



PHPG

The Pacific Health Policy Group

**Utilization and Expenditure Analysis for
Dually Eligible SoonerCare Members with
Chronic Conditions**

Prepared for:

State of Oklahoma

Oklahoma Health Care Authority

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Overview

Oklahoma was one of eleven states selected by the Centers for Medicare and Medicaid Services (CMS) to participate in a demonstration project to develop and test integrated models of care for persons dually eligible for Medicare and Medicaid. The Oklahoma Health Care Authority (OHCA) is managing the demonstration, which has three components: a care management initiative for beneficiaries with chronic conditions; an Accountable Care Organization initiative in Tulsa; and expansion of the existing Cherokee PACE program to other sites throughout the state.

The Pacific Health Policy Group (PHPG) was retained by the OHCA to perform an analysis of Medicare and Medicaid paid claims data for SoonerCare beneficiaries (members), to identify chronic conditions to be targeted under the care management initiative. PHPG is a national consulting firm specializing in the development, implementation and evaluation of managed models of care for Medicaid and Medicare populations, including children and adults with special health care needs. PHPG currently is conducting a multi-year evaluation of an existing OHCA chronic care disease management program that targets Medicaid-only members (“SoonerCare Health Management Program”).

Analysis Populations

The utilization and expenditure analysis was conducted separately for four populations of dually eligible SoonerCare members with one or more chronic conditions:

1. Frail elderly and persons with physical disabilities enrolled in the *ADvantage* Home- and Community-Based Services (HCBS) waiver
2. Nursing facility residents
3. Persons with developmental disabilities, including those enrolled in the Developmental Disabilities Service Division (DDSD) waiver
4. “Target” group consisting of persons not falling into one of the first three categories.

PHPG isolated persons in the first three groups because these individuals receive some level of care management today. Although persons in these groups may benefit from enrollment in the care management initiative, the nature of the support they would receive would likely be oriented toward quality oversight and addressing gaps in their existing care management model.

Individuals in the fourth category are less likely to be receiving care management today (beyond what is provided through their medical home), unless they are enrolled in a Medicare Advantage plan. Even then, the care management is unlikely to be holistic, encompassing both Medicare and Medicaid services.

Analysis Conditions

Results are presented for beneficiary paid claims experience during calendar year 2009. Information is presented by diagnostic category for 41 chronic conditions. They include CMS-identified chronic conditions, as well as other conditions targeted under the SoonerCare Health Management Program.

Conditions are presented in alphabetical order, as listed below:

- | | | |
|--|-----------------------------|---|
| 1. Acute Myocardial Infarction | 14. Coronary Artery Disease | 29. Migraine Headaches |
| 2. ADHD | 15. Depression | 30. Multiple Sclerosis |
| 3. Alcohol Use Disorders and Complications | 16. Developmental Disorders | 31. Osteoporosis |
| 4. Alzheimer's Disease | 17. Diabetes | 32. Other Depressive Disorders ² |
| 5. Alzheimer's Related Diseases or Senility ¹ | 18. Endometrial Cancer | 33. Other Psychotic Disorders ³ |
| 6. Anxiety Disorders | 19. Female Breast Cancer | 34. Personality Disorders |
| 7. Asthma | 20. Glaucoma | 35. Prostate Cancer |
| 8. Atrial Fibrillation | 21. Heart Failure | 36. PTSD |
| 9. Bipolar Disorder | 22. Hip/Pelvic Fracture | 37. RA/OA |
| 10. Cataract | 23. HIV/AIDS | 38. Schizophrenia |
| 11. Chronic Kidney Disease | 24. Hyperlipidemia | 39. Stroke/TIA |
| 12. Colorectal Cancer | 25. Hypertension | 40. Substance Related Disorders |
| 13. COPD | 26. Ischemic Heart Disease | 41. Tobacco Use |
| | 27. Lower Back Pain | |
| | 28. Lung Cancer | |

The following data is presented for each condition:

- Inpatient admissions (regardless of admitting diagnoses)
- Outpatient visits
- Skilled nursing days
- Physician visits
- Aggregate expenditures (Medicare and Medicaid)
- Per Member Per Month (PMPM) expenditures

¹ Includes only members not also identified for diagnostic category 4, "Alzheimer's Disease"

² Includes only members not also identified for diagnostic category 15, "Depression"

³ Includes only members not also identified for diagnostic category 38, "Schizophrenia"

Methodology for Creation of Utilization/Expenditure Data Set

Analysis Steps

PHPG developed utilization/expenditure profiles using a dataset comprised of Medicare and Medicaid eligibility, utilization and expenditure data.

Medicare data was provided by CMS for calendar year (CY) 2009 from the Chronic Condition Warehouse (CCW); data only was provided for dually eligible members identified by the OHCA. The data was used to develop member-specific profiles relating to eligibility, diagnostic categories and annual Medicare utilization (inpatient, outpatient, skilled nursing, physician) and expenditures.

Medicaid data was obtained through claims extracts developed by the OHCA in December 2011 for dually eligible SoonerCare members. Data was provided for member experience from October 2008 through September 2011. The data was used to develop member-specific information relating to total annual Medicaid expenditures and diagnostic categories not available in the CCW data.⁴

PHPG also utilized Medicaid claims extracts previously provided by the OHCA to obtain category of service level detail. PHPG developed category of service-specific criteria to group members into the four populations analyzed in this report: *ADvantage* waiver participants, nursing facility residents, persons with developmental disabilities and the target (i.e., “all other”) population.⁵

The CCW data provided did not include any member identification information (e.g., social security number) that could directly link to member records in the Medicaid data; therefore, PHPG utilized the combination of date of birth and 9-digit zip code to match Medicare and Medicaid member-specific information across the two datasets. This matching process resulted in 78,115 successful matches, capturing approximately two-thirds of all dually eligible members.

⁴ The CCW data received by PHPG included only 21 chronic conditions identified by CMS at the time the data were created; however, an additional 13 chronic conditions have since been identified, for a total of 34 CCW-specific chronic condition cohorts. PHPG identified members for the initial 21 chronic condition cohorts directly from the CCW data extract. To identify members for the additional 13 cohorts, PHPG applied the CCW chronic condition definitions to the December 2011 Medicaid claims extracts received from the OHCA. For the remaining seven chronic conditions, beneficiaries were identified using definitions developed by PHPG. Definitions for all diagnostic categories can be found in Appendix A of this report.

⁵ PHPG did not have data available to categorize members definitively into the specified populations. Compared to recent enrollment reports, the member counts in this report appear to understate the number of nursing facility residents and persons with developmental disabilities. The larger counts reported in other sources (e.g., OHCA annual report) may include short term stay nursing facility residents and persons with developmental disabilities who have been wait listed for DDS waiver services. These persons are likely not receiving care management and therefore are appropriate for inclusion in the “target” category.

Finally, PHPG identified diagnostic categories within each population exhibiting above- and below-average utilization and expenditure rates. Rates were compared to the average calculated by evenly weighting the rates for each diagnostic category. PHPG categorized the results in the following ranges:

- 25 percent or more above the calculated average
- 11 – 24 percent above the calculated average
- Within 10 percent of the calculated average (above or below)
- 11 – 24 percent below the calculated average
- 25 percent or more below the calculated average

Diagnostic categories with data points in the “25 percent or more above the calculated average” range, and with significant aggregate dollar amounts, represent the most promising candidates for the care management initiative.

Presentation of Findings

Results are presented by population, starting on the following page. The target (“all other”_ population is presented first, followed by *ADvantage* waiver enrollees, nursing facility residents, persons with developmental disabilities and all groups combined.

The body of the report includes two exhibits for each population group. The first exhibit presents member/member month data and aggregate expenditure amounts. The second exhibit presents utilization and expenditure results, with data points falling above or below the average highlighted in red (above average) or green (below average).

The utilization/expenditure data also is presented in charts in Appendix B of the report.

Additional Notes

PHPG received a 2010 Medicare data set shortly before completing the analysis of 2009 data. Although there was not sufficient time to replicate the 2009 analysis, PHPG compared dollar amounts at the category of service level across the two data sets and found them to be very similar. It would be of value to update this analysis with 2010 data, to identify trends. However, PHPG does not believe that the results would differ materially.

The analysis findings are presented at the individual diagnosis level, but co-morbidities are common in this population. Over 67 percent had two or more chronic conditions and 29.5 percent had five or more. In addition, nearly half (45.9 percent) had some combination of physical and behavioral health co-morbidities. While PHPG did not perform a separate analysis

by co-morbidity, the relationship between conditions is often apparent in the findings. (For example, lung cancer and tobacco use both are conditions associated with above average utilization and expenditures.)

A holistic care management model will ultimately encompass more than the trigger condition resulting in a person's enrollment into the program. The high prevalence of behavioral health conditions also will influence the nature of the care management furnished to enrollees. In the SoonerCare Health Management Program, where a similarly high rate of co-morbidity exists, care managers often must address the member's behavioral health needs before seeking to improve their physical health and chronic care self-management skills.

Target Population

The target population included 48,423 members, or 62 percent of the dual eligibles included in the analysis. Total (Medicare and Medicaid) expenditures for the group exceeded \$740 million (see exhibit 1 on the following page).

A number of diagnostic categories were characterized by high PMPM spending, usually along with high rates of inpatient, outpatient, SNF and/or physician utilization. Members falling into these diagnostic categories (presented alphabetically below and in exhibit 2 on the second following page) likely represent promising candidates for care management:

- Acute Myocardial Infarction
- Chronic Kidney Disease
- Colorectal Cancer
- Coronary Artery Disease
- Heart Failure
- HIV/AIDS
- Lung Cancer
- Multiple Sclerosis
- Other Depressive Disorders
- Other Psychotic Disorders
- Personality Disorders
- Substance Related Disorders
- Tobacco Use

In some categories, the number of members and aggregate dollars are relatively low (though still accounting for millions of dollars). However, because of the high co-morbidity rate, identifying a member through one high cost condition will likely result in the member being managed for multiple conditions once enrolled in the program.

Exhibit 1 – Chronically Ill Dually Eligible SoonerCare Members: Target Population
Total Enrollment and Spending (CY 2009)

Diagnostic Category	Members	% of Total Members	Member Months	Total Medicare/Medicaid Spending
Acute Myocardial Infarction	377	0.8%	4,150	\$19,684,428
ADHD	412	0.9%	4,567	\$10,477,147
Alcohol Use Disorders & Complications	1,020	2.1%	11,393	\$31,099,553
Alzheimer's Disease	571	1.2%	6,139	\$6,539,349
Alzheimer's Related Diseases or Senility	1,137	2.3%	12,687	\$23,547,764
Anxiety Disorders	5,000	10.3%	56,737	\$138,386,181
Asthma	2,170	4.5%	24,850	\$59,668,554
Atrial Fibrillation	1,364	2.8%	15,598	\$36,131,726
Bipolar Disorder	2,632	5.4%	29,950	\$55,937,651
Cataract	4,014	8.3%	47,930	\$54,827,515
Chronic Kidney Disease	3,949	8.2%	43,727	\$215,236,051
Colorectal Cancer	236	0.5%	2,624	\$9,500,804
COPD	6,563	13.6%	75,898	\$156,981,779
Coronary Artery Disease	5,408	11.2%	61,791	\$222,152,718
Depression	6,128	12.7%	69,149	\$196,668,841
Developmental Disorders	460	0.9%	5,271	\$7,837,133
Diabetes	10,077	20.8%	117,452	\$219,246,210
Endometrial Cancer	38	0.1%	414	\$1,312,887
Female Breast Cancer	490	1.0%	5,730	\$11,528,802
Glaucoma	1,979	4.1%	23,616	\$23,520,042
Heart Failure	160	0.3%	1,752	\$6,633,537
Hip/Pelvic Fracture	10,085	20.8%	116,476	\$231,619,000
HIV/AIDS	224	0.5%	2,547	\$8,524,469
Hyperlipidemia	2,678	5.5%	30,758	\$48,712,782
Hypertension	12,536	25.9%	144,225	\$339,683,248
Ischemic Heart Disease	9,222	19.0%	108,791	\$167,485,224
Lower Back Pain	4,150	8.6%	47,659	\$109,548,939
Lung Cancer	307	0.6%	3,056	\$12,165,574
Migraine Headaches	803	1.7%	9,130	\$23,854,059
Multiple Sclerosis	143	0.3%	1,647	\$5,671,100
Osteoporosis	2,613	5.4%	30,864	\$38,237,515
Other Depressive Disorders	1,467	3.0%	14,451	\$62,268,729
Other Psychotic Disorders	489	1.0%	5,398	\$23,709,039
Personality Disorders	276	0.6%	3,152	\$12,394,691
Prostate Cancer	281	0.6%	3,282	\$6,251,226
PTSD	976	2.0%	10,965	\$23,936,754
RA/OA	8,283	17.1%	97,430	\$117,919,024
Schizophrenia	2,141	4.4%	24,771	\$30,728,134
Stroke/TIA	1,127	2.3%	12,692	\$40,131,464
Substance Related Disorders	1,376	2.8%	15,643	\$57,751,005
Tobacco Use	6,404	13.2%	72,233	\$241,120,826
Total (Unduplicated)	48,423	100.0%	550,730	\$742,405,173

Exhibit 2 – Chronically Ill Dually Eligible SoonerCare Members: Target Population
PMPM Expenditures and Utilization per 1,000 Members (CY 2009)

Diagnostic Category	PMPM Spending	Total IP Admissions	Total OP Visits	Total SNF Days	Total Physician Visits
Acute Myocardial Infarction	\$4,743	2,935	8,284	3,412	10,054
ADHD	\$2,294	1,030	6,645	1,109	7,226
Alcohol Use Disorders & Complications	\$2,730	1,331	6,351	1,126	6,670
Alzheimer's Disease	\$1,065	1,003	5,096	6,736	7,055
Alzheimer's Related Diseases or Senility	\$1,856	1,218	5,825	6,302	8,226
Anxiety Disorders	\$2,439	852	6,619	579	9,744
Asthma	\$2,401	793	6,537	707	10,324
Atrial Fibrillation	\$2,316	1,443	7,843	4,601	10,964
Bipolar Disorder	\$1,868	835	6,273	386	8,154
Cataract	\$1,144	421	5,127	778	8,299
Chronic Kidney Disease	\$4,922	1,538	9,292	3,796	9,741
Colorectal Cancer	\$3,621	1,335	8,451	2,021	11,492
COPD	\$2,068	1,207	6,689	1,951	9,888
Coronary Artery Disease	\$3,595	1,036	6,710	1,100	9,978
Depression	\$2,844	1,265	7,392	2,856	9,747
Developmental Disorders	\$1,487	587	4,198	1,211	5,359
Diabetes	\$1,867	746	6,292	1,572	8,802
Endometrial Cancer	\$3,171	1,217	8,551	1,304	11,101
Female Breast Cancer	\$2,012	708	8,469	1,879	11,981
Glaucoma	\$996	414	5,105	934	9,332
Heart Failure	\$3,786	2,836	6,164	21,719	7,959
Hip/Pelvic Fracture	\$1,989	896	6,443	1,758	9,492
HIV/AIDS	\$3,347	433	4,853	-	7,383
Hyperlipidemia	\$1,584	400	4,835	387	8,258
Hypertension	\$2,355	573	5,379	877	8,352
Ischemic Heart Disease	\$1,540	888	6,468	1,470	9,416
Lower Back Pain	\$2,299	658	6,801	640	10,757
Lung Cancer	\$3,981	1,889	9,510	1,076	13,025
Migraine Headaches	\$2,613	793	8,924	439	11,737
Multiple Sclerosis	\$3,443	743	5,851	1,246	8,503
Osteoporosis	\$1,239	714	5,994	1,986	9,989
Other Depressive Disorders	\$4,309	617	5,266	299	7,189
Other Psychotic Disorders	\$4,392	1,601	7,834	3,668	8,668
Personality Disorders	\$3,932	1,808	8,197	407	9,103
Prostate Cancer	\$1,905	589	6,113	1,682	10,271
PTSD	\$2,183	882	6,977	484	9,345
RA/OA	\$1,210	674	5,900	1,529	10,115
Schizophrenia	\$1,240	710	5,024	371	5,395
Stroke/TIA	\$3,162	1,731	7,596	6,734	10,088
Substance Related Disorders	\$3,692	1,504	7,598	745	9,275
Tobacco Use	\$3,338	941	6,808	521	8,628
Total (Unduplicated)	\$1,348	428	4,073	685	6,073

Above average 25%+

Above average 10 – 24%

Average

Below average 10 – 24%

Below average 25%+

ADvantage Waiver Participants

The *ADvantage Waiver* population included 17,807 members, or 23 percent of the dual eligibles included in the analysis. Total (Medicare and Medicaid) expenditures for the group was slightly under \$750 million (see exhibit 3 on the following page).

As noted earlier, care management for this population could consist of supplemental or wraparound management of services not addressed in the *ADvantage* care plan (to be coordinated with the *ADvantage* care manager) and quality oversight activities. The diagnostic categories representing promising candidates for some level of care management, based on PMPM spending and utilization activity include (see exhibit 4 on the second following page):

- Acute Myocardial Infarction
- ADHD
- Chronic Kidney Disease
- Colorectal Cancer
- Developmental Disorders
- Substance Related Disorders

Exhibit 3 – Chronically Ill Dually Eligible SoonerCare Members: ADvantage Waiver Participants
Total Enrollment and Spending (CY 2009)

Diagnostic Category	Members	% of Total Members	Member Months	Total Medicare/ Medicaid Spending
Acute Myocardial Infarction	319	1.8%	3,443	\$27,159,770
ADHD	256	1.4%	2,884	\$21,998,784
Alcohol Use Disorders & Complications	276	1.5%	3,075	\$14,343,353
Alzheimer's Disease	1,069	6.0%	12,083	\$39,074,311
Alzheimer's Related Diseases or Senility	1,480	8.3%	16,618	\$63,617,647
Anxiety Disorders	2,205	12.4%	25,265	\$124,149,531
Asthma	1,326	7.4%	15,188	\$67,590,300
Atrial Fibrillation	1,262	7.1%	14,420	\$59,229,815
Bipolar Disorder	812	4.6%	9,377	\$43,682,986
Cataract	2,057	11.6%	24,413	\$83,251,428
Chronic Kidney Disease	3,505	19.7%	38,885	\$250,310,559
Colorectal Cancer	148	0.8%	1,631	\$10,851,781
COPD	4,964	27.9%	56,318	\$224,952,606
Coronary Artery Disease	4,220	23.7%	48,161	\$243,291,423
Depression	6,164	34.6%	69,325	\$301,950,192
Developmental Disorders	1,793	10.1%	20,929	\$132,923,195
Diabetes	6,411	36.0%	73,478	\$305,836,161
Endometrial Cancer	23	0.1%	248	\$544,456
Female Breast Cancer	284	1.6%	3,251	\$12,656,956
Glaucoma	947	5.3%	11,201	\$31,777,364
Heart Failure	246	1.4%	2,729	\$13,097,782
Hip/Pelvic Fracture	7,397	41.5%	84,397	\$325,689,047
HIV/AIDS	81	0.5%	935	\$3,233,366
Hyperlipidemia	1,087	6.1%	12,649	\$52,685,460
Hypertension	7,152	40.2%	82,627	\$347,334,781
Ischemic Heart Disease	5,588	31.4%	64,879	\$244,857,017
Lower Back Pain	1,773	10.0%	20,553	\$82,274,178
Lung Cancer	257	1.4%	2,531	\$14,288,338
Migraine Headaches	200	1.1%	2,269	\$10,530,164
Multiple Sclerosis	216	1.2%	2,517	\$7,606,171
Osteoporosis	1,984	11.1%	23,069	\$81,034,190
Other Depressive Disorders	508	2.9%	5,357	\$29,594,791
Other Psychotic Disorders	724	4.1%	8,199	\$38,090,806
Personality Disorders	130	0.7%	1,513	\$6,942,028
Prostate Cancer	163	0.9%	1,834	\$6,115,202
PTSD	378	2.1%	4,322	\$21,508,505
RA/OA	6,049	34.0%	70,275	\$220,852,179
Schizophrenia	447	2.5%	5,151	\$21,350,051
Stroke/TIA	1,178	6.6%	13,472	\$62,507,755
Substance Related Disorders	451	2.5%	5,127	\$31,766,899
Tobacco Use	2,086	11.7%	23,659	\$127,244,033
Total (Unduplicated)	17,807	100.0%	202,190	\$749,839,047

**Exhibit 4 – Chronically Ill Dually Eligible SoonerCare Members: ADvantage Waiver Participants
PMPM Expenditures and Utilization per 1,000 Members (CY 2009)**

Diagnostic Category	PMPM Spending	Total IP Admissions	Total OP Visits	Total SNF Days	Total Physician Visits
Acute Myocardial Infarction	\$7,888	3,607	10,763	12,746	9,992
ADHD	\$7,628	1,423	5,996	4,448	8,189
Alcohol Use Disorders & Complications	\$4,665	2,029	8,121	6,291	9,026
Alzheimer's Disease	\$3,234	1,437	6,064	10,172	7,538
Alzheimer's Related Diseases or Senility	\$3,828	1,569	7,490	10,245	8,362
Anxiety Disorders	\$4,914	1,461	8,281	4,396	11,015
Asthma	\$4,450	1,408	7,861	3,270	11,694
Atrial Fibrillation	\$4,107	1,955	10,508	8,664	11,689
Bipolar Disorder	\$4,659	1,209	7,622	2,613	10,975
Cataract	\$3,410	954	7,516	3,438	10,347
Chronic Kidney Disease	\$6,437	2,089	10,552	8,253	10,674
Colorectal Cancer	\$6,653	2,045	10,381	5,592	12,979
COPD	\$3,994	1,742	8,416	5,806	10,867
Coronary Artery Disease	\$5,052	1,517	8,282	4,744	10,745
Depression	\$4,356	1,657	8,886	6,494	10,343
Developmental Disorders	\$6,351	326	2,820	415	5,911
Diabetes	\$4,162	1,318	8,281	4,890	10,173
Endometrial Cancer	\$2,195	726	10,984	2,081	12,000
Female Breast Cancer	\$3,893	1,266	10,217	3,503	13,532
Glaucoma	\$2,837	824	6,880	3,601	10,946
Heart Failure	\$4,799	3,219	9,098	26,467	8,733
Hip/Pelvic Fracture	\$3,859	1,415	8,358	5,456	10,250
HIV/AIDS	\$3,458	975	7,470	1,861	10,319
Hyperlipidemia	\$4,165	851	6,749	2,357	10,132
Hypertension	\$4,204	1,078	7,100	4,250	9,483
Ischemic Heart Disease	\$3,774	1,400	8,131	5,747	10,428
Lower Back Pain	\$4,003	1,231	8,729	3,674	12,677
Lung Cancer	\$5,645	2,328	11,061	6,747	13,920
Migraine Headaches	\$4,641	1,513	10,741	1,629	13,840
Multiple Sclerosis	\$3,022	806	5,306	2,322	7,070
Osteoporosis	\$3,513	1,360	8,046	7,147	10,648
Other Depressive Disorders	\$5,525	652	4,796	2,357	6,803
Other Psychotic Disorders	\$4,646	1,865	7,505	10,334	7,810
Personality Disorders	\$4,588	1,626	8,201	3,347	12,000
Prostate Cancer	\$3,334	1,400	9,409	3,919	11,490
PTSD	\$4,977	1,388	8,288	5,286	10,745
RA/OA	\$3,143	1,223	7,724	5,341	10,576
Schizophrenia	\$4,145	1,030	7,390	2,015	9,209
Stroke/TIA	\$4,640	2,070	8,864	11,750	10,140
Substance Related Disorders	\$6,196	2,289	9,484	4,995	13,023
Tobacco Use	\$5,378	1,669	8,795	3,917	10,921
Total (Unduplicated)	\$3,709	927	6,130	3,537	8,183

Above average 25%+

Above average 10 – 24%

Average

Below average 10 – 24%

Below average 25%+

Nursing Facility Residents

The nursing facility population included 10,685 members, or 14 percent of the dual eligibles included in the analysis. Total (Medicare and Medicaid) expenditures for the group was nearly \$600 million (see exhibit 5 on the following page).

As with the *ADvantage* population, care management for this group could consist of supplemental or wraparound management of services not addressed by the facility care plan (including transition back to the community) and quality oversight activities. The diagnostic categories representing promising candidates for some level of care management, based on PMPM spending and utilization activity include (see exhibit 6 on the second following page):

- Acute Myocardial Infarction
- Alcohol Use Disorders and Complications
- Asthma
- HIV/AIDS
- Substance Use Disorders
- Tobacco Use

Exhibit 5 – Chronically Ill Dually Eligible SoonerCare Members: Nursing Facility Residents
Total Enrollment and Spending (CY 2009)

Diagnostic Category	Members	% of Total Members	Member Months	Total Medicare/ Medicaid Spending
Acute Myocardial Infarction	186	1.7%	1,757	\$12,748,736
ADHD	286	2.7%	3,174	\$19,042,705
Alcohol Use Disorders & Complications	168	1.6%	1,803	\$25,656,681
Alzheimer's Disease	3,393	31.8%	35,994	\$155,438,820
Alzheimer's Related Diseases or Senility	3,132	29.3%	33,038	\$164,948,759
Anxiety Disorders	1,371	12.8%	15,131	\$109,291,248
Asthma	229	2.1%	2,560	\$28,472,136
Atrial Fibrillation	1,022	9.6%	10,977	\$56,937,034
Bipolar Disorder	552	5.2%	6,212	\$41,157,498
Cataract	1,665	15.6%	19,322	\$88,703,829
Chronic Kidney Disease	2,667	25.0%	26,930	\$179,095,138
Colorectal Cancer	84	0.8%	875	\$5,106,966
COPD	2,246	21.0%	24,158	\$146,402,118
Coronary Artery Disease	1,534	14.4%	16,509	\$135,610,210
Depression	4,823	45.1%	49,923	\$277,940,875
Developmental Disorders	454	4.2%	5,073	\$28,522,789
Diabetes	3,965	37.1%	42,014	\$234,083,133
Endometrial Cancer	6	0.1%	72	\$351,432
Female Breast Cancer	91	0.9%	1,030	\$5,209,786
Glaucoma	689	6.4%	7,912	\$38,886,176
Heart Failure	334	3.1%	3,636	\$21,683,771
Hip/Pelvic Fracture	4,424	41.4%	46,184	\$256,641,953
HIV/AIDS	18	0.2%	199	\$5,110,590
Hyperlipidemia	284	2.7%	3,210	\$21,960,863
Hypertension	3,927	36.8%	43,127	\$283,513,019
Ischemic Heart Disease	4,025	37.7%	45,118	\$235,614,726
Lower Back Pain	407	3.8%	4,589	\$29,390,967
Lung Cancer	88	0.8%	802	\$5,415,171
Migraine Headaches	22	0.2%	250	\$1,777,780
Multiple Sclerosis	129	1.2%	1,464	\$7,296,074
Osteoporosis	1,472	13.8%	16,503	\$79,425,116
Other Depressive Disorders	272	2.5%	2,902	\$17,972,584
Other Psychotic Disorders	1,014	9.5%	11,105	\$65,058,787
Personality Disorders	74	0.7%	864	\$5,227,710
Prostate Cancer	98	0.9%	1,049	\$5,367,214
PTSD	73	0.7%	811	\$6,204,097
RA/OA	3,454	32.3%	37,374	\$182,674,400
Schizophrenia	733	6.9%	8,264	\$46,920,172
Stroke/TIA	1,688	15.8%	18,549	\$106,268,113
Substance Related Disorders	111	1.0%	1,230	\$21,233,014
Tobacco Use	433	4.1%	4,716	\$54,695,942
Total (Unduplicated)	10,685	100.0%	112,872	\$596,809,419

**Exhibit 6 – Chronically Ill Dually Eligible SoonerCare Members: Nursing Facility Residents
PMPM Expenditures and Utilization per 1,000 Members (CY 2009)**

Diagnostic Category	PMPM Spending	Total IP Admissions	Total OP Visits	Total SNF Days	Total Physician Visits
Acute Myocardial Infarction	\$7,256	3,374	9,692	39,900	3,374
ADHD	\$6,000	2,223	8,941	23,565	1,679
Alcohol Use Disorders & Complications	\$14,230	1,677	8,313	19,295	2,463
Alzheimer's Disease	\$4,318	1,150	7,363	16,979	1,722
Alzheimer's Related Diseases or Senility	\$4,993	1,164	7,988	17,141	1,744
Anxiety Disorders	\$7,223	1,443	8,615	19,602	2,263
Asthma	\$11,122	1,917	10,434	24,994	3,319
Atrial Fibrillation	\$5,187	1,905	10,822	27,283	3,028
Bipolar Disorder	\$6,625	1,686	9,520	21,236	2,175
Cataract	\$4,591	982	7,373	16,216	2,034
Chronic Kidney Disease	\$6,650	2,161	9,947	28,473	2,591
Colorectal Cancer	\$5,837	1,673	11,904	22,025	3,593
COPD	\$6,060	2,004	9,502	27,721	2,638
Coronary Artery Disease	\$8,214	1,704	9,160	24,313	2,868
Depression	\$5,567	1,594	9,539	21,811	2,407
Developmental Disorders	\$5,622	1,008	8,279	13,930	1,417
Diabetes	\$5,572	1,467	9,117	20,663	2,341
Endometrial Cancer	\$4,881	667	8,333	8,500	2,667
Female Breast Cancer	\$5,058	1,258	7,689	20,167	3,146
Glaucoma	\$4,915	1,006	6,962	17,167	2,465
Heart Failure	\$5,964	2,627	9,099	55,323	2,855
Hip/Pelvic Fracture	\$5,557	1,582	9,164	22,858	2,560
HIV/AIDS	\$25,681	1,447	8,503	18,874	4,704
Hyperlipidemia	\$6,841	1,125	7,054	16,374	2,546
Hypertension	\$6,574	1,226	7,690	18,364	2,095
Ischemic Heart Disease	\$5,222	1,448	8,674	21,649	2,363
Lower Back Pain	\$6,405	1,540	8,747	21,061	3,514
Lung Cancer	\$6,752	2,693	11,521	21,456	4,309
Migraine Headaches	\$7,111	1,584	11,760	22,224	4,944
Multiple Sclerosis	\$4,984	1,197	7,533	13,279	2,156
Osteoporosis	\$4,813	1,233	8,462	19,449	2,384
Other Depressive Disorders	\$6,193	657	3,391	8,708	1,241
Other Psychotic Disorders	\$5,859	1,420	8,468	20,502	1,733
Personality Disorders	\$6,051	1,972	11,361	14,583	2,708
Prostate Cancer	\$5,117	2,105	11,153	27,924	4,301
PTSD	\$7,650	2,353	12,326	27,965	3,536
RA/OA	\$4,888	1,300	8,627	20,858	2,539
Schizophrenia	\$5,678	1,275	7,607	17,047	1,391
Stroke/TIA	\$5,729	1,566	8,974	23,657	2,053
Substance Related Disorders	\$17,263	2,868	11,366	29,034	5,307
Tobacco Use	\$11,598	2,293	10,117	24,471	3,387
Total (Unduplicated)	\$5,287	1,102	7,441	16,151	1,892

Above average 25%+

Above average 10 – 24%

Average

Below average 10 – 24%

Below average 25%+

Persons with Developmental Disabilities

Persons with developmental disabilities accounted for 1,200 members, or about two percent of the dual eligibles included in the analysis. Total (Medicare and Medicaid) expenditures for the group were over \$92 million (see exhibit 7 on the following page).

As with the *ADvantage* population, care management for this group could consist of supplemental or wraparound management of services not addressed by the DDSD waiver care plan and quality oversight activities. The diagnostic categories representing promising candidates for some level of care management, based on PMPM spending and utilization activity include (see exhibit 8 on the second following page):

- Chronic Kidney Disease
- Hip/Pelvic Fracture
- Lung Cancer
- Other Psychotic Disorders
- Personality Disorders

Exhibit 7 – Chronically Ill Dually Eligible SoonerCare Members: DD Individuals
Total Enrollment and Spending (CY 2009)

Diagnostic Category	Members	% of Total Members	Member Months	Total Medicare/Medicaid Spending
Acute Myocardial Infarction	1	0.1%	12	\$72,315
ADHD	184	15.3%	2,140	\$11,800,402
Alcohol Use Disorders & Complications	3	0.3%	36	\$187,128
Alzheimer's Disease	23	1.9%	268	\$1,442,877
Alzheimer's Related Diseases or Senility	60	5.0%	691	\$4,237,430
Anxiety Disorders	194	16.2%	2,246	\$12,619,237
Asthma	23	1.9%	268	\$1,995,215
Atrial Fibrillation	6	0.5%	59	\$329,896
Bipolar Disorder	214	17.8%	2,502	\$13,288,317
Cataract	211	17.6%	2,522	\$13,403,623
Chronic Kidney Disease	55	4.6%	604	\$4,628,664
Colorectal Cancer	3	0.3%	30	\$143,479
COPD	40	3.3%	455	\$3,462,887
Coronary Artery Disease	24	2.0%	272	\$1,937,956
Depression	103	8.6%	1,133	\$8,238,391
Developmental Disorders	1,011	84.3%	11,739	\$68,628,929
Diabetes	177	14.8%	2,046	\$11,146,517
Endometrial Cancer				
Female Breast Cancer	6	0.5%	72	\$491,976
Glaucoma	74	6.2%	881	\$3,463,817
Heart Failure	1	0.1%	12	\$62,468
Hip/Pelvic Fracture	71	5.9%	782	\$6,217,314
HIV/AIDS	1	0.1%	12	\$8,424
Hyperlipidemia	38	3.2%	440	\$2,459,308
Hypertension	207	17.3%	2,426	\$15,766,093
Ischemic Heart Disease	313	26.1%	3,705	\$18,489,942
Lower Back Pain	18	1.5%	216	\$890,070
Lung Cancer	1	0.1%	4	\$33,762
Migraine Headaches	3	0.3%	36	\$207,676
Multiple Sclerosis				
Osteoporosis	104	8.7%	1,247	\$9,331,037
Other Depressive Disorders	19	1.6%	164	\$1,176,339
Other Psychotic Disorders	148	12.3%	1,739	\$25,072,621
Personality Disorders	23	1.9%	256	\$2,091,233
Prostate Cancer	4	0.3%	48	\$289,037
PTSD	49	4.1%	573	\$2,999,774
RA/OA	64	5.3%	742	\$4,118,376
Schizophrenia	164	13.7%	1,923	\$9,692,911
Stroke/TIA	11	0.9%	126	\$606,034
Substance Related Disorders	3	0.3%	33	\$207,856
Tobacco Use	41	3.4%	481	\$2,435,181
Total (Unduplicated)	1,200	100.0%	13,937	\$92,656,620

**Exhibit 8 – Chronically Ill Dually Eligible SoonerCare Members: DD Individuals
PMPM Expenditures and Utilization per 1,000 Members (CY 2009)**

Diagnostic Category	PMPM Spending	Total IP Admissions	Total OP Visits	Total SNF Days	Total Physician Visits
Acute Myocardial Infarction	\$6,026	1,000	14,000	-	3,000
ADHD	\$5,514	477	9,381	56	3,381
Alcohol Use Disorders & Complications	\$5,198	667	5,000	-	3,667
Alzheimer's Disease	\$5,384	358	8,418	-	6,493
Alzheimer's Related Diseases or Senility	\$6,132	521	7,919	2,327	4,671
Anxiety Disorders	\$5,619	481	7,699	1,122	4,018
Asthma	\$7,445	896	17,418	582	6,224
Atrial Fibrillation	\$5,591	1,627	8,949	-	8,949
Bipolar Disorder	\$5,311	499	10,341	1,247	3,794
Cataract	\$5,315	314	8,555	333	4,049
Chronic Kidney Disease	\$7,663	1,073	8,940	1,947	5,901
Colorectal Cancer	\$4,783	800	3,200	5,200	7,200
COPD	\$7,611	1,345	13,240	290	5,881
Coronary Artery Disease	\$7,125	971	8,426	265	6,265
Depression	\$7,271	921	10,973	2,351	4,597
Developmental Disorders	\$5,846	333	8,090	359	3,632
Diabetes	\$5,448	457	8,933	628	4,721
Endometrial Cancer					
Female Breast Cancer	\$6,833	833	22,167	-	11,500
Glaucoma	\$3,932	191	6,756	-	2,792
Heart Failure	\$5,206	2,000	42,000	66,000	3,000
Hip/Pelvic Fracture	\$7,951	859	8,716	844	5,985
HIV/AIDS	\$702	-	9,000	-	15,000
Hyperlipidemia	\$5,589	300	7,800	-	4,855
Hypertension	\$6,499	450	9,824	663	5,392
Ischemic Heart Disease	\$4,991	470	8,071	878	4,389
Lower Back Pain	\$4,121	333	8,889	-	6,667
Lung Cancer	\$8,440	3,000	3,000	-	15,000
Migraine Headaches	\$5,769	-	6,000	-	12,000
Multiple Sclerosis					
Osteoporosis	\$7,483	452	10,047	106	3,926
Other Depressive Disorders	\$7,173	732	6,805	-	6,512
Other Psychotic Disorders	\$14,418	359	12,442	-	2,029
Personality Disorders	\$8,169	375	7,641	-	4,641
Prostate Cancer	\$6,022	500	10,000	-	9,250
PTSD	\$5,235	754	8,921	2,052	5,969
RA/OA	\$5,550	825	7,633	210	6,954
Schizophrenia	\$5,041	568	10,696	1,117	3,551
Stroke/TIA	\$4,810	952	12,857	-	3,714
Substance Related Disorders	\$6,299	1,818	6,909	-	3,636
Tobacco Use	\$5,063	998	9,555	-	5,588
Total (Unduplicated)	\$6,648	311	7,928	302	3,568

Above average 25%+

Above average 10 – 24%

Average

Below average 10 – 24%

Below average 25%+

Total Chronic Condition Dual Population

Exhibit 9 below summarizes expenditures and utilization for the four dual eligible groups and for the analysis population as a whole. PMPM expenditures for the target group were below the average for the total analysis population. However, the target group also is the least managed of the four, meaning that care management could have the greatest relative impact on expenditures and utilization.

