

Long-Acting Reversible Contraception: The Contraceptive CHOICE Project

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FINANCIAL CONFLICTS

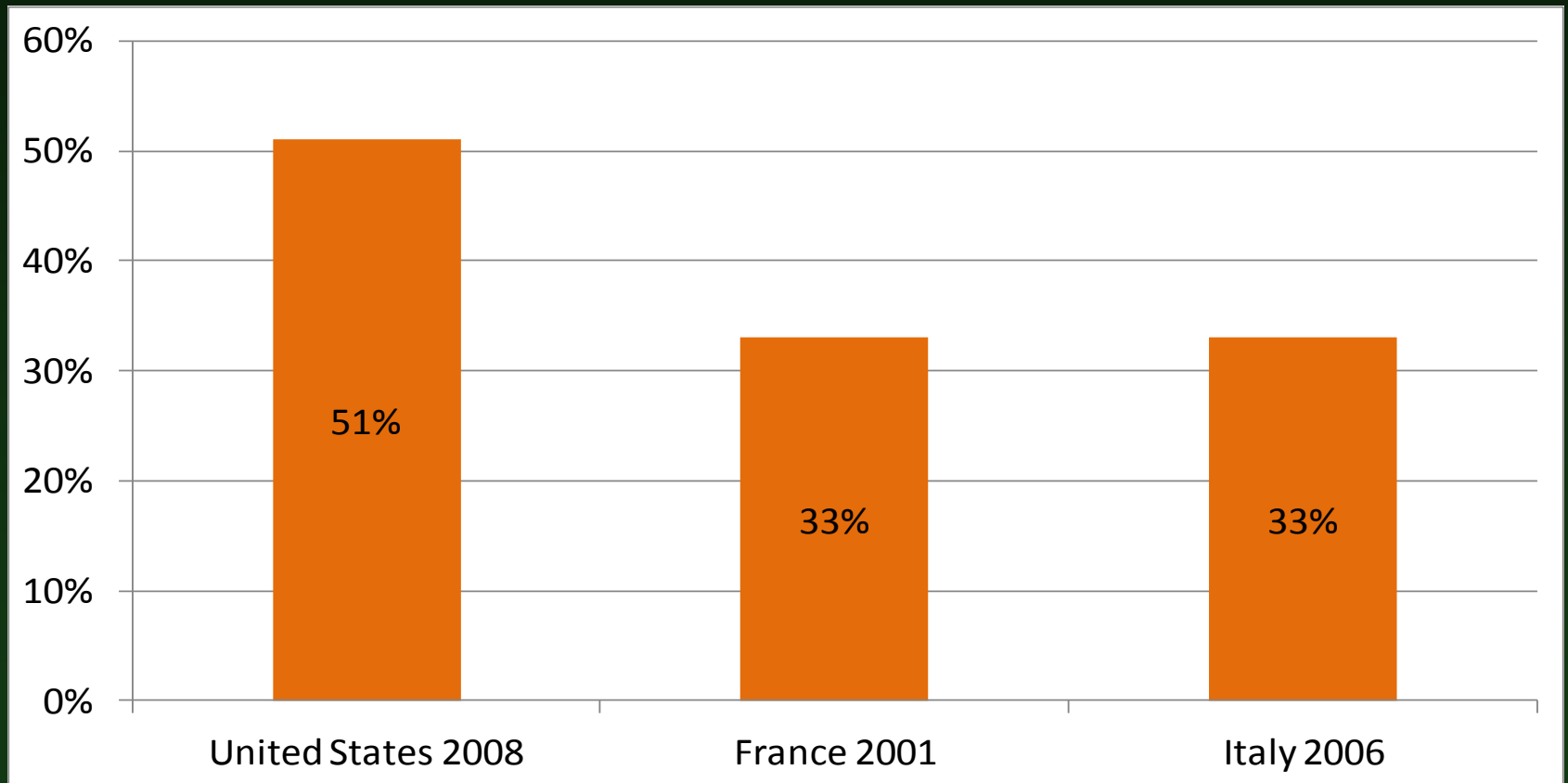
Research Grant Support
Bayer, Merck, Teva

