



TouchScript Medication Management System
Financial Impact Analysis on Pharmacy Risk Pools

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Introduction

Electronic prescribing in general and TouchScript in particular are powerful tools for health plans to use in their efforts to help manage their pharmacy costs. Cap Gemini Ernst & Young US LLC was engaged by Allscripts, Inc. to determine the potential financial impact of electronic prescribing by physicians on managed care pharmacy risk pools. This analysis is the largest study on the impact of electronic prescribing performed in the United States to-date, involving over 680,000 electronic prescribing records from over 1,200 physicians. Cap Gemini Ernst & Young worked closely with IMS Health, the world's leading provider of pharmaceutical and healthcare information, on analysis and comparative data and with Allscripts, the provider of the TouchScript electronic prescribing system.

The purpose of this engagement was twofold. First, to determine whether use of the TouchScript system impacted overall prescription costs, and second, to determine whether use of the TouchScript system impacted the total number of prescriptions written.

Over the past 60 days, we have reviewed the methodology of data collected by IMS Health and Allscripts, validated the analysis and prepared a final assessment in which we were able to reach clear conclusions that answer the two questions proposed above. After validation of the data collection methods and analysis of the results, we have prepared this assessment.



In terms of functionality as well as installed base, the TouchScript system is the leading electronic prescribing system in the United States. Using a hand-held personal computer, physicians can quickly create electronic prescriptions at the point of care with three touches of the screen, by linking patient, diagnosis and medication. At the point of prescribing, the system prompts the provider with useful information including generic alternatives, health plan formulary status, drug utilization reviews, disease management information and physician prescribing pattern indicators.

These prompts provided during the prescribing process create the opportunity to achieve cost savings. When a physician selects a drug therapy to be prescribed, the system will prompt whenever a generic equivalent or therapeutic alternative is available. In addition to generic status, the system prompts the user by identifying drugs as either preferred, approved or non-formulary. Before the prescription is completed, the cost-effective options are identified for the provider, allowing the provider to make an informed choice.

Executive Summary

TouchScript Is A Proven Cost Containment Tool

TouchScript is a point-of-care physician decision support and productivity tool that assists managed care organizations in controlling pharmacy costs and achieving savings. **Our analysis shows that the aggregate impact of utilizing TouchScript for prescribing will vary by plan, ranging from \$0.75 to \$3.20 savings per TouchScript prescription¹**, which can be significant when projected over the total drug spend of the organization². Simply stated, the study indicates that for each prescription where TouchScript is utilized, the final choice of the provider is likely to produce savings relative to the cost had a paper prescription been written. Savings come from two areas: 1) increased prescribing of generic medications, and 2) enhanced formulary compliance of physicians using TouchScript.

The savings are realized by providing real time information at the point of care as a part of the prescribing process. This is accomplished by educating physicians to optimize the cost-benefit alternatives when prescribing, including substituting generics for brand medications, prescribing cost-effective therapeutic alternatives and prescribing formulary as well as ‘preferred’ formulary instead of non-formulary drugs. This education is provided by a hand-held device that presents the most cost-effective alternatives to the physician at the point-of-care as prescribing decisions are made for the patient.

**Total Potential Savings per TouchScript Prescription
Combined Savings from Generic Usage and Formulary Compliance¹**



¹ Each health plan’s performance and cost savings will vary based on their individual historic experience for: generic utilization rates, formulary compliance levels, net cost per prescription after copay, copay levels, rebate levels, duration of therapy for medications, and infrastructure costs for switching drugs.

² The final savings will depend on the percent of a health plan’s physicians that use the TouchScript technology as well as a number of pharmacy cost factors that may vary by plan. For example, a plan in which 40% of physicians utilize TouchScript for 80% of prescriptions could expect a 1% to 4% reduction in total drug spend when the health plan’s average cost per prescription is \$24.

