE Cohort as Compared with Those in the U.S. Population.*

Outcome	U.S. Population, All Teens*	U.S. Population, Sexually Experienced Teens†	CHOICE Cohort‡
	no. per 1000 teens		*mean no. per 1000 teens (95% CI)*
Pregnancy	57.4	158.5	34.0 (25.7–44.1)
Birth	34.4	94.0	19.4 (13.3–27.4)
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Secura et al. ‘Provision of no-cost, long-acting contraception and teenage pregnancy’. NEJM, 2014.

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>75% reduction in all 3 outcomes

Secura et al. ‘Provision of no-cost, long-acting contraception and teenage pregnancy’. NEJM, 2014.

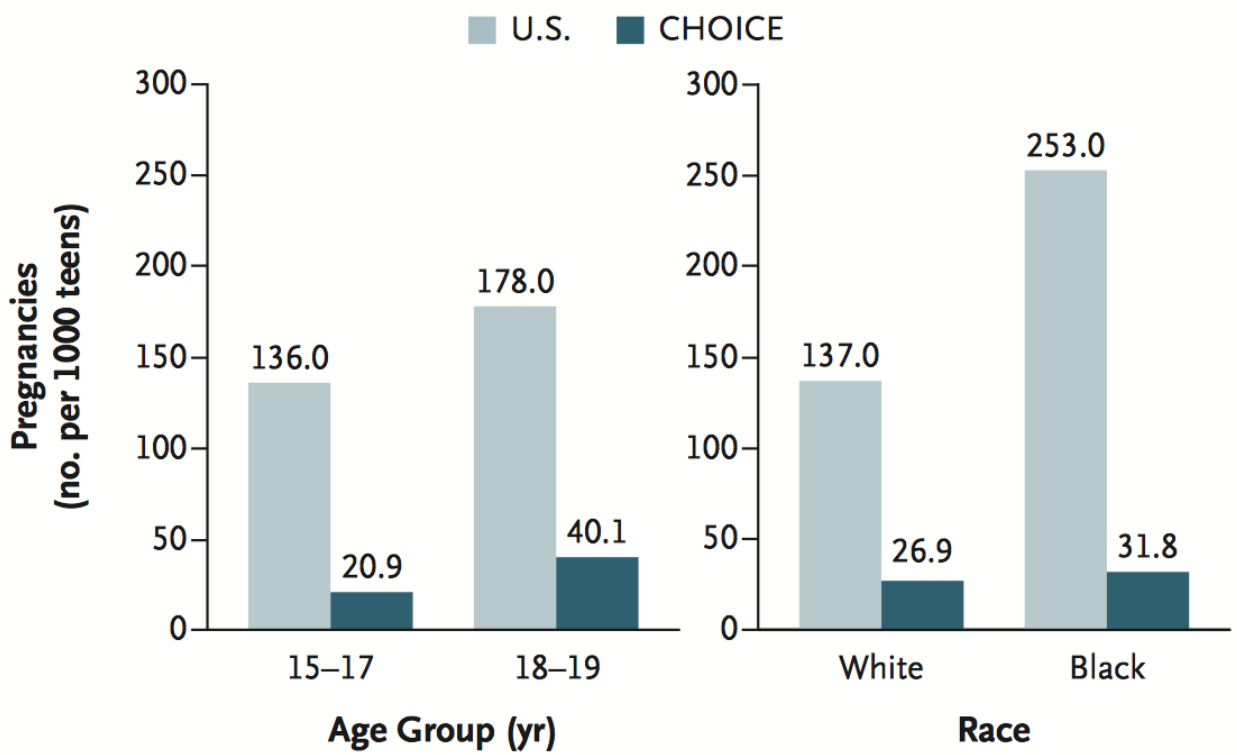


Figure 2. Pregnancy Rates among Sexually Experienced U.S. Teenage Girls and Women, as Compared with CHOICE Participants, Stratified According to Age and Race.

Data for the 2008 U.S. rates stratified according to age and race are from K. Kost, Guttmacher Institute (personal communication).

Secura et al. ‘Provision of no-cost, long-acting contraception and teenage pregnancy’. NEJM, 2014.

