

# Geographic Variation Trends in Prescription Use: 2000 to 2006



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## Executive Summary

In 2002, Express Scripts researchers added a new dimension — geographic location — to the list of factors influencing prescription-drug use. Since that time, major changes have taken place on the prescription-drug landscape. Increasing rates of obesity, drug recalls, reports of safety issues and changing treatment guidelines all affect prescription-drug use in important ways.

Using 2006 data from a random sample of 3 million commercially insured members, we explored, once again, patterns of use by state for seven major therapy classes: antihyperlipidemics, antidiabetics, antihypertensives, gastrointestinal (GI) medications, antidepressants, analgesics/anti-inflammatories and estrogen. This study also estimates the change in pharmaceutical spending within the commercially insured U.S. market associated with changes in utilization.

## Key Findings

- From 2000 to 2006
  - More adult members used their prescription benefits than ever before, resulting in an annual average increase of five prescriptions per individual
  - The prevalence and intensity of antihyperlipidemics more than doubled
  - Prevalence of antidiabetics and antihypertensives each increased by more than 75%
  - The use of estrogen therapy dropped by half
- Similar geographic patterns of use were noted in 2006 as compared to 2000, with higher rates of use noted in the South — particularly for antihyperlipidemics, antidiabetics, antihypertensives, GI medications and estrogen therapy.
  - The greatest increase in prevalence of use for antidiabetics, antihypertensives, GI medications and analgesics/anti-inflammatory medications occurred in Southern states.
- In 2006, the costs to U.S. plan sponsors and their members from increased utilization of antihyperlipidemics, antidiabetics, antihypertensives, antidepressants and GI medications was estimated to be more than \$12 billion.

- The states with the greatest per capita increase in spending for these therapy classes were West Virginia, \$196; Kentucky, \$185; Alabama, \$174; Mississippi, \$162; Louisiana, \$154; and Arkansas, \$151.

## Implications

Plan sponsors face numerous challenges in managing prescription-drug costs. Our key findings suggest that those challenges include the sociodemographic and market forces influencing the use of prescription medications. Total healthcare cost implications from increases or decreases in utilization are unclear. Encouraging use of the most cost-effective agents within a therapy class can help to offset increased utilization. For example, increases in cost due to increased use of antihyperlipidemic agents can be mitigated by greater use of lower cost, equally effective generic medications.

## Introduction

In 2002, Express Scripts published the *Prescription Drug Atlas*,<sup>1</sup> the first state-level evaluation of geographic variation in prescription-drug use in the U.S. Using data from 2000, the report found significant variation in the use of prescription medications across the U.S. Most notable were higher prevalence of use for cardiovascular and GI medications in the South.

Since 2000, several changes have impacted the use of prescription medications. Given the link between obesity and chronic conditions, such as hyperlipidemia, diabetes and hypertension, perhaps the most important factor is the rise in U.S. obesity rates. According to the Centers for Disease Control and Prevention (CDC), between 2000 and 2005 the number of American adults considered obese — having a body mass index (BMI) of 30 or greater — increased from one in five to one in four.<sup>2</sup> Additionally, from 2000 to 2006, safety concerns resulted in 11 prescription products being removed from the market. Another factor influencing use of prescription medications is the growth in direct-to-consumer advertising, which increased from \$2.8 billion in 2000 to more than \$4 billion in 2005.<sup>3</sup>

To understand how these and other market factors impacted prescription use from 2000 to 2006, this study re-evaluated the patterns of geographic variation in prescription use for selected therapy classes used by a sample of adult, commercially insured members.

## Methods

Data for 2000 and 2006 were extracted from two one-year databases constructed for research purposes by Express Scripts. One of the largest pharmacy benefit management (PBM) companies in North America, Express Scripts provides PBM services to more than 50 million members nationwide. The databases were composed of aggregated administrative pharmacy claims and eligibility information for random samples of approximately 2.2 million (2000) and 3 million (2006) Express Scripts members who were enrolled in commercially insured plans (not Medicare+Choice or Medicaid). Information on members representing all 50 states was included. Plan sponsors included private-sector and public-sector employer groups, managed care organizations, third party administrators, self-insured employers, and union groups.

From this database, data on adult members age 18 years to 64 years who were continuously enrolled for the entire year of 2000 or 2006 were selected. Members with missing or incorrect state information were excluded from analysis as were members residing in states with a sample size of less than 2,000 members. In 2000, excluded states were Alaska, Delaware, Hawaii, Montana, New Mexico, North Dakota, Rhode Island, South Dakota and Wyoming. One additional state, Vermont, was excluded in 2006. All state rates were adjusted for age and gender using the direct standardization method with the overall 2000 study sample as the reference sample.

The therapy classes selected for analysis in this study included antihyperlipidemics, antidiabetics, antihypertensives, GI medications, antidepressants, analgesics/anti-inflammatories and estrogens. See Appendix A for descriptions of therapy classes. These therapy classes were chosen based upon their overall utilization and prevalence of use in 2000, in addition to

being classes likely impacted by population demographics and market changes. Therapy classes were identified using the first two digits of the Generic Product Identifier (GPI) code.<sup>4</sup>

Two measures of utilization were calculated: prevalence and intensity of use. Prevalence, the number of continuously eligible members with at least one prescription claim in a particular therapy class divided by the number of eligible members, was calculated for each year. Prescription-use intensity — per member per year (PMPY) utilization — was measured as the total number of 30-day adjusted prescription medications divided by the total number of continuously eligible members. Prescription claims were adjusted to 30-day equivalents to correct for differences in home-delivery penetration rates between states and across years.

The measure of variability used in our analysis was the coefficient of variation (CV) calculated as the ratio of the standard deviation to the mean of the sample.

Finally, the financial implications from changes in utilization for the U.S. commercially insured market were estimated across all therapy classes. Changes in total costs were estimated overall and by state, and were measured as the difference between the 2000 and 2006 PMPY utilization multiplied by the average cost per prescription in 2006. For example, the change in total cost for therapy class *i* and state *j* was calculated using the formula below:

Total Cost change<sub>ij</sub> = (PMPY<sub>Rx2006ij</sub> - PMPY<sub>Rx2000ij</sub>) \* adult population with employer-sponsored health coverage<sub>2006j</sub> \* cost/<sub>Rx2006ij</sub> where PMPY<sub>Rx</sub> = PMPY utilization and cost/Rx is the average discounted ingredient cost per prescription for therapy class *i* and state *j* in 2006. Estimates of the 2006 state population age 18 years to 64 years with employer-sponsored healthcare coverage were obtained from the U.S. Census Bureau.<sup>5</sup> The state-level cost per prescription was estimated for each state using the actual average discounted ingredient cost.<sup>6</sup> Therefore, the increased cost represents the costs to both plan sponsors and members.



**One of the largest pharmacy benefit management (PBM) companies in North America,**  
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**The therapy classes selected for analysis in this study included**  
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analgesics/anti-inflammatories  
and estrogens.



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*The greatest increase in prevalence use was in antihyperlipidemics with prevalence more than doubling from 6% of members in 2000 to more than 13% in 2006.*

## Results

### *Overall Growth*

Between 2000 and 2006, the number of adult members utilizing the prescription benefit through Express Scripts plan sponsors increased from 67% to 74% (Table 1). Intensity of use increased by 32% (approximately four prescriptions PMPY) to 14.3 prescriptions per year compared to the 2000 rate of 10.8 prescriptions per year. One third of the increase in the number of prescriptions PMPY was driven by prevalence increase, and two thirds of the increase was driven by an increased number of prescriptions among prescription-drug users. The greatest increase in prevalence use was in antihyperlipidemics with prevalence more than doubling from 6% of members in 2000 to more than 13% in 2006. Other therapy classes with significant increases in prevalence of use were antidiabetics and antihypertensives, each with prevalence increases of more than 75%. Intensity of use also increased 65% for antidiabetics, 58% for antihypertensives and more than 50% for antidepressants. On the other hand, prevalence of estrogen-therapy use dropped in half. Intensity of use outpaced prevalence of use changes for GI medications and antidepressants suggesting that, in addition to increased prevalence of use, patients were taking these medications for longer periods of time or were more compliant with their medication. Three of the top five utilizing states in 2000 for all drug therapies — Kansas, Kentucky and Louisiana — were also in the top five in 2006 (Table 2).

### *Geographic Variations in Growth by Therapeutic Categories*

#### **Antihyperlipidemics**

In general, states with the highest prevalence of use for antihyperlipidemics in 2000 were also those with the highest prevalence of use in 2006 (Table 2). See Appendix B for prevalence estimates for all states. Michigan, West Virginia, Kentucky and Maryland were the top five states in both 2000 and 2006, with rates of use doubling in 2006. As seen in Figure 3 and Figure 4, the Southern and lower Midwestern regions of the country had not only the highest prevalence of use, but also some of the greatest increases in prevalence use. State-by-state variability in the use of

antihyperlipidemics, as measured by the CV, decreased from 2000 to 2006 (Table 1).

#### **Antidiabetics**

Prevalence of use for antidiabetics also demonstrated dramatic increases (Table 1). Prevalence of use increased from 3% in 2000 to approximately 6% in 2006. Overall prevalence of use was highest in the South and lower Midwest while Northeastern states generally showed the lowest prevalence (Figure 5 and Figure 6). Four of the five states with the highest prevalence of use in 2006 were the Southern states of Mississippi, Tennessee, Alabama and Georgia (Table 2). Alabama was the only state that retained its top-five ranking from 2000. States with the lowest prevalence of use in 2006 were the Northeast states of Massachusetts, Maine and New Hampshire. State-by-state variation in the use of antidiabetics remained relatively constant, increasing by 2.5%.

#### **Antihypertensives**

Similarly, Southern states had the highest prevalence of antihypertensive use in 2006 with Alabama, Mississippi, West Virginia and Louisiana among the top five positions in both 2000 and 2006. All five of the states with the lowest prevalence of use in 2000 — Oregon, California, Colorado and Minnesota — remained the lowest prevalence-use states in 2006, albeit use grew by approximately four percentage points in each. All five states with the largest increase in prevalence of antihypertensives were in the South — Alabama, Mississippi, Kentucky, Georgia and Louisiana. The dramatic increase in the prevalence of antihypertensive use from 2000 to 2006 can be seen graphically in Figure 7 and Figure 8 as the shading for all states darkens. State-by-state variability in the use of antihypertensives decreased by approximately 6%.

#### **Gastrointestinal Medications**

Prevalence of GI medication use grew at a more modest rate of 20% or approximately two percentage points from 2000 to 2006. However, intensity of use grew by 34% suggesting that those on medications were more compliant or remained on therapy for longer periods of time. Once again, four of the top five states with highest prevalence of use in 2000 — West Virginia, Kentucky, Mississippi and Tennessee — were in the top

five in 2006. As seen in Figure 9 and Figure 10, the Southern region had by far the greatest prevalence of use as well as the greatest growth in use of GI medication therapy (Table 2). State-by-state variability increased by 92% for GI medications from 2000 to 2006.

#### Antidepressants

Antidepressant prevalence grew by 33%, however, intensity of use grew by 50.7%. Unlike other therapy classes, no clear pattern of geographic variation in use was observed. Three of the five states with the highest rate of use in 2000 — Utah, Maine and Kentucky — remained in the top five in 2006. Although Utah continued to be the state with the highest prevalence of antidepressant use, it had one of the lowest rate increases of any state (2.4%) between 2000 and 2006. States with the greatest increases in overall prevalence included the Southeastern states of Alabama and Louisiana, in addition to states located in the Northern (Wisconsin) and Northeastern (New Hampshire and Connecticut) regions of the country. The darker shading seen from Figure 11 to Figure 12 highlights the overall increase in prevalence use from 2000 to 2006. State-by-state variability in the use of antidepressants decreased from 2000 to 2006.

#### Analgesics/Anti-Inflammatories

Overall, the prevalence use of analgesics/anti-inflammatory agents decreased by less than one percentage point from 2000 to 2006 to an overall prevalence rate of 15.4%. Three of the top five most prevalent states in 2000 — Michigan, Utah and Maryland — remained in the top five in 2006. Interestingly, some states, such as Maine, New Hampshire, Wisconsin, Connecticut and Kansas, saw decreases of over two percentage points, while other states Arizona, Tennessee, Alabama, Florida and West Virginia saw increases of up to two percentage points. While state-by-state variation increased from 2000 to 2006, no apparent geographic pattern of use was noted (Figure 13 and Figure 14).

#### Estrogen

Estrogen's overall prevalence of use dropped by over half from 2000 to 2006. Although this negative trend was seen in every state we evaluated, the highest prevalence of use

continued to be in Southern states and the lowest prevalence of use in states located in the Northeast (Table 2, Figure 15 and Figure 16). Three states with prevalence in the top five in 2000 — Arkansas, Oklahoma and Louisiana — were also in the top five for 2006. Regional variation in the use of estrogen therapy, among the highest of the seven therapy classes evaluated in 2000, increased by more than 73% in 2006.

