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Issue Brief

Long Acting Reversible Contraceptives (LARCs): Efficacy & Cost Effectiveness

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Unintended pregnancies can pose significant health risks to the mother and the infant, in addition to being an economic burden. Unintended pregnancy can result in higher rates of depression, diabetes, and obesity in the mother as well as poorer socioeconomic conditions. Unintended pregnancy is also associated with poor physical and mental health in children[1]. In 2011, 45% of all pregnancies in the U.S. were unintended, including 75% of teen pregnancies[2]. More than 95% of these unintended pregnancies were attributed to women who do not use contraceptives or use them inconsistently.

In Arizona, 51% of all pregnancies in 2010 were unintended, costing more than $161.5 million to the state taxpayers and $509 million to the federal government[2,3]. Over 51% of all births in Arizona were funded by the state's Medicaid program, AHCCCS, and the total cost to Arizona from unintended pregnancies was $531 per woman in 2010 compared to $201 per woman nationally[2,4]. Publicly funded family planning programs in Arizona helped to meet only 23% of contraceptive services and supplies for women in the state in 2013. This is significantly lower than the national average of 29%[2].

While different Medicaid plans in Arizona provide different coverage for family planning services, all plans are required to cover one or more contraceptives from each category of contraceptives (oral and injectable contraceptives, subdermal implantable contraceptives, intrauterine devices, diaphragms, condoms, foams, and suppositories)[5]. However, Arizona experienced more than a 7% increase in the number of women needing publicly funded contraceptive services between 2010 and 2013 despite coverage[6].

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Increasing investments in pregnancy prevention by increasing access to Long Acting Reversible Contraception (LARCs) can help improve maternal and child health outcomes in Arizona in a cost effective manner. Nationally, for every public dollar spent on pregnancy prevention, $4.02 is estimated to be saved on maternal and child care among Medicaid eligible women[7].

LARC includes birth control methods such as intrauterine devices (IUD) and implants. These contraceptive methods usually last 3-10 years and do not require user effort daily, weekly, or monthly such as the pill or patch, other common methods of birth control[8]. LARCs can be highly effective as a family planning method. Women who use LARCs experience a pregnancy rate of less than 1 in 100 women in the first year of use compared to birth control pills (9 out of 100) or male condoms (18 out of 100)[9].

Despite the effectiveness, the utilization of LARCs continue to remain low in the U.S. at 11.6 percent among women using contraceptives in 2011-2013 compared to 25.9 percent of women who use the pill[10]. Barriers to LARC utilization include higher upfront costs for the devices and insertion

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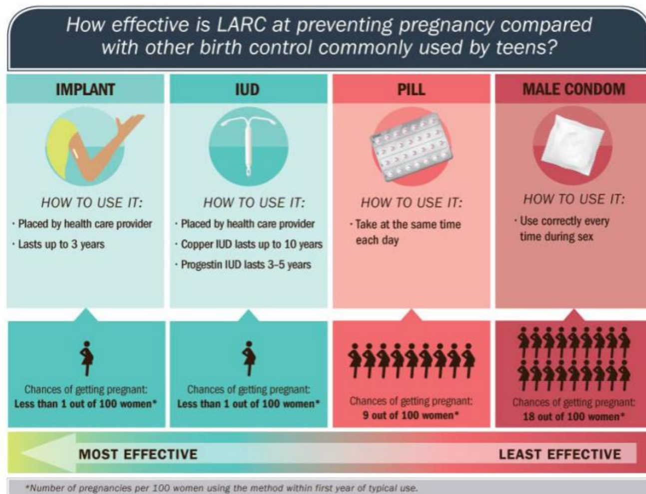
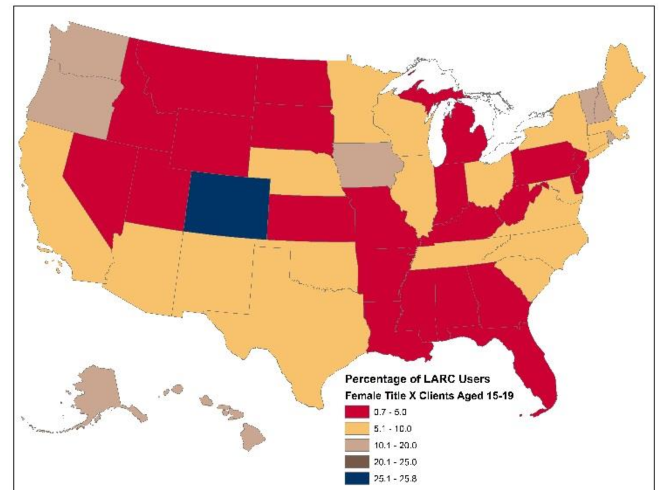
procedures, poor reimbursement policies, lack of implant/IUD training for obstetrician-gynecologists, limited access, and low levels of awareness about the benefits of LARCs relative to other family planning methods[8,11,12].