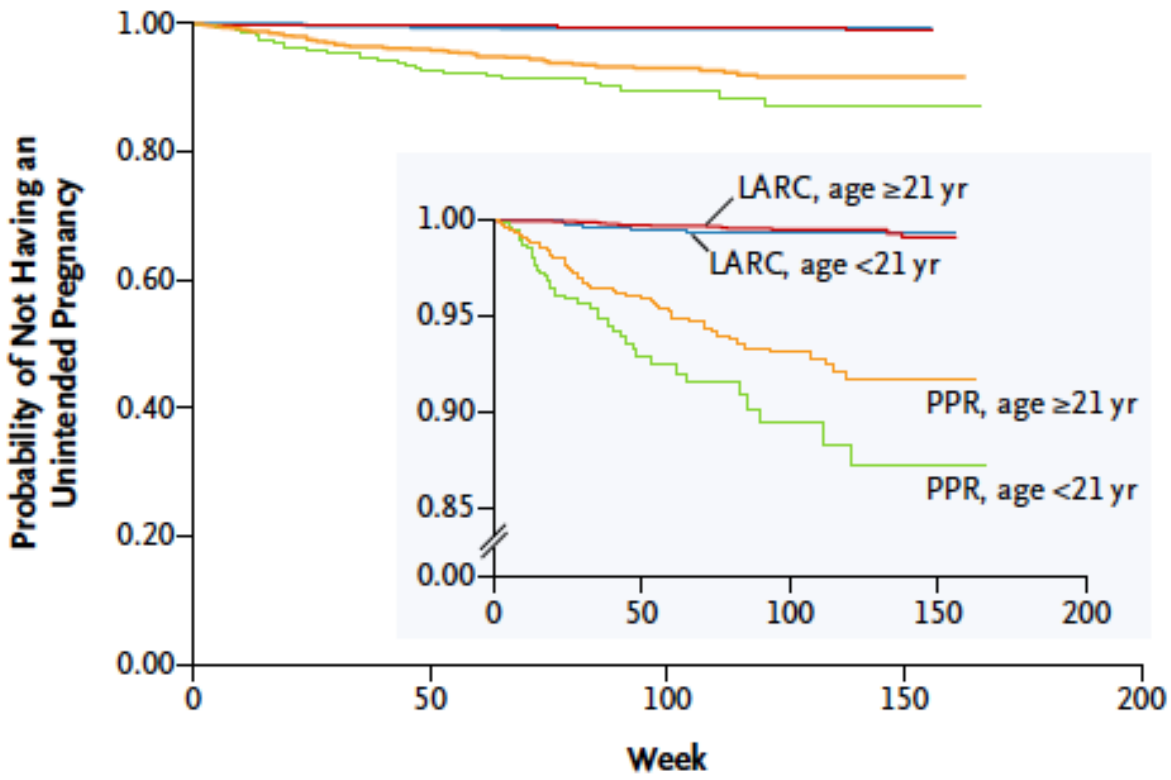
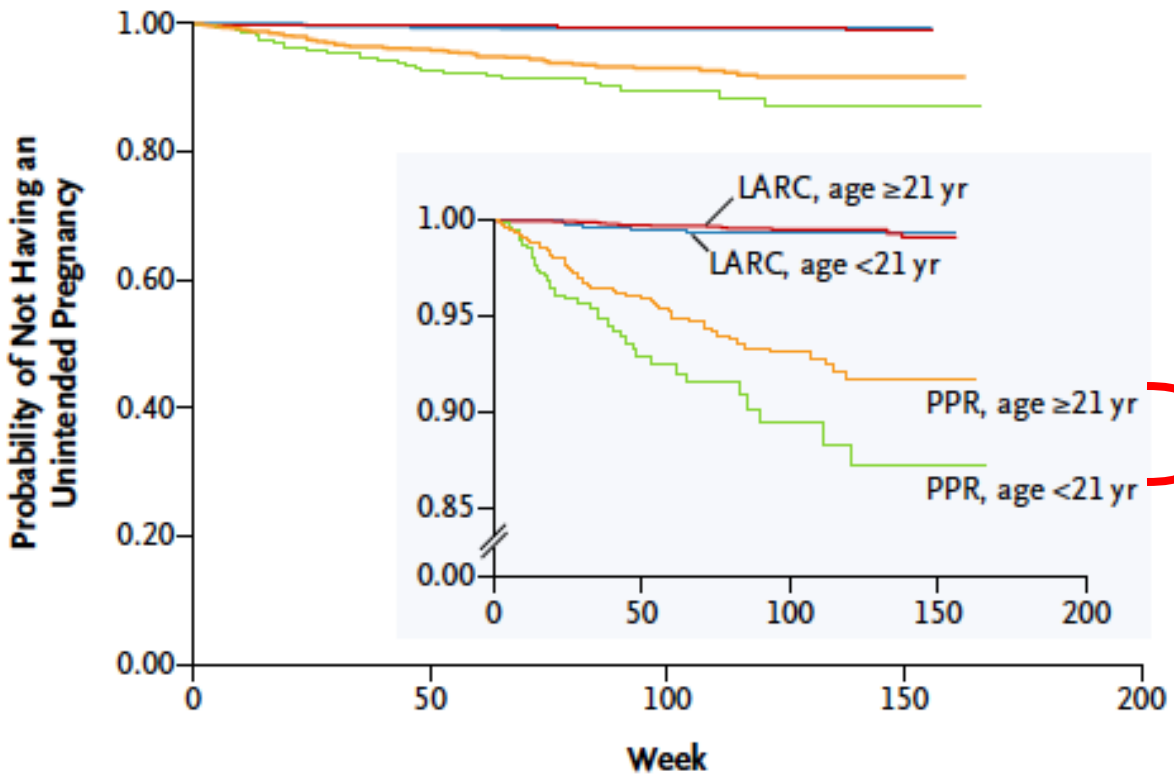


Figure 2. Probability of Not Having an Unintended Pregnancy, According to Contraceptive Method and Age.

Survival curves show the probability of not having an unintended pregnancy, stratified according to age group. LARC methods were the most effective, and failure rates did not vary according to age (P=0.49). PPR methods were less effective, and failure rates in participants younger than 21 years old were twice as great as in women 21 years of age or older (P=0.02).

Winner et al. ‘. Effectiveness of Long-Acting Reversible Contraception’. NEJM, 2012.



