Medco as a Business Model Imperialist

By
Lawrence W. Abrams, Ph.D.
July 28, 2008

Abstract

The business model of large Independent pharmacy benefits managers (PBMs) are in stark contract to the rest of the healthcare cost containment industry in that their revenue model features opaque transactional margins from captive suppliers subsidizing transparent management fees. Updating our work on making the PBM business model transparent, we quantify the dependence of MedcoHealth Solutions, the largest independent PBM, on pharmacy margins relative to management fees.

We estimate that Medco's revenue from client fees averages $6.52 per-member-per-year (PMPY). In contract, its gross profits from prescription transactions averages seven times that, or $ 42.66 PMPY.

Medco has chosen medicine therapy management (MTM) as the focus of new business development. While this makes sense in terms leveraging Medco's existing infrastructure and customer base, we will show that the MTM business would be a stretch for its revenue model and value proposition. **We estimate that the fees now charged for a typical MTM program would double to quadruple the total fees that Medco currently charges for all of its PBM services**.

Medco will attempt to win new MTM business by covering low ball MTM fees with transactional margins generated by its personnel who steer MTM members to Medco captive pharmacies and to PolyMedica, its newly acquired diabetic supply operation. Its long term strategy is to dominate the disease management business generally using the same deceptive pricing strategy.

We conclude the paper with an assessment of factors that might deter Medco from spreading its business model beyond pharmacy benefits management.

© Lawrence W. Abrams, 2008

Medco as a Business Model Imperialist

Table of Contents

© Lawrence W. Abrams, 2008

Lawrence W. Abrams, Ph.D.
Nu-Retail
P.O. Box 1285
Watsonville, CA. 95077
831-254-7325 (C.)
labrams@nu-retail.com

Disclosures:

I have not received any remuneration for this paper.

I have a Ph.D. in Economics from Washington University in St. Louis and a B.A. in Economics from Amherst College. Other papers on PBMs can be accessed at www.nu-retail.com

© Lawrence W. Abrams, 2008

Medco as a Business Model Imperialist

By
Lawrence W. Abrams, Ph.D.
July 28, 2008

Introduction

MedcoHealth Solutions, the largest of the Big 3 independent pharmacy benefit managers (PBMs), has chosen to focus new business development on medication therapy management (MTM), a branch of disease management. By going into the MTM business, Medco would be leveraging its existing infrastructure and targeting its existing client base. Despite MTM being a nice fit for Medco in these areas, we will demonstrate quantitatively that the MTM business would be a stretch for Medco's current revenue model. Also, MTM's value proposition will present problems for Medco.

A business model is a formal conceptualization of how a company conducts business. It is a detailed exposition of the markets a company serves, the infrastructure it owns, and way it monetizes its offerings. It has little to do with what a company actually produces.

Having a clear picture of how a company does business becomes extremely valuable when evaluating options for new business development. The basic idea is that even though a new business involves a new product or service, the chances of success are improved if a new business is compatible with a company's existing business model. If a new business is not compatible, then business development involves more than new product development. It involving changing the business model of the new venture and/or changing the existing model of the company.

We find it useful to view a business model as compromised of four components (1) infrastructure (2) target market; (3) revenue and cost model; and (4) value proposition. MTM fits perfectly into Medco's existing infrastructure and target market. However, the fees-for-service revenue model normally used to finance MTM is different from Medco's existing revenue model which relies on transaction margins

© Lawrence W. Abrams, 2008

from captive pharmacy operations. The typical value proposition of MTM is a reduction in overall medical costs, which will be a departure from Medco's current value proposition that focuses narrowly on reducing drug spend trend.

The paper starts with a review of new business development options for the Big 3 PBMs – Medco, Express Scripts, and CVS/Caremark -- and offers a reason why Medco has targeted MTM. There is a brief discussion of why MTM is an excellent fit for some parts of Medco's business model.

The case of why MTM will be a stretch for the Medco begins with a disaggregation of Medco's FY2007 10-K financials to show the extent to which Medco uses opaque margins from prescription transactions to finance core PBM programs. We calculate with certainty the share of Medco's current gross profits derived from transactions versus fees. We then derive an estimate of average per-member-per-year (PMPY) fees of a typical MTM program and compare that to what Medco currently derives from client fees.

The result is that the fees now charged for a typical MTM program would double to quadruple the total fees that Medco currently charges for all of it PBM services. Give the relative magnitude of the fees of a typical MTM program, it seems likely that Medco will try to stretch the MTM revenue model by covering low ball MTM fees with transactions margins from captive pharmacies and from newly acquired healthcare suppliers such as PolyMedica, a direct to consumer diabetic supply operation.

Next, we present the case that Medco will have difficulties proving to clients that its efforts cause a reduction in overall healthcare costs, *ceteris paribus*. Given this difficulty, it seems likely that Medco will try to switch client focus to some lesser measure of success such as greater adherence of drug use.

© Lawrence W. Abrams, 2008

We conclude the paper with an assessment of factors that might deter Medco from spreading its deceptive business model beyond pharmacy benefits management to other areas of healthcare cost containment.

The Focus of PBM New Business Development

Since 2006, the focus of new business development for the Big 3 PBMs has been on expanding the scope of its benefit management business rather than buying additional pharmacy operations.

Much of this is due to the fact that there is no where left to go via horizontal integration of captive pharmacy operations. The Big 3 PBMs have acquired all of the large, independent specialty pharmacies, with the exception of BioScipt. The need for new mail order capacity has been met through internal expansion.

The other reason is a sense by the Big 3 PBMs that further horizontal integration in the PBM industry would be challenged on antitrust grounds by the Federal Trade Commission (FTC). In August of 2005, the FTC released a study analyzing potential conflict of interest of PBM ownership of mail order pharmacies.[1] They concluded that PBM exclusionary practices did not "disadvantage" plan sponsors. The report was poorly written and thoroughly discredited.[2]

In 2007, a new team of lawyers and economists at the FTC was tasked with reviewing a proposed horizontal merger between the # 2 PBM, Express Scripts and the # 3 PBM, Caremark. The FTC asked for additional information about the proposed merger, thus allowing an earlier bid by CVS, a large drugstore chain, to win out.

This is in contract to a 2003 case where the FTC did not invoke its right to delay a horizontal merger between the # 2 PBM, Caremark, and the #4 PBM at the time, Advanced PCS. The 2007 delay was a clear signal to the PBM industry of a change in thinking at the FTC. The FTC now has a clearer understanding of the Big 3 PBM revenue model and the incentive the Big 3 PBMs have to hold up

© Lawrence W. Abrams, 2008

prices in the drug supply chain.[3] The new FTC economists overseeing the PBM industry thankfully are familiar with the theory of "facilitating practices" and see the possibility that the Big 3 PBM practice of setting the reimbursement rates for competing retail pharmacies as such. In other words, the best thing you could do to keep **your** prices high is to have **your competitor** set them. There is now some question to the belief that large independent PBMs behave as benevolent "countervailing powers" in intermediate markets. [4]

Of course, a merger involving vertical integration with Walgreen's or Rite-Aid is still an option for Express Scripts or Medco. We have argued that such mergers would be pro-competitive as it is a step toward a "preferred provider" price war.[5] However, we have presented the case that Walgreen's does not need Medco or Express Scripts to win a preferred provider war. We have also argued that Rite-Aid is worth more closed than open.[6]

Two Paths of PBM New Business Development

While the purpose of this paper is to focus on medication therapy management as a new business for Medco, we do want to note a fundamental division within the ranks of the Big 3 PBMs over the general direction of healthcare benefit management.

One strain is based on a belief that the best approach to healthcare cost containment is more "top-down" intervention by healthcare practitioners such as nurses and pharmacists and the "wisdom of an elite". The other strain is based on a belief that consumer-directed healthcare is the best approach. Based on recent announcements, Medco and CVS/Caremark are both headed toward a "top-down" approach while Express Scripts is headed toward a consumer-directed approach. It is interesting to note that the political divisions of Democrat versus Republican or progressive versus conservative do not overlay neatly the division between "top-down" versus consumer-directed approaches to healthcare cost containment.

© Lawrence W. Abrams, 2008

Medco has rolled out a medication therapy management business anchored by “Medco Therapeutic Resource Centers” located in existing call centers.[7] CVS/Caremark also has announced a “top-down” plan that will feature their retail pharmacists as MTM counselors.[8] As expected, CVS touts their unique ability among the Big 3 PBMs to offer “face-to-face” interaction with enrollees at retail outlets.

Express Scripts’ new business development is based on a belief that a consumer-directed approach to cost-containment is best. It is creating a buzz by promising to apply *au courant* concepts of behavioral economics such as “nudging” and “choice architecture” to the practice of consumer-directed pharmacy benefits. The centerpiece of Express Scripts’ strategy is a “Center for Cost-Effective Consumerism” whose goal is to develop innovative (and branded) ways of “nudging” consumers into making better drug prescription choices. Quoting Robert Nease, the chief scientist at Express Scripts [9]

> "Despite the predictions of classical economic theory, it's clear that giving health consumers price information alone is not enough. Instead, communications and a more advanced understanding of the consumer are needed to accelerate better health and value,"

.Express Scripts has underscored its commitment to a consumer-directed approach by buying ConnectYourCare, a company with software that helps individuals manage their own healthcare and related costs.