#### *Marginal Change in Prescription Costs Associated With Increased Utilization*

Using U.S. Census, estimates of the number of adults age 18 years to 64 years with employer-sponsored healthcare coverage<sup>5</sup>, five of the seven therapy classes saw increases in total cost while spending for analgesics/anti-inflammatory and estrogen therapy decreased. The estimated increase in pharmaceutical spending within the commercially insured market from increased utilization of antihyperlipidemics, antidiabetics, antihypertensives, antidepressants and GI medications is more than \$12 billion (Table 3). See Appendix C for PMPY utilization rates by state. The states with the largest per capita increase in spending for these therapy classes were West Virginia, \$196; Kentucky, \$185; Alabama, \$174; Mississippi, \$162; Louisiana, \$154; and Arkansas, \$151.

#### Limitations

Several study limitations should be noted. First, while prescription-claims data are a reliable and valid source of information, plan-related factors that were not controlled may cause differences in prevalence and utilization between states and across time periods. Whether geography correlates with copayments or other plan-related factors is unknown. If they are correlated, failing to control for them would bias estimates of variation found in our sample.

The degree of client and member turnover from 2000 to 2006 will also impact prescription-use trends. However, we believe that this impact, overall, is mitigated by high rates of client retention together with the fact that no one plan sponsor represented more than 6% of a state's sample in either year.



**The states with the largest per capita increase in spending for these therapy classes were West Virginia, \$196; Kentucky, \$185; Alabama, \$174; Mississippi, \$162; Louisiana, \$154; and Arkansas, \$151.**



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**Factors other than disease prevalence that may also influence prevalence of use include**

*greater likelihood of screening, earlier initiation of drug treatment, and greater propensity of physicians to use drug therapy instead of nondrug therapy.*

**Findings from this study suggest that sociodemographic and market forces strongly influence the use of prescription medications.**

## Discussion

This study found significant increases in the prevalence and intensity of adult prescription-drug use for several classes of chronic medications. Geographic patterns for the use of some therapy classes suggest several factors may be contributing to the changes in prescription-drug prevalence. While these factors include safety concerns and the implementation of new guidelines; the rise of obesity is likely a significant factor. To understand the linear dependence between obesity and prescription prevalence use, Pearson correlation coefficients ( $\rho$ ) were estimated across states for state-level obesity rates available from [statehealthfacts.org](http://statehealthfacts.org) and drug-use prevalence. Large correlations between state-level obesity rates were noted for antidiabetics ( $\rho = 0.67$ ) and antihypertensives ( $\rho = 0.75$ ). A medium correlation was seen for antihyperlipidemics ( $\rho = 0.37$ ).<sup>7</sup> While we cannot conclude that obesity is the sole cause of prescription use, obesity rates are highly correlated with prevalence of antidiabetic and antihypertensive use.

Other factors that could also be contributing toward increases in utilization include greater compliance rates and more dual therapy, such as in the antidiabetic therapy class. Factors other than disease prevalence that may also influence prevalence of use include greater likelihood of screening, earlier initiation of drug treatment, and greater propensity of physicians to use drug therapy instead of nondrug therapy.

Influencing the increased prevalence and utilization of antihyperlipidemics were changes in treatment guidelines.<sup>8</sup> Released in 2001, the new guidelines lowered the LDL cholesterol (LDL-C) levels considered to be the threshold for drug treatment and set new, lower LDL-C goals for some individuals. In 2002, the impact of these changes was estimated to increase the prevalence of drug therapy more than 140% from a prevalence of 5% to 13%.<sup>9</sup>

Variation in use increased significantly for GI medications (CV=10.0 in 2000 and 19.1 in 2006). The availability of Prilosec OTC®, a proton-pump inhibitor (PPI), which became

available over the counter (OTC) in September 2003, may explain a large part of the shift. As a result of Prilosec's transition to nonprescription status, plan sponsors adopted a number of coverage changes, such as moving all prescription-only PPI to third tier. However, some plan sponsors opted to cover the OTC agent, likely contributing to the greater variation.

Reduction in geographic variation in the use of antidepressants may be the result of greater caution in use of these agents. Due to the safety concerns for the use of antidepressants by children and adolescents, a Public Health Advisory was issued by the Food and Drug Administration (FDA) in October 2003.<sup>10</sup> Despite these warnings within the pediatric population, the prevalence and intensity of use among adults continued to grow.

Study findings pointing to an increased cardiovascular risk profile noted for the COX-2 agents resulted in market withdrawal for two of the three that were sold in the U.S., contributing to the decreased use of COX-2s from 2000 to 2006.<sup>11, 12</sup> Similarly, the increased cardiovascular risk for women taking combination hormone replacement therapy (HRT) played a big role in the decreased prevalence of estrogen therapy.<sup>13, 14</sup> The greater drop for estrogen compared to analgesics/anti-inflammatory medications suggests that patients on COX-2 agents were switching to other agents within the therapy class perceived to have a lower cardiovascular risk profile — an option not available for those taking HRT. For both the analgesic/anti-inflammatory and estrogen therapy classes, regional variation increased from 2000 to 2006 suggesting that how states reacted to these warnings varied — leading to greater discrepancies in utilization of these therapy classes.

## Conclusion

The link between obesity and conditions, such as diabetes and hypertension is well established in the literature. Therefore, it is no surprise that state-level prevalence rates for drugs used to treat these conditions would be highly correlated with state-level obesity rates. Additionally, the rising rates of obesity would also suggest increased rates of treatment for

these conditions, which our data confirm. However, what has not been known to date is the financial implication of these usage increases and the degree to which this varies by state. Our findings suggest that many states located in the South where prevalence rates and prevalence-rate increases were greater, had spending increases of \$150 up to \$200 per commercially insured resident. States in the Northeast and Western regions of the country had spending increases less than half of that.

These findings also indicate that market forces, such as drug-safety concerns, had an important impact on usage patterns albeit with a differential impact across states. State-level variation increased from 2000 to 2006 for estrogen and analgesic/anti-inflammatory therapy classes, resulting in a five-fold difference in prevalence rates for estrogen therapy. The introduction of OTC agents increased the regional variation for GI medications, while implementation of new guidelines for lipid-lowering therapy doubled prevalence of use but decreased state variability.

The growing rates of prescription-drug use hold important implications for plan sponsors in the management of prescription costs. While the total healthcare cost implications from increases or decreases in prescription use are unclear — for example, medical cost offsets from increased diabetes drug treatment — in the short term, encouraging members to use the most cost-effective agents within a therapy class, such as generic drugs, can reduce prescription costs without compromising treatment effectiveness. While some factors impacting prescription-drug use, such as changes in guidelines, are outside of plan-sponsors' control, efforts to address obesity and other member wellness issues is becoming a greater focus. Additionally, research should be conducted to understand provider factors and patient factors influencing variation in the prescribing response to drug-safety concerns. Moving forward on all fronts can help make the use of prescription drugs safer and more affordable.



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**Table 1: Age and Gender Adjusted Prevalence and Utilization by Therapy Class: 2000 and 2006**

Therapy Class	Prevalence			PMPY Utilization			Coefficient of Variation		
	2000	2006	% Change	2000	2006	% Change	2000	2006	% Change
Antihyperlipidemics	6.1%	13.2%	116.4%	0.50	1.07	114.0%	12.2	9.9	-18.8%
Antidiabetics	3.1%	5.5%	77.4%	0.40	0.66	65.0%	17.6	18.0	2.5%
Antihypertensives	8.0%	14.1%	76.3%	0.74	1.17	58.1%	19.9	18.7	-5.7%
Gastrointestinal Medications	9.0%	10.8%	20.0%	0.47	0.63	34.0%	9.9	19.1	91.7%
Antidepressants	10.7%	14.2%	32.7%	0.73	1.10	50.7%	17.4	14.7	-15.3%
Analgesics/Anti-inflammatories	16.3%	15.4%	-5.5%	0.45	0.39	-13.3%	15.2	18.8	23.6%
Estrogen	7.9%	3.7%	-53.2%	0.69	0.27	-60.9%	21.0	38.1	73.5%
Overall	66.7%	74.4%	11.5%	10.81	14.26	31.9%	5.5	4.6	-17.9%

**Table 2: States With Highest and Lowest Prevalence and Changes in Absolute Prevalence: 2000 and 2006**

Therapy Class	2000 Adjusted Prevalence				2006 Adjusted Prevalence				2000-2006 Change			
	Top 5 States		Lowest 5 States		Top 5 States		Lowest 5 States		Top 5 States		Lowest 5 States	
Overall	KS	70.55%	NY	58.89%	LA	79.58%	ID	69.10%	CT	14.01%	IA	6.63%
	MI	70.22%	AZ	58.69%	KY	78.35%	WA	68.75%	FL	13.58%	MI	6.20%
	UT	69.61%	WI	58.66%	KS	77.77%	ME	67.42%	AL	13.15%	UT	5.37%
	KY	68.98%	OR	58.41%	CT	77.02%	OR	66.63%	GA	12.97%	ID	2.94%
	LA	68.97%	CA	57.88%	SC	76.63%	CA	66.21%	AZ	12.50%	ME	-0.36%
Antihyperlipidemics	MI	6.69%	FL	4.66%	MI	13.75%	WA	10.48%	FL	8.06%	ME	5.60%
	WV	6.63%	NV	4.54%	WV	13.31%	UT	10.46%	VA	7.60%	ID	5.54%
	KY	6.57%	OR	4.35%	MD	13.08%	CA	10.44%	CT	7.53%	NE	5.18%
	MD	6.30%	ID	4.03%	KY	12.86%	ID	9.57%	TN	7.30%	OR	5.01%
	ME	6.11%	CO	3.91%	TN	12.82%	OR	9.36%	GA	7.26%	UT	4.81%
Antidiabetics	VA	3.52%	ME	2.18%	MS	6.59%	WA	3.76%	ID	3.85%	WI	1.44%
	SC	3.49%	MA	2.16%	TN	6.39%	MA	3.74%	MS	3.22%	ME	1.44%
	AL	3.47%	NH	2.09%	ID	6.14%	ME	3.62%	TN	3.19%	WA	1.34%
	NE	3.41%	OR	1.95%	AL	6.07%	NH	3.58%	MD	2.97%	MN	1.10%
	TX	3.40%	CO	1.67%	GA	5.83%	MN	3.55%	AR	2.94%	NE	0.86%
Antihypertensives	WV	10.01%	ID	5.50%	AL	16.90%	ME	9.91%	AL	7.41%	MN	4.09%
	SC	9.99%	OR	5.49%	MS	16.82%	CO	9.82%	MS	7.29%	WI	3.88%
	MS	9.53%	CA	5.39%	WV	15.81%	CA	9.63%	KY	7.08%	NY	3.86%
	AL	9.49%	CO	5.19%	LA	15.81%	OR	9.60%	GA	6.82%	ME	3.43%
	LA	9.26%	MN	4.85%	TN	15.63%	MN	8.94%	LA	6.55%	NE	2.72%
Gastrointestinal Medications	WV	11.73%	CA	6.67%	WV	13.52%	CT	7.89%	LA	2.94%	ID	0.60%
	KY	11.07%	OR	6.48%	KY	13.48%	CA	7.78%	MI	2.79%	SC	0.51%
	TN	11.04%	WI	6.07%	MS	13.18%	MN	7.32%	AL	2.48%	OR	0.48%
	MS	10.74%	CO	5.81%	TN	12.96%	WI	7.16%	MS	2.44%	ME	0.39%
	SC	10.44%	MN	5.64%	AL	12.78%	OR	6.96%	KY	2.41%	NV	0.26%
Antidepressants	UT	16.00%	CT	8.39%	UT	18.36%	IL	12.17%	AL	6.49%	WA	2.46%
	ME	14.40%	FL	8.37%	KY	17.31%	NV	11.21%	LA	6.16%	UT	2.36%
	KY	12.95%	NY	7.42%	ME	17.20%	CA	9.87%	WI	5.68%	NE	1.93%
	WV	12.77%	CA	7.26%	AR	17.17%	NJ	9.59%	NH	5.60%	NY	1.72%
	WA	12.21%	NJ	6.41%	LA	17.14%	NY	9.14%	CT	5.47%	NV	1.37%
Analgesics/Anti-inflammatories	MI	20.40%	AZ	12.33%	MI	20.30%	WI	10.79%	AZ	1.60%	ME	-2.06%
	UT	20.22%	ME	12.01%	UT	19.79%	OR	10.66%	TN	1.35%	NH	-2.12%
	KY	18.13%	OR	11.46%	AL	18.27%	CO	10.60%	AL	1.33%	WI	-2.16%
	NC	17.62%	CO	11.22%	TN	17.94%	ME	9.95%	FL	1.21%	CT	-2.26%
	MD	17.55%	MN	10.71%	MD	17.80%	MN	9.04%	WV	1.05%	KS	-2.45%
Estrogen	AR	10.99%	PA	5.93%	LA	6.32%	PA	1.89%	NJ	-2.30%	IA	-5.22%
	OK	10.95%	CT	5.43%	OK	6.19%	NH	1.71%	NY	-3.33%	AR	-5.27%
	LA	10.48%	MA	5.26%	KS	5.78%	MA	1.69%	CT	-3.35%	MI	-5.34%
	ID	10.43%	NY	4.49%	AR	5.72%	NJ	1.30%	VA	-3.37%	WV	-5.52%
	MS	9.92%	NJ	3.60%	AL	5.71%	NY	1.16%	KS	-3.48%	ID	-5.62%