Although reimbursement for LARCs through state Medicaid and Title-X family planning clinics in Arizona is allowed, LARCs are not a commonly prescribed family planning tool. Increased promotion of LARC through policy and prescriber initiatives could help improve maternal and child health outcomes in the state through lowering the unintended pregnancy rate, yielding significant savings through unwanted pregnancy prevention, and reducing health disparities.

Success in Colorado – A Case Study

Following various federal initiatives, including the Affordable Care Act, several U.S. states have adopted various reimbursement strategies for LARC devices and insertion services. Colorado was one of the early and innovative adopters for LARC reimbursement (through private funding for Title-X family planning clinics). Colorado has witnessed significant reduction in fertility rates, teen pregnancy rates, and abortion rates in addition to a return on investment of $5.85 per dollar spent[13]. The state had the highest rate of LARC utilization in the country among teens aged 15 – 19 in 2013[14]. It is estimated that 25.8 percent of teens aged 15-19 use LARCs through Title-X funding in Colorado, compared to 5.8 percent in Arizona[15].



Even before the state started reimbursing LARC devices and procedures, the Colorado Department of Public Health and Environment (CDPHE) launched the Colorado Family Planning Initiative (CFPI) through private funding in 2009[13,16]. As part of the CFPI initiative, LARCs were provided at no cost to the low-income population through the state's 28 Title X-funded family planning clinics in 37 counties covering 95% of the state's low income population.

"Colorado has witnessed significant reduction in fertility rates, teen pregnancy rates, and abortion rates in addition to a return on investment of $5.85 per dollar spent"

The program witnessed tremendous success with increased LARC usage, lower than expected fertility rates, lower abortion rates, reduced unintended teen pregnancies, decreased high risk births, and lower number of children enrolled in Colorado's

Special Supplemental Nutrition program for Women, Infants, and Children (WIC)[16,17].

Results from Colorado Family Planning Initiative		
2011 observed vs. expected fertility rate in 15-19 year olds	↓	29 %
Proportion of high risk births in CFPI counties between 2009 and 2011	↓	24%
Abortion rate in 15-19 years olds between 2009 and 2011	↓	34%
Abortion rate in 20-24 years olds between 2009 and 2011	↓	18%
Infant enrollment in WIC between 2010 and 2013	↓	23%
No. of teens giving birth for the 2nd and 3rd time between 2009 and 2014	↓	58%

Source: Ricketts (2014) Perspectives on Sexual and Reproductive Health, 46(3), 125-132, hwww.larc4co.com.

The program is also estimated to result in significant cost savings for the state by decreasing demand for other state-funded programs. In 2014, the state spent $404 per patient for a family planning visit compared to the cost of an average Medicaid birth at $11,500[17,18]. Additionally, the state Medicaid program is said to have avoided $79 million in birth related costs between 2010 and 2012 due to reduced fertility rates; resulting in a return on investment of $5.85 per dollar spent on the CFPI program[13]. Following the success of the program, Governor John Hickenlooper and state legislators allocated $2.5 million for the CFPI as part of the 2016-2017 budget[14].

What Have Other States Done?

In April 2016, the Center for Medicaid and Children's Health Insurance Program (CHIP) Services (CMCS) published an informational bulletin on the effectiveness of LARCs and barriers to LARC utilization[8]. While 14 states have implemented various contractual and payment strategies and policy guidance over the past 3 years to improve LARC utilization, Arizona was not included in the list. Contractual/payment strategies and policies currently followed by various states fall into 5 broad categories as shown in the infographic to the right.

Contractual/Payment Strategies and Policies for LARCs		
1.	Provide timely, patient centered comprehensive coverage for the provision of contraceptive services for women of child-bearing age (e.g., contraception counseling; insertion, removal, replacement)	Massachusetts
2.	Raising payment rates to providers for LARC or other contraceptive devices in order to ensure that providers offer the full range of contraceptive methods	California, Colorado, Illinois, Maryland, New York, South Carolina
3.	Reimbursing for immediate postpartum insertion of LARC by unbundling payment for LARC from other labor and delivery services	Alabama, Colorado, Georgia, Illinois, Iowa, Louisiana, Maryland, Massachusetts, Montana, New Mexico, New York, South Carolina
4.	Removing logistical barriers for supply management of LARC devices (e.g., addressing supply chain, acquisition, stocking cost and disposal cost issues)	Georgia, Illinois, South Carolina, Texas
5.	Removing administrative barriers for provision of LARC (e.g., allowing for billing office visits and LARC procedures on the same day; removing preauthorization requirements)	Illinois, Iowa, Louisiana, Texas

Source: Medicaid.gov https://www.medicaid.gov/federal-policy-guidance/downloads/CIB040816.pdf

What's Next for Arizona?