We have discussed elsewhere our skepticism about the potential of a consumer-directed pharmacy benefit designed by one of the Big 3 PBMs. Basically, we have argued that Big 3 PBM revenue model would be threatened if plan members had access to a free market for prescriptions and access to information about the full range of therapeutic equivalents for brand drugs.[10]

.

MTM’s Infrastructure Requirements

Medication therapy management engages pharmacists to assist health plan members in managing chronic diseases with a focus on medications. These specialists engage members periodically via

© Lawrence W. Abrams, 2008

the telephone or in person at a retail pharmacy. Consultations last between 15 minutes and 60 minutes per session. They are much more extensive than the typically brief encounter between a plan member and a retail pharmacist at the time a new prescription is filled.

The major resource requirement for MTM are healthcare practitioners that specialize in various chronic diseases, IT systems, and communication systems used in contacting and interacting with physicians and plan members.

Much of personnel and IT requirements for MTM are already in place in mail order call centers of the Big 3 PBMs. However, several IT functions will be new for PBMs. One is the gathering and storing of information about patient vital signs and healthcare practices and relating this to existing drug utilization information. Linked to that is an enrollee system that ranks potential enrollees on the basis of benefit-cost. Further, there should a link to a decision-support system that recommends medication based on vital signs and other data.

For example, consider the following statement from OptumHealth, a captive disease management unit of UnitedHealth Group, on its intended use of decision-support software for "brain health" [11]

> OptumHealth Behavioral Solutions will work with Brain Resource to provide clinicians with a Web-based assessment that measures general cognition (how people process information) and social cognition (how people manage their emotions). This 40-minute assessment is based on well-known and validated tests of memory, attention, executive function, and response speed, and mood, social skills and emotional resilience.
>
> Once the assessment is completed, within seconds, it is compared with thousands of profiles in the Brain Resource International Database – the largest international database quantifying individual differences in brain function. Based on these scores, a set of "decision rules" automatically recommends the most appropriate treatment for the client.

Careful selection of members for enrollment is an important part of an MTM program because of amount of time and cost involved relative to other PBM services. Criteria for selection include data from insurance claims revealing medical and/or drug treatment for chronic diseases.

Here PBMs might have an advantage over other companies because there is anecdotal evidence that drug claims are filed faster and that it easier to infer the nature of the disease from drug use data than from medical claims data. Medco is likely to cite this advantage as a reason why plans should

© Lawrence W. Abrams, 2008

outsource MTM to them rather than to some disease management company with access only to medical claims.

While the retail pharmacies possess the personnel required for MTM, they lag far behind mail order operations in access to IT systems designed to manage MTM. Also, currently there is a lack of private space in retail pharmacies suitable for conducting a "personal" consultation. It is a major blemish on the management of CVS/Caremark that they have made so little progress since their merger to enhance the infrastructure of retail pharmacies. While CVS CEO Tom Ryan touted "value creation" as the reason for the merger of a chain drugstore and a PBM, there is no evidence to date of any move to invest in new PBM infrastructure located at retail drugstores.

Of course, there may be some peripheral benefit to the PBM business created by the placement of healthcare clinics in retail drugstores. This may provide some space for private consultations between pharmacists and plan members. But, it seems that most of the "spillover" benefits of retail healthcare clinics will accrue to the retail pharmacy business rather than the PBM business. Investing in retail healthcare clinics is an inefficient way to capture the potential synergies between the PBM business and the retail drugstore business.

MTM's Target Market

Medco's most important competitive advantage as it enters the MTM business is its complete access to prescription claim information of its current client base. This gives Medco an advantage over other more experienced disease management companies. Medco's primary target will be clients that are self-insured Fortune 500 companies and Taft-Hartley plans that do not now have a MTM program in place. After that, it is an open question what Medco will do next. The options are diagramed below:

© Lawrence W. Abrams, 2008

Medco's Sequence of Target Markets	Uses Medco as PBM	Uses Other PBMs e.g., Caremark, Express Scripts. Aetna, Cigna
Does Not Have Disease Management	Target # 1	Target # 3
Has Disease Management e.g., Healthways, OptumHealth Lifemasters, etc.	Target # 2	

We believe that Medco's secondary target will be existing clients who already have engaged another specialist in disease management. While Medco has signed a 10 year partnership with Healthways to market MTM to Medco clients, the day will come sooner than later when Medco pitches MTM to one of its own clients that also happens to use Healthways for general disease management.

The least promising target for Medco will be plans without a MTM program, but who are served by a competitor PBM. This will be a difficult market because Medco will need access to prescription claims data from such arch rivals as CVS/Caremark and Express Scripts. Access to both prescription and medical claims data is necessary for a company to be truly successful in the MTM business. The problem for Medco is that is that large insurance companies like Aetna, Cigna, Humana, and Wellpoint-Anthem, may not want to share medical claims data with Medco. This is because all of these companies have captive PBM operations that compete with Medco for the PBM business of self-insured Fortune 500 companies.

If Medco's entry into MTM is successful, it will surely target the general disease management business. This prospect should shatter any hope of easy sharing of medical and prescription claims

© Lawrence W. Abrams, 2008

data among PBMs, independent disease management companies, and integrated insurance companies.

Quantifying Medco's Revenue Model: Fiscal 2007

The purpose of this section is to update our work on disaggregating Medco's gross profits by source – claims and data fees, retail reimbursement spread, captive pharmacy margins, and retained rebates.[12] Since 3Q2004, Medco has been a focus because it has been the only Big 3 PBM to disclose its gross rebates received from Pharma and its rebate retention rate. To this day, it is the only large PBM where the share of gross profits from retained rebates can be calculated with certainty.

Medco's disclosure of its rebate revenue was part of a government *qui tam* settlement in 2004. This disclosure was the likely impetus for Medco to rapidly transform its revenue model away from retained rebates to a dependence on mail order margins. Medco has turned this forced disclosure into a positive development and rightly touts itself as the most transparent PBM among the Big 3. Of course, Medco's transparency is relative…relatively good compared to Express Scripts or CVS/Caremark, but relative poor compared to other healthcare cost containment companies.

In our update below, we pay special attention to quantifying the importance of gross profits from transactions relative to gross profits from client fees. In the past, we measured relative importance as a percentage of total gross profits. Here we develop measures of importance in terms of average dollar per-member-per-year (PMPY). This facilitates quantitative comparisons with benefit management fees typically charged for MTM and disease management.

Fortunately, for this paper, Medco has always separated out transactional financials from fee-for-service financials. For the first time in its 2007's 10-K annual report to the SEC, Medco separated out client fees from so-called "data fees" received from Pharma.[13] This separation was likely due to

© Lawrence W. Abrams, 2008

pressure for more transparency as many believe that “data fees” from Pharma are a surrogate for pharmaceutical rebates.

As the table below indicates, “data fees” contribute only 5.2% of Medco’s 2007 gross profits, small compared to the contributions by transactional margins, but substantial compared to the 7.9% contribution by the sum of all fees paid by clients.

Using line item figures reported by Medco in its 2007 10-K, it is possible derive, without further disaggregation, at an estimate of average per member per year (PMPY) client fees for services. Because Medco does not report the total number of lives covered by plans it manages, an estimate of covered lives is the only outside piece of information required.[14]

In 2005, Medco purchased Accredo, a very large specialty pharmacy. This acquisition was material both from a financial and from a financial reporting perspective. Medco has used this event to obfuscate its financials further. The good news is that Medco now separates out specialty pharmacy financials from traditional pharmacy (and PBM) financials. This makes it possible to derive a specialty pharmacy gross profit margin once co-payments are netted out.

Before the Accredo acquisition, Medco reported mail order pharmacy revenue, but not cost, separately from other PBM related financials. Now, with the purchase of Accredo, Medco sees itself as two broad businesses – PBM and specialty pharmacy --with one PBM line item for mail, retail, rebates, and co-payments. Medco explains the decision to stop reporting traditional pharmacy revenue by channel of distribution in its latest 10-K: [15]

> As a result of our acquisition of Accredo in August 2005, we have two reportable segments, PBM and Specialty Pharmacy. The PBM segment involves sales of traditional prescription drugs and supplies to our clients and members, either through our network of contractually affiliated retail pharmacies or our mail-order pharmacies…. …The PBM segment is measured and managed on an integrated basis, and there is no distinct measurement that separates the performance and profitability of mail order and retail….As a result of the nature of our integrated PBM services and contracts, the chief operating decision maker views Medco’s PBM operations as a single segment for purposes of making decisions about resource allocations and in assessing performance.

© Lawrence W. Abrams, 2008

The failure to disaggregate revenue by distribution channel represents a major step backward is the transparency of Medco's financial reporting. However, with a few reasonable assumptions, we are able once again to make transparent what Medco does not.

The table below presents our efforts to make Medco's business model transparent for FY2007. It is a line item delineation of revenue and cost that highlights the importance of gross profits from transactions relative to gross profits from fees. The derivation did not require any further disaggregation of line items reported by Medco in its FY2007 10-K report.

The table below highlights Medco's dependency on transactional gross profits. In 2007, Medco derived only 7.9% of its gross profits from client fees compared to 86.9% from prescription transaction gross profits. Based on an estimate that Medco manages the pharmacy benefits of approximately 60 million people**, we estimate that Medco's revenue from client fees averages $6.52 per-member-per-year (PMPY). In contract, its gross profits from prescription transactions averages seven times that, or $ 42.66 PMPY.**

Medco's financials are still opaque about the various sources of traditional pharmacy transactional gross profits – retail reimbursement spread versus mail order margins versus retained rebates from Pharma. While it is possible to split out rebates with certainty, disaggregating pharmacy revenue and costs by distribution channel – retail versus mail order – requires additional assumptions.