**Table 3: Estimated Change in 2006 Prescription-Drug Spending Due to Changes in Utilization: Ranked By Per-Capita Cost Change**

Antihyperlipidemics			Antidiabetics			Antihypertensives		
State	Total	Per Capita	State	Total	Per Capita	State	Total	Per Capita
KY	\$114,428,714	\$69	WV	\$22,694,193	\$29	WV	\$45,776,733	\$59
WV	\$53,330,249	\$69	AL	\$46,731,325	\$26	ID	\$29,852,394	\$50
MD	\$145,202,397	\$57	ID	\$15,629,286	\$26	MS	\$41,320,566	\$40
AL	\$104,076,983	\$57	MS	\$25,705,995	\$25	AR	\$38,879,828	\$40
GA	\$197,828,185	\$50	TN	\$47,595,284	\$21	KY	\$49,244,119	\$30
TN	\$105,673,658	\$47	KY	\$32,007,798	\$19	LA	\$39,976,727	\$29
MS	\$48,542,316	\$47	AR	\$17,977,024	\$18	AL	\$49,036,856	\$27
FL	\$298,429,578	\$46	OK	\$21,779,703	\$17	NV	\$27,075,449	\$27
MI	\$202,077,977	\$46	GA	\$63,519,476	\$16	NH	\$16,527,977	\$26
NJ	\$177,331,825	\$45	VA	\$57,141,682	\$16	KS	\$28,021,057	\$25
LA	\$61,994,417	\$45	NC	\$52,340,812	\$15	OK	\$30,423,539	\$24
VA	\$155,180,696	\$44	MO	\$36,876,324	\$15	ME	\$13,568,902	\$24
NC	\$151,434,978	\$44	KS	\$16,749,742	\$15	CT	\$32,304,764	\$20
CT	\$68,487,788	\$43	FL	\$97,927,641	\$15	MD	\$47,144,651	\$19
AR	\$42,348,082	\$43	UT	\$15,017,424	\$15	UT	\$18,694,885	\$19
IN	\$123,572,259	\$42	AZ	\$32,914,461	\$15	TN	\$39,805,778	\$18
MO	\$98,789,948	\$41	LA	\$19,553,205	\$14	NE	\$13,320,116	\$18
TX	\$314,372,347	\$40	SC	\$22,713,547	\$14	SC	\$25,933,020	\$16
PA	\$209,594,762	\$38	NJ	\$55,250,741	\$14	MO	\$30,259,847	\$13
OK	\$47,586,217	\$38	IN	\$36,932,910	\$13	IA	\$16,722,097	\$13
WA	\$98,101,711	\$35	NV	\$11,796,361	\$12	IN	\$34,506,165	\$12
KS	\$39,591,944	\$35	MD	\$27,090,380	\$11	GA	\$41,831,075	\$11
NV	\$35,783,772	\$35	TX	\$85,431,599	\$11	CO	\$22,313,570	\$11
CO	\$66,566,693	\$34	OH	\$54,681,618	\$11	OR	\$16,747,804	\$11
ID	\$20,301,458	\$34	CO	\$20,599,945	\$11	NC	\$34,563,108	\$10
OH	\$165,281,218	\$33	CA	\$148,150,023	\$11	VA	\$34,317,663	\$10
AZ	\$70,948,342	\$32	PA	\$50,984,972	\$9	NJ	\$39,745,427	\$10
SC	\$53,738,412	\$32	CT	\$14,840,590	\$9	AZ	\$23,098,533	\$10
CA	\$387,968,810	\$30	IA	\$11,644,822	\$9	WA	\$24,817,564	\$9
MA	\$80,667,162	\$29	MI	\$33,826,108	\$8	MI	\$33,642,360	\$8
NH	\$18,046,264	\$29	IL	\$44,058,578	\$8	MN	\$17,211,653	\$8
MN	\$63,810,416	\$28	NE	\$5,911,853	\$8	WI	\$17,446,080	\$7
NY	\$202,630,666	\$26	WI	\$18,970,365	\$7	FL	\$39,011,600	\$6
IL	\$138,334,399	\$25	NY	\$54,922,415	\$7	MA	\$15,866,072	\$6
WI	\$63,251,139	\$25	WA	\$14,811,447	\$5	PA	\$29,251,493	\$5
UT	\$24,890,691	\$25	OR	\$5,850,566	\$4	OH	\$24,311,724	\$5
OR	\$35,901,238	\$24	MA	\$1,822,497	\$1	TX	\$33,668,657	\$4
IA	\$28,385,090	\$22	MN	\$906,327	\$0	IL	\$19,368,076	\$4
ME	\$12,423,598	\$22	NH	-\$4,284,327	-\$7	NY	\$21,990,590	\$3
NE	\$12,725,796	\$17	ME	-\$3,857,464	-\$7	CA	\$22,549,840	\$2
<b>Total</b>	<b>\$4,352,466,807</b>	<b>\$37</b>	<b>Total</b>	<b>\$1,337,180,269</b>	<b>\$12</b>	<b>Total</b>	<b>\$1,210,312,542</b>	<b>\$10</b>

**Table 3: Estimated Change in 2006 Prescription-Drug Spending Due to Changes in Utilization: Ranked By Per-Capita Cost Change *Continued***

Gastrointestinal Medications			Antidepressants			Analgesics / Anti-Inflammatories		
State	Total	Per Capita	State	Total	Per Capita	State	Total	Per Capita
MI	\$137,273,188	\$31	KY	\$68,805,303	\$42	AZ	\$4,652,635	\$2
NJ	\$115,831,696	\$29	CT	\$62,880,485	\$39	MI	\$4,618,442	\$1
MD	\$73,769,503	\$29	LA	\$52,865,464	\$38	TN	\$2,820,034	\$1
LA	\$40,414,475	\$29	NH	\$23,804,921	\$38	AL	\$166,058	\$0
MO	\$67,591,183	\$28	AL	\$67,590,258	\$37	VA	-\$1,096,074	\$0
AL	\$48,936,726	\$27	VA	\$118,905,462	\$34	PA	-\$2,740,997	\$0
KY	\$41,483,634	\$25	TN	\$75,325,328	\$33	WV	-\$459,029	-\$1
MS	\$24,941,986	\$24	WV	\$25,674,492	\$33	NH	-\$479,515	-\$1
PA	\$128,205,334	\$23	IN	\$93,813,068	\$32	KY	-\$1,099,101	-\$1
TN	\$51,221,420	\$23	MO	\$77,936,045	\$32	UT	-\$1,462,191	-\$1
OH	\$112,135,010	\$22	CO	\$61,701,535	\$32	MN	-\$1,703,175	-\$1
GA	\$86,970,661	\$22	GA	\$120,985,840	\$31	MO	-\$3,317,955	-\$1
VA	\$78,368,700	\$22	MD	\$78,757,499	\$31	MA	-\$3,433,829	-\$1
CO	\$42,639,337	\$22	MN	\$71,766,854	\$31	FL	-\$4,607,388	-\$1
FL	\$135,116,897	\$21	OK	\$38,982,152	\$31	GA	-\$5,120,957	-\$1
IL	\$110,142,913	\$20	MI	\$132,416,839	\$30	CA	-\$13,920,408	-\$1
AR	\$19,517,980	\$20	WI	\$75,579,479	\$30	MS	-\$2,236,102	-\$2
NH	\$12,781,604	\$20	SC	\$49,066,240	\$30	OK	-\$2,549,129	-\$2
TX	\$148,611,553	\$19	AR	\$29,606,420	\$30	LA	-\$2,565,480	-\$2
IN	\$50,387,120	\$17	OH	\$142,714,531	\$29	CO	-\$3,017,864	-\$2
MN	\$36,218,972	\$16	IA	\$38,226,140	\$29	SC	-\$3,191,164	-\$2
IA	\$20,334,324	\$16	FL	\$173,722,111	\$27	WA	-\$5,693,458	-\$2
OK	\$18,932,777	\$15	NJ	\$105,238,787	\$27	MD	-\$5,770,035	-\$2
NY	\$104,504,491	\$14	MS	\$27,464,919	\$27	NJ	-\$9,846,458	-\$2
NC	\$47,758,516	\$14	NC	\$90,089,661	\$26	OH	-\$11,330,799	-\$2
AZ	\$28,068,556	\$13	MA	\$72,993,808	\$26	NY	-\$17,544,876	-\$2
MA	\$34,402,793	\$12	OR	\$38,740,767	\$26	ID	-\$1,764,547	-\$3
CA	\$143,789,501	\$11	ID	\$14,688,965	\$25	IA	-\$3,625,671	-\$3
CT	\$18,067,832	\$11	PA	\$134,969,379	\$24	OR	-\$4,663,258	-\$3
WA	\$29,579,517	\$10	AZ	\$54,430,754	\$24	WI	-\$6,621,621	-\$3
WI	\$25,826,615	\$10	TX	\$180,226,002	\$23	NC	-\$10,842,823	-\$3
NE	\$7,397,100	\$10	WA	\$64,637,716	\$23	IL	-\$15,915,960	-\$3
OR	\$13,776,471	\$9	IL	\$116,751,926	\$21	ME	-\$2,221,493	-\$4
UT	\$8,985,443	\$9	KS	\$24,083,885	\$21	NV	-\$3,718,703	-\$4
SC	\$13,603,227	\$8	CA	\$249,276,667	\$19	KS	-\$4,189,378	-\$4
NV	\$7,172,550	\$7	NE	\$13,379,885	\$18	CT	-\$5,792,820	-\$4
KS	\$6,057,069	\$5	UT	\$17,159,163	\$17	IN	-\$12,576,520	-\$4
WV	\$3,768,921	\$5	ME	\$9,690,628	\$17	TX	-\$28,653,179	-\$4
ME	\$2,757,837	\$5	NY	\$112,406,180	\$15	NE	-\$3,503,292	-\$5
ID	\$1,507,972	\$3	NV	\$10,265,958	\$10	AR	-\$6,284,298	-\$6
<b>Total</b>	<b>\$2,108,305,695</b>	<b>\$18</b>	<b>Total</b>	<b>\$3,033,883,857</b>	<b>\$26</b>	<b>Total</b>	<b>-\$201,170,236</b>	<b>-\$2</b>

**Table 3: Estimated Change in 2006 Prescription-Drug Spending Due to Changes in Utilization: Ranked By Per-Capita Cost Change *Continued***

Estrogen		
State	Total	Per Capita
NJ	-\$33,850,656	-\$9
UT	-\$10,614,750	-\$11
AL	-\$19,213,067	-\$11
AZ	-\$24,552,739	-\$11
VA	-\$37,568,681	-\$11
NY	-\$87,631,949	-\$11
KS	-\$14,081,859	-\$12
LA	-\$17,078,145	-\$12
CT	-\$19,994,513	-\$12
CO	-\$22,687,609	-\$12
MA	-\$33,545,984	-\$12
NH	-\$8,009,780	-\$13
NE	-\$9,520,858	-\$13
OR	-\$19,424,513	-\$13
SC	-\$21,410,393	-\$13
KY	-\$22,228,377	-\$13
MN	-\$30,035,226	-\$13
WI	-\$33,830,643	-\$13
NC	-\$46,458,390	-\$13
GA	-\$52,113,317	-\$13
PA	-\$71,543,375	-\$13
FL	-\$87,519,425	-\$13
TX	-\$105,167,796	-\$13
CA	-\$175,534,088	-\$13
MS	-\$14,052,199	-\$14
NV	-\$14,209,532	-\$14
TN	-\$31,366,365	-\$14
WA	-\$39,281,968	-\$14
OH	-\$71,371,262	-\$14
MO	-\$36,368,887	-\$15
IN	-\$42,487,766	-\$15
ME	-\$8,930,168	-\$16
OK	-\$19,665,052	-\$16
IA	-\$20,682,509	-\$16
IL	-\$91,027,443	-\$16
AR	-\$17,058,024	-\$17
MI	-\$76,195,199	-\$17
ID	-\$10,500,064	-\$18
WV	-\$16,707,363	-\$22
MD	-\$57,945,805	-\$23
<b>Total</b>	<b>-\$1,574,454,956</b>	<b>-\$14</b>

