

BIRTH SPACING AND USE OF LARC

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THIS ACTIVITY IS JOINTLY-PROVIDED BY
SYNAPTIV AND THE COLORADO HOSPITAL
ASSOCIATION

Safe Deliveries Project Partnership

- Colorado Hospital Association
- Anthem Blue Cross and Blue Shield Foundation
- March of Dimes Colorado/Wyoming Chapter
- Colorado Perinatal Care Quality Collaborative

Why is a Professor of Family Planning speaking at this conference?



Outline of Presentation

- What is the relationship between birth spacing and birth outcomes?
- Is there unmet need for improved birth spacing?
- Does improved access to highly effective contraceptives
 - Increase *interpregnancy intervals*?
 - *Time to first pregnancy*?
 - Reduce *unintended pregnancy*?
- Does improved access to highly effective contraceptives improve birth outcomes?

Unintended Pregnancy, Birth Spacing and Birth Outcomes

- Regardless of birth interval, unintended pregnancies have greater risk of adverse outcomes
 - Preterm birth (PTB) and delivery of LBW infants
- The link between unintended pregnancy and poor birth outcomes is likely multifaceted,
 - Maternal socioeconomic risk factors,
 - Inadequate prenatal care, and
 - Preconceptional and prenatal maternal behavioral risk factors

Short Interpregnancy Interval and Perinatal Outcomes

- Multiple studies show association of short IPI and:
 - Delayed PNC, preterm birth, neonatal morbidity, low birthweight
- Retrospective study of primiparous women with singleton gestation delivering in US
 - N=1,964,000
 - Short IPI associated with PTB, SGA, low Apgar, NICU admission

DeFranco EA, et al. Influence of interpregnancy interval on neonatal morbidity. Am J Obstet Gynecol. 2015 Mar;212(3):386.e1-9.
 Orr ST et al. Unintended pregnancy and preterm birth. Pediatric Perinatal Epidemiology. 2005; 14:309-313.
 Yee LM, et al. The association between interdelivery interval and adverse perinatal outcomes in a diverse US population. J Perinatol. 2010 Mar 31.

Is there an unmet need for improved birth spacing?

- 33% of US pregnancies have interpregnancy interval of <18 months
- 9% have interdelivery interval of <18 months
- Half of postpartum women resume intercourse within 6 weeks of delivery
- 117,000 postpartum Medicaid recipients in CA:
 - 60% did not have a contraceptive claim within 3 months postpartum
- 13% received contraception at first postpartum visit: significantly more likely to have an adequate IPI
- Infant <9 months is a risk factor for abortion in next pregnancy

Does improved access to LARC increase IPI?

- 2006-2010 NSFG data
- Contraceptive use at
 - 0, 3, 6, 12, 18 months
- Pregnancy within 18 months
 - Hormonal method users=12.6%
 - LARC users=0.5%
- At least 70% of pregnancies within 12 months were unintended

Original Research
Contraception After Delivery and Short Interpregnancy Intervals Among Women in the United States

Karl Wilco, MD, MS, Stephen B. Diaz, MD, MS, and Joseph E. Pridem, MD

OBJECTIVE: To investigate women's patterns of contraceptive use after delivery and the association between method use and risk of pregnancy within 18 months.

DESIGN: We used the nationally representative 2006-2010 NSFG. We compared with 47% using hormonal and long-acting contraceptive methods and 4% using LARC. We calculated interpregnancy interval (IPI) and risk of pregnancy within 18 months.

RESULTS: We used the nationally representative 2006-2010 NSFG. We compared with 47% using hormonal and long-acting contraceptive methods and 4% using LARC. We calculated interpregnancy interval (IPI) and risk of pregnancy within 18 months.

Contraception for Young Mothers

- 12 to 49% of adolescent mothers are pregnant again within one year (RRP)
- A second child in adolescence predicts a high risk of negative outcomes
- Teens have the highest rate of PTB by age group
- Many different interventions with limited success
- Norplant associated with prevention of RRP in adolescents

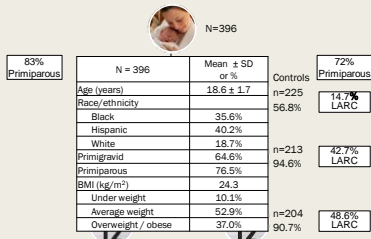


Meads, C.S. Soc Sci Med. 2006; 60(4): p. 655-78.
Owen-Smith C. Am J Prev Med. 2005; 21(2): p. 60-6.

