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Iowa Family Planning Demonstration Evaluation
Final Report: February 2006-June 2017

Elizabeth T Momany, PhD
Associate Research Scientist

The University of Iowa Public Policy Center

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Introduction

Study Caution

A changing health care landscape

Study results from the period January 1, 2014 through June 30, 2017 include a time of significant change in Iowa Medicaid. On January 1, 2014, the Iowa Health and Wellness Plan (IHAWP) began providing health care coverage for Iowans from 0-133% FPL who were not eligible through some other Medicaid category of care such as through a disability determination or family medical assistance. This option mirrored many of the benefits available in Medicaid and exceeded the coverage provided in the Family Planning Demonstration (FPD). Coverage through IHAWP was provided through the FFS Medicaid program for Iowans from 0-100% FPL and through Qualified Health Plans accessed through the Health Marketplace for Iowans from 101-133% FPL. In addition, the health insurance mandate may have shifted women from 134-300% FPL, who had previously relied on FPD for their family planning services, into private plans. Unfortunately, we are unable to determine whether women in private plans accessed family planning services or delivered a child.

At the end of CY 2014 CoOportunity, one of two Qualified Health Plans, ended. By the conclusion of CY 2015 the only other QHP, Coventry, was not asked to renew their product in Iowa. During the period January to March, 2016, all Medicaid members were placed into the traditional Fee-for-service (FFS) model of care. Beginning April 1, 2016 members were enrolled in one of three Managed Care Organizations (MCOs): Amerigroup Iowa, AmeriHealth Caritas Iowa, or United Healthcare Plan of the River Valley.

Data issues

The MCOs began operation on April 1, 2016. During the period April - June 2016 encounter data provided by the MCOs is incomplete with data missing in key fields such as the DRG code and discharge date for hospitalizations. The proportion of encounters with missing data vary by MCO with AmeriGroup providing the most complete data during this time. As of the fourth quarter of 2016, data is more complete however, key components such as discharge date, are still missing on a significant proportion of claims.

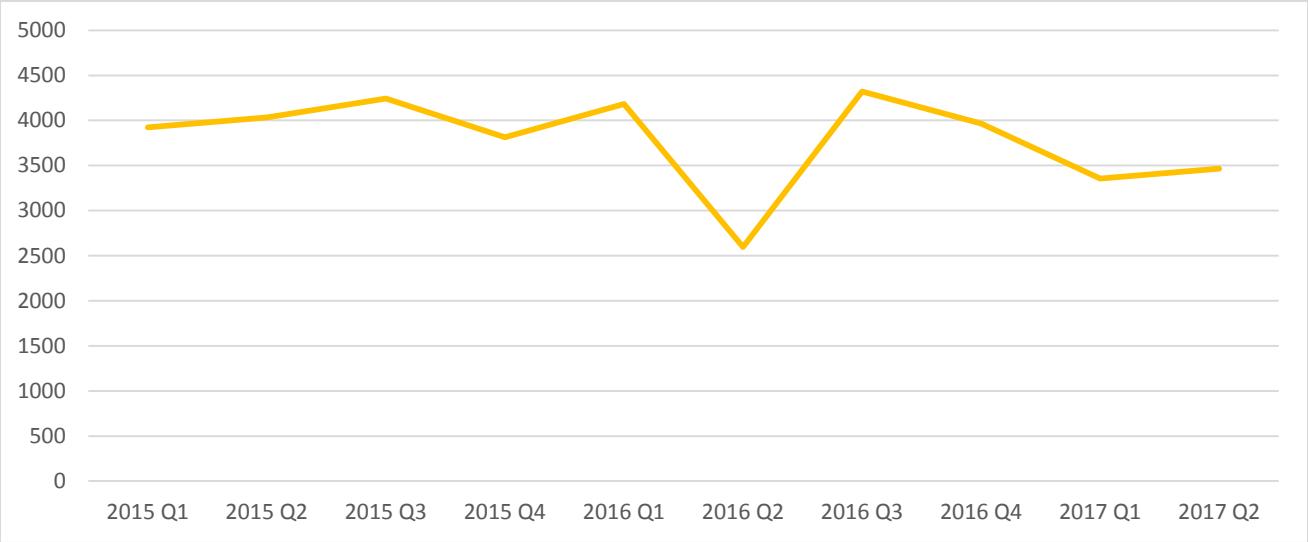
In past reports, the DRG code has been sufficient to identify most deliveries. Since DRG code is missing for over 40% of hospitalizations during CY 2016, we were unable to utilize the previously developed protocols to identify a delivery. Current Procedural Terminology codes (CPT) 59400, 59409, 59410, 59510, 59514, 59515, 59610, 59612, 59614, 59618, 59620, and 59622 and ICD-10 procedures codes 10D00, 10D00Z0, 10D00Z1, 10D07, 10D07Z3, 10D07Z4, 10D07Z5, 10D07Z6, 10D07Z7, 10D07Z8, 10D17, 10D17ZZ, 10D28ZZ, 10E0X, 10E0XZZ were used to identify births. We saw a dramatic fall in the deliveries during the second quarter of CY 2016 (Figure **1**). By comparing to previous yearly patterns, we can be certain that this fall is the result of missing data, and NOT the result of an actual fall in the number of deliveries during this time. Therefore, this report provides eligibility data and family planning services data through

