

ANALYSIS OF THE IMPACT OF PRESCRIPTION SYNCHRONIZATION ON ADHERENCE AMONG MEDICAID BENEFICIARIES

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BACKGROUND

- Medication synchronization improves adherence, and as a result clinical and economic outcomes, among patients on multiple chronic medications.¹ Medicaid beneficiaries have low medication adherence in the context of poor refill consolidation and would potentially benefit from interventions focused on improving synchronization of medication refills.²
- RxSync[®] is a community pharmacy patient management program designed to enhance medication adherence and provide greater efficiencies in the pharmacy.³ The core elements of RxSync[®] are (1) synchronization and scheduling of refills for maintenance medications, (2) monthly patient contact to monitor adherence, schedule refills and identify health problems; and (3) when needed, providing pharmacist consultation, additional medication therapy management (MTM), or making professional recommendations to prescribers to address needs identified in monthly contact.
- The objectives of this study were to examine the impact of medication synchronization through RxSync[®] on adherence to chronic medications and total health resource utilization among Mississippi Medicaid beneficiaries.

METHODOLOGY

Prescription claims from 2008-2011 for drugs belonging to classes including statins, antihypertensives, and oral hypoglycemics, from a pharmacy that employs RxSync[®], were extracted along with claims from non-RxSync[®] pharmacies from Mississippi Medicaid data.

Medication adherence for the three drug classes measured as the proportion of days covered (PDC) was calculated from the date of first prescription fill (index date) to discontinuation of medication or end of the study period (whichever came first) along with medical, pharmacy, and total costs.

First, medication adherence and costs were compared by matching beneficiaries in the RxSync[®] and non-RxSync[®] pharmacies on age, sex, race, and use of the three drug classes using a greedy-matching algorithm.

Then, to remove effect of confounders not included in the matching algorithm, a pre-post analysis was used to compare medication adherence 6 months before and after joining the RxSync[®] pharmacy.

ACKNOWLEDGMENTS/DISCLOSURES

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RESULTS

Table 1 presents a comparison of medication adherence three, six, nine, and twelve months after the index date in the matched sample. The average PDC was higher in the RxSync[®] group than in the non-RxSync[®] group. Costs associated with beneficiaries in the RxSync[®] group were higher than the non-RxSync[®] group (Table 2).

Table 1. Matched comparison of medication adherence three, six, nine, and twelve months after the index date in RxSync[®] and non-RxSync[®] beneficiaries.

Drug	RxSync [®] beneficiaries			Non-RxSync [®] beneficiaries		
	N	Average % PDC	PDC > 80% (% beneficiaries)	N	Average % PDC	PDC > 80% (% beneficiaries)
Three months						
Stains	26	91.58	80.77	26	85.98	69.23
Antihypertensives	57	91.85	85.96	57	83.07	60.71
Oral hypoglycemics	38	88.91	81.58	38	84.91	71.05
All	121	90.87	83.47	121	84.27	65.83
Six months						
Stains	20	87.16	75	20	84.72	75
Antihypertensives	42	90.55	87.50	42	81.89	65.91
Oral hypoglycemics	32	84.91	78.13	32	80.29	65.52
All	90	87.91	81.52	90	81.86	67.42
Nine months						
Stains	12	86.66	66.67	12	84.41	72.73
Antihypertensives	35	87.86	74.29	35	83.35	64.86
Oral hypoglycemics	26	81.85	61.54	26	78.44	57.69
All	74	85.52	68.49	74	81.78	63.51
Twelve months						
Stains	10	87.16	70	10	88.91	88.89
Antihypertensives	30	86.14	80	30	83.33	60.00
Oral hypoglycemics	22	82.15	68.18	22	82.22	63.16
All	60	84.89	74.19	60	83.80	65.52