Advisory Boards
Perrigo, Teva

OBJECTIVES

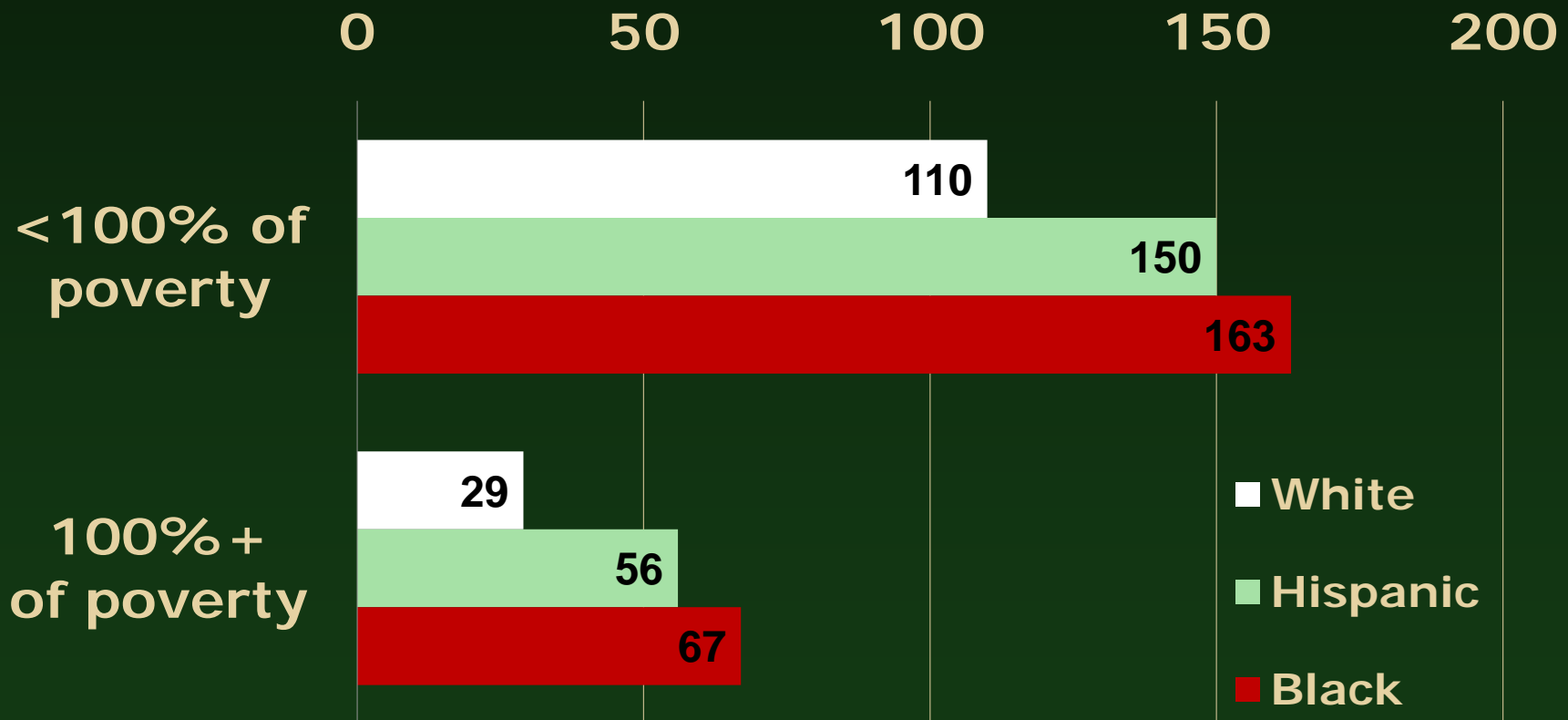
- Describe the contraceptive choices of participants in the Contraceptive CHOICE Project
- Provide the continuation rates of contraceptive options
- Provide evidence for compliance/adherence and contraceptive failure rates

U.S. Percent of Pregnancies Unintended is High



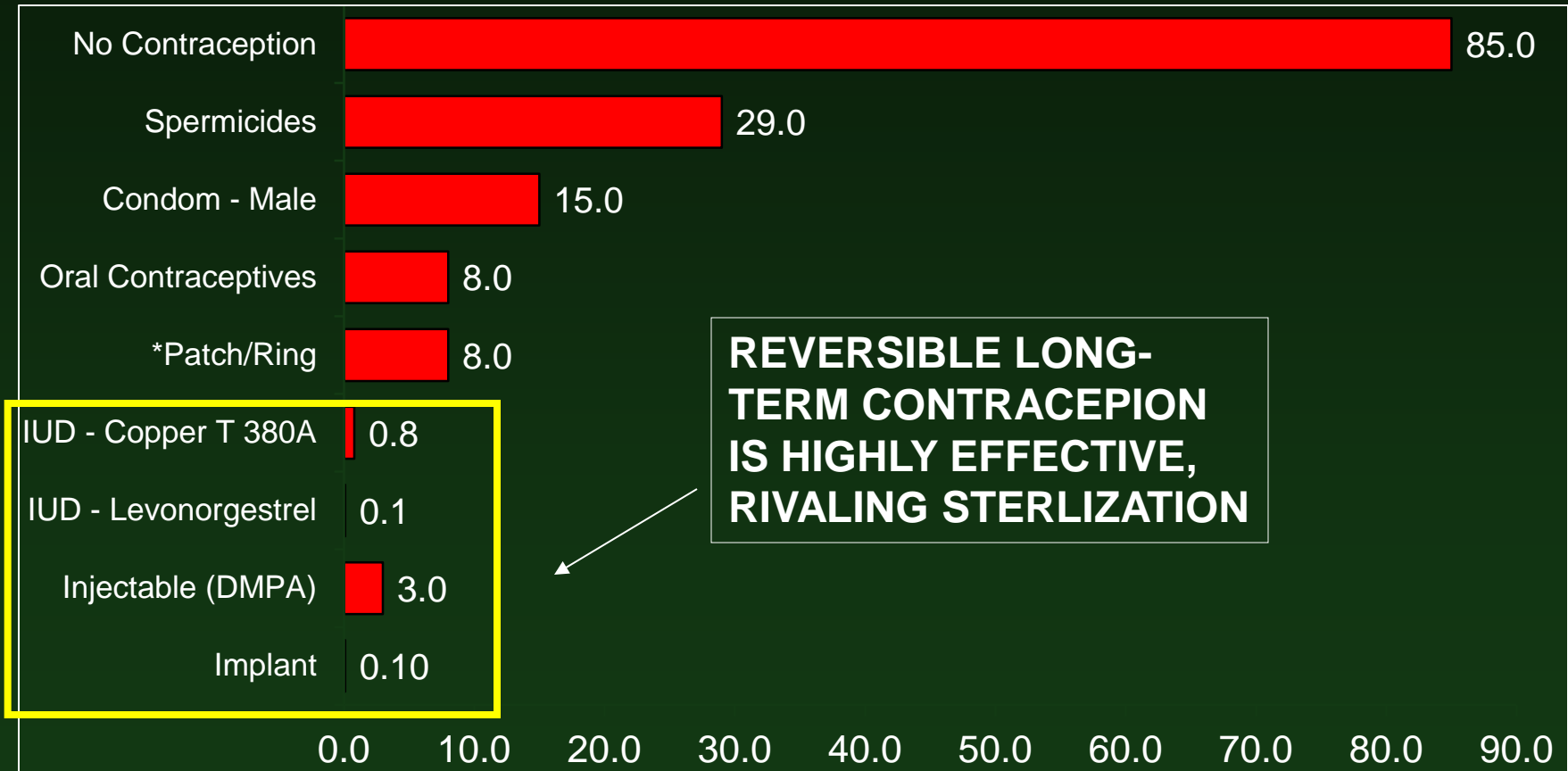
Finer and Zolna 2011; Bajos 2003; Carbone 2009