June 2017, but ignores the delivery data for the second and third quarter (April-September, 2016).

The analytics for predicting averted births has been updated to attempt to account for changes in the Medicaid programs. This updated approach reflects fewer averted births at the beginning of the program and more during the final years.

In an effort to account for the deliveries that may have shifted from the MAC program to IHAWP due to expanded coverage, beginning in the first quarter of CY 2015 IHAWP deliveries are combined with MAC program deliveries when counting the number of deliveries per quarter.

Figure 1. Number of deliveries by quarter, CY 2015 and CY 2016



Family Planning Demonstration

The State of Iowa ended the 1115 Family Planning Demonstration effective June 30, 2017. The waiver provided family planning services to men and women 12–54 years of age with income not exceeding 300% of the Federal poverty level (FPL) for the family size. FPD contained the objectives listed below.

1) Improve the access to and use of Medicaid family planning services by women who have received a Medicaid pregnancy related service.
2) Improve birth outcomes and the health of women by increasing the child spacing interval among women in the target population.
3) Decrease the number of Medicaid-paid deliveries, which will reduce annual expenditures for prenatal, delivery newborn, and infant care.
4) Reduce the number of unintended and unwanted pregnancies among women eligible for Medicaid.
5) Reduce teen pregnancy by reducing the number of repeat teen births.

6) Estimate the overall savings in Medicaid spending attributable to providing family planning services to women for 2 years postpartum.

The 1115 Family Planning Demonstration "Iowa Family Planning Network" began in February 1, 2006. The final report for the evaluation of the first 5 years of the waiver program indicated the following successes.

Successes

1) The demonstration has increased the number of women receiving family planning services within the Medicaid program. Over 80,000 women have accessed family planning services through this demonstration. However, the number of women served annually through the FPD has fallen since the beginning of the Iowa Health and Wellness Plan, Iowa's expanded coverage option.
2) Reductions in Medicaid costs for deliveries and, birth and first year of life are over $475 million.
3) Net averted costs are nearly $400 million during the 11+ years of the demonstration.

Evaluation

The evaluation budget is limited to $20,000 per year. This level of support provides no funding for survey work or extensive data analyses. For this reason, the evaluation team is unable to perform target surveys to determine whether births were intended or unintended as has been done by other evaluation teams. Complex modeling to determine the effects of the expansion are also limited due to time and resource constraints. The simple evaluation plan provided may not adequately address all of the state's objectives.

Data

Evaluation data are compiled from enrollment, claims and encounter files for the period January 1, 2001 through June 30, 2017. The following protocols clarify the methods and operationalize variables and formulas needed to complete the analyses.