TouchScript Did Not Influence the Number of Prescriptions Written

It was also important to ascertain whether the use of TouchScript prescribing technology had any impact on the overall level of prescribing, since the accrued savings from using TouchScript would have been eroded by any such increase. Results of a separate IMS Health study of more than 688 physicians, comparing 344 physicians' pre- and post-TouchScript implementation prescribing levels to a control group of equal size, reflect no such increase. The IMS study demonstrated that there was no statistically significant difference between the new prescription volume of TouchScript physicians versus the control group. **No increase was seen in overall prescribing volume as physicians moved from traditional paper prescription writing methods to using electronic prescribing on the TouchScript system.**

Behavior Changed for Physicians Using TouchScript

A comparison of TouchScript physicians versus a baseline of non-users found that physicians using the TouchScript system reverted to old prescribing habits when they were not using the technology. **Generic prescribing levels reverted from 55% to the level of the control group, 43%, when the TouchScript device was not being used.** This finding further demonstrates the benefit of using TouchScript for prescribing as it demonstrates that the **technology prompted the behavioral change in physician prescribing.**

Potential For Additional TouchScript Savings

Although this study did not directly evaluate the impact of the TouchScript system on preferred formulary cost savings, the study suggests additional cost savings are likely because the TouchScript system prompts the prescriber to select the most preferred drug choices as defined by the particular health plan. **By highlighting the preferred formulary drugs to the physician at the time of prescribing, health plans may attain additional savings when compared to merely prescribing approved formulary medications as was evaluated in this study.**

Quantitative Analysis

TouchScript Impact on Generic Usage

Methodology

In order to quantify the cost savings opportunity from generic usage, a test group of 682,682³ prescriptions was analyzed. Savings were calculated by comparing the initial prescription choice of the physician to the final prescription choice. Switches are defined as situations where the provider selected an initial drug of choice, then was prompted by TouchScript with additional information, and selected a final medication different from the initial choice. In addition, brand versus generic utilization rates were compared with a baseline physician group of non-TouchScript users.

Prescriptions were categorized by type of medication as either being single-source, dual-source, multi-source or generic, in order to measure the savings associated with prescribing a different mix of prescription types, i.e. changing from a high cost item to a lower cost alternative. Cost indices were utilized to compare the relative costs between source types. The gross cost indices were developed based on a generic cost before copay of \$13.00, with the generic cost index set at 1.00. Subsequently, the multi-source and single/dual gross cost indices were set at 2.50 and 4.50 respectively, to represent the relative costs of these more expensive product types. Copays were set to approximate industry average levels and net cost was calculated as cost before copay less the average copay. Finally, the net cost index was calculated (again, relative to the generic cost before copay), and savings were then calculated as the change in the weighted average net cost indices.

Generic Usage Savings per TouchScript Prescription⁴

Prescription Type	Initial Choice	Final Choice	Gross Cost Index	Cost Before Copay	Average Copay	Net Cost	Net Cost Index
Single/Dual Source Brand	38%	38%	4.50	\$58.50	\$12.00	\$46.50	3.58
Multi Source Brand	16%	7%	2.50	\$32.50	\$12.00	\$20.50	1.58
Generics	46%	55%	1.00	\$13.00	\$5.00	\$8.00	0.62
	Starting Total		2.56	\$33.30	\$8.76	\$24.54	1.89
	Ending Total		2.42	\$31.52	\$8.14	\$23.38	1.80
	Change		-5.3%	-\$1.78	-7.1%	-\$1.16	-4.7%

³ Actual prescriptions written on the TouchScript electronic prescribing system from March 1999 through February 2000.

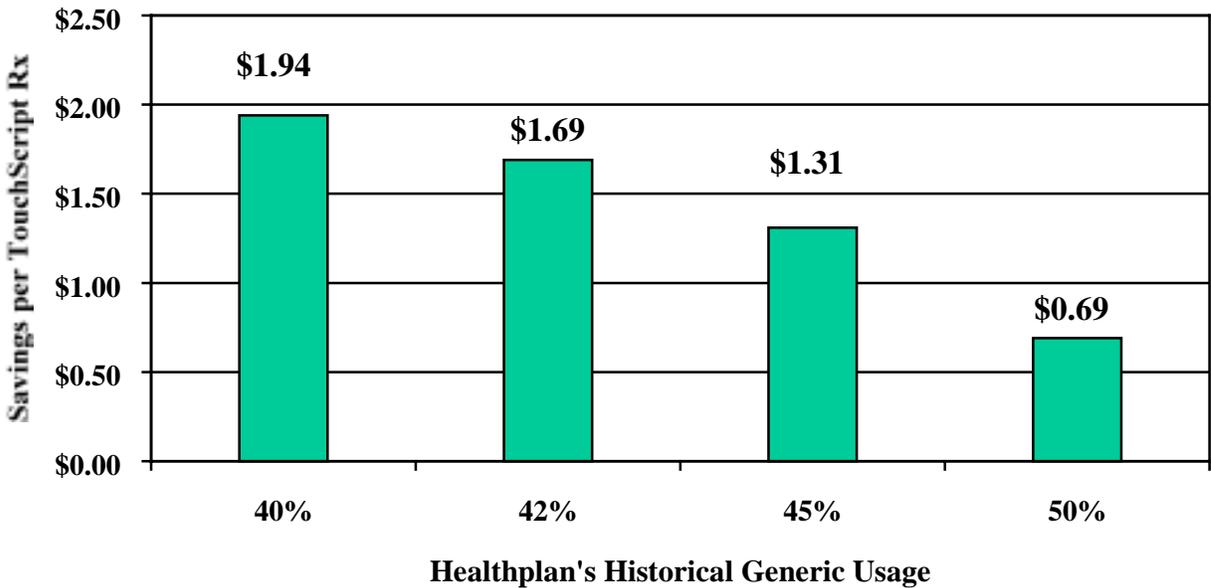
⁴ Reduction in rebates due to generic switches was not included in the analysis of savings.

