surescripts
The Nation's E-Prescription Network

Clinical Benefits: Improving Medication Adherence/Compliance

- According to data from the AHRQ Medical Expenditure Panel Survey (1997-2005) and an analysis of that data by the NACDS Economics Department, an average of 20 percent of prescriptions written go unfilled.

- According to studies cited in a recent report by the National Council on Patient Information and Education (NCPIE), only about 50 percent of American patients typically take their medicines as prescribed, resulting in approximately $177 billion annually in direct and indirect costs to the U.S. economy.

- Experts have long viewed e-prescribing as a means of raising awareness of non-compliance when it occurs so that appropriate steps can be taken to help patients.

- Two studies have looked at the relationship between e-prescribing and medication adherence/compliance.

- First, CVS Caremark and Horizon Blue Cross Blue Shield of New Jersey, (Horizon BCBSNJ) on April 17, 2008 release preliminary results of a study that analyzed when and if prescriptions written for the treatment of various chronic conditions, such as cardiovascular disease, were dispensed to patients.

    - Study results found a high rate of noncompliance among all patients taking medications to treat a variety of cardiovascular diseases such as high blood pressure, with approximately 18% of those prescriptions unfilled after 60 days.

    - Patients continuing their therapy were found to be significantly more compliant than those starting a new therapy with a cardiovascular medication.

    - Noncompliance among patients continuing therapy was approximately 6.

    - Noncompliance rates for patients initiating therapy with a cardiovascular medication (i.e., primary noncompliance) were much higher, with up to 70% of patients noncompliant after 60 days.

    - Data was collected between January 1, 2005 and October 31, 2006 from a subset of 507 Horizon BCBSNJ providers who use iScribe e-prescribing technology.

    - Researchers conducted a retrospective analysis comparing prescriptions for medications to treat chronic diseases (i.e., asthma, cardiovascular diseases, and diabetes) as well as prescriptions for antibiotics written via iScribe during this time period to submitted drug claims for medications dispensed between January 1, 2005 and December 31, 2006.

- Second, in October of 2007, Walgreens and Surescripts announced research that tracked the number of prescriptions received by pharmacies before and after physicians began using electronic prescribing.

    - The research showed an 11 percent increase in new prescriptions filled after physicians began using electronic prescribing.

    - The research – which used prescriber data from IMS Health -- links a physician prescribing electronically, or "e-prescribing", to more of that physician's prescriptions making it to the pharmacy.

Prescription Counts For 100 Prescribers: Before & After E-Prescribing			
	3 Months Before e-Rx	3 Months After e-Rx	Difference
New Prescriptions	272,103	302,616	11.21%

    - The research involved a convenience sample of 100 active electronic prescribers across five states, 93 different pharmacy organizations at 14,638 locations, and over one million prescriptions. No patient data was used in the analysis. The six months of prescriber data included three months before and three months after physicians began e-prescribing. To account for seasonal influences on prescribing, activation dates spanned 19 months: from April 2005 through November of 2006. The study also controlled for variations in prescribing software by involving physicians using 15 different software vendor applications.

    - By reviewing a subset of the overall data (prescriptions sent to Walgreens), researchers also observed that as many, if not more, patients picked up their prescriptions when they were sent electronically to their pharmacy (i.e. as compared to handwritten, printed, faxed, or telephoned prescriptions).

    - And while further research is needed to ascertain how electronic prescribing causes more prescriptions to be received by pharmacies and picked up by patients, experts are suggesting the study's results represent the first evidence that e-prescribing could help address prescription leakage, one part of the long-standing problems of patient adherence. Adherence defines how well a patient sticks to their drug regimen.