**Exhibit 9 – Chronically Ill Dually Eligible SoonerCare Members
Summary Comparison of Enrollment, Expenditures and Utilization Rates (CY 2009)**

Population	Chronically Ill Dual Eligibles	Medicare Member Months	Total Medicare/Medicaid Spending	PMPM Spending	Total IP Admissions per 1,000	Total OP Visits per 1,000	Total SNF Days per 1,000	Total Physician Visits per 1,000
Target	48,423	550,730	\$742,405,173	\$1,348	428	4,073	685	6,073
ADvantage	17,807	202,190	\$749,839,047	\$3,709	927	6,130	3,537	8,183
Nursing Facility	10,685	112,872	\$596,809,419	\$5,287	1,102	7,441	16,151	1,892
DD	1,200	13,937	\$92,656,620	\$6,648	311	7,928	302	3,568
TOTAL (Unduplicated)	78,115	879,729	\$2,181,710,259	\$2,480	627	5,039	3,319	5,982

Exhibits 10 and 11 on the following two pages present information by diagnostic category for the analysis population as a whole. While the care management model should likely segment the target population from other groups, the information is useful in identifying the costliest conditions across the entire chronic condition duals eligible population. They are (in alphabetical order):

- Acute Myocardial Infarction
- ADHD
- Chronic Kidney Disease
- Colorectal Cancer
- Developmental Disorders
- Heart Failure
- Lung Cancer
- Other Psychotic Disorders
- Substance Related Disorders

**Exhibit 10 – Chronically Ill Dually Eligible SoonerCare Members: All Members
Total Enrollment and Spending (CY 2009)**

Diagnostic Category	Members	% of Total Members	Member Months	Total Medicare/ Medicaid Spending
Acute Myocardial Infarction	883	1.1%	9,362	\$59,665,249
ADHD	1,138	1.5%	12,765	\$63,319,037
Alcohol Use Disorders & Complications	1,467	1.9%	16,307	\$71,286,715
Alzheimer's Disease	5,056	6.5%	54,484	\$202,495,357
Alzheimer's Related Diseases or Senility	5,809	7.4%	63,034	\$256,351,600
Anxiety Disorders	8,770	11.2%	99,379	\$384,446,198
Asthma	3,748	4.8%	42,866	\$157,726,205
Atrial Fibrillation	3,654	4.7%	41,054	\$152,628,471
Bipolar Disorder	4,210	5.4%	48,041	\$154,066,451
Cataract	7,947	10.2%	94,187	\$240,186,396
Chronic Kidney Disease	10,176	13.0%	110,146	\$649,270,412
Colorectal Cancer	471	0.6%	5,160	\$25,603,030
COPD	13,813	17.7%	156,829	\$531,799,390
Coronary Artery Disease	11,186	14.3%	126,733	\$602,992,307
Depression	17,218	22.0%	189,530	\$784,798,299
Developmental Disorders	3,718	4.8%	43,012	\$237,912,046
Diabetes	20,630	26.4%	234,990	\$770,312,021
Endometrial Cancer	67	0.1%	734	\$2,208,775
Female Breast Cancer	871	1.1%	10,083	\$29,887,521
Glaucoma	3,689	4.7%	43,610	\$97,647,398
Heart Failure	741	0.9%	8,129	\$41,477,559
Hip/Pelvic Fracture	21,977	28.1%	247,839	\$820,167,314
HIV/AIDS	324	0.4%	3,693	\$16,876,849
Hyperlipidemia	4,087	5.2%	47,057	\$125,818,413
Hypertension	23,822	30.5%	272,405	\$986,297,142
Ischemic Heart Disease	19,148	24.5%	222,493	\$666,446,909
Lower Back Pain	6,348	8.1%	73,017	\$222,104,154
Lung Cancer	653	0.8%	6,393	\$31,902,845
Migraine Headaches	1,028	1.3%	11,685	\$36,369,678
Multiple Sclerosis	488	0.6%	5,628	\$20,573,346
Osteoporosis	6,173	7.9%	71,683	\$208,027,858
Other Depressive Disorders	2,266	2.9%	22,874	\$111,012,444
Other Psychotic Disorders	2,375	3.0%	26,441	\$151,931,252
Personality Disorders	503	0.6%	5,785	\$26,655,661
Prostate Cancer	546	0.7%	6,213	\$18,022,679
PTSD	1,476	1.9%	16,671	\$54,649,131
RA/OA	17,850	22.9%	205,821	\$525,563,980
Schizophrenia	3,485	4.5%	40,109	\$108,691,268
Stroke/TIA	4,004	5.1%	44,839	\$209,513,365
Substance Related Disorders	1,941	2.5%	22,033	\$110,958,774
Tobacco Use	8,964	11.5%	101,089	\$425,495,983
Total (Unduplicated)	78,115	100.0%	879,729	\$2,181,710,259

**Exhibit 11 – Chronically Ill Dually Eligible SoonerCare Members: All Members
Per Member Expenditures and Utilization (CY 2009)**

Diagnostic Category	PMPM Spending	Total IP Admissions	Total OP Visits	Total SNF Days	Total Physician Visits
Acute Myocardial Infarction	\$6,373	3,262	9,467	13,688	8,769
ADHD	\$4,960	1,323	7,528	7,271	5,420
Alcohol Use Disorders & Complications	\$4,372	1,500	6,899	4,106	6,643
Alzheimer's Disease	\$3,717	1,193	6,825	14,232	3,636
Alzheimer's Related Diseases or Senility	\$4,067	1,275	7,421	12,979	4,826
Anxiety Disorders	\$3,868	1,088	7,370	4,458	8,799
Asthma	\$3,680	1,079	7,307	3,065	10,365
Atrial Fibrillation	\$3,718	1,747	9,577	12,086	9,094
Bipolar Disorder	\$3,207	1,000	7,168	3,561	7,705
Cataract	\$2,550	672	6,299	4,623	7,431
Chronic Kidney Disease	\$5,895	1,882	9,895	11,393	8,301
Colorectal Cancer	\$4,962	1,614	9,616	6,560	10,598
COPD	\$3,391	1,523	7,761	7,300	9,111
Coronary Artery Disease	\$4,758	1,306	7,630	5,507	9,335
Depression	\$4,141	1,493	8,526	9,177	8,001
Developmental Disorders	\$5,531	440	5,071	2,091	4,691
Diabetes	\$3,278	1,051	7,442	6,015	8,040
Endometrial Cancer	\$3,009	997	9,351	2,272	10,578
Female Breast Cancer	\$2,964	945	9,051	4,257	11,575
Glaucoma	\$2,239	622	5,931	4,545	8,369
Heart Failure	\$5,102	2,870	8,515	38,409	5,928
Hip/Pelvic Fracture	\$3,309	1,200	7,609	6,946	8,447
HIV/AIDS	\$4,570	624	5,725	1,488	8,006
Hyperlipidemia	\$2,674	570	5,529	2,004	8,340
Hypertension	\$3,621	828	6,306	4,667	7,678
Ischemic Heart Disease	\$2,995	1,144	7,427	6,799	8,197
Lower Back Pain	\$3,042	874	7,472	2,775	10,830
Lung Cancer	\$4,990	2,164	10,373	5,877	12,287
Migraine Headaches	\$3,113	947	9,329	1,135	12,001
Multiple Sclerosis	\$3,656	889	6,045	4,857	6,211
Osteoporosis	\$2,902	1,037	7,293	7,634	8,345
Other Depressive Disorders	\$4,853	631	4,929	1,846	6,339
Other Psychotic Disorders	\$5,746	1,525	8,301	12,564	5,053
Personality Disorders	\$4,608	1,722	8,646	3,275	8,708
Prostate Cancer	\$2,901	1,084	7,967	6,760	9,615
PTSD	\$3,278	1,080	7,644	3,120	9,309
RA/OA	\$2,554	975	7,024	6,335	8,886
Schizophrenia	\$2,710	861	6,132	4,054	4,972
Stroke/TIA	\$4,673	1,762	8,562	15,223	6,762
Substance Related Disorders	\$5,036	1,763	8,246	3,312	9,917
Tobacco Use	\$4,209	1,175	7,440	2,431	8,906
Total (Unduplicated)	\$2,480	627	5,039	3,319	5,982

Above average 25%+

Above average 10 – 24%

Average

Below average 10 – 24%

Below average 25%+

Appendix A: Diagnostic Category Descriptions

Diagnostic Category	Reference Time Period (# of years)	Valid ICD-9/CPT4/HCPCS Codes ¹	Number/Type of Claims to Qualify ²	Exclusions	Identified in CCW Data	CCW Criteria Applied by PHPG to Medicaid Claims Data	PHPG Criteria Applied to Medicaid Claims Data
Acute Myocardial Infarction	1 year	DX 410.01,410.11,410.21, 410.31, 410.41, 410.51, 410.61, 410.71,410.81, 410.91 (ONLY first or second DX on the claim)	At least 1 inpatient claim with DX codes during the 1-yr period		✓		
ADHD	2 years	DX 312.00, 312.01, 312.02, 312.03, 312.10, 312.11, 312.12, 312.13, 312.20, 312.21, 312.22, 312.23, 312.30, 312.31, 312.32, 312.33, 312.34, 312.35, 312.39, 312.4, 312.81, 312.82, 312.89, 312.9, 313.81, 314.00, 314.01, 314.1, 314.2, 314.8, 314.9	At least 1 inpatient claim or two other non-drug claims of any service type			✓	
Alcohol Use Disorders and Complications	2 years	DX 291.0, 291.1, 291.2, 291.3, 291.4, 291.5, 291.81, 291.82, 291.89, 291.9, 303.00, 303.01, 303.02, 303.03, 303.90, 303.91, 303.92, 303.93, 305.00, 305.01, 305.02, 305.03, 357.5, 425.5, 535.30, 535.31, 571.0, 571.1, 571.2, 571.3, 760.71, 980.0, V65.42, V79.1, 94.62, 94.68	At least 1 inpatient claim or 2 other non-drug claims of any service type or 1 procedure code claim of any type (i.e., 94.62, 94.68) and there must be at least 1 qualifying claim without a screening code (i.e., V65.42, V79.1)			✓	
Alzheimer's Disease	3 years	DX 331.0 (any DX on the claim)	At least 1 inpatient, SNF, HHA, HOP or Carrier claim with DX codes during the 3-yr period		✓		

Utilization & Expenditure Profiles of Dually Eligible SoonerCare Members with Chronic Conditions

Diagnostic Category	Reference Time Period (# of years)	Valid ICD-9/CPT4/HCPCS Codes ¹	Number/Type of Claims to Qualify ²	Exclusions	Identified in CCW Data	CCW Criteria Applied by PHPG to Medicaid Claims Data	PHPG Criteria Applied to Medicaid Claims Data
Alzheimer's Related Diseases or Senility	3 years	DX 331.0, 331.1, 331.11, 331.19,331.2, 331.7, 290.0, 290.10,290.11, 290.12, 290.13,290.20, 290.21,290.3, 290.40, 290.41,290.42, 290.43, 294.0, 294.1, 294.10,294.11, 294.8, 797 (any DX on the claim)	At least 1 inpatient, SNF, HHA HOP or Carrier claim with DX codes during the 3-yr period	Members identified in "Alzheimer's Disease" diagnostic category	✓		
Anxiety Disorders	2 years	DX 293.84, 300.00, 300.01, 300.02, 300.09, 300.10, 300.20, 300.21, 300.22, 300.23, 300.29, 300.3, 300.5, 300.89, 300.9, 308.0, 308.1, 308.2, 308.3, 308.4, 308.9, 309.81, 313.0, 313.1, 313.21, 313.22, 313.3, 313.82, 313.83	At least 1 inpatient claim or two other non-drug claims of any service type			✓	
Asthma	3 years	DX 493.XX	At least 1 claim of any type with DX codes during 3-year time period				✓
Atrial Fibrillation	1 year	DX 427.31 (ONLY first or second DX on the claim)	At least 1 inpatient claim or 2 HOP or Carrier claims with DX code during the 1-yr period		✓		
Bipolar Disorder	2 years	DX 296.00, 296.01, 296.02, 296.03, 296.04, 296.05, 296.06, 296.10, 296.11, 296.12, 296.13, 296.14, 296.15, 296.16, 296.40, 296.41, 296.42, 296.43, 296.44, 296.45, 296.46, 296.50, 296.51, 296.52, 296.53, 296.54, 296.55, 296.56, 296.60, 296.61, 296.62, 296.63, 296.64, 296.65, 296.66, 296.7, 296.80, 296.81, 296.82, 296.89, 296.90, 296.99, 301.13	At least 1 inpatient claim or two other non-drug claims of any service type			✓	

Utilization & Expenditure Profiles of Dually Eligible SoonerCare Members with Chronic Conditions

Diagnostic Category	Reference Time Period (# of years)	Valid ICD-9/CPT4/HCPSC Codes ¹	Number/Type of Claims to Qualify ²	Exclusions	Identified in CCW Data	CCW Criteria Applied by PHPG to Medicaid Claims Data	PHPG Criteria Applied to Medicaid Claims Data
Cataract	1 year	DX 366.01,366.02,366.03, 366.04, 366.09, 366.10, 366.12, 366.13,366.14, 366.15, 366.16,366.17,366.18,366.19, 366.20, 366.21,366.22, 366.23, 366.30,366.32, 366.33,366.34, 366.41, 366.42,366.43, 366.44, 366.45,366.46, 366.50,366.51, 366.52, 366.53,366.8, 366.9, 379.26, 379.31, 379.39,743.31, 743.32, 743.33,996.53,V43.1, (ONLY principal DX on the claim)	At least 1 HOP or Carrier claim with DX codes during the 1-yr period		✓		
Chronic Kidney Disease	2 years	DX 016.00,016.01,016.02, 016.03, 016.04, 016.05, 016.06, 095.4,189.0, 189.9, 223.0, 236.91, 249.40, 249.41, 250.40, 250.41,250.42,250.43, 271.4, 274.10, 283.11, 403.01, 403.11, 403.91, 404.02,404.03, 404.12, 404.13,404.92, 404.93,440.1, 442.1, 572.4, 580.0,580.4, 580.81, 580.89, 580.9, 581.0, 581.1, 581.2, 581.3, 581.81,581.89, 581.9, 582.0, 582.1, 582.2, 582.4, 582.81, 582.89, 582.9,583.0, 583.1, 583.2, 583.4, 583.6,583.7, 583.81, 583.89, 583.9,584.5, 584.6, 584.7, 584.8, 584.9,585, 585.1, 585.2, 585.3, 585.4,585.5, 585.6, 585.9, 586, 587,588.0, 588.1, 588.81, 588.89, 588.9,591, 753.12, 753.13, 753.14, 753.15, 753.16, 753.17, 753.19, 753.20,753.21, 753.22, 753.23,753.29, 794.4 (any DX on the claim)	At least 1 inpatient, SNF or HHA claim or 2 HOP or Carrier claims with DX codes during the 2-yr period		✓		

Utilization & Expenditure Profiles of Dually Eligible SoonerCare Members with Chronic Conditions

Diagnostic Category	Reference Time Period (# of years)	Valid ICD-9/CPT4/HCPCS Codes ¹	Number/Type of Claims to Qualify ²	Exclusions	Identified in CCW Data	CCW Criteria Applied by PHPG to Medicaid Claims Data	PHPG Criteria Applied to Medicaid Claims Data
Chronic Obstructive Pulmonary Disease (COPD)	1 year	DX 491.0, 491.1, 491.20, 491.21, 491.22, 491.8, 491.9, 492.0, 492.8, 494.0, 494.1, 496 (any DX on the claim)	At least 1 inpatient, SNF, HHA or 2 HOP or Carrier claims with DX codes during the 1-yr period		✓		
Colorectal Cancer	1 year	DX 153.0, 153.1, 153.2, 153.3, 153.4, 153.5, 153.6, 153.7, 153.8, 153.9, 154.0, 154.1, 230.3, 230.4 (any DX on the claim)	At least 1 inpatient or 2 HOP or Carrier claims with DX codes during the 1-year time period		✓		
Coronary Artery Disease	3 years	DX 410.XX, 411.XX, 412.XX, 413.XX, 414.0X, 414.8X, 414.9X, V4581, V4582	At least 1 claim of any type with DX codes during 3-year time period				✓
Depression	1 year	DX 296.20, 296.21, 296.22, 296.23, 296.24, 296.25, 296.26, 296.30, 296.31, 296.32, 296.33, 296.34, 296.35, 296.36, 296.50, 296.51, 296.52, 296.53, 296.54, 296.55, 296.56, 296.60, 296.61, 296.62, 296.63, 296.64, 296.65, 296.66, 296.89, 298.0, 300.4, 309.1, 311 (any DX on the claim)	At least 1 inpatient, SNF, HHA, HOP or Carrier claim with DX codes during the 1-yr period		✓		
Developmental Disorders	2 years	DX 299.00, 299.01, 299.10, 299.80, 299.81, 299.90, 299.91, 307.2, 307.21, 307.22, 307.23, 315.00, 315.01, 315.02, 315.09, 315.1, 315.2, 315.31, 315.32, 315.34, 315.35, 315.39, 315.4, 315.5, 315.8, 315.9, 317, 318.0, 318.1, 318.2, 319	At least 1 inpatient claim or two other non-drug claims of any service type			✓	

Utilization & Expenditure Profiles of Dually Eligible SoonerCare Members with Chronic Conditions

Diagnostic Category	Reference Time Period (# of years)	Valid ICD-9/CPT4/HCPSC Codes ¹	Number/Type of Claims to Qualify ²	Exclusions	Identified in CCW Data	CCW Criteria Applied by PHPG to Medicaid Claims Data	PHPG Criteria Applied to Medicaid Claims Data
Diabetes	2 years	DX 249.00, 249.01, 249.10, 249.11, 249.20, 249.21, 249.30, 249.31, 249.40, 249.41, 249.50, 249.51, 249.60, 249.61, 249.70, 249.71, 249.80, 249.81, 249.90, 249.91, 250.00, 250.01, 250.02, 250.03, 250.10, 250.11, 250.12, 250.13, 250.20, 250.21, 250.22, 250.23, 250.30, 250.31, 250.32, 250.33, 250.40, 250.41, 250.42, 250.43, 250.50, 250.51, 250.52, 250.53, 250.60, 250.61, 250.62, 250.63, 250.70, 250.71, 250.72, 250.73, 250.80, 250.81, 250.82, 250.83, 250.90, 250.91, 250.92, 250.93, 357.2, 362.01, 362.02, 366.41 (any DX on the claim)	At least 1 inpatient, SNF or HHA claim or 2 HOP or Carrier claims with DX codes during the 2-yr period		✓		
Endometrial Cancer	1 year	DX 182.0, 182.1, 182.8, 233.2 (any DX on the claim)	At least 1 inpatient or 2 HOP or Carrier claims with DX codes during the 1-year time period		✓		
Female Breast Cancer**	1 year	DX 174.0, 174.1, 174.2, 174.3, 174.4, 174.5, 174.6, 174.8, 174.9, 233.0 (any DX on the claim)	At least 1 inpatient or 2 HOP or Carrier claims with DX codes during the 1-year time period		✓		
Glaucoma	1 year	DX 362.85, 364.55, 365.00, 365.01, 365.02, 365.03, 365.04, 365.10, 365.11, 365.12, 365.15, 365.20, 365.21, 365.22, 365.23, 365.24, 365.41, 365.61, 365.89, 365.9, 366.31, 377.14, V80.1 (ONLY principalDX on the claim)	At least 1 Carrier claim with DX codes during the 1-yr period		✓		

Utilization & Expenditure Profiles of Dually Eligible SoonerCare Members with Chronic Conditions

Diagnostic Category	Reference Time Period (# of years)	Valid ICD-9/CPT4/HCPCS Codes ¹	Number/Type of Claims to Qualify ²	Exclusions	Identified in CCW Data	CCW Criteria Applied by PHPG to Medicaid Claims Data	PHPG Criteria Applied to Medicaid Claims Data
Heart Failure	2 years	DX 398.91, 402.01, 402.11, 402.91, 404.01, 404.11, 404.91, 404.03, 404.13, 404.93, 428.0, 428.1, 428.20, 428.21, 428.22, 428.23, 428.30, 428.31, 428.32, 428.33, 428.40, 428.41, 428.42, 428.43, 428.9 (any DX on the claim)	At least 1 inpatient, HOP or Carrier claim with DX codes during the 2-yr period		✓		
Hip/Pelvic Fracture	1 year	DX 733.98, 808.0, 808.1, 808.2, 808.3, 808.41, 808.42, 808.43, 808.49, 808.51, 808.52, 808.53, 808.59, 808.8, 808.9, 820.00, 820.01, 820.02, 820.03, 820.09, 820.10, 820.11, 820.12, 820.13, 820.19, 820.20, 820.21, 820.22, 820.30, 820.31, 820.32, 820.8, 820.9 (any DX on the claim)	At least 1 inpatient claim with DX code during the 1-yr period		✓		
HIV/AIDS	2 years	DX 042, 042.0, 042.1, 042.2, 042.9, 043.0, 043.1, 043.2, 043.3, 043.9, 044.0, 044.9, 079.53, 279.10, 279.19, 795.71, V08	At least 1 inpatient claim or two other non-drug claims of any service type or one drug claim and there must be at least one qualifying claim without a screening code (i.e., V08)			✓	
Hyperlipidemia	3 years	DX 272.2X, 272.4X	At least 1 claim of any type with DX codes during 3-year time period				✓
Hypertension	3 years	DX 401.XX, 402.XX, 403.XX, 404.00, 404.01, 404.03, 404.1X, 404.90	At least 1 claim of any type with DX codes during 3-year time period				✓

Utilization & Expenditure Profiles of Dually Eligible SoonerCare Members with Chronic Conditions

Diagnostic Category	Reference Time Period (# of years)	Valid ICD-9/CPT4/HCPCS Codes ¹	Number/Type of Claims to Qualify ²	Exclusions	Identified in CCW Data	CCW Criteria Applied by PHPG to Medicaid Claims Data	PHPG Criteria Applied to Medicaid Claims Data
Ischemic Heart Disease	2 years	DX 410.00, 410.01, 410.02, 410.10, 410.11, 410.12, 410.20, 410.21, 410.22, 410.30, 410.31, 410.32, 410.40, 410.41, 410.42, 410.50, 410.51, 410.52, 410.60, 410.61, 410.62, 410.70, 410.71, 410.72, 410.80, 410.81, 410.82, 410.90, 410.91, 410.92, 411.0, 411.1, 411.81, 411.89, 412, 413.0, 413.1, 413.9, 414.00, 414.01, 414.02, 414.03, 414.04, 414.05, 414.06, 414.07, 414.10, 414.11, 414.12, 414.19, 414.2, 414.3, 414.8, 414.9 Proc 00.66, 36.01, 36.02, 36.03, 36.04, 36.05, 36.06, 36.07, 36.09, 36.10, 36.11, 36.12, 36.13, 36.14, 36.15, 36.16, 36.17, 36.19, 36.2, 36.31, 36.32 HCPCS 33510, 33511, 33512, 33513, 33514, 33516, 33517, 33518, 33519, 33521, 33522, 33523, 33533, 33534, 33535, 33536, 33542, 33545, 33548, 92975, 92977, 92980, 92982, 92995, 33140, 33141 (any DX, PROC or HCPCS on the claim)	At least 1 inpatient, SNF, HHA, HOP or Carrier claim with DX, Procedure or HCPC codes during the 2-yr period		✓		
Lower Back Pain	3 years	DX 724.2X	At least 1 claim of any type with DX codes during 3-year time period				✓
Lung Cancer	1 year	DX 162.0, 162.2, 162.3, 162.4, 162.5, 162.8, 162.9, 231.2 (any DX on the claim)	At least 1 inpatient or 2 HOP or Carrier claims with DX codes during the 1-yeartime period		✓		

Utilization & Expenditure Profiles of Dually Eligible SoonerCare Members with Chronic Conditions

Diagnostic Category	Reference Time Period (# of years)	Valid ICD-9/CPT4/HCPCS Codes ¹	Number/Type of Claims to Qualify ²	Exclusions	Identified in CCW Data	CCW Criteria Applied by PHPG to Medicaid Claims Data	PHPG Criteria Applied to Medicaid Claims Data
Migraine Headaches	3 years	DX 346.XX	At least 1 claim of any type with DX codes during 3-year time period				✓
Multiple Sclerosis	3 years	DX 340.XX	At least 1 claim of any type with DX codes during 3-year time period				✓
Osteoporosis	1 year	DX 733.00, 733.01, 733.02, 733.03, 733.09 (any DX on the claim)	At least 1 inpatient, HOP or Carrier claim with DX code during the 1-yr period		✓		
Other Depressive Disorders	2 years	DX 293.83, 296.20, 296.21, 296.22, 296.23, 296.24, 296.25, 296.26, 296.30, 296.31, 296.32, 296.33, 296.34, 296.35, 296.36, 300.4, 300.5, 311, 313.1, V79.0	At least 1 inpatient claim or two other non-drug claims of any service type and there must be at least one qualifying claim without a screening code (i.e., V79.0)	Members identified in "Depression" diagnostic category		✓	

Utilization & Expenditure Profiles of Dually Eligible SoonerCare Members with Chronic Conditions

Diagnostic Category	Reference Time Period (# of years)	Valid ICD-9/CPT4/HCPSC Codes ¹	Number/Type of Claims to Qualify ²	Exclusions	Identified in CCW Data	CCW Criteria Applied by PHPG to Medicaid Claims Data	PHPG Criteria Applied to Medicaid Claims Data
Other Psychotic Disorders	2 years	DX 293.81, 293.82, 295.00, 295.01, 295.02, 295.03, 295.04, 295.05, 295.10, 295.11, 295.12, 295.13, 295.14, 295.15, 295.20, 295.21, 295.22, 295.23, 295.24, 295.25, 295.30, 295.31, 295.32, 295.34, 295.35, 295.40, 295.41, 295.42, 295.43, 295.44, 295.45, 295.51, 295.52, 295.53, 295.54, 295.55, 295.60, 295.61, 295.62, 295.63, 295.64, 295.65, 295.70, 295.71, 295.72, 295.73, 295.74, 295.75, 295.80, 295.81, 295.82, 295.83, 295.84, 295.85, 295.90, 295.92, 295.93, 295.94, 295.95, 297.0, 297.1, 297.2, 297.3, 297.8, 297.9, 298.0, 298.1, 298.2, 298.3, 298.4, 298.8, 298.9	At least 1 inpatient claim or two other non-drug claims of any service type	Members identified in "Schizophrenia" diagnostic category		✓	
Personality Disorders	2 years	DX 310.0, 301.10, 301.11, 301.12, 301.13, 301.20, 301.21, 301.22, 301.3, 301.4, 301.50, 301.51, 301.59, 301.6, 301.7, 301.81, 301.82, 301.83, 301.84, 301.89, 301.9	At least 1 inpatient claim or two other non-drug claims of any service type			✓	
Prostate Cancer	1 year	DX 185, 233.4 (any DX on the claim)	At least 1 inpatient or 2 HOP or Carrier claims with DX codes during the 1-yeartime period		✓		
PTSD	2 years	DX 308.0, 308.2, 308.3, 308.4, 308.9, 309.0, 309.1, 309.24, 309.28, 309.29, 309.3, 309.4, 309.81, 309.82, 309.83, 309.89	At least 1 inpatient claim or two other non-drug claims of any service type			✓	

Utilization & Expenditure Profiles of Dually Eligible SoonerCare Members with Chronic Conditions

Diagnostic Category	Reference Time Period (# of years)	Valid ICD-9/CPT4/HCPSC Codes ¹	Number/Type of Claims to Qualify ²	Exclusions	Identified in CCW Data	CCW Criteria Applied by PHPG to Medicaid Claims Data	PHPG Criteria Applied to Medicaid Claims Data
RA/OA (Rheumatoid Arthritis/ Osteoarthritis)	2 years	DX 714.0, 714.1, 714.2, 714.30, 714.31, 714.32, 714.33, 715.00, 715.04, 715.09, 715.10, 715.11, 715.12, 715.13, 715.14, 715.15, 715.16, 715.17, 715.18, 715.20, 715.21, 715.22, 715.23, 715.24, 715.25, 715.26, 715.27, 715.28, 715.30, 715.31, 715.32, 715.33, 715.34, 715.35, 715.36, 715.37, 715.38, 715.80, 715.89, 715.90, 715.98 (any DX on the claim)	At least 2 inpatient, SNF, HHA, HOP or Carrier claims with DX codes during the 2-yr period Any combination of claims at least one day apart.		✓		
Schizophrenia	2 years	DX 295.00, 295.01, 295.02, 295.03, 295.04, 295.05, 295.10, 295.11, 295.12, 295.13, 295.14, 295.15, 295.20, 295.21, 295.22, 295.23, 295.24, 295.25, 295.30, 295.31, 295.32, 295.34, 295.35, 295.40, 295.41, 295.42, 295.43, 295.44, 295.45, 295.51, 295.52, 295.53, 295.54, 295.55, 295.60, 295.61, 295.62, 295.63, 295.64, 295.65, 295.70, 295.71, 295.72, 295.73, 295.74, 295.75, 295.80, 295.81, 295.82, 295.83, 295.84, 295.85, 295.90, 295.92, 295.93, 295.94, 295.95	At least 1 inpatient claim or two other non-drug claims of any service type			✓	
Stroke / Transient Ischemic Attack (TIA)	1 year	DX 430, 431, 434.00, 434.01, 434.10, 434.11, 434.90, 434.91, 435.0, 435.1, 435.3, 435.8, 435.9, 436, 997.02 (any DX on the claim)	At least 1 inpatient claim or 2 HOP or Carrier claims with DX codes during the 1-yr period	If any of the qualifying claims have: 800 <= DX Code <= 804.9, 850 <= DX Code <= 854.1 in any DX position OR DX V57XX as the principal DX code, then EXCLUDE.	✓		

Utilization & Expenditure Profiles of Dually Eligible SoonerCare Members with Chronic Conditions

Diagnostic Category	Reference Time Period (# of years)	Valid ICD-9/CPT4/HCPSC Codes ¹	Number/Type of Claims to Qualify ²	Exclusions	Identified in CCW Data	CCW Criteria Applied by PHPG to Medicaid Claims Data	PHPG Criteria Applied to Medicaid Claims Data
Substance Related Disorders	2 years	DX 292.0, 292.11, 292.12, 292.2, 292.81, 292.82, 292.83, 292.84, 292.85, 292.89, 304.00, 304.01, 304.02, 304.03, 304.10, 304.11, 304.12, 304.13, 304.20, 304.21, 304.22, 304.23, 304.30, 304.31, 304.32, 304.33, 304.40, 304.41, 304.42, 304.43, 304.50, 304.51, 304.52, 304.53, 304.60, 304.61, 304.62, 304.63, 304.70, 304.71, 304.72, 304.73, 304.80, 304.81, 304.82, 304.83, 304.90, 304.91, 304.92, 304.93, 305.20, 305.21, 305.22, 305.23, 305.30, 305.31, 305.32, 305.33, 305.40, 305.41, 305.42, 305.43, 305.50, 305.51, 305.52, 305.53, 305.60, 305.61, 305.62, 305.63, 305.70, 305.71, 305.72, 305.73, 305.80, 305.81, 305.82, 305.83, 305.90, 305.91, 305.92, 305.93, 648.30, 648.31, 648.32, 648.33, 648.34, 655.50, 655.51, 655.53, 760.72, 760.73, 760.75, 965.00, 965.01, 965.02, 965.09, V65.42, 94.65, 94.68	At least 1 inpatient claim or two other non-drug claims of any service type or one procedure code claim of any type (i.e., 94.65, 94.68) and there must be at least one qualifying claim without a screening code (i.e., 65.42)			✓	
Tobacco Use	2 years	DX 305.1, 649.00, 649.01, 649.03, 649.04, 989.84, 99406, 99407	At least 1 inpatient claim or two other non-drug claims of any service type or one procedure code claim of any type (i.e., 99406, 99407)			✓	

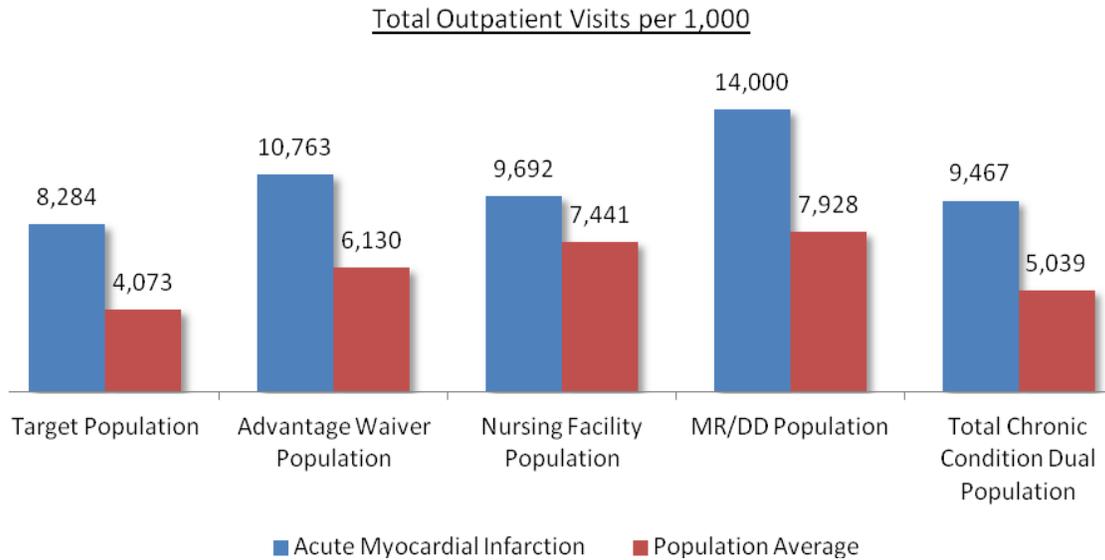
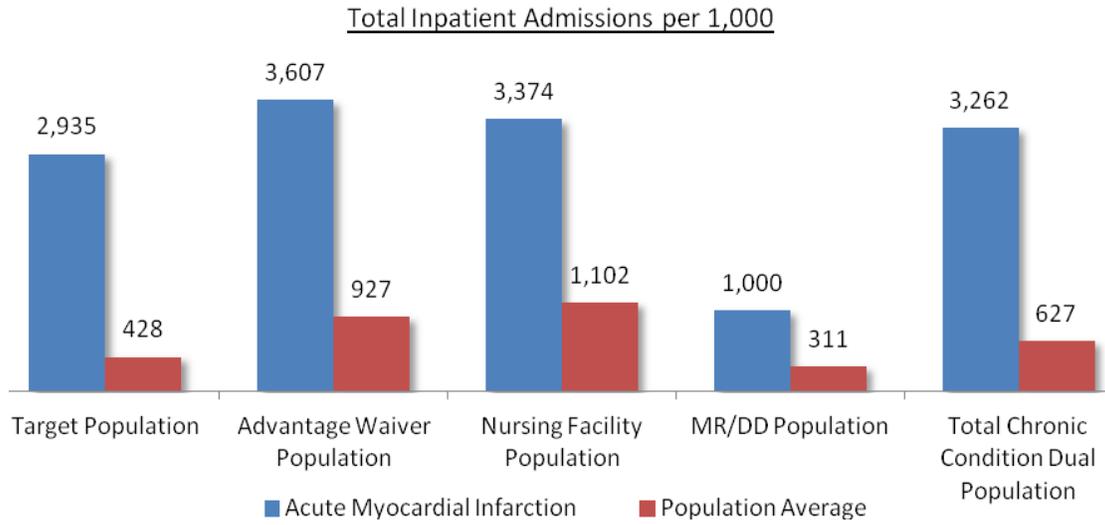
Footnotes on following page.

