Adolescents' attitudes about long-acting reversible contraception: Exploring a youth-centered counseling approach

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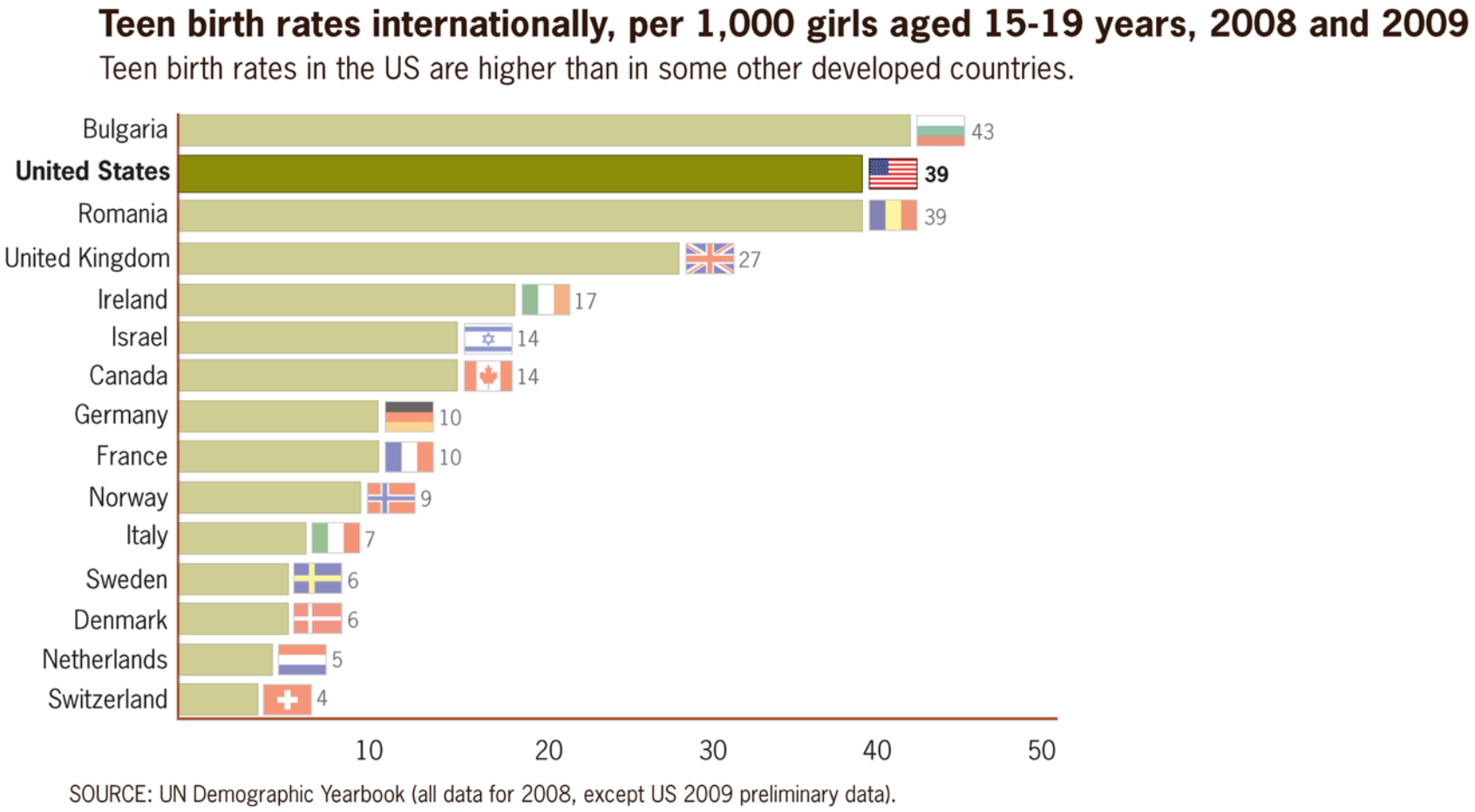
Teen birth rates globally



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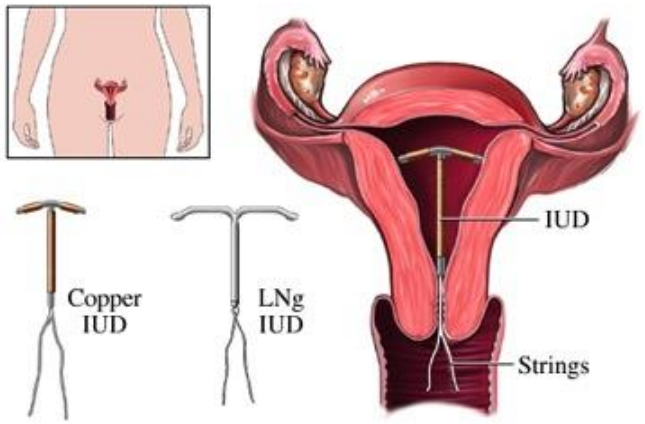
Long-Acting Reversible Contraception (LARC)

- **Intrauterine devices**
  - **Levonorgestrel (LNG) intrauterine system**
  - **Copper T380A intrauterine device**
- **Subdermal contraceptive implant**



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LARC and Adolescents

- **Safe and effective for adolescent women**
- **First-line contraceptive option**
- **Contraceptive CHOICE study**

Mestad Contraception 2011, Winner NEJM 2012.

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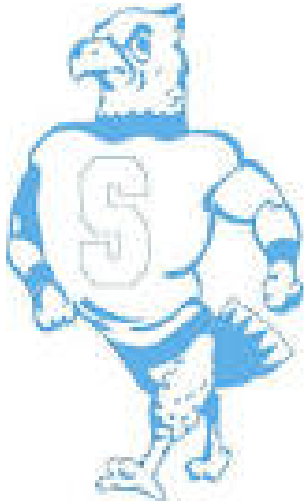
LARC in School-Based Health Centers

- **Seattle school-based health centers (SBHCs) began offering LARC in 2011**
- **Disparities in uptake of LARC**
- **<u>Study Objective:</u> To understand what factors shape adolescent knowledge and attitudes about LARC devices**



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Specific Aims

1. To explore adolescent knowledge and attitudes about LARC devices with a goal to inform the development of LARC counseling tool for adolescent women
2. To evaluate the effect of a health educator program on knowledge and acceptability of LARC devices and acceptability of LARC device placement in the SBHC setting
3. To identify female patient characteristics associated with knowledge and acceptability of LARC devices and acceptability of LARC device placement in the SBHC setting

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- To explore adolescent knowledge and attitudes about LARC devices with a goal to inform the development of LARC counseling tool for adolescent women

- **Semi-structured interviews with 30 SBHC patients**
  - Inclusion criteria: female, age 13 to 19, full parental consent to use SBHC, English-speaking
  - Exclusion criteria: developmental delay
- **Topic areas:**
  - Family/peers/school
  - Reproductive life plan
  - Experiences with contraception including LARC
  - Experiences receiving care in SBHC
- **Thematic analysis**