Participants less than 21 years of age who were using pills, patch, or ring had almost **twice** the risk of unintended pregnancy as older women

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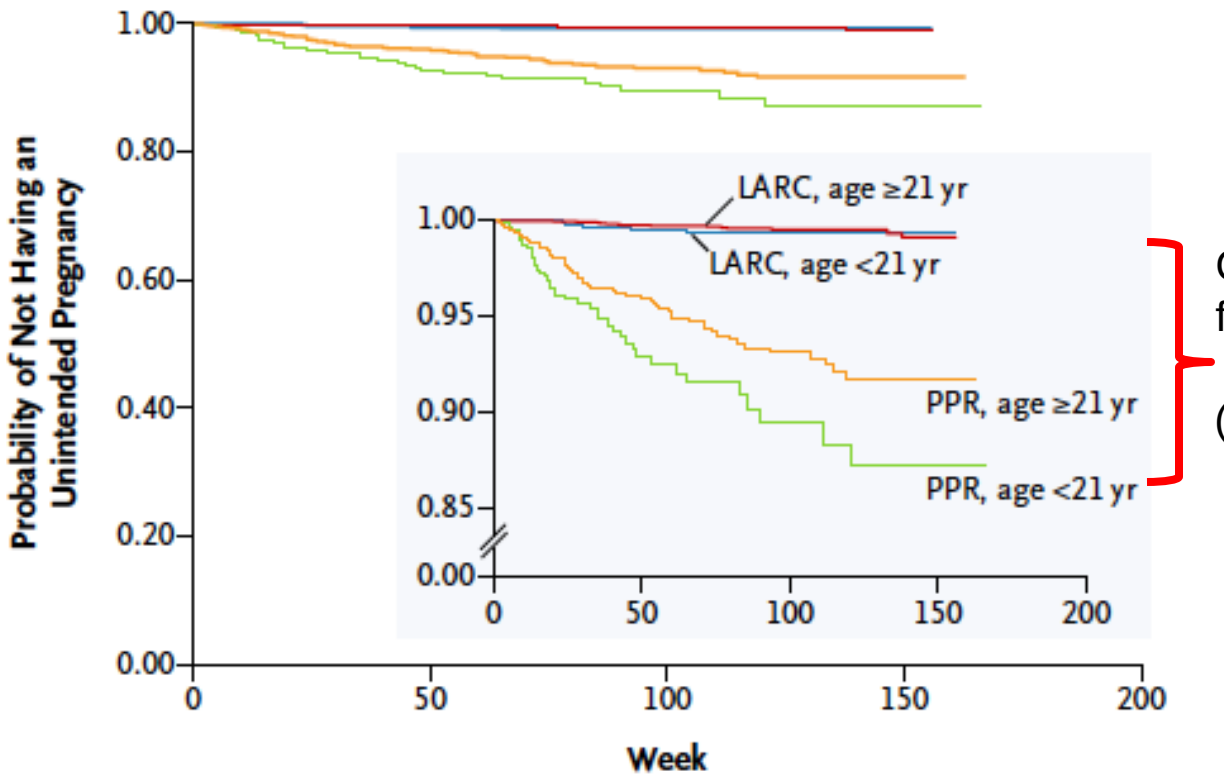

Contraceptive failure rate for PPR (pill/patch/ring) was **22 times** higher than LARC

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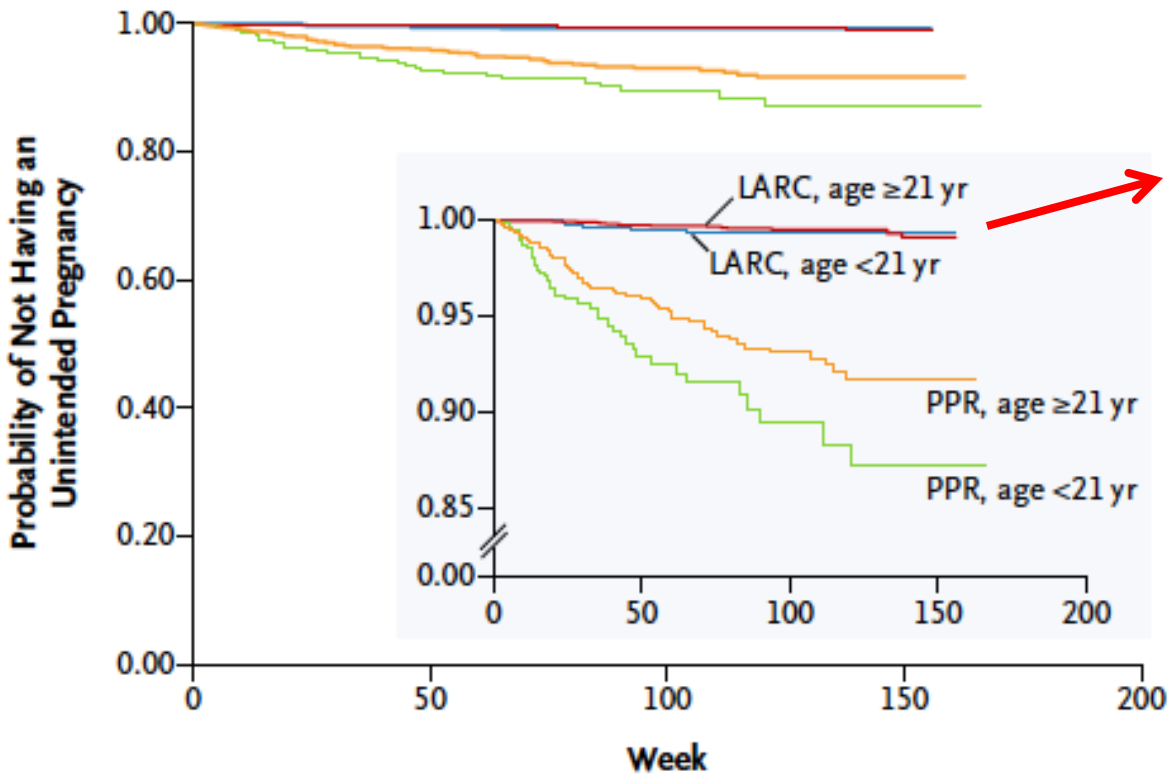