Appendix A Footnotes:

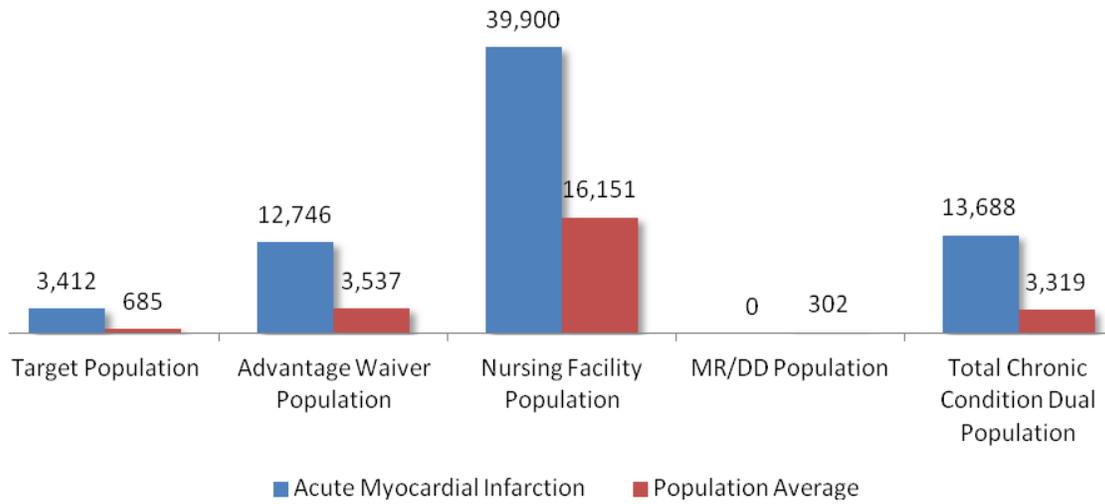
- ¹ For diagnostic categories identified in CCW data: Effective dates of these codes vary. Researchers may be interested in confirming the code(s) of interest in accompanying claims or assessment data files.
- ² For diagnostic categories identified in CCW data: Carrier claims refers to RIC "O" claims (not DMERC RIC "M" claims), and excludes any claims for which line item Berenson-Eggers Type of Service [BETOS] variable equals D1A, D1B, D1C, D1D, D1E, D1F, D1G, or O1A. The categories with D1 in the first two positions are DME categories. The O1A category includes ambulance services. The intent of the algorithm is to exclude claims where the services do not require a licensed health care professional. SNF refers to skilled nursing facility; HHA refers to home health agency; HOP refers to hospital outpatient.
- **The diagnosis codes included in this definition are for female breast cancer only (male breast cancer codes are not included). Researchers may be interested in confirming gender with the accompanying beneficiary data file due to the potential miscoding of diagnosis codes.

Appendix B: Utilization and Expenditure Charts by Diagnostic Category

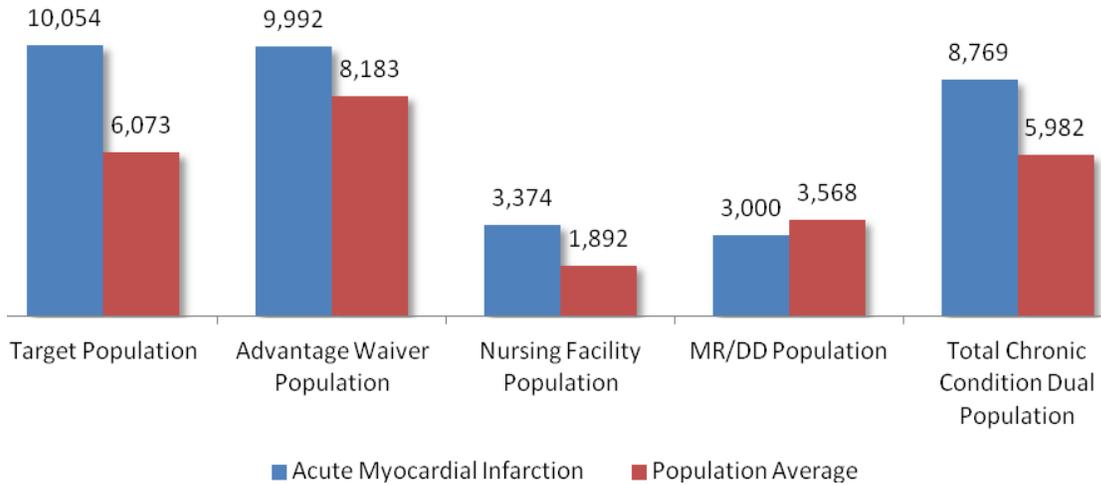
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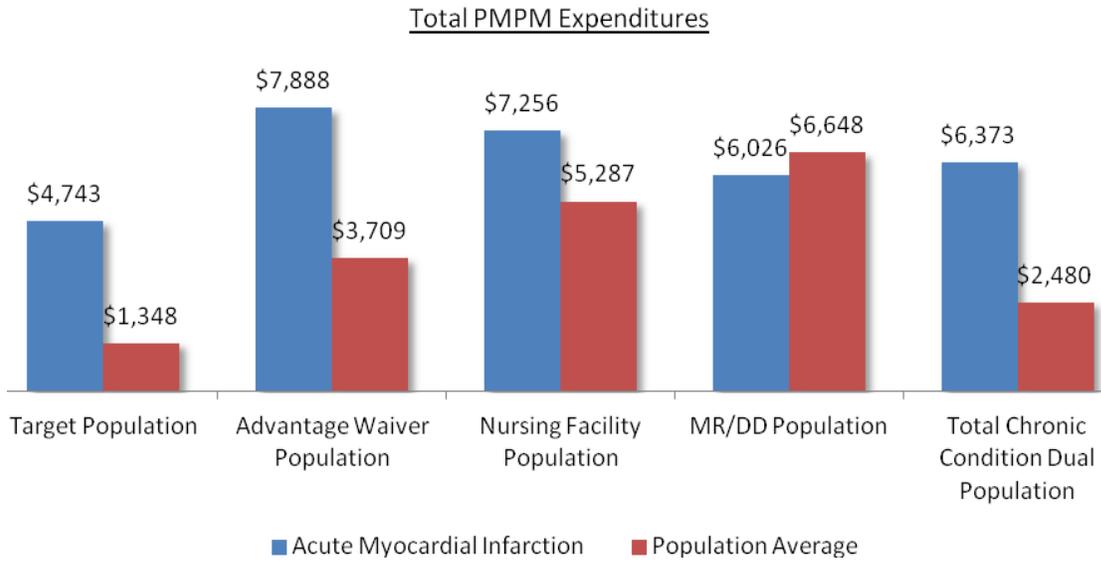


Total Skilled Nursing Days per 1,000

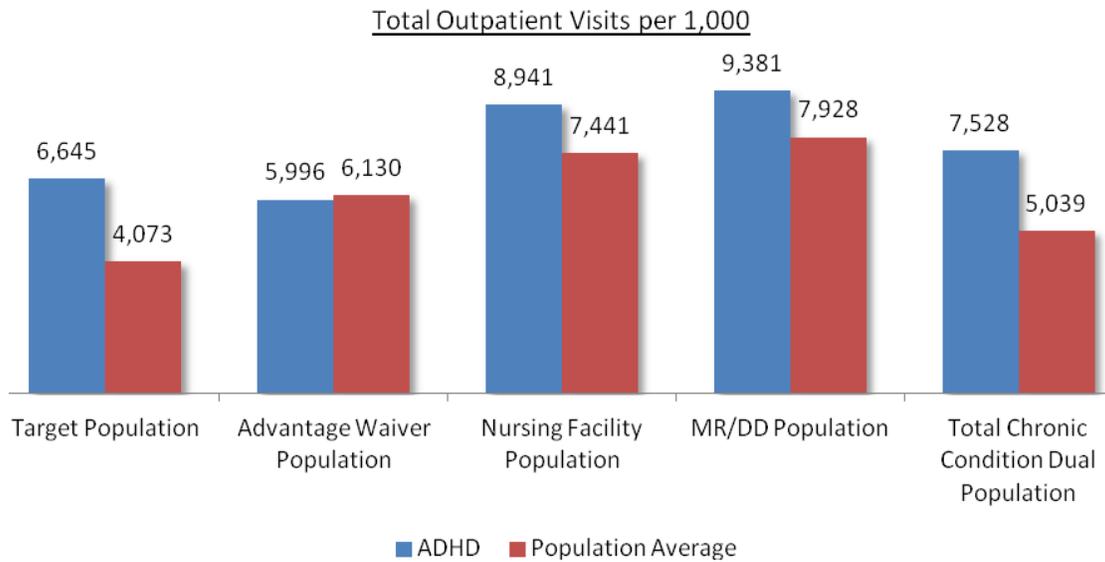
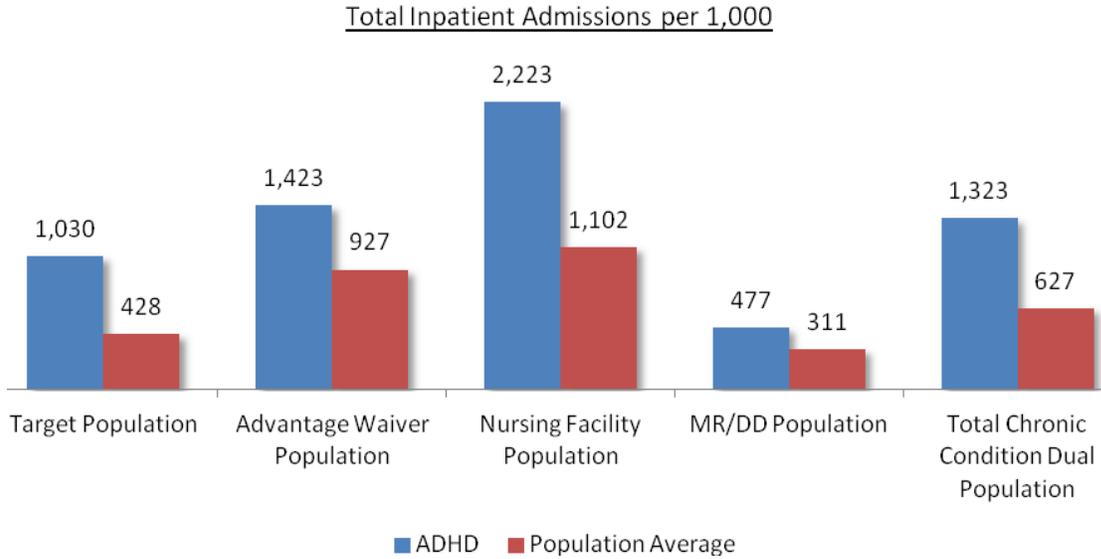


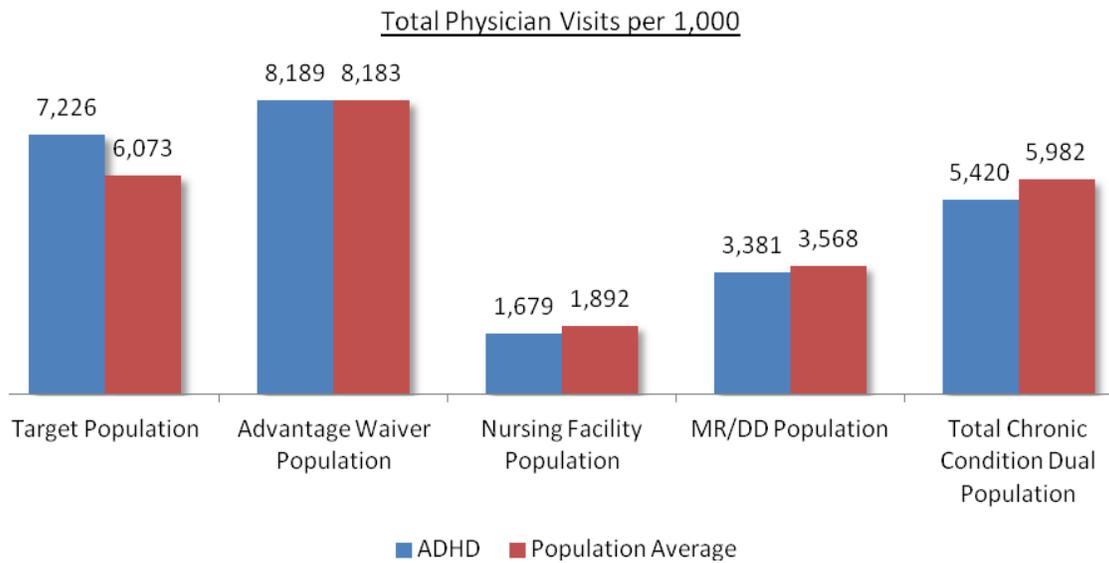
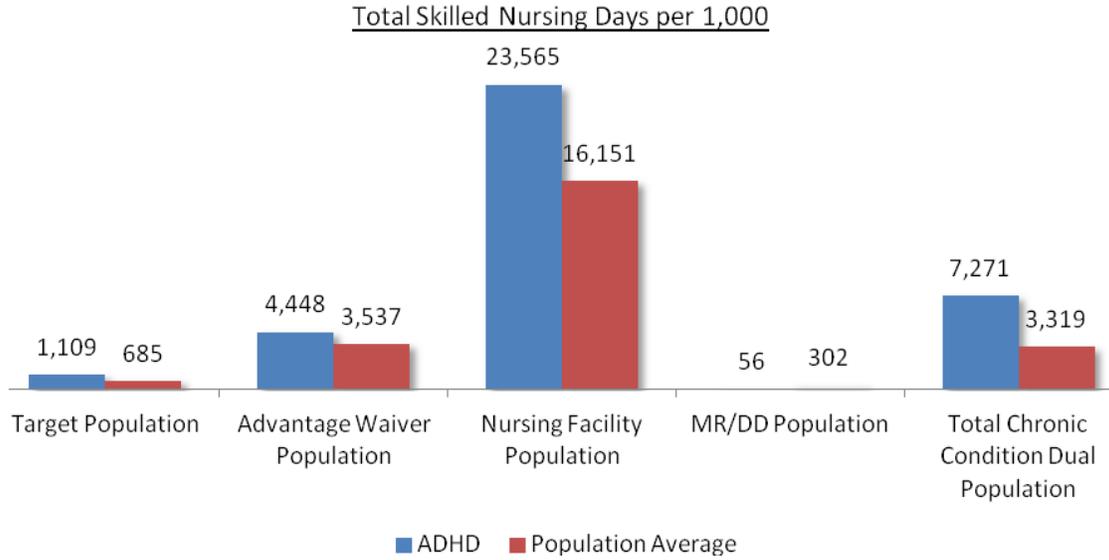
Total Physician Visits per 1,000

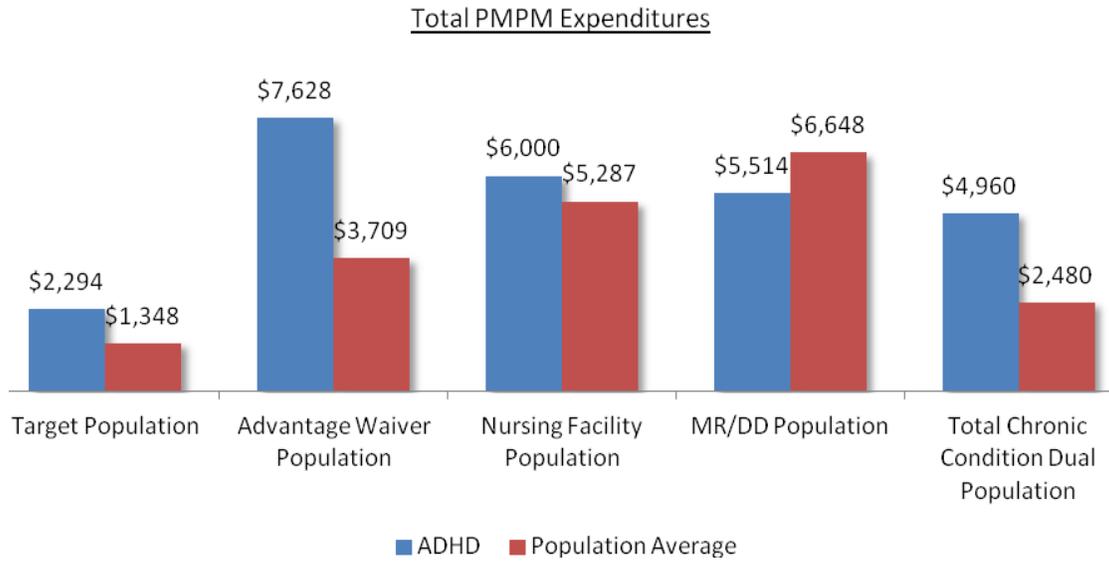




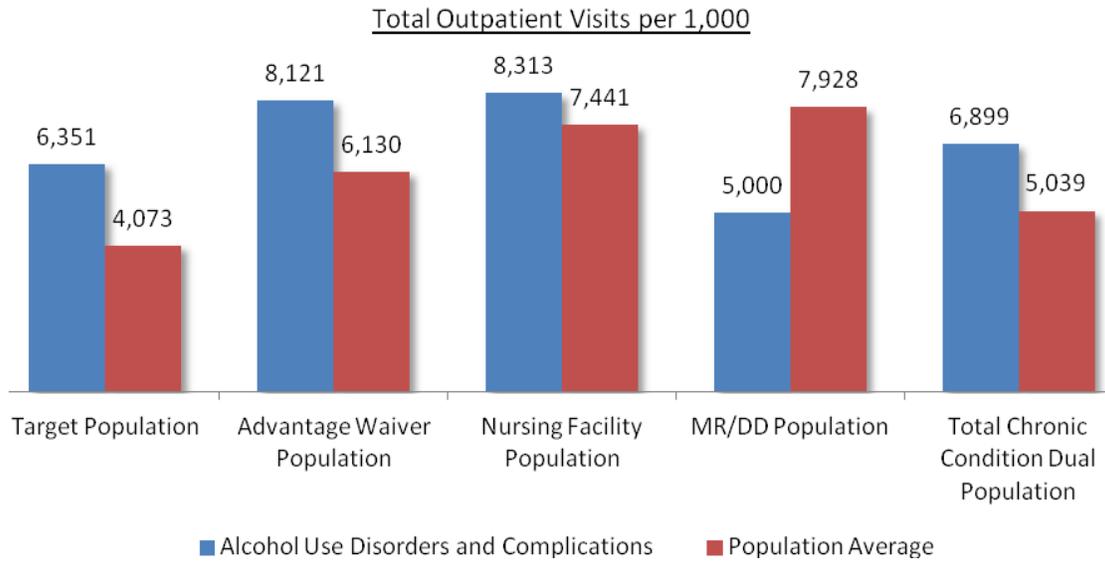
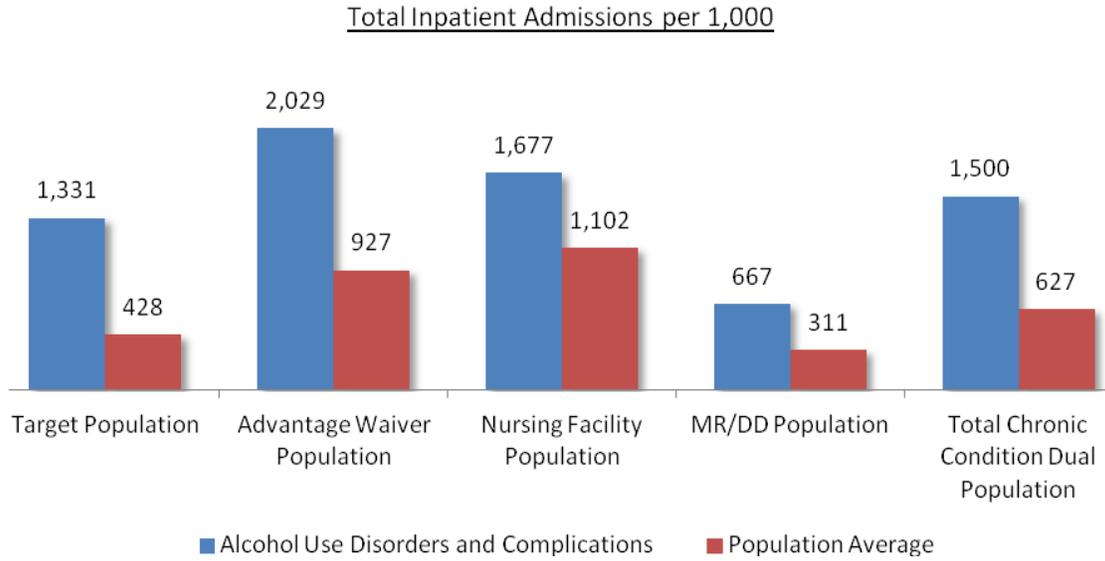
ADHD



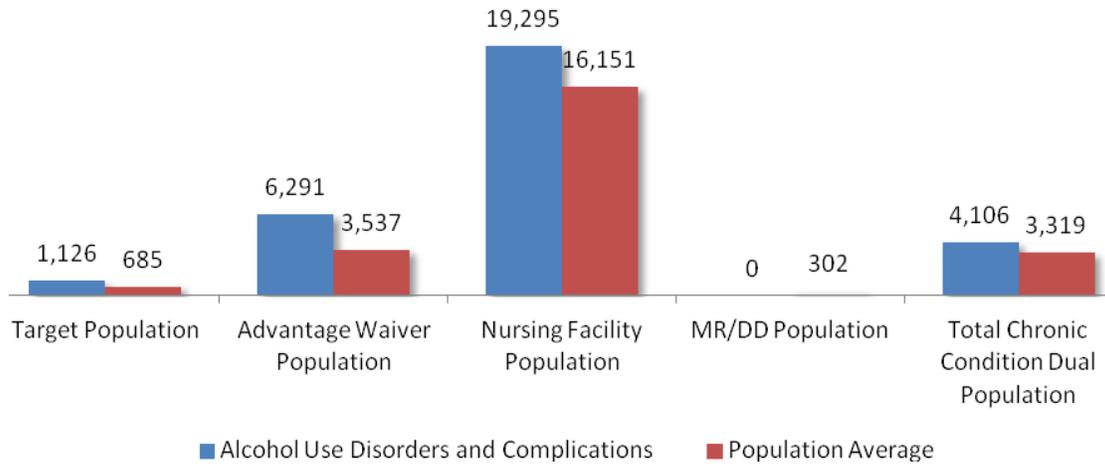




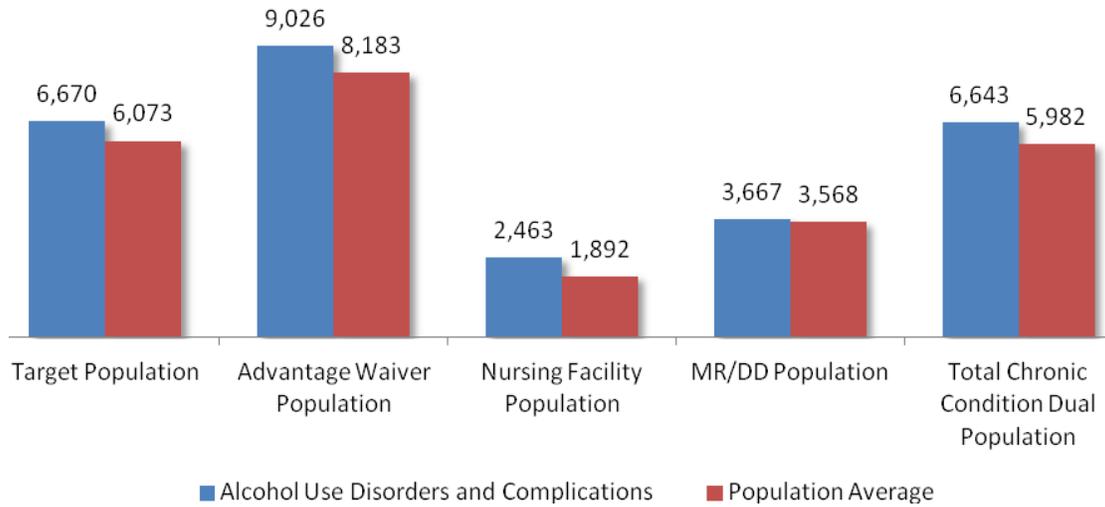
Alcohol Use Disorders and Complications

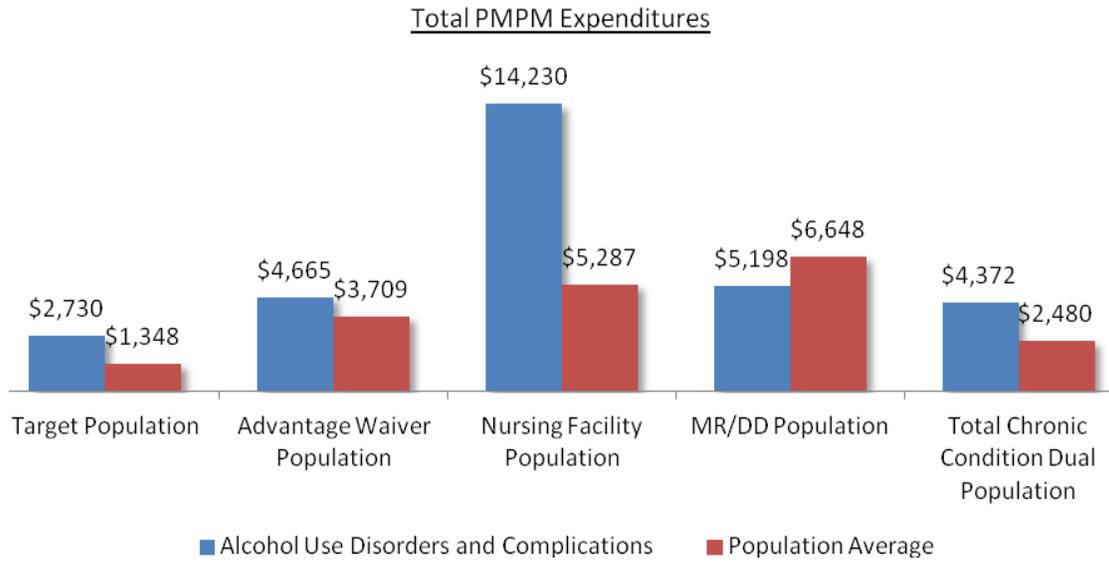


Total Skilled Nursing Days per 1,000

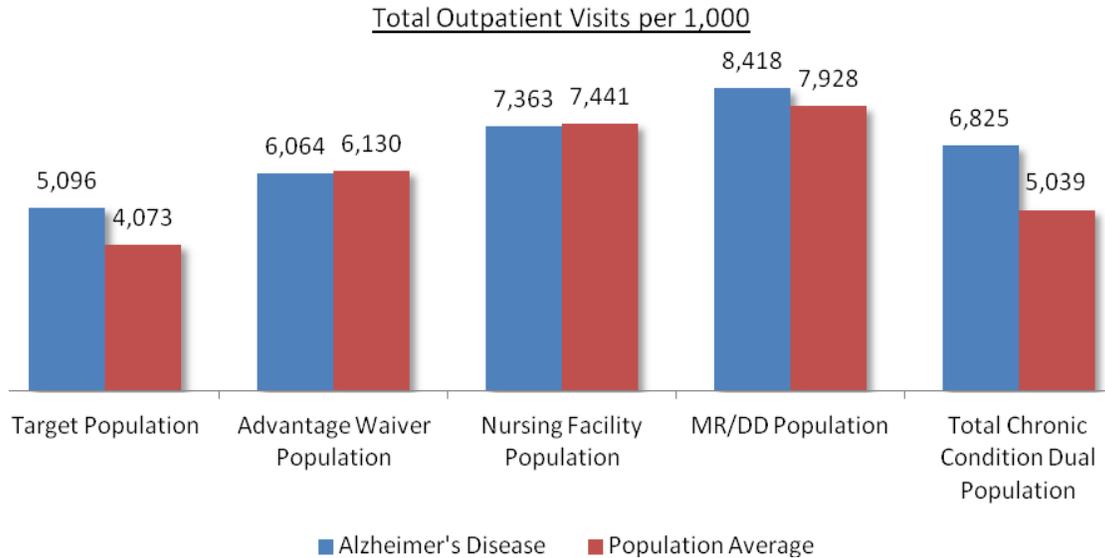
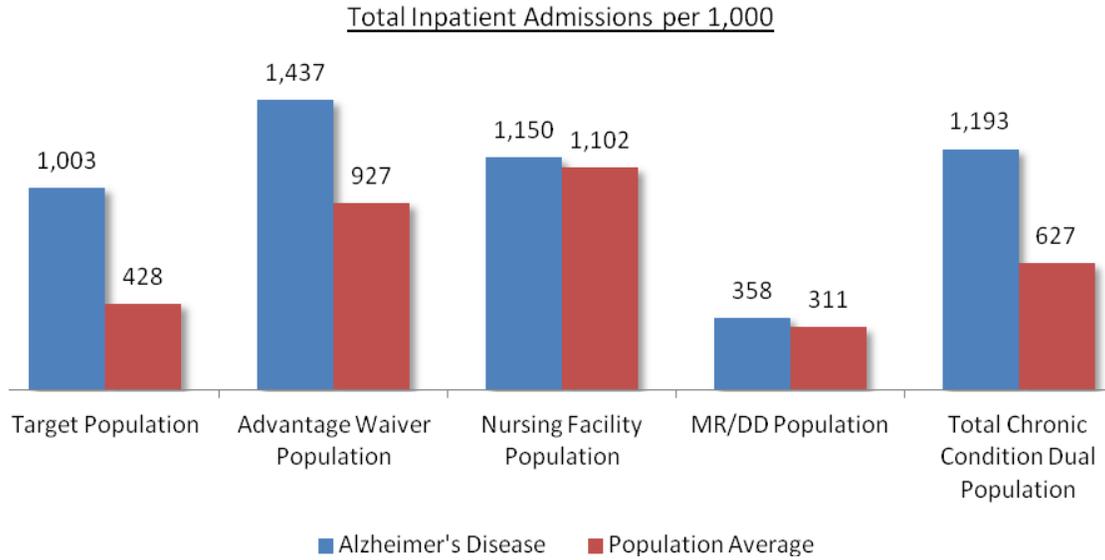


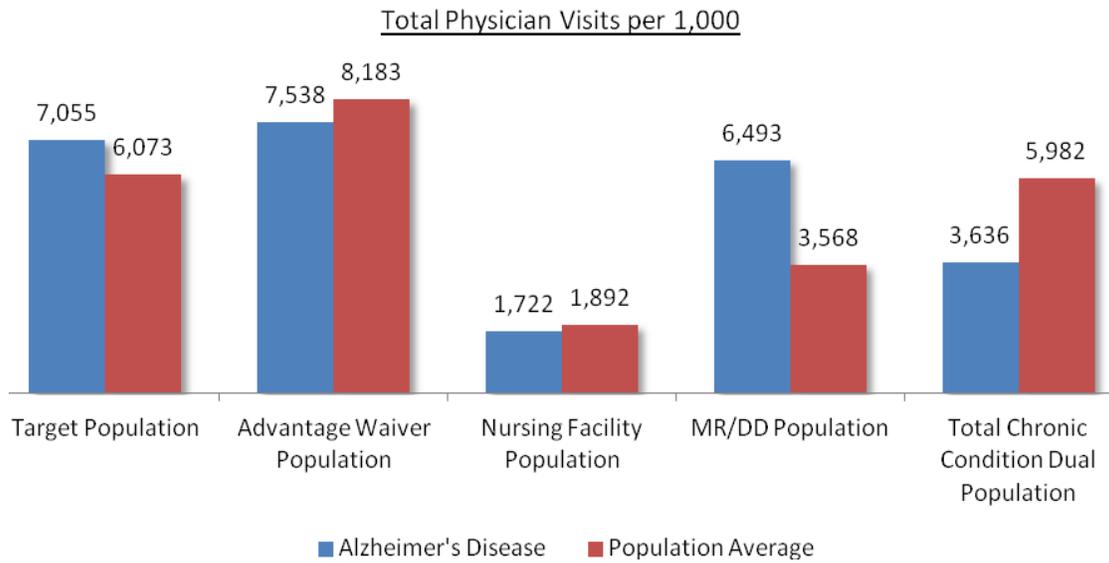
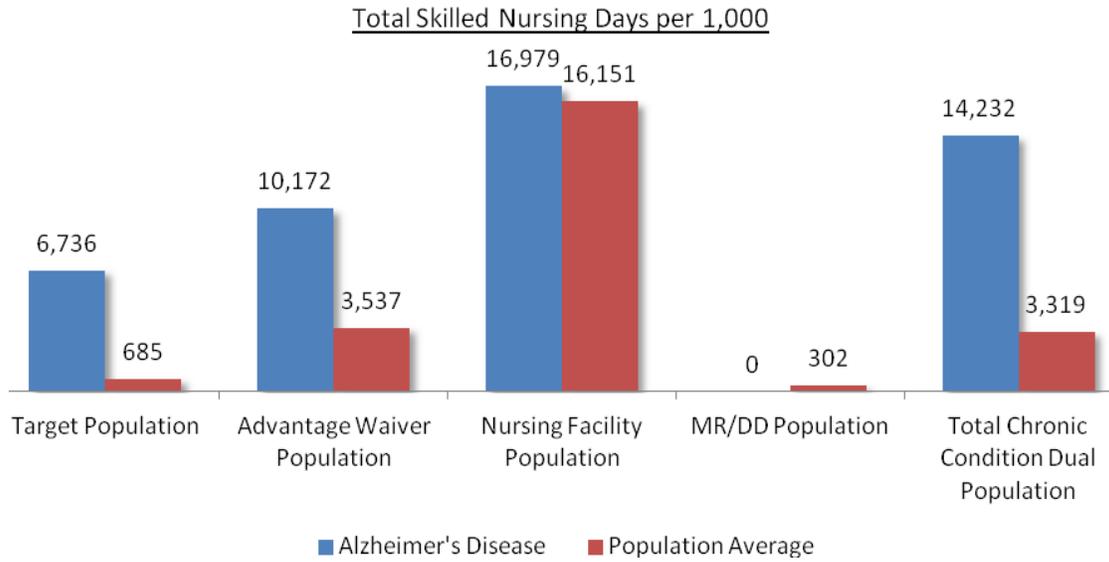
Total Physician Visits per 1,000