In Arizona, a large percentage of women who need the assistance of publicly funded family planning programs are young, women of color, low income or uninsured[19]. More than 90% of funding for family planning programs is from Medicaid, while 8% is from Title X (federal grant program). The remaining

funds come from other federal resources. Expanding access to family planning services and taking advantage of various federal initiatives can help increase LARC utilization in the state. CMS recommends that states cover all FDA-identified contraceptive methods (both prescription and non-prescription) to help increase accessability[20].

Some of the federal initiatives focusing on LARCs include[21]:

- Medicaid Family Planning Waiver – allows expanded eligibility for coverage of family planning services under Medicaid. As of December 2015, Arizona is one of the 23 states which had not secured a waiver for expanded coverage of family planning services under Medicaid[22].
- CDC 6/18 Initiative – CDC partners with purchasers, payers, and providers to reimburse for LARC devices and full range on contraceptive services[7].
- CDC/ASTHO Immediate Post-partum LARC Learning Community – CDC works with states and health agencies to implement LARC, especially postpartum insertion following delivery
- CMCS Maternal & Infant Health Initiative – Promotes postpartum care including pregnancy planning and spacing, and pregnancy prevention through effective contraceptive use.

Additionally, Arizona could explore initiatives to overcome barriers such as varying reimbursement rates by provider and by device, partial reimbursement to providers, upfront costs required by providers to stock LARC devices, confidentiality concerns from patients including bills (for family planning services) sent to insured clients and information appearing in patient portals, IUD/implant training for providers including those practicing in rural settings with low volume of patients, resistance from providers who have moral or religious objections, and clinical flow disruptions caused by same-day LARC insertion services.

In addition to strategies around reimbursements and provider training, the state could enhance policies around LARC education and counselling for teens and at-risk populations. Counselling could focus on the efficacy and potential benefits of LARCs and reinforce that LARCs do not help prevent sexually transmitted diseases[23]. As stated by a Guttmacher study, "Health care providers have to ensure that their patients' choices are fully informed and completely voluntary and that they are empowered to choose freely from the range of contraceptive options, including highly effective LARC methods.[24]"

While multi-pronged efforts focused on training, education, inventory management and reimbursements would likely increase LARC utilization in Arizona, various studies and real-world examples, such as what is occurring in Colorado, have proven that increased access to LARCs can help improve health outcomes while being cost effective.

AHCCCS is already working towards modifying reimbursement for immediate postpartum insertion of LARC by unbundling payment for LARC from other labor and delivery services (projected to be implemented by January 2017). However, more work could be done to overcome all barriers through joint efforts from researchers, policy makers, and maternal and child health experts including physicians and publicly funded family planning providers.

