



Trusted since 1901™

Modeling the Economic Value of Medication Synchronization among Medicare Beneficiaries

Presented at the Academy Health Annual Research Meeting
Washington, DC, June 2-4, 2019.

| Sun | Mon | Tue | Wed | Thu | Fri | Sat |
|-----|-----|--|-----|-----|-----|-----|
| | | | 1 | 2 | 3 | 4 |
| 5 | 6 | 7   | 8 | 9 | 10 | 11 |
| 12 | 13 | 14   | 15 | 16 | 17 | 18 |
| 19 | 20 | 21 | 22 | 23 | 24 | 25 |
| 26 | 27 | 28 | 29 | 30 | 31 | |



**Medication Synchronization
Reduces Healthcare Costs
for Medicare Beneficiaries
by \$32.08 – \$74.47 PMPY**

RESEARCH OBJECTIVE

- Suboptimal medication therapy that includes non-adherence has been associated with \$495.3 to \$672.7 billion in annual US healthcare costs. Medication synchronization (med sync) programs that align medication fill dates and offer consultations have been shown to improve medication adherence.
- The study objective was to develop a model to estimate the impact of med sync driven adherence improvements on associated healthcare costs among Medicare beneficiaries.

STUDY DESIGN

- An economic value model was developed based on the published literature and National Health Expenditure (NHE) data to compare the total healthcare costs with and without medication synchronization programs for Medicare Part D beneficiaries.
- Three medication adherence improvements from 3 independent studies with different program settings were applied in the model.
- This model can be customized by entering an alternate population size, medication synchronization eligible rate, enrollment rate, and projection year.
- The primary outcome measure reported net healthcare cost savings for 100,000 members and per member per year (PMPY).

POPULATION STUDIED

- Medicare Part D beneficiaries

RESULTS

Assuming:

- 100,000 Medicare Part D beneficiaries.
- 50% filled multiple maintenance medications in multiple pharmacy visits per month, and 10% enrolled in a med sync program; overall, 5% of the beneficiaries enrolled.
- The total healthcare cost per Medicare enrollee \$12,622 was stratified for qualified members as \$21,103 and non-qualified members as \$4,141 since med sync programs target high-risk patients with two or more medications.
- Based on CMS NHE by Type of Service and Source of Funds data, Rx cost is about 14.3% of healthcare cost, medical cost is about 62.6% and other expenditures⁶ is 23.1%.

Estimated total healthcare cost without med sync is \$1,262,200,000:

- Rx cost: $100,000 \times 50\% \times \$21,103 \times 14.3\% + 100,000 \times (1-50\%) \times \$4,141 \times 14.3\% = \$180,494,600$
- Medical cost: $100,000 \times 50\% \times \$21,103 \times 62.6\% + 100,000 \times (1-50\%) \times \$4,141 \times 62.6\% = \$790,137,200$
- Other cost: $100,000 \times 50\% \times \$21,103 \times 23.1\% + 100,000 \times (1-50\%) \times \$4,141 \times 23.1\% = \$291,568,200$

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 | \$1,258,923,980 | \$1,258,153,152 | \$1,254,684,424 |
| Rx cost ⁴ | \$181,520,628 | \$181,762,046 | \$182,848,429 |
| Medical Cost ⁵ | \$785,835,152 | \$784,822,905 | \$780,267,796 |
| Other Cost ⁶ | \$291,568,200 | \$291,568,200 | \$291,568,200 |
| Estimated total plan healthcare costs savings with med sync | (\$3,276,020) | (\$4,046,848) | (\$7,515,576) |
| Total additional dispensing fee cost due to short fill ⁷ | \$68,100 | \$68,100 | \$68,100 |
| Estimated net total plan healthcare costs savings | (\$3,207,920) | (\$3,978,748) | (\$7,447,476) |
| Estimated net total plan healthcare costs savings PMPY | (\$32.08) | (\$39.79) | (\$74.47) |

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 $100,000 \times 5\% \times \$21,103 \times 14.3\% \times (1 + \text{pdc lift}) + 100,000 \times (50\% - 5\%) \times \$21,103 \times 14.3\% + 100,000 \times (1 - 50\%) \times \$4,141 \times 14.3\%$.

⁵ $100,000 \times 5\% \times \$21,103 \times 62.6\% \times (1 - \text{pdc lift} \times 0.9578) + 100,000 \times (50\% - 5\%) \times \$21,103 \times 62.6\% + 100,000 \times (1 - 50\%) \times \$4,141 \times 62.6\%$
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 Other expenditures include dental service, nursing care facilities and continuing care retirement communities, home health care, durable medical equipment, other non-durable medical products, and other professional services.

⁷ Assuming 6 short fills PMPY and \$2.27 dispensing fee (<https://rxsafe.com/improve-pharmacy-reimbursement-revenue/>), additional dispensing fee is $\$2.27 \times 6 \times 100,000 \times 5\% = \$68,100$.

In a group of 100,000 Medicare beneficiaries with 5% enrolled in a medication synchronization program:

- If medication adherence increased 6.8%, then healthcare cost would decrease by \$32.08 PMPY.
- If medication adherence increased 8.4%, then healthcare cost would decrease by \$39.79 PMPY.
- If medication adherence increased 15.6%, then healthcare cost would decrease by \$74.47 PMPY.

CONCLUSIONS AND IMPLICATIONS

- Economic modeling demonstrates that medication synchronization programs can result in substantial healthcare cost savings by improving medication adherence.
- Proper planning with cost models can help policy makers understand the value of medication synchronization and develop strategies to implement and improve its impact on the Medicare population.

AMA Citation:

Mu, Y, Zhang, J, Singh, T, Taitel, M. Modeling the Economic Value of Medication Synchronization among Medicare Beneficiaries. Presented at the Academy Health Annual Research Meeting, June 2-4, 2019, Washington, DC.

Contributing Authors:

Ying Mu, MS¹; Junjie Zhang, MS¹; Tanya Singh, MPH¹; Michael Taitel, PhD¹
¹Walgreens Center for Health and Wellbeing Research

This research was funded internally by Walgreen Co.

For more information on this presentation, please contact: research@walgreens.com.