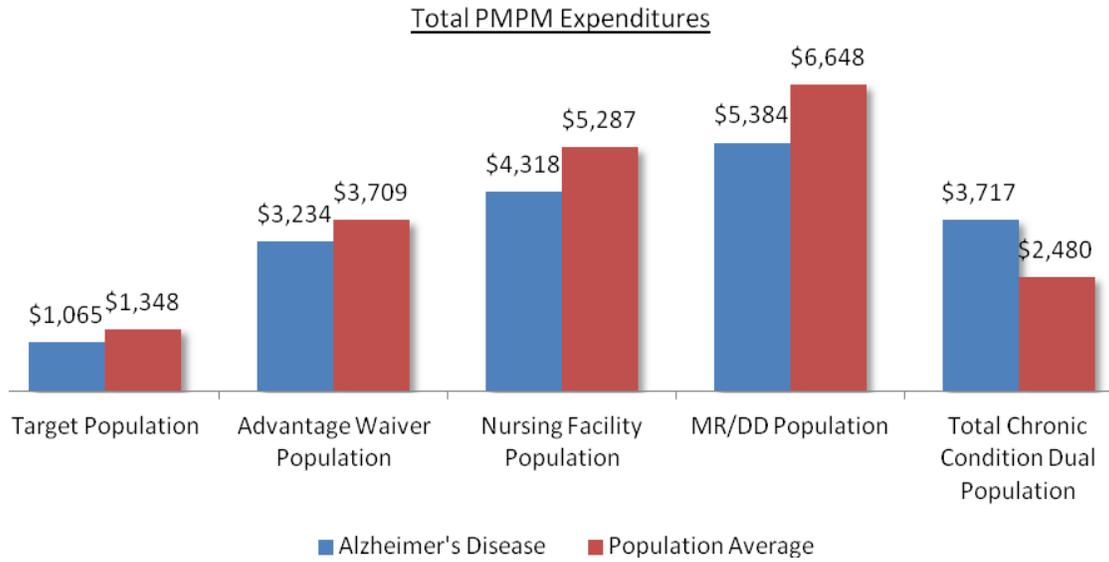




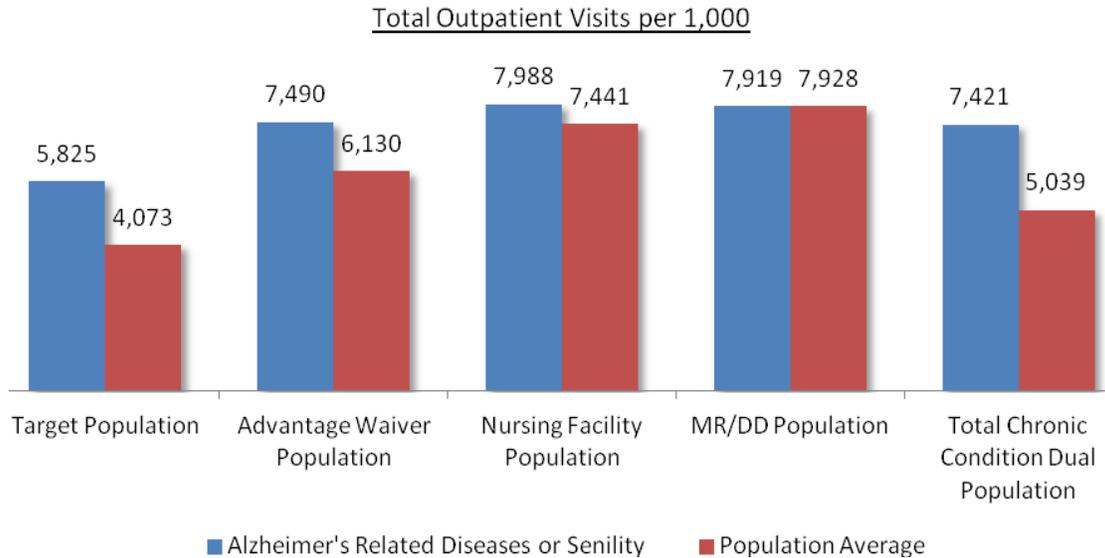
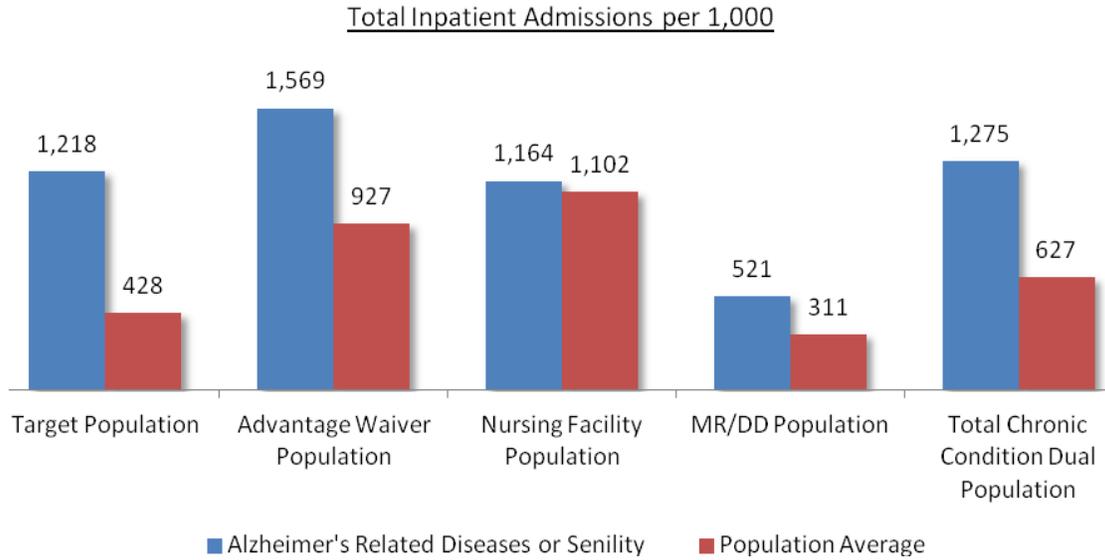
Alzheimer's Disease

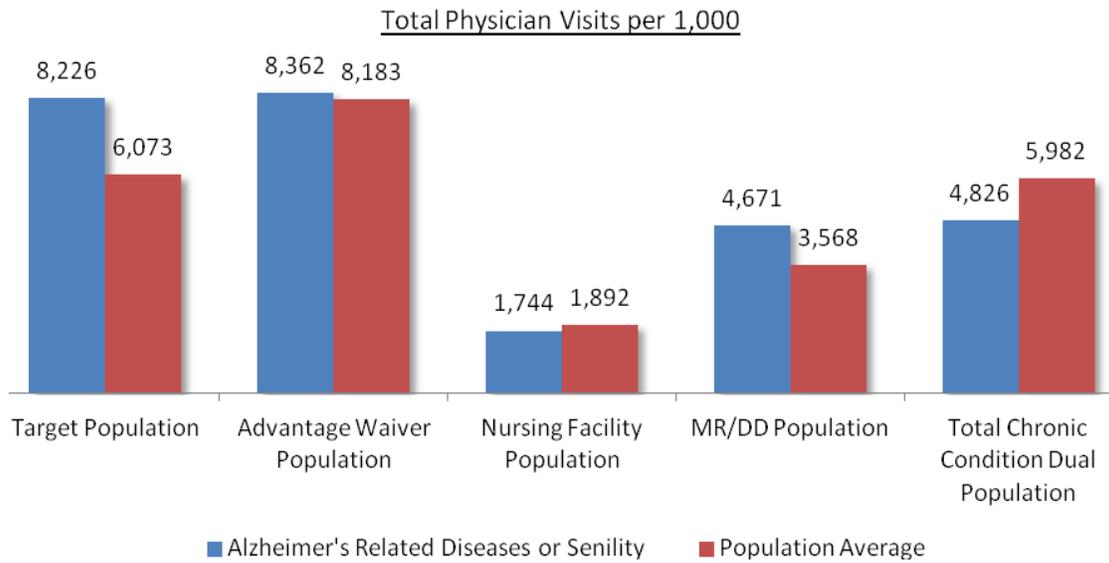
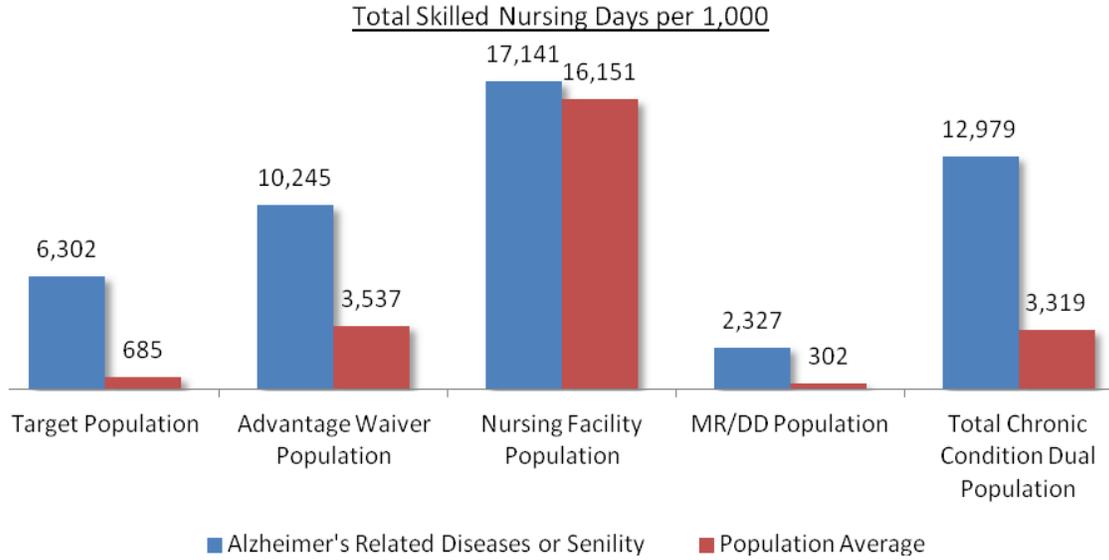


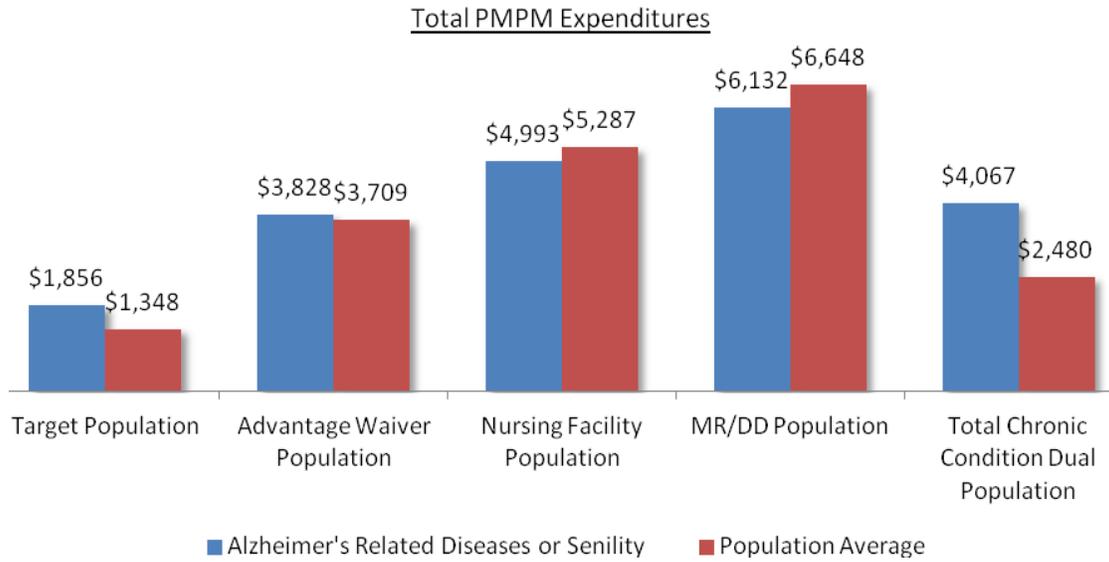




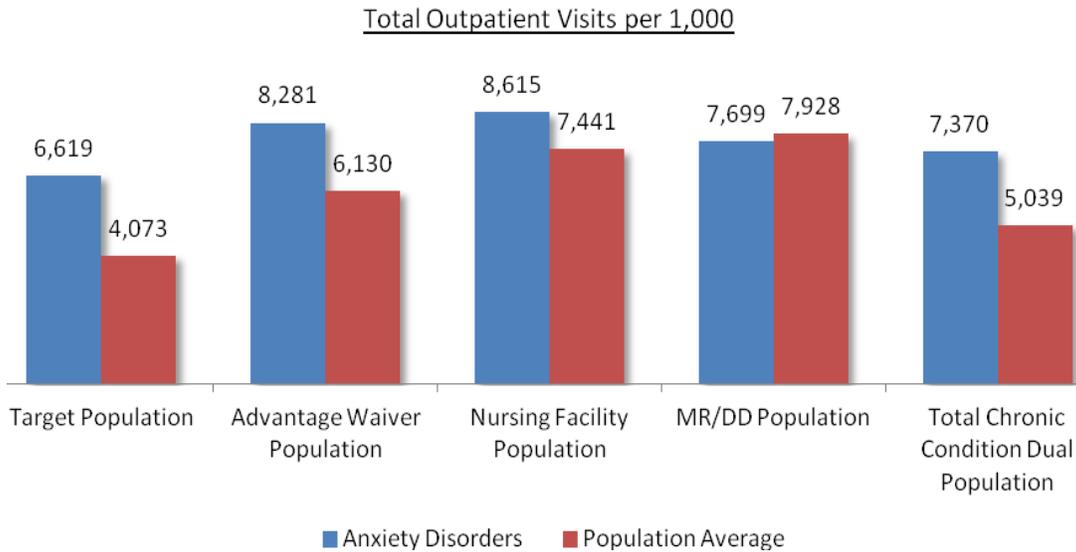
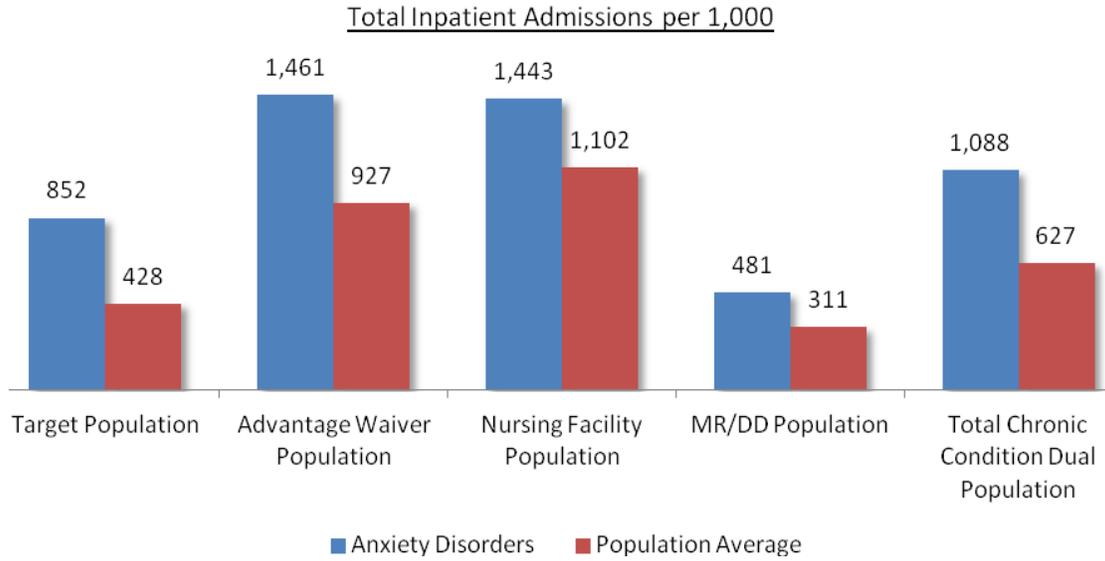
Alzheimer's Related Diseases or Senility



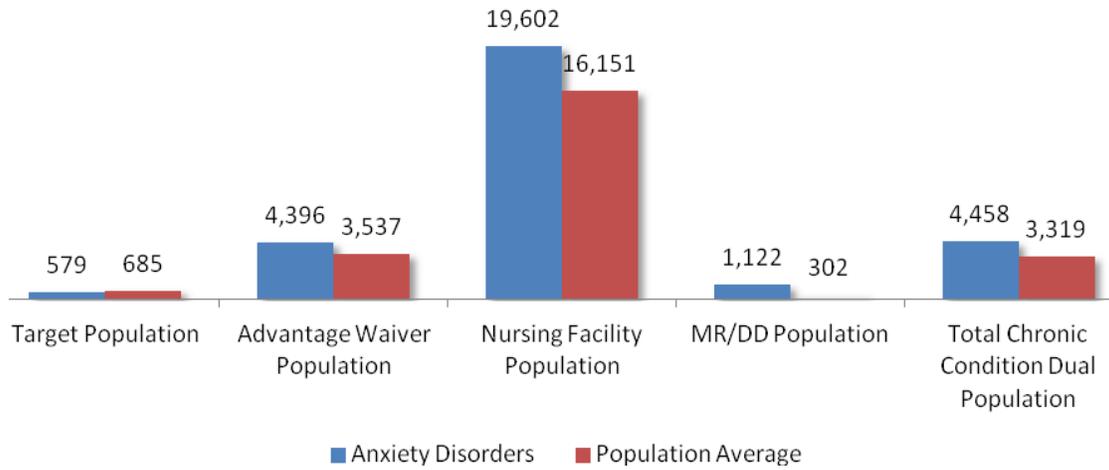




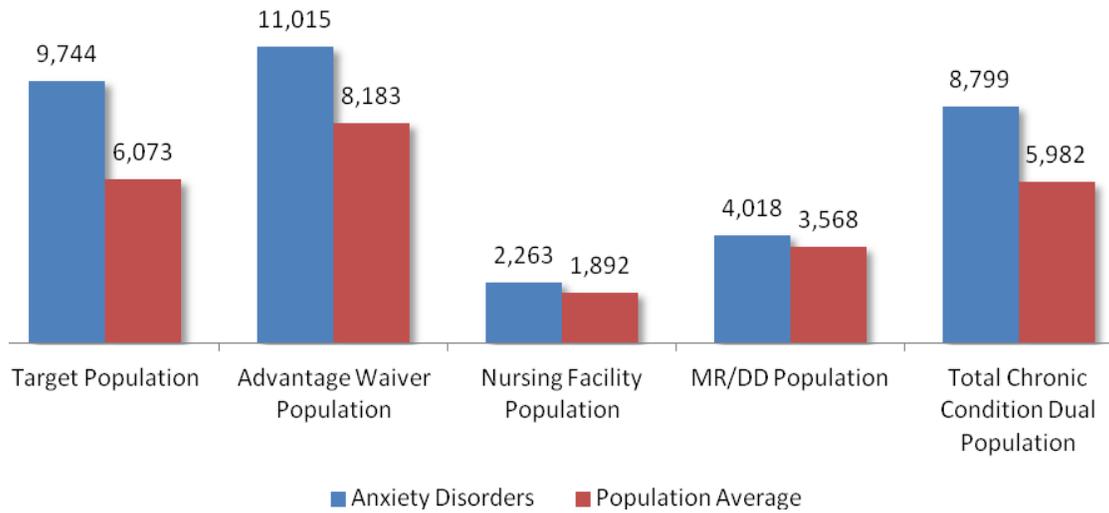
Anxiety Disorders

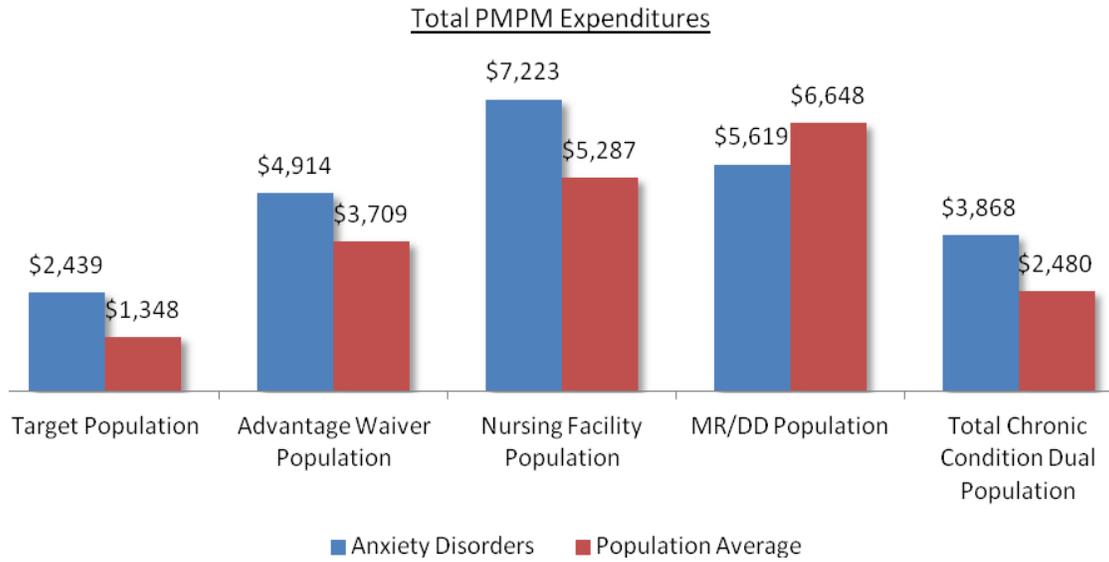


Total Skilled Nursing Days per 1,000



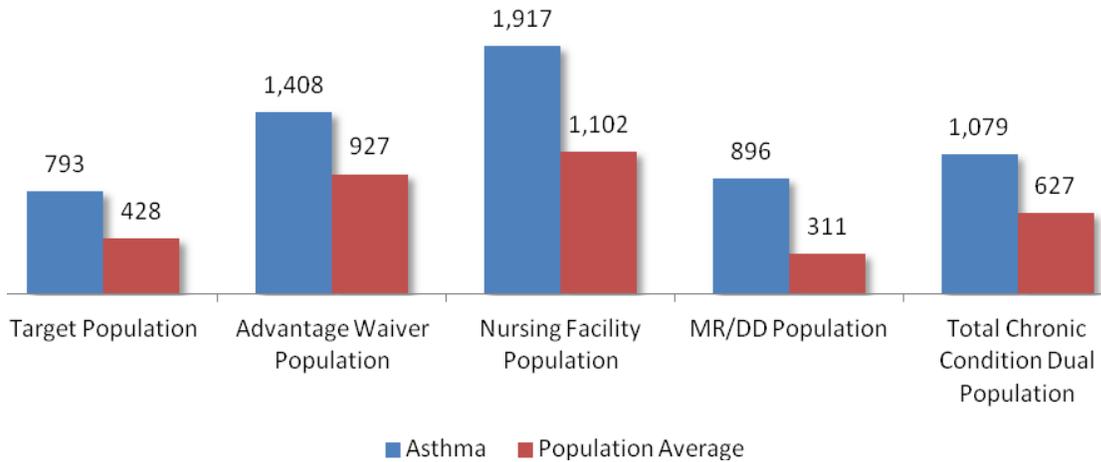
Total Physician Visits per 1,000



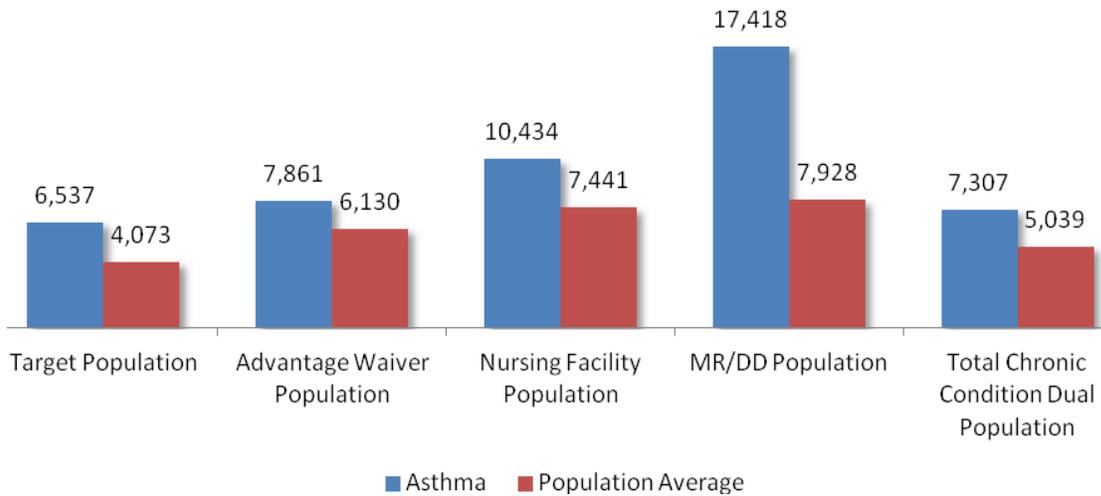


Asthma

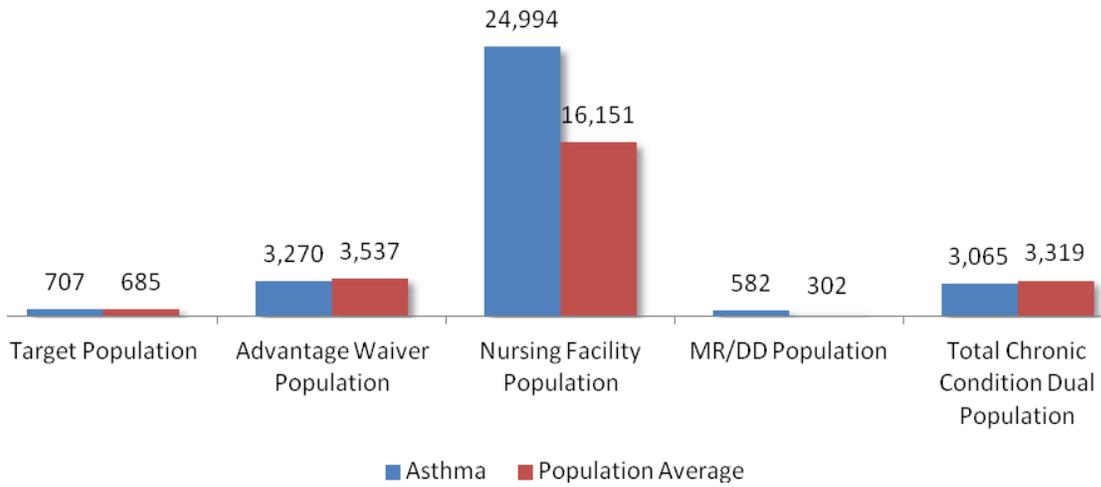
Total Inpatient Admissions per 1,000



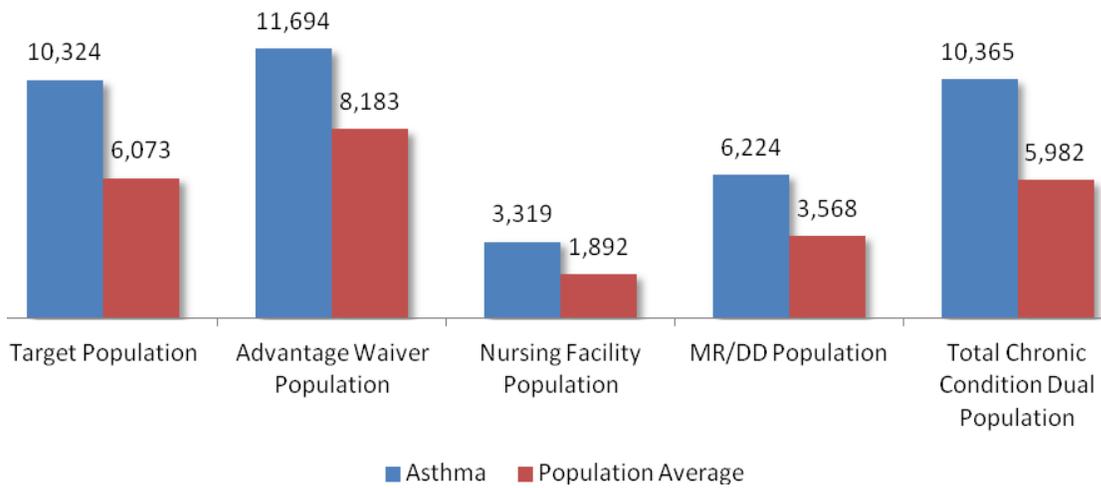
Total Outpatient Visits per 1,000

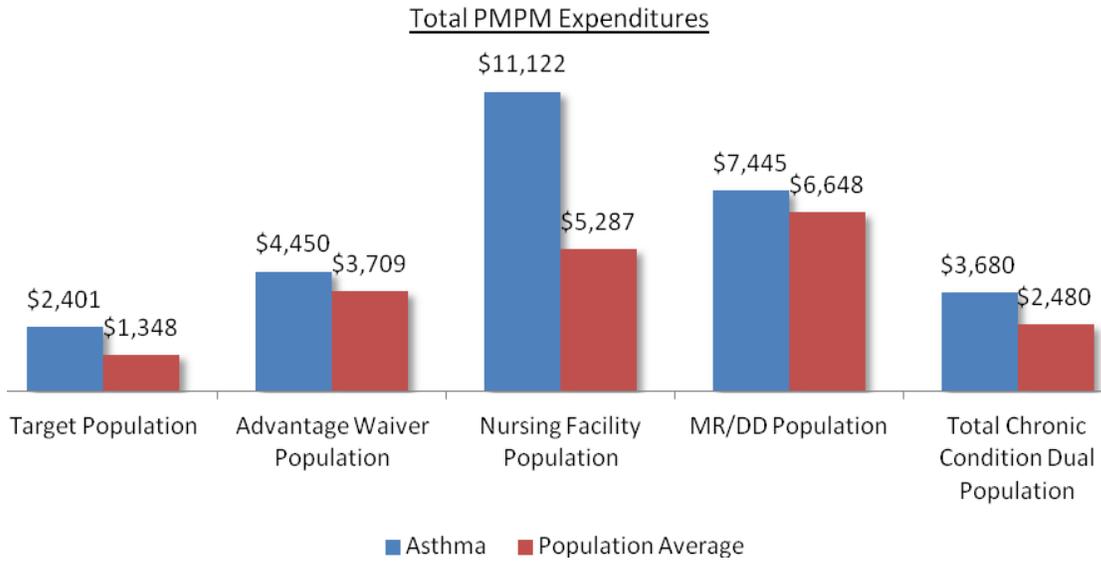


Total Skilled Nursing Days per 1,000

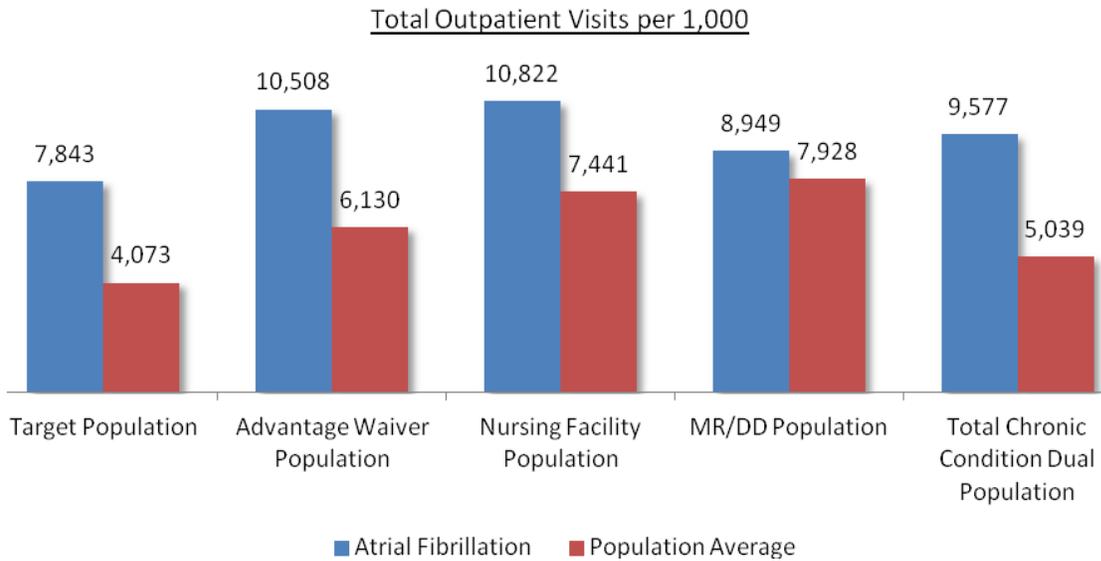
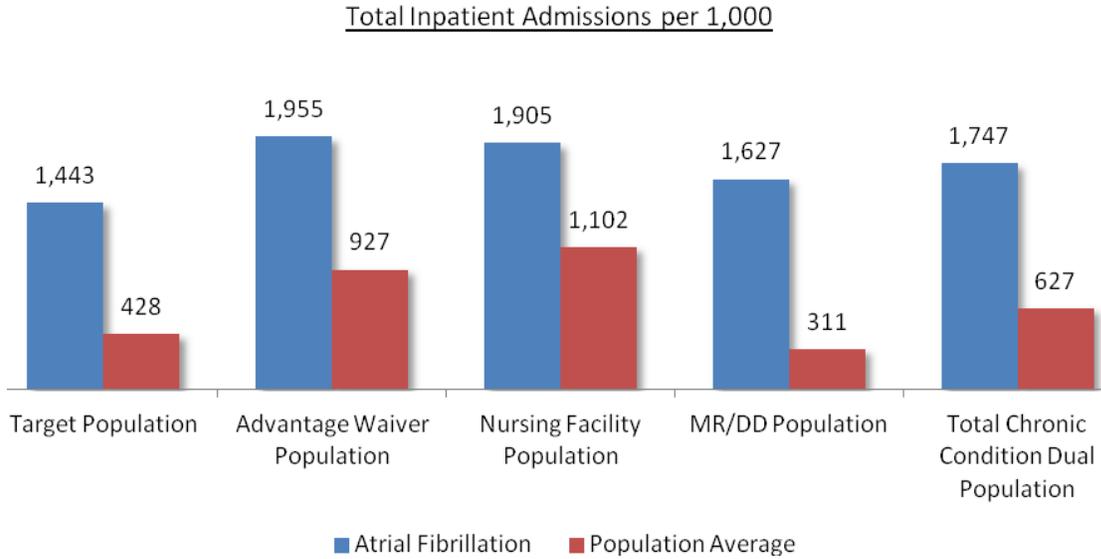


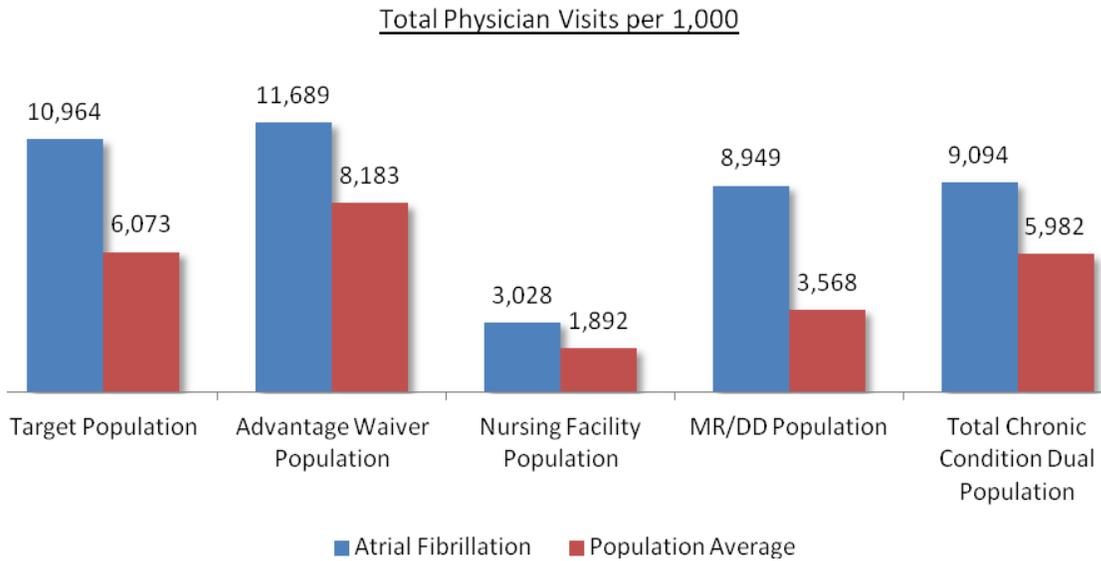
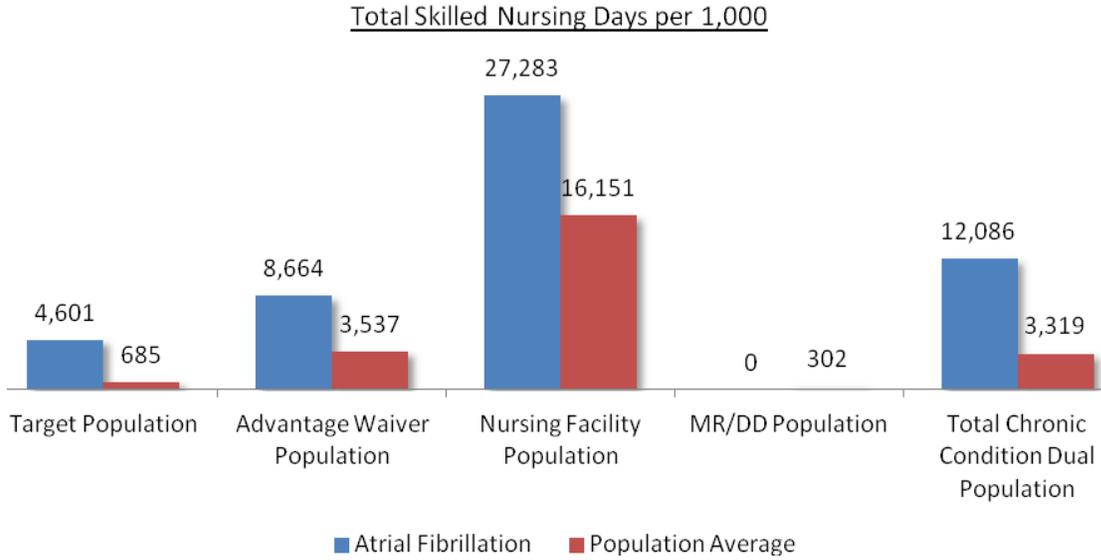
Total Physician Visits per 1,000