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Results

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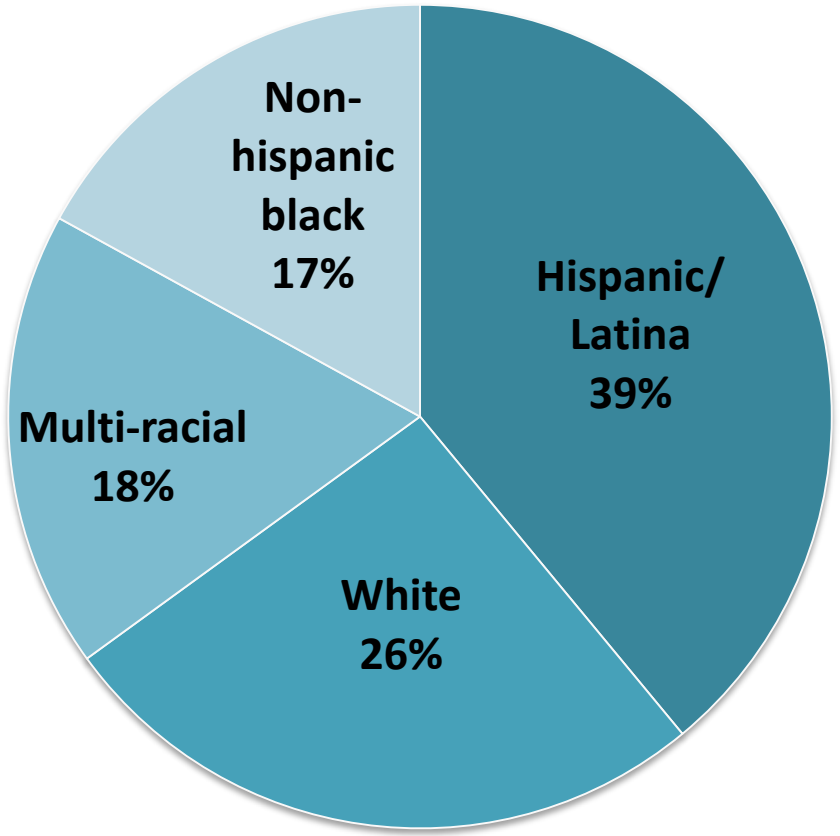
Results

- **30 participants interviewed**
  - **Mean age 16.2 years (Range 14 to 18)**
  - **70% qualified for school lunch subsidy**
  - **17% current or prior LARC device**

Racial distribution of participants



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Main Themes

- Method Preferences
- Social References
- Information Needs
- Motivating Circumstances to Initiate LARC
- Environmental Constraints and Supports

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Method Preferences

- **Side effects and non-contraceptive benefits**

"I needed something that fit me, that wouldn't make me gain weight, and I could remember. The 3-year [implant] worked best. – 17 year old"

"[The IUD] kind of messes with [your period], and then you don't get it at all. I kind of like having it as a friendly reminder like "Hey, you're not pregnant, by the way." – 17 year old

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Method Preferences

- **Side effects and non-contraceptive benefits**
- **Duration of use**

"My friend had the [implant] taken out…because her boyfriend lives far away, so for her to have that in her arm doesn't really do her any good." – 18 year old

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Method Preferences

- **Side effects and non-contraceptive benefits**
- **Duration of use**
- **User versus provider- controlled method**

"I'd probably use the pill because I would be the one responsible for it." – 15 year old

"It's kind of scary because it's something that's in you, rather than something you can just take off" - 18 year old

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Social References

- **Negative anecdote from peer or family**

"My friend who has [an IUD]…said that it hurt a lot when they put it in, and that felt like she had been lied to." **-15 year old**

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Social References

- **Negative anecdote from peer or family**
- **Previous counselling from a health provider**

"I just heard [from provider] that it stops periods. It's way more effective than the regular stuff. It's better because it lasts longer and you don't even know that it's there." – 14 year old

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Information Needs

- **Abstract nature of LARC devices**

"I just felt like it was sketchy. I can't physically see it, so sometimes I'd forget it's in my arm….I need the physical reminder to reassure myself".
-18 year old

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Information Needs

- **Abstract nature of LARC devices**
- **Knowledge about mechanism, placement, and removal of LARC**

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Motivating Circumstances to Initiate LARC

- **Personal pregnancy experiences or “scares”**
- **Relocation experiences or plans**

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Motivating Circumstances to Initiate LARC

- **Personal pregnancy experiences or scares**
- **Relocation experiences or plans**
- **Desire to delay childbearing for discrete time period**

" I wanted something that I would have for a while and not have to worry. Because I don't want to end up accidentally getting pregnant, during my college years." -17 year old

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Environmental Constraints and Supports

- **Parent openness about sexuality and contraception**

"[My mom] would just say that she trusts my decision and that she thinks it's a good one to be protected." **-15 year old**

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Environmental Constraints and Supports

- **Parent openness about sexuality and contraception**
- **Social norm that contraceptive use implies sexual activity**

"The word birth control is very subtle, but behind the word it's like, 'You're having sex.' That's most parents' go-to answer." **-18 year old**

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Environmental Constraints and Supports

- **Parent openness about sexuality and contraception**
- **Social norm that contraceptive use implies sexual activity**
- **Supportive school-based health care environment**

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Main Themes

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Main Themes

- **P** Method Preferences
- **R** Social References
- **I** Information Needs
- **M** Motivating Circumstances to Initiate LARC
- **E** Environmental Constraints and Supports

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Applying PRIME

P IUDs and implants are a kind of medical treatment, and all medical treatments have side effects. What side effects are most important for you to avoid? How important is it for you to have (regular periods? A method that no one else can see? The ability to see or feel your method?)

R Does anyone in your life have experience with an IUD or implant? What have you heard about their experiences?

I IUDs and implants can be in place for several years, but they can be removed by a provider at any time and do not affect your ability to get pregnant after being removed. What do you know about the procedure to have an IUD or subdermal implant placed?

M Do you know anyone who experienced an unplanned pregnancy? What was that like for them?" OR "It sounds like you have some exciting career plans. How long is the training to enter that profession?

E Many teens may choose to begin a contraceptive method before they have sex for the first time. Where do you get most of your sexual and reproductive health care? Do you talk about your reproductive health with any adults in your life?

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Limitations and Strengths

- **Qualitative and exploratory approach**
  - **Nonrandom sample**
  - **One geographic region**
- **Diverse sample of participants**

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Conclusions

- **Unique factors influence adolescent decision-making about contraception**
  - **Including (and especially) LARC**
- **PRIME may allow providers to rapidly introduce LARC to adolescent patients and explore knowledge, acceptability, and readiness**
- **Further study to evaluate PRIME for provider comfort with LARC counseling and validity in assessing LARC readiness among adolescents**