Year to allocate services

The services provided on a claim are counted within the year of the first date of service. This decision rule is important in determining the costs for prenatal care and birth for the baseline numbers. As an example, a woman admitted to the hospital for delivery on December 30, 2014 and discharged on January 3, 2015 will have the costs for delivery added to the total for the study year 2014.

Mothers and children

Children and mothers are not matched when determining rates or costs. Costs for all women who are enrolled in Child Medical Assistance Program (CMAP), Family Medical Assistance Program (FMAP) and Mothers and Children program (MAC) when they deliver are used to determine the cost per delivery by year. All costs for prenatal care, all care provided and medications prescribed during the prenatal period and delivery are calculated and divided by the number of women delivering in a given year to determine average delivery cost per year. All costs for birth, unique to the child, are calculated and divided by the number of children to determine the average birth cost per year. Delivery cost and birth cost for each year are added to determine the total birth-related cost per year.

Number of people under 300% poverty

Sources to estimate the number of people within the state under 300% of poverty were investigated. There are no reliable estimates of people under 300% of poverty across the state for the evaluation period or the age groups of interest.

Enrollment

The Family Planning Demonstration (FPD) began enrolling women on February 1, 2006 and men on December 1, 2011; enrollment for men peaked in December 2012 at 641. The monthly enrollment numbers for women peaked at nearly 27,000 in November 2012. Table 1 provides a breakdown of number of months in the family planning program, gender, race and age during FY 2017. As might be expected, though the program is designed to serve members as young as

12 years of age, the majority of members (80%) enrolled in the FPD are between the ages of 21 and 44 years of age.

Table 1. Length of family planning enrollment, age, gender, and race
FY 2017

Characteristic	Number	Percent
Length of enrollment		
1-3 month	6,972	31%
4-6 months	5,291	24%
7-9 months	4,515	20%
10-11 months	3,240	14%
12 months	2,364	11%
Sex		
Female	21,387	96%
Male	995	4%
Race		
White	13,064	58%
Black	1,555	7%
American Indian	280	1%
Asian	354	2%
Hispanic	1,043	5%
Pacific Islander	95	0%
Multiple race-Hispanic	447	2%
Multiple race- Other	262	1%
Unreported	5,282	24%
Age		
13-18 years	1,548	7%
19-20 years	2,374	11%
21-24 years	5,875	26%
25-34 years	9,681	43%
35-44 years	2,396	11%
45-54 years	453	2%

Figure **2** and Figure **3** show the enrollment levels for all members during the period January 2006–June 2017. There were steady declines beginning in CY 2013 resulting in more than a 50% reduction in women enrolled in FPD by the end of June 2017. Though it is difficult to understand this phenomenon, the CY 2014 report provided evidence to suggest that women were moving to alternative coverage sources such as Iowa Health and Wellness Plan, the bipartisan solution for Iowa that began on January 1, 2014. See http://ppc.uiowa.edu/publications/iowa-family-planning-demonstration-evaluation-third-waiver-period . In addition, the FPD officially shifted from a federal waiver to a state-only supported program through Iowa Medicaid Enterprise (IME) on July 1, 2017.