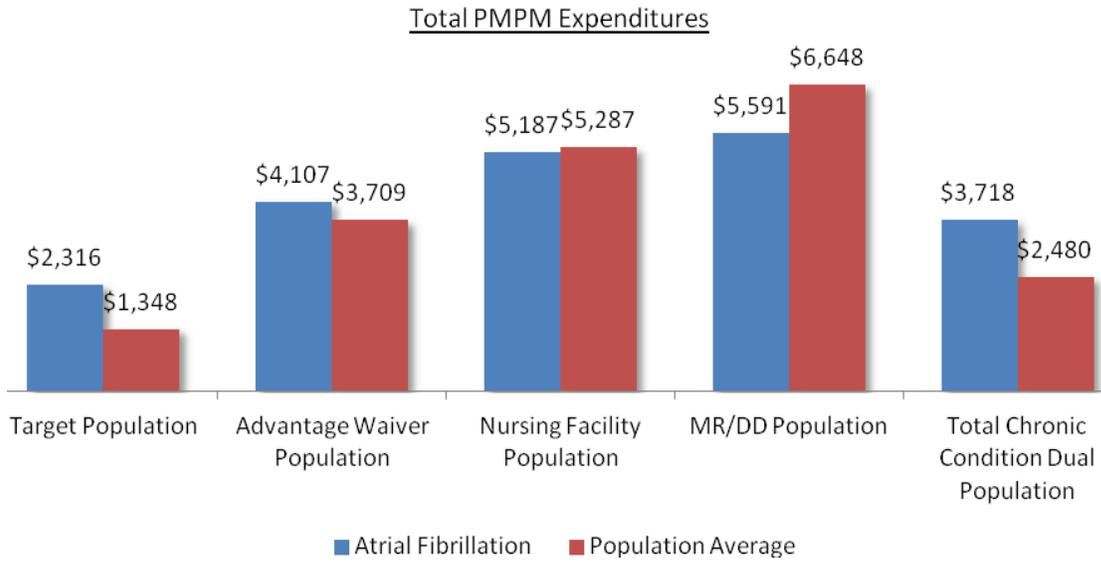




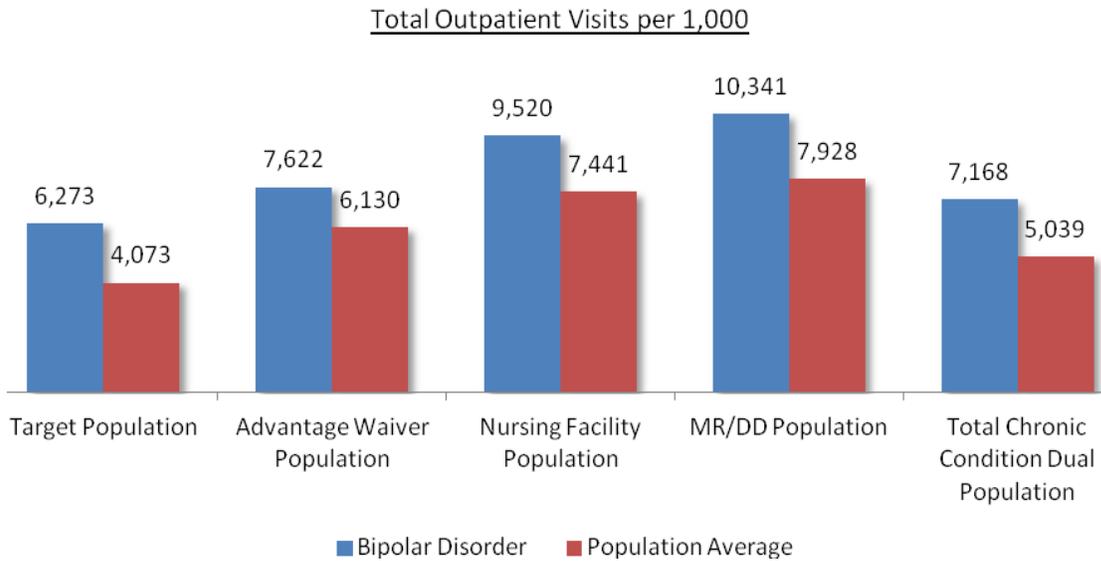
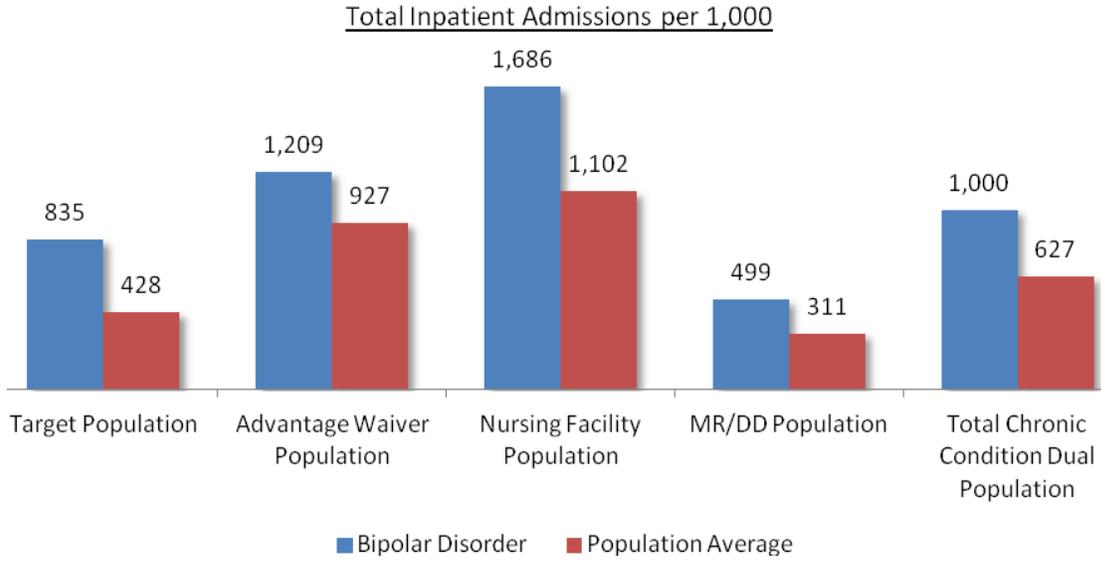
Atrial Fibrillation



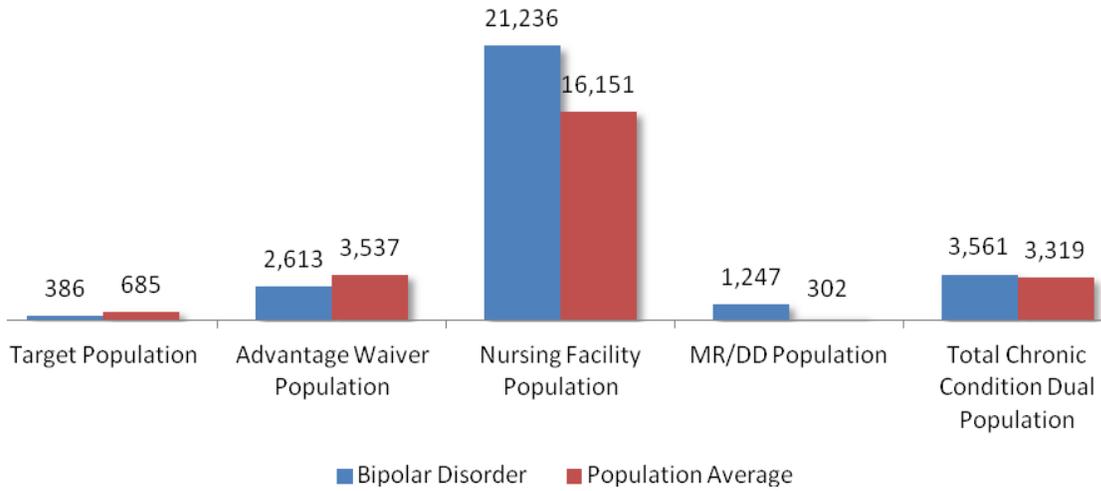




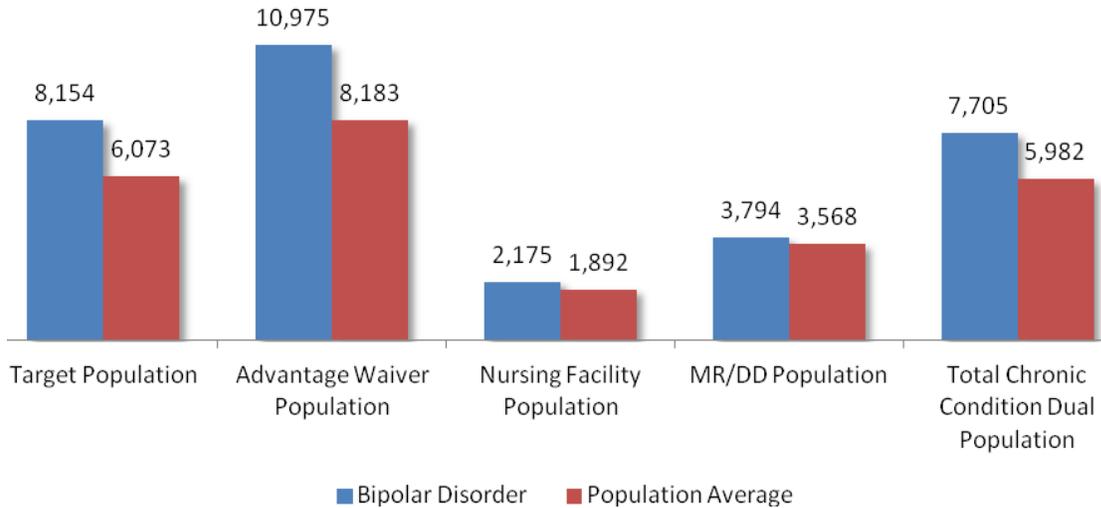
Bipolar Disorder

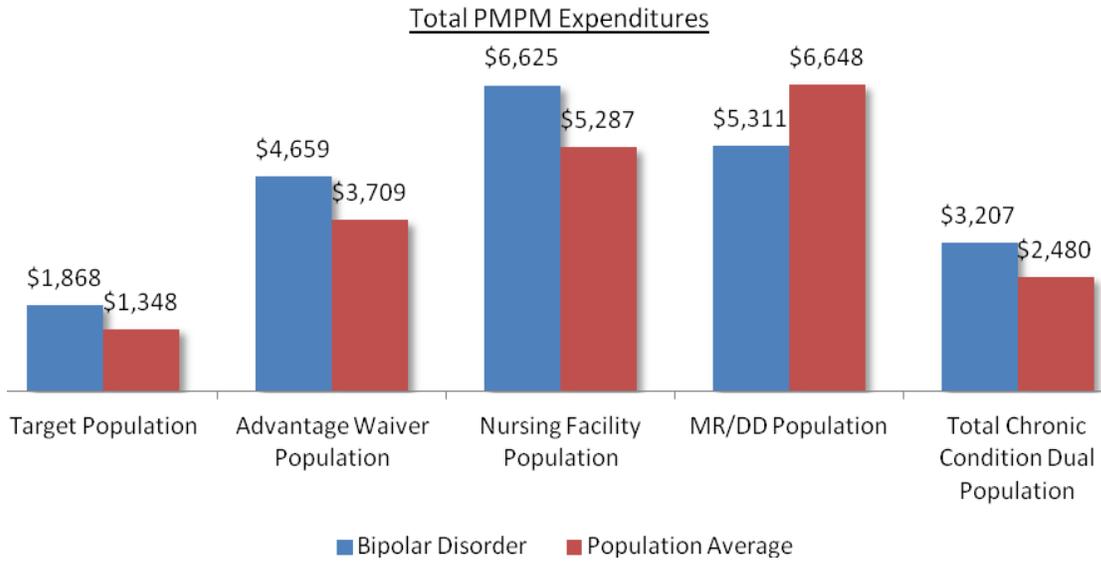


Total Skilled Nursing Days per 1,000

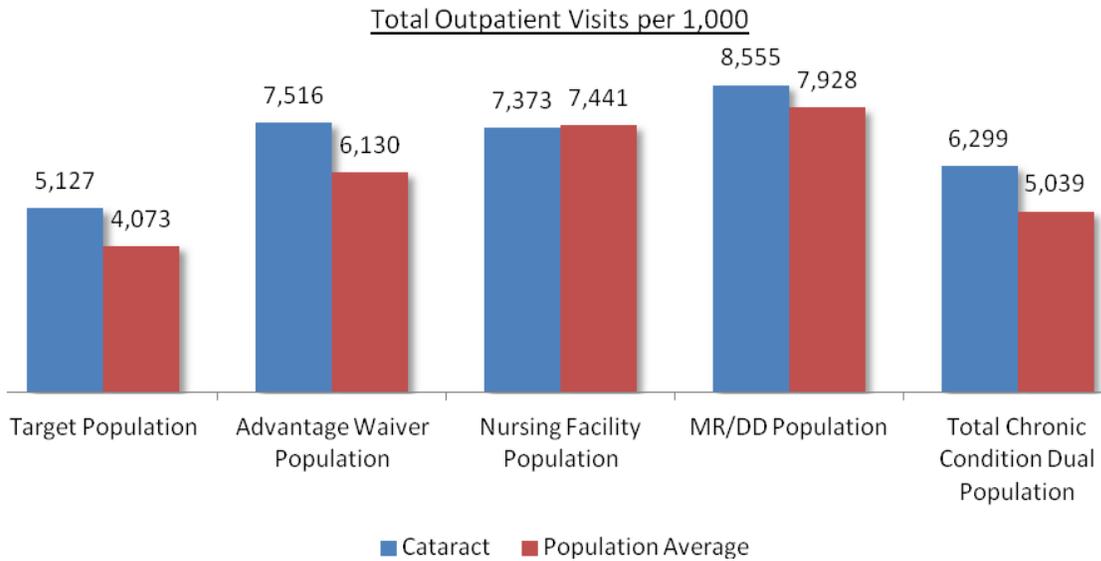
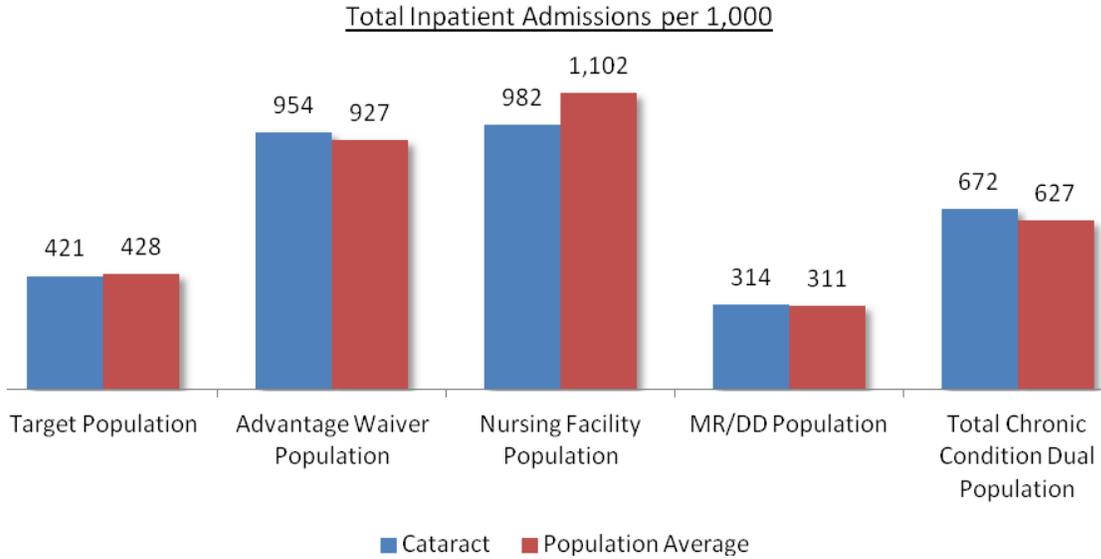


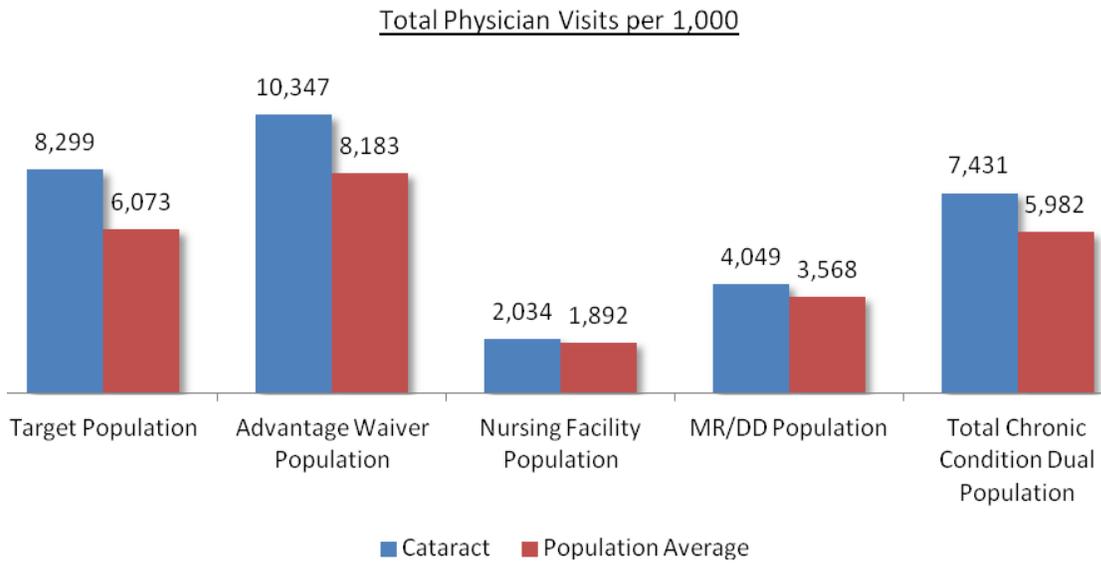
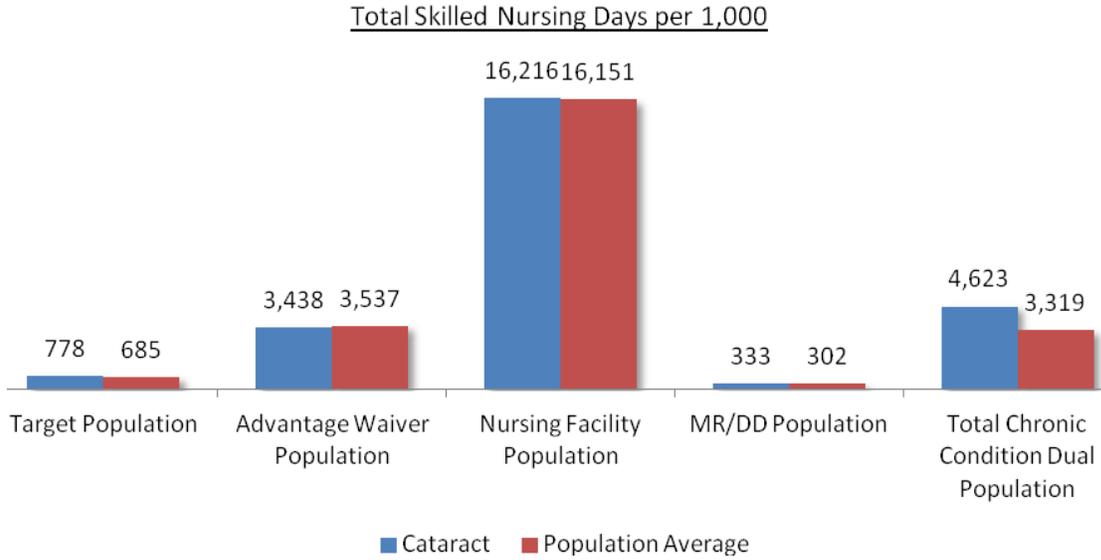
Total Physician Visits per 1,000

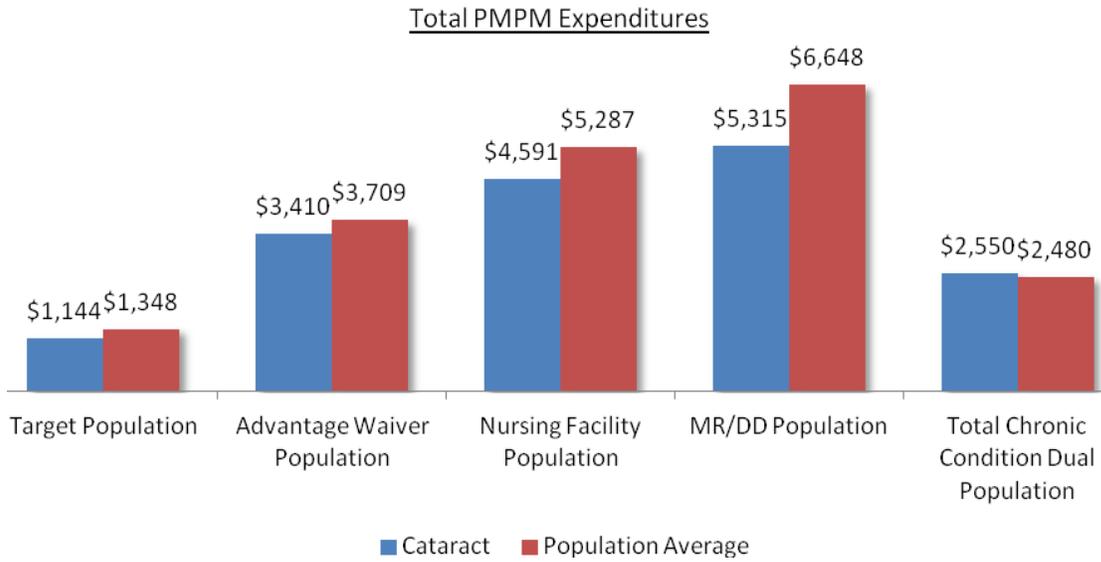




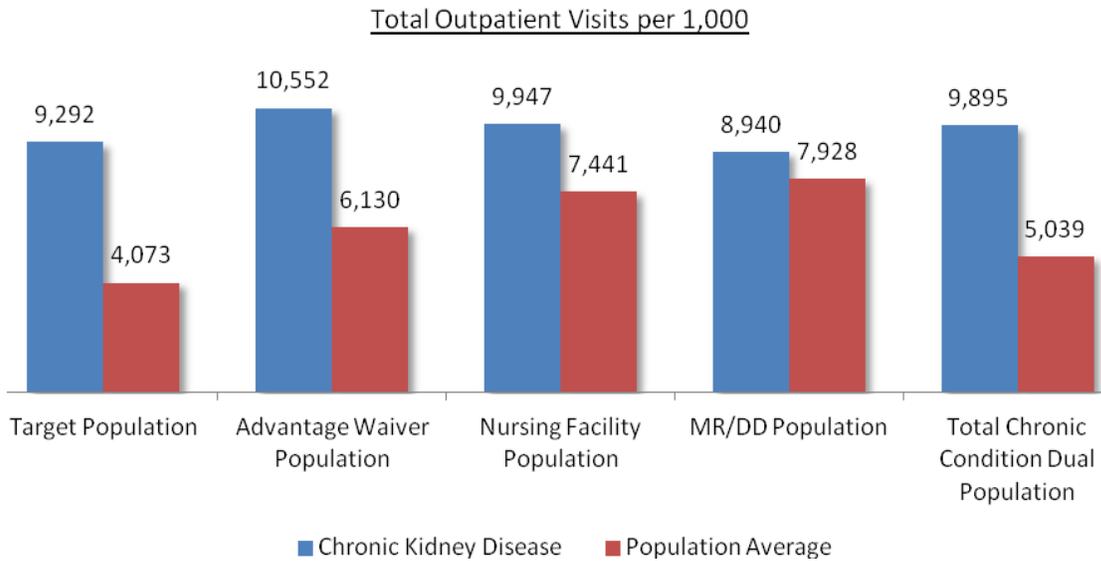
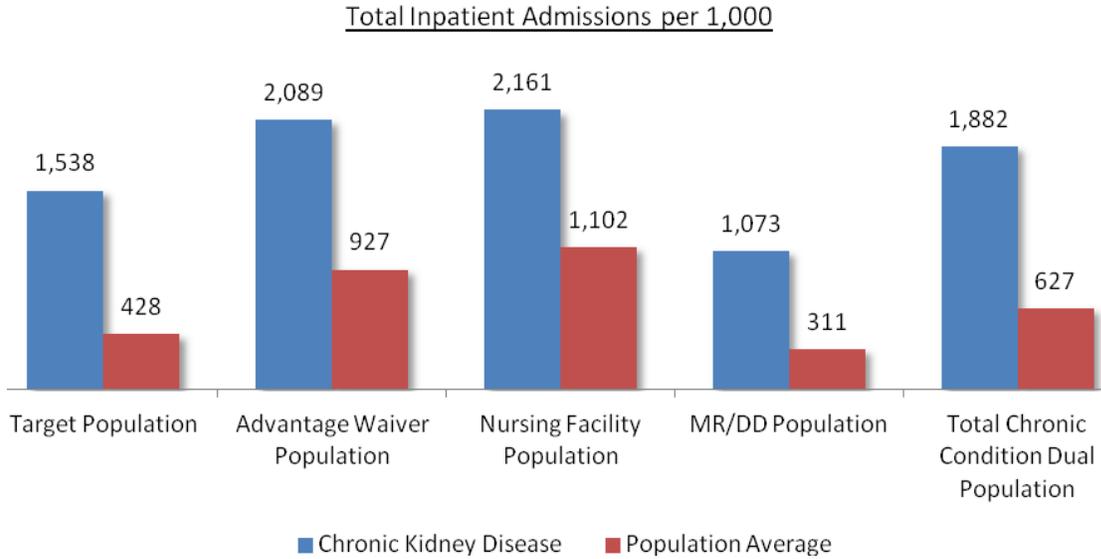
Cataract

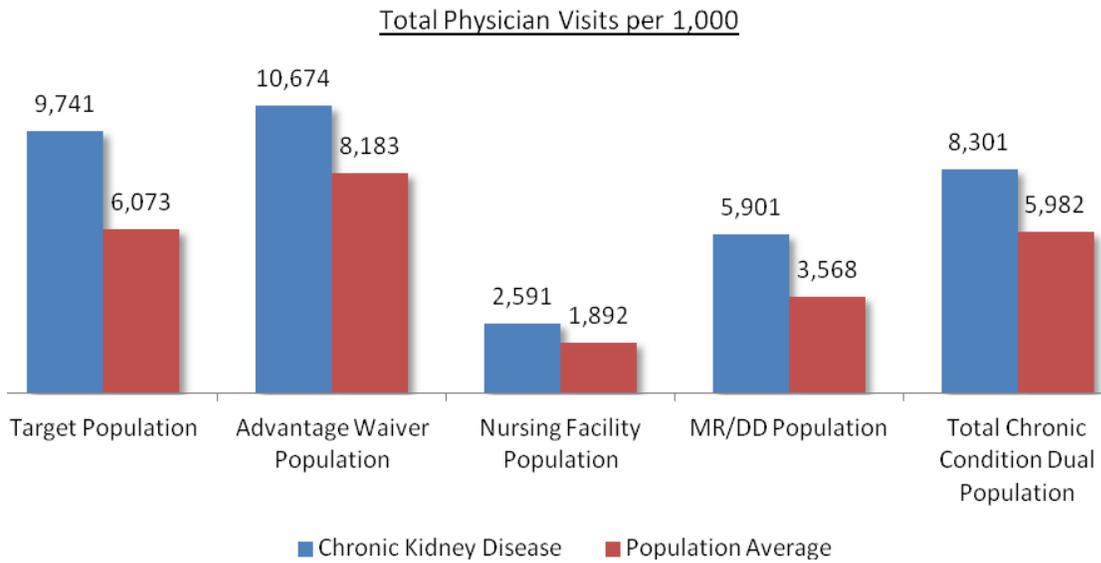
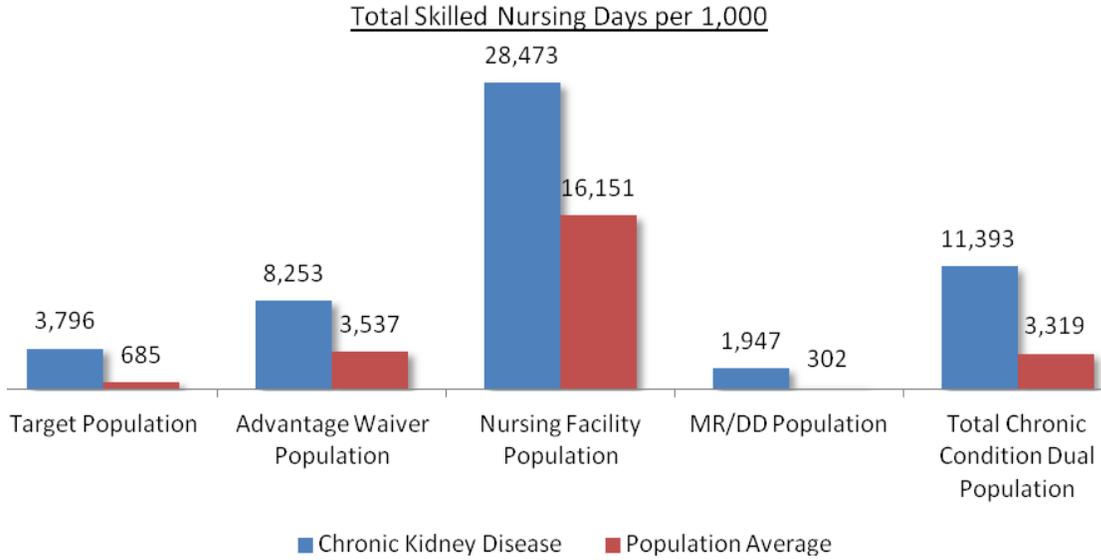


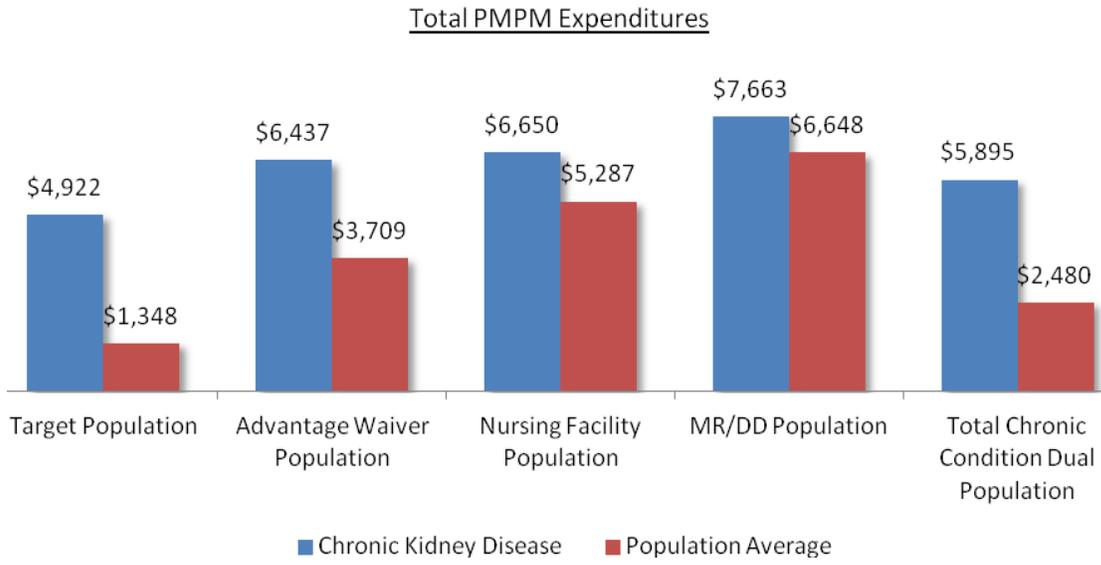




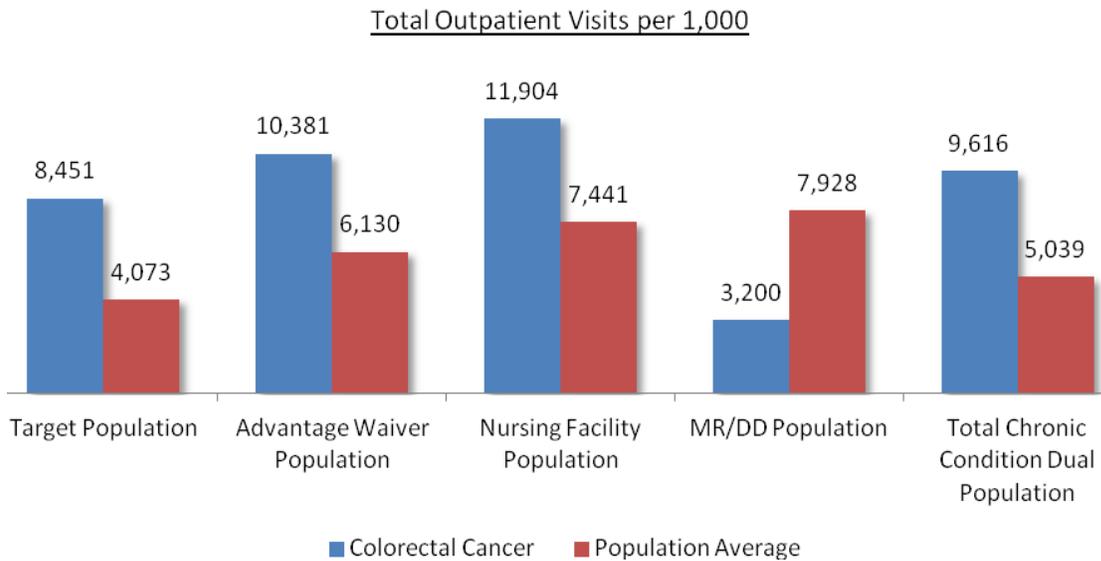
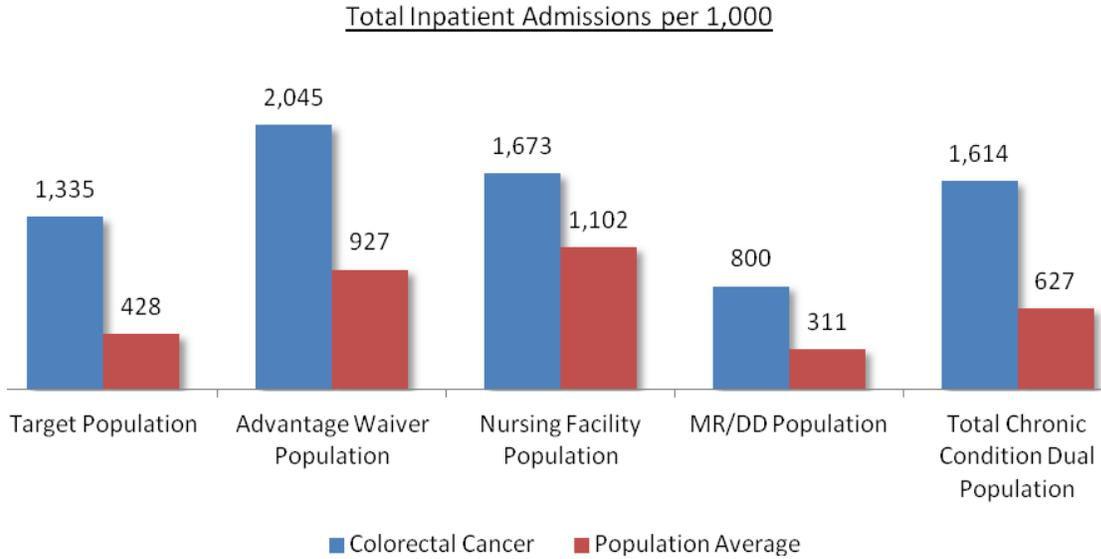
Chronic Kidney Disease

