

# A BUSINESS CASE FOR LONG-ACTING REVERSIBLE CONTRACEPTION (LARC) FOR RHODE ISLAND MEDICAID

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## The Problem

- Half of all pregnancies are unintended (Guttmacher, 2013)
- Rates of unintended pregnancy (UP) highest among low-income, young women (Guttmacher, 2013)
- Utilization of LARC lowest among young women and minorities (CDC, 2012)
- UP cost \$11.1 B in 2006 (Guttmacher, 2013)
- Short acting contraception (SARC) including pill and condom, is less effective than LARC (IUD) due to increased reliance on the user (Trussell, 2004)

## Purpose of the Project

- Goal: evaluate economic impact of a modest increase in LARC uptake on Medicaid expenditures in RI

## Assumptions

- Compared current to 3 hypothetical scenarios
  - 10% women on no method → LARC
  - 10% women on SARC → LARC
  - 5% women on no method and 5% on SARC → LARC
- Defined contraception as
  - LARC = IUD
  - SARC = pill, injection
  - No method = none, rhythm, withdrawal

## Key Finding

- Medicaid can save almost \$1 M if a small percentage (10% over 3 years) of women switch to LARC from no method and SARC methods. This is a conservative estimate because of the small switch over 3 years, and because we used conservative estimates of costs and savings.

## Projected Savings from Averted UP

- Multiplied number of UPs by average cost of UP to get projected savings from averted UP
- Calculated number of UPs prevented by multiplying number of women on contraception by probability of having UP in current and hypothetical scenarios
- Used DRG codes to estimate range of average Medicaid reimbursement for 3 birth outcomes (Table 1)
- Calculated average cost of UP by weighting the average Medicaid reimbursement for 3 birth outcomes: live and uncomplicated, LBW, and spontaneous abortion (Table 2)
- **Takeaway:** Scenario 1 offers highest potential savings, scenario 2 offers lowest potential savings, and scenario 3 offers middle-of-the-road savings (Table 3)

**Table 1: Range of Medicaid reimbursement for birth outcomes**

Pregnancy Outcome	Average length of stay (days)	DRG-Code consistent with ALOS: Low est.	Average reimbursement (low)	Average reimbursement (high)
<b>Uncomplicated Live Birth</b> (weighted average of vaginal births and C-section)			\$5,074	\$7,980
Vaginal, uncomplicated (73.4% of births)	2.4	560-1	\$3,977	\$6,517
C-section (27.6% of births)	4.7	540-2	\$7,953	\$11,819
<b>Low Birth Weight</b>	26	621-4	\$30,000	\$30,000
<b>Spontaneous abortion</b> (Requiring hospitalization)	1.4	564-2	\$4,418	\$7,511

**Table 2: Average cost of UP**

Age	Average cost of UP
15-19	\$3,514
20-24	\$3,330
25-29	\$3,786
30-34	\$3,300
35-39	\$3,764
40-44	\$4,126

**Table 3: Estimated savings from prevented UPs**

Scenario	# of UPs prevented	Savings (\$M)
Scenario 1	368	\$1.36-1.91
Scenario 2	84	\$0.32-0.40
Scenario 3	226	\$0.83-1.16

## Projected Medicaid Costs of Contraception

- Calculated annualized cost of contraceptives to compare those of different lifespans (Table 4)
- Compared Medicaid's current contraceptive costs to costs in hypothetical scenarios (Table 5)
- **Takeaway:** Contraceptive costs in scenario 2 and 3 are lower than in the current scenario because annualized cost of IUDs is less than annualized cost of short acting methods (pill and injection) (Table 5)

Contraception	Annualized cost
None	\$0
Condom	Not covered by Medicaid
Pill	\$449
Injection	\$392
IUD	\$60-179

Scenario	Cost of contraception (\$M)*	Change in cost vs. current scenario (\$M)*
Current	\$4.71 - 4.78	--
Scenario 1	\$4.76 - 4.92	+ \$0.05-0.15
Scenario 2	\$4.34 - 4.60	- \$0.18-0.37
Scenario 3	\$4.55 - 4.77	- \$0.02-0.16

\*Range reflects high and low estimate of annualized cost of IUD

## Projected Net Savings

- Subtracted estimated costs from estimated savings to get projected net savings
- Calculated net savings over one year
- **Takeaway:** Results are sensitive to varying cost of IUDs, cost of birth outcomes, and proportion of women switching to LARC. However, conclusion is same: scenario 1 has highest net savings, scenario 2 has lowest net savings, and scenario 3 offers savings in the middle. (Table 6)

Scenario	High costs, low savings (\$M)	Low costs, low savings (\$M)	High costs, high savings (\$M)
Scenario 1	\$1.21	\$1.31	\$1.76
Scenario 2	\$0.50	\$0.69	\$0.58
Scenario 3	\$0.84	\$1.00	\$1.17

## Financial Projections

- Modeled what happens when the 10% switch of women to LARC occurs over 3 years, instead of 1 year – a more conservative and feasible scenario
- Assumed some women switch from SARC and some from no method to LARC
- Included resources needed for education and outreach to providers and women
- **Takeaway:** Medicaid can save almost \$1 M over three years if a small percentage of women switch to LARC from no method and SARC methods. This is a conservative estimate because of the small switch over three years, and because we used conservative estimates of costs and savings. (Table 7)

	Year 1	Year 2	Year 3	Total
<b>Costs (\$M)*</b>				
Cost of contraceptive (LARC and SARC)	0.12	0.08	0.16	0.41
Education and outreach	0.01	0.005	0.005	0.02
<b>Benefits (\$M)</b>				
Savings resulting from prevented <u>UPs</u>	0.72	0.23	0.50	1.46
Present Value of Net Benefit (\$M)	0.52	0.13	0.31	<b>0.97</b>

All costs and benefits are reported in present value. Future costs have been discounted at 4.2% (2012 Medical CPI)