© Lawrence W. Abrams, 2008

How Medco Reports Its Revenue and Cost Model

	source	Revenue Mil $	source	Costs Mil $	Gross Profit	Margin Share	Margin
PBM Rx Transactions	10-K	$37,981	10-K	$35,839	$2,142	72.7%	5.6%
Specialty Rx Transactions	10-K	$5,981	10-K	$5,563	$417	14.2%	7.0%
Fees from Mfgrs	10-K	$153	10-K	$0	$153	5.2%	100.0%
Fees from Clients	10-K	$391	10-K	$158	$233	**7.9%**	59.5%
Totals- FY07	10-K	$44,506	10-K	$41,561	$2,945	100.0%	6.6%

		Mil
Members	A.I.S.	60
PMPY Fees from Clients		**$6.52**
PMPY Gross Profits From Transactions		**$42.66**

http://www.aishealth.com/MarketData/PharmBenMgmt/PBM_market01.html covered lives 2Q07
Medco Health Solutions, Form 10-K for year ending December 29, 2007, Available at
http://yahoo.brand.edgar-online.com/DisplayFiling.aspx?dcn=0000950123-08-001863

In the appendix, we show just what assumptions were used to disaggregate Medco's traditional pharmacy financials by source. The following table summarizes this disaggregation.

In the 3Q2004, Medco first disclosed that its rebate retention rate was 40.5% of gross rebates. By 2007, the table below indicates that Medco has reduced its rebate retention rate to 15.4%. In 3Q2004, we calculated with certainty that retained rebates contributed 71.4% of total gross profits. Today, the contribution of retained rebates has fallen to only 18.6% of gross profits. Back in 3Q2004, we estimated that mail order pharmacy margins contributed 11.2% to Medco's overall gross profits. In 2007, we estimate that mail order now contributes 49.9 % to overall gross profits.

© Lawrence W. Abrams, 2008

How Medco Reports Its Revenue and Cost Model, FY2007

	cell	source	Costs Mil $	Gross Profit	Margin Share	Margin
PBM Rx Transactions	a1	10-K	$ 35,839	$ 2,142	72.7%	5.6%
Specialty Rx Transactions	a2	10-K	$ 5,563	$ 417	14.2%	7.0%
Fees From Pharma	a3	10-K	$ -	$ 153	5.2%	100.0%
Fees from Clients	a4	10-K	$ 158	$ 233	**7.9%**	59.5%
Totals- FY07	a5	10-K	$ 41,561	$ 2,945	100.0%	6.6%

A More Transparent View of Medco's Business Model, FY2007

			Costs	Gross Profit	Margin Share	Margin	
PBM Rx Transactions							
Retail Network Reimbursements	a14	=.0995*a14	$ 24,555	$ 123	4.2%	0.5%	"The Spread"
Captive Mail Order Pharmacy	a15	remainder	$ 14,845	$ 1,470	49.9%	9.0%	Mail Order Margin
Rebates Remitted and Received	a16	10-K	$ (3,561)	$ 548	18.6%	15.4%	Retention Rate
PBM Rx Transactions	a17	10-K	$ 35,839	$ 2,142	72.7%	5.6%	
Specialty Rx Transactions	a18	10-K	$ 5,563	$ 417	14.2%	7.0%	
Fees From Pharma	a19	10-K	$ -	$ 153	5.2%	100.0%	
Fees From Clients	a20	10-K	$ 158	$ 233	7.9%	59.5%	
Totals- FY07			$ 41,561	$ 2,945	100.0%	6.6%	

		Costs	Gross Profit
Mail Order Pharmacy Per 90 Day Rx	a24	**$ 156.60**	**$ 15.51**

For FY2007 we estimate that Medco's gross profit margin for the mail order to be 9.0%. This is considerably higher than our 2Q2005 estimate of 4.5% for Medco's mail order operations, which was also net of co-payments.

We believe that source of the increased mail order margins is due to a shift in utilization to high margin "new" generics (e.g. simvastatin during its first year as a generic) rather than lower dispensing costs due to sheer volume filling up unused capacity.

© Lawrence W. Abrams, 2008

The following table presents our “stylized facts” of the financials of a large mail order pharmacy operation. The “stylized facts” for the components of gross profits comes close to our estimates above for Medco based on a disaggregation of its 10-K report. We find it extremely useful to postulate three types of drugs dispensed, each with distinct margins, as measured both by $ per script and by percentage: (1) a new generic with a high AWP (e.g. simvastatin); (2) an old generic with a low AWP (e.g. lovastatin); and (3) a brand with a high AWP (e.g. Lipitor).

The table below highlights two aspects of the financials of a large mail order pharmacy operation. One is that the ingredient and prescription margins are higher for generics than brands by design. The second is that new generics have higher **gross profits per script** than older generics even though the **ingredient and prescription margins** are the similar.

This is due to a flaw in the AWP reimbursement formula that covers ridiculously low dispensing fees with percentages, rather than fixed dollars, off AWP. This highlights our contention that the flaw in the AWP formula is not so much the basis – AWP – but the evolution over time of the use of percentages to cover below cost dispensing fees.

© Lawrence W. Abrams, 2008

"Stylized" Model of Mail Order Prescription Margins by Drug Type

	New Generic (e.g. simvastatin)	Old Generic (e.g.lovastatin)	Brand (e.g. Lipitor)	Weighted Average	Derived Medco
Rx Volume Share	**3%**	**47%**	**50%**	**100%**	
AWP	$ 70.00	$ 30.00	$ 117.53		
AWP * 3	$ 210.00	$ 90.00	$ 352.59		
Sell Discount	-42.0%	-42.0%	-19.5%		
Ingredient Reimbursement	$ 121.80	$ 52.20	$ 283.83	**$ 170.11**	
Add: Dispensing Fee	$ 2.00	$ 2.00	$ 2.00		
Revenue/Rx	**$ 123.80**	**$ 54.20**	**$ 285.83**	**$ 172.11**	**$ 172.11**
Buy Discount	-74.0%	-74.0%	-22.8%		
Ingredient Cost	$ 54.60	$ 23.40	$ 272.20	**$ 148.74**	
Ingredient Margin %	**32.0%**	**32.0%**	**3.3%**		
Warehousing and Delivery (263a) costs	$ 0.30	$ 0.30	$ 0.30		
Labor and Overhead Costs / Rx	**$ 7.00**	**$ 7.00**	**$ 7.00**		
Mailing Costs	$ 0.50	$ 0.50	$ 0.50		
Total Mail Fill Cost of Sale	$ 7.80	$ 7.80	$ 7.80	**$ 7.80**	
Total Mail Order Cost of Sale	$ 62.40	$ 31.20	$ 280.00	**$ 156.54**	**$ 156.60**
Gross Profit / 90 Day Rx	**$ 61.40**	**$ 23.00**	**$ 5.84**	**$ 15.57**	**$ 15.51**
Gross Profits/ 30 Day Rx	**$ 20.47**	**$ 7.67**	**$ 1.95**	**$ 5.19**	**$ 5.17**
Prescription Margin %	**49.6%**	**42.4%**	**2.0%**	**9.0%**	**9.0%**
$ Spend Share	**2.2%**	**14.8%**	**83.0%**	**100.0%**	
$ Gross Profit Share	**11.8%**	**69.4%**	**18.7%**	**100.0%**	

A better alternative would be a fixed dollar “fill and fair return fee”. A fair dispensing fee would be around $9.00 which would reward Medco for being a low cost dispenser at $7.80 per mail order script. Currently, the gross profits, or return, on Medco’s mail order operations covers 49.9% of remaining “SG&A” costs and operating income, while client fees covers only 5.2%, an obvious intentional cross-subsidy due to the desire to obfuscate its business model. A fair return fee around $3.00 per mail order script would greatly reduce Medco’s mail return from $15.71 per script to $4.20 = $3.00+ the $1.20 difference between the fair dispensing fee of $9.00 and Medco’s estimated fully burdened mail order dispensing costs of $7.80.

© Lawrence W. Abrams, 2008

Under a fill and fair return fee of $12.00 = $9.00 fill and $3.00 fair return, Medco's mail order gross profits would be $381 M = $4.20 * 94.8 M scripts, a substantial reduction from the $1,470 M we estimate it now receives under an AWP system of reimbursement. To make up this difference, Medco would have to increase PMPY client fees by $18.14 PMPY = ($1,470 M – $381 M) / 60 M.

As we have said, currently we estimate Medco is charging only $ 6.52 PMPY in client fees. Under a cost plus reimbursement formula, Medco would have to increase transparent member fees almost 4 times to $ 24.66 PMPY.

Medco's mail order's share of gross profits would be reduced from 49.9% to 12.9% while client fees, the transparent share of its business model if you will, would go from 5.2% to 42.2%.

The table also highlights how the loss of patent by a blockbuster brand drug like Zocor can create a material "bubble" in pharmacy gross profits as an old brand becomes a new generic, and then in a year, becomes, an old generic. Even though a blockbuster new generic like simvastatin in its first year contributes less than 3% of prescription volume and drug spend, it can contribute around 13% of a pharmacy's gross profit. This is all due to a flaw in the AWP reimbursement formula described earlier.

