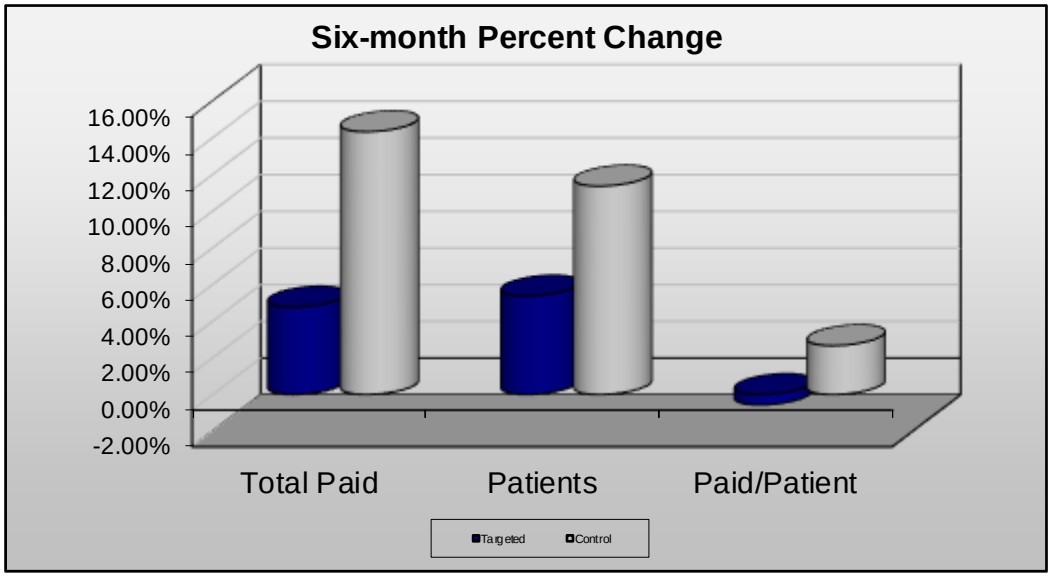
Contraceptive: Drug Use Evaluation

Prepared for Texas Medicaid in August 2021

EXECUTIVE SUMMARY

Purpose of Intervention	Improving birth outcomes is a public health and budgetary priority for Medicaid programs. Ensuring members have access to contraception ensures states are actively supporting the health of both women and children in the state. This intervention promotes the safe use of contraceptive hormones among women of child-bearing age.

Intervention	Intervention Type	Population-based mailing
	Intervention Mailing Date	11/19/2020
	Pre-intervention Period (Baseline)	May 2020 – October 2020
	Post-intervention Period (Post)	December 2020 – May 2021
	Number of Letters Mailed	1,158
	Number of Targeted Physicians	1,158



Savings Calculation

State Cost Savings Calculation:	
Targeted Group: Actual Contraceptive Management Drugs Average Cost Per Patient Per Month (Pre)	$127.51
% Change in Control Group from Pre to Post	2.66%
Estimated Contraceptive Management Drugs Paid Amount Per Targeted Patient Per Month if No Interv	$130.91
Targeted Group: Contraceptive Management Drugs Cost Per Patient Per Month (Post)	$126.78
Estimated Cost Savings Per Patient Per Month	$4.12
Total Monthly Number of Targeted Panel Patients Served in Post Period	111,781
6-Month Total Savings	$460,537.72
6-Month State General Revenue Funds Savings	$184,261.14
12-Month Total State Savings	$368,522.28

BACKGROUND

In the Texas (TX) Medicaid fee-for-service (FFS) pharmacy program, contraceptives account for the top drug class by number of prescriptions, with 143,291 prescriptions at a cost of $14,916,688, this past year. Broken out, contraceptive utilization by formulation is as follows: oral contraceptives at 106,394, injectables at 12,550, transdermal at 10,242 and vaginal at 8,803 claims. The remaining approximately 5,300 claims are for IUDs and implantable contraceptives, which are not included in this intervention.

Contraceptives are widely used and are considered generally safe for use in most women.[1] Oral contraceptives (OCs) represent 74% of total contraceptive use in the TX Medicaid FFS program. While a variety of contraceptive formulations are available, from patches, to vaginal rings and injectables, oral formulations remain popular. With contraceptive utilization high, clinical opportunities exist to ensure safe use in this young, and often healthy, population.[2] Labeling for oral, injectable, transdermal and vaginal contraceptive formulations includes contraindications, which are considerations for this intervention.[2-11]

Contraceptive efficacy is highly dependent on adherence to the prescribed regimen. This is especially true with oral contraceptives that require daily dosing to be successful. International data indicate that up to 47% of women taking OCs do not fully adhere to the regimen and over 20% miss at least 2 doses per cycle. Several variables have been linked to poor OC adherence including lower education level, having a lower income and experiencing side effects. These variables may also affect adherence with other contraceptive formulations. Missing or forgetting OC doses is cited as one of the major reasons for women seeking emergency contraception. Failure rates for contraceptives increase with less than recommended dosing, regardless of the formulation. Therefore, poor adherence with contraceptive methods may be a leading cause of unintended pregnancy.[8,12]