Effectiveness of LARC not altered in adolescents and young women

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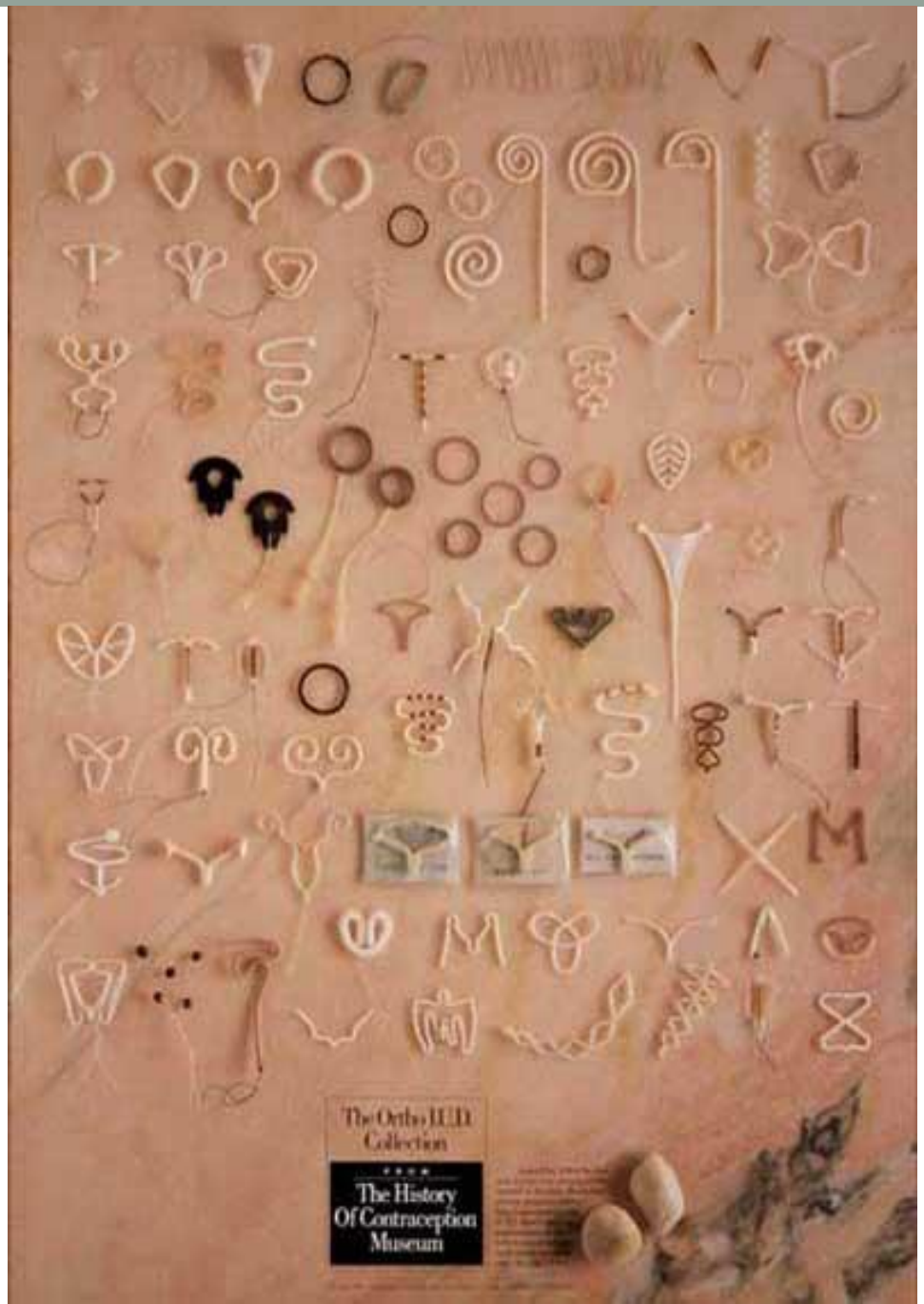
Key findings

- When barriers of cost, access and knowledge are removed, women/teens tend to choose the most effective, least user-dependant method
- LARC's continuation rates in teenagers is better than for non-LARC methods, even at 3 years
- Participants less than 21 years of age who were using pills, patch, or ring had almost **twice** the risk of unintended pregnancy as older women
- Lower pregnancy, birth and abortion rates in 15 - 19 year old women when financial and access barriers to contraception were removed and patients were informed about the efficacy of LARC methods