This "simvastatin bubble" passed through the financials of the Big 3 PBMs and the large drugstore chains for about a year beginning in June of 2006 when Zocor lost patent protection and Teva had an exclusive to market the generic equivalent, simvastatin. The passing of an AWP-induced "simvastatin bubble" contributed to Walgreen's "hiccup" when it reported for the first time in over a decade that a quarterly earnings, this case 4Q2007 (June-August 2007), failed to exceed that of the prior year. On the day of this announcement, Walgreen's stock plummeted more than 15%, the largest single-day decrease in roughly twenty years.[16]

© Lawrence W. Abrams, 2008

It is important to make clear that reported mail order pharmacy margins cannot be compared to reported retail pharmacy margins, which typically runs around 22%, for the follow reason:

Mail order and specialty pharmacies are considered “manufacturing” operations by accountants and their cost of sale includes ingredients as well as pharmacy labor, facilities and other indirect “manufacturing” costs. This differs from how accountants calculate the costs of sales of retail pharmacies, which includes only ingredients purchased for resale and inventory warehousing costs, but not retail pharmacy labor or facilities costs.

We want to end the discussion here with a note on the so-called retail reimbursement “spread” – the difference between client-to-Medco reimbursements and Medco-to-retailer reimbursements for prescriptions dispensed at retail. PBMs add value here – reimbursement negotiation, working capital management, and a small risk of loss -- but there is no fulfillment value added.

Our past disaggregation work basically came down to one equation and two unknowns – mail order costs or margins and spread margins. Total margin, running around 6 percentage points, was known as was margins on co-payments (none), rebates, and fees. We “plugged” in various spread margins to see what the resulting mail order margins would be. We found that the **aggregate** spread margin could not be much larger than 1% without driving the mail order margin below zero.[17] In our disaggregation work then and now, we have pegged the aggregate spread at .5%

Robert Garis began reporting in 2003 instances of large reimbursement spreads and made a big deal of PBM deception in this area.[18] Even today, **The Wall Street Journal’s** new reporter covering the PBM industry is making a big deal of spread margins based only on anecdotal evidence.[19]

The fact of the matter is that Medco’s aggregate gross profits reported to the Securities and Exchange Commission runs around 6 percentage points. If the **aggregate spread**, which is a component of aggregate gross profit margin, were over 1 %, it would drive mail order margins below

zero. **Anecdotal spreads** of double and triple digits have validity, but little "weight", as in weighted average gross profit margins.

MTM's Revenue Model

According to a 2005 Lewin survey, the majority of MTM revenue models are variants of fee-for-service (FFS) models based on $ per minute or $ per visit with two to four types of visits delineated.[20] These fees are tailored to costs with the greatest being labor-related. The following is an example presented in the Lewin survey of a MTM fee schedule charged by an independent pharmacy to a healthcare plan :

Charges: $1.00 to $2.00 per minute
Initial visits - $75 to $120 per visit
Follow-up visits - $35 to $60 per visit

In actuality, the MTM revenue model is much more complex than the delineation above. It often involves a great deal of fine-tuning as the fees are often highly differentiated by type of service provided.

The revenue model chosen for a general disease management plan is likely to be different than the per-visit or per-minute revenue model of MTM. Healthways, the leading independent disease management company, has a revenue model dominated by more generalized per-member-per-month fees (PMPM) for enrollees. Healthways discloses in its latest 10-K: [21]

> We generally determine our contract fees by multiplying a contractually negotiated rate per member per month ("PMPM") by the number of members covered by our services during the month. We typically set the PMPM rates during contract negotiations with customers based on the value we expect our programs to create and a sharing of that value between the customer and the Company… In addition, some of our services are billed on a fee for service basis.

The difference in revenue models between MTM and disease management stem from a difference in value propositions. Disease management tries to affect the whole array of healthcare inputs -- medical treatment, drug use, diet, and exercise. Healthways is comfortable with measuring its

performance in terms of outcomes as measured by PMPM healthcare costs. A revenue model based on PMPM fees is consistent with this broad focus.

In contrast, a MTM plan focuses only on drug use to contain overall healthcare costs. It may be impossible for a MTM plan to distinguish the impact of drug use from the impact of other cost containment programs run by other entities. A value proposition consistent with the more limited scope of MTM would be based on some intermediate outcome like persistence of drug use. A revenue model consistent with this more limited focus would be specific fees based on effort rather than headcount.

In order to see how MTM might fit into the Medco business model, we derive below quantitative estimates of fees for a typical MTM plan. Based on a plan that charges $120 per hour, 4 visits a year lasting between 10 and 20 minutes a visit, we calculate that a typical MTM plan will charge between $80 and $160 per year per enrolled member. Based on a modest enrollment rate of 10% of membership, this translated into an average PMPY fee of between $8 and $16.

Earlier, we calculated that Medco averages $6.52 per-member-per-year (PMPY) from client fees in 2007. If Medco were to adopt the revenue model of a typical MTM plan, rather than using some cross-subsidy scheme, it would feature fees averaging between $8 and $16 across all members. T**his would double to quadruple the total fees that Medco currently charges for all of it PBM services.**

© Lawrence W. Abrams, 2008

Estimate of PMPY Fee for a Typical MTM Program

$ Fee / hour	$ 120.00	$ 120.00	$ 120.00
$ Fee / minute	$ 2.00	$ 2.00	$ 2.00
Visits / year	4	4	4
Minutes / visit	10	15	20
Minutes / year	40	60	80
Fee / Enrolled Member	**$ 80.00**	**$ 120.00**	**$ 160.00**

Average PMPY Fee

% of Members Enrolled			
7.5%	**$ 6.00**	**$ 9.00**	**$ 12.00**
10.0%	**$ 8.00**	**$ 12.00**	**$ 16.00**
14.5%	**$ 11.60**	**$ 17.40**	**$ 23.20**

Medco's Current Value Proposition

As we stated earlier, one for the four basic components of a business model is the value proposition. The value proposition is contained in statements made to customers specifying what value a company provides and how is to be measured. In the modern corporation, the value proposition goes hand-in-hand with a pricing strategy as prices are chosen, and carefully differentiated by customer, on the basis of estimates of value provided rather than costs incurred.[22]

Medco states that they are in the business of containing the growth of outpatient prescription drug spending – containing "drug spend trend" in industry lingo. They mention in passing that their effects may help contain other healthcare costs such as hospital and physician costs. Much effort is devoted in explaining why their value proposition requires them to become an exclusive provider of prescription drugs dispensed from their captive mail order and specialty pharmacy operations.

For practical and strategic reasons, outsourced healthcare cost containment companies back off from pricing based on outright performance in terms of cost containment. Instead, fees for services based

on effort, as opposed to performance, are favored. Examples include claims processing fees ($ / claim) and visitation fees ($ / visit).

Some healthcare cost containment companies have chosen generalized per-member-per-month (PMPM) fees rather than fees tied to specific inputs or effort. For example, small independent PBMs, like Envision and Medmetrics, earn no margins on transactions. They cover benefits management with fully transparent PMPM fees. Healthways, the largest outsourced provider of disease management, prices its services on the basis of generalized PMPM fees rather than specific fees tied to effort.

In stark contrast to other outsourced healthcare cost containment companies, the Big 3 PBMs avoid both fees based on effort or generalized PMPM fees. This strategy has nothing to do with the Big 3 PBM value proposition *per se*, but it stems from the fact that opaque pricing yields higher profits than transparent pricing. Of course, it takes two parties to make deceptive pricing a winning business strategy. In a business based on comparisons of detailed bids, it makes sense to disconnect pricing from effort or performance if clients do not perform due diligence to unmask deception in pricing.

There is another reason why PBMs avoid performance-based pricing. PBMs know that much of drug spend trend is beyond their control. Because of this, performance-based pricing for pharmacy benefits management is too risky for any entity other than an insurance company.

An excellent history of PBM practices by PriceWaterhouseCoopers (PWC) cited a time when PBMs did offer contracts based on capitated per member per-month (PMPM) costs.[23] In such contracts, the PBM agreed to accept a fixed PMPM fee for all benefits management including all pharmacy reimbursements. Profitability depended on whether the PBM could contain actual PMPM spending below the cap. According the PWC (p.62)

> Capitated pricing, tested by the PBM industry in the early-1990s, is essentially nonexistent today since PBMs generally lost money through these arrangements. For example, ValueRx (now Express Scripts) signed a capitated contract with Ford Motor Company in 1994 for Ford's unionized workers. Due to significant losses, ValueRx was forced to renegotiate this contract a year later.

© Lawrence W. Abrams, 2008

It is clear that a fully capitated contract is too risky for a PBM because most of the year-to-year variability of drug spend trend is due to factors beyond PBM control – list prices for brand drugs and the timing of the loss of patent protection of blockbuster brand drugs.

Benchmarking Medco's Performance

Not only does Medco avoid performance-based pricing, it also has a history of avoiding quantification and comparison of their performance in the first place. Before 2005, Medco rarely touted its generic utilization rate, a performance statistic measured by the percentage of prescriptions filled that are generic.

