

## **Medicare Part D: Assessing the Impact for Beneficiaries without Previous Drug Coverage and Dual Eligibles**

### ***METHODOLOGY***

#### **I. Data Characteristics**

This analysis is based on anonymous patient-level pharmacy transaction data collected by Verispan. Verispan is a health care information company founded by Quintiles Transnational Corp. and McKesson Corp., and is a leading provider of de-identified patient-centric, longitudinal data delivered in near real time, as well as one of the major providers of health care information and services overall.

For this study, Verispan's pharmacy transaction records were obtained for all patients age 65 and older as of January 1, 2005; in addition, all transaction records with a Verispan-identified Medicare Part D payer in 2006 were obtained. Data was made available for the period January 1, 2005 through December 31, 2006.

Unique patient ID numbers assigned by Verispan enabled aggregation of all activity at a patient level, with full patient confidentiality maintained by removing patient-identifiable information. In order to further "clean" the data to include only those patients and transactions for which the analyses would be meaningful, we excluded patients with transactions, on average, in 2 or more 3-digit zip codes per month (suggesting that these might be in fact two different patients mistakenly assigned a single patient ID).

#### **Data Limitations and Caveats**

Certain limitations of the data may result in some transactions for the patients we are including in the analysis not being captured in the data set. First, patients who either switch to or sometimes utilize pharmacies that do not report their data to Verispan may be missing some transactions. Second, mail order transactions are captured only on a limited basis in this data set.

As a result, calculations of per patient averages could slightly under-represent actual utilization and spending levels; however, we believe the large sample size will mostly compensate for this issue.

While filtering has been done to attempt to remove multiple patients with a common ID, the algorithms do not catch 100% of these patients. Inclusion of these patients in the data set could skew average utilization and cost calculations upward, although we believe the impact to be negligible given the large sample size.

Since the data are strictly pharmaceutical claims data with no diagnostic information, all analysis at a therapeutic class level presumes that individuals filling prescriptions for the drugs identified within each class are likely to have the accompanying

diagnoses. To minimize the likelihood of misclassification, we selected conditions for which the drug treatments could be assumed to be used exclusively for treating those, but not other, conditions.

## II. Key Data Fields

The following are the key data fields obtained for each transaction:

- name and NDC classification of the drug that was prescribed and its associated therapeutic class
- days of supply filled
- patient's out-of-pocket cost
- total drug cost
- name and categorization of third party payer
- patient birth date
- pharmacy zip code

In addition, because some transactions represented 60- or 90-days' supply (the equivalent of 2 or 3 months of therapy respectively), each transaction was converted to a "Normalized Rx", based on the days of supply (1-44 days' supply = 1 Rx; 45-74 days' supply = 2 Rx; 75+ days' supply = 3 Rx)

## III. Cohort Creation – Previously Uninsured

Since our objective was to analyze the impact of Part D on patients with no drug coverage in 2005, it was necessary to extract a cohort of patients from the Verispan data set which met specified conditions. Therefore, only those patients for whom the following conditions applied were included in the analysis:

- For those 2005 transactions in which the "Patient Pay Amount" captured by Verispan (patient's portion of total drug cost, including co-payments, amounts applied to deductible, etc.) was greater than zero, the "Patient Pay Amount" was equal to the "EDWRx Retail Dollars" captured by Verispan (total cost of a drug); and,
- For all 2005 transactions, the "EDWRx Retail Dollars" were greater than \$0; and,
- For all 2005 transactions, the "Payer Type Description" captured by Verispan (classification of the transaction's payer type) was "True Cash"

All patient-level data was de-identified by Verispan in the initial data set provided, ensuring patient confidentiality while enabling analysis of aggregate information for each patient. Exhibit One contains patient and transaction counts for the "previously uninsured" analysis. The patient sample was derived as follows:

- 20.3 million patients were included in the initial full data set
- 4.8 million patients had an identified Part D payer at some point in 2006

- 1.5 million patients had sufficient 2005 cost data available to enable classification as uninsured
- 63,173 patients met criteria for classification as “previously uninsured”
- **40,993 patients** had at least one 2005 transaction following their first month with a 2005 transaction, making them available for 2005 utilization analysis
- **17,930 of these patients** had complete patient pay data for 2005 and 2006, making them available for 2005 cost analysis
- **55,268 patients** had at least one Part D transaction following their first month in 2006 with a Part D transaction, making them available for 2006 utilization analysis
- **23,238 of these patients** had complete patient pay data for 2005 and 2006, making them available for 2006 cost analysis

Patients for whom we had sufficient 2006 patient pay data (that is, for at least 50% of their transactions) were further classified based on their Part D subsidy status so that we could examine the impact of Part D specifically on those previously uninsured patients who qualified for a subsidy under Part D. Low Income Subsidy (LIS) patients were identified as those meeting the following criteria:

- for 2006, the “Patient Pay Amt” captured by Verispan was equal to \$1 for generic drugs and \$3 for branded drugs in at least 50% of the patient’s transactions for which patient cost data was available; or,
- for 2006, the “Patient Pay Amt” captured by Verispan was less than or equal to \$2 for generic drugs or \$5 for branded drugs in at least 50% of the patient’s transactions for which patient cost data was available.

