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# LTCPA Short Cycle Dispensing Report

**Managed Solutions, LLC**  
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**Managed Solutions, LLC<sup>®</sup>**

**A Strategic Consulting & Communications Company**

# Meeting Objective

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Present the results of a study carried out by Managed Solutions, LLC on behalf of the Long Term Care Pharmacy Alliance (LTCPA) to determine:

- Amount of unused medication dispensed to Medicare Part D residents in Skilled Nursing Facilities (SNFs)
- How to cost effectively implement Section 3310 of the Patient Protection and Affordable Care Act

We believe this is the only study to date using actual returned prescription data for Medicare Part D in the skilled nursing environment.

# Managed Solutions, LLC

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- Founded in 2000. Two partners.
- Background in the pharmaceutical industry with 25 years experience in LTC.
- Perform consulting services for pharmaceutical companies, biotech companies and medical device companies.
- Core competency in health economics, market analytics and market research.

# Study Overview

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- Carried out a data-based analysis.
- Identified LTC pharmacies that could provide information on returns of partially used Medicare Part D prescriptions from SNFs.
  - Two national and three independent LTC pharmacy companies.
- Derived an estimate of the cost to Medicare Part D plans of all unused medication in SNFs that could feasibly be dispensed in shorter fills (oral solids).
- Identified the subset of prescriptions that could potentially result in savings due to shorter fill times.

# Summary of Key Findings

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- The additional expense of short cycle dispensing outweighs the expected savings from reduced waste
  - Annual net cost to the Part D program would increase by at least \$0.8 - \$1.3 billion if moving to 7-day fills
  - Possible Exception: High-cost drugs (ingredient cost of \$400/Rx or more)
- Critical components driving findings
  - Part D wastage in LTC is 2.9% of total Part D revenue
  - 7-day fills will increase Rx volume by 3.29 times, resulting in 194 million additional Rxs
  - LTCPs will need to be reimbursed for their cost to fill these additional scripts
  - 75% of Rxs are generics (will increase in future)



# Table 1: Medicare Part D Return Rates

	Dispensed	Returned	%
Number of Rx's	834,407	51,265	6.1%
Dollar value	\$47,012,469	\$1,343,002	2.9%

- 6.1% of dispensed Medicare Part D prescriptions are returned to LTC pharmacies with partially used medication.
- The cost of the returned unused medication amounts to 2.9% of total dispensed cost.
- On average about half of the medication has been consumed in the returned prescriptions.

Anecdotal information has indicated the cost of unused medications to be 17% or higher. This is the first study using prescription data from multiple LTC pharmacy companies we are aware of that addresses this issue. The results show actual costs to be far lower.

# Notes to Table 1

	Dispensed	Returned	%
Number of Rxs	834,407	51,265	6.1%
Dollar value	\$47,012,469	\$1,343,002	2.9%

- Dispensed and returned Rx data for 1-month to 6-month periods from the first half of 2010 obtained from 5 LTC pharmacy companies.
- Dispensed Rxs include all dosage forms. Dispensed dollar value includes the Medicare Part D dispensing fee.
- Return rate for number of Rxs varied from 3.1% to 8.8% [6.1% ± 1.9%] among the 5 companies. Return rate for the cost varied from 1.7% to 4.4% [2.9% ± 1.0%]. Standard error is based on a 95% confidence interval.
- Returned Rxs are oral solid dosage forms only and do not include the dispensing fee. Return rates were based on oral solids for two reasons:
  - Only oral solids can be feasibly dispensed in shorter days supply.
  - Oral solids are reliably returned to the pharmacies in our sample.

## Table 2: Estimate of Current Waste

1. Annual SNF Medicare D Rxs	78,000,000
2. Mean Rx cost with dispensing fee	\$56.34
3. Total annual charges to Medicare D plans	\$4,394,704,961
4. Percentage of returned Rx value--solid oral dosage forms	2.9%
<b>5. Annual value of destroyed oral solids</b>	<b>\$125,543,283</b>

- Current Medicare Part D “waste” in the LTC segment that could potentially be reduced through shorter fill times is estimated at \$125 million annually.