Disparities by Race & Ethnicity Persist Across Income Groups



Unintended pregnancy rate, 2008

Typical Use - First Year Failure Rates



*Estimates in lieu of actual data

Trussell J. *Contraception* 2004;70:89-96.

**Funk S et al. *Contraception* 2005;71:319-326.

Long-Acting Reversible Contraception

There is a need for effective
contraceptive methods that are

forgettable

Finer LB, et al. *Perspect Sexual Reprod Health*. 2003.

Hillis SD, et al. *Obstet Gynecol*. 1999.

Stanwood NL, et al. *Obstet Gynecol*. 2002.



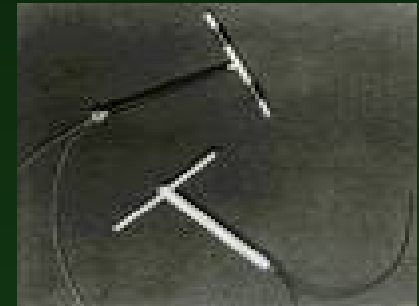
NATIONAL LEADERS IN MEDICINE

THE
CONTRACEPTIVE
CHOICE
PROJECT

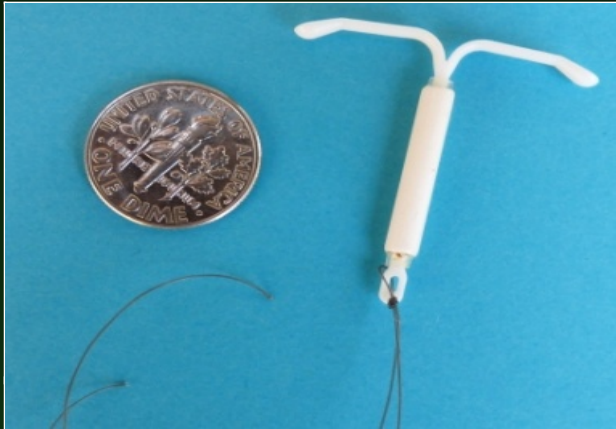


Contraceptive Cohort Study

- Remove financial barriers to most effective long-term reversible methods
- Recruit 10,000 participants over 4 years
 - No-cost contraception
 - Participant choice
 - 2-3 years follow-up
 - Assess continuation, satisfaction
 - Population outcomes:
 - Unintended/teen pregnancy