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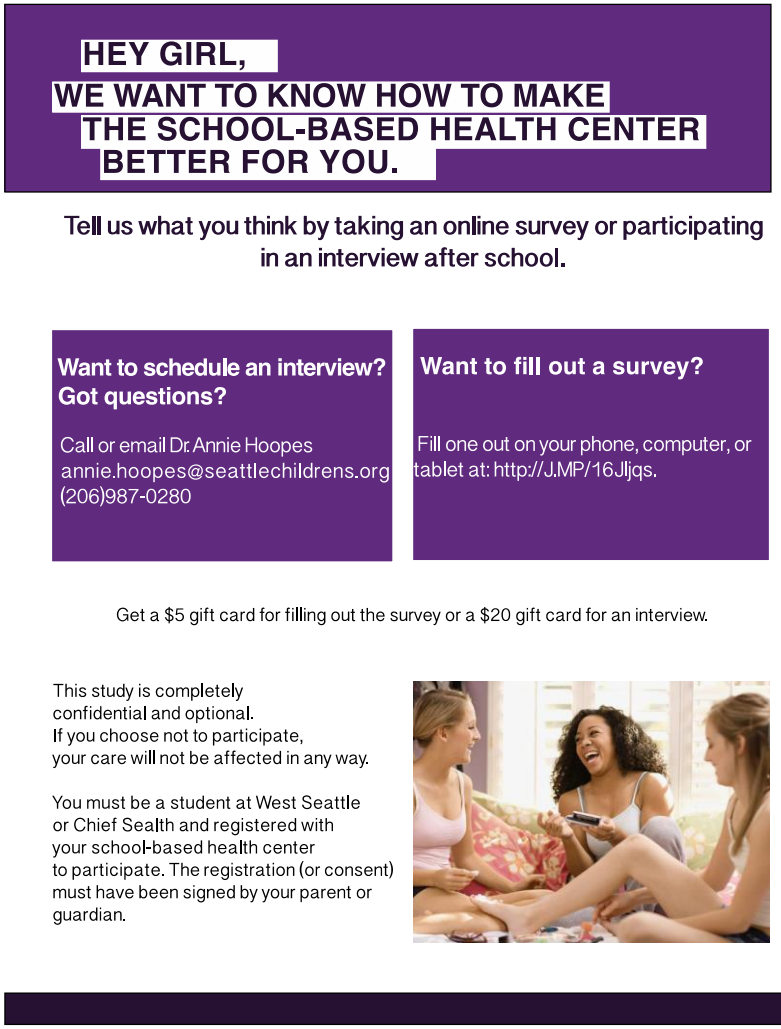

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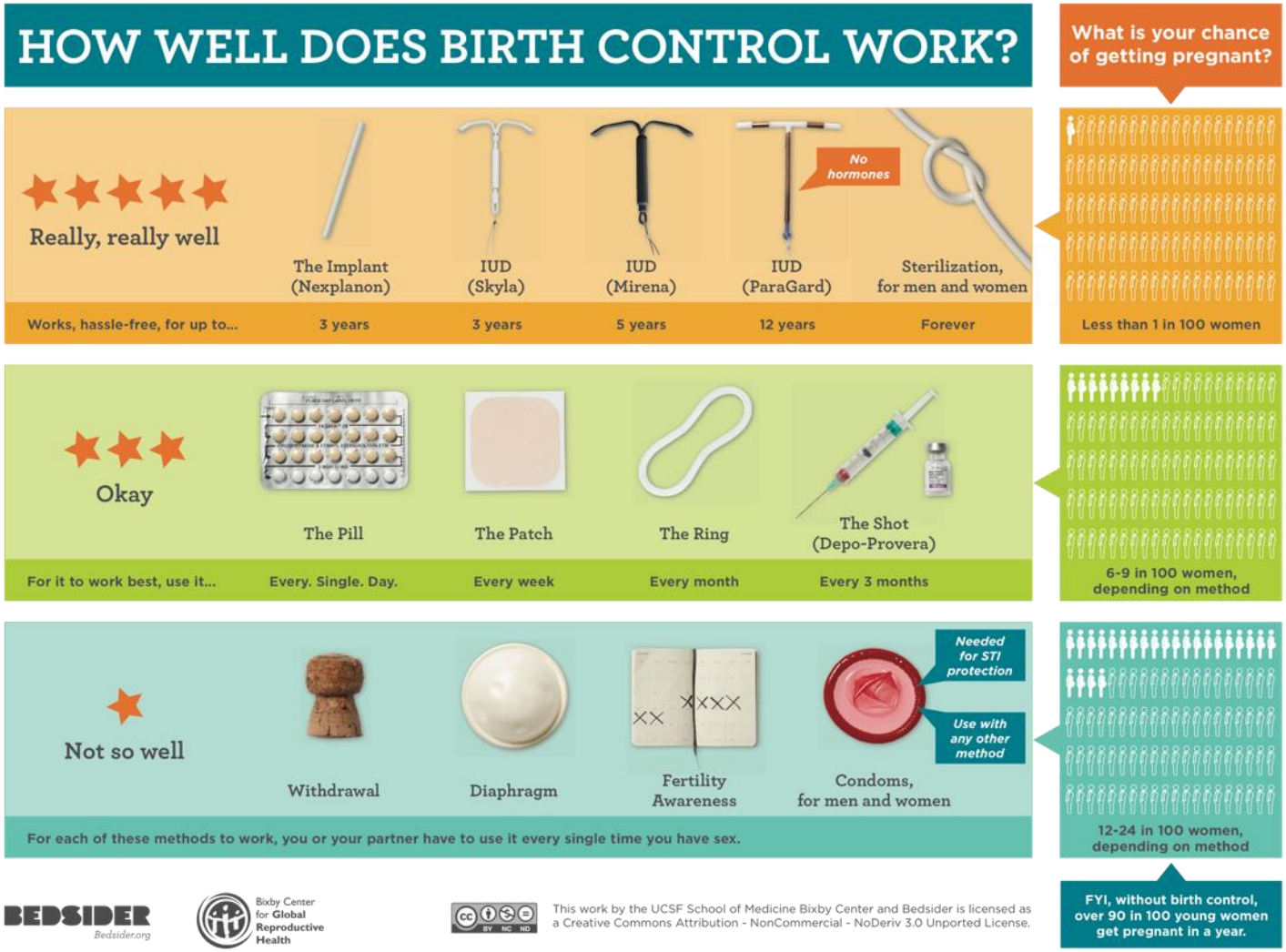