FIGURE 1

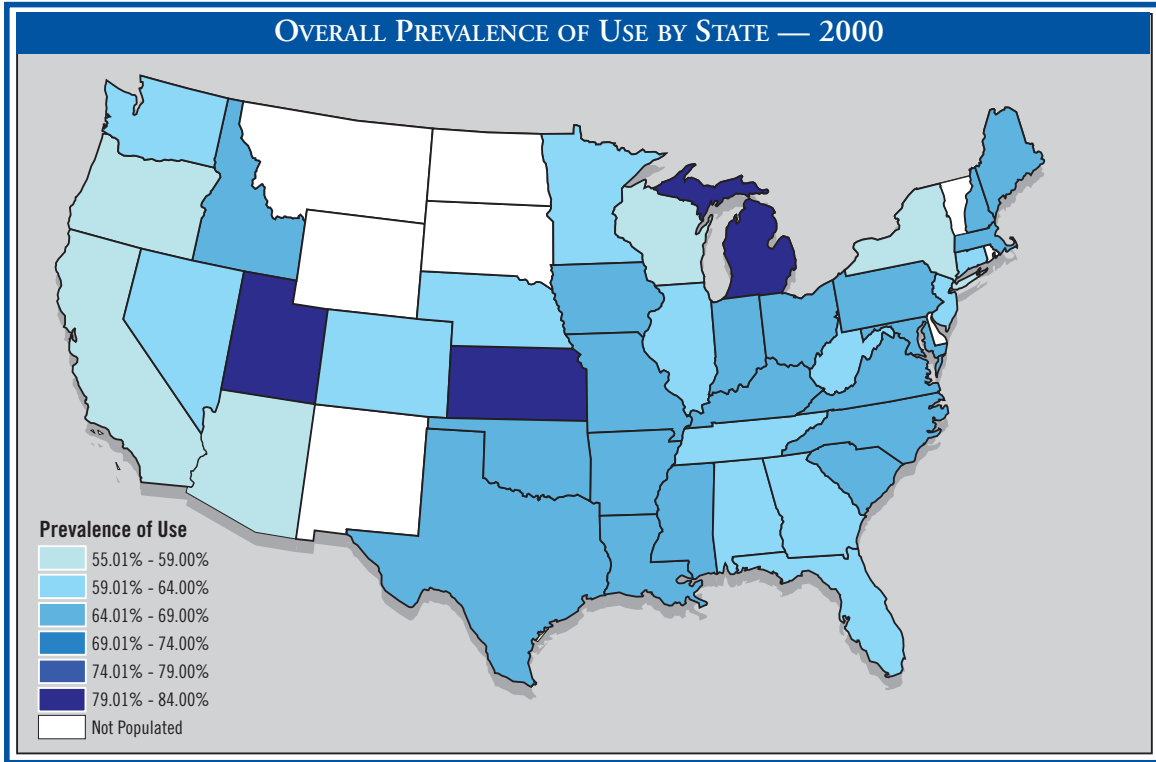


FIGURE 2

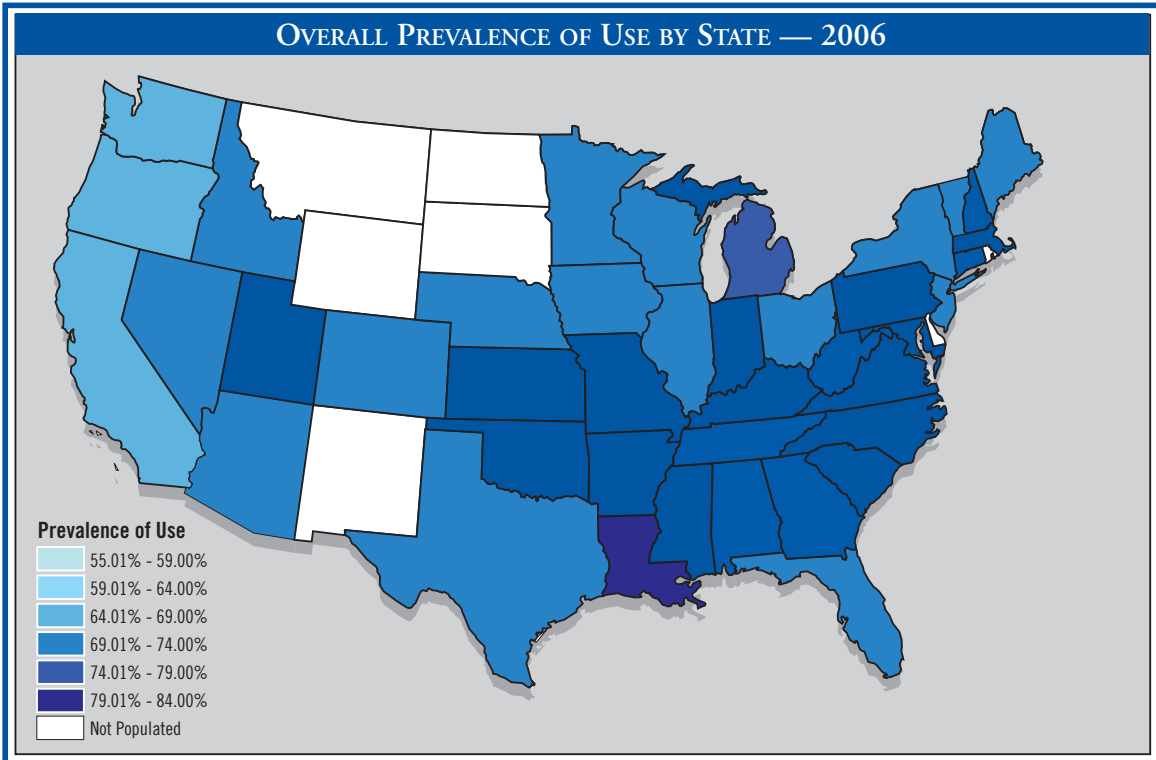


FIGURE 3

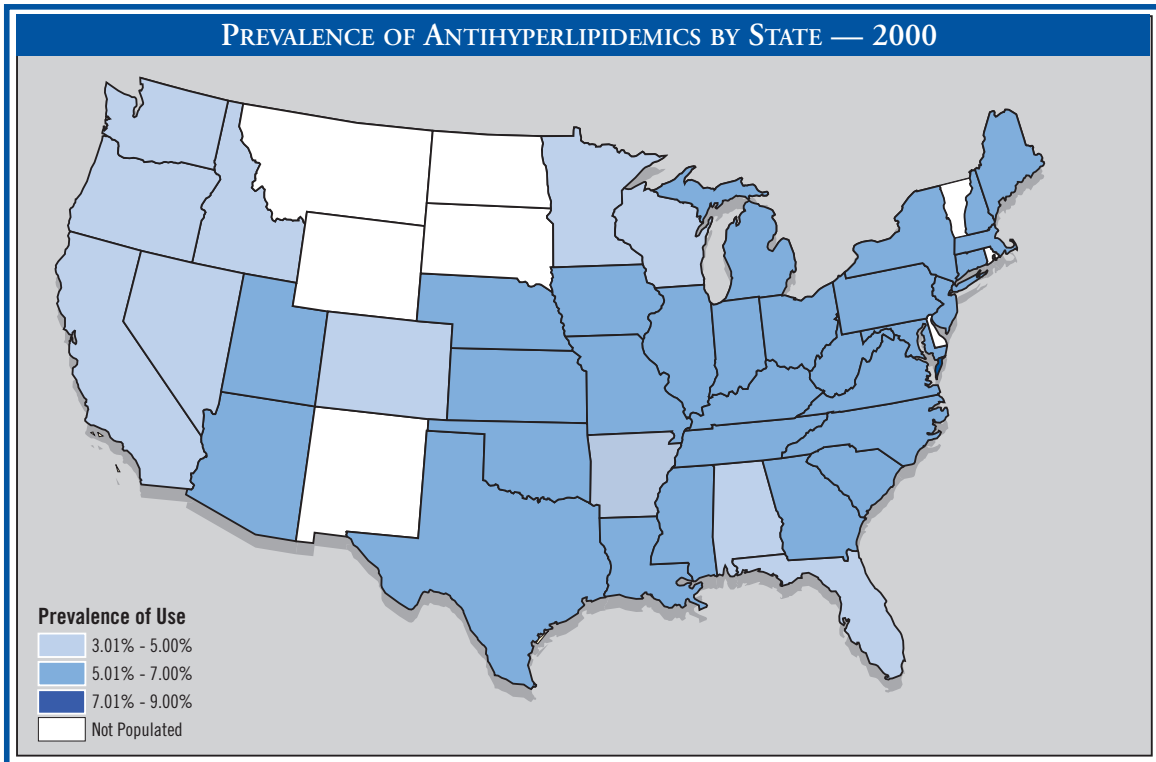


FIGURE 4

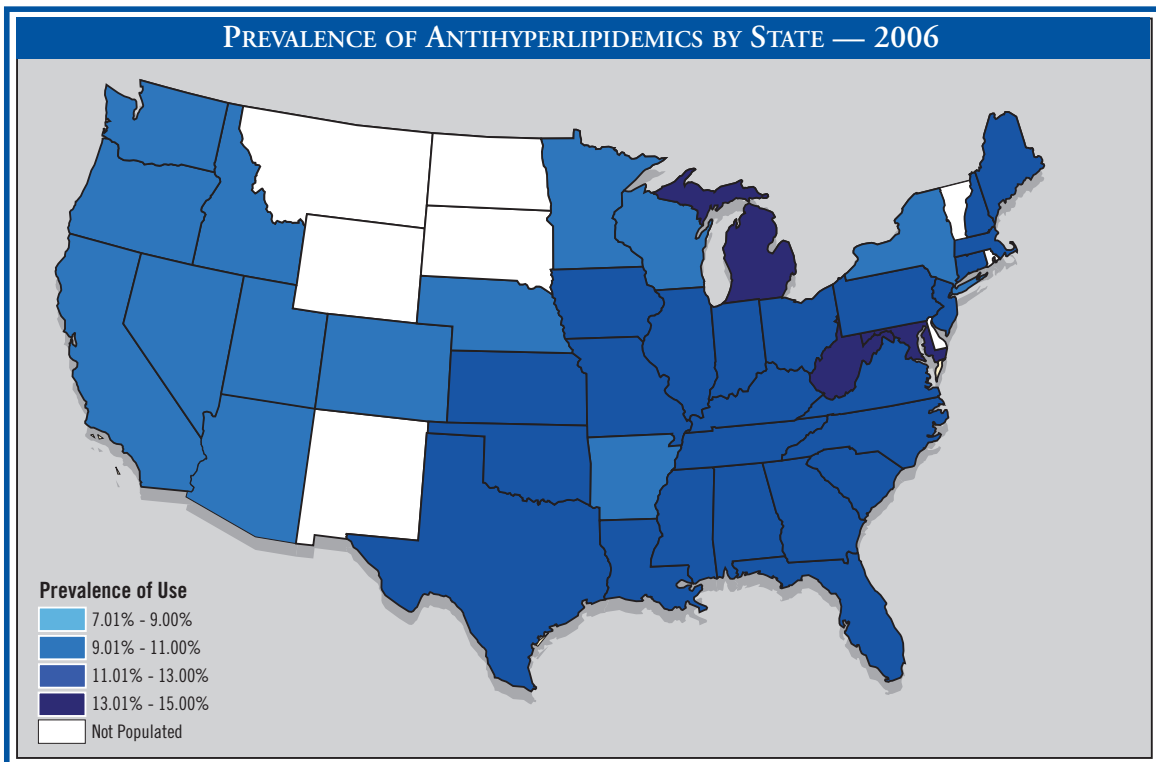


FIGURE 5

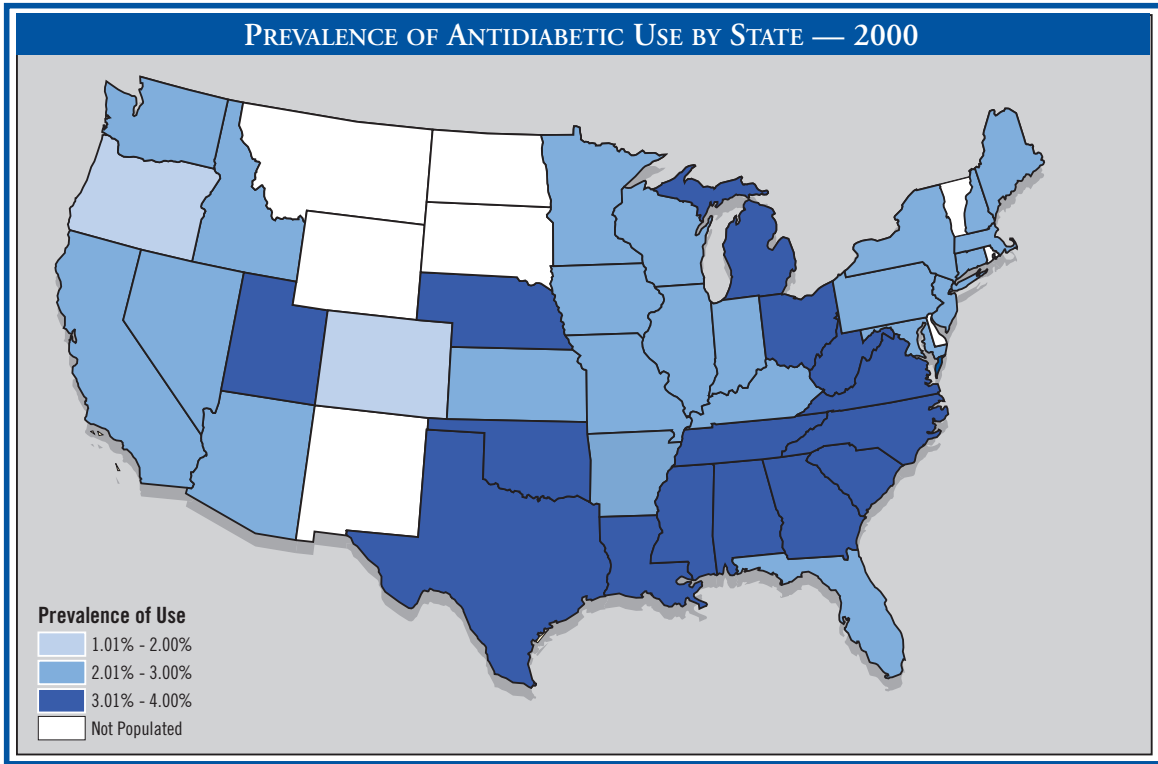


FIGURE 6

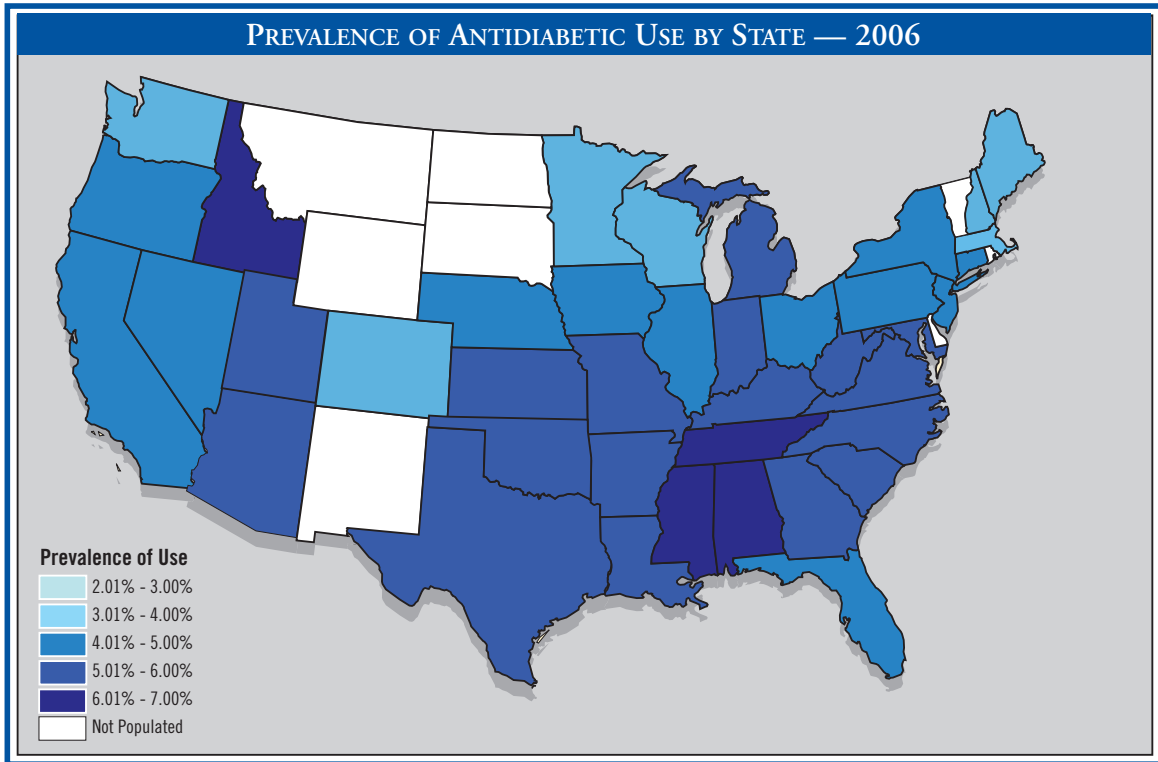


FIGURE 7

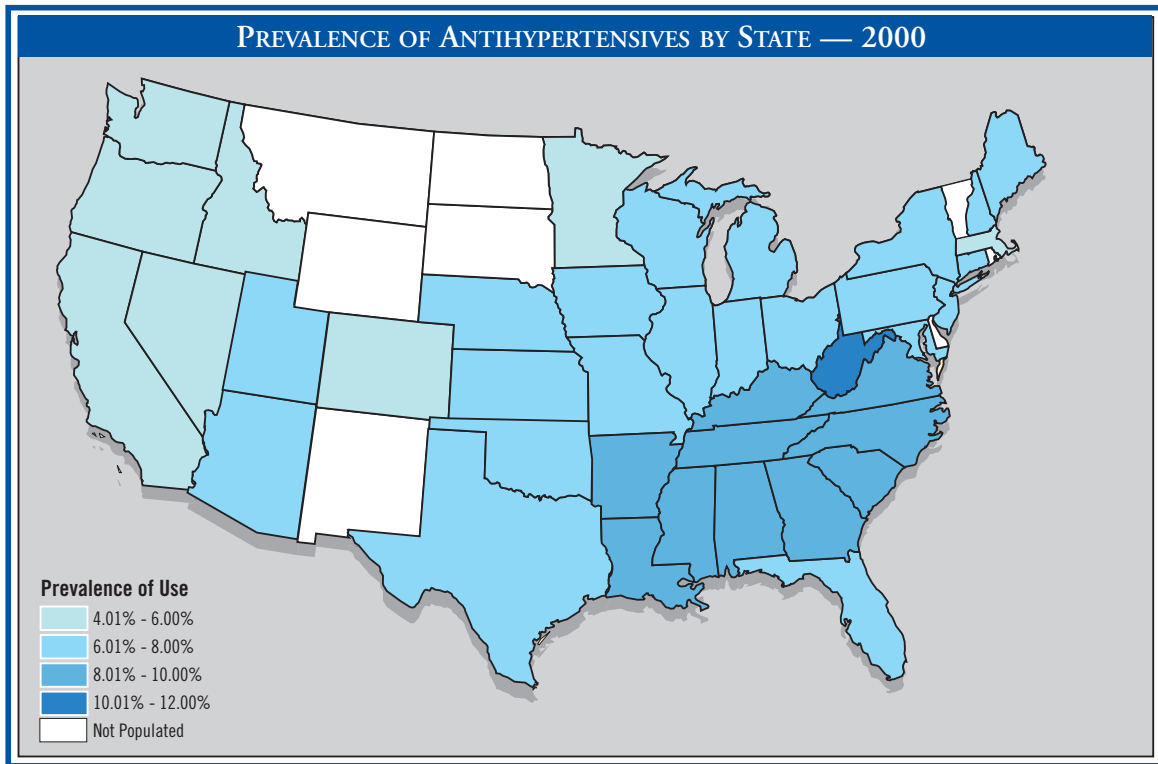


FIGURE 8

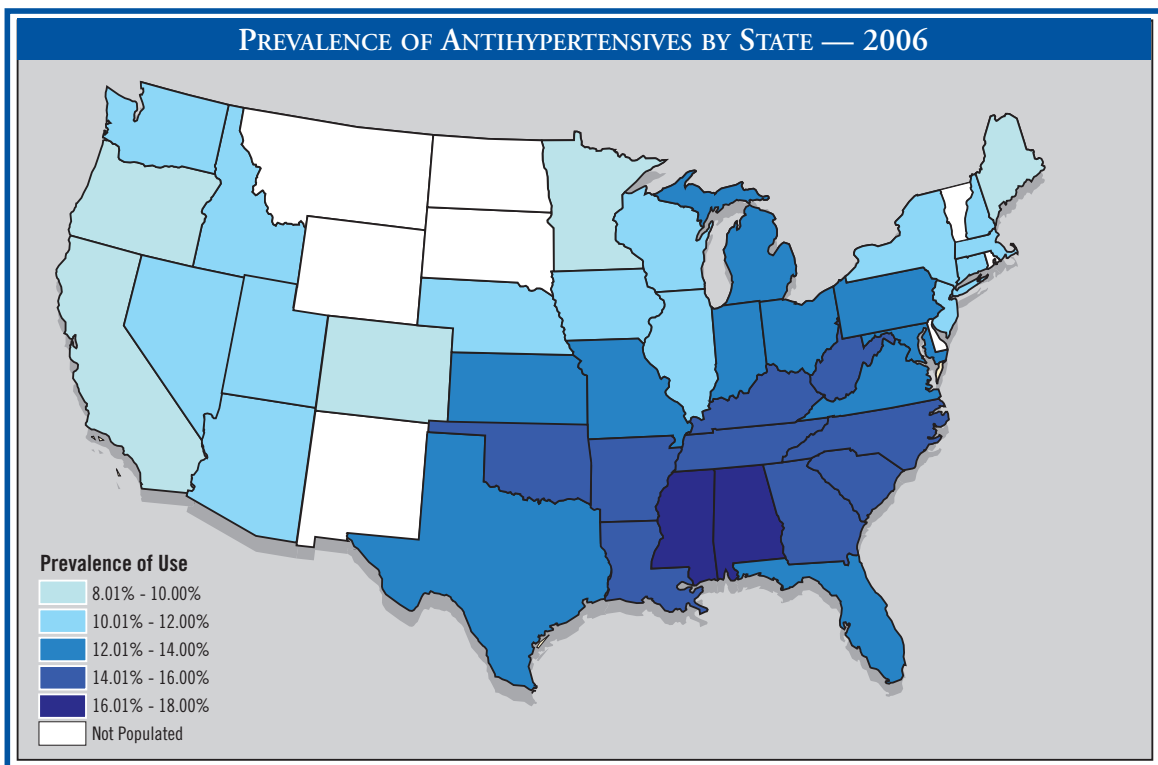


FIGURE 9

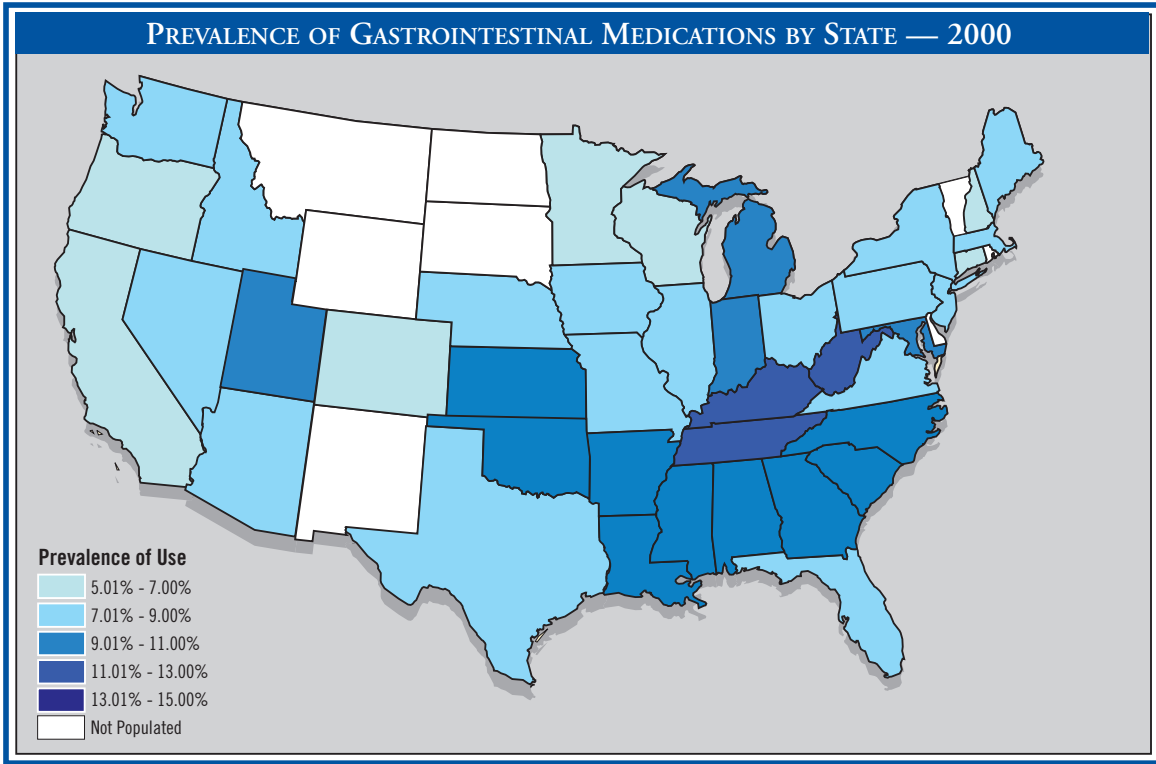


FIGURE 10

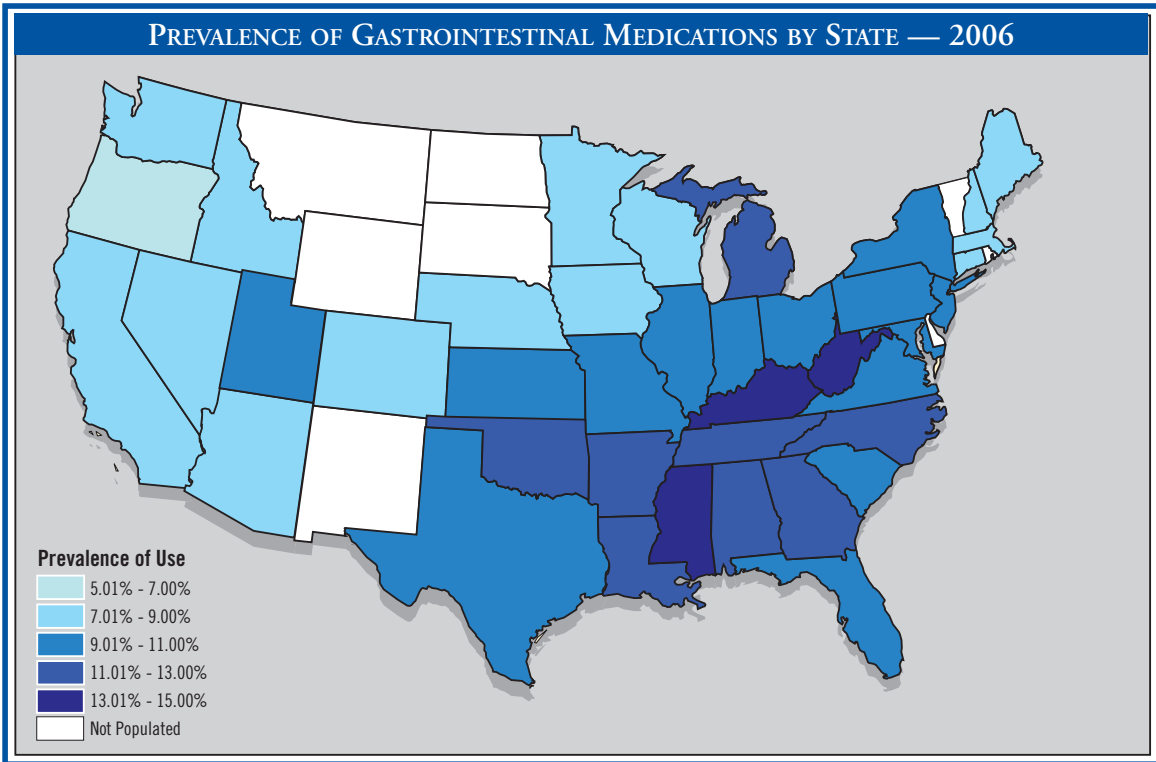


FIGURE 11

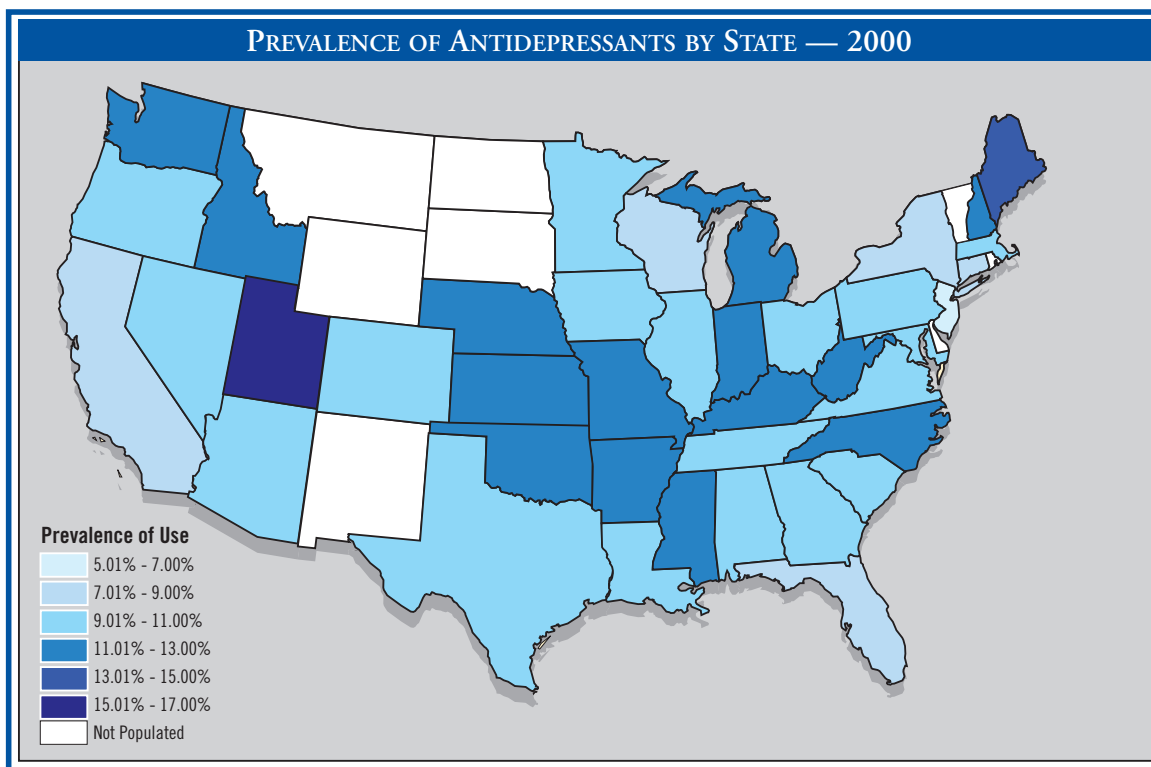


FIGURE 12