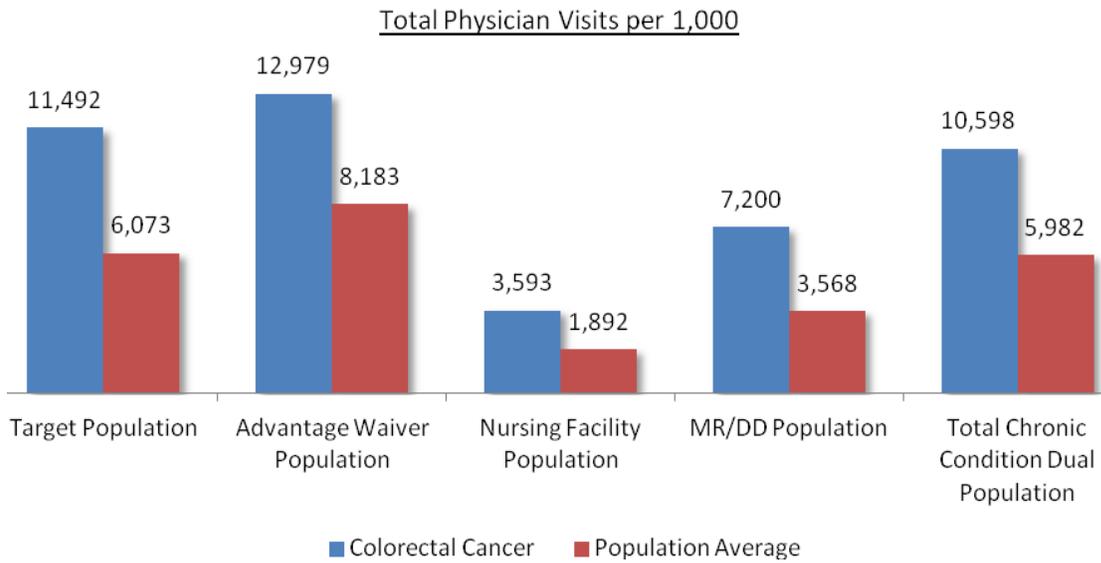
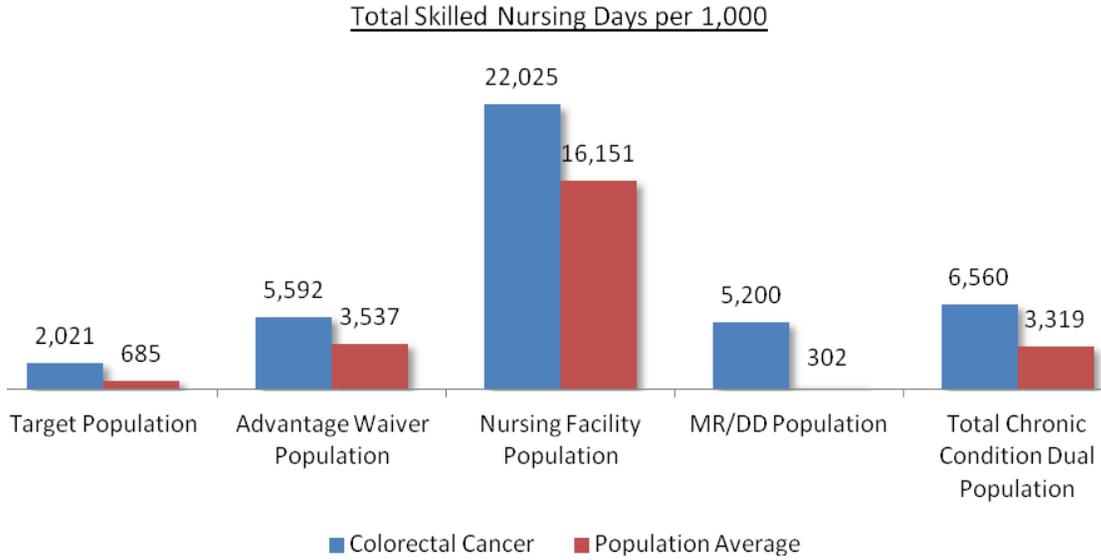


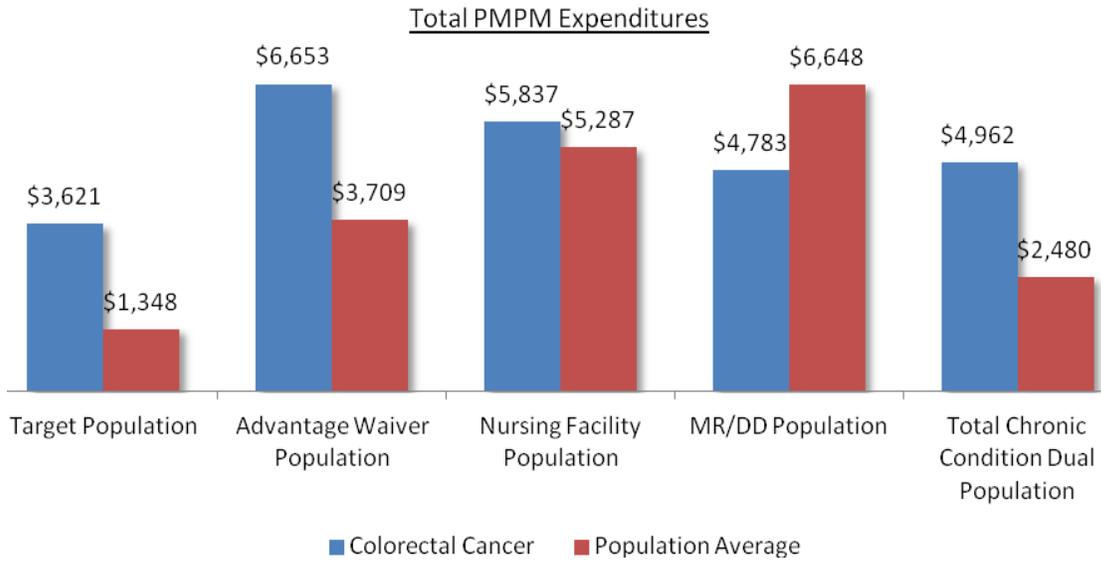




Colorectal Cancer

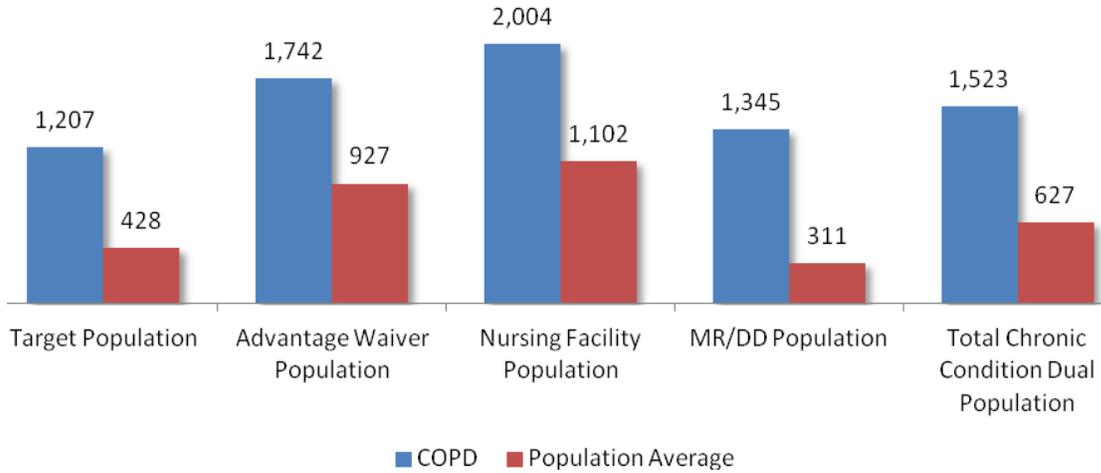




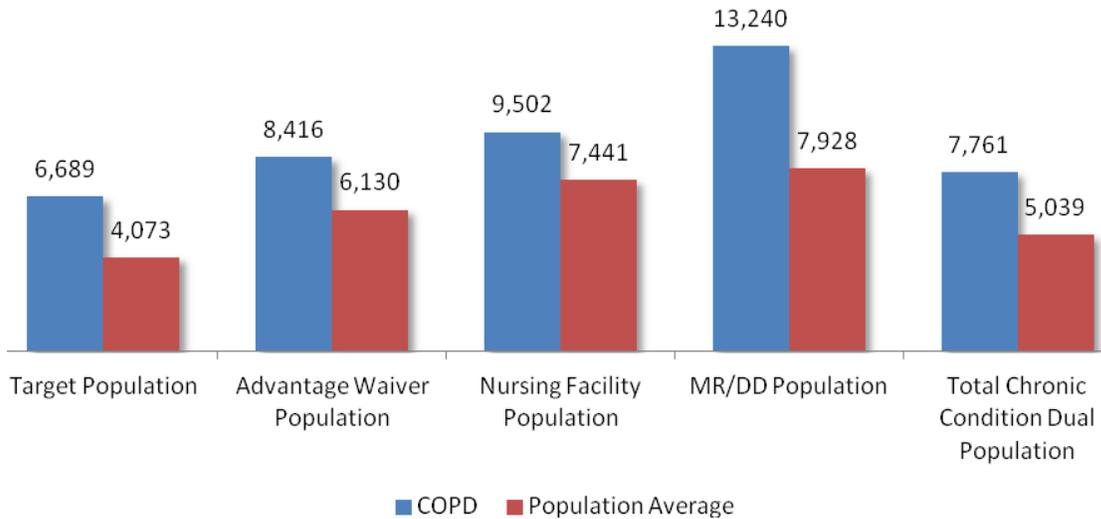


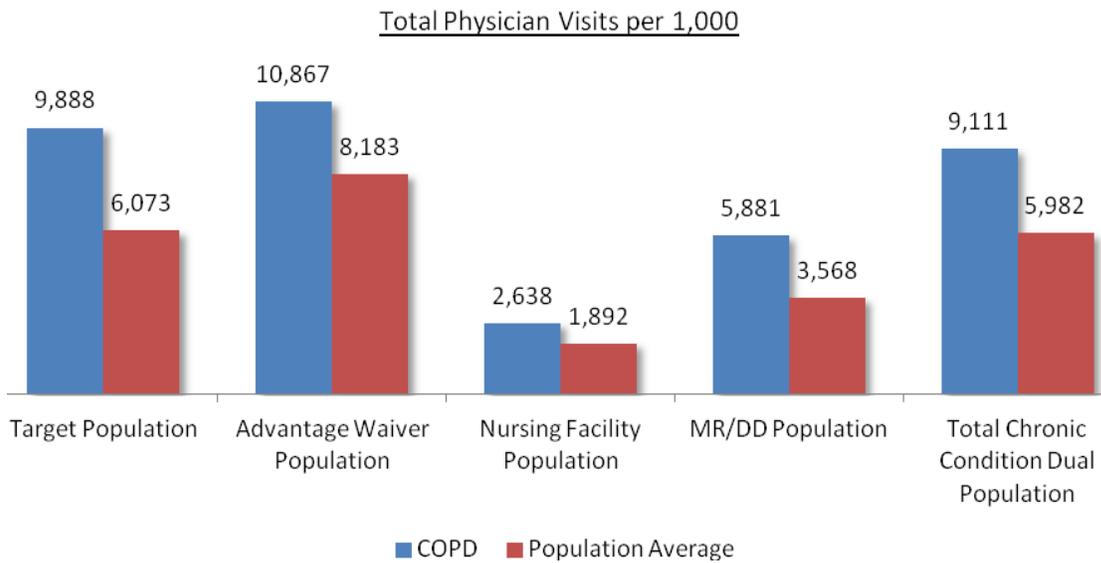
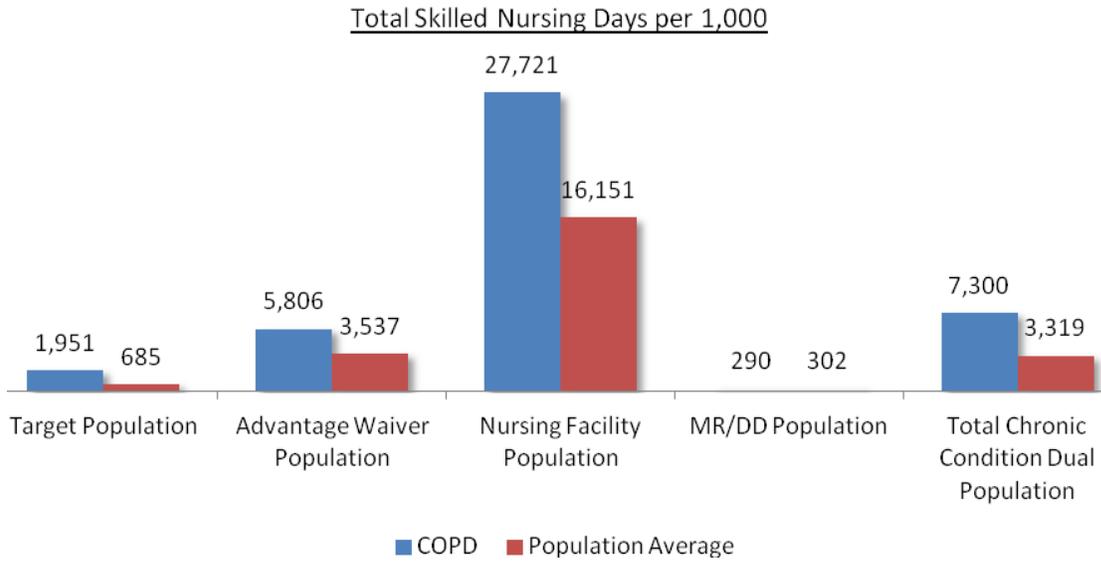
COPD

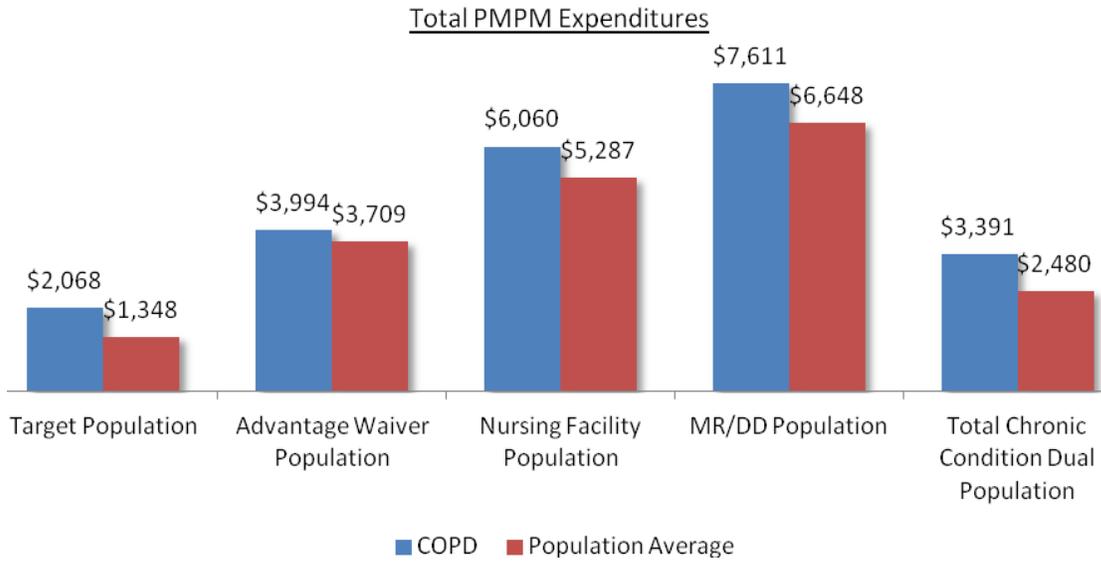
Total Inpatient Admissions per 1,000



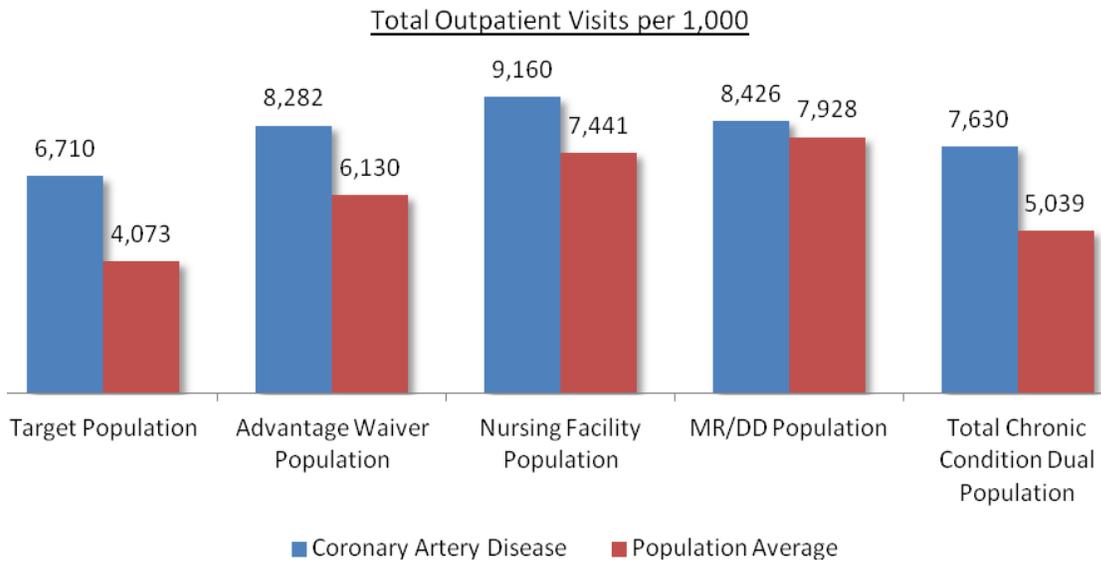
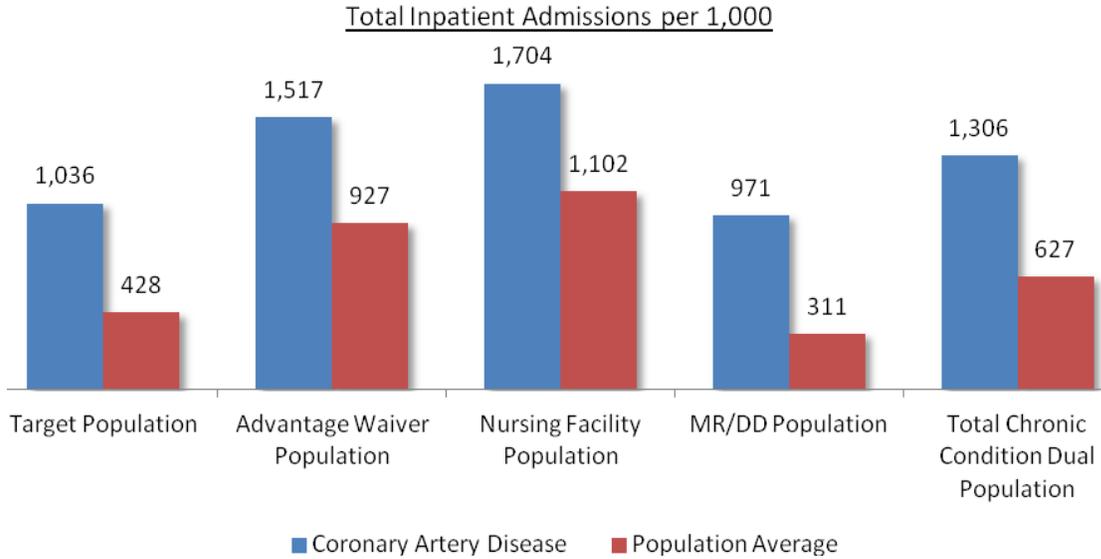
Total Outpatient Visits per 1,000



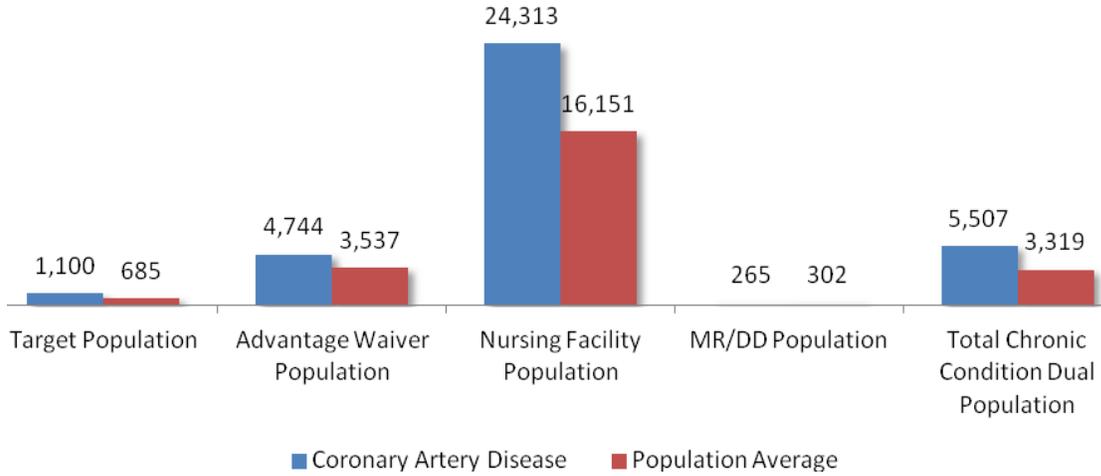




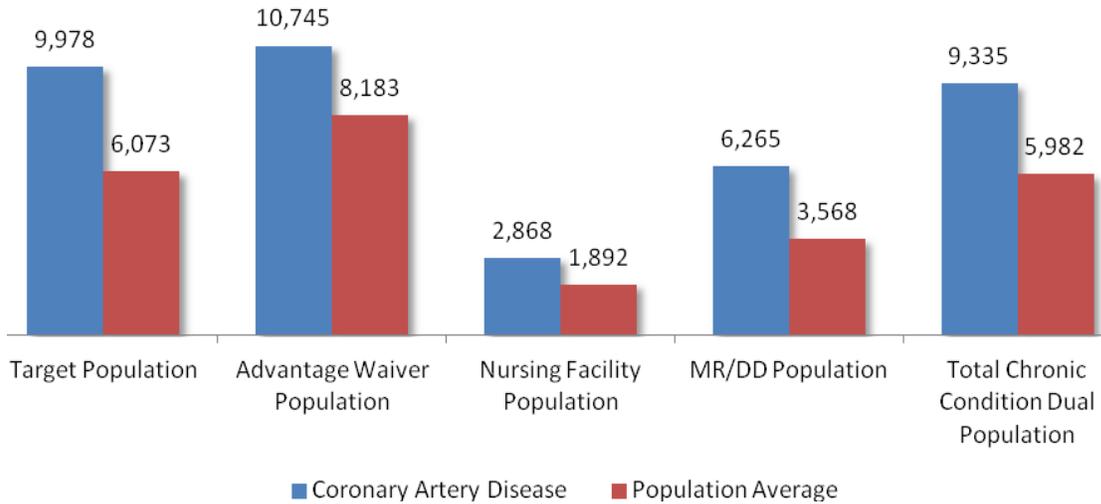
Coronary Artery Disease

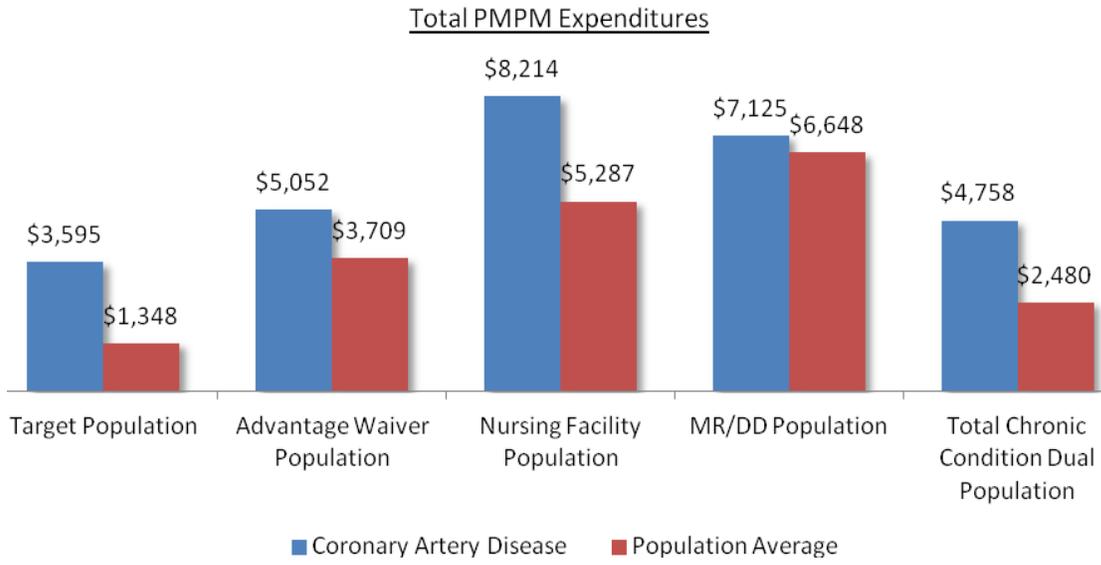


Total Skilled Nursing Days per 1,000

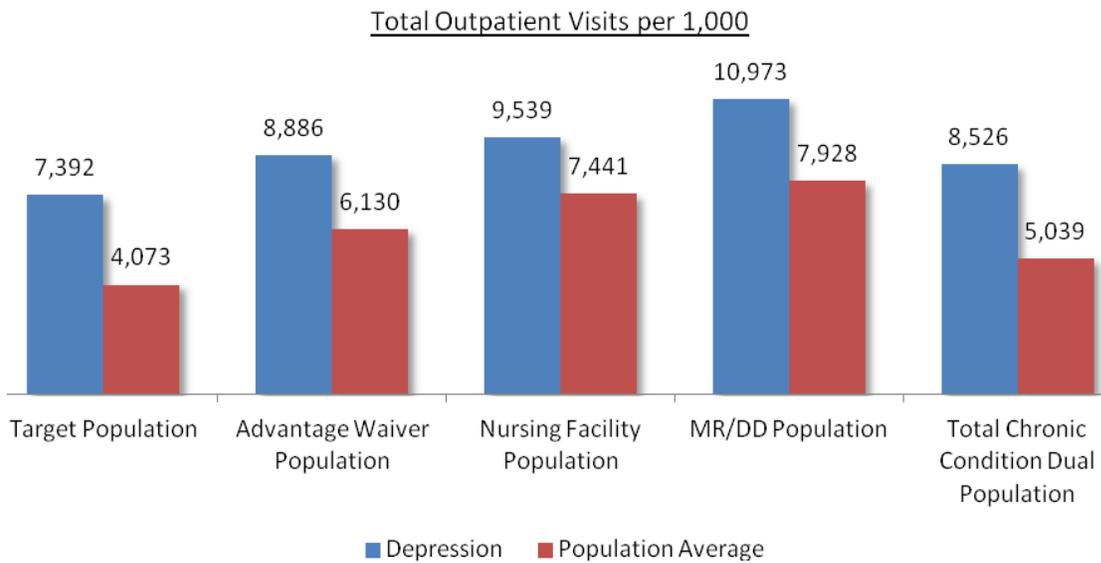
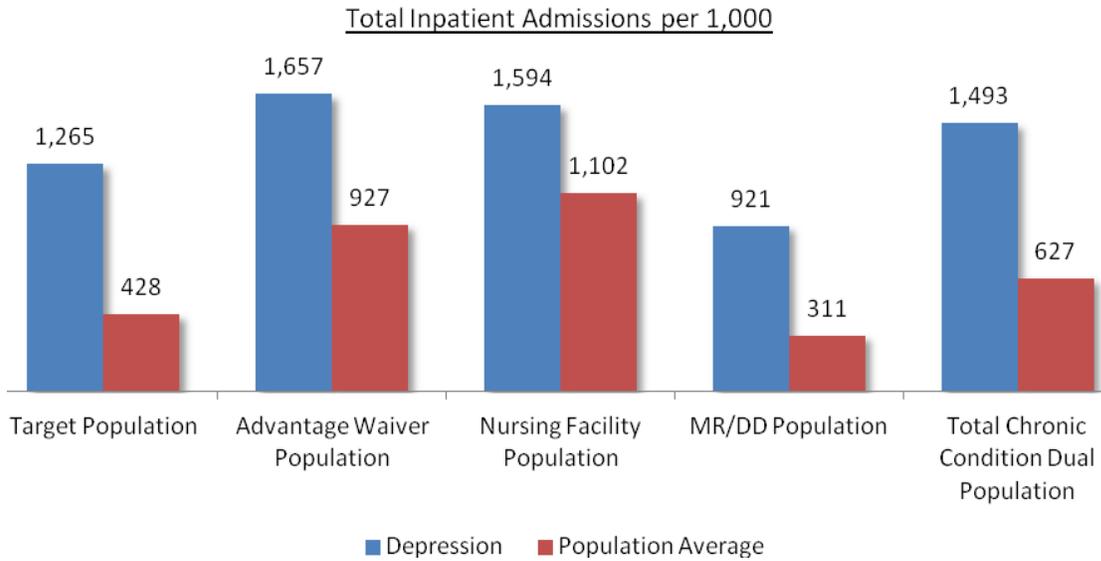


Total Physician Visits per 1,000

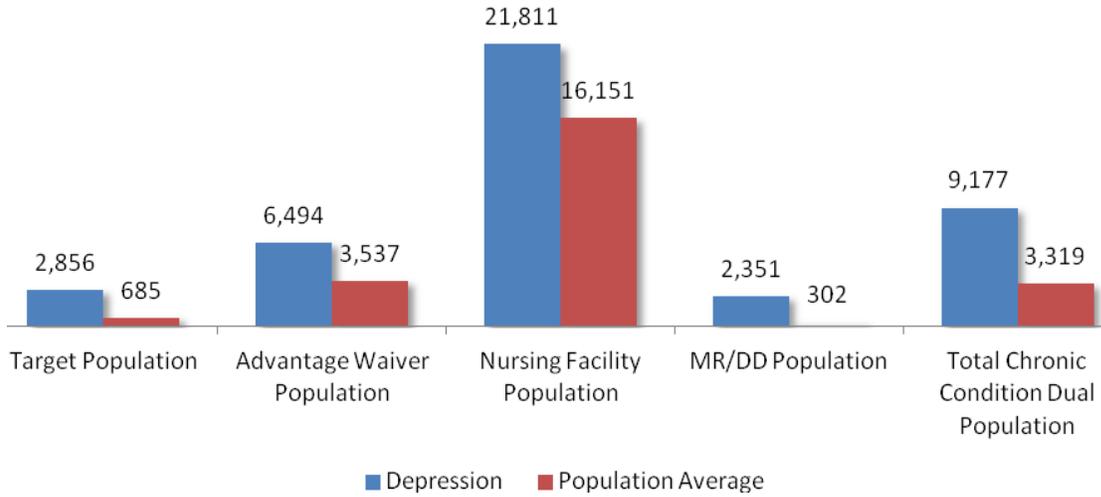




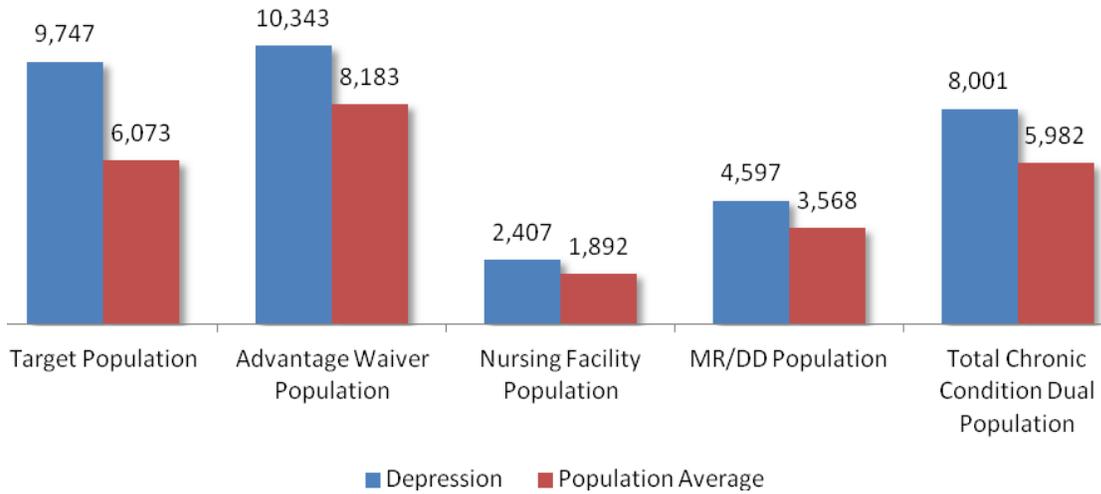
Depression

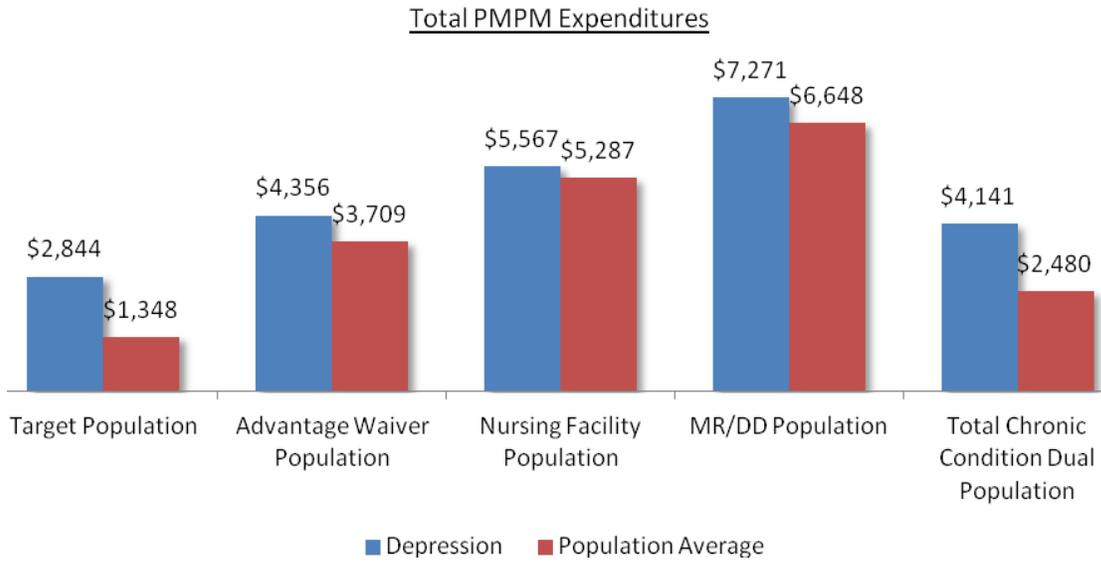


Total Skilled Nursing Days per 1,000

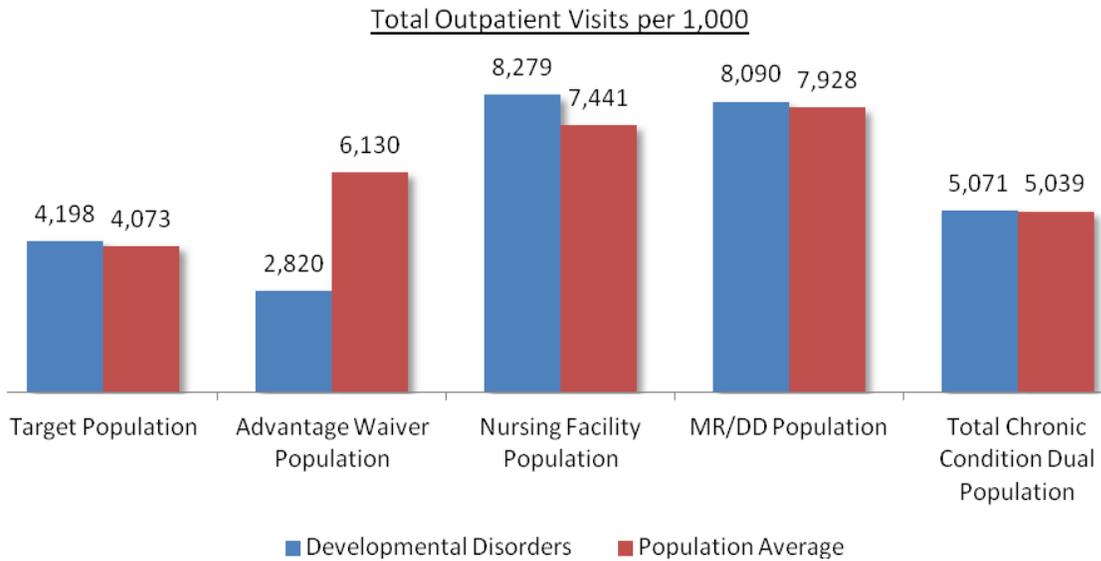
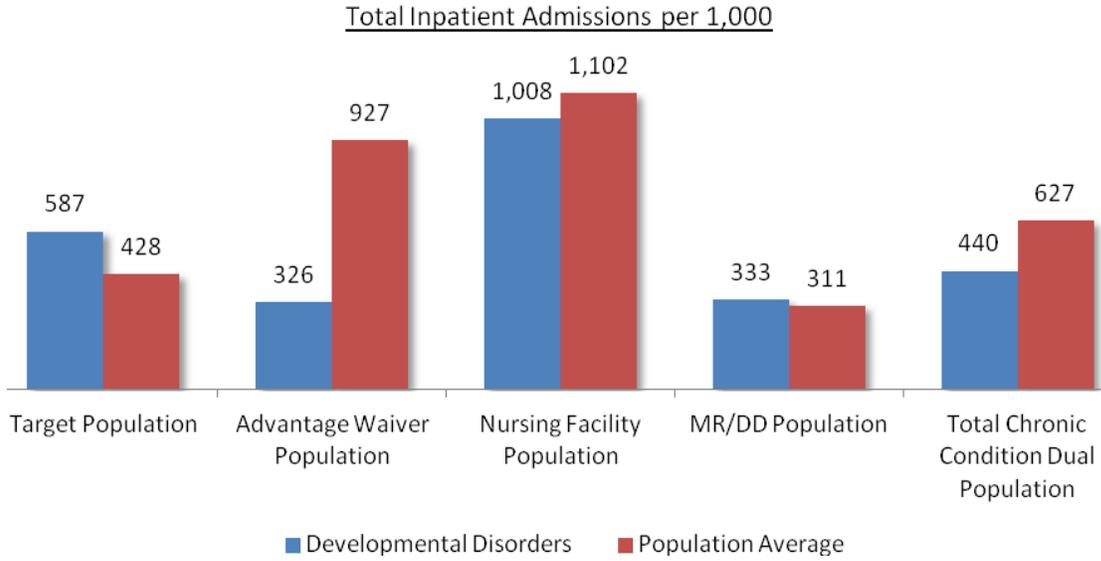