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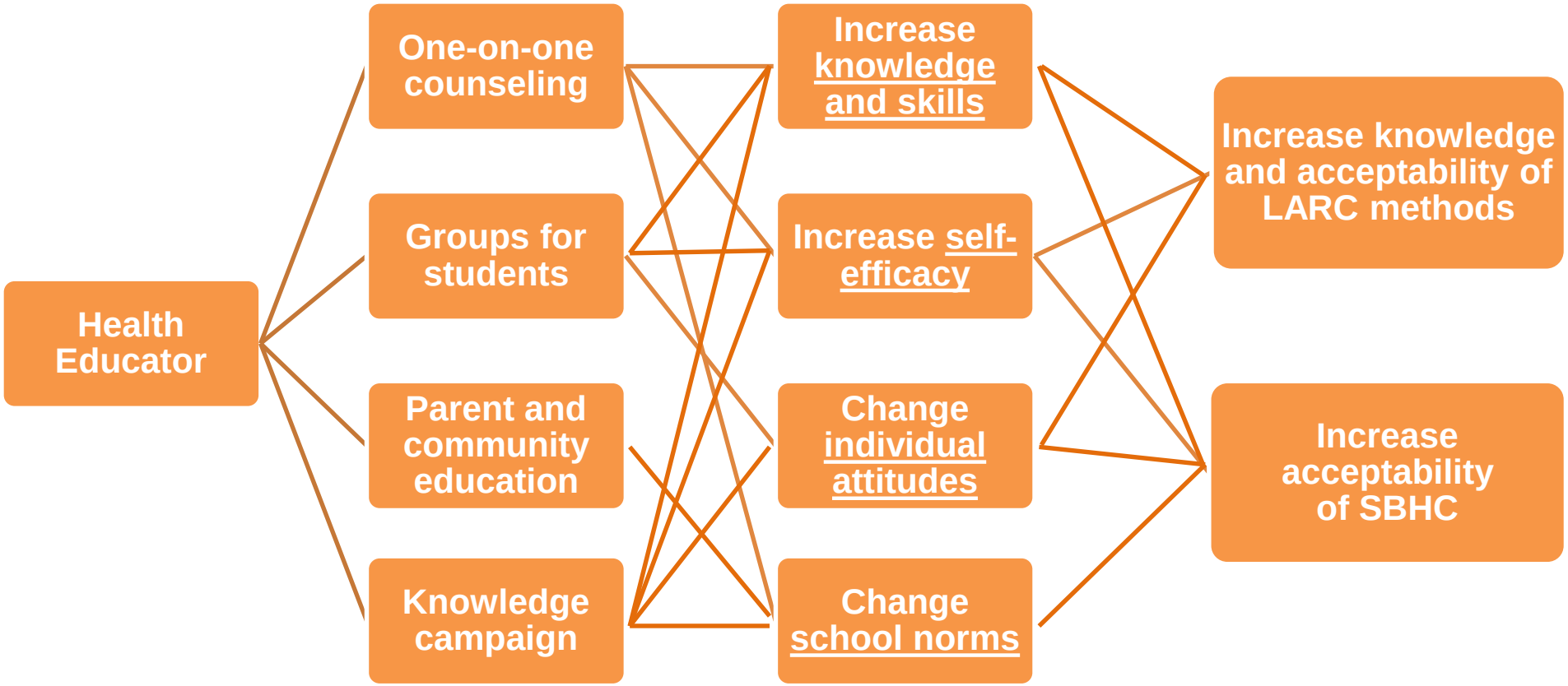
Back Up Slides

Conceptual framework



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2

- To evaluate the effect of a health educator program on knowledge and acceptability of LARC devices and acceptability of LARC device placement in the SBHC setting

3

- To identify female patient characteristics associated with knowledge and acceptability of LARC devices and acceptability of LARC device placement in the SBHC setting

- **Electronic survey at baseline and 1-year follow-up of 150 SBHC patients**
  - **Same inclusion/exclusion criteria**
  - **Content:**
    - **Demographics**
    - **Contraception and sexual health history**
    - **Experiences related to LARCs**
    - **Knowledge about LARCs (11-item)**
    - **Experiences with health educator and SBHC**

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3

- **To identify patient characteristics associated with knowledge and acceptability of LARC devices and acceptability of LARC device placement in the SBHC setting**

- **Chi-square and multiple regression**
- **Exposures:**
  - **Age**
  - **Sexual experience**
  - **SES**
  - **Race/ethnicity**
  - **Prior contraceptive use**
- **Outcomes:**
  - **Knowledge of LARCs**
  - **Acceptability of LARCs**
  - **Acceptability of SBHC**

H_o	H_A
Younger	
Less sex	
Low SES	
Racial/ethnic minority	
No prior contraceptive use	
⊘	↓
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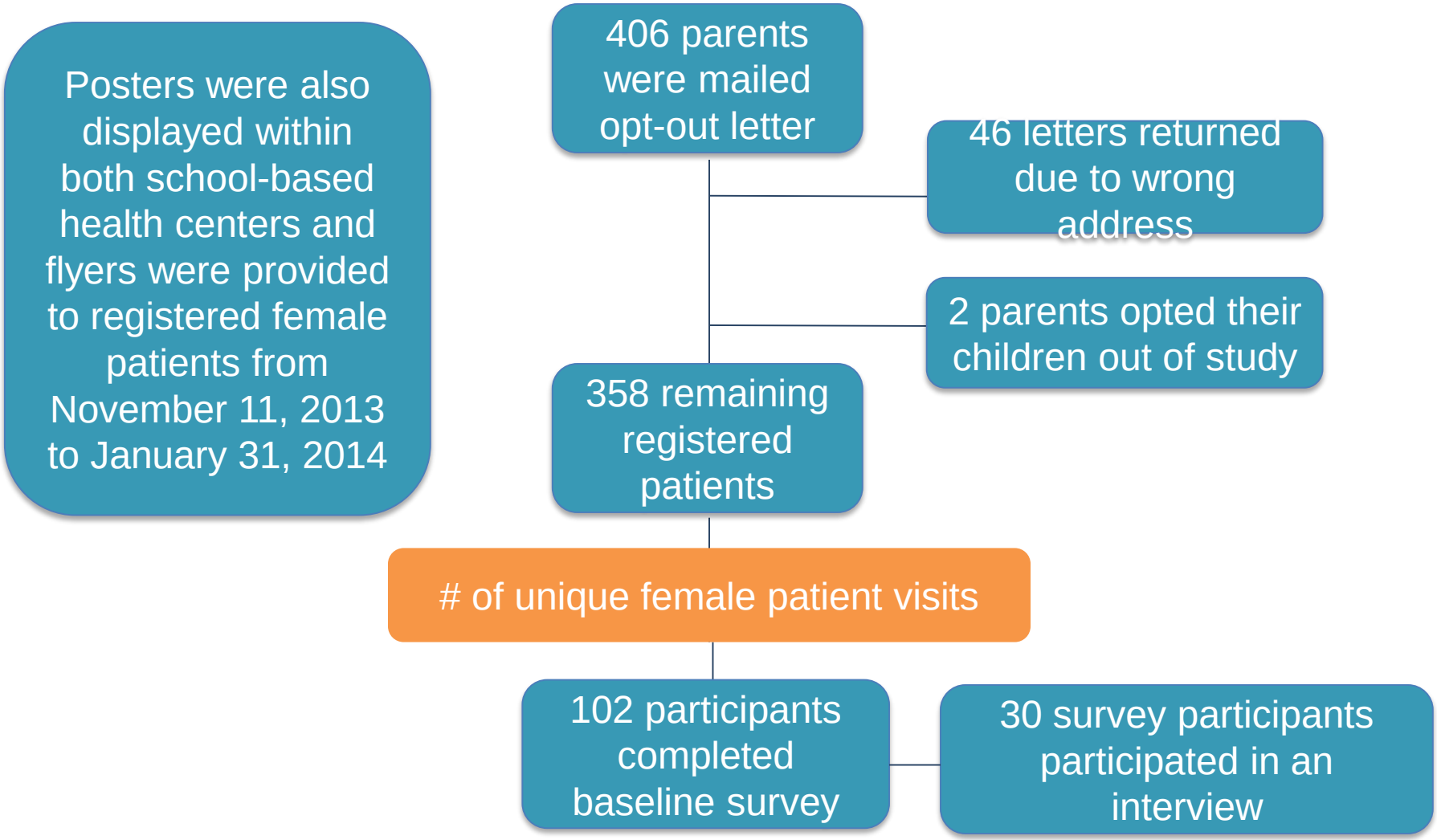
Results