Barriers to LARCs


The Ortho I.U.D.
Collection
The History
Of Contraception
Museum

Contraception history

- Dalkon shield in the 1970s
- Design flaw: porous, multifilament string which bacteria could travel into uterus of users
  - Cases of sepsis, injury, miscarriage, and death

Contraception history

IUD myths

- IUCs **do not** cause infertility
- IUCs **do not** increased rates of STIs or pelvic inflammatory disease
  - *Increased risk of PID only in 1st 21 days*
  - *No contraindication if past history of PID*
- IUCs **do not** need to be removed with the new diagnosis of STI / PID
  - *Only if no clinic improvement after 48 - 72 hours of appropriate therapy*
- IUCs **do not** increase risk of ectopic pregnancies
  - *Risk of overall pregnancy low, although need to rule out ectopic pregnancies in failure (copper IUD > IUS)*
- **No increased risk** of expulsion in nulliparous women (slight increased risk in teenagers)
- Insertion **not** more difficult in teenagers
  - *Associated with provider experience*
  - *>50% nulliparous young women have discomfort - need anticipatory guidance*
  - *No benefit with misoprostol use*

What risks would you include in your counselling?

What risks would you include in your counselling?

UTERINE PERFORATION

- 0.3-2.6/1000 insertions
- ↑ : inexperience, postpartum, BF, uterine anatomy
- ↓ : bimanual examination, tenaculum, uterine sounding

INFECTION

- Related to the insertion process
- PID: 1st 20 days post-insertion (OR 6.26 - low absolute risk)
- 0-2% if no cervical infection
- 0-5% if undetected infection

EXPULSION

- More common in the 1st year (2-10%)
- 5-year cumulative expulsion rate
  - Copper-IUD 6.7%
  - LNG-IUS 5.8%
- RF: HMB, dysmenorrhea, young age, atypical anatomy, leiomyoma, previous expulsion
- Prior expulsion is NOT a contraindication

FAILURE

- r/o ectopic pregnancy if pregnant
- RARE risk of EP in IUC users
- 15-50% of pregnancy will be EP
- Copper-IUD > LNG-IUS (HR_{adj} 0.26, 95% CI 0.1-0.66)
- Pregnancy with IUC in utero associated with complications

ACOG 2012/2016; SOGC 2016

Barriers to LARCs

Original Study

Pediatricians' Attitudes and Beliefs about Long-Acting Reversible Contraceptives Influence Counseling

Elise D. Berlan MD, MPH [1,2,*], Nicole M. Pritt BA [1], Alison H. Norris MD, PhD [3,4]

[1] *Division of Adolescent Medicine, Nationwide Children's Hospital, Columbus, Ohio*
[2] *Department of Pediatrics, The Ohio State University College of Medicine, Columbus, Ohio*
[3] *Division of Epidemiology, The Ohio State University College of Public Health, Columbus, Ohio*
[4] *Division of Infectious Diseases, The Ohio State University College of Medicine, Columbus, Ohio*

A B S T R A C T

Study Objective: Adolescents are at high risk for unintended pregnancy. Because of pediatricians' potential role in contraceptive counseling, understanding their attitudes and beliefs and counseling practices about use of long-acting reversible contraceptives (LARC; ie, etonogestrel implant and intrauterine devices [IUDs]) is vital.
Design, Setting, Participants, Interventions, and Main Outcome Measures: We interviewed primary care pediatricians (N = 23) in a Midwestern city in June-August 2014. We transcribed the interviews, developed a coding schema, and analyzed these qualitative data using a priori and open coding of transcripts.
Results: Few pediatricians had favorable views on adolescent IUD use and most did not include IUDs in routine contraception counseling. Pediatricians perceived IUDs to impose significant risks for adverse reproductive outcomes and to be poorly tolerated by adolescents. Poor and/or outdated knowledge influenced inaccurate beliefs and unsupportive attitudes. Whereas some pediatricians were advocates for adolescent use of IUDs, many others had concerns that IUDs were not appropriate and not favored by adolescents. In contrast, participants viewed the etonogestrel implant more favorably and often included it in routine counseling. Some pediatricians focused on the familiar and readily available methods (injectable and oral contraceptives) or assumed patients had predetermined expectations for those methods. Time spent counseling on LARC was also perceived as a barrier. Pediatricians described how education and increased familiarity with LARC changed viewpoints.
Conclusion: A variety of beliefs and attitudes, as well as factors such as time and personal habits, influence pediatricians' contraceptive counseling practices. Until knowledge deficits are addressed, uninformed viewpoints and unfavorable attitudes will limit adolescents' access to LARC, especially IUDs.
Key Words: Adolescents, Contraception, Pediatrics, Long-acting reversible contraception, Qualitative, Teen pregnancy

Berlan ED et al. Pediatricians' attitudes and beliefs about long-acting reversible contraceptives influence counseling. J Pediatr Adolesc Gynecol, 2016.