**Exhibit One: Patient and Transaction Counts – Previously Uninsured Analysis**

2005	Utilization Analysis			Cost Analysis		
	Overall	LIS	Non-subsidy	Overall	LIS	Non-subsidy
A. # Normalized Rxs	656,995	80,805	545,614	291,816	25,903	265,913
B. # Patients	40,993	7,789	30,477	17,930	2,536	15,394
C. # Patients with first 2005 transaction no later than March	24,442	3,918	19,094	NA	NA	NA

2006	Utilization Analysis			Cost Analysis		
	Overall	LIS	Non-subsidy	Overall	LIS	Non-subsidy
A. # Normalized Rxs	1,454,639	453,700	919,462	465,650	89,449	376,201
B. # Patients	55,268	12,531	38,509	23,238	4,144	19,094
C. # Patients with first 2006 Part D transaction no later than March	20,444	6,388	13,312	NA	NA	NA

**Notes:**

Utilization Analysis: Includes all patients classified as Previously Uninsured. LIS and Non-subsidy counts may not add up to overall counts because some patients in the overall data set did not have sufficient patient pay data (that is, for <50% of their 2006 transactions) available to enable us to make a subsidy classification.

Cost Analysis: Includes previously uninsured patients for whom “Patient Pay Amt” is greater than \$0 in all of their 2005 and 2006 transactions

A. # of Normalized Rxs: 2005 and 2006 counts are mutually exclusive

B. # of Patients:

2005: number of patients in the data set with transactions beyond 1st month in data

2006: number of patients in the data set with transactions beyond 1st month of Part D coverage

C. Subset of 2005 and 2006 – used for “distinct condition” analysis

## IV. Cohort Creation – Dual Eligibles

Since our objective was to analyze the impact of Part D on Dual Eligible patients, it was necessary to extract a cohort of patients from the Verispan data set which met specified conditions. These conditions were based on patient cost-sharing in 2006 (based on Part D co-pay levels for subsidy patients) and payer identification in 2005. Only those patients for whom the following conditions applied were included in the analysis:

- for 2006, the “Patient Pay Amt” captured by Verispan (patient’s portion of total drug cost, including co-payments, amounts applied to deductible, etc.) was greater than \$0 in at least 50% of the patient’s transactions for which patient cost data was available; and,
- for 2006, the “Patient Pay Amt” captured by Verispan was equal to \$1 for generic drugs and \$3 for branded drugs in at least 50% of the patient’s transactions for which patient cost data was available; or,
- for 2006, the “Patient Pay Amt” captured by Verispan was less than or equal to \$2 for generic drugs or \$5 for branded drugs in at least 50% of the patient’s transactions for which patient cost data was available; and,

- for 2005, the “Payer Type Description” captured by Verispan (classification of the transaction’s payer type) was Medicaid in at least 50% of patient’s transactions

All patient-level data was de-identified, ensuring patient confidentiality while enabling analysis of aggregate information for each patient.

Exhibit Two contains patient and transaction counts for the “dual eligible” analysis. The patient sample was derived as follows:

- 20.3 million patients were included in initial full data set
- 4.8 million patients had an identified Part D payer at some point in 2006
- 3.4 million patients had sufficient cost data available (at least 50% of their transactions in 2006) to enable classification
- 1.1 million patients met criteria for classification as LIS (Low Income Subsidy)
- **284,552 patients** were determined to be dual eligible and could be included in 2005 utilization analysis
- **77,923 of these patients** had complete patient pay data for 2005 and 2006, and could be included in the 2005 cost analysis
- **277,158 patients** were dual eligible with at least one Part D transaction between Mar-Dec 2006 and could be included in 2006 utilization analysis
- **74,542 of these patients** had complete patient pay data for 2005 and 2006, and could be included in the 2006 cost analysis

**Exhibit Two: Patient and Transaction Counts – Dual Eligible Analysis**

	2005 (Jan-Dec)		2006 (Mar-Dec)	
	Utilization Analysis	Cost Analysis	Utilization Analysis	Cost Analysis
A. # Normalized Rxs	15,691,421	2,640,171	13,199,275	2,235,388
B. # Patients	284,552	77,923	277,158	74,542

Notes:

Utilization Analysis: Includes patients for whom “Patient Pay Amt” is greater than \$0 in at least 50% of their 2006 transactions

Cost Analysis: Includes patients for whom “Patient Pay Amt” is greater than \$0 in all of their 2005 and 2006 transactions

A. # of Normalized Rxs: 2005 and 2006 counts are mutually exclusive

B. # of Patients:

- 2005: number of patients in the data set meeting cohort conditions
- 2006: number of 2005 patients with at least one Part D transaction between 3/1/2006 and 12/31/2006

## V. General Analysis Approach

Two general types of analyses were undertaken for the previously uninsured and dual eligible populations. In the first, which was “transaction-based”, all records in 2005 (e.g., normalized Rxs) were compared to all records after March in 2006 for a fixed patient population. Averages were calculated on a per patient - per month basis using 12 months in 2005 and 10 months in 2006.

The second type of analysis was “patient-based”, in which comparisons were made on a patient-by-patient basis between all “captured months” in 2005 (starting with the month following either a patient’s first Medicaid transaction for dual eligibles or their first 2005 transaction for previously uninsured) and with the month following the patient’s first Part D transaction in 2006. Individual differences were calculated between the activity in 2005 and that in 2006 for each patient. Overall results represent the average of these differences across all patients.

Patient-level analysis enabled us to accommodate each patient’s actual experience in the data set, that is, the number of months of activity in 2005 and the number of months with Part D coverage in 2006.

In order to analyze the impact of Part D on access to drugs for specific chronic conditions, we selected those conditions which are highly prevalent in the Medicare population, and for which the drug treatments used could be assumed to be used exclusively for treating those (but not other) conditions. We looked at groupings of drugs used to treat the following conditions: Alzheimer’s disease, asthma, diabetes, high cholesterol, hypertension, neurological/psychiatric disorders and osteoporosis.

Verispan’s drug class (USC) classifications were used, with specific classifications selected to comprise the range of likely treatments for each of the conditions, and analysis conducted separately for those drugs falling into each group.

\* \* \* \* \*