Study Participants



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Age (years [mean +/- SD)	16.7 (1.2)
Race/ethnicity	n (%)
Asian	4 (4.0)
Native Hawaiian or Pacific Islander	2 (2.0)
Black	19 (18.8)
White	29 (28.7)
Hispanic	29 (28.7)
Other	5 (5.0)
More than one (non-Hispanic)	13 (12.9)
Free/reduced lunch	60 (62.5)
IEP	15 (14.7)
Medical problem	26 (25.5)
Mental health problem	28 (27.5)
Mom had first baby <18	21 (21.2)
Ever had vaginal intercourse	53 (52.5)
Ever pregnant	5 (5.0)
Ever LARC	16 (16.2)

Exposure to Health educator

Health educator		N (%)
Do you know health educator?		
	Yes	52 (48.6)
	No	37 (34.6)
	Don't know/skip	18 (16.8)
What activities? (check all)		
	Classroom presentation	14 (13.1)
	Individual visit	25 (23.4)
	Other ((Student health council, girls group, sports team, TA)	13 (12.1)
	I haven't met her	60 (56.1)

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True or False Question
You have to remember to take an IUD or Nexplanon implant everyday
IUDs and Nexplanon implants are two of the most effective forms of reversible birth control available for women
Having an IUD or Nexplanon implant placed involves a simple procedure in a health clinic
IUDs and Nexplanon implants have to be removed by a health care provider
You can have an IUD or Nexplanon implant if you've never had a baby
IUDs and Nexplanon implants hurt your ability to get pregnant in the future
IUDs and Nexplanon implants protect against STDs including HIV
A Nexplanon implant can be in place for 3 years before you have to replace it
A Mirena IUD can be in place for 5 to 7 years
IUDs and Nexplanon implants are birth control methods that you need to remember to insert before each sex act

True or False Question	Total correct N(%)	History of vaginal sex	No history of vaginal sex	Chi2 p value
You have to remember to take an IUD or Nexplanon implant everyday	70 (69.3)	44 (83.0)	26 (54.2)	0.002
IUDs and Nexplanon implants are two of the most effective forms of reversible birth control available for women	55 (55.6)	34 (64.2)	21 (45.7)	0.065
Having an IUD or Nexplanon implant placed involves a simple procedure in a health clinic	61 (61.6)	41 (78.9)	20 (42.6)	<0.001
IUDs and Nexplanon implants have to be removed by a health care provider	64 (64.7)	44 (86.3)	20 (41.7)	<0.001
You can have an IUD or Nexplanon implant if you've never had a baby	54 (54.6)	35 (67.3)	19 (40.4)	0.007
IUDs and Nexplanon implants hurt your ability to get pregnant in the future	53 (54.6)	35 (68.6)	18 (39.1)	0.004
IUDs and Nexplanon implants protect against STDs including HIV	72 (72)	48 (90.6)	24 (51.1)	<0.001
A Nexplanon implant can be in place for 3 years before you have to replace it	55 (54.5)	42 (79.3)	13 (27.1)	<0.001
A Mirena IUD can be in place for 5 to 7 years	46 (46.9)	36 (67.9)	10 (22.2)	<0.001
IUDs and Nexplanon implants are birth control methods that you need to remember to insert before each sex act	62 (62)	41 (77.4)	21 (44.7)	0.001

Multivariate regression of LARC knowledge score

Characteristic	Coefficient	95% CI	p-value
Age (years)	-0.005	-0.5 to 0.5	0.986
White Race	**2.658**	**1.2 to 4.3**	**0.001**
Free or Reduced Lunch	0.305	-1.2 to 1.7	0.690
Self-report of lifetime mental health diagnosis	0.284	-1.239 to 1.808	0.711
History of sexual experience	**3.287**	**2.0 to 4.7**	**<0.001**
History of LARC experience	**2.370**	**0.4 to 4.3**	**0.019**
Exposure to health educator counseling session	-0.258	-1.9 to 1.3	0.749

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Multivariate regression of implant acceptability

Characteristic	Odds Ratio	95% CI	p-value
Age (years)	1.004	0.584 to 1.726	0.988
White Race	0.527	0.111 to 2.511	0.422
Free Lunch	2.998	0.638 to 14.097	0.165
Self-report of lifetime mental health diagnosis	0.662	0.139 to 3.144	0.604
History of vaginal intercourse	**6.360**	**1.667 to 24.269**	**0.007**
Exposure to health educator counseling session	1.629	0.403 to 6.575	0.493

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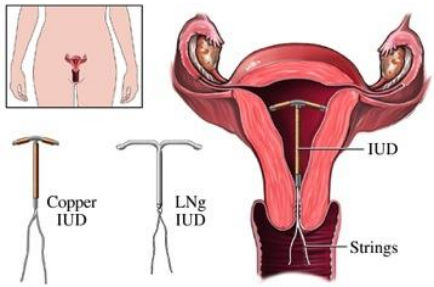

Multivariate regression of IUD acceptability

Characteristic	Odds Ratio	95% CI	p-value
Age (years)	**0.535**	**0.305 to 0.939**	**0.029**
White Race	2.71	0.677 to 10.883	0.159
Free Lunch	0.950	0.252 to 3.581	0.939
Self-report of lifetime mental health diagnosis	0.926	0.232 to 3.691	0.232
History of vaginal intercourse	3.232	0.815 to 12.808	0.095
Exposure to health educator counseling session	1.304	0.284 to 5.989	0.733

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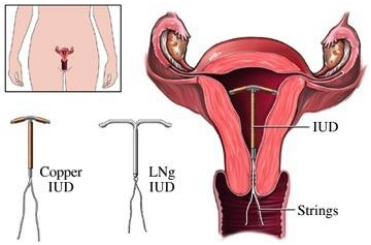

Multivariate regression of LARC acceptability

Characteristic	Odds Ratio	95% CI	p-value
Age (years)	0.690	0.438 to 1.088	0.111
White Race	1.359	0.412 to 4.481	0.614
Free Lunch	1.251	0.396 to 3.944	0.703
Self-report of lifetime mental health diagnosis	0.899	0.275 to 2.933	0.860
History of vaginal intercourse	**4.263**	**1.402 to 12.970**	**0.011**
Exposure to health educator counseling session	1.566	0.488 to 5.027	0.451

Conclusions

- **Variable knowledge about LARC**
  - **White respondents, those with history of vaginal intercourse more likely demonstrate greater LARC knowledge**
- **History of vaginal intercourse sole predictor of general LARC acceptability**
- **Valuable insight from general pediatric population sample**