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SOGC CLINICAL PRACTICE GUIDELINE

No. 329, February 2016 (Replaces No. 143, April 2004)

Canadian Contraception Consensus (Part 3 of 4): Chapter 7 — Intrauterine Contraception

Recommendation
1. Health care professionals should be careful not to restrict access to intrauterine contraceptives (IUC) owing to theoretical or unproven risks. (III-A) Health care professionals should offer IUC as a first-line method of contraception to both nulliparous and multiparous women. (II-2A)

Black, A. & Guilbert, E., 2015

The American College of
Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

COMMITTEE OPINION

Number 539 • October 2012 *(Replaces Committee Opinion No. 392, December 2007)*
(Reaffirmed 2016)

Committee on Adolescent Health Care
Long-Acting Reversible Contraception Working Group

This document reflects emerging clinical and scientific advances as of the date issued and is subject to change. The information should not be construed as dictating an exclusive course of treatment or procedure to be followed.

Adolescents and Long-Acting Reversible Contraception: Implants and Intrauterine Devices

- "With top-tier effectiveness, high rates of satisfaction and continuation, and no need for daily adherence, LARC methods should be **first-line recommendations** for all women and **adolescents**."

- "Counseling about LARC methods **should** occur at **all** health care provider visits with sexually active adolescents, including preventive health, abortion, prenatal, and postpartum visits. […] Health care providers **should consider LARC methods for adolescents** and help make these methods accessible to them."

American Academy of Pediatrics

DEDICATED TO THE HEALTH OF ALL CHILDREN™

Organizational Principles to Guide and Define the Child Health Care System and/or Improve the Health of all Children

POLICY STATEMENT

Contraception for Adolescents

1. Pediatricians should counsel about and ensure access to a broad range of contraceptive services for their adolescent patients. This includes educating patients about all contraceptive methods that are safe and appropriate for them and describing the most effective methods first.

2. Pediatricians should be able to educate adolescent patients about LARC methods, including the progestin implant and IUDs. Given the efficacy, safety, and ease of use, LARC methods should be considered first-line contraceptive choices for adolescents. Some pediatricians may choose to acquire the skills to provide these methods to adolescents. Those who do not should identify health care providers in their communities to whom patients can be referred.

Facilitators to LARC uptake

- Accurate, evidence-based education/counselling for patients
  - ↑ knowledge and positive attitude toward IUCs
  - Creation of opportunities!
- Youth-friendly approaches to accessibility
  - Flexible hours
  - Specific outreach programs
  - Social media
  - Emphasis on confidentiality
- Same-day insertion
- Removal of cost …

Satterwhite, C.L. & Ramaswamy, M. Let's talk about sex (again): advancing the conversation around long-acting reversible contraception for teenagers. *Women's Health*, 2015.

Cost

- Total cost of Mirena IUS (with dispensing fee, etc.) = ***$410.08***
  - Still cheaper than 5 years of birth control, but need all the money up front
  - Covered by most insurance plans, although confidentiality could be compromised (i.e. need to discuss with parents)
  - Covered by Ontario Works
- Alternate options:
  - Provider can apply for SOGC Compassionate Contraceptive Assistance Program
    - Limited supply
  - Copper IUD

Drug coverage

All long-acting reversible contraception available in Canada covered (prior approval not required)

http://www.healthycanadians.gc.ca/publications/health-system-systeme-sante/nihb-drug-list-2016-liste-medicaments-ssna/index-eng.php?page=28#s11-68

SOGC Compassionate Contraceptive Assistance Program

Login Français

THE SOCIETY OF OBSTETRICIANS AND GYNAECOLOGISTS OF CANADA

ABOUT CCAP HOW CCAP WORKS WHO IS ELIGIBLE? FAQ

Sign-in

Username

About CCAP

The Compassionate Contraceptive Assistance Program

Participating companies

LARC counseling

- ‘Long-acting reversible contraception is the most effective, least user-dependant method, and first-line recommendation for adolescent patients’
- Address any IUC myths
- Address cost issues, insurance coverage
- Anticipatory guidance prior to insertion:
  - Cramping during insertion common
    - Take good dose of ibuprofen 2 hours before
    - Improves with time, can take weeks
  - Bleeding common, unpredictable
    - “Rule of thirds”:
      - 1/3 of pts: periods stay the same
      - 1/3 of pts: periods are much lighter
      - 1/3 of pts: lose periods completely (amenorrheic)

LARC counseling

- Hormone absorbed locally (in uterus), less systemic side effects
  - Major risk factors:
    - Infection at insertion (as vaginal cavity not sterile)
      - Improves with:
        - Sterile technique
        - Provider experience
    - Expulsion
      - Leave strings ~ 1 cm in length, check after menses
    - Uterine perforation
      - Better with provider experience
- If possible, follow-up at 6 weeks:
  - Visualize strings
  - Check compliance, answer concerns
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Most present with increased cramping & bleeding, advised to seek care anyways

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INTERNATIONAL JOURNAL OF
CIRCUMPOLAR HEALTH

ORIGINAL RESEARCH ARTICLE

Youth perspectives on sexually transmitted infections and sexual health in Northern Canada and implications for public health practice

Gwen Healey*

Qaujigiartiit Health Research Centre, Iqaluit, NU, Canada and Northern Ontario School of Medicine

Objective. High rates of sexually transmitted infections in the Arctic have been a focus of recent research, and youth are believed to be at greatest risk of infection. Little research has focused on understanding youth perspectives on sexual health. The goal of this study was to collect the perspectives of youth in Nunavut on sexual health and relationships with the intent of informing public health practice.