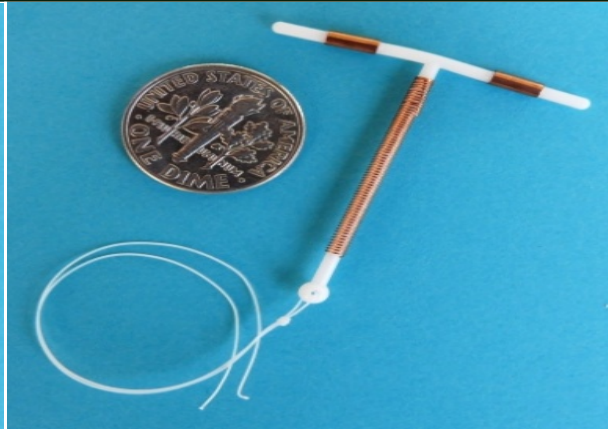


Long-Acting Reversible Contraception



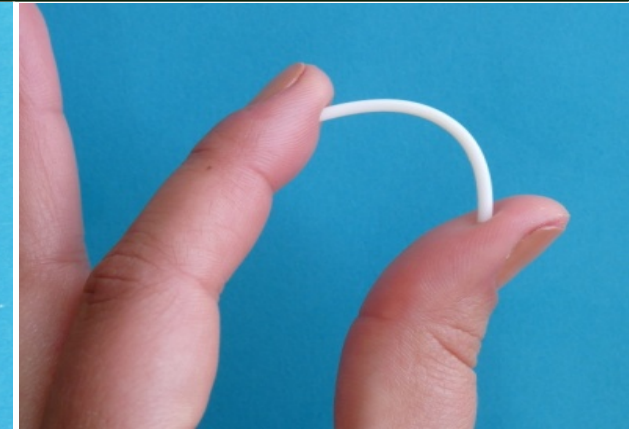
LNG-IUS

- 99% effective
- 20 mcg levonorgestrel/day
- Up to 5 years



Copper T IUD

- 99% effective
- Copper ions
- Up to 10 years



Subdermal Implant

- 99% effective
- 60 mcg etonogestrel/day
- Up to 3 years

CHOICE: Inclusion Criteria

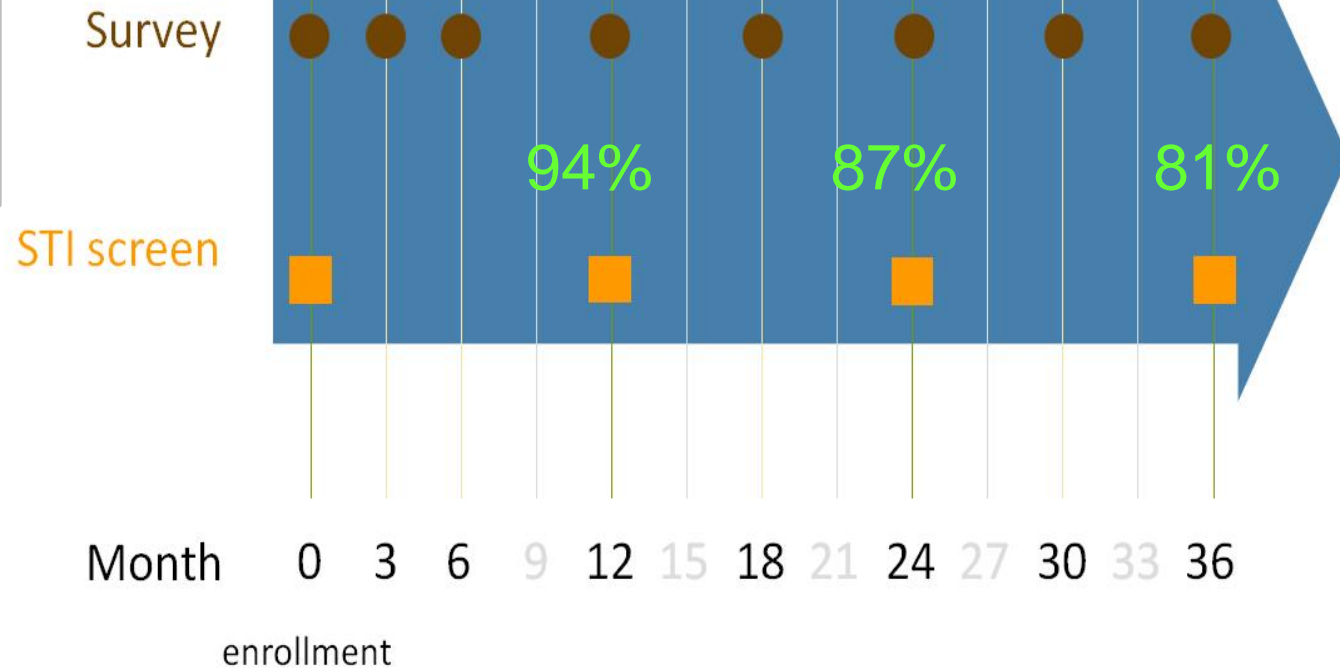
- 14-45 years
- Primary residency in STL City or Country
- Sexually active with male partner
(or soon to be)
- Does not desire pregnancy during next 12 months
 - Desires reversible contraception
- Willing to try a new contraceptive method

Contraceptive CHOICE Project: Study Details

ELIGIBLE

Tiered
Contraceptive
Counseling

LNG-IUS
Cu-IUD
Implant
DMPA
Pills
Patch
Ring
Other



Baseline Characteristics

Age (years)	N		%
14-17	485	} 2,033	5.2
18-20	1548		16.7
21-25	3559		38.5
26-35	3029		32.7
36-45	635		6.9

Race	N	%
Black	4660	50.6
White	3861	41.9
Other	693	7.5

Baseline Characteristics (N=9,256)