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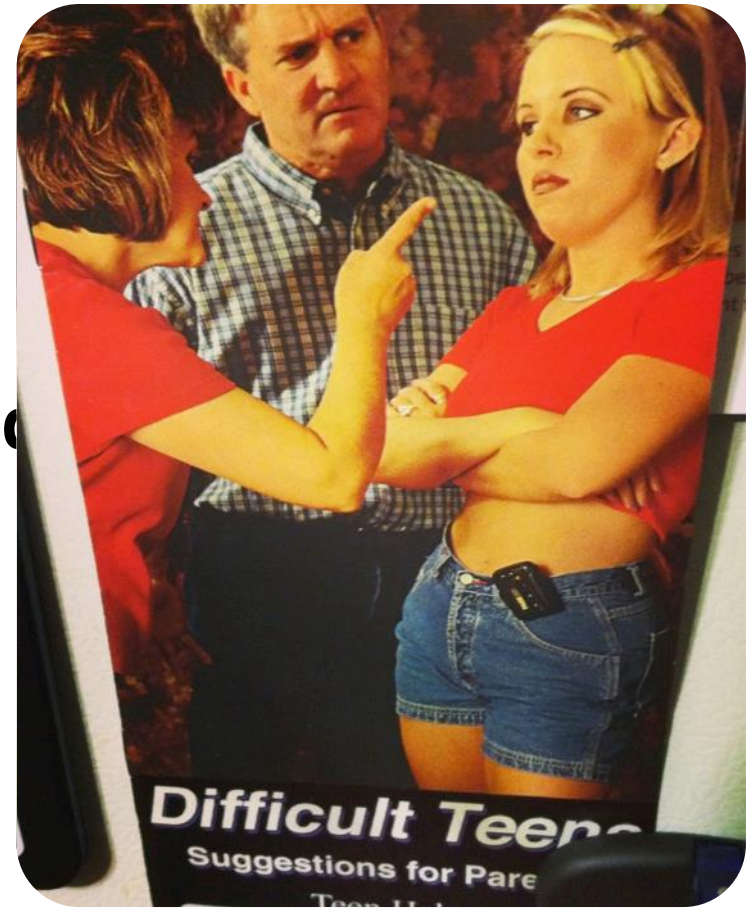
Strengths and Limitations

- Exploratory
  - Innovative setting
- Small sample size
  - Recruitment of registered minors
- Non validated survey instrument
- Fluidity of health educator curriculum



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Future directions

- **Validation of survey instrument**
  - **Cognitive interviews to determine best way to phrase questions**
- **Expand survey to larger, more representative population of teens**
- **Apply results to design and pilot a LARC counseling tool**
  - **Consider sexual inexperienced youth**

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Sample Interview Questions

- When do you feel is the right time to have a first pregnancy?
- How do you decide what contraceptive method to use?
- Where do you get the majority of information about contraceptive methods?
- Would do you like or dislike about potential LARC methods?
- Have you heard from others about their experiences with LARC?
- What do your parents or other family members think about LARC?
- What services at the school-based health center do you use?
- Describe your interactions with the health educator?
- What services would you like the health educator or the school-based health center to provide?