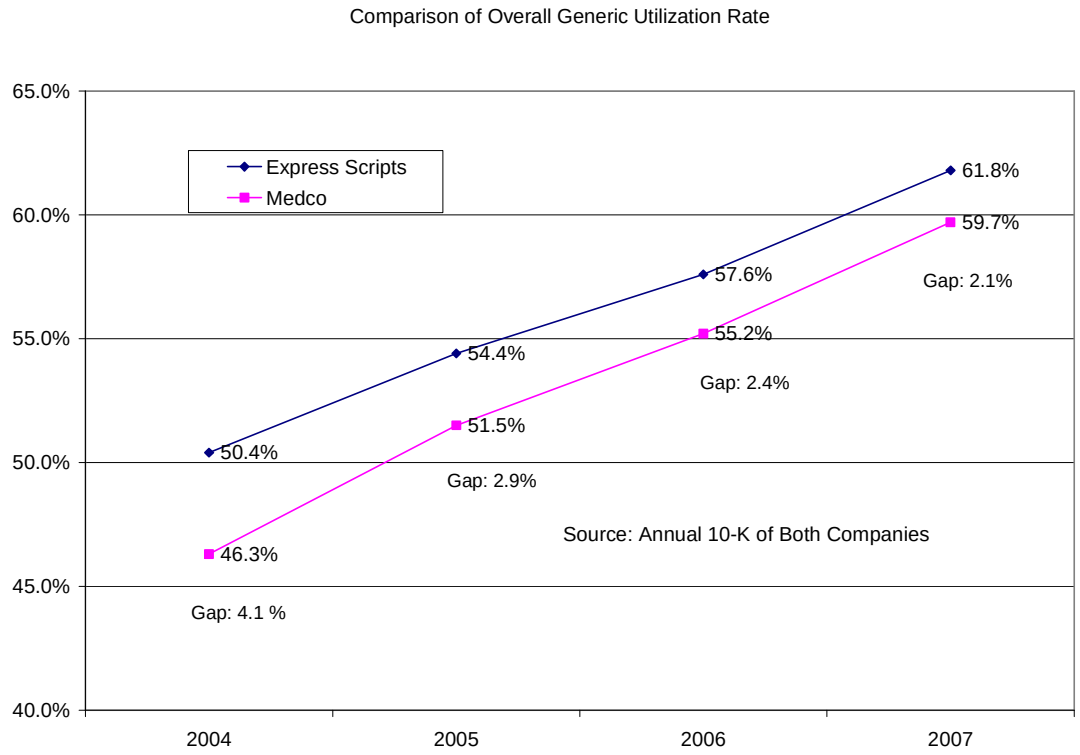
Today, Medco proudly talks about the upward trend in generic drug utilization delivered. But, Medco fails to explain how much of the trend is due new generic substitution, which is beyond their control, and how much is due to new therapeutic interchange, which Medco can control.

The graph below highlights Medco's recent performance in the area generic utilization. We have added the performance of Express Scripts as a comparison and have used it in the past to argue that Medco's lagging performance was due to their "sins of omission" in promoting therapeutic interchange.[24]

To Medco's credit, its generic utilization gap has narrowed since our last comparison in 2005. However, Medco's improvement may be due as much to backsliding by Express Scripts, as evidenced by their reversal of their "tier 3" formulary placement of Lipitor in advance of Zocor's loss of

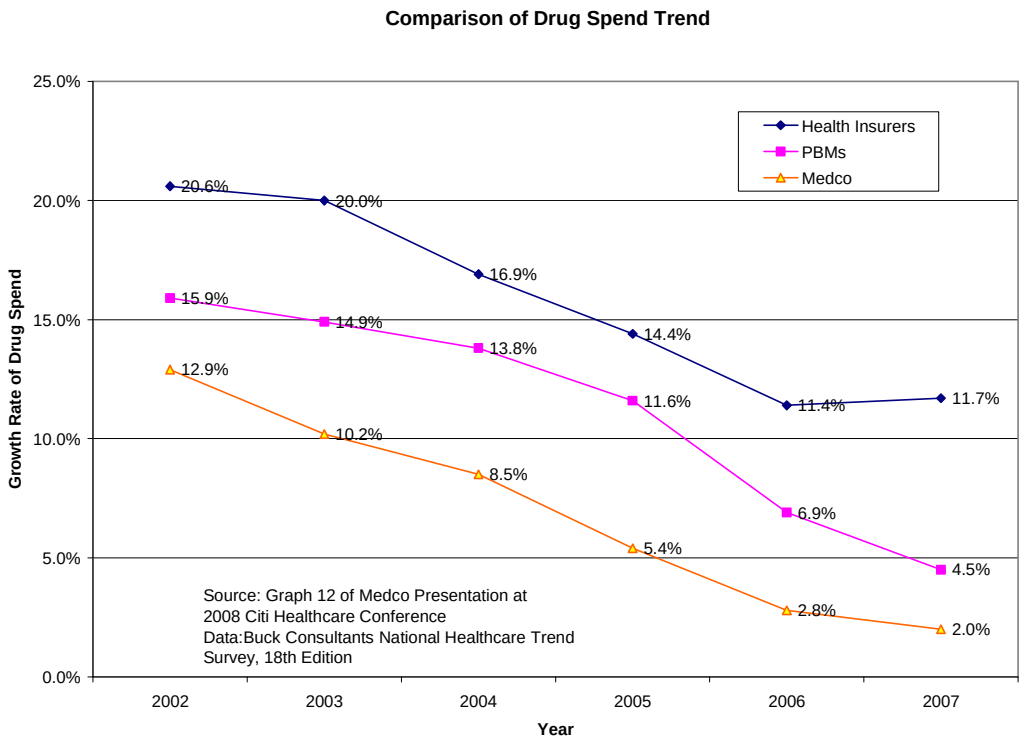
© Lawrence W. Abrams, 2008

patent protection in 2006.[25]



Medco touts its ability to contain drug spend trend, but we have been able to find only one publicly available graph which plots Medco's trend against some benchmark. We have replicated the Medco-supplied graph below.[26] If Medco would make a habit of benchmarking its performance, then analysts could begin posing questions about the graph to Medco management in order to evaluate it critically.

.



MTM's Value Proposition

There are several fundamental differences between the MTM value proposition and Medco's current value proposition. First, the MTM value proposition is medical cost containment; Medco's is drug cost containment. In fact, MTM is likely to cause an increase in drug spend as necessary step toward medical cost containment. Furthermore, MTM is likely to increase drug spend more that a general disease management program because MTM focuses on chronic diseases of the elderly who use a disproportional amount newer brand drugs and biologics.

Obviously, there is difference between how the two value propositions are proven. The performance of PBM programs should be measured by statistics relating to drug costs. The performance of MTM programs should be measured by statistics measuring impact on overall healthcare costs.

The scope of the MTM value proposition creates added data gathering and analysis problems for Medco. Currently, Medco needs only to access its own drug claims database to get evidence in

© Lawrence W. Abrams, 2008

support of its value proposition. With MTM, Medco needs to access medical claims data from competitors in the outsourced PBM market. This includes healthcare plan administrators for self-insured Fortune 500 plans like Aetna, Cigna, Humana, and United Healthcare, all with either captive PBMs and/or captive disease management operations that compete with Medco.

Medco will also have to deal with an analytical problem that has troubled the whole disease management industry. That is the problem of isolating the effect of MTM from the effect of other on-going programs. The basic question Medco must answers is, what is the effect of its MTM programs, *ceteris paribus*, on medical costs? This requires a carefully designed pilot program that simulates the "lab experience" where the only difference between two sample groups is a MTM program.

Because of the relative difficulty and expense of proving this value proposition, a core competency for companies who wish to succeed in this business has to be world-class expertise in pharmacoeconomics. Medco demonstrated its seriousness about entering MTM business by announcing recently the hiring of Peter Juhn MD, MPH to be the president of its Therapeutic Resource Centers, the nexus of its MTM operation. Prior to joining Medco, Dr Juhn "served as Vice President for Evidence and Regulatory Policy at Johnson and Johnson. Prior to that role, Dr Juhn directed the disease management programs for both WellPoint and Kaiser Permanente." [27]

There is another reason why Medco will find the MTM value proposition difficult to support. As best we can figure, it has more to due the historical circumstances that have created a higher level of expectation of performance for disease management than for pharmacy benefit management. We do not know whether the higher level of expectation was driven by demanding clients or desperate vendors willing to say anything to get the business.

It could be due to the fact that PBMs started out as computer network specialists and evolved later into benefit managers. The level of expectation for PBMs has been effectiveness, sometimes ratcheting up to cost-effectiveness. It seems shocking that anyone would ever expect a PBM to prove

© Lawrence W. Abrams, 2008

that it pays for itself. That is, prove that its effort produces a reduction in drug spend trend that is exceeded by fees and excess transactional mail order gross profits.

For disease management companies, the level of performance expectations has always been higher. In many cases, it has not been sufficient for disease management companies to reduce cost or reduce costs efficiently. The expectation for disease management is often that it is supposed to pay for itself.

Disease management companies did not start out as technical service providers like PBMs. From the beginning, they marketed themselves as outsourced cost containers that could significantly reduce healthcare costs over and above that of internal operations In order to win new business, they had to show convincingly that not only did their efforts pay, but that their efforts paid off.