Figure 2. Women Enrolled in FPD by month
January 2006–June 2017

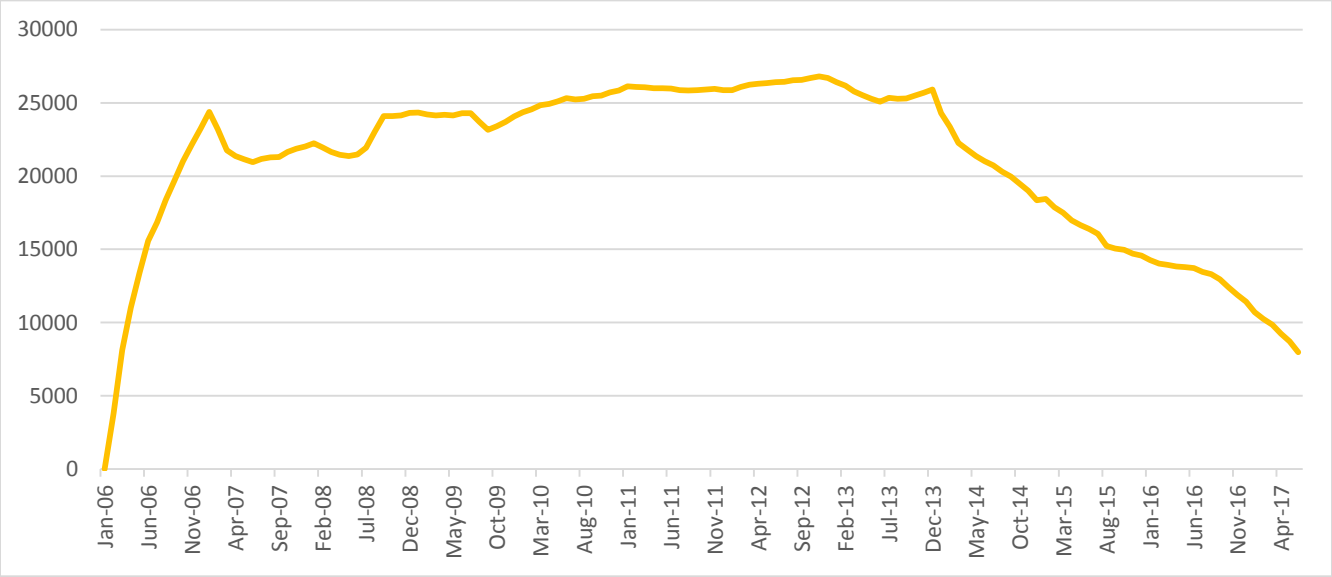
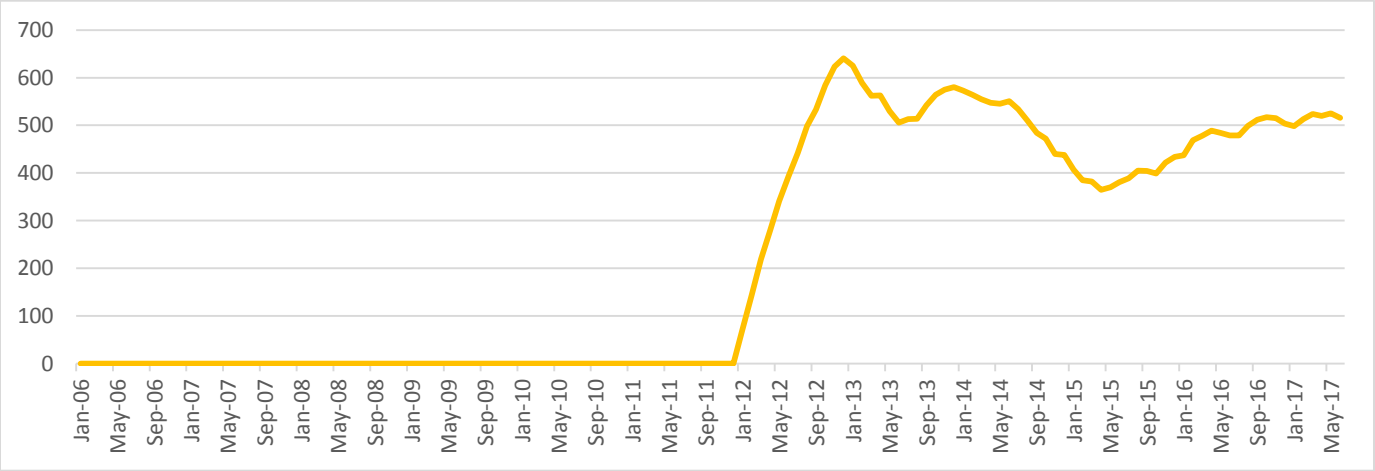


Figure 3. Men Enrolled in FPD by month
January 2006–June 2017



Results

Family planning services

Objective 1: Improve the access to and use of Medicaid family planning services by women and men under 300% FPL.