Immediate post-partum implants

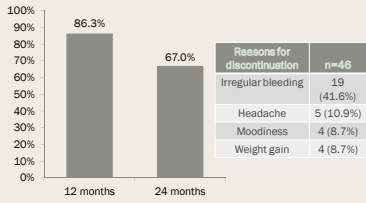
- All adolescents in CAMP delivered 6/1/08-11/30/09
 - Prenatally, offered immediate PP implant
 - Immediate PP IUDs not available
 - Records reviewed; phone interviews for missing data
 - Variables: demographic, reproductive, contraceptive use, discontinuation/re-initiation of contraceptives, pregnancy
- Consistent Contraception
 - Using one or more contraceptive method(s) for 80% of the year of observation

Participation



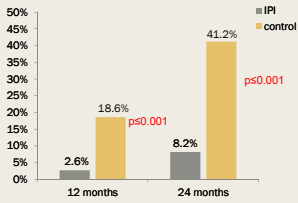
Touce KM, Sheeder JL, Teal SR. Am J Obstet Gynecol. 2012 Jun;206(6):481-41-7.

Implant Continuation



Toocle K. Am J Obstet Gynecol. 2012.

Repeat Pregnancy



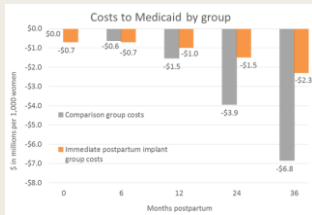
Toocle K. Am J Obstet Gynecol. 2012.

Cost-effectiveness

- Costs estimated using Colorado Medicaid payments
 - Implant device, insertion, removal, ectopic, SAB, NSVD, C/S
- Outcomes estimated using results of CAMP IPI project

Han L, Teal SB, Sheeder J, Toocle K. Am J Obstet and Gynecol. 2014 Jul 21;111:24 e1-7.

Annual costs/1000 women



Han L, et al. *Am J Obstet Gynecol*. 2014 Jul;211(1):24.e3-7.

Cost-effectiveness

For every dollar spent \$0.79, \$3.54, and \$6.50 would be saved at 12, 24, and 36 months.

GENERAL GYNECOLOGY Preventing repeat pregnancy in adolescents: is immediate postpartum insertion of the contraceptive implant cost effective?

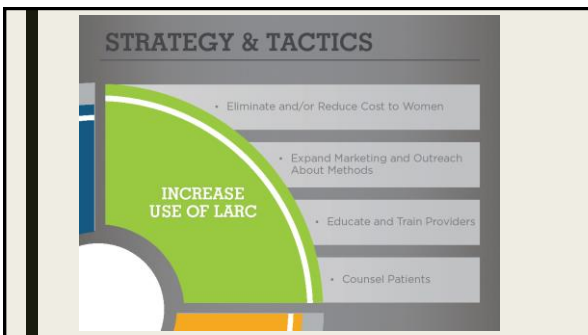
OBJECTIVE: The objective of the study was to determine the cost effectiveness of a hypothetical, state-based program offering immediate postpartum insertion of the contraceptive implant to adolescents. **DESIGN:** A retrospective cohort study. **SETTING:** A tertiary care hospital. **PARTICIPANTS:** All adolescents who were 12–19 years old and had a live birth between 2005 and 2010. **MEASUREMENTS AND MAIN RESULTS:** We compared the actual costs of the immediate postpartum insertion of the implant with the actual costs of the comparison group. **CONCLUSIONS:** For every dollar spent on the implant, \$0.79, \$3.54, and \$6.50 would be saved at 12, 24, and 36 months, respectively. **KEY WORDS:** adolescent, cost, implant, immediate contraception, long-acting reversible contraception, Medicaid, postpartum.

MULTI-YEAR MULTI-FACETED

The Colorado Initiative is a multi-year and multi-faceted effort to reduce unintended pregnancy among those it affects most: low-income, uninsured women.