SES	n	%
Public assistance	3442	37.2
Trouble meeting basic needs	3639	39.3

Insurance	n	%
None	3782	41.1
Private	3957	43.1
Public	1455	15.8

Baseline Characteristics

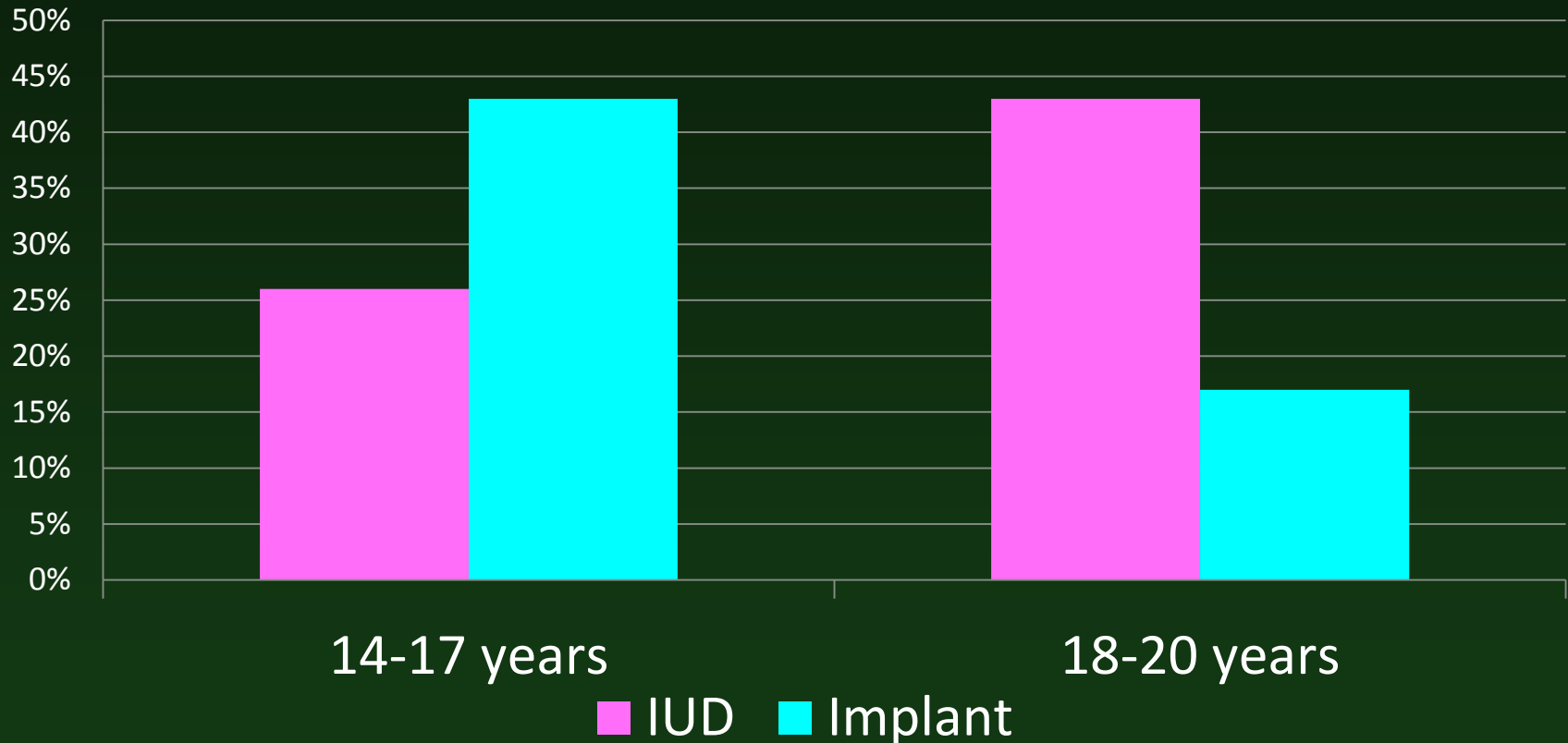
Parity	N	%
0	4375	47.3
1-2	3885	50.0
3+	996	10.7
Unintended pregnancy	5857	63.2
History of STI	3746	40.5

LARC Acceptance

	%
LNG-IUS	46.0
CuT380A	11.9
Implant	16.9
DMPA	6.9
Pills	9.4
Ring	7.0
Patch	1.8
Other	<1.0

} **75%**

Choice of LARC Methods in Adolescents



NEJM CHOICE Publication

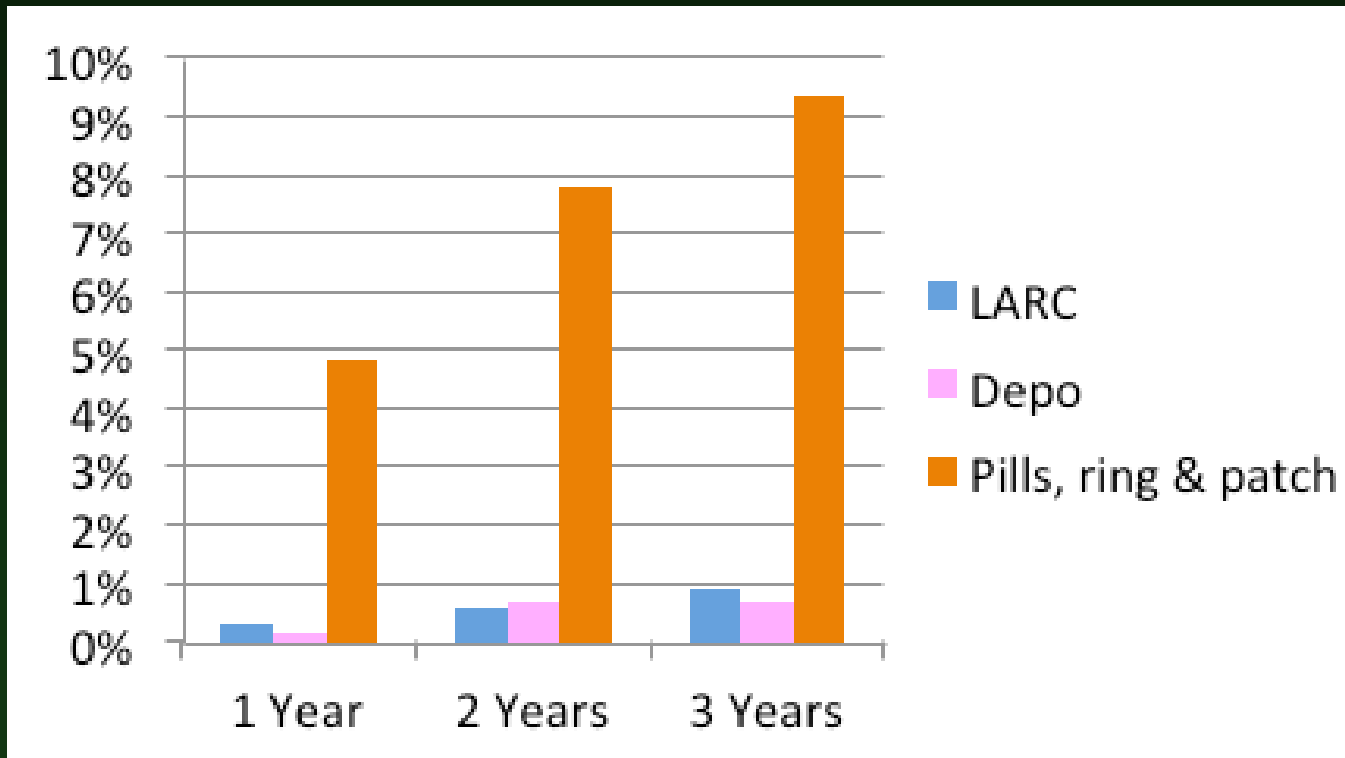
The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Effectiveness of Long-Acting Reversible Contraception