To address this objective we tracked the number of women within the eligible population who obtained services while enrolled in the FPD.

Data source	Medicaid claims and encounter and enrollment data
Eligible population	Women 12–54 years of age who were enrolled in Medicaid for at least one month during the measurement year
Measurement years	January 1, 2006-June 30, 2017
Measure	Costs per member per month (PMPM) for women within the demonstration

Findings

The costs for family planning services to women in the demonstration are shown in Table 2. Actual costs rose from $5,192,124 to $9,494,280 over the first four years of the program, declining for the following two years then rising to peak at $9,717,669 in CY 2012 before falling to $5,674,214 in CY 2014 and $4,908,673 in CY 2016. Costs for family planning services provided for women in the first six months of 2017 were $1,084,577. The cost for men's family planning services in CY 2012 was $88,161 falling to $64,312 and rising again in CY 2016 to $67,932. Costs for family planning services provided to men in the first six months of 2017 were $43,344.

The number of women served through the family planning program falls over FY 2017 from 13,459 in July 2016 to 7,985 in June 2017. Only 479 men were served in July 2016 increasing to 516 in June 2017.

Table 2. Cost of female family planning services
January 2006–June 2017

Year	Total cost	PMPM costs	PMPY costs
2006	$ 5,192,124	$ 29.97	$ 359.61
2007	$ 6,931,922	$ 26.45	$ 317.40
2008	$ 8,649,314	$ 31.83	$ 381.98
2009	$ 9,494,280	$ 33.01	$ 396.09
2010	$ 9,206,530	$ 30.47	$ 365.69
2011	$ 8,568,748	$ 27.51	$ 330.09
2012	$ 9,717,669	$ 30.65	$ 367.77
2013	$ 8,627,444	$ 28.08	$ 336.98
2014	$ 5,674,214	$ 22.52	$ 270.26
2015	$ 3,800,076	$ 19.55	$ 234.59
2016	$ 4,908,673	$ 30.87	$ 370.39
Jan-June 2017	$ 1,084,577	$ 19.11	N/A

Objective 2: Improve birth outcomes and the health of women by increasing the child spacing interval among women in the target population.

Findings

We have not addressed this objective during the extension.

Medicaid deliveries

Objective 3: Decrease the number of Medicaid-paid deliveries, which will reduce annual expenditures for prenatal, delivery, newborn, and infant care.

A decrease in the number of repeat births by nature indicates a decrease in the rate of Medicaid-paid deliveries. In addition, covering family planning services for women who have not qualified for this coverage before should result in fewer births, as women are able to access continuous family planning. Given that the use of family planning services normally results in the avoidance of pregnancy, we anticipate that the annual rate of Medicaid paid deliveries will decrease.

Data source	Medicaid claims and enrollment files
Eligible population	Women 12–54 years of age enrolled in Medicaid who had a delivery during the measurement year.
Measurement years	January 1, 2007-March 31, 2016 and October 1, 2016-June 30, 2017

Count of deliveries	Count of all deliveries regardless of status at birth for each measurement year (multiples will be counted as one delivery)

Findings

Figure **4** provides a graphical representation of demonstration effects. There are 4 lines on the graph:

- FMAP deliveries per quarter for 5 years prior to the demonstration
- FMAP deliveries per quarter for the demonstration period
- MAC deliveries per quarter for the 5 years prior to the demonstration
- MAC deliveries per quarter for the demonstration period

The upper bound estimated for averted births is provided by subtracting the MAC slope after the program from the MAC slope before the program. A conservative estimation procedure that attempts to account for enrollment changes was also used. The slope of the line for MAC before the demonstration minus the adjusted value for the slope of the FMAP line before the demonstration provides an estimate of the slope of the MAC line before the program that may be accounted for by fertility rates before the program. The slope of the MAC line after the program began minus the adjusted slope of the line of FMAP provides an estimate of the slope of the MAC line that may be accounted for by fertility rates after the program. Subtracting the "after program" slope from the "before program" slope provides a number of averted births.