Method. This qualitative research study was conducted within an Indigenous knowledge framework with a focus on Inuit ways of knowing. Data were collected through face-to-face interviews in three Nunavut communities with 17 youth between the ages of 14 and 19 years. Participants were asked open-ended questions about their experiences talking about sexual health and relationships with their family, peers, teachers or others in the community.

Results. There are four key findings, which are important for public health: (a) Parents/caregivers are the preferred source of knowledge about sexual health and relationships among youth respondents; (b) youth did not report using the Internet for sexual health information; (c) youth related sexual decision-making to the broader community context and determinants of health, such as poverty; and (d) youth discussed sexual health in terms of desire and love, which is an aspect of sexual health often omitted from the discourse.

Implications and contribution. The youth in this study articulated perspectives on sexual health, which are largely neglected in current public health practice in the North. The findings from this study underscore the important role of community-led participatory research in contributing to our understanding of the public health challenges in our communities today, and provide direction for future interventions and research.

Keywords: *Inuit*; *adolescent*; *sexual health*; *sexual health education*; *parent–adolescent relationships*; *determinants of health*

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INTERNATIONAL JOURNAL OF
CIRCUMPOLAR HEALTH

ORIGINAL RESEARCH ARTI

Youth perspect sexuall ted infections exual he her

Key findings:

- Parents/caregivers are preferred source of knowledge about sexual health and relationships
- Youth did not report using the Internet for sexual health information
- Youth related sexual decision-making to the broader community context and determinants of health, such as poverty
- Youth discussed sexual health in terms of desire and love, which is an aspect of sexual health often omitted from the discourse

Nunavut
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Results. T imp h: (a) Par e the
preferred wledg lth and youth respond did
not rep the Internet informatic ted sexual decision-m the
broade mmunity context a ts of health, s y; and (d) youth discusse al
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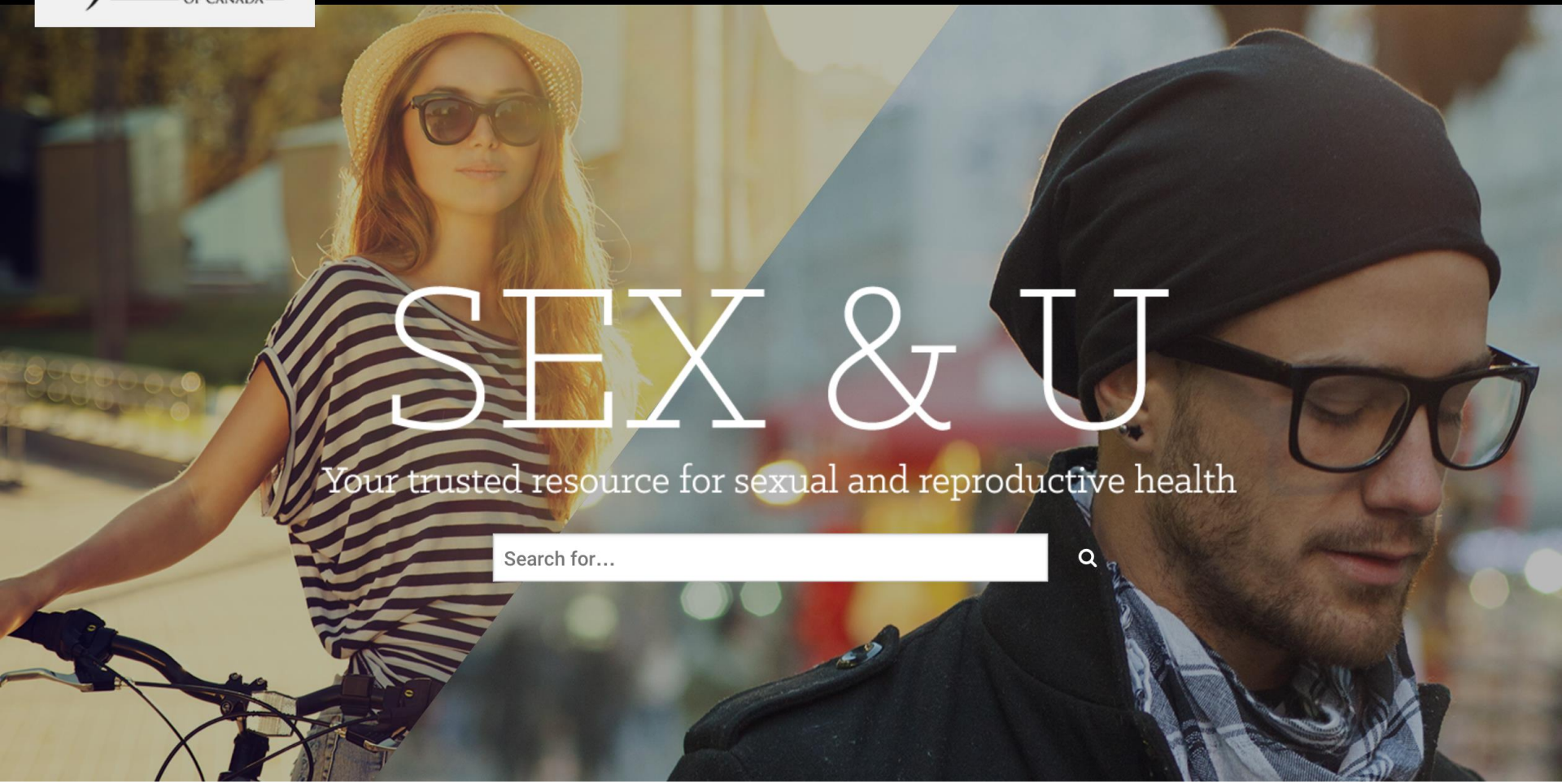
THE SOCIETY OF OBSTETRICIANS AND GYNAECOLOGISTS OF CANADA



HOW EFFECTIVE IS IT?