The lofty expectations for disease management lately has hurt the industry.[28] On January 29, 2008, the Centers for Medicare and Medicaid Services (CMS) announced that they would be terminating funding of a major study designed to help decide whether the government should fund disease management for millions of Medicare beneficiaries with chronic illnesses. [29]

The performance expectation that was agreed upon both by CMS and the contractors, most notably Healthways, was that it be "budget neutral" -- that is, pay for itself. Quoting from an evaluation of the study,[30]

> Fees negotiated by the MHSOs with CMS have not been covered by reductions in Medicare expenditures, let alone an additional 5% savings in Medicare payments. Without a substantial reduction in each MHSO's monthly fee, budget neutrality after the first year is questionable

The cancellation of this highly-publicized government-sponsored experiment rocked the disease management world. It caused the stock price of Healthways, the most visible contractor of this program, to dropped 16% in one day and Healthways' stock has never recovered.[31]

© Lawrence W. Abrams, 2008

We believe that the event described above is an example of the problems that Medco will face in proving the value of it MTM program. Medco is one failed pilot program away from a serious drop in its stock price. Certainly, Medco will avoid the value proposition that MTM will pay for itself. It is likely to avoid committing to the value proposition that MTM reduces healthcare costs, *ceteris paribus*. We expect that Medco will try to convince clients to settle on improving drug adherence as a performance measure.

Medco as a Business Model Imperialist

If Medco is successful in entering the MTM business, we believe that it will attempt to dominate the disease management business generally. The basic strategy is three fold: (1) dilute the value proposition from healthcare cost containment to greater adherence (more, not less healthcare); (2) expand ownership beyond pharmacies to include suppliers of diabetic, diagnostic, gynecology, orthopedic, and other healthcare products; (3) steer members to captive suppliers and use inflated margins to cross-subsidize benefit management fees.

Medco's target market will include single disease management niches such as mental illness and HIV, now managed by such companies as Hythiam, APS Healthcare, and Allion Healthcare. It also will include general disease management programs, now managed by such companies as Healthways, Lifemasters Supported Selfcare, McKesson Health Solutions, and OptumHealth, the captive unit of UnitedHealth Group.

As Medco grows its outsourced disease management business, look for it to purchase other providers of healthcare products whose transactional margins could be used to cross-subsidize management fees. This first step toward carrying out this strategy has been Medco's recent purchase of PolyMedica, a supplier of diabetic products. In its 2008 Drug Spend Trend Report, Medco explicitly states that the top focus of its MTM program will be diabetes and that its specialist pharmacists will help diabetes patients with their "supply needs": [32]

© Lawrence W. Abrams, 2008

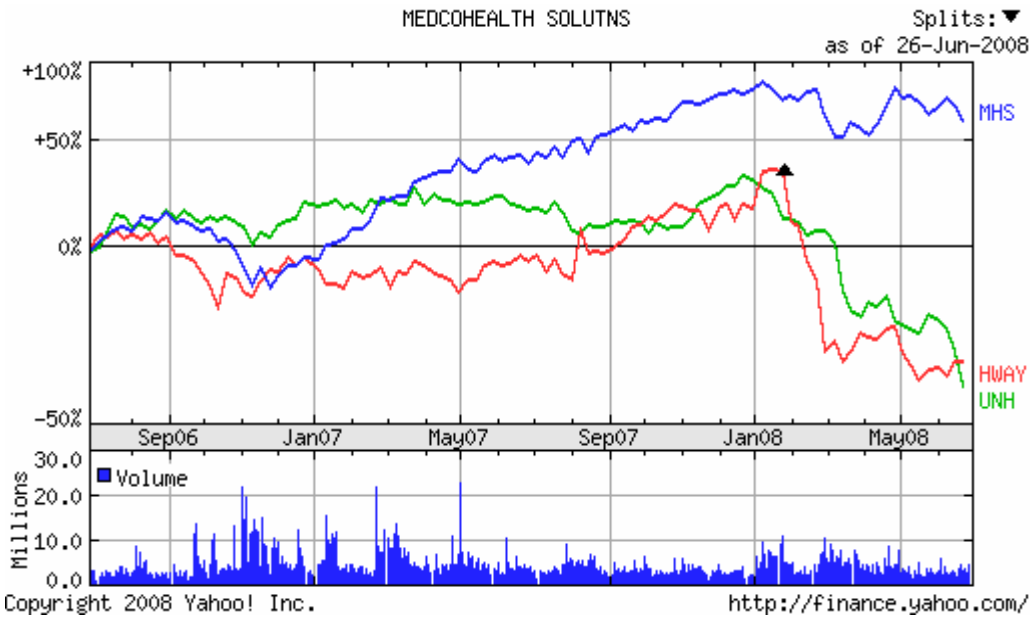
> Reflecting the need for advanced pharmacy care, the Medco Therapeutic Resource Centers® (TRCs) with more than 1,100 specialist pharmacists, were developed to help patients with diabetes and other chronic and complex conditions. Specialist pharmacists help address prescription safety, medication compliance, and side effects, and engage patients and physicians about other elements of care. Specialist pharmacists help patients with diabetes manage their complex drug regimens and supply needs, as well as the monitoring of the disease itself.

The recent bid for Matria by Inverness Medical Innovations mirrors Medco's imperialist strategy. Matria is a general disease management company with historical strengths in managing difficult pregnancies. Inverness Medical Innovations is leading manufacturer of fertility and pregnancy testing products for the consumer market as well as a wide range of diagnostic testing products for the professional market. Quoting the Inverness CEO Ron Zwanziger, "Extending diagnostic testing from disease identification to risk assessment to patient management greatly extends our business potential." [33]

What the Inverness CEO is really saying is that Inverness covets Matria because it is an opportunity to win disease management contracts by using transactional margins on fertility and pregnancy testing products to cover low ball management fees.

What is striking today is how well stocks of the Big 3 PBMs have held up relative to other healthcare cost containment companies with more transparent revenue models. The graph below documents how well the stock price of Medco (MHS) has performed relative to Healthways (HWAY) or UnitedHealth Group (UNH). It would be tautological to say that the difference is due to the trajectory of Medco's earnings relative to Healthway's and UnitedHealth's.

© Lawrence W. Abrams, 2008



Because all healthcare management contracts, risk-based on not, have to go through a bidding process, the transparency of a company's revenue model can have a material impact on gross profit margins. It is not surprising to find a correlation between profit trends among healthcare cost containment companies and the transparency of their revenue models. Of course, "it takes two to tango", and so the blame for this situation must extend beyond Medco. We will elaborate more on this later.

Medco's long term strategy is to become a "business model imperialist". Its expansion beyond pharmacy benefits management threatens all healthcare costs containment companies. Medco is an intermediate threat to all outsourced disease management companies such as Healthways, Lifemasters Supported Selfcare, Inc, and OptumHealth.

© Lawrence W. Abrams, 2008

Deterrents to the Spread of the Medco Business Model

What might deter Medco from succeeding in the MTM business? What might deter Medco's long term strategy to become a general healthcare cost containment company?

The obvious deterrent would be due diligence on the part of clients. Most of the defection from the Big 3 PBMs has been by large insurance companies with in-house staff capable of doing due diligence on outsourced PBM contracts. After careful analysis, insurance companies are concluding that it is now pays to "carve-in" PBM functions. In the BCBS market, it includes two big wins by Prime Therapeutics, a PBM jointly owned by BCBS plans. It also includes major "carve-ins" by other BCBS licensees: Independence, Regence, and now Highmark as a result of its merger with Independence. In the commercial insurance market, it includes a major "carve-in" by Humana.

Despite the public outcry of lack of PBM transparency, there has been no material defection by self-insured Fortune 500 companies and Taft-Hartley plans. It is interesting to note the correlation between the satisfaction with the Big 3 PBMs, as evidenced by the lack of defection, and the use of outside consultants to negotiate PBM contracts. The big outside consultants that negotiate outsourced PBM contracts for Fortune 500 companies include Mercer, Towers Perrin, Hewitt Associates, and Watson Wyatt Worldwide. The outside consultants that negotiate on behalf of big Taft-Hartley plans are the Segal Group and Pharmaceutical Strategies Group.

We should mention that two large insurance companies recently renewed their contracts with Medco -- Coventry and United Healthcare, the commercial division of UnitedHealth Group. This cannot be construed as an acceptance of the Medco revenue model because Medco acknowledges that the contract with United is a "sweetheart deal" with below average gross profits. According to Medco in its 2007 10-K, the UnitedHealth Group contract represented 22% of its net revenues but [34]

© Lawrence W. Abrams, 2008

> The UnitedHealth Group account has much lower mail-order penetration and, because of its size, much steeper pricing than the average client, and consequently generates lower profitability than typical client accounts.

If United represents 22% of Medco's net revenue and a below average share of its gross profits, then it follows algebraically that there is another segment of Medco's client base that generates a disproportionate share of Medco's gross profits.

Jack Hammond, an international representative for United Steelworkers, told *TheStreet.com* in 2006 that union clients collectively represent 25%.of Medco's business.[35] Medco's union clients include the United Auto Workers and the United Steel Workers. To make up for the United Healthcare's "sweetheart deal", we hypothesize that Taft-Hartley plans represent 25% of Medco's net revenue, but 35% or so of its gross profits. Indeed, we have viewed the confluence of self-insured Taft-Hartley plans and Big 3 PBMs as the "perfect storm" of ERISA failure.

Another obvious deterrent to the Medco strategy would be stepped-up activity by government authorities investigating whether Medco is in compliance with tough Federal anti-kickback laws, including the so-called Stark Law. These laws were passed to prevent healthcare providers from self-dealing referrals. The question is when would a Medco pharmacist referral of a diabetic patient to PolyMedica, its captive diabetic supply house, constitute a violation of Federal anti-kickback laws?