Brooke Winner, M.D., Jeffrey F. Peipert, M.D., Ph.D., QiuHong Zhao, M.S.,
Christina Buckel, M.S.W., Tessa Madden, M.D., M.P.H., Jenifer E. Allsworth, Ph.D.,
and Gina M. Secura, Ph.D., M.P.H.

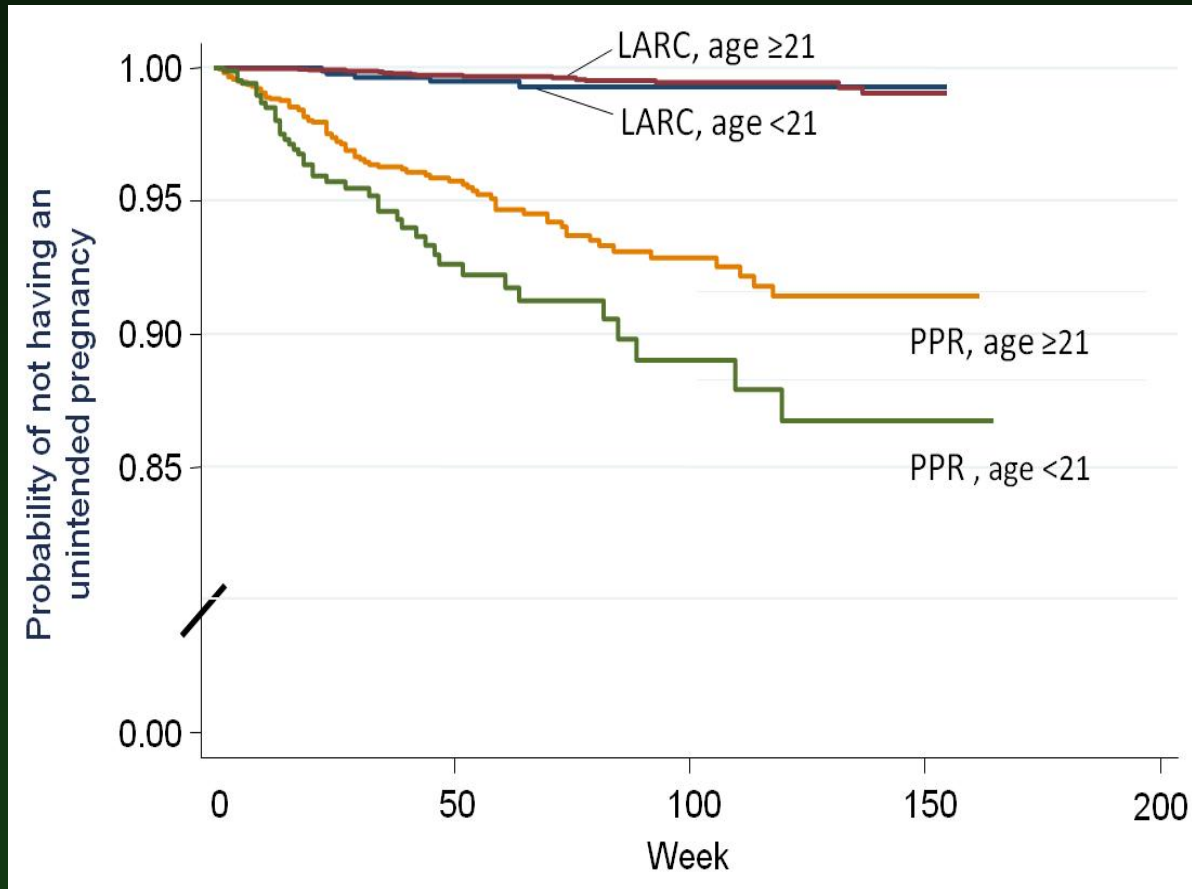
Unintended Pregnancy by Contraceptive Method



$HR_{adj} = 22.3$ (95% CI 14.0, 35.4) TWENTY-FOLD DIFFERENCE!

Winner, et al. NEJM 2012.