## Notes to Table 2

1. Annual SNF Medicare D Rx	78,000,000
2. Mean Rx cost with dispensing fee	\$56.34
3. Total annual charges to Medicare D plans	\$4,394,704,961
4. Percentage of returned Rx value--solid oral dosage forms	2.9%
5. Annual value of destroyed oral solids	\$125,543,283

- Current dispensed but unused medication in Medicare Part D in the SNF segment is estimated at \$125 million annually - or just over \$1 billion over 8 years.
- The figure of 78 million annual Medicare Part D Rx to the skilled nursing segment is based on Slide 8 of the Acumen presentation at the March 2010 CMS Medicare Part D symposium\*:
  - 850,000 full year claimants x 82 claims = 69,700,000 (2008)
  - 205,845 partial year claimants x 41 claims (assumed) = 8,439,645
  - Total claims = 78,139,645
  - \$56.34 cost is based on 5-company weighted average for 834,407 Rx (Average cost based on Acumen presentation is  $\$4520 / 82 = \$55.12$ ).

\* I\_LTC\_Pharmacy\_Price\_Index.pdf available at [http://www.cms.gov/PrescriptionDrugCovGenIn/09\\_ProgramReports.asp#TopOfPage](http://www.cms.gov/PrescriptionDrugCovGenIn/09_ProgramReports.asp#TopOfPage).

## Table 3: Impact of 7-day vs. 30-day Fill on Medicare Part D Costs

<b>Potential waste reduction</b>		
5. Annual value of destroyed oral solids	\$125,543,283	
6. "Reduction factor" of 7 day fill compared to 30 day fill [1- (3.5/15)]	0.767	
7. Potential waste reduction (30-day value x (1- .233))	\$96,249,850	
	<b>Mean dispensing fee</b>	<b>Mean direct cost per Rx</b>
<b>Increase in dispensing fees</b>		
8. Annual LTC Medicare D oral solid Rx's (75.6% of all Rx's)	58,930,379	58,930,379
9. Additional oral solid Rx's due to 7 day vs 30 day fill	193,628,387	193,628,387
10. Dispensing fee per Rx	\$4.74	\$7.34
11. Additional dispensing fees	\$917,115,665	\$1,421,370,664
<b>12. Net additional cost to payer</b>	<b>\$820,865,815</b>	<b>\$1,325,120,814</b>

- Potential annual reduction of \$96 million in unused medication comes at a cost of \$917 million in additional annual dispensing fees due to dispensing over 193 million additional prescriptions resulting in a net additional cost to Medicare Part D plans of \$821 million. The additional cost rises to \$1.3 billion if the direct cost per Rx is used as the fee.

Additional dispensing fees at any reasonable level overwhelm the potential savings from waste reduction if all oral solids are moved to a 7-day fill. Question: Can we find a subset of prescriptions where net savings are possible?

# Notes to Table 3

<b>Potential waste reduction</b>		
5. Annual value of destroyed oral solids	\$125,543,283	
6. "Reduction factor" of 7 day fill compared to 30 day fill [1- (3.5/15)]	0.767	
7. Potential waste reduction (30-day value x (1 - .233))	\$96,249,850	
<b>Increase in dispensing fees</b>	<b>Mean dispensing fee</b>	<b>Mean direct cost per Rx</b>
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- In moving from 30-day to 7-day fills, not all of the unused medication can be eliminated. The unused days supply in our sample of returned Rx's had a nearly flat distribution from 1 to 30 days. On average then, returned 7-day fills will have  $7/30 = 0.233$  as much unused medication as the returned 30-day fills.
- Therefore we reduce the potential savings from \$125 million to about \$96 million.
- There are about 59 million annual Rx's for oral solid products (about  $\frac{3}{4}$  of all Rx's). Moving all of these from 30-day to 7 day fills would result in 193 additional Rx's:  $59 \times (30/7) - 1$ .
- The dispensing fee of \$4.74 is the weighted average dispensing fee from the companies in the study. This reflects negotiated dispensing fees as determined in the contract between the prescription drug plan and the pharmacy. The \$7.34 direct cost is the average direct cost reported by these companies. The dispensing fee therefore does not even cover the direct cost of dispensing a prescription (mostly wages), much less the full dispensing cost, including fixed costs. See Table 6.
- The mean Rx cost would have to rise to \$537 in order for the potential savings to equal the increase in dispensing fees using the current average fee from our sample. This indicates that there is only an advantage in reducing the fill days on very high cost medications.
- Alternatively, the return rate would have to rise from 2.9% to over 27% in order for the potential savings to equal the increase in dispensing fees.