References

1. Reducing Unintended Pregnancies in Colorado. Colorado Department of Public Health and Environment. https://www.colorado.gov/pacific/sites/default/files/HPF_FP_UP-Reducing-Unintended-Pregnancies-in-CO.pdf. Published n.d. Accessed June 2016.
2. State Facts about Unintended Pregnancy: Arizona. Guttmacher Institute, 2016. https://www.guttmacher.org/fact-sheet/state-facts-about-unintended-pregnancy-arizona. Accessed June 2016.
3. Title X in Arizona. Improving Public Health and Saving Taxpayer Dollars. National Family Planning & Reproductive Health Association. http://www.nationalfamilyplanning.org/file/documents---state-snapshots/Title-X-Arizona.pdf. Published September 2015. Accessed June 2016.
4. Arizona Department of Health Services. Natality: Maternal Characteristics and Newborn's Health http://www.azdhs.gov/plan/report/ahs/2014/pdf/text1b.pdf. Published 2014. Accessed June 2016
5. Arizona Healthcare Cost Containment System. AHCCCS Medical Policy Manual Chapter 400 Section 420: Family Planning. https://www.azahcccs.gov/shared/Downloads/MedicalPolicyManual/Chap400.pdf. Updated 2015. Accessed June 2016
6. Guttmacher Institute. Contraceptive Needs and Services, 2013 Update. https://www.guttmacher.org/sites/default/files/report_pdf/contraceptive-needs-and-services-2013.pdf. Published July 2015. Accessed June 2016.
7. Evidence Summary: Prevent Unintended Pregnancy. The 6|18 Initiative. Center for Disease Control and prevention. http://www.cdc.gov/sixeighteen/docs/6-18-evidence-summary-pregnancy.pdf. Published December 2015. Accessed June 2016
8. Wanchino, V. CMCS Informational Bulletin - State Medicaid Payment Approaches to Improve Access to Long-Acting Reversible Contraception. Center for Medicaid and Chip Services, 2016. Retrieved from https://www.medicaid.gov/federal-policy-guidance/downloads/CIB040816.pdf. Published April 2016. Accessed June 2016.
9. Preventing Teen Pregnancy Infographics. Center for Disease Control and Prevention Website. http://www.cdc.gov/vitalsigns/rd-test/larc/infographic.html. Published April 2015. Accessed June 2016.
10. Daniels, K., Daugherty, J., Jones, J., & Mosher, W. Current Contraceptive Use and Variation by Selected Characteristics Among Women Aged 15-44: United States, 2011-2013. National health statistics reports, 2015;(86), 1-15.
11. Luchowski, A. T., Anderson, B. L., Power, M. L., Raglan, G. B., Espey, E., & Schulkin, J. Obstetrician–Gynecologists and contraception: long-acting reversible contraception practices and education. Contraception,2014; 89(6), 578-583.
12. Secura, G. M., Madden, T., McNicholas, C., Mullersman, J., Buckel, C. M., Zhao, Q., & Peipert, J. F. Provision of no-cost, long-acting contraception and teenage pregnancy. New England Journal of Medicine,2014; 371(14), 1316-1323.
13. Colorado's Teen Birth Rate Continues to Plummet. Colorado Department of Public Health and Environment. https://www.colorado.gov/pacific/cdphe/news/teenbirthrate. Published October 2015. Accessed June 2016.
14. Colorado poised to invest in successful public health program to reduce unintended pregnancies, LARC4CO.com. http://www.larc4co.com/press-release-042616. Published April 2016. Accessed June 2016.
15. Romero, L., Pazol, K., Warner, L., Gavin, L., Moskosky, S., Besera, G., ... & Barfield, W. Vital Signs: Trends in Use of Long-Acting Reversible Contraception Among Teens Aged 15–19 Years Seeking Contraceptive Services—United States, 2005–2013. MMWR Morb Mortal Wkly Rep, 2015; 64(13), 363-369.
16. Ricketts, S., Klingler, G., & Schwalberg, R. Game Change in Colorado: Widespread Use Of Long-Acting Reversible Contraceptives and Rapid Decline in Births Among Young, Low-Income Women. Perspectives on Sexual and Reproductive Health, 2014; 46(3), 125-132.
17. Stone, Z. The Colorado Legislature Rights Its Wrong, Funds Family Planning Initiative. Colorado Consumer Health Initiative. April 13, 2016. http://cohealthinitiative.org/blog/2016-04-13/colorado-legislature-rights-its-wrong-funds-family-planning-initiative. Accessed June 2016.
18. Support Continued Access to Effective Birth Control. LARC4CO.com. https://static1.squarespace.com/static/54db74dfe4b0196028574a9a/t/56fd7c6f8a65e238e311a883/1459453040920/FACTSHEET-FamilyPlanning2016-Final-s7-032316.pdf. Published March 2016. Accessed June 2016.
19. State Facts on Publicly Funded Family Planning Services: Arizona. Guttmacher Institute, July 2015. https://www.guttmacher.org/fact-sheet/state-facts-publicly-funded-family-planning-services-arizona. Accessed June 2016.
20. Wanchino, V. CMCS Letter to State Health officials: Medicaid Family Planning Services and Supplies, SHO# 16-008, June 2016.
21. Women's Health Statistics: Arizona. Center for Disease Control & Prevention. http://www.cdc.gov/reproductivehealth/data_stats/pdfs/arizona.pdf. Published 2016. Accessed on June 2016.
22. States that have Expanded Eligibility for Coverage of Family Planning Services under Medicaid. Henry J. Kaiser Family Foundation. http://kff.org/medicaid/state-indicator/family-planning-services-waivers/. Published December 2015. Accessed June 2016.
23. Williams, R. L., & Fortenberry, J. D. Dual use of long-acting reversible contraceptives and condoms among adolescents. Journal of Adolescent Health, 2013;52(4), S29-S34.
24. Guttmacher Institute. Fully Informed Patient Choice and Consent Have to be Central to Expanding Access to Highly Effective Contraceptive Methods. https://www.guttmacher.org/news-release/2014/fully-informed-patient-choice-and-consent-have-be-central-expanding-access-highly. Published September 2014, Accessed June 2016.