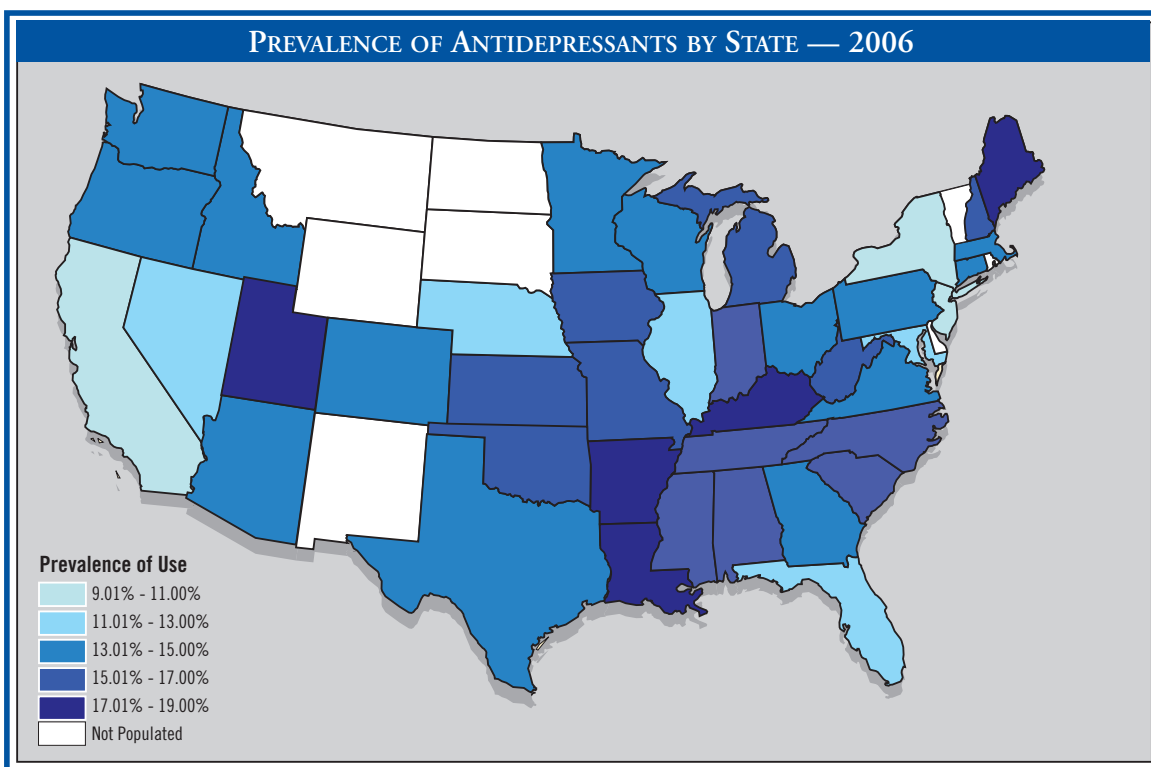


FIGURE 13

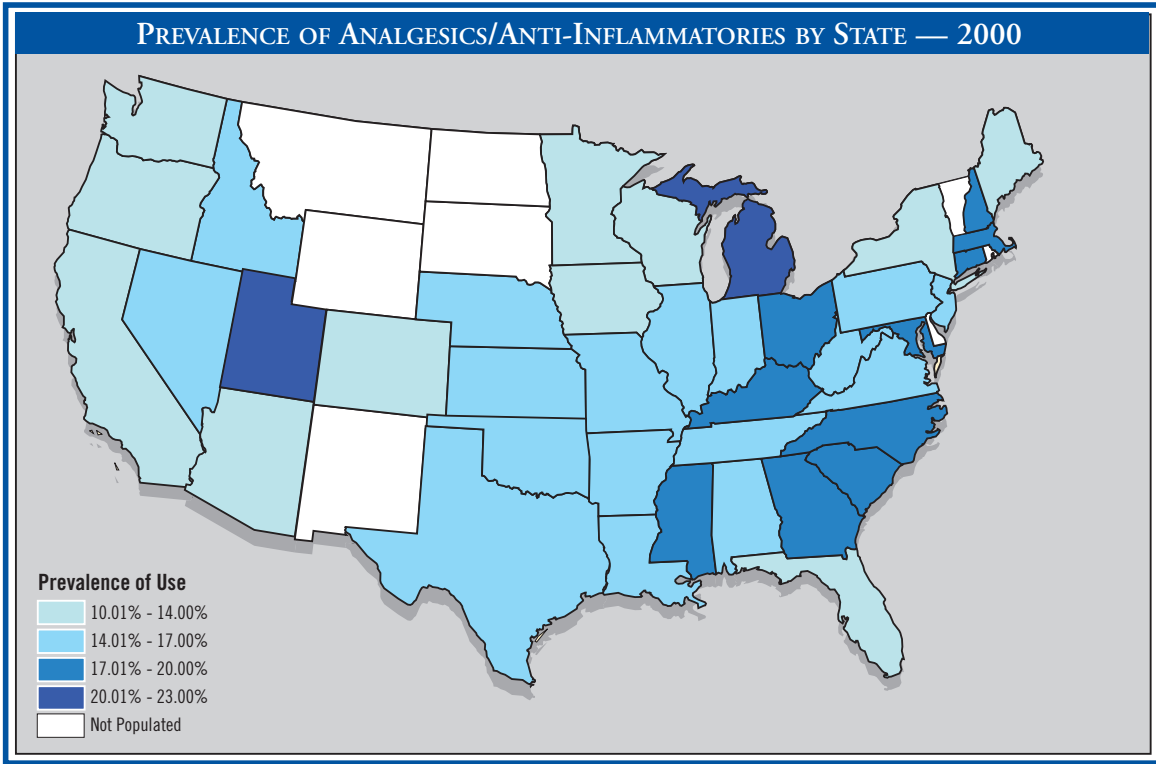


FIGURE 14

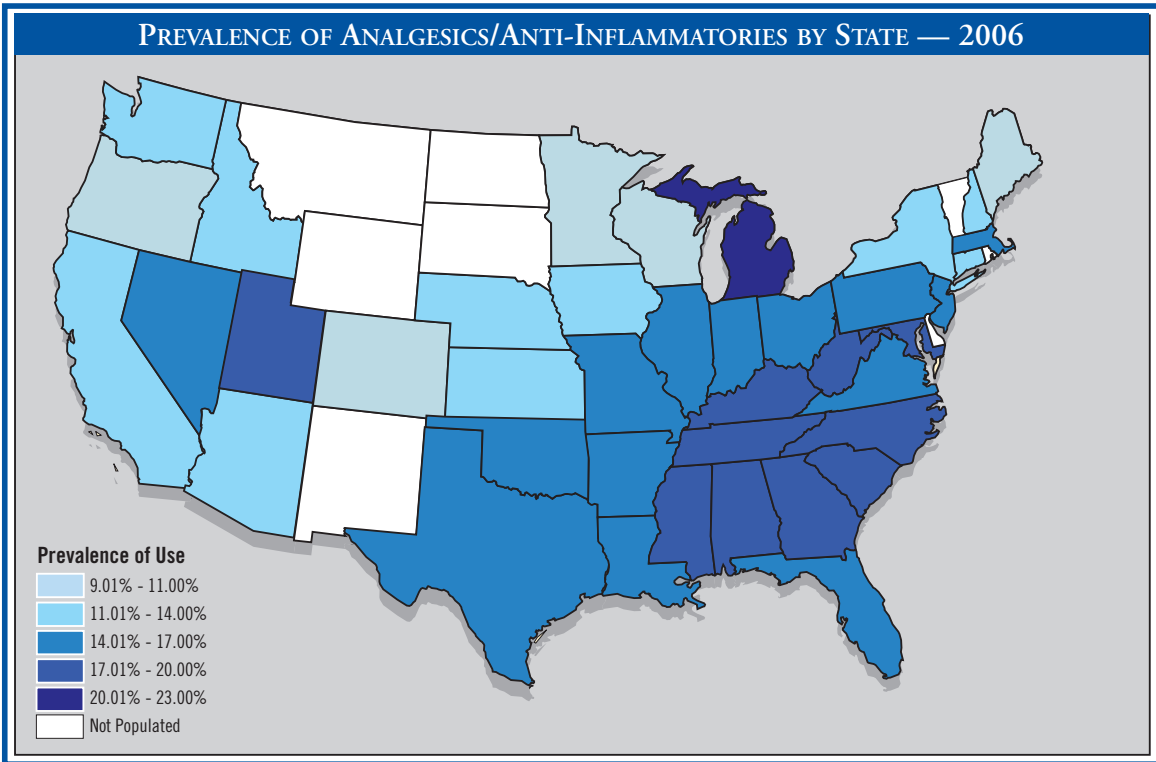


FIGURE 15

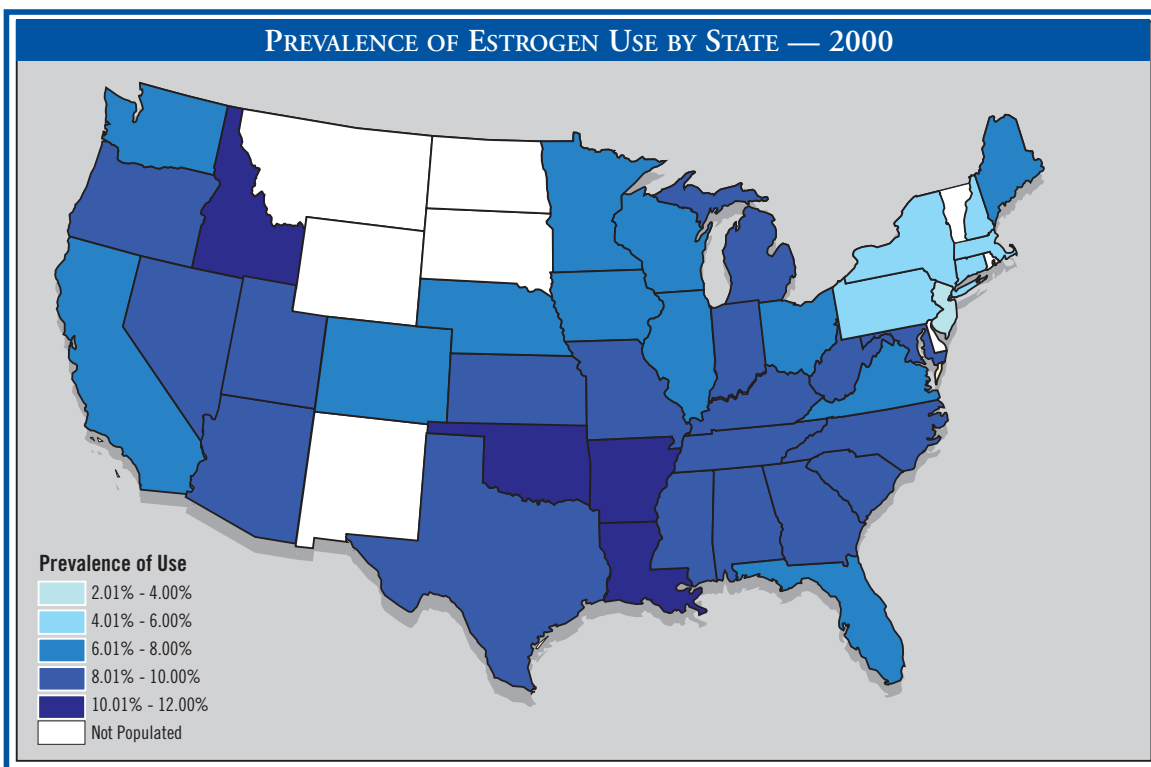
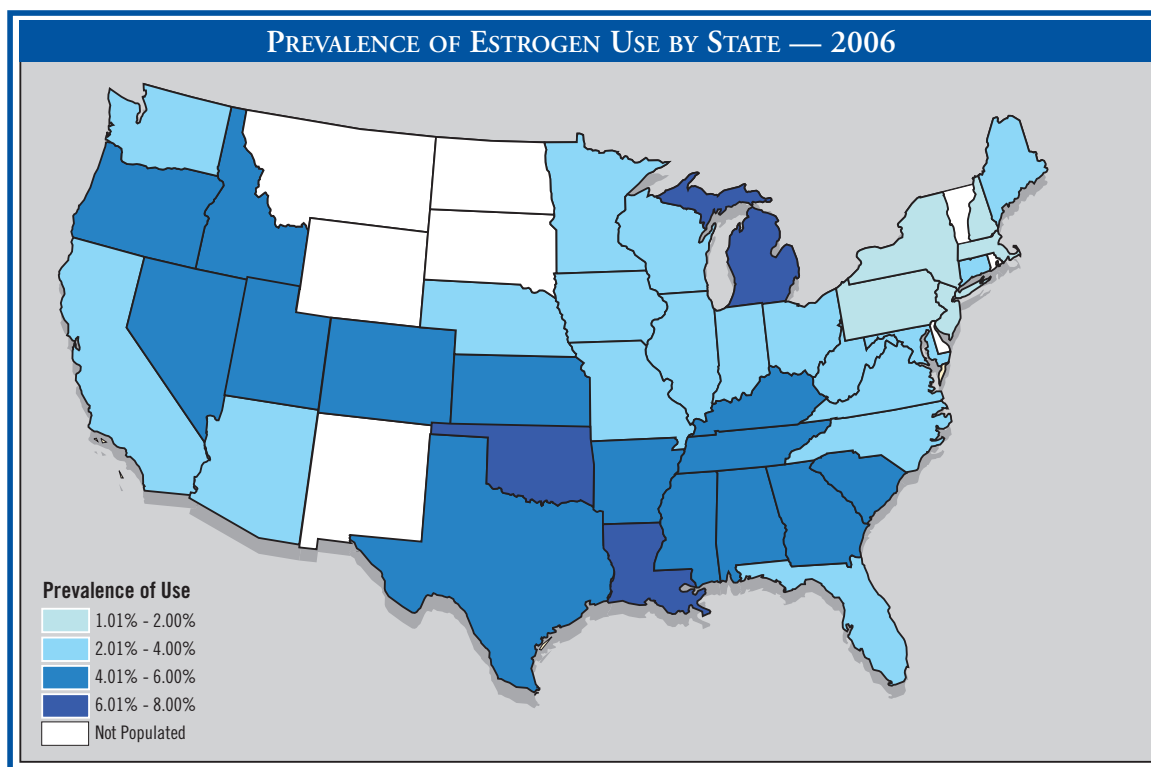


FIGURE 16



**Appendix A: Therapy Class Descriptions**

Therapy Class	Subclasses	First Two Digits of the Generic Product Identifier Code
Antihyperlipidemics	Bile Acid Sequestrants, Fibric Acid Derivatives, Intestinal Cholesterol Absorption Inhibitors, HMG CoA Reductase Inhibitors, Nicotinic Acid Derivatives, and Antihyperlipidemic Combination Products	39