Levonorgestrel-releasing intrauterine system (LNG-IUS)

FAILURE RATE DURING FIRST YEAR OF USE

IUCs are one of the most effective methods of contraception available

TYPICAL USE

2 of 1000 women

PERFECT USE

2 of 1000 women

ADVANTAGES

- Highly effective
- Reversible
- Long term, forgettable and invisible
- Cost-effective
- Safe
- May be suitable for women who cannot take estrogen
- May be suitable for breastfeeding women
- Reduces risk of endometrial cancer

DISADVANTAGES

- Initially, irregular bleeding or spotting may occur
- Expensive
- Some pain or discomfort during insertion
- Rare risks with the insertion could include infection, perforation of the uterus, or expulsion of the IUC
- Does not protect against STIs

HOME | SEXWORDS ᐃᓄᒃᑎᑦ FRANÇAIS INUINNAQTUN

I Respect Myself

RESPECT YOURSELF

SEX 101

HAVING SEX

RESOURCES

MEDIA

I Respect Myself

For Youth
For Communities
For Parents and Caregivers
For Educators
For Healthcare Providers

Home

For Health Care Professionals

Gov. of Nunavut Resources

- CHOICES - Graphic Novel
- Condom Procurement Guidelines
- Congenital Syphilis Article
- I Respect Myself Poster (Inuktitut-English)
- IUC Learning Package - Insertion Competency Checklist
- IUC Learning Package - Module Objectives
- IUC Learning Package - Post Test
- IUC Learning Package - Process for Midwife Certification

I Respect Myself

For Youth
For Communities
For Parents and Caregivers
For Educators
For Healthcare Providers

Home

For Parents and Caregivers

Gov. of Nunavut Resources

Talking to Our Children About Sexuality

External Resources

Kids Help Phone

Live Healthy

Parents Teaching Sexual Health

Red Cross "Be Safe!" Program

Sexuality and U

TALKING TO OUR CHILDREN ABOUT SEXUALITY

Sexuality includes body parts, relationships, communication, values, decision-making, and sexual activity.

Talking about sexuality helps young people feel good about themselves and their bodies. It can help them make decisions about:

- When to have sex
- Talking to their partner about safer sex
- Using condoms
- STI testing
- Planning pregnancy
- Telling someone if they have been abused

> I think it's easier and less stressful to have 'the talk' little bits at a time as they grow rather than one big talk when they are a teenager.
>
> – Parent of young children, Iqaluit

> It was important for me that he finished school before becoming a father. He also needs to know to respect his partner; if his partner says 'NO' then he can only do what they are comfortable with.
>
> – Parent of a teenager, Kugluktuk

Demonstrate Pilimmaksarniq. Be open, honest and welcoming.
Keep your sense of humour. Do not worry if the conversation isn't perfect.

CONVERSATION STARTERS

Parental influence

- Large body of evidence supports positive impact of parents on sexual health of youth
- Evidence also shows that parents seek out practical guidance from health care providers in supporting teen sexual health

- One of the mechanisms by which parents modify sexual decision-making among teens is parental monitoring
  - i.e. parental knowledge of adolescents' companions, whereabouts, and activities
  - ie. enforcement of rules about friends and dating

Parental Monitoring and Its Associations With Adolescent Sexual Risk Behavior: A Meta-analysis

Patricia J. Dittus, PhD[a], Shannon L. Michael, PhD, MPH[b], Jeffrey S. Becasen, MPH, CPH[a], Kari M. Gloppen, PhD, MPH[c], Katharine McCarthy, MPH[d], Vincent Guilamo-Ramos, PhD, MPH, LCSW, RN[d,e]

- Meta-analysis (included 30 studies) to assess the magnitude of association between parental monitoring and adolescent sexual intercourse, condom use, and contraceptive use.
- Extracted effect size data to calculate pooled odds ratios (ORs).

Dittus PJ et al. Parental monitoring and its associations with adolescents sexual risk behaviour: A meta-analysis.. Pediatrics, 2015.

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- Higher overall parental monitoring, monitoring knowledge, and rule enforcement were associated with:
  - **delayed sexual intercourse**
  - **greater condom use**
  - **increased contraceptive use**

Dittus PJ et al. Parental monitoring and its associations with adolescents sexual risk behaviour: A meta-analysis.. Pediatrics, 2015.

Take Home Points

- Adolescent sexual development is a normal, anticipated developmental process
- *"Pediatricians are encouraged to discuss the most effective contraceptive methods first"* (AAP)
  - Given that typical use is the same as perfect use, intrauterine devices are considered first-line for adolescents
- Providers should address any perceived knowledge gaps to decrease barriers to counseling and prescribing LARCs for teenage patients
  - Promotion of culturally adapted sexual health programs
  - Involvement of parents & elders in education

Questions? Comments?