Findings

Prescription switches from a brand drug to a lower cost generic alternative are a significant source of savings when utilizing TouchScript. In this analysis, when the provider was prompted with alternatives by TouchScript, generic prescribing increased 9 percentage points while multi-source prescribing decreased 9 percentage points. This shift in prescribing carries a minimum dollar value (savings) of \$1.16 per switch.

Potential savings for at-risk pools will vary dependent upon the starting generic usage of the prescribers in the absence of TouchScript. In the analysis, the starting generic prescribing rate was 46%. Assuming an individual health plan has historic generic prescribing rates between 40%-50%, utilizing the same methodology as before, a plan may achieve the following savings per script when utilizing TouchScript:

Generic Usage Potential Savings per TouchScript Prescription



When TouchScript users were compared against a baseline group of non-TouchScript physicians there was a significant twelve percentage point differential in generic prescribing rates between the two groups. The baseline group prescribed generics 43% of the time as compared to TouchScript physicians prescribing 55% of the time when using the electronic prescribing technology of TouchScript. This finding provides evidence that the TouchScript system does influence physician behavior to enhance generic prescribing and thus, reduce health plan drug costs.

The study also found that TouchScript physicians reverted to old generic prescribing habits when they were not using the technology. Generic prescribing levels reverted to the level of the baseline group, 43%, when the TouchScript software was not being used. This finding further validates the benefit of using TouchScript for prescribing as it demonstrates that the technology prompted the behavioral change in physician prescribing.

TouchScript Impact on Formulary Compliance

Methodology

To quantify the savings from increased formulary compliance, a subset of 500,000 prescriptions from the original 680,000 prescriptions was used and switches from non-formulary to formulary drugs were captured. The original data was divided to exclude those prescriptions that had been switched to generics to avoid double-counting the generic savings. Switches from non-formulary to formulary items were then quantified.

Savings from enhancing formulary compliance were calculated as being from two sources: a reduction in drug costs as well as administrative savings. For drug costs, savings were assumed to come from a combination of lower AWP costs and/or higher rebates. For administrative savings, it was assumed that eliminating phone calls and administrative processes for the switches produces soft savings of \$10 per switch⁵, which was spread over the assumed duration of therapy. The sum of the AWP/rebate savings and administrative cost savings results in the total savings per switch from non-formulary to formulary alternatives.

Formulary Compliance Savings per Switched Prescription

Prescription Type	Percent Non-Formulary to Formulary Switches	AWP + Rebate Gain per Switched Rx	Duration of Therapy	Administrative Savings per Switched Rx	Total Savings per Switched Rx
Dual Source	7%	\$7.50	6.0	\$1.67	\$9.17
Single Source	57%	\$7.50	6.0	\$1.67	\$9.17
Multi Source	1%	\$3.00	6.0	\$1.67	\$4.67
Generic	35%	\$ -	1.5	\$6.67	\$6.67
Total		\$4.83	4.4	\$3.42	\$8.25

Findings

In this analysis, the switch from non-formulary to formulary drugs produces net average savings of \$8.25 per switched prescription. These savings are achieved through the information provided at the point of care as the prescription is being written. If the first choice is a non-formulary item, a list of preferred and approved options is presented. Even if the choice is an approved drug, a list of preferred alternatives is offered. The point-of-care options lead TouchScript physicians to overall formulary compliance of over 96%.