## Table 4: Distribution of Returned Oral Solid Rxs by Cost of Originally Dispensed Rx

Dispensed Value of Original Prescription	Cumulative % of Returned Prescriptions	Cumulative % of Returned Prescription Cost
\$0 to \$10	33.1%	2.2%
\$10 to \$20	60.5%	7.9%
\$20 to \$50	75.9%	15.7%
\$50 to \$100	84.2%	27.0%
\$100 to \$200	93.4%	52.2%
\$200 to \$300	96.8%	68.1%
\$300 to \$400	97.6%	73.1%
\$400 and over	100.0%	100.0%

- The **number** of returned Rxs are heavily skewed toward lower cost Rxs.
- The **cost** of returned Rxs is heavily skewed toward higher cost Rxs.
  - Rxs with dispensed value of **under \$50** account for 76% of returns but only 16% of return cost.
  - Rxs with dispensed value of **over \$50** account for 24% of returns but account for 84% of return cost.

The skewed distribution indicates that net savings may be achievable for high cost Rxs, where the cost of unused medications may exceed additional dispensing fees due to shorter fills.



# Notes to Table 4

<b>Dispensed Value of Original Prescription</b>	<b>Cumulative % of Returned Prescriptions</b>	<b>Cumulative % of Returned Prescription Cost</b>
\$0 to \$10	33.1%	2.2%
\$10 to \$20	60.5%	7.9%
\$20 to \$50	75.9%	15.7%
\$50 to \$100	84.2%	27.0%
\$100 to \$200	93.4%	52.2%
\$200 to \$300	96.8%	68.1%
\$300 to \$400	97.6%	73.1%
\$400 and over	100.0%	100.0%

- The distribution of returned Rx's in terms of number and cost was calculated from 43,713 returned oral solid Rx's from 5 LTC pharmacy companies for which the dosage form, unit cost, dispensed quantity and returned quantity were available.

## Table 5: Annual Net Savings and Costs Due to 7-day Fill by Ingredient Cost of Dispensed 30-day Rx \*

Dispensed Value	Mix of Rxs Dispensed (1)	Potential Savings from 7-day Fill (10)	Additional Dispensing Fees (12) based on average fee	Net Savings (Cost) (13) based on average fee	Additional Dispensing Fees (12) based on average direct cost **	Net Savings (Cost) (13) based on average direct cost **
\$0 to \$10	42.9%	\$2,070,210	\$393,442,620	(\$391,372,410)	\$609,768,015	(\$607,697,805)
\$10 to \$20	15.4%	\$5,510,131	\$141,235,812	(\$135,725,681)	\$218,891,082	(\$213,380,951)
\$20 to \$50	13.5%	\$7,547,503	\$123,810,615	(\$116,263,112)	\$191,885,040	(\$184,337,537)
\$50 to \$100	9.5%	\$10,853,825	\$87,125,988	(\$76,272,163)	\$135,030,213	(\$124,176,388)
\$100 to \$200	11.0%	\$24,264,642	\$100,882,723	(\$76,618,081)	\$156,350,773	(\$132,086,131)
\$200 to \$300	5.6%	\$15,303,180	\$51,358,477	(\$36,055,298)	\$79,596,757	(\$64,293,578)
\$300 to \$400	0.6%	\$4,789,060	\$5,502,694	(\$713,634)	\$8,528,224	(\$3,739,164)
\$400 and over	1.5%	\$25,911,299	\$13,756,735	\$12,154,564	\$21,320,560	\$4,590,739
<b>Total</b>	<b>100.0%</b>	<b>\$96,249,850</b>	<b>\$917,115,665</b>	<b>(\$820,865,815)</b>	<b>\$1,421,370,664</b>	<b>(\$1,325,120,814)</b>

\* Based on 78 million annual Rxs in LTC, average dispensing fee of \$4.74 and average direct cost of \$7.34.

\*\* A negative Net savings indicates that costs to the PDP would increase

- Moving from a 30-day to a 7-day fill results in additional costs to payers until the dispensed 30-day prescription cost is above \$400. This would affect about 1.5% of Medicare Part D prescriptions and yield net savings in the range of \$4.6 to \$12.2 million annually depending on the dispensing fee amount.

Net savings are only possible when the return value of a 30-day prescription is greater than the additional dispensing fees. This will only occur for very high cost prescriptions (over \$400) that account for less than 2% of all prescriptions. Generics average about \$20 per Rx and brands about \$175.