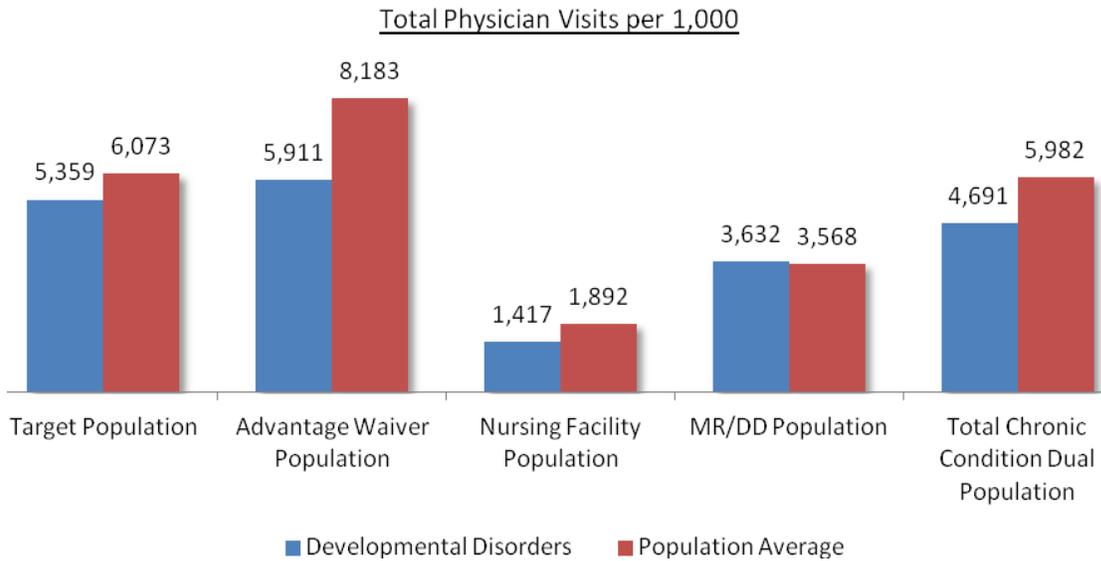
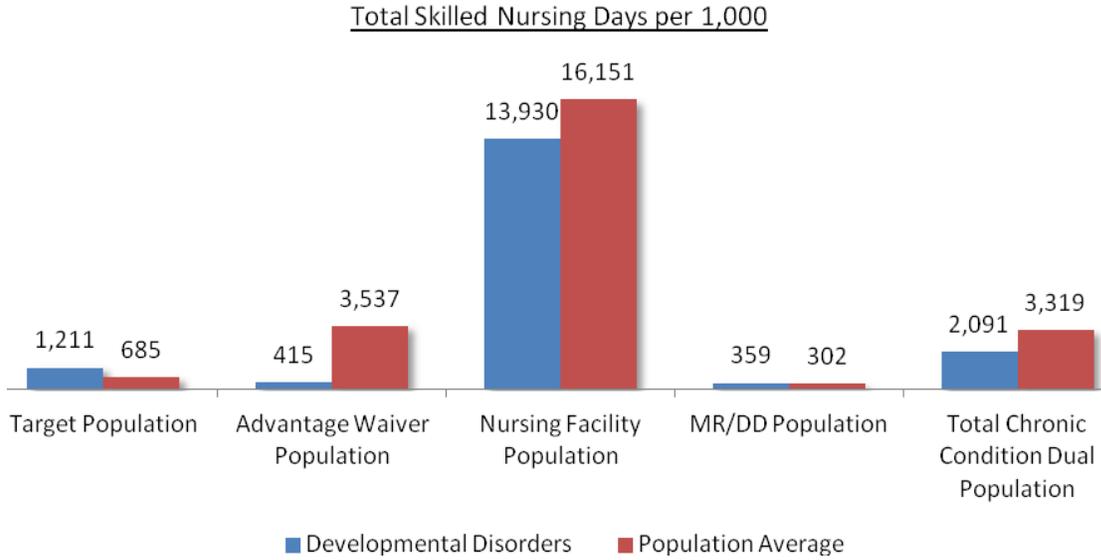
Total Physician Visits per 1,000

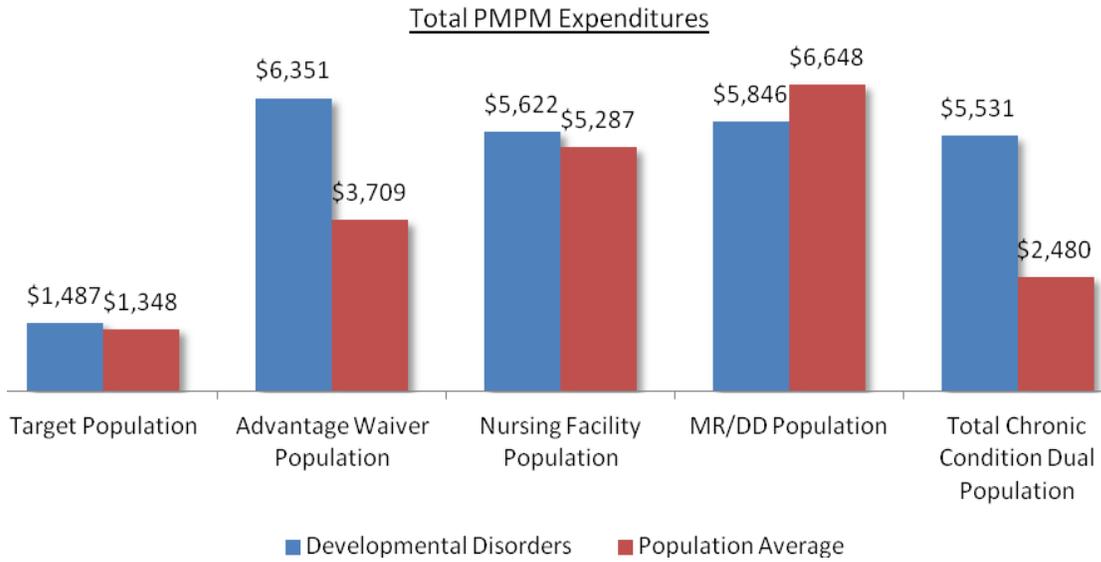




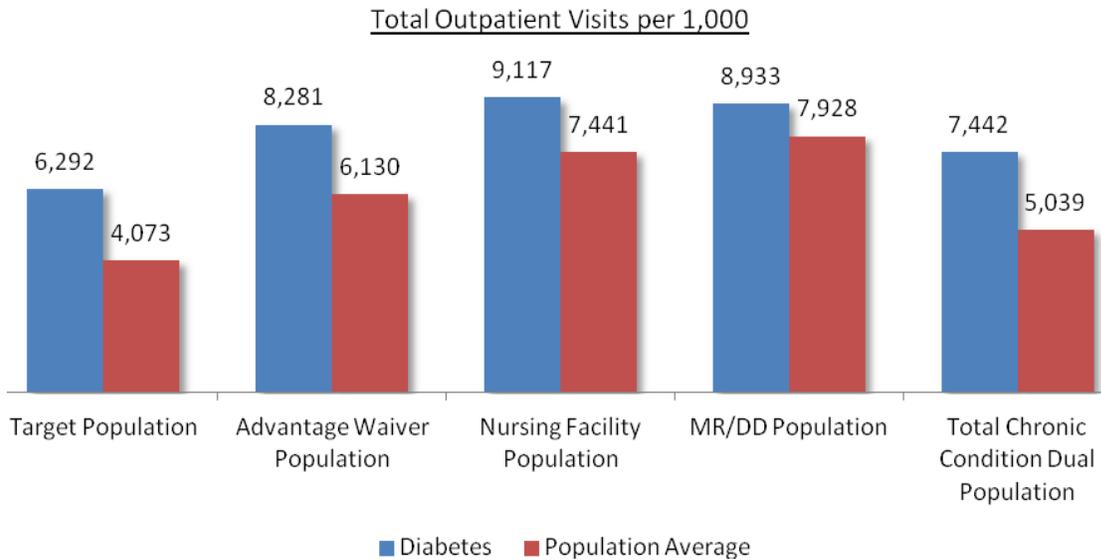
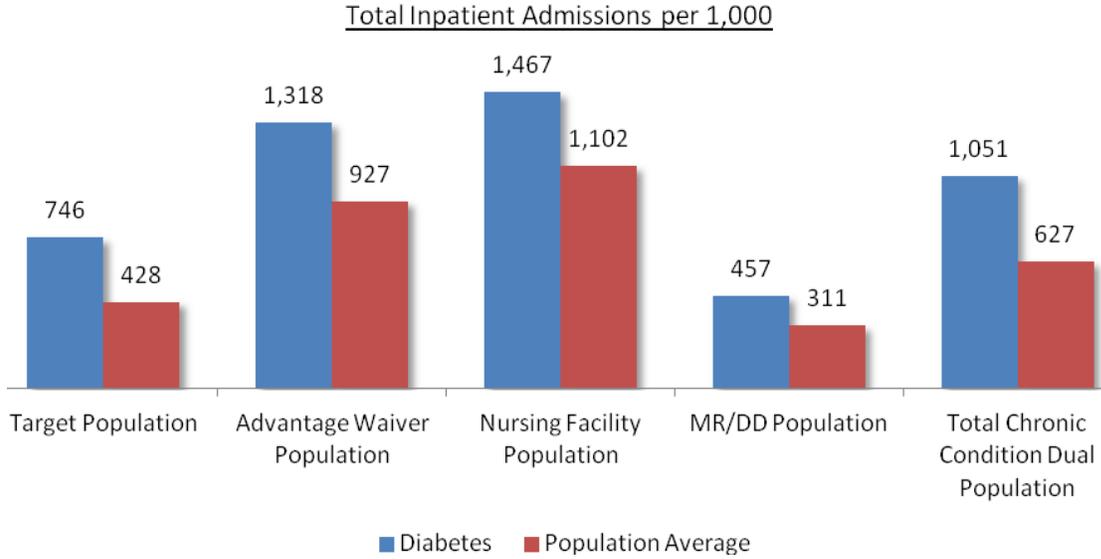
Developmental Disorders



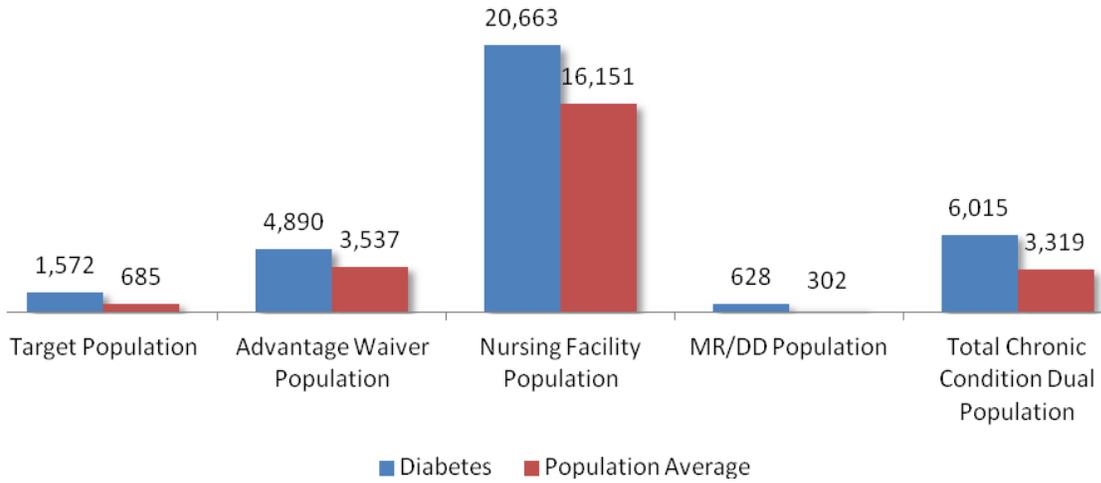




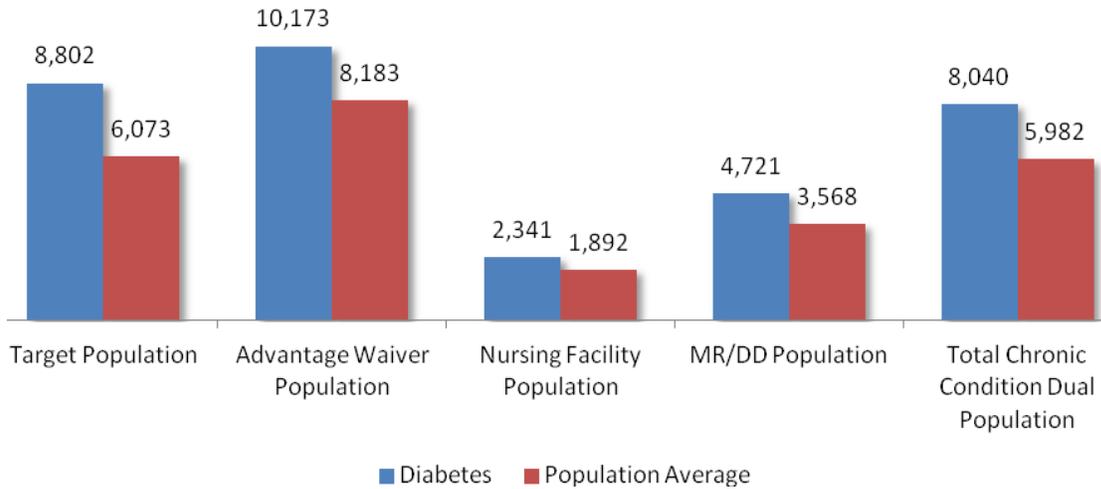
Diabetes Population

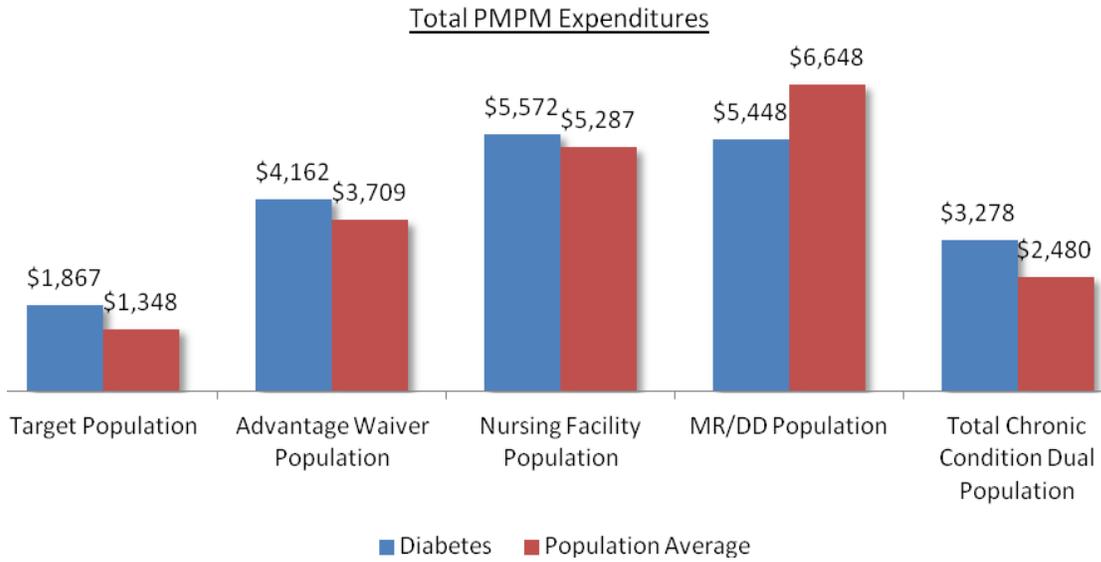


Total Skilled Nursing Days per 1,000

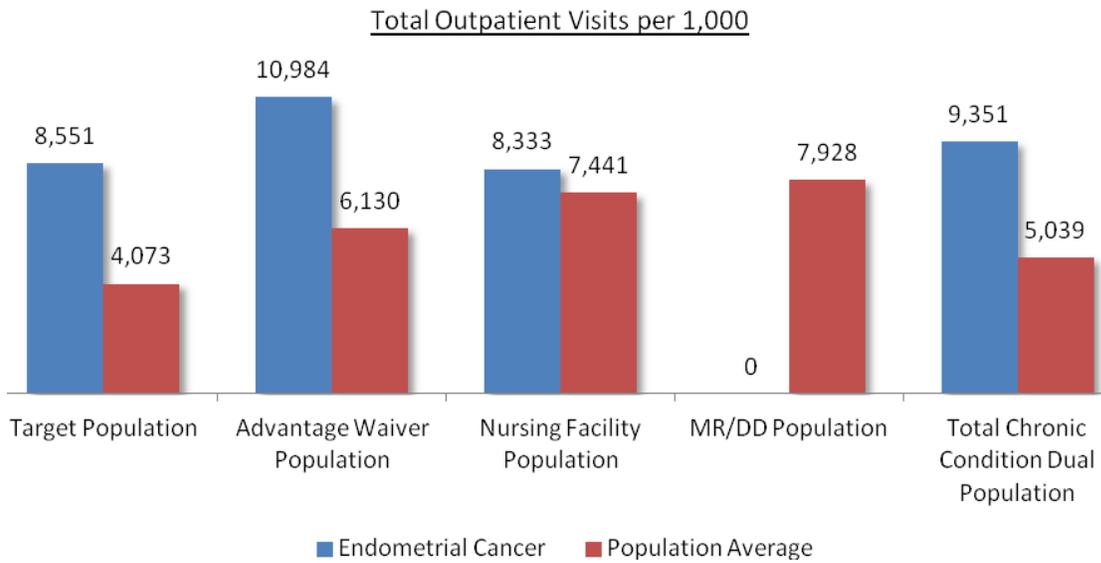
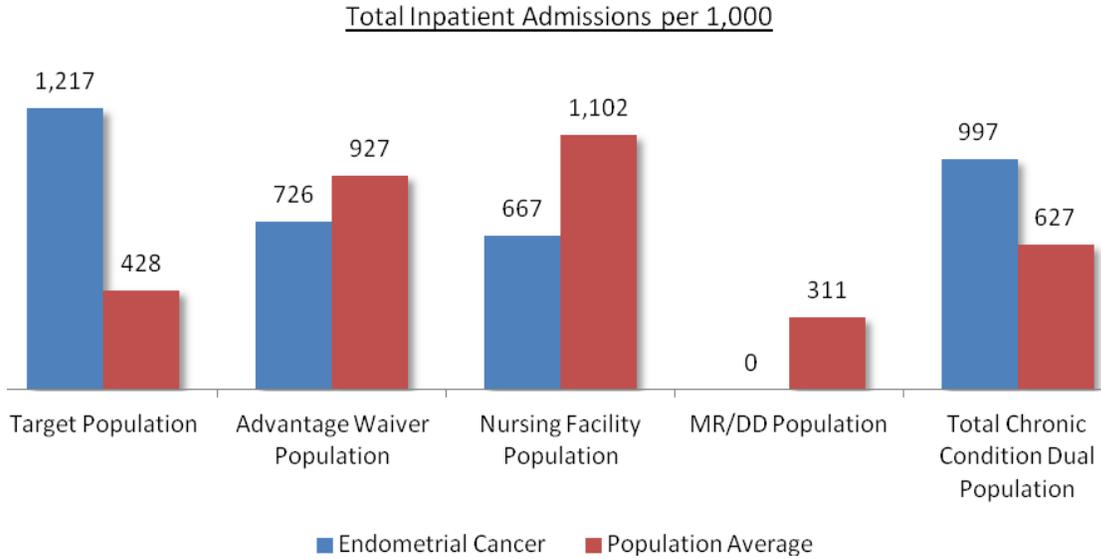


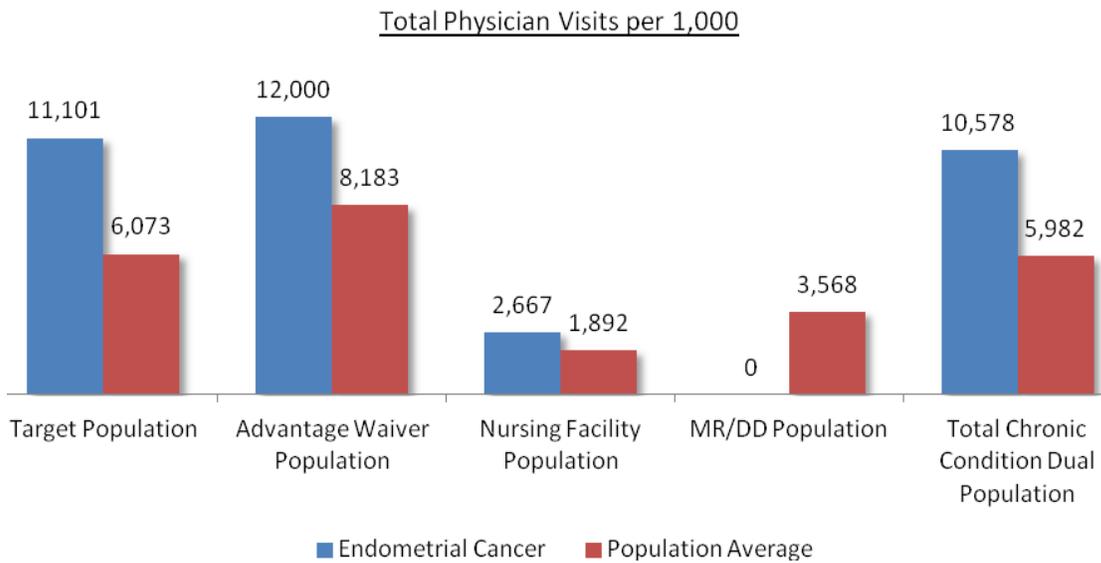
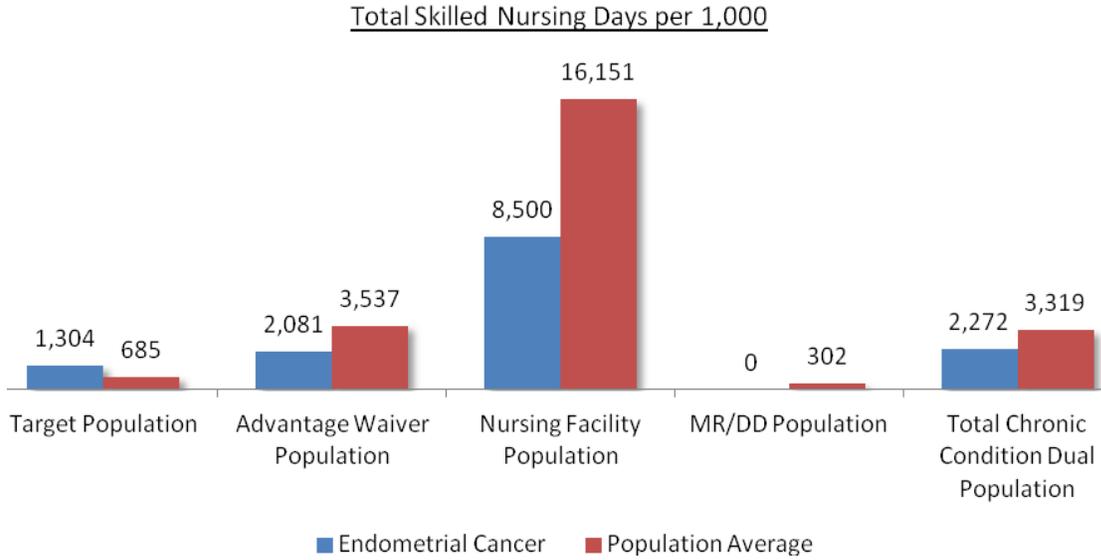
Total Physician Visits per 1,000

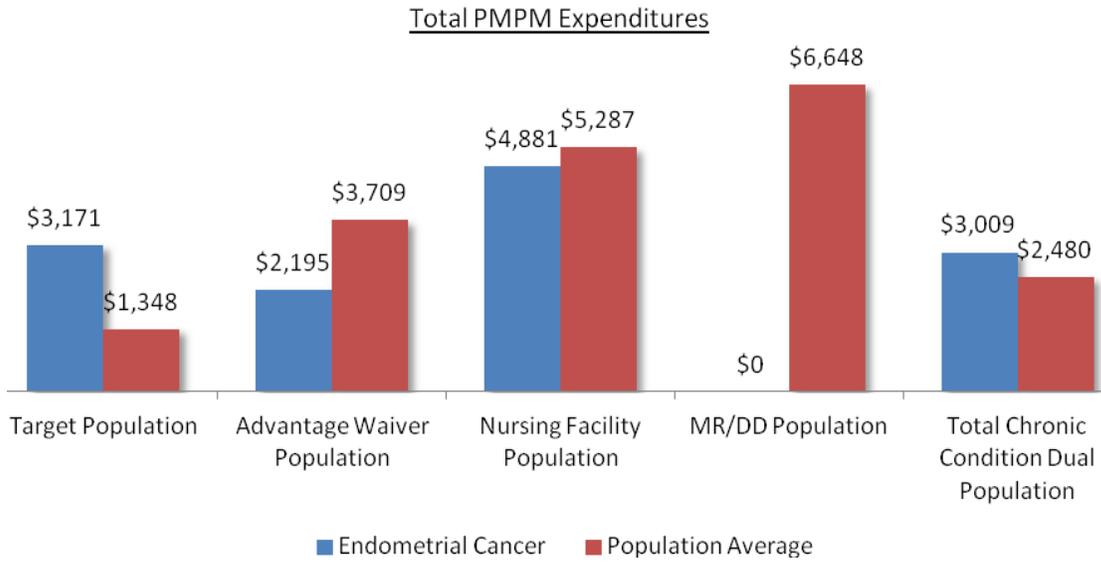




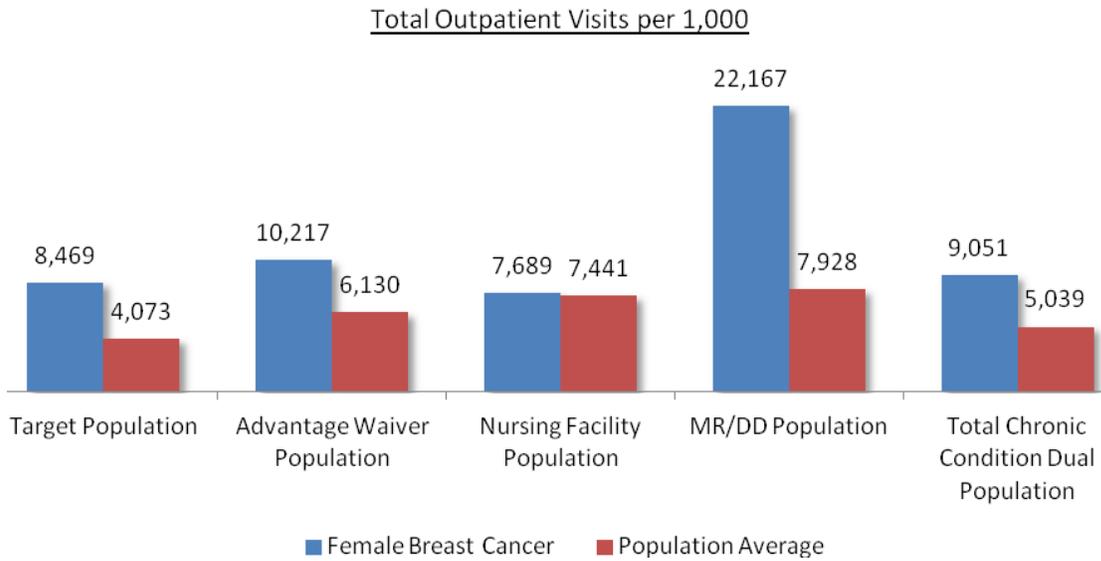
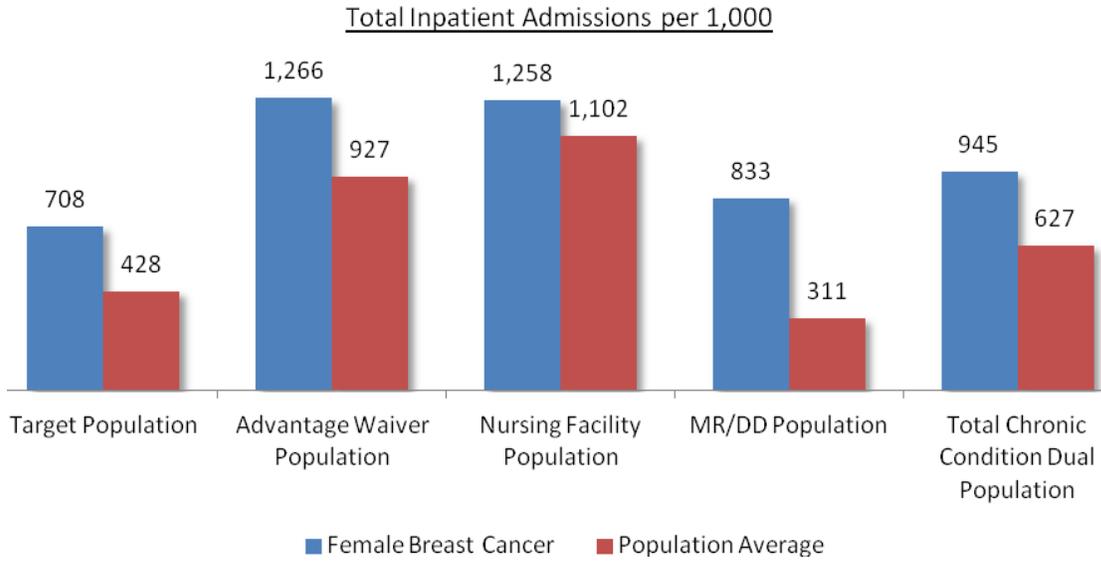
Endometrial Cancer



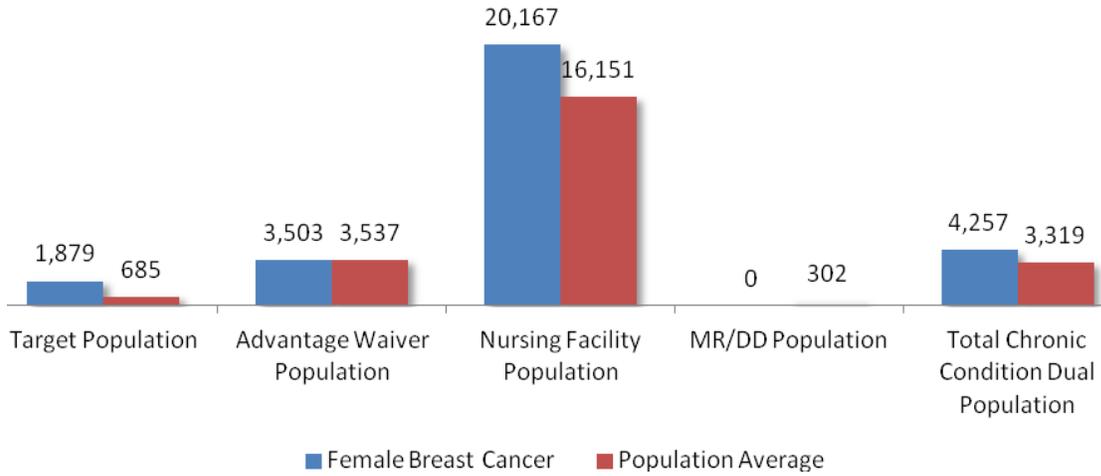




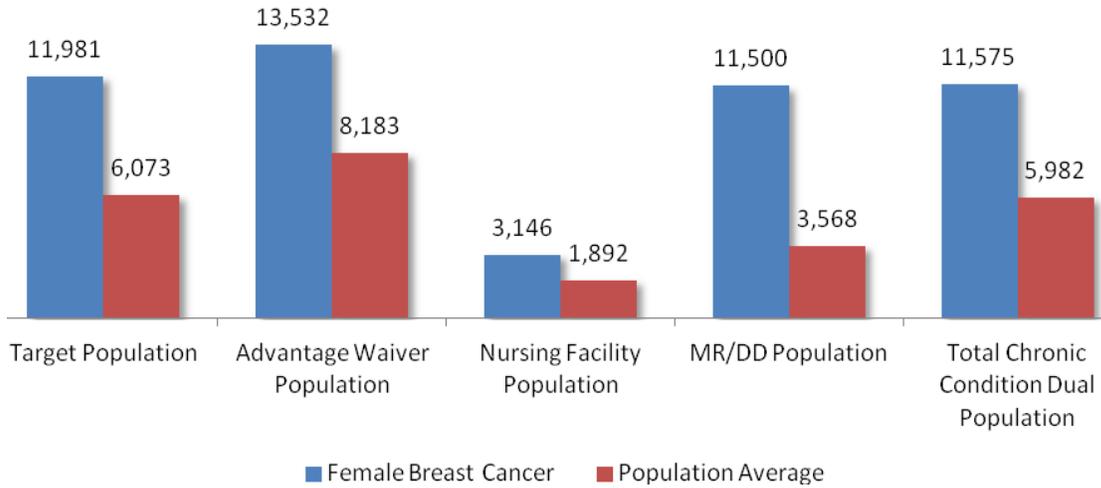
Female Breast Cancer

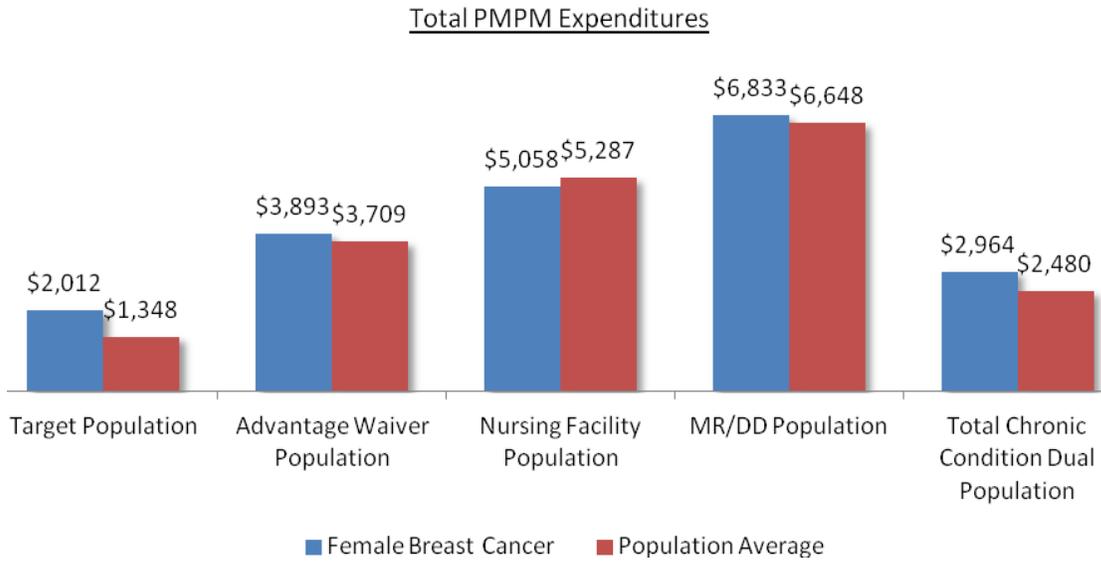


Total Skilled Nursing Days per 1,000

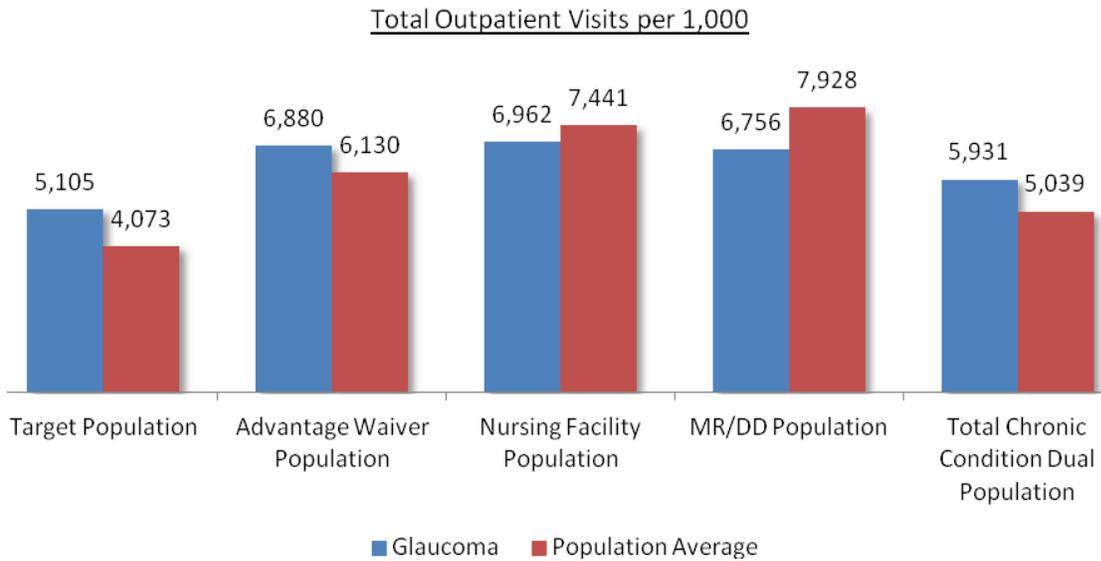
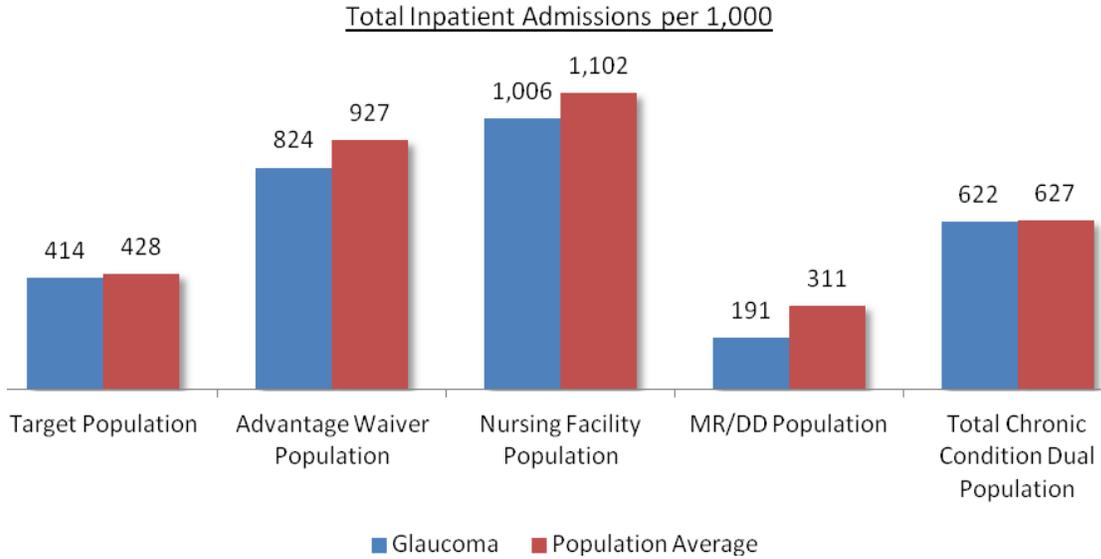