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HEY GIRL,
WE WANT TO KNOW HOW TO MAKE THE SCHOOL-BASED HEALTH CENTER BETTER FOR YOU.

Tell us what you think by taking an online survey or participating in an interview after school.

Want to schedule an interview? Got questions?

Call or email Dr. Annie Hoopes
annie.hoopes@seattlechildrens.org
(206)987-0280

Want to fill out a survey?

Fill one out on your phone, computer, or tablet at: http://J.MP/16Jljqs.

Get a $5 gift card for filling out the survey or a $20 gift card for an interview.

This study is completely confidential and optional. If you choose not to participate, your care will not be affected in any way.

You must be a student at West Seattle or Chief Sealth and registered with your school-based health center to participate. The registration (or consent) must have been signed by your parent or guardian.

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Use the QR code below or fill one out on your computer at:

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You can also borrow a tablet at the school-based health center to fill out a survey during your free time before or after classes.

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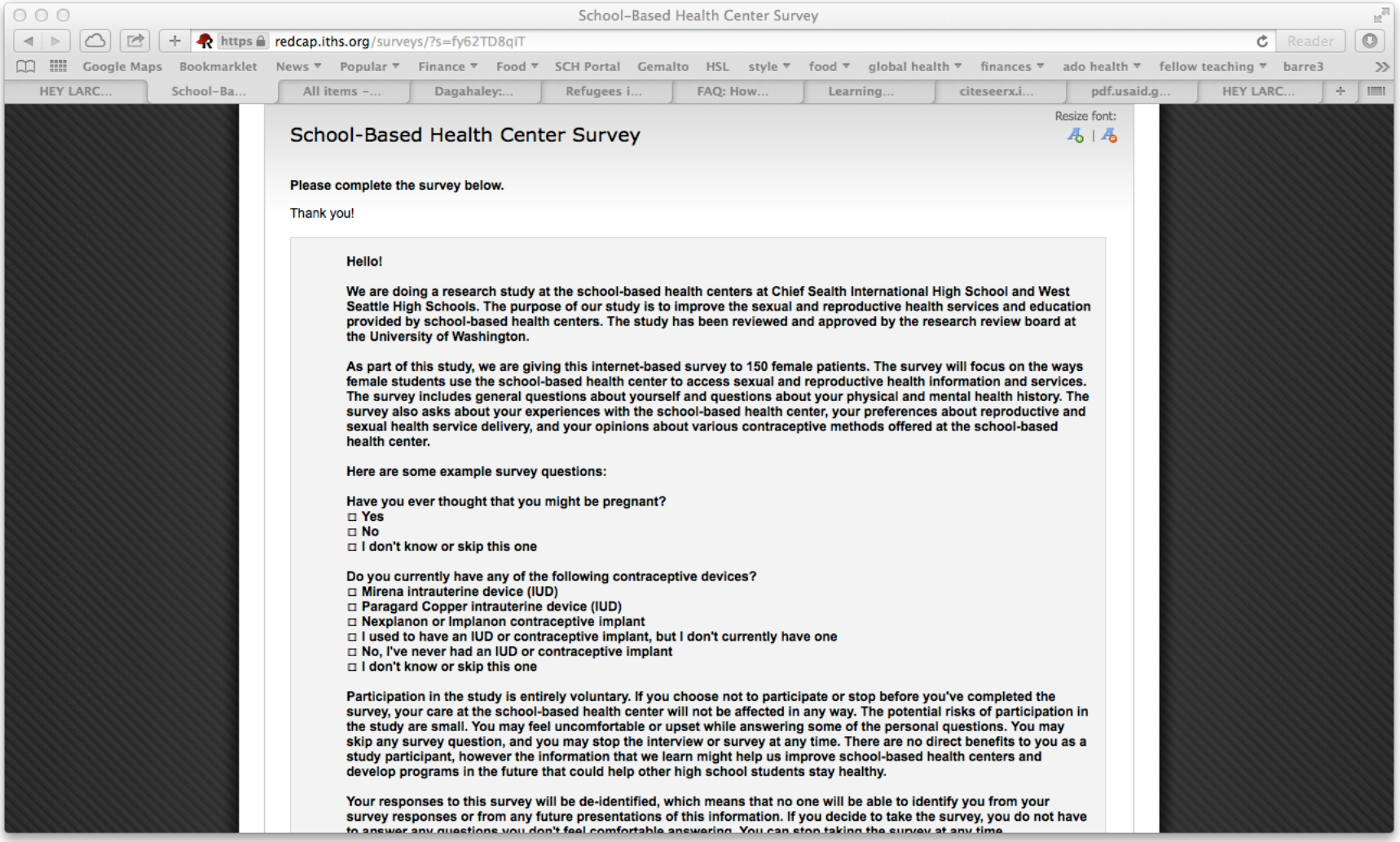
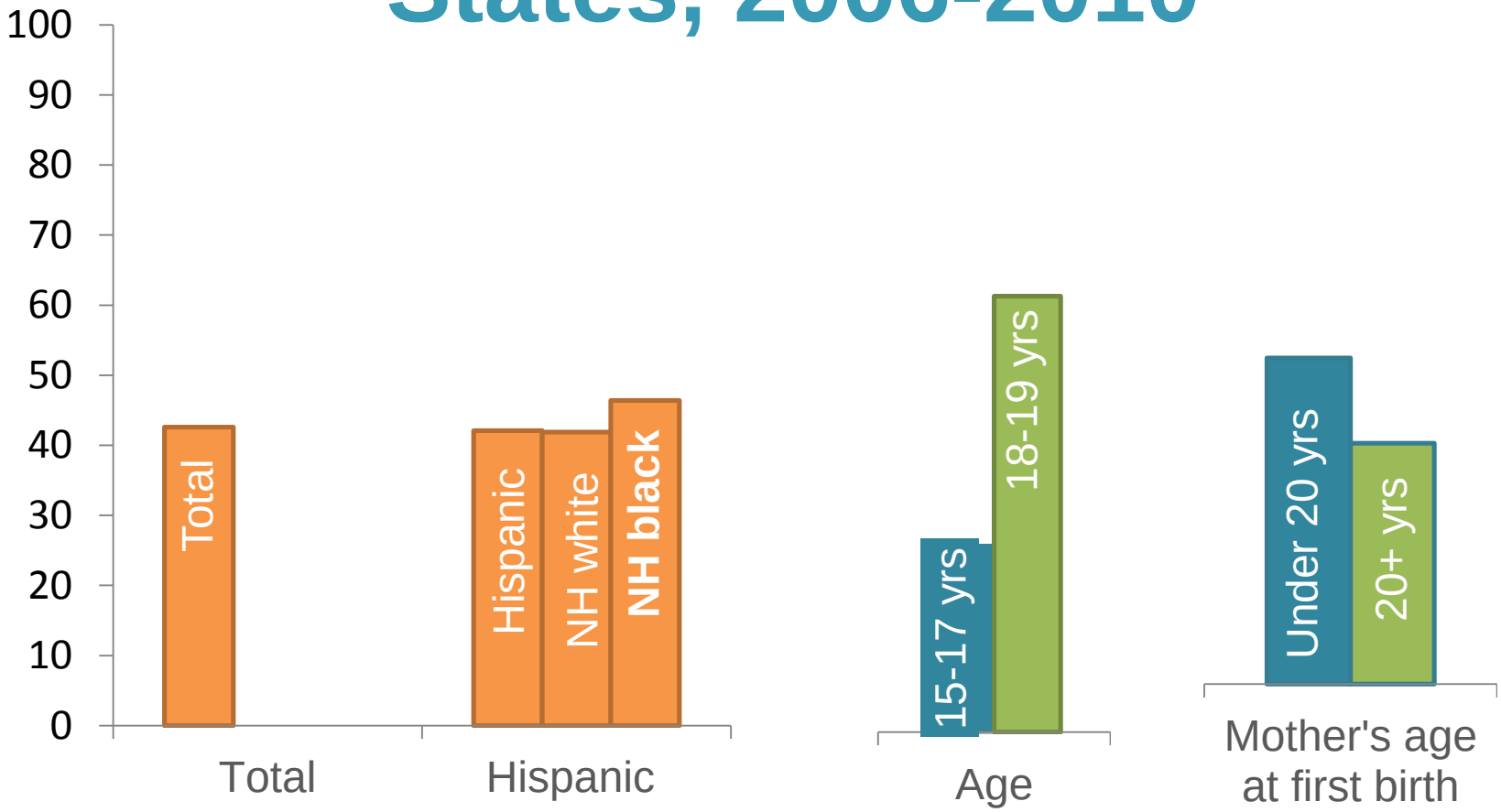
RedCap Survey