Indicator #1: Increased Risk of Adverse Events with Contraceptives

Use of contraceptives is common among Medicaid members, but comes with a long list of contraindications, including cardiac and thromboembolic diseases and smoking. In fact, labeling for combination hormonal contraceptives includes a boxed warning for cigarette smoking and heightened risk of cardiovascular disease.[3-6, 9-11]

Candidates (denominator):	All patients receiving oral, injectable, transdermal and vaginal contraceptives in the past 45 days
Exception Criteria (numerator):	Candidates with a diagnosis for one of the disease contraindications listed in Table 1, within the specified look back time. Note: Individuals 35 years of age and older with a diagnosis for tobacco abuse are included only if they have not recently received smoking cessation therapy. Injectable medroxyprogesterone is not included in the tobacco use assessment due to the agent's labeling.

Indicator #2: Adherence with Contraceptives

Poor adherence with contraceptives is reported as one of the main causes of unintended pregnancy.[8,12] Contraceptive use for other medical conditions (e.g., migraine, dysmenorrhea, anemia associated with menorrhagia) is an important consideration and factor in adherence assessment.

Candidates (denominator):	Patients receiving oral, injectable, transdermal and vaginal contraceptives in the most recent 45 days and 84 to 126 days ago (identify chronic therapy).
Exception Criteria (numerator):	Candidates who have less than 55 days of contraceptive therapy in the past 84 days. Patients with medical claims data indicating pregnancy or tubal ligation in the past 60 days are excluded.

METHODOLOGY

In November 2020, all physicians treating patients with any of the aforementioned drug-related problems were identified. Physicians with at least one patient with a performance indicator received the mailing. Providers were mailed the intervention materials on November 19, 2020.

Operational definitions:

Targeted Group – physicians treating one or more patients with any of the aforementioned drug-related problem(s) and who received mailed intervention materials *(Section 1.e.1.A Exhibit A of the Agreed Modifications to the RFP and Contractor Proposal).*

Control Group - physicians treating patients taking an intervention-related drug but did not receive mailed intervention materials *(Section 1.e.1.A Exhibit A of the Agreed Modifications to the RFP and Contractor Proposal).*

Intervention Drugs – Contraceptives

Pre Intervention Time Period – May 2020 through October 2020

Post Intervention Time Period – December 2020 through May 2021

6-month Total Paid – total drug costs can be defined as the total amount of paid intervention drug claims for the above time periods for the prescribers in the control and target groups. The target group consisted of those prescribers who had one or more members with an aforementioned performance indicator. The control group consisted of all other prescribers who prescribed intervention drug therapy agents in the designated time periods *(Sections 1.e.1. and 1.e.2 Exhibit A of the Agreed Modifications to the RFP and Contractor Proposal).*

Average Number of Panel Patients per Month - during the 6-month pre and post time periods, the number of unique Medicaid patients with a drug claim submitted using a respective provider number was captured each month. Medicaid patients that did not have a drug claim were not counted in the prescriber's panel. The monthly numbers were summed then divided by six to calculate the monthly average. For example, in Table 1, the physician (with provider number AB123456) had an average of 12 patients with at least one drug claim per month. If a patient had

two different claims in June, they would be counted as one patient. By evaluating all patients seen by a specific physician, changes in prescribing patterns can be evaluated on existing and new patients *(Sections 1.e.1. and 1.e.2 Exhibit A of the Agreed Modifications to the RFP and Contractor Proposal).*

Table 3: Average Number of Panel Patients per Month

Provider Number	Month #	Number of Unique Patients with a Drug Claim
AB123456	1	10
	2	10
	3	10
	4	12
	5	13
	6	17
Total		72
Average Number of Panel Patients per Month		12

Average Cost/Patient per Month – this was calculated by dividing the total dollars paid for drug claims during the analysis time period by the total number of Medicaid panel patients during the respective time period. For example, in the targeted group post analysis; there were 111,781 patients who had a drug claim during the six-month review period. The total amount of dollars paid for drug claims for these patients during the post analysis was $14,172,148. Dividing these two numbers ($14,172,148/111,781) yields an average cost per patient of $126.78 *(Sections 1.e.1. and 1.e.2 Exhibit A of the Agreed Modifications to the RFP and Contractor Proposal).*

$$\textbf{Average Cost/Patient/per Month} = \frac{\textbf{6-month Total Amount Paid for Intervention Drugs}}{\textbf{Average number of Panel Patients per Month}} \; / \; \textbf{(\# Months)}$$