Achievement of cost savings is dependent upon each health plan's present formulary compliance rate, cost for formulary and non-formulary drugs, in terms of the AWP and rebates, as well as any administrative costs associated with enforcing formulary compliance today. Savings can be projected based upon a plan's individual experience and the formulary compliance enhancement they believe they would achieve. We have provided a range of

⁵ Estimate based on Allscripts' management experience in the following areas: call center staff, average wage and benefits, call volume and average talk time for therapeutic interchanges.

potential savings per TouchScript-created prescription based on different levels of savings per switch as well as the degree of formulary enhancement that might be achieved for an individual plan:

Formulary Compliance Potential Savings per TouchScript Prescription

Formulary Enhancement	Drug & Administrative Savings Per Switch				
	\$6	\$8	\$10	\$12	\$14
5%	\$ 0.30	\$ 0.40	\$ 0.50	\$ 0.60	\$ 0.70
7.5%	\$ 0.45	\$ 0.60	\$ 0.75	\$ 0.90	\$ 1.05
10%	\$ 0.60	\$ 0.80	\$ 1.00	\$ 1.20	\$ 1.40

Overall Impact of TouchScript on Prescribing Habits

Methodology

IMS Health performed a separate analysis to determine the impact of TouchScript electronic prescribing on overall physician prescription writing behavior. For this study 688 physicians were selected, 344 TouchScript physicians were chosen (based upon their installation date and version of software in use) and a matched 'control' group of 344 non-TouchScript physicians were selected to provide a benchmark for comparison of change over time.

To evaluate the utilization of the TouchScript system, IMS Health compared the actual number of new prescriptions written by the TouchScript physicians with those written by doctors from the matched control group. Members of the control group were selected based upon the following four factors to ensure that the control group had similar characteristics:

- ◆ Specialty
- ◆ Geography
- ◆ Total Retail Prescription Volume
- ◆ Percent of Prescriptions in Third Party

The prescription data (for new prescriptions only) was gathered from the IMS Health Prescription Database (a sample of retail drugstores) and aggregated to quarterly new prescription volumes for the 3 months prior to installation and for the first and second quarter post installation. A constant panel of reporting retail drugstores was used to control for artificial swings in prescription volumes due to changes in the IMS Health database sample. IMS Health utilized Analysis of Covariance (ANCOVA) to test for significant differences between the test and control over the pre and post installation time periods.

Findings

The IMS Health study showed that there was no statistically significant difference between the new prescription volume of TouchScript physicians versus the control group. **No increase was seen in overall prescribing volume as physicians moved from paper methods to using TouchScript.** Another significant finding was that when the TouchScript physicians

were not using the technology, they exhibited the same generic prescribing behavior as the control group. They, as well as the control group, had generic prescribing levels of 43% when using traditional methods.

Conclusion

The potential savings opportunities from TouchScript technology are significant. **The aggregate impact of utilizing TouchScript for prescribing will vary by plan, ranging from \$0.75 to \$3.20 savings per prescription written using the TouchScript electronic prescribing tool.** That is, for each prescription where TouchScript is utilized, the final choice of the provider is likely to produce savings relative to the cost had a paper prescription been written. These savings are significant when projected over the total drug spend of the organization. By educating physicians on cost-effective options it is possible to achieve significant savings through enhanced generic usage and increased formulary compliance.

The IMS study demonstrated that when TouchScript physicians were prescribing with the technology, there was no statistically significant difference between the new prescription volume of TouchScript physicians versus the control group. **No increase was seen in overall prescribing volume as physicians moved from paper methods to using TouchScript to create prescriptions.**

When TouchScript physicians' were not writing with the technology, their generic prescribing levels declined. **Generic prescribing, which was 55% when they were using the technology, was 43% when the TouchScript device was not being used.** This finding further validates the benefit of using TouchScript for prescribing as it demonstrates that this **technology prompted the behavioral change in physician prescribing.**

Finally, although we did not directly evaluate the impact of the TouchScript system on preferred formulary cost savings, we believe additional cost savings are likely, in that the TouchScript system prompts the prescriber to the most preferred drug choices as defined by the particular health plan. **By highlighting the physician's drug choice to preferred formulary items, health plans can attain additional savings above those available from moving them merely to the approved formulary medications.**

Disclaimer

Cap Gemini Ernst & Young US LLC does not directly endorse the TouchScript system. We are not guaranteeing any particular savings from the use of TouchScript. All conclusions are based on information provided by IMS and Allscripts, and therefore we cannot warrant the accuracy of the data provided.