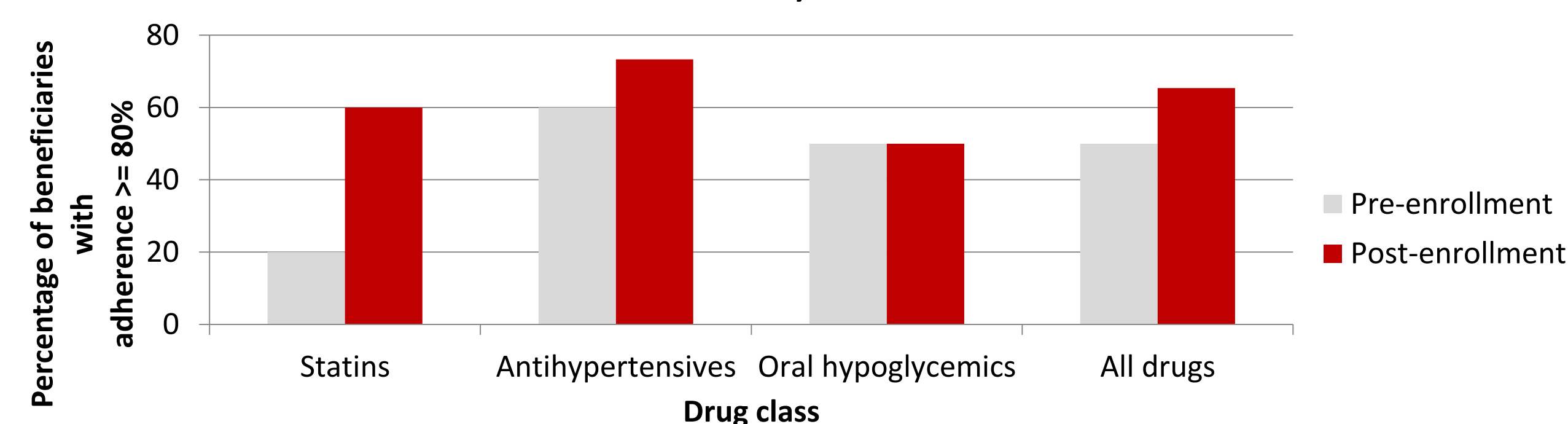
PDC = Proportion of days covered.

Table 2. Matched comparison of medical, pharmacy, and total costs three, six, nine, and twelve months after the index date in RxSync[®] and non-RxSync[®] beneficiaries.

Drug	N	RxSync [®] beneficiaries			Non-RxSync [®] beneficiaries		
		Medical costs (\$)	Pharmacy costs (\$)	Total costs (\$)	Medical costs (\$)	Pharmacy costs (\$)	Total costs (\$)
Three months							
Stains	26	1,195.82	883.02	2,078.84	3,677.27	993.55	4,670.82
Antihypertensives	57	1,944.16	836.27	2,780.43	2,363.47	835.49	3,198.96
Oral hypoglycemics	38	1,964.37	966.54	2,930.91	1,363.92	808.97	2,172.89
All	121	1,802.41	887.22	2,689.63	2,326.52	861.13	3,187.65
Six months							
Stains	20	2,025.06	1,969.40	3,994.46	3,863.42	2,411.96	6,275.38
Antihypertensives	42	4,885.30	1,427.67	6,312.97	4,331.68	1,889.14	6,220.82
Oral hypoglycemics	32	2,497.37	1,909.83	4,407.2	2,722.42	1,598.78	4,321.2
All	90	3,432.92	1,707.07	5,139.99	3,703.25	1,885.30	5,588.55
Nine months							
Stains	12	3,782.91	3,210.17	6,993.08	3,363.33	3,094.50	6,457.83
Antihypertensives	35	6,182.37	2,117.92	8,300.29	7,064.28	2,942.26	10,006.54
Oral hypoglycemics	26	4,452.09	2,889.20	7,341.29	3,851.55	2,316.86	6,168.41
All	74	5,143.20	2,572.71	7,715.91	5,390.11	2,745.15	8,135.26
Twelve months							
Stains	10	5,582.39	3,989.49	9,571.88	4,797.81	4,097.31	8,895.12
Antihypertensives	30	8,490.03	2,777.21	11,267.24	10,765.58	3,817.54	14,583.12
Oral hypoglycemics	22	6,919.02	4,073.61	10,992.63	3,535.05	3,250.01	6,785.06
All	60	7,446.77	3,432.75	10,879.52	7,505.36	3,670.33	11,175.69

Figure 1 presents a comparison of the percentage of beneficiaries with PDC >= 80% in each drug class pre- and post- enrollment in the RxSync[®] pharmacy. In general, a higher proportion of beneficiaries reported >= 80% adherence after enrollment into RxSync[®].

Fig. 1: Comparison of beneficiaries with >= 80% adherence pre- and post- enrollment in RxSync



CONCLUSIONS

- When matched on age, gender, and type of drug, beneficiaries enrolled in the RxSync[®] pharmacy reported higher adherence to chronic medications including statins, oral hypoglycemics, and antihypertensives.
- Also, medication adherence increased on enrollment of beneficiaries from a non-RxSync[®] pharmacy to an RxSync[®] pharmacy. Similarly, medical, pharmacy, and total costs were found to decrease.
- Medication synchronization improves medication adherence and decreases costs among Medicaid beneficiaries on chronic medications.

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