Total State Savings *(Sections 1.e.3 and 1.e.4 Exhibit A of the Agreed Modifications to the RFP and Contractor Proposal)***:**

- Intervention Average Cost Savings per Month - the percent change seen in the control group was applied to the intervention group baseline Average Cost per Patient per Month. This amount represents the estimated Amount Paid per Targeted Physician per Patient in the absence of the intervention (i.e., Estimated Paid Amount). The Estimated Paid Amount per Patient per Month was then subtracted from the actual Intervention Target Group Average Cost per Patient per Month to estimate the Average Cost Savings per Patient per Month.
- 6-Month Total Savings - the Intervention Average Cost Savings per Patient per Month was multiplied by the total number of targeted patients served over the 6-month time frame.
- 6-Month State General Revenue Funds Savings= 6-Month Total State Savings X 0.4001.
- Total State Savings = 6-Month State General Revenue Funds Savings X 2.

RESULTS

Population-based intervention

A total of 1,158 physicians were targeted and received intervention materials. Table 4 compares the 6-month total amount paid for contraceptive drugs, the total number of patients in each physician's panel per month, and the average cost per patient for the targeted and control groups during the six-month pre and post periods. When comparing the pre-Average Cost per Patient per Month between the targeted and control groups, the cost was approximately $33 higher for the targeted group. This difference may be due to such factors as the targeted group having more patients prescribed contraceptives per physician or that associated average drug costs are inherently higher in the targeted group.

The target group saw a 4.77% increase in the amount paid for intervention-related drugs while the control group saw a 14.32% increase. Additionally, the average number of monthly patients for the physician's panel increased 5.37% for the target group and increased 11.36% for the control group. To control for changes in case load variance (i.e., the change in the number of panel patients) between the two groups, the average cost per patient was also calculated. Total amount paid and number of panel patient trends led to a 0.57% decrease in average cost per patient per month in the targeted group and a 2.66% increase for the control group.

Table 4: Six-Month Trends for Overall Targeted vs Control Group

Group	Contraceptive Drugs -- Six Months Total Paid Pre/Post			Average Number of Panel Patients per Month			Contraceptive Drugs Average Cost per Patient per Month		
	Pre	Post	Change	Pre	Post	Change	Pre	Post	Change
Targeted	$13,527,228	$14,172,148	4.77%	17,681	18,630	5.37%	$127.51	$126.78	-0.57%
Control	$12,688,370	$14,505,606	14.32%	22,350	24,888	11.36%	$94.62	$97.14	2.66%

Table 5 shows the Intervention Average Cost Savings per Patient per Month and the savings calculations. Had the intervention not been mailed, the targeted pre average cost per patient per month would have increased 2.66% from $127.51 to $130.91. The net difference between the actual and estimated average cost/patient for the targeted group was $4.12. Based on 111,781 targeted patients served per month during the six-month post period, the six-month Total Savings and Total State Savings are decreased costs of $460,537.72 and $184,261.14, respectively. Over a twelve-month period, the Total State Savings are decreased costs of $368,522.38.

Table 5: Overall Intervention Average Cost Savings

State Cost Savings Calculation:	
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CONDUENT

Table 6: Clinical Changes

Clinical Indicators	Baseline	Jan-2021	% Change
Increased risk of adverse events with oral, injectable, transdermal, and vaginal contraceptives	210	146	-30.5%
Adherence with contraceptives	1,478	1,067	-27.8%
Total	1,688	1,213	-28.1%

CONCLUSIONS

This population-based intervention was successful in encouraging appropriate use of contraceptive drug therapy and providing prescribers with educational tools to better communicate with their patients' issues regarding appropriate treatment. This resulted in an economic impact on Texas Medicaid's pharmacy program expenditures, with a calculated twelve-month overall decrease in costs of $460,537.72 and decreased costs to the State of $368,522.28 and decreases in clinical indicators of contraceptives of 28.1%.

CONDUENT

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Table 1: Oral, Injectable, Transdermal and Vaginal Contraceptive Contraindications (indicator #1)

Contraindication	Diagnosis Look Back Timeframe
Thrombophlebitis	2 years
Coronary Artery Disease	2 years
Cerebral Vascular Disease	2 years
Age >/=35 years and History of Tobacco Use (excludes injectable medroxyprogesterone)	1 year
Thromboembolic Disease	2 years
Migraine headaches with aura or inferred from pharmacy claims for a triptan, Reyvow™, Nurtec™ ODT or Ubrelvy™	1 year for ICD-10s; 45 days for inferred pharmacy claims
Liver Disease	2 years
Breast Cancer	2 years
Retinal Thrombosis	2 years
Adrenal Insufficiency (drospirenone)	2 years
Hyperkalemia (drospirenone)	6 months
Severe Renal Disease (drospirenone)	2 years

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