.One would think that the Big 3 PBM practice of payer as provider would trigger intense government scrutiny in the area of kickbacks. Yet, PBMs were able to dominate the mail order and specialty pharmacy business without raising anti-kickback scrutiny. As Medco continues to combine entry into the disease management business with additional ownership of direct-to-consumer suppliers, one might expect this finally to arouse federal government action.

The eventual demise of the AWP formula for prescription drug reimbursement is another threat.[36] We have discussed earlier in this paper how a formula based on ingredient cost plus a fixed dollar "fill-and-fair-return fee" would deter excessive margins on mail order generics. The Big 3 PBMs and

Wall Street analysts discount any impact of the move to replace AWP. We believe that Wall Street has focused on alternative bases – AWP versus AMP --rather than alternative formulas – percentage discount versus dollar addition.

A reimbursement formula based on percentages allows for too much margin variability after the contract terms are set. A formula based on dollars rather than percentages could fix margins at the time of contract. To meet the generally-accepted Tricare standards for geographic coverage, small independent inner city and rural pharmacies might have to be reimbursed at a higher fill fee.

Efficient dispensing operations like Medco's would be rewarded by the $9 "fill fee" as we have estimated their fully burdened fill cost at around $7.80. On the other hand, the $3.00 "fair return" fee would penalize Medco as the equivalent to a fair return fee under an AWP formula is gross profits, which we estimate to be around $15.71 per mail order script. Earlier, we estimated that Medco would have to increase PMPY client fees by $18.14 from $6.52 to $ 24.66 to compensate for the loss if the current AWP-minus formula were replaced by a cost-plus formula

How fast this change might take place is an open question. So far, efforts by the federal government to adopt cost-plus pricing for Medicaid have been thwarted by lobbying efforts sponsored by pharmacy trade associations. Indeed, the National Community Pharmacists Association (NCPA) and the National Association of Chain Drug Stores (NACDS) have lined up as allies of the Big 3 PBMs to lobby against any cost-plus reimbursement formula.

To date, we believe that the most potent threat to the current PBM revenue model has not been clients or government.

It has been Wal-Mart and its relentless quest to provide customers with "always low prices". Wal-Mart has a long standing strategy of targeting inefficiencies in the retail supply chain. It initially championed advanced logistics to reduce retail supply chain distribution costs. Lately, it has focused

© Lawrence W. Abrams, 2008

on “trust-busting” – using its purchasing muscle to press for prices concessions from consumer brand manufacturers and keeping the unions from organizing its grocery business.

Wal-Mart’s recent focus on the retail pharmacy market should be viewed as another example of Wal-Mart targeting an opportunity to delivery lower prices through “trust-busting”. Wal-Mart has sensed that there is tacit collusion among the Big 3 PBMs to hold up the prices of generics in the drug supply chain. Wal-Mart knows that the only thing distinguishing chain drugstores from “dimestore dinosaurs” like Woolworth is that little 800 square foot hole in the back of the drugstore that generates 75% of a chain drugstore’s revenue and virtually 100% of its profits.[37]

The Wal-Mart’s $ 4 prescription announcement in September 2006 marks the end of an era of “competition by convenience’ and the beginning of an area of “competition by price” in the drug supply chain. Wal-Mart is a more of a threat to chain drugstores than to it is to PBMs because it is more expensive for chain drugstores to downsize their “brick-and-mortar” operations than it is for PBMs to change their revenue model by rewriting a few pricing parameters in client contracts.

The Wal-Mart announcement is the beginning of the end to a détente between the Big 3 PBMs and large retail pharmacies. When push comes to shove in the coming supply chain generic drug price war, the Big 3 PBMs will push the chain drugstores “under the bus” by giving in to client demands for lower generic prices and preferred provider retail networks. The Big 3 PBMs will try to shift their own revenue model to some other source, either a small increase in mail order brand margins and/or go back to raising the rebate retention rate.

Walgreen can no longer rely on a “hedgehog strategy” in an era of competition by price. Its short term concern is other retailers. But, Walgreen is the low cost dispenser in the retail space, due to high dispensing volume per store, and should retain its market share at the end of any preferred provider war. Its long term concern should be to boost the net profitability to its front store, possibly by moving away from the convenience store concept in favor of a “wellness” concept.

© Lawrence W. Abrams, 2008

The hedgehog must move beyond the simple strategy of “so-many stores by such-and-such a date”. It has recently signaled its intent to reduce the growth rate of new stores. Walgreen’s long term threat not retailers, but the Big 3 PBMs. As a retailer, what can Walgreen do to upset the Big 3 PBM dominance?

One is to push 90-day fill at retail. Even though this move might hurt them in terms of retail store traffic, 90-day fill at retail will hurt the Big 3 PBMs even more. The recent announcement by Walgreen that they will now offer 90-day retail fill for cash-paying members of their prescription club should be viewed more as a counterpunch aimed at the Big 3 PBMs than at Wal-Mart.

Walgreen’s short and long term allies are the “carve-in” PBMs of Aetna, Cigna, Prime, Wellpoint-Anthem, and Humana. Its long term strategy should include serving in any capacity as an enabler of the PBM “carve-in” movement. This means making available to any “carve-in” PBM operation access to its mail order and specialty pharmacy as an outsource. Prime Therapeutics’ reliance on Walgreen’s specialty pharmacy is an example of this partnership.

Most Wall Street analysts have downplayed the impact of the Wal-Mart announcement. They have viewed it through traditional price theory and concluded that the $4 price would cause only a limited number of people to “schlep” the extra miles in order to save a few dollars.

However, the specificity of its $4 generic prescription announcement should be viewed as a tipping point of the “idea epidemic” that generic prescription prices are too high.[38] The real damage of the Wal-Mart announce should not be measured in terms of customer movement among pharmacies, but in terms of employee complaints to their HR department about $10 or $20 co-payments for generics when employees know that they can pay $4 cash for a 30 day refill and $10 cash for a 90 day fill at Wal-Mart.

© Lawrence W. Abrams, 2008

The flood of employee complaints has prompted corporate HR departments to push their healthcare plan administrators to lowering co-payments on generics.[39] To make up for loss of co-payments, plan sponsors will push their outsourced PBM to get better prices for generics.

Facing margin pressure on generics, PBMs and large chain drugstores like Walgreen and CVS will be forced to eliminate cross subsidies in their revenue models. This means higher benefit management fees for Medco and higher front store prices and/or slower store growth for retailers. Wal-Mart as a retail supply chain trust-buster is the most potent threat so far to Medco's imperialist strategy.

© Lawrence W. Abrams, 2008

Appendix: A Disaggregation of Medco's Model, FY2007 Revenue

How Medco Reports Its Revenue and Cost Model, FY2007			Revenue	
	cell	**source**	**Mil $**	
PBM Rx Transactions	a1	10-K	$	37,981
Specialty Rx Transactions	a2	10-K	$	5,981
Fees From Pharma	a3	10-K	$ 153	
Fees from Clients	a4	10-K	$	391
Totals- FY07	a5	10-K	$	44,506

Data Used In Derivation	**cell**	**source**	**Mil $**	
Rx Volume (not Adjusted for MO)	a6	10-K	$ 560	
Members	a8	A.I.S.		60
Mail Order Rx Volume (90 Day Count)	a9	10-K	94.80	
Gross Rebates Received	a10	10-K	$ 3,561	
Rebate Retention Rate	a11	10-K		15.4%
Retail Share of Transaction Revenue	a12	estimate		60.2%
Mail Order Share of Transaction Revenue	a13	=1-a12		39.8%

A More Transparent View of Medco's Business Model, FY2007				**Revenue**
PBM Rx Transactions				
Retail Network Reimbursements	a14	=a12*(a17-a16)	$	24,678
Captive Mail Order Pharmacy	a15	=a13*(a17-a16)	$	16,316
Rebates Remitted and Received	a16	10-K	$	(3,013)
PBM Rx Transactions	a17	10-K	$	37,981
Specialty Rx Transactions	a18	10-K	$	5,981
Fees From Pharma	a19	10-K	$	153
Fees From Clients	a20	10-K	$	391

© Lawrence W. Abrams, 2008

Appendix: A Disaggregation of Medco's Model, FY2007 Cost and Gross Profit

How Medco Reports Its Revenue and Cost Model, FY2007

	cell	source	Costs Mil $	Gross Profit	Margin Share	Margin
PBM Rx Transactions	a1	10-K	$ 35,839	$ 2,142	72.7%	5.6%
Specialty Rx Transactions	a2	10-K	$ 5,563	$ 417	14.2%	7.0%
Fees From Pharma	a3	10-K	$ -	$ 153	5.2%	100.0%
Fees from Clients	a4	10-K	$ 158	$ 233	**7.9%**	59.5%
Totals- FY07	a5	10-K	$ 41,561	$ 2,945	100.0%	6.6%

A More Transparent View of Medco's Business Model, FY2007

			Costs	Gross Profit	Margin Share	Margin	
PBM Rx Transactions							
Retail Network Reimbursements	a14	=.0995*a14	$ 24,555	$ 123	4.2%	0.5%	"The Spread"
Captive Mail Order Pharmacy	a15	remainder	$ 14,845	$ 1,470	49.9%	9.0%	Mail Order Margin
Rebates Remitted and Received	a16	10-K	$ (3,561)	$ 548	18.6%	15.4%	Retention Rate
PBM Rx Transactions	a17	10-K	$ 35,839	$ 2,142	72.7%	5.6%	
Specialty Rx Transactions	a18	10-K	$ 5,563	$ 417	14.2%	7.0%	
Fees From Pharma	a19	10-K	$ -	$ 153	5.2%	100.0%	
Fees From Clients	a20	10-K	$ 158	$ 233	7.9%	59.5%	
Totals- FY07			$ 41,561	$ 2,945	100.0%	6.6%	