This study was supported by the Maternal and Child Health Bureau, grant #T76MC00011

Never-married females age 15-19 who have ever had sex, United States, 2006-2010



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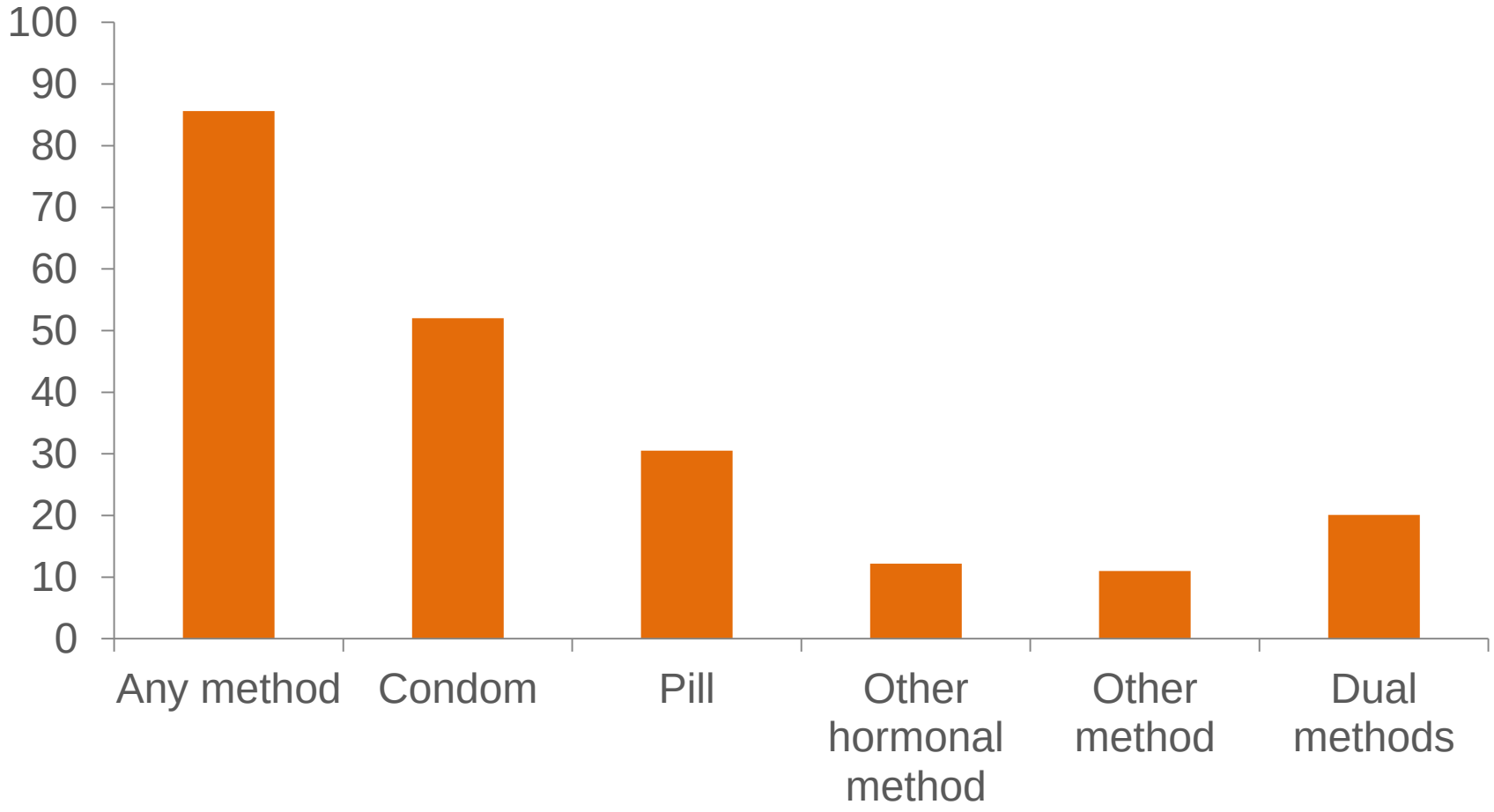
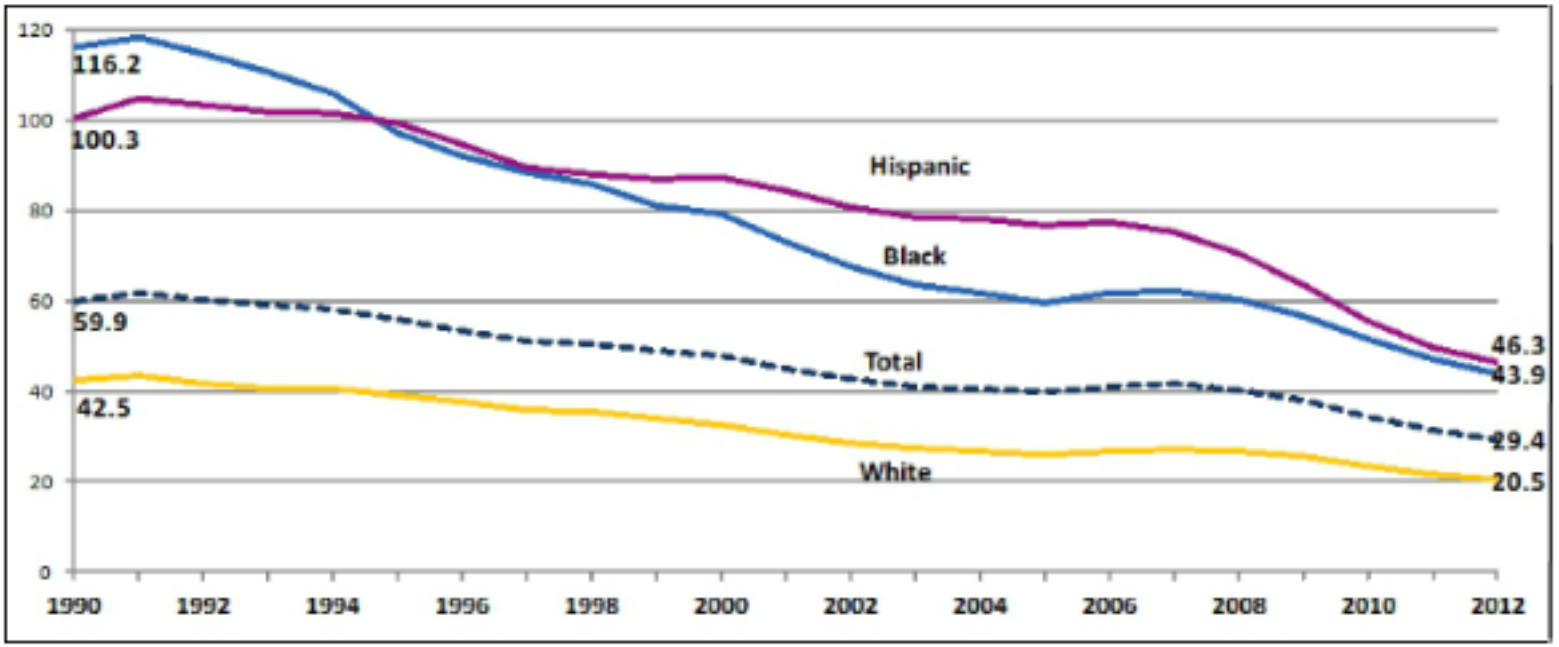
Use of contraception at last sex in the prior 3 months among never-married females age 15-19, by method used, United States, 2006-2010



Adolescent pregnancy in the US

Figure 1: Birth rates per 1,000 females ages 15-19, by race/ethnicity, 1990-2012



Source: Hamilton, B. E., Martin, J. A., & Ventura, S. J.(2013). *Births: Preliminary data for 2012*. Hyattsville, MD: National Center for Health Statistics.

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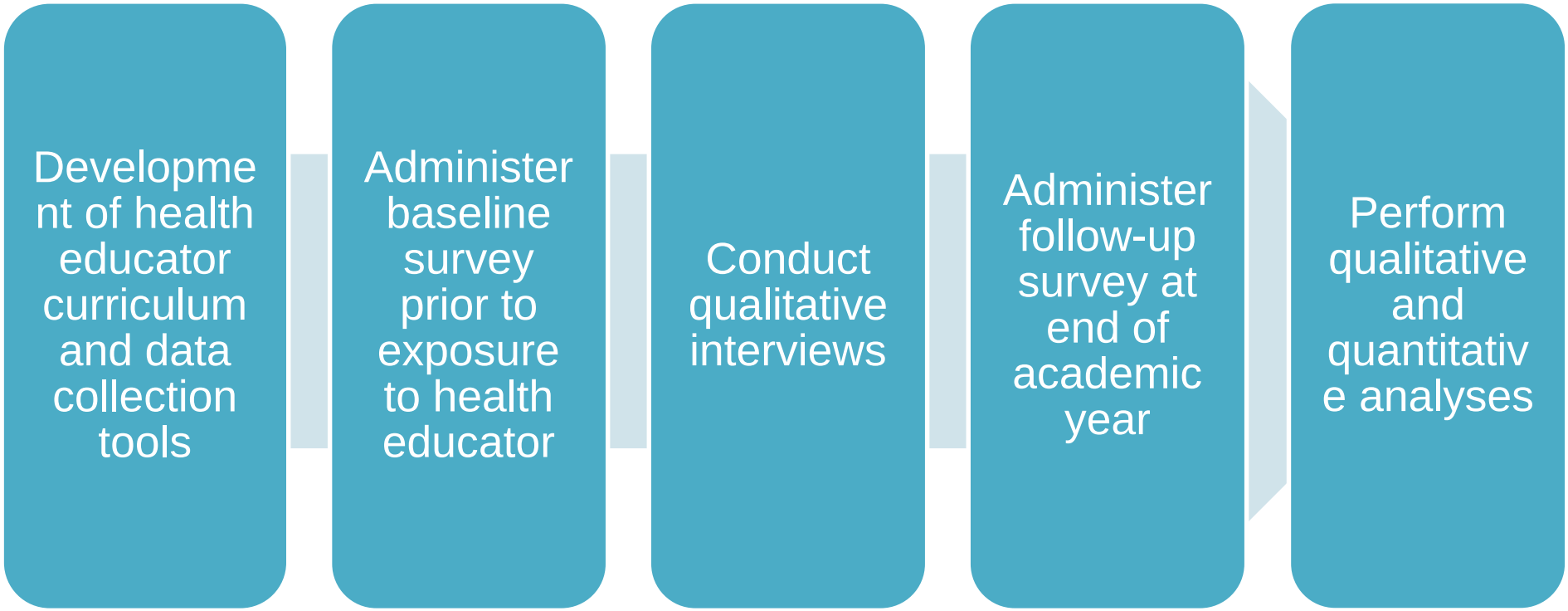
Timeline



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