Method Failure by Age



$HR_{adj} = 1.9;$
95% CI 1.2, 2.8

12- & 24-Month Continuation: Overall Cohort



Method	12-Month (%)	24-Month (%)
LNG-IUS	87.5	78.9
Copper IUD	84.1	77.3
Implant	83.3	68.5
Any LARC	86.2	76.6
DMPA	56.2	38.0
OCPs	55.0	43.5
Ring	54.2	41.1
Patch	49.5	39.9
Non-LARC	54.7	40.9

12-Month Satisfaction*: Overall Cohort & By Age

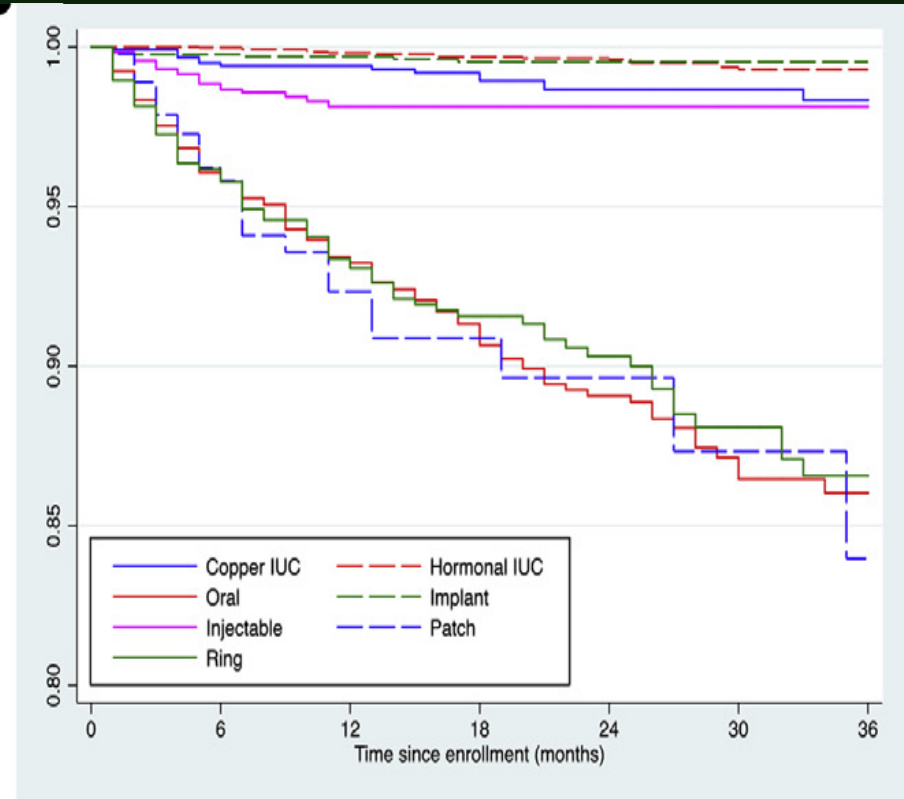
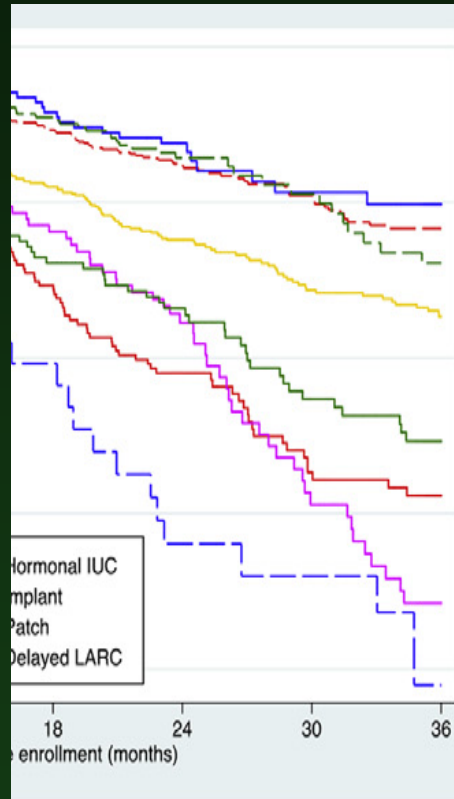


Method	Overall (%)	14-19 (%)	20-45 (%)
LNG- IUS	83.1	77%	84%
Copper IUD	80.2	72%	81%
Implant	77.0	74%	78%
Any LARC	81.2	75%	82%
DMPA	50.1	43%	52%
Pills	49.3	46%	50%
Ring	49.7	31%	52%
Patch	37.2	35%	38%
Non-LARC	48.8	42%	50%

*Very or somewhat satisfied combined

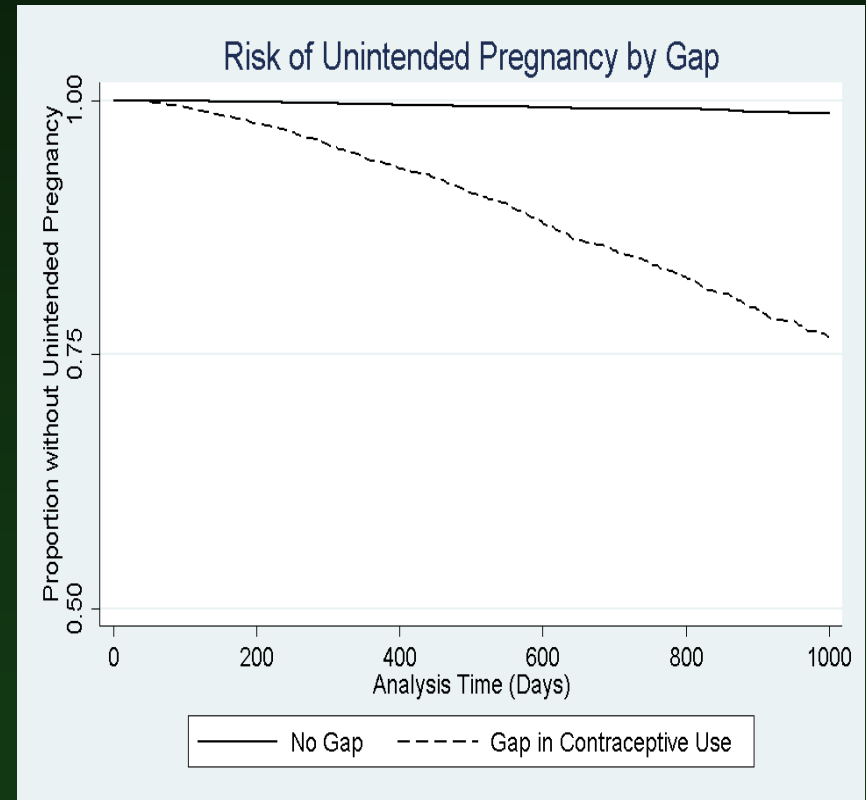
“Intent to Use” versus “As Used”

Where does DMPA fit?