Antidiabetics	Insulin, Antidiabetic Amylin Analog Symlin Incretin Mimetics, Sulfonylureas, Antidiabetic Amino Acid Derivatives, Biguanides, Meglitinide Analogues, Glucagon, Alpha-Glucosidase Inhibitors, Dipeptidyl Peptidase-4 (DPP-4) Inhibitor Insulin Sensitizing Agents, and Antidiabetic Combinations	27
Antihypertensives	Angiotensin Converting Enzyme (ACE) Inhibitors, Angiotensin II Receptor Antagonists (ARBs), and ACE/ARB Combinations	36
Gastrointestinal Medications	Antispasmodics, H-2 Antagonists, Ulcer Drug Prostaglandins, Proton Pump Inhibitors, Misc. Anti-Ulcer (Sucralfate), and Ulcer Therapy Combinations	49
Antidepressants	Alpha-2 Receptor Antagonists (Tetracyclics), Monoamine Oxidase Inhibitors (MAOIs), Modified Cyclics, Selective Serotonin Reuptake Inhibitors (SSRIs), Serotonin-Norepinephrine Reuptake Inhibitors (SNRIs), Tricyclic Agents, and Misc. Antidepressants (maprotiline and bupropion)	58
Analgesics/ Anti-Inflammatories	Nonsteroidal Anti-inflammatory Agents (NSAIDs), Gold Compounds, Antirheumatic Antimetabolites, Interleukin-1 Pyrimidine Synthesis Inhibitors, Analgesics/Anti-Inflammatory Combinations	66
Estrogen	Estrogen and Estrogen Combinations	24