As can be seen from the graph, the slope of lines between the years before the FPD was implemented and after is nearly identical for the FMAP program, indicating that there was a nearly constant birth rate for women in this program. The line for the MAC program was steadily climbing before the implementation of the FPD, but fell following implementation of the program. We utilize the slope and intercept for the line associated with MAC months before implementing FPD as the estimate of births by quarter for the period after implementation of the FPD. We then subtracted the number of actual births from the calculated estimates and consider the difference to be the 'high' estimate of averted births over time. This estimate is considered to be 'high' because it assumes the pre-implementation MAC trend remains constant through June 2017. We also multiply the high estimate by 0.5 to obtain a conservative 'low' estimate. This provides a lower estimate that does not rely on the assumption that the pre-implementation trend remains the same throughout the period. To provide conservative estimates of the savings for the program the midpoint estimates are utilized.

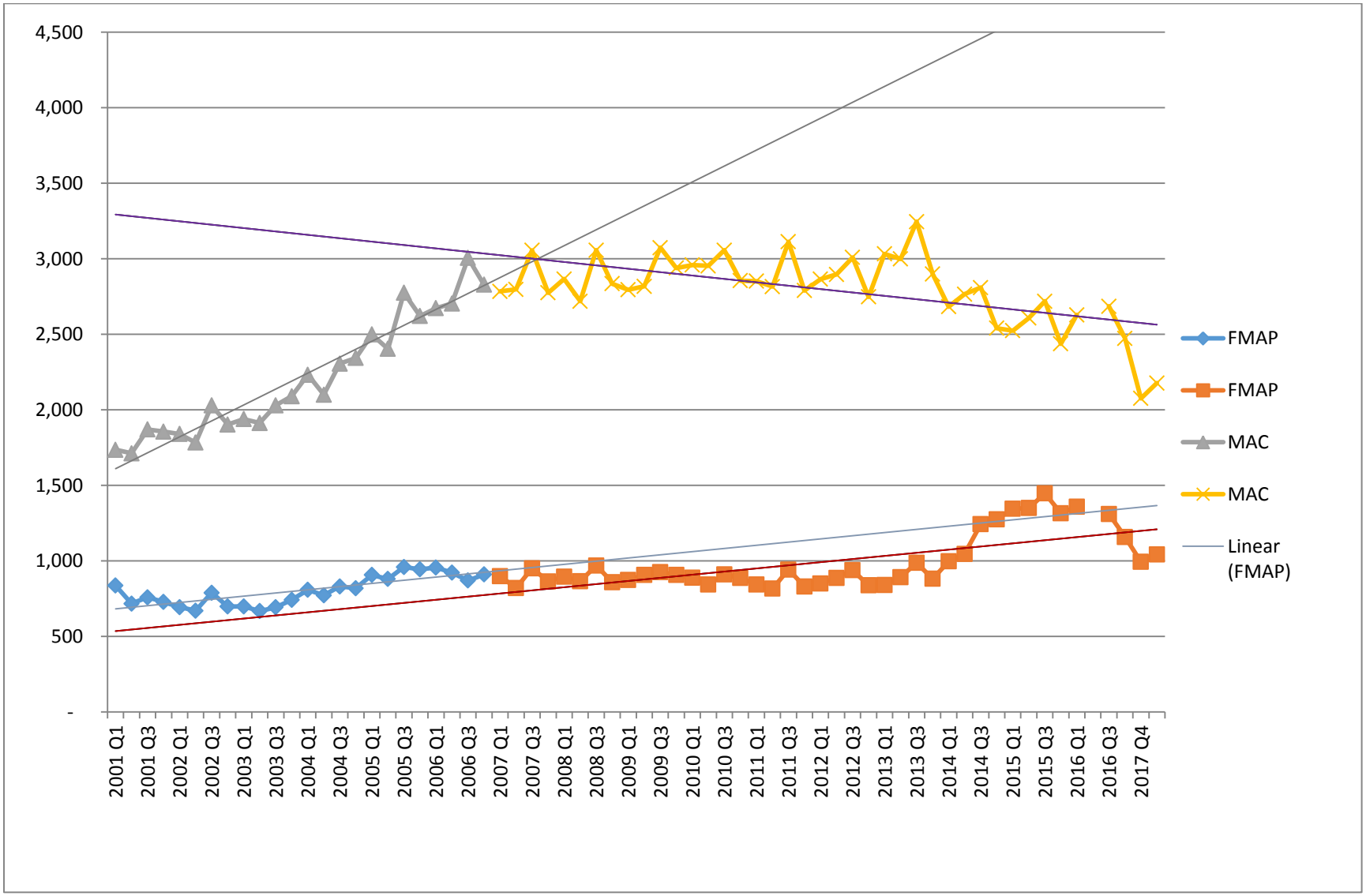
According to these methodologies, from 24,117 - 48,233 births were averted during the demonstration. Table 3 provides the number of averted births by year and level.

