Modeling the Economic Value of Medication Synchronization among Commercial and Medicaid Populations

Presented at the International Society for Pharmacoeconomics and Outcomes Research (ISPOR); New Orleans, LA; May 18-22, 2019.

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Medication Synchronization Reduces Healthcare Costs $11.60 – $27.84 PMPY

OBJECTIVE

- Develop an economic model to estimate the impact of medication synchronization (med sync) programs that align medication fill dates, offer consultations, and demonstrate improved medication adherence on associated healthcare costs for combined commercial and Medicaid populations.

METHOD

- An economic value model was developed based on published literature, National Health Expenditure (NHE) data, and a Health Care Cost Institute (HCCI) report to compare total healthcare costs with and without medication synchronization for commercial and Medicaid beneficiaries.
- Total healthcare cost includes both Rx and medical cost.
- Three medication adherence improvements from 3 independent studies with different program settings were applied in a model.
- This model can be customized by entering alternative population sizes, medication synchronization eligible rates, enrollment rates, and projection year.
- The primary outcome measure reported net healthcare cost savings per member per year (PMPY).

Assuming:

- 100,000 commercial and Medicaid beneficiaries
- 10% filled multiple maintenance medications in multiple pharmacy visits per month, and 25% enrolled in a med sync program
- Gross annual healthcare cost for med sync eligible members is $12,602, which is twice of total health spending per member for commercial plan in 2018 based on NHE projections. Therefore, the cost for non-eligible members is $5,601.
- Rx cost is 19% of healthcare cost based on HCCI report.

Estimated total healthcare cost without med sync is $630,110,000:

- Rx cost: 100,000*10%*$12,602*19%+ 100,000*(1-10%)*$5,601*19% = $119,720,900
- Medical cost: 100,000*10%*$12,602*(1-19%)+ 100,000*(1-10%)*$5,601*(1-19%)=$510,389,100

Med Sync & Consultation

	Scenario 1	Scenario 2	Scenario 3
PDC Lift	6.8%[1]	8.4%[2]	15.6%[3]
Estimated total plan healthcare costs with med sync	$628,854,979	$628,559,680	$627,230,833
Rx cost[4]	$120,127,945	$120,223,720	$120,654,708
Medical Cost[5]	$508,727,034	$508,335,960	$506,576,125
Estimated total plan healthcare cost savings with med sync	($1,255,021)	($1,550,320)	($2,879,167)
Total additional dispensing fee cost due to short fill[6]	$94,950	$94,950	$94,950
Estimated net total plan healthcare cost savings	($1,160,071)	($1,455,370)	($2,784,217)
Estimated net total plan healthcare cost savings PMPY	($11.60)	($14.55)	($27.84)

In a group of 100,000 commercial and Medicaid beneficiaries with 2.5% enrolled in a medication synchronization program:
- If medication adherence increased 6.8%, then healthcare costs would decrease by $11.60 PMPY.
- If medication adherence increased 8.4%, then healthcare costs would decrease by $14.55 PMPY.
- If medication adherence increased 15.6%, then healthcare costs would decrease by $27.84 PMPY.

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[1] Medication Synchronization Improves Medication Adherence; Mu, Y et al.; Value in Health , Volume 21 , S137.

[2] https://cdn.ymaws.com/www.papharmacists.com/resource/resmgr/legislative/MedSync/MedSync_IssueBrief_NACDS.pdf

[3] Impact of appointment-based medication synchronization on existing users of chronic medications. Holdford D et al.; Journal of managed care & specialty pharmacy. 2015;21(8):662-669.

[4] 100,000*2.5%*$12,602*19%*(1+PDC lift)+ 100,000*(10%-2.5%)*$12,602*19%+ 100,000*(1-10%)*$5,601*19%.

[5] 100,000*2.5%*$12,602*(1-19%)*(1-PDC lift*0.9578)+ 100,000*(10%-2.5%)*$12,602*(1-19%)+ 100,000*(1-10%)*$5,601*(1-19%) Weighted reduction of 0.9578% in medical cost from 1% increase in drug use was derived from study: Medical Cost Offsets from Prescription Drug Utilization among Medicare Beneficiaries. Journal of Managed Care & Specialty Pharmacy; Roebuck, M.C. et al.; October 2014; Vol.20, No.10.

[6] Assuming 6 short fills PMPY and $6.33 dispensing fee (https://rxsafe.com/improve-pharmacy-reimbursement-revenue/), additional dispensing fee is $6.33*6*100,000 *2.5%=$94,950.

CONCLUSIONS

- Medication synchronization helps patients with multiple chronic conditions improve their medication adherence, which could result in better health outcomes and reduced overall healthcare cost.