“GAP” Analysis: Multivariable Risk Factors for Unintended Pregnancy

<u>FACTOR</u>	<u>HR_{adj}</u>
4+ College	0.5
< 20 years	1.3
Low SES	1.3
Prior UIP	2.0
GAP	14.0



Madden T, et al. (in preparation)

NEJM CHOICE Publication

The NEW ENGLAND JOURNAL of MEDICINE

ORIGINAL ARTICLE

Provision of No-Cost, Long-Acting Contraception and Teenage Pregnancy

Gina M. Secura, Ph.D., M.P.H., Tessa Madden, M.D., M.P.H.,
Colleen McNicholas, D.O., Jennifer Mullersman, B.S.N.,
Christina M. Buckel, M.S.W., Qihong Zhao, M.S., and
Jeffrey F. Peipert, M.D., Ph.D.

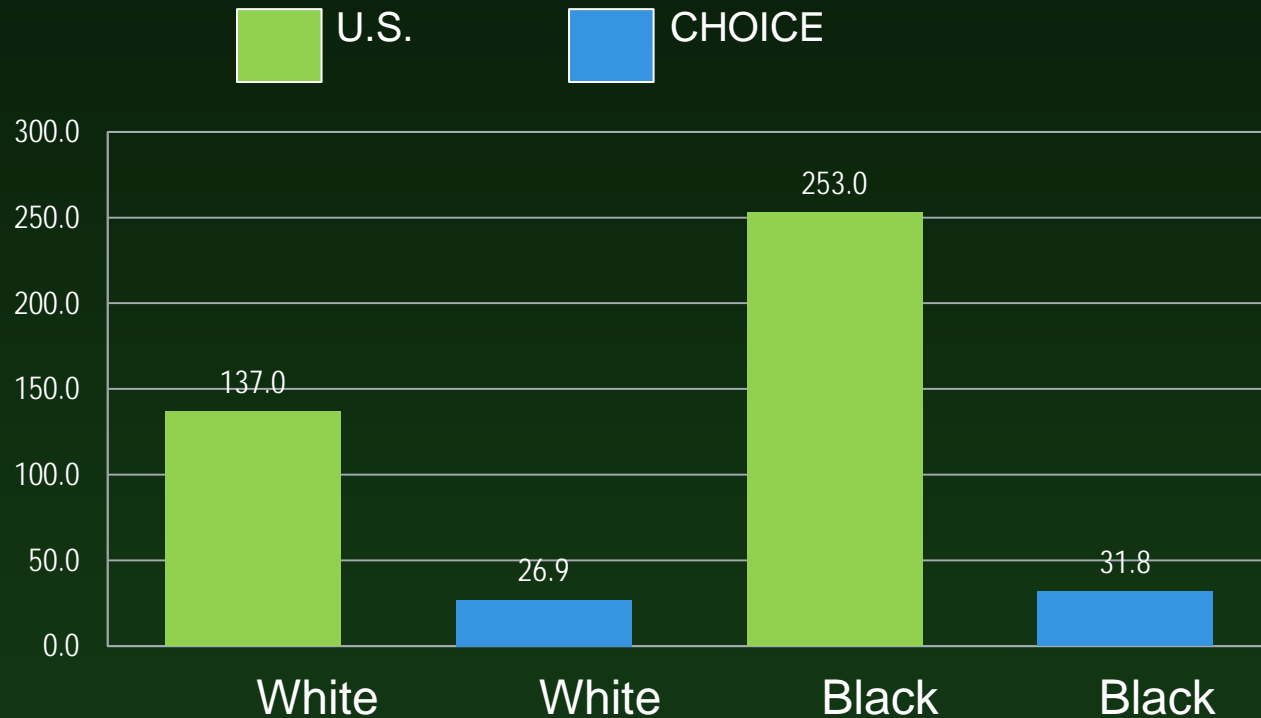
Teen Outcomes: CHOICE Compared to U.S.

	CHOICE Annual Rate*	2008 U.S. Rate*	Reduction
Pregnancy among sexually active teens	34.0	158.5	64%
Birth	19.4	94.0	63%
Abortion	9.7	41.5	65%

*All rates per 1,000 teens 15-19 years

Secura et al. NEJM 2014.

Pregnancy Rates: Sexually Experienced U.S. Teens Compared to CHOICE Stratified by Race



Secura et al. NEJM 2014.

Take-Home Messages

- WHY such a high uptake of LARC?
 - EFFECTIVENESS: key attribute
 - Forgettable: not dependent on adherence
- HIGH continuation rates for long-acting methods, but NOT DMPA, pills, patch or ring
 - Why? Speculation.....
- Application to Microbicides:
 - Longer-acting methods are best (?)

Thank you