Table 3. Estimation of averted births
January 2007-June 2017*

Year	Low estimate of averted births	Midpoint estimate of averted births	High estimate of averted births
2007	203	304	406
2008	593	889	1,186
2009	940	1,410	1,881
2010	1,263	1,894	2,527
2011	1,812	2,717	3,623
2012	2,260	3,390	4,520
2013	2,353	3,528	4,705
2014	3,463	5,195	6,927
2015	4,141	6,211	8,282
2016*	4,203	6,304	8,406
2017*	2,885	4,327	5,770
Total	**24,116**	**36,169**	**48,233**

*based on 2016 values with estimated births for the 2nd quarter of 2016.

Figure 4. Numbers of deliveries by quarter
Q1 2001-Q2 2017



Objective 4: Reduce the number of unintended and unwanted pregnancies among women eligible for Medicaid.

Under the assumption that any reduction in the birth rate represents a reduction in unintended pregnancies we will use the objective 3 analyses to evaluate this objective.

Objective 5: Reduce teen pregnancy by reducing the number of repeat teen births.

Under the assumption that any reduction in the birth rate represents a reduction in unintended pregnancies we will use the objective 3 analyses to evaluate this objective.

Objective 6: Estimate the overall savings in Medicaid spending attributable to providing family planning services to women for 1 year postpartum.

Four cost categories are combined to calculate Medicaid savings attributable to providing family planning services to women 1 year postpartum. The birth and delivery costs consist of prenatal care, care given with a diagnosis code related to pregnancy prior to delivery; cost of birth care, costs associated with the delivery as indicated by diagnosis and procedure codes; newborn care, care provided to a child under the age of 1 month; and infant care, all care provided to children from 1 month to 1 year of age whose births were paid for by the Medicaid program.

Data source	Medicaid claims files
Eligible population	Women 12–54 years of age enrolled in Medicaid and children birth through 1year of age enrolled in Medicaid
Measurement years	CY 2007–CY 2015
Cost of care	Medicaid costs associated with claims bearing a diagnosis code indicating prenatal care including all care provided in the prenatal or postpartum period, claims bearing a diagnosis code indicating a birth (for children) or a delivery (for women), claims for children up to 1 month of age and claims for children from 1 month to 1 year of age
Savings	Number of reduced births accountable to the provision of family planning services to women 1 year postpartum times the cost of care

Findings

Table 4 provides the costs for delivery and birth and the first year of life from January 2001 through June 2017. The average cost for the mother in 2017 was $8,157, while the average cost for the birth and first year of life for the child was $7,678. This results in $15,834 in costs being avoided for each averted birth from January 2016 through June 2017.