# Notes to Table 5

Dispensed Value	Mix of Rx's Dispensed (1)	Potential Savings from 7-day Fill (10)	Additional Dispensing Fees (12) based on average fee	Net Savings (Cost) (13) based on average fee	Additional Dispensing Fees (12) based on average direct cost **	Net Savings (Cost) (13) based on average direct cost **
\$0 to \$10	42.9%	\$2,070,210	\$393,442,620	(\$391,372,410)	\$609,768,015	(\$607,697,805)
\$10 to \$20	15.4%	\$5,510,131	\$141,235,812	(\$135,725,681)	\$218,891,082	(\$213,380,951)
\$20 to \$50	13.5%	\$7,547,503	\$123,810,615	(\$116,263,112)	\$191,885,040	(\$184,337,537)
\$50 to \$100	9.5%	\$10,853,825	\$87,125,988	(\$76,272,163)	\$135,030,213	(\$124,176,388)
\$100 to \$200	11.0%	\$24,264,642	\$100,882,723	(\$76,618,081)	\$156,350,773	(\$132,086,131)
\$200 to \$300	5.6%	\$15,303,180	\$51,358,477	(\$36,055,298)	\$79,596,757	(\$64,293,578)
\$300 to \$400	0.6%	\$4,789,060	\$5,502,694	(\$713,634)	\$8,528,224	(\$3,739,164)
\$400 and over	1.5%	\$25,911,299	\$13,756,735	\$12,154,564	\$21,320,560	\$4,590,739
<b>Total</b>	<b>100.0%</b>	<b>\$96,249,850</b>	<b>\$917,115,665</b>	<b>(\$820,865,815)</b>	<b>\$1,421,370,664</b>	<b>(\$1,325,120,814)</b>

- All figures are annual and based on 78 million annual Medicare Part D Rx's to SNFs.
- The mix of dispensed Rx's is based on a sample of 8 million Rx's.
- Potential savings in each range of dispensed value is calculated using the distribution in Table 4 and the methodology used in Tables 2 and 3. A return rate for Rx cost of 2.9% was used and the reduction in unused medication was based on the 7/30 ratio.
- Dispensing fees were based on the reported dispensing fees and on the reported direct cost of filling a prescription.
- Using the upper value of the confidence limit for the return rate, there is a small savings for Rx's over \$300, but still large incremental costs for Rx's under \$300.

# Conclusions

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Study was carried out using a significant data sample from multiple LTC pharmacy companies.

- Percentage of claims due to unused oral solids for Medicare Part D residents in SNFs is  $2.9\% \pm 1.0\%$ , amounting to a total value of \$125 million out of \$4.4 billion in claims.
- If prescriptions are dispensed on a 7-day cycle, only prescriptions with an original dispensing cost of \$400 or more will yield savings to Medicare Part D plans.

## Table 6: Dispensing Fees and Direct Cost per Rx for 8 LTC Pharmacy Companies

	Weighted mean
Average Medicare D dispensing fee	\$4.74
Direct and indirect cost per Rx	\$13.13
Direct (variable) cost per Rx	\$7.34
Difference between direct dispensing cost per Rx and dispensing fee	\$2.60

- The direct dispensing cost per prescription is greater than the Medicare Part D dispensing fee : \$7.34 vs. \$4.74
- On average, direct dispensing costs per prescription exceed the dispensing fee by \$2.60.

Current dispensing fees do not even cover direct dispensing costs. Pharmacies must recover at least the direct costs of dispensing and a portion of fixed costs.

# Notes to Table 6

	Weighted mean
Average Medicare D dispensing fee	\$4.74
Direct and indirect cost per Rx	\$13.13
Direct (variable) cost per Rx	\$7.34
Difference between direct dispensing cost per Rx and dispensing fee	\$2.60

- Direct cost per Rx includes only costs incurred by filling one incremental prescription (variable costs).
- These include primarily pharmacist and other wages (78% of direct costs), delivery costs and packaging materials. See Table 7.

## Table 7: Breakout of Direct Dispensing Cost\*

Direct Expense Item	% of total
Pharmacist wages and benefits	30.5%
Pharmacy tech wages	23.9%
Delivery wages	16.9%
Other wages	6.9%
Utilities	5.3%
Delivery expenses (non payroll)	5.0%
Packaging (containers and labels)	3.4%
Other expense non payroll	3.0%
Pharmacy computer expenses	1.8%
Telephone	1.7%
Repairs	1.0%
Interest expense	0.7%
<b>Total Direct Dispensing costs</b>	<b>100.0%</b>

\* 5-Company Average

- Direct dispensing cost is unlikely to drop since pharmacies are currently operating at or near capacity. State pharmacy laws place constraints on staffing minimums. For example, many states do not allow more than two pharmacy techs for each pharmacist.
- The direct dispensing cost could increase as a result of the need to acquire more space, equipment or increased labor costs due to shortages of qualified staff. There is a nationwide shortage of pharmacists.