© Lawrence W. Abrams, 2008

Notes:

(1) Federal Trade Commission, "Pharmacy Benefit Managers: Ownership of Mail Order Pharmacies," September 2005. Available at http://www.ftc.gov/os/2005/09/index.htm#6

(2) LW Abrams, "Sins of Omission," October 2005, Available at http://www.nu-retail.com/pbm_sin_of_omission.pdf and LW Abrams, "Contrary to What Wall Street and the FTC Say, The PBM Business Model Is Misaligned," November 2005, Available at http://www.nu-retail.com/PBM_Alignment.pdf

(3) LW Abrams, "Exclusionary Practices in the Mail Order Pharmacy Market," September 2005. Available at www.nu-retail.com/quantifying_Medco_business_model.pdf

(4) LW Abrams, "CVS-Caremark Merger," November 2006 Available at www.nu-retail.com/CVS_Caremark_Merger.pdf and LW Abrams, "Pharmacy Benefit Managers as Conflicted Countervailing Powers," January 2007 Available at www.nu-retail.com/quantifying_Medco_business_model.pdf

(5) LW Abrams, "The CVS-Caremark Merger and the Coming Preferred Provider War," December 2006 Available at http://www.nu-retail.com/CVS_Caremark_Coming_Preferred_Provider_War.pdf

(6) LW Abrams, "Rite-Aid: Worth More Closed that Open," Seeking-Alpha, February 2, 2008. Available at http://seekingalpha.com/article/62775-rite-aid-worth-more-closed-than-open

(7) Medco presented its vision for the future to analysts in "Advancing the Practice of Pharmacy", Medco Analyst's Day Presentation, November 6, 2007, Available at http://library.corporate-ir.net/library/13/131/131268/items/275339/MedcoAnalyst2007.pdf

(8) CVS/Caremark's announcement of MTM program is available at http://biz.yahoo.com/prnews/080619/neth003.html?.v=43

(9) Express Scripts Press Release announcing the establishment of the Center for Cost-Effective Consumerism, April 15, 2008 Available at http://phx.corporate-ir.net/phoenix.zhtml?c=69641&p=irol-newsArticle&ID=1129664&highlight=

(10) LW Abrams, "The Future of Consumer-Directed Pharmacy Benefits," August 2007 Available at www.nu-retail.com/Consumer-Directed-Pharmacy-Benefits.pdf LW Abrams, "Show Me the Display! A Review of an ESI Study of Consumer-Directed Pharmacy Benefits," July 2007. Available at http://www.nu-retail.com/Show-Me-The-Display.pdf

(11) OptumHealth Introduces a New "Brain Health" Capabilities, Press Release, July 7, 2008 Available at http://biz.yahoo.com/bw/080707/20080707005971.html?.v=1

(12) LW Abrams, "Quantifying Medco's Business Model, "April 2005 Available at http://www.nu-retail.com/quantifying_Medco_business_model.pdf and LW Abrams, "Medco's Transition to a Transparent Business Model," September 2005 Available at http://www.nu-retail.com/medco_transition.pdf

((13) Securities and Exchange Commission, Medco Health Solutions, Inc, 10-K for the Year Ending December 31, 2007 Available at http://www.edgar-online.com/bin/cobrand/?doc=A-1170650-0000950123-08-001863&nav=1&src=Yahoo

© Lawrence W. Abrams, 2008

(14) Estimate of the number of lives covered by Medco
http://www.aishealth.com/MarketData/PharmBenMgmt/PBM_market01.html

(15) Securities and Exchange Commission, Medco Health Solutions, Inc, 10-K for the Year Ending December 31, 2007 in section "Factors Affecting…" Available at http://www.edgar-online.com/bin/cobrand/?doc=A-1170650-0000950123-08-001863&nav=1&src=Yahoo

(16) USA Today, "Walgreen's Share Fall as 4Q Profits Slip," October 1, 2007 Available at http://www.usatoday.com/money/economy/2007-10-01-4263954486_x.htm

(17) LW Abrams "Quantifying Medco's Business Model: A 2007 Update," July 2008 Available at http://www.nu-retail.com/Quantifying_Medco's_Business_Model_2007_Update.pdf

(18) Robert I Garis and Bartholomew E. Clark, "The Spread: Pilot Study of An Undocumented Source of Pharmacy Benefit Manager Revenue," Available at http://www.medscape.com/viewarticle/469844

(19) Sarah Rubenstein, "Medicare Moves to Limit Costs in Drug Plans," **The Wall Street Journal**, July 22, 2008 Available at http://online.wsj.com/article/SB121668516741472029.html?mod=googlenews_wsj

(20) The Lewin Group**, "**Medication Therapy Management Services: A Critical Review", May 15, 2005. Available at http://www.accp.com/position/mtms.pdf

(21) Securities and Exchange Commission, Healthways, Inc, 10-K for the Year Ending August 31, 2007 Available at http://yahoo.brand.edgar-online.com/DisplayFiling.aspx?dcn=0000704415-07-000078

(22) To see how MBA students are taught value-pricing, see the popular graduate school textbook Nagle, TT and Hogan, JE, **The Strategy and Tactics of Pricing**, 4th Edition 2006. Pearson Prentice Hall

(23) PriceWaterhouseCoopers LLP, Study of Pharmaceutical Benefit Management, HCFA Contract No. 500-97-0399/0097, June 2001 p 19-26. Available at http://www.pcmanet.org/assets/2008-03-25_Research_hcfastudy.pdf

(24) LW Abrams, "Tale of Two PBMs: Express Scripts vs. Medco," November, 2005 Available at www.nu-retail.com/Tale_of_Two_PBMs.pdf

(25) International Business Times, "Pfizer, Express Scripts Cut Rebate Deal, "May 30, 2007 Available at http://www.ibtimes.com/articles/20070530/pfizer-express-scripts.htm

(26) Medco Presentation at the 2008 Citi Investment Research Global Health Care Conference slide 12 Available at http://library.corporate-ir.net/library/13/131/131268/items/294988/CITIConference5.21.08.pdf

(27) Medco Health Solutions 2Q2007 Earnings Conference Call Transcript Available at http://seekingalpha.com/article/86863-medco-health-solutions-inc-q2-2008-earnings-call-transcript?page=2

(28) Mattke, S. et al. "Evidence for the Effect of Disease Management: Is $1 Billion a Year a Good Investment," **American Journal of Managed Care**, 2007, 13:670-676 Available at http://www.ajmc.com/files/articlefiles/AJMC_07dec_Mattke_670to76.pdf

(29) CMS, "Completion of Phase I of Medicare Health Support Program, January 29, 2008. Available at http://www.cms.hhs.gov/CCIP/downloads/EOP_Fact_Sheet_FINAL_012808.pdf

© Lawrence W. Abrams, 2008

(30)1N. McCall et al, **"**Evaluation of Phase I of Medicare Health Support (Formerly Voluntary Chronic Care Improvement) Pilot Program Under Traditional Fee-for-Service Medicare, EMS, June 2007 Available at http://www.cms.hhs.gov/Reports/Downloads/McCall.pdf

(31) Abelson, R. "Medicare Finds How Hard It Is to Save Money," New York Times, April 7, 2007 Available at http://www.nytimes.com/2008/04/07/business/07medicare.html?_r=1&pagewanted=1&ref=policy&oref=slogin

(32) Medco Health Solutions, **2008 Drug Trend Report** Available at http://medco.mediaroom.com/file.php/162/2008+DRUG+TREND+REPORT.pdf

(33) Health Management Technology, "Inverness Buys Matria for $1.18 Billion," February 2008. Available at http://www.healthmgttech.com/enews/sample/feature-2.aspx

(34) Securities and Exchange Commission, Medco Health Solutions, Inc, 10-K for the Years Ending December 31, 2007

(35) Melissa Davis' "No Labor of Love at Medco, May 5, 2006 Available at http://www.thestreet.com/_tscs/stocks/healthcare/10283969.html

(36) Barbara Martinez, "How Quiet Moves by a Publisher Sway Billion in Drug Spending," Wall Street Journal, October 6, 2006 Available at http://online.wsj.com/article/SB116009254011484383.html?mod=googlenews_wsj

(37) For cross-subsidies in the chain drugstore business, LW Abrams, "Walgreen's Transparency Issue," November 2003 Available at http://www.nu-retail./**Transparency**.pdf and LW Abrams, "The CVS-Caremark Merger and the Coming Preferred Provider War," December 2006 Available at http://www.nu-retail.com/CVS_Caremark_Coming_Preferred_Provider_War.pdf

(38) Malcolm Gladwell, **The Tipping Point: How Little Things Can Make A Big Difference** Little Brown & Co., 2002

(39) Neil Lerner, "Generic Rx Copays are Steady or Dropping, With Wal-Mart's $4 Rx Seen as a Factor," Reprinted from Drug Benefit News, March 10, 2008 Available at http://www.aishealth.com/DrugCosts/DBN_Wal-Mart_Generics.html

© Lawrence W. Abrams, 2008