**Appendix B: Age and Gender Adjusted Prevalence Rates: 2000 and 2006**

State	Sample Size		Overall		Antihyperlipidemics		Antidiabetics		Antihypertensives		Gastrointestinal Medications		Antidepressants		Analgesics/Anti-Inflammatories		Estrogens	
	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006
AL	5,759	9,241	62.06%	75.21%	4.90%	12.06%	3.47%	6.07%	9.49%	16.90%	10.30%	12.78%	9.88%	16.37%	16.94%	18.27%	9.74%	5.71%
AR	4,851	8,881	67.00%	76.36%	4.97%	10.59%	2.71%	5.65%	8.60%	14.99%	10.35%	12.21%	12.17%	17.17%	16.91%	15.02%	10.99%	5.72%
AZ	5,166	15,572	58.69%	71.19%	5.04%	10.96%	2.90%	5.19%	6.33%	11.37%	7.18%	8.41%	9.46%	13.23%	12.33%	13.93%	8.06%	3.99%
CA	24,159	66,350	57.88%	66.21%	4.84%	10.44%	2.36%	4.40%	5.39%	9.63%	6.67%	7.78%	7.26%	9.87%	12.96%	13.47%	7.39%	3.12%
CO	8,198	18,838	60.18%	71.92%	3.91%	10.84%	1.67%	3.85%	5.19%	9.82%	5.81%	7.92%	9.40%	14.21%	11.22%	10.60%	7.80%	4.07%
CT	12,681	26,443	63.01%	77.02%	5.20%	12.73%	2.62%	4.49%	6.28%	11.52%	6.92%	7.89%	8.39%	13.86%	15.83%	13.57%	5.43%	2.08%
FL	12,851	43,669	59.19%	72.77%	4.66%	12.72%	2.55%	4.93%	6.34%	12.49%	7.73%	9.93%	8.37%	12.47%	13.14%	14.35%	7.52%	3.10%
GA	25,134	28,029	61.16%	74.13%	5.26%	12.52%	3.15%	5.83%	8.72%	15.54%	9.40%	11.54%	9.80%	13.91%	17.29%	17.51%	8.87%	4.49%
IA	4,756	8,521	65.27%	71.90%	5.34%	11.27%	2.88%	4.32%	6.25%	10.35%	7.10%	8.44%	10.14%	15.03%	13.93%	12.67%	7.90%	2.68%
ID	2,869	3,532	66.16%	69.10%	4.03%	9.57%	2.29%	6.14%	5.50%	10.77%	7.38%	7.98%	12.11%	14.77%	14.09%	12.56%	10.43%	4.81%
IL	29,124	41,573	62.71%	71.28%	5.21%	11.84%	2.45%	4.41%	7.25%	11.40%	7.82%	9.58%	9.13%	12.17%	14.29%	14.08%	7.49%	2.60%
IN	27,614	27,096	65.65%	75.40%	5.76%	12.63%	2.93%	5.36%	7.76%	13.60%	9.09%	10.20%	11.99%	16.81%	16.66%	15.90%	8.06%	3.47%
KS	7,814	17,121	70.55%	77.77%	5.83%	12.38%	2.75%	5.18%	7.47%	12.84%	9.02%	9.85%	12.13%	15.80%	15.28%	12.83%	9.26%	5.78%
KY	5,304	14,374	68.98%	78.35%	6.57%	12.86%	2.79%	5.70%	8.34%	15.42%	11.07%	13.48%	12.95%	17.31%	18.13%	17.78%	9.25%	4.62%
LA	12,191	40,499	68.97%	79.58%	5.82%	12.68%	3.04%	5.68%	9.26%	15.81%	9.29%	12.23%	10.98%	17.14%	16.87%	16.36%	10.48%	6.32%
MA	14,455	29,674	65.93%	75.88%	5.26%	12.30%	2.16%	3.74%	5.69%	10.11%	7.27%	8.88%	10.11%	15.00%	14.99%	14.25%	5.26%	1.69%
MD	8,624	36,447	67.53%	75.06%	6.30%	13.08%	2.50%	5.47%	7.46%	13.98%	9.05%	10.93%	9.39%	12.97%	17.55%	17.80%	7.18%	2.33%
ME	3,071	2,057	67.78%	67.42%	6.11%	11.71%	2.18%	3.62%	6.48%	9.91%	8.23%	8.62%	14.40%	17.20%	12.01%	9.95%	7.02%	2.23%
MI	22,664	42,650	70.22%	76.42%	6.69%	13.75%	3.03%	5.27%	6.94%	12.62%	9.78%	12.57%	12.00%	16.10%	20.40%	20.30%	8.54%	3.20%
MN	4,351	20,264	60.52%	71.66%	4.71%	10.86%	2.45%	3.55%	4.85%	8.94%	5.64%	7.32%	10.26%	14.95%	10.71%	9.04%	6.55%	2.86%
MO	72,715	38,358	68.82%	75.71%	5.46%	12.08%	2.68%	5.43%	7.41%	13.11%	8.62%	10.61%	11.70%	16.70%	15.46%	14.55%	8.36%	3.84%
MS	6,121	9,056	65.23%	75.58%	5.30%	11.07%	3.37%	6.59%	9.53%	16.82%	10.74%	13.18%	11.23%	15.89%	17.36%	17.01%	9.92%	5.71%
NC	15,506	27,839	64.13%	75.01%	5.64%	12.52%	3.17%	5.68%	8.23%	14.48%	10.03%	11.05%	11.22%	15.09%	17.62%	17.06%	8.42%	3.79%
NE	2,460	5,489	63.70%	71.60%	5.31%	10.49%	3.41%	4.27%	7.57%	10.29%	7.57%	8.48%	11.03%	12.96%	14.03%	12.68%	7.47%	3.51%
NH	4,287	3,135	65.58%	74.94%	6.01%	12.33%	2.09%	3.58%	6.13%	10.25%	6.81%	8.87%	11.13%	16.73%	15.75%	13.63%	5.95%	1.71%
NJ	10,771	40,997	61.32%	71.08%	5.07%	11.86%	2.59%	4.51%	6.41%	11.91%	8.10%	10.14%	6.41%	9.59%	15.93%	15.02%	3.60%	1.30%
NV	5,483	9,685	62.35%	71.71%	4.54%	10.68%	2.37%	4.92%	5.83%	11.06%	7.67%	7.93%	9.84%	11.21%	16.89%	15.46%	9.02%	4.38%
NY	16,293	79,100	58.89%	69.67%	5.14%	10.93%	2.58%	4.20%	6.50%	10.36%	7.36%	9.38%	7.42%	9.14%	13.64%	13.47%	4.49%	1.16%
OH	22,280	39,803	64.13%	73.50%	5.75%	12.18%	3.03%	4.98%	7.81%	12.26%	8.95%	10.96%	10.19%	14.32%	17.17%	16.27%	7.42%	2.87%
OK	4,134	8,777	65.33%	76.28%	5.49%	11.91%	3.07%	5.42%	7.81%	14.16%	10.29%	12.05%	11.33%	16.50%	16.04%	16.41%	10.95%	6.19%
OR	1,746	7,659	58.41%	66.63%	4.35%	9.36%	1.95%	4.16%	5.49%	9.60%	6.48%	6.96%	9.99%	14.73%	11.46%	10.66%	8.29%	4.35%
PA	30,855	107,442	67.28%	74.14%	5.41%	12.33%	2.81%	4.28%	7.42%	12.08%	8.55%	10.35%	10.49%	13.88%	15.32%	14.32%	5.93%	1.89%
SC	4,170	17,296	64.62%	76.63%	6.07%	12.50%	3.49%	5.74%	9.99%	14.63%	10.44%	10.95%	10.72%	15.41%	17.45%	17.25%	9.11%	4.61%
TN	17,587	21,933	63.62%	76.02%	5.52%	12.82%	3.20%	6.39%	9.13%	15.63%	11.04%	12.96%	10.91%	15.97%	16.59%	17.94%	9.22%	4.78%
TX	29,809	66,042	64.30%	73.90%	5.94%	12.78%	3.40%	5.53%	7.88%	13.84%	8.62%	10.21%	9.63%	13.04%	14.87%	14.34%	9.06%	4.56%
UT	14,426	19,860	69.61%	74.98%	5.65%	10.46%	3.39%	5.48%	7.04%	11.50%	9.91%	10.80%	16.00%	18.36%	20.22%	19.79%	8.86%	4.98%
VA	9,064	24,398	64.56%	76.02%	5.01%	12.61%	3.52%	5.18%	8.02%	13.12%	8.60%	9.97%	9.75%	14.35%	16.18%	15.80%	6.55%	3.18%
WA	6,234	15,241	61.40%	68.75%	4.70%	10.48%	2.42%	3.76%	5.62%	10.31%	7.39%	8.48%	12.21%	14.67%	13.45%	11.85%	7.67%	3.94%
WI	5,159	27,356	58.66%	69.71%	4.69%	10.90%	2.54%	3.98%	6.17%	10.05%	6.07%	7.16%	8.47%	14.15%	12.95%	10.79%	6.26%	2.50%
WV	3,570	8,676	62.83%	74.73%	6.63%	13.31%	3.36%	5.36%	10.01%	15.81%	11.73%	13.52%	12.77%	16.57%	16.19%	17.24%	9.24%	3.72%
Min	1,746	2,057	57.88%	66.21%	3.91%	9.36%	1.67%	3.55%	4.85%	8.94%	5.64%	6.96%	6.41%	9.14%	10.71%	9.04%	3.60%	1.16%
Max	72,715	107,442	70.55%	79.58%	6.69%	13.75%	3.52%	6.59%	10.01%	16.90%	11.73%	13.52%	16.00%	18.36%	20.40%	20.30%	10.99%	6.32%

**Appendix C: Age and Gender Adjusted Per Member Per Year (PMPY) Utilization Rates: 2000 and 2006**

State	Overall		Antihyperlipidemics		Antidiabetics		Antihypertensives		Gastrointestinal Medications		Antidepressants		Analgesics/Anti-Inflammatories		Estrogen	
	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006	2000	2006
AL	10.44	16.36	0.85	1.52	0.38	0.75	0.85	1.52	0.52	0.77	0.58	1.16	0.50	0.50	0.75	0.43
AR	11.77	15.09	0.83	1.35	0.45	0.70	0.83	1.35	0.56	0.75	0.79	1.24	0.58	0.45	0.98	0.46
AZ	9.45	13.50	0.63	1.02	0.47	0.69	0.63	1.02	0.41	0.53	0.69	1.06	0.33	0.39	0.69	0.33
CA	8.76	11.37	0.52	0.87	0.41	0.58	0.52	0.87	0.32	0.42	0.52	0.79	0.34	0.31	0.65	0.25
CO	8.87	12.70	0.52	0.90	0.35	0.49	0.52	0.90	0.32	0.51	0.72	1.16	0.34	0.30	0.71	0.36
CT	9.97	13.83	0.62	1.07	0.48	0.61	0.62	1.07	0.36	0.47	0.60	1.13	0.41	0.30	0.48	0.17
FL	9.33	13.63	0.60	1.12	0.42	0.63	0.60	1.12	0.38	0.57	0.55	0.93	0.37	0.36	0.65	0.25
GA	10.74	14.81	0.84	1.42	0.44	0.68	0.84	1.42	0.49	0.69	0.62	1.06	0.48	0.45	0.74	0.36
IA	10.51	12.98	0.70	0.97	0.50	0.62	0.70	0.97	0.42	0.56	0.78	1.25	0.44	0.37	0.70	0.23
ID	9.82	12.83	0.58	1.00	0.39	0.76	0.58	1.00	0.46	0.48	0.88	1.24	0.43	0.36	0.95	0.40
IL	10.68	13.31	0.79	1.08	0.52	0.64	0.79	1.08	0.43	0.61	0.67	0.99	0.44	0.37	0.69	0.21
IN	11.66	15.29	0.82	1.32	0.54	0.71	0.82	1.32	0.52	0.67	0.82	1.31	0.55	0.46	0.72	0.30
KS	12.28	15.63	0.78	1.19	0.53	0.73	0.78	1.19	0.57	0.62	0.90	1.26	0.47	0.39	0.85	0.48
KY	12.76	19.02	0.88	1.66	0.58	0.85	0.88	1.66	0.63	0.87	0.84	1.48	0.61	0.60	0.82	0.44
LA	11.90	16.34	0.89	1.42	0.49	0.69	0.89	1.42	0.43	0.70	0.68	1.24	0.45	0.41	0.88	0.50
MA	10.26	13.98	0.62	0.97	0.54	0.55	0.62	0.97	0.42	0.57	0.76	1.26	0.38	0.33	0.50	0.14
MD	11.12	14.94	0.78	1.28	0.59	0.72	0.78	1.28	0.49	0.69	0.72	1.07	0.48	0.44	0.66	0.18
ME	10.91	12.12	0.68	0.94	0.64	0.54	0.68	0.94	0.50	0.55	1.13	1.42	0.38	0.29	0.67	0.16
MI	11.51	16.31	0.71	1.23	0.62	0.73	0.71	1.23	0.55	0.85	0.85	1.31	0.54	0.56	0.79	0.28
MN	8.96	12.50	0.51	0.85	0.51	0.51	0.51	0.85	0.33	0.48	0.78	1.28	0.28	0.26	0.63	0.24
MO	11.69	15.63	0.76	1.22	0.52	0.74	0.76	1.22	0.47	0.72	0.82	1.33	0.46	0.43	0.75	0.32
MS	11.79	15.41	0.90	1.46	0.44	0.79	0.90	1.46	0.54	0.75	0.69	1.07	0.49	0.45	0.83	0.44
NC	11.22	14.76	0.80	1.32	0.48	0.70	0.80	1.32	0.56	0.68	0.74	1.12	0.51	0.44	0.71	0.29
NE	11.06	12.96	0.81	1.01	0.51	0.61	0.81	1.01	0.46	0.54	0.79	1.03	0.48	0.38	0.69	0.30
NH	10.76	14.04	0.67	1.01	0.66	0.55	0.67	1.01	0.42	0.64	0.84	1.47	0.41	0.39	0.57	0.16
NJ	8.99	12.74	0.66	1.12	0.45	0.62	0.66	1.12	0.34	0.57	0.41	0.75	0.39	0.33	0.30	0.10
NV	10.00	12.86	0.56	0.98	0.42	0.60	0.56	0.98	0.40	0.47	0.66	0.83	0.49	0.38	0.78	0.35
NY	8.78	11.55	0.65	0.95	0.47	0.57	0.65	0.95	0.38	0.51	0.50	0.71	0.35	0.29	0.40	0.09
OH	10.87	14.46	0.81	1.19	0.54	0.70	0.81	1.19	0.51	0.72	0.68	1.11	0.51	0.46	0.65	0.24
OK	12.14	16.04	0.82	1.24	0.50	0.72	0.82	1.24	0.63	0.77	0.79	1.24	0.57	0.53	0.94	0.49
OR	9.58	12.54	0.60	0.90	0.51	0.57	0.60	0.90	0.37	0.46	0.80	1.20	0.37	0.29	0.79	0.37
PA	10.54	14.19	0.76	1.19	0.49	0.62	0.76	1.19	0.46	0.69	0.75	1.12	0.38	0.37	0.52	0.16
SC	11.72	15.22	0.96	1.33	0.50	0.69	0.96	1.33	0.55	0.63	0.69	1.15	0.51	0.47	0.76	0.38
TN	11.80	16.56	0.89	1.44	0.48	0.77	0.89	1.44	0.63	0.84	0.71	1.20	0.49	0.51	0.78	0.38
TX	11.18	14.21	0.78	1.24	0.52	0.67	0.78	1.24	0.43	0.60	0.67	0.98	0.44	0.36	0.79	0.37
UT	11.92	14.32	0.72	1.02	0.49	0.70	0.72	1.02	0.59	0.68	1.20	1.50	0.60	0.55	0.76	0.41
VA	10.43	15.34	0.76	1.26	0.47	0.70	0.76	1.26	0.45	0.65	0.66	1.17	0.41	0.40	0.57	0.26
WA	10.37	13.32	0.56	0.94	0.44	0.51	0.56	0.94	0.41	0.52	0.92	1.31	0.35	0.30	0.70	0.32
WI	9.45	12.75	0.67	0.99	0.48	0.59	0.67	0.99	0.39	0.48	0.68	1.19	0.39	0.32	0.62	0.21
WV	12.42	18.03	1.04	1.61	0.60	0.93	1.04	1.61	0.73	0.79	0.87	1.40	0.55	0.53	0.78	0.32
Min	8.76	11.37	0.51	0.85	0.35	0.49	0.51	0.85	0.32	0.42	0.41	0.71	0.28	0.26	0.30	0.09
Max	12.76	19.02	1.04	1.66	0.66	0.93	1.04	1.66	0.73	0.87	1.20	1.50	0.61	0.60	0.98	0.50