Table 4. Average Medicaid costs for delivery and birth through 1st year of life
January 2001- June 2017

Year	Delivery	Birth through 1st year of life	Total
2001	$4,593	$4,938	$9,531
2002	$4,771	$5,472	$10,243
2003	$4,750	$4,975	$9,725
2004	$4,906	$5,662	$10,568
2005	$5,228	$5,256	$10,484
2006	$5,656	$5,962	$11,618
2007	$6,068	$6,656	$12,724
2008	$6,240	$6,772	$13,012
2009	$6,890	$6,505	$13,395
2010	$6,998	$7,031	$14,029
2011	$7,412	$7,046	$14,458
2012	$8,059	$7,544	$15,603
2013	$8,049	$7,841	$15,890
2014	$7,733	$7,562	$15,295
2015	$8,688	$7,548	$16,235
January 2016-June 2017*	$8,157	$7,678	$15,834

*Delivery and 1st year of life costs are estimated by averaging the previous 3 years of data

To provide conservative estimates demonstration cost reductions, the Medicaid average costs for delivery and birth through first year of life were multiplied by the midpoint estimates of averted births (Table 3). The total averted costs from the demonstration associated with delivery and birth through first year of life were nearly $485 million through June 2017 (Table 5). It is important to remember that these cost reduction estimates do not include continuing costs for children who remain on Medicaid past their first birthday. Approximately 40% of children who had a Medicaid paid birth will remain on Medicaid five or more years.

Table 5. Cost reductions associated with averted births
January 2007–June 2017*

Year	Averted births	Delivery cost	Birth and first year of life costs	Cost reductions
2007	304	$6,068	$6,656	$3,868,096
2008	889	$6,240	$6,772	$11,567,668
2009	1,410	$6,890	$6,505	$18,886,950
2010	1,894	$6,998	$7,031	$26,578,502
2011	2,717	$7,412	$7,046	$39,336,726
2012	3,390	$8,059	$7,544	$52,894,170
2013	3,528	$8,049	$7,841	$56,059,920
2014	5,195	$7,733	$7,562	$79,457,525
2015	6,211	$8,688	$7,548	$101,351,098
2016*	6,304	$8,157	$7,678	$99,819,637
Jan-June 2017*	4,327	$8,157	$7,678	$68,515,160
Total	**36,169**			**$**558,335,452

*estimates based on 2015 costs

Table 6 provides estimates of the net cost reductions to Medicaid resulting from the family planning demonstration using the midpoint estimates. It is difficult to provide exact net cost reductions; however, the true value most likely lies near the midpoint. An estimated $475 million were avoided through an investment of $81 million for a return of $4.82 for every dollar spent.

Table 6. Net savings in Medicaid costs due to the family planning demonstration program
January 2006-June 2017

Year	Total costs averted	FP service costs	Net savings
2006	0	$5,192,124	($5,192,124)
2007	$3,868,096	$6,931,922	($3,063,826)
2008	$11,567,668	$8,649,314	$2,918,354
2009	$18,886,950	$9,494,280	$9,392,670
2010	$26,578,502	$9,206,530	$17,371,972
2011	$39,336,726	$8,568,748	$30,767,978
2012	$52,894,170	$9,717,669	$43,176,501
2013	$56,059,920	$8,627,444	$47,432,476
2014	$79,457,525	$5,674,214	$73,783,311
2015	$101,351,098	$3,800,076	$97,551,022
2016*	$99,819,637	$4,908,673	$94,910,964
Jan-June, 2017*	$68,515,160	$1,084,577	$67,430,583
Total	**$558,335,452**	**$81,855,571**	**$476,479,882**

*estimates based on 2015 costs

While the extrapolation method provided reasonable estimates of averted births and avoided costs for the first few years after the implementation of the program, the continued use of this model for the long-term estimates becomes increasingly difficult. If the lower estimates of averted births were used instead of the midpoint estimates, then the estimated total costs avoided would be nearly $360 million, yielding a net savings of $280 million, and a return of $2.45 for every dollar spent.

For the program to reach economic parity, the expense of $4.9 million spent on family planning services in 2016 would have needed to avert a total of 307 births, for the roughly 159,000 months of family planning services provided. This equates to averting one birth per 518 months provided.

The Family Planning Demonstration (FPD) has provided a cost-effective mechanism to allow women and men access family planning services. This access has resulted in averted births and reduced costs to the state.