Dispensing is a labor-intensive process. The bulk of direct costs is due to wages.



# Full Table 5 with Notes Based on Average Dispensing Fee

Dispensed Value	Mix of Rxs Dispensed (1)	Mix of Oral Solid Rxs Returned (2)	% of Dispensed Oral Solid Rxs Returned (3)	Rxs Dispensed (4)	Ingredient Cost per Dispensed Rx (5)	Dispensed value (6)
\$0 to \$10	42.9%	33.1%	4.7%	33,462,000	\$4.66	\$155,922,968
\$10 to \$20	15.4%	27.4%	10.9%	12,012,000	\$14.07	\$168,970,199
\$20 to \$50	13.5%	15.5%	7.0%	10,530,000	\$32.54	\$342,680,091
\$50 to \$100	9.5%	8.2%	5.3%	7,410,000	\$76.47	\$566,647,996
\$100 to \$200	11.0%	9.2%	5.2%	8,580,000	\$149.27	\$1,280,725,897
\$200 to \$300	5.6%	3.4%	3.7%	4,368,000	\$227.38	\$993,187,534
\$300 to \$400	0.6%	0.8%	8.2%	468,000	\$346.48	\$162,152,521
\$400 and over	1.5%	2.4%	9.8%	1,170,000	\$610.74	\$714,571,192
<b>Total</b>	<b>100.0%</b>	<b>100.0%</b>	<b>6.1%</b>	<b>78,000,000</b>	<b>\$56.34</b>	<b>\$4,394,704,961</b>

Dispensed Value	Oral Solid Rxs Returned (7)	Ingredient Cost per Returned OS Rx (8)	Total Ingredient Cost of Returned OS Rxs (9)	Potential Savings from 7-day Fill (10)	Additional Oral Solid Rxs (11)	Additional Dispensing Fees (12) based on average fee	Net Savings (Cost) (13) based on average fee
\$0 to \$10	1,586,450	\$1.70	\$2,700,274	\$2,070,210	83,066,578	\$393,442,620	(\$391,372,410)
\$10 to \$20	1,311,060	\$5.48	\$7,187,128	\$5,510,131	29,818,772	\$141,235,812	(\$135,725,681)
\$20 to \$50	740,767	\$13.29	\$9,844,569	\$7,547,503	26,139,832	\$123,810,615	(\$116,263,112)
\$50 to \$100	395,324	\$35.81	\$14,157,163	\$10,853,825	18,394,697	\$87,125,988	(\$76,272,163)
\$100 to \$200	442,903	\$71.46	\$31,649,533	\$24,264,642	21,299,123	\$100,882,723	(\$76,618,081)
\$200 to \$300	163,238	\$122.28	\$19,960,669	\$15,303,180	10,843,190	\$51,358,477	(\$36,055,298)
\$300 to \$400	38,151	\$163.73	\$6,246,600	\$4,789,060	1,161,770	\$5,502,694	(\$713,634)
\$400 and over	114,344	\$295.58	\$33,797,346	\$25,911,299	2,904,426	\$13,756,735	\$12,154,564
<b>Total</b>	<b>4,792,237</b>	<b>\$26.20</b>	<b>\$125,543,283</b>	<b>\$96,249,850</b>	<b>193,628,387</b>	<b>\$917,115,665</b>	<b>(\$820,865,815)</b>

(1) Source: Based on 8 million dispensed Medicare Part D Rxs (LTCPA presentation, 2010)

(2) Source: Aggregate returns analysis, Table 7

(3) Overall oral solid Rx return rate from Table 4, Line 16 x (2) / (1)

(4) Estimated annual Medicare Part D Rxs in SNFs x (1)

(5) Source: Same as (1)

(6) (4) x (5)

(7) (3) x (4)

(8) Source: Table 7 and 8 [Divide Oral Solid Value by Number of Rxs]

(9) (7) x (8)

(10) (9) x [ 1 - (7/30) ]

(11) (4) x 75.6% x (30/7 -1)

(12) (11) x \$4.74

(13) (10) - (12)