Total Physician Visits per 1,000

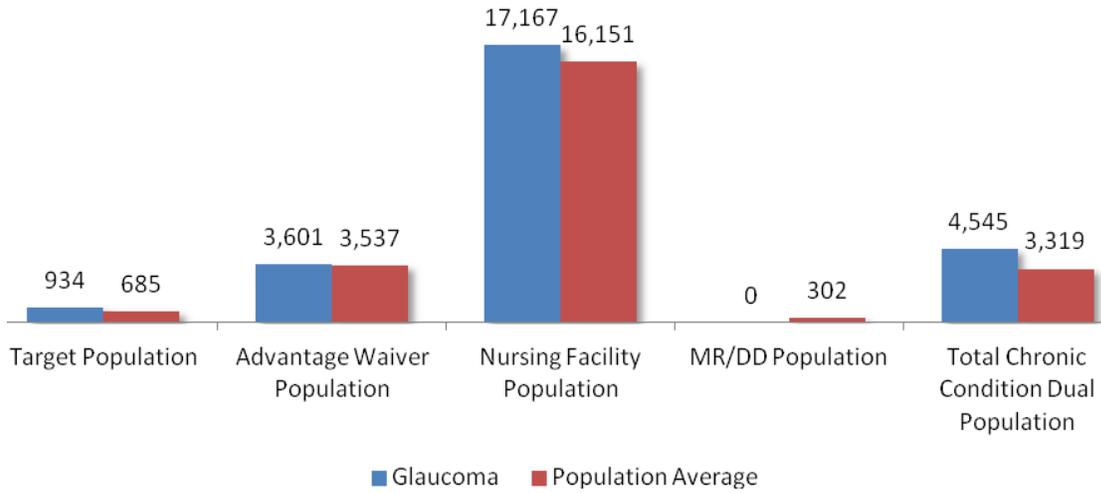




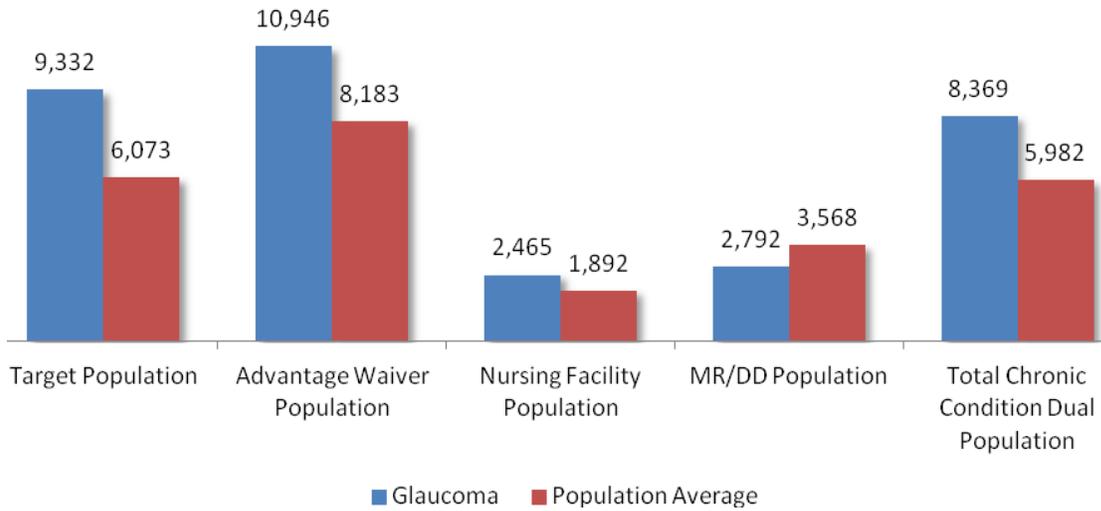
Glaucoma

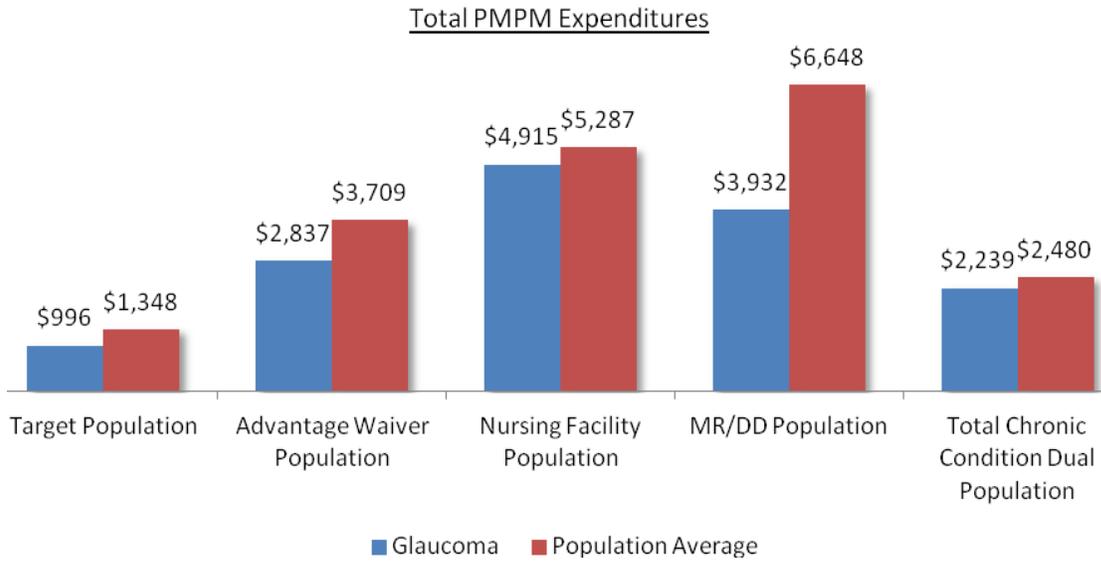


Total Skilled Nursing Days per 1,000

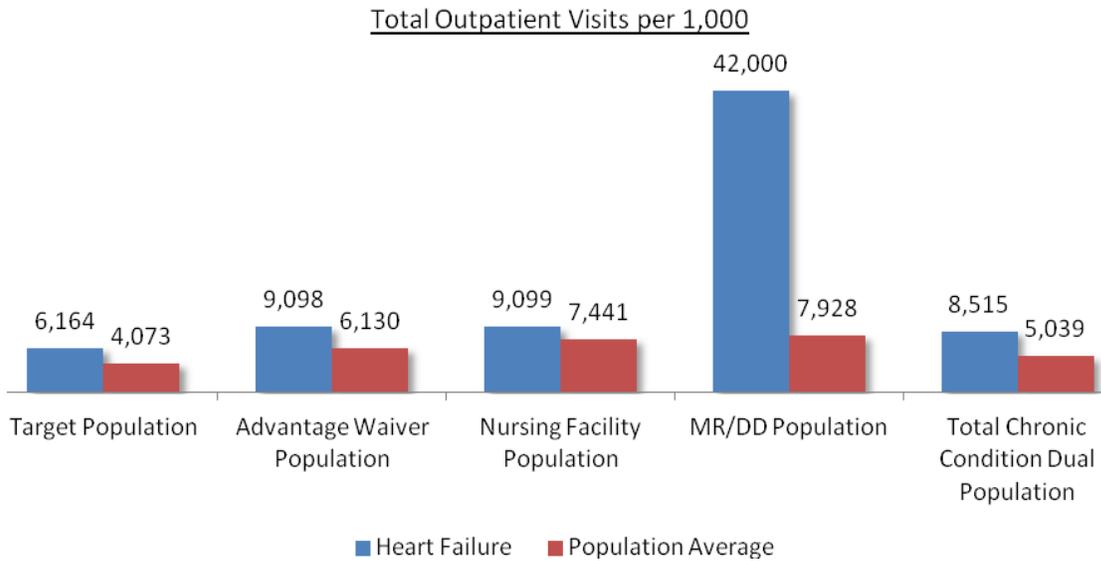
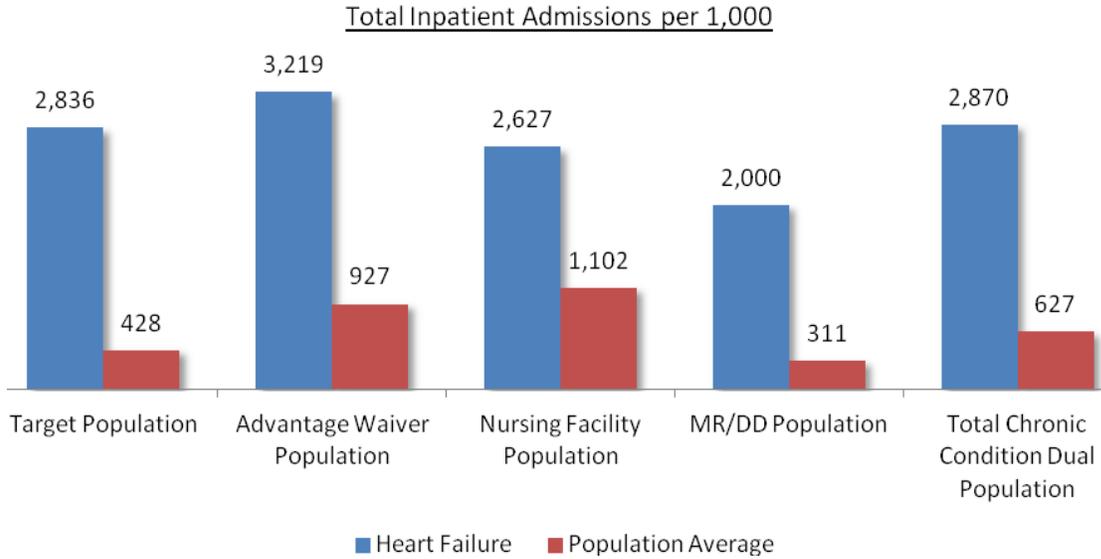


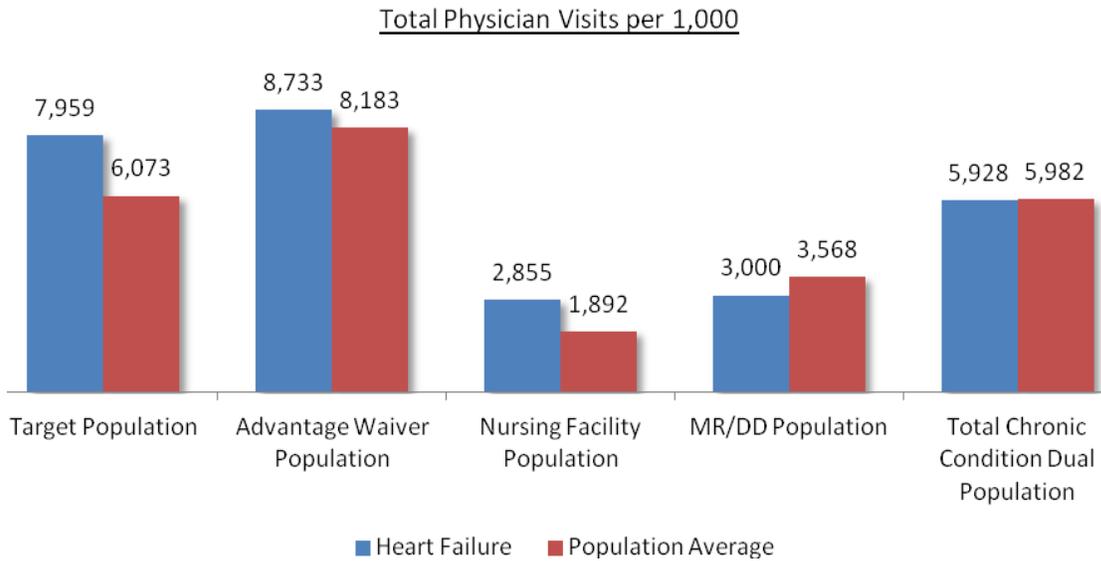
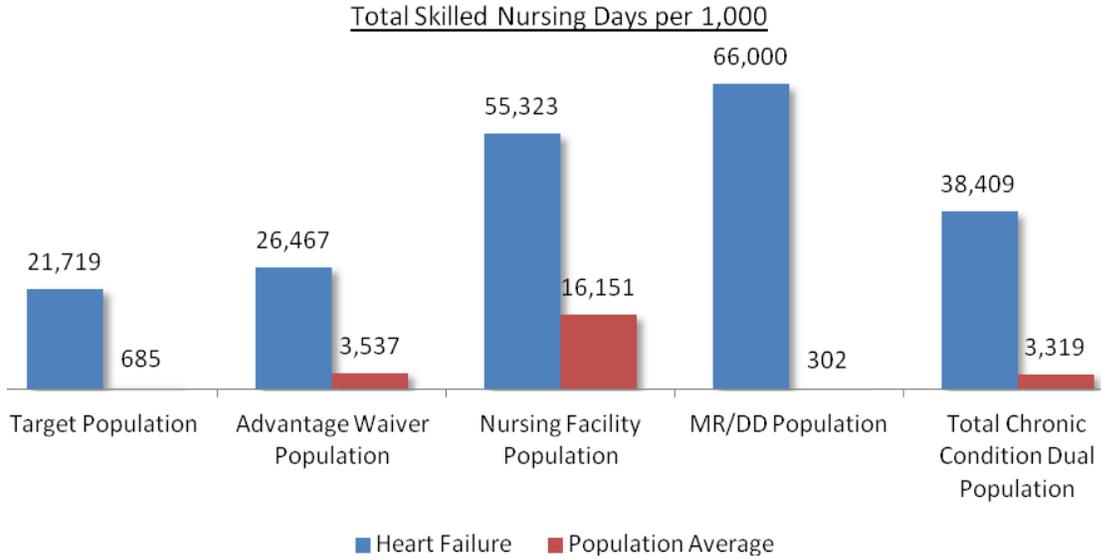
Total Physician Visits per 1,000

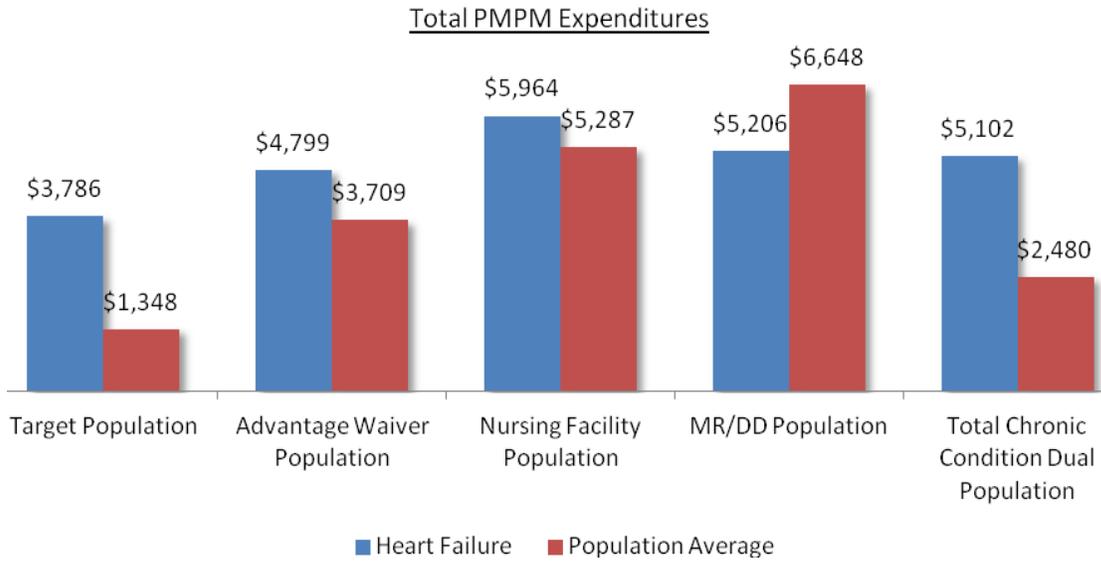




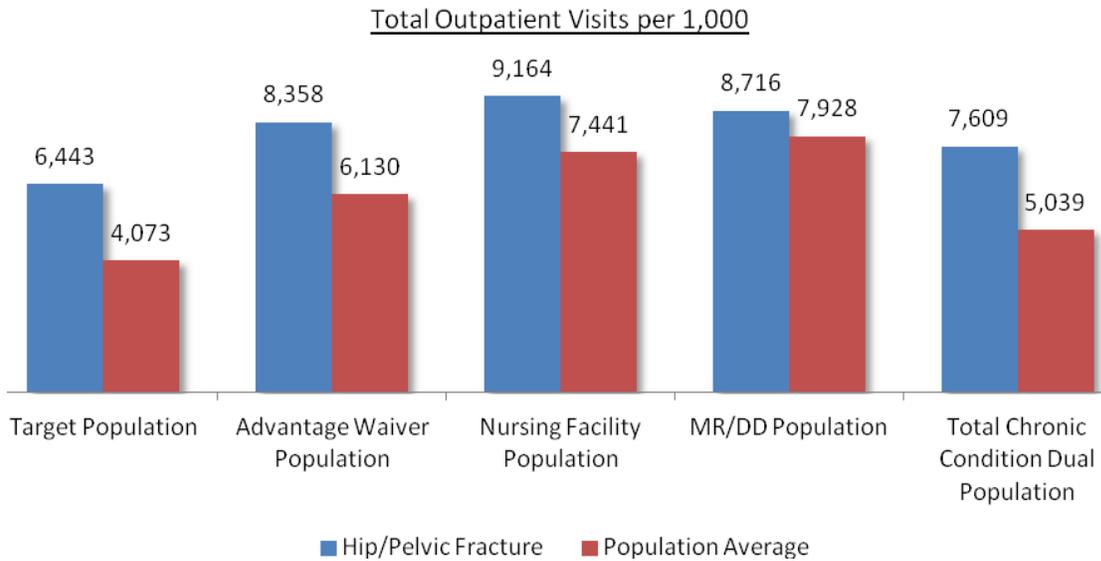
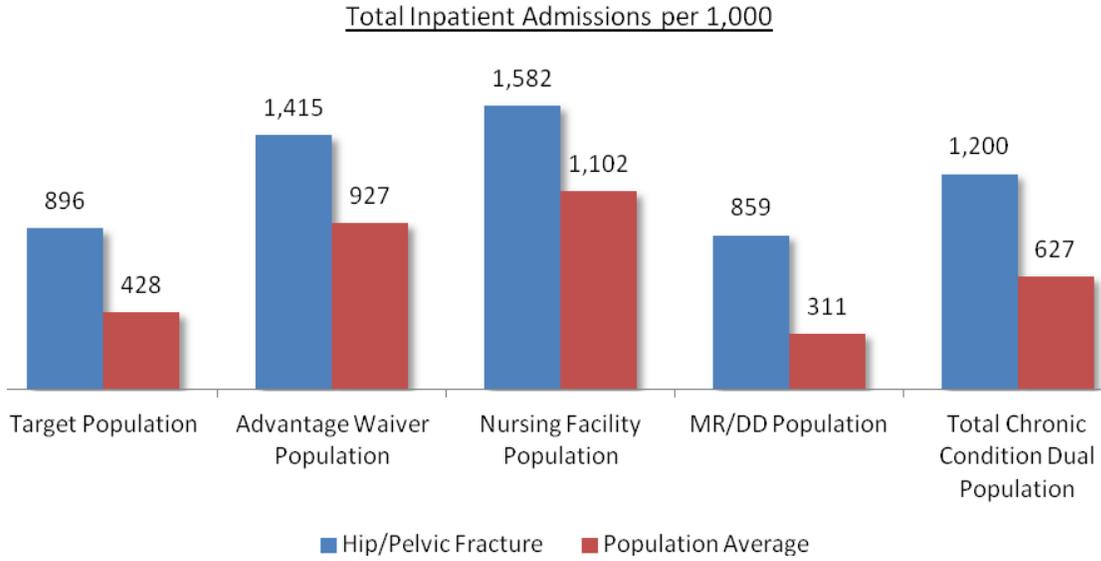
Heart Failure

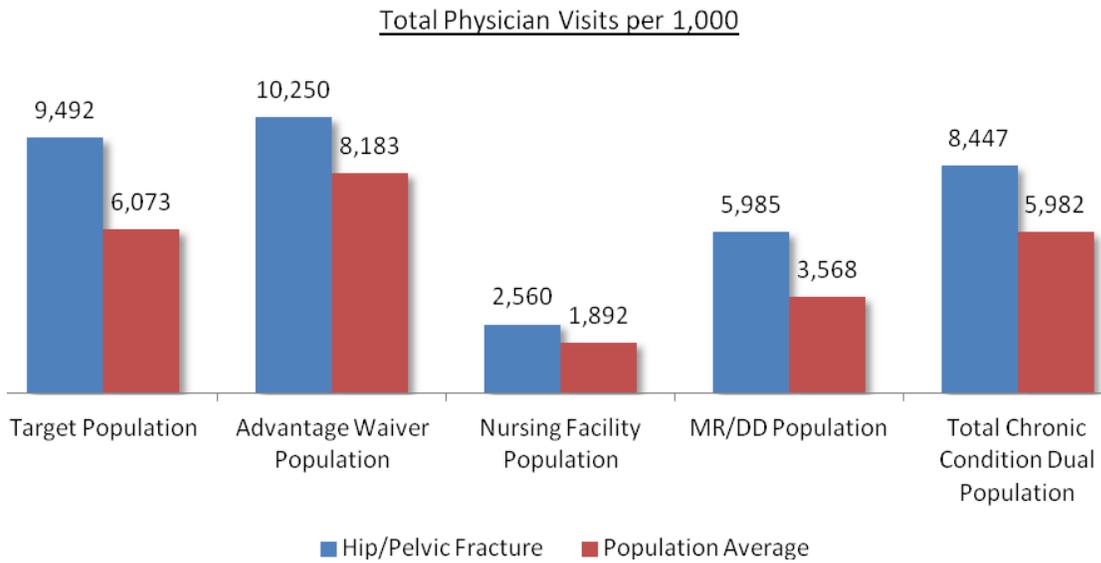
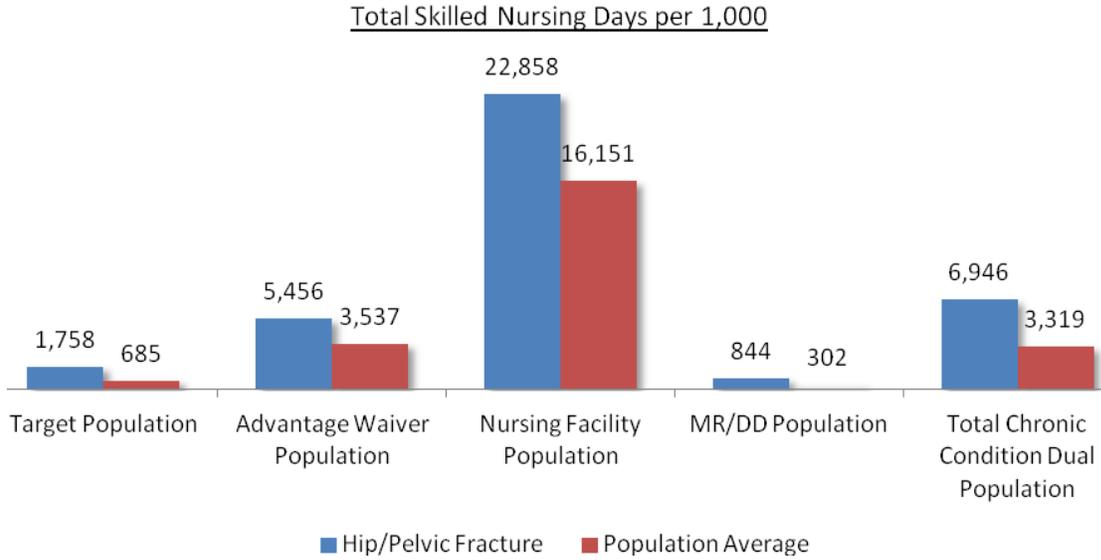


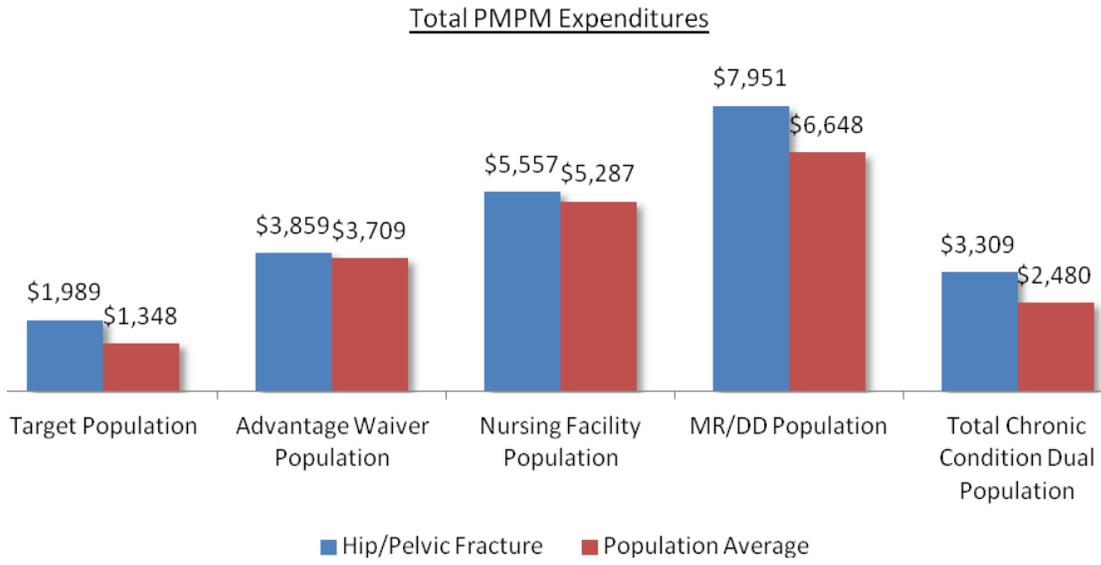




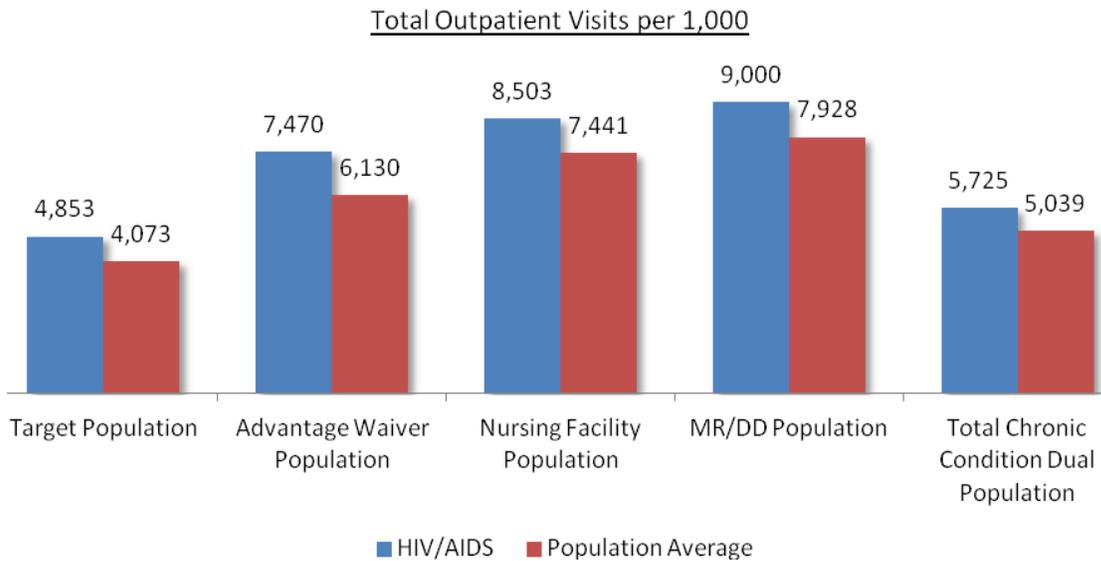
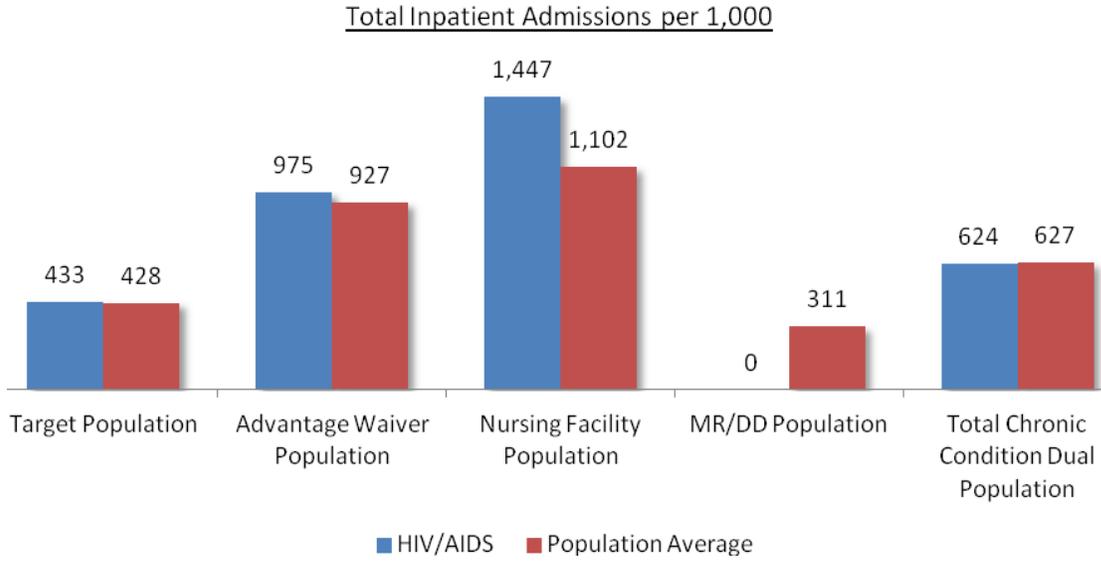
Hip/Pelvic Fracture

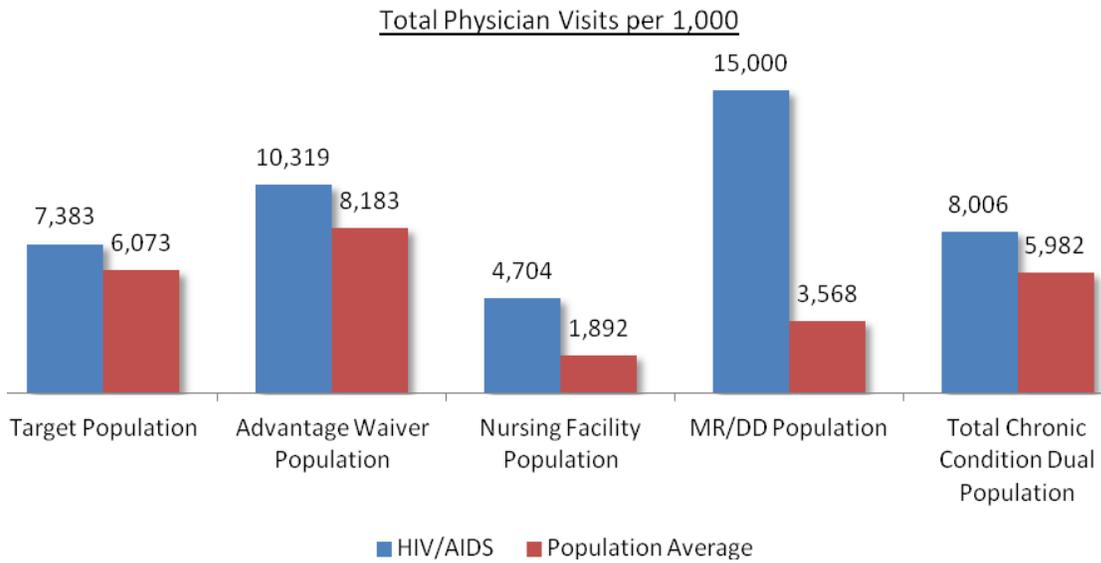
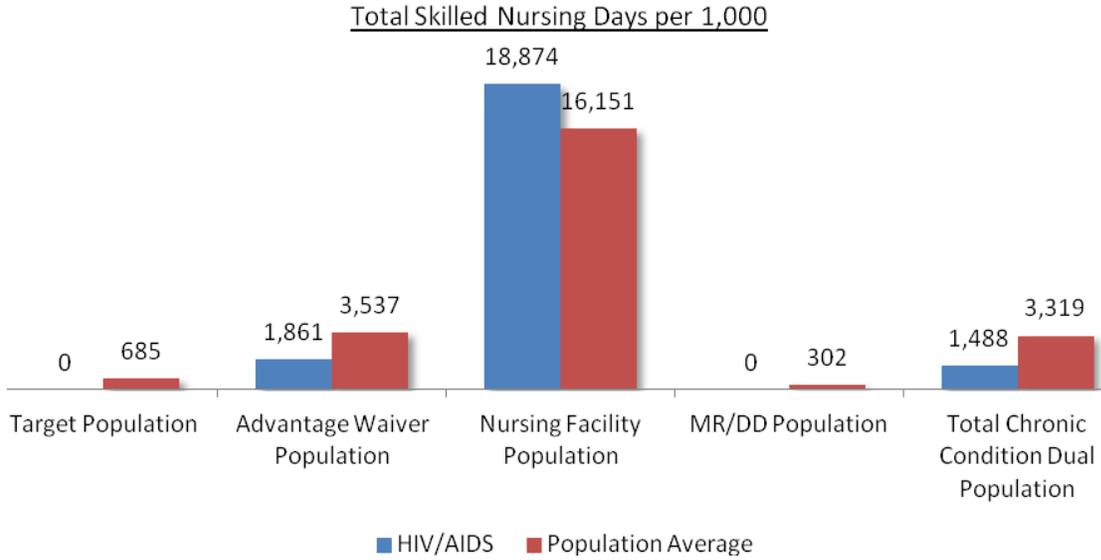