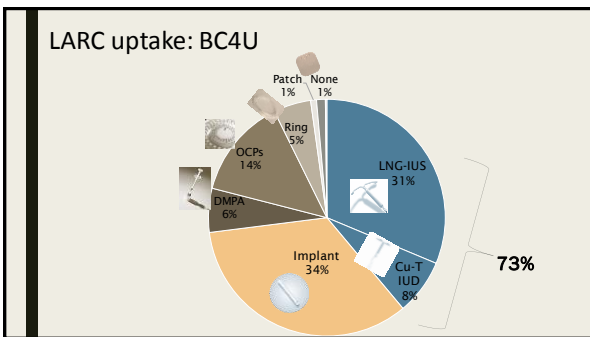


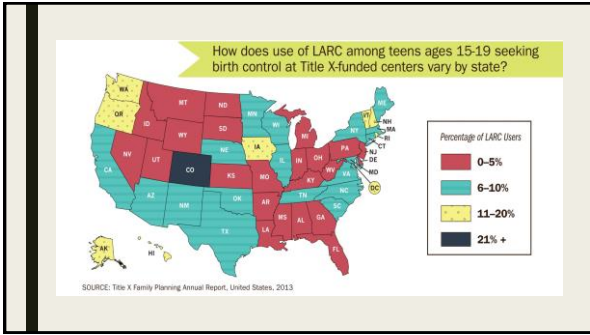


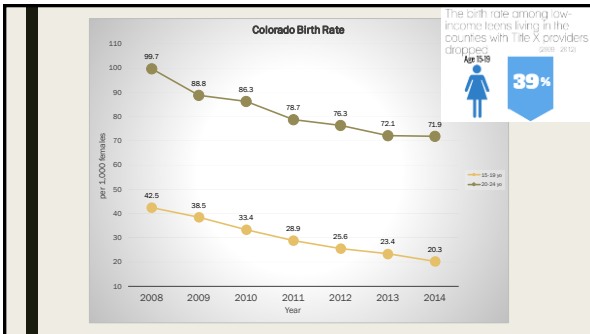


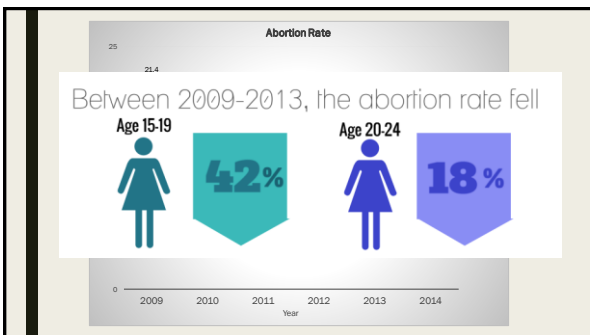


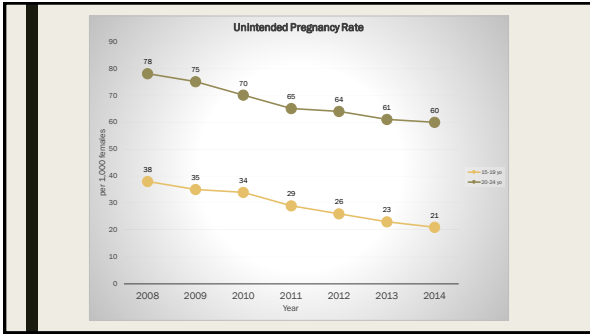


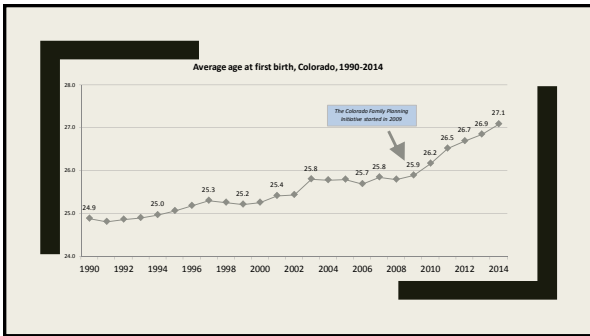


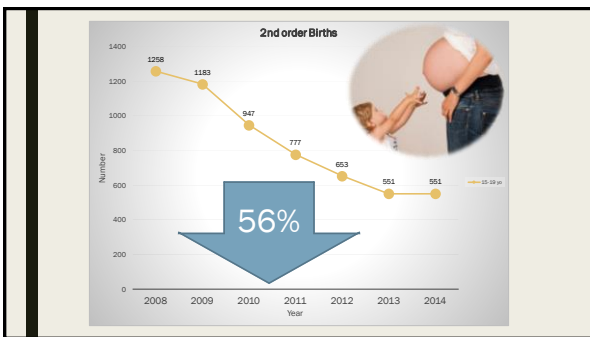


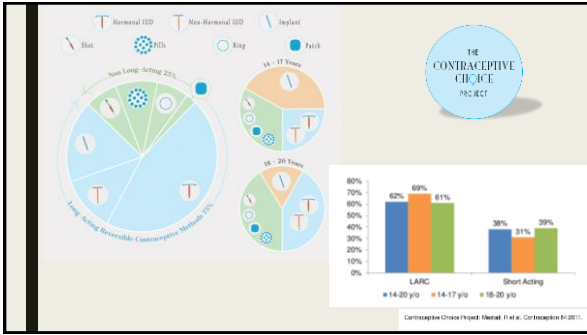


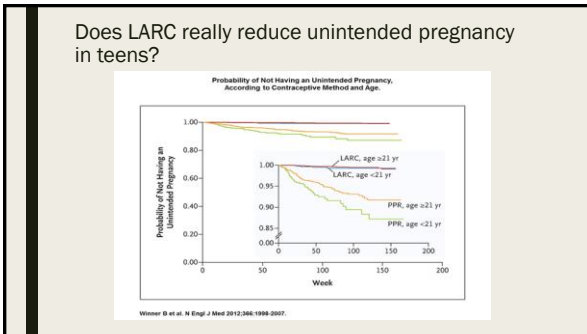


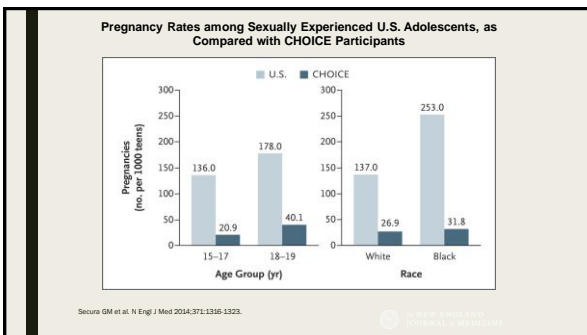


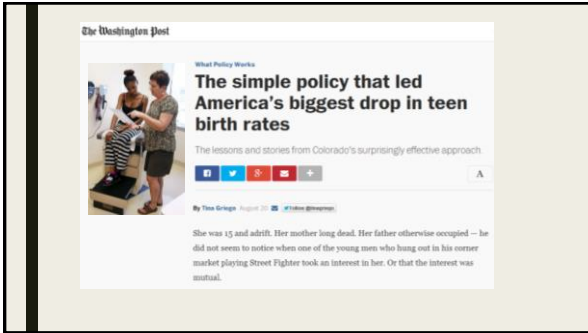










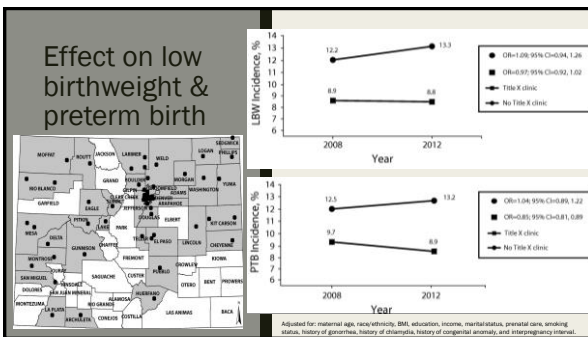


Why was I invited to this conference?

Adverse Birth Outcomes in Colorado: Assessing the Impact of a Statewide Initiative to Prevent Unintended Pregnancy

| Lisa M. Gottlieb, MD, Lindsay Datta, MS, Ryan K. Johnson, BS, Danielle Dohndorf, MS, and Jeanette Strasser, PhD, MPH

In the realm of PTB prevention, these numbers are more impactful than all of the previous efforts with tocolytics and progesterone...(nationwide the) downstream impact would be prevention of more than \$1 billion in health care expenditures... A. Caughey, Obstet Gynecol Survey

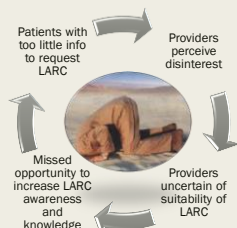


Direct link between LARC use and reduced PTB

- N=112,000 Medicaid births in California, second order or higher (2011)
 - How long ago was the prior birth?
 - Was the birth preterm?
 - Contraceptive method after the prior birth?
- 9.75% of births preterm
- For each additional month of contraceptive use, odds of PTB ↓ 1.1%
- Mean contraceptive coverage duration was greatest with IUD and implants

OBSTETRICS
The impact of postpartum contraception on reducing preterm birth: findings from California
 Maria L. Rodriguez, MD, MPH; Michael Cheng, MPH; Stefan D. Bouvier, PhD, MPH
OBJECTIVE: Contraception is an important strategy to prevent recurrent preterm in women with early obstetric history. We evaluated the impact of postpartum contraceptive use on the risk of preterm birth in a population of Medicaid recipients in California.

Missed opportunities



Tsai S, Romer SF. *J Adolescent Health*. 2013 Apr;52(4):535-9.

Colorado results



Children's Hospital Colorado

- LARC initiation and use is very high in Colorado
- This results in reductions in:
 - Teen births
 - Abortions
 - Unintended pregnancies
 - Rapid 2nd births
 - Preterm births
 - Low birth weight
 - Costs
- Same-day initiation is important and reasonable
- Patients know what they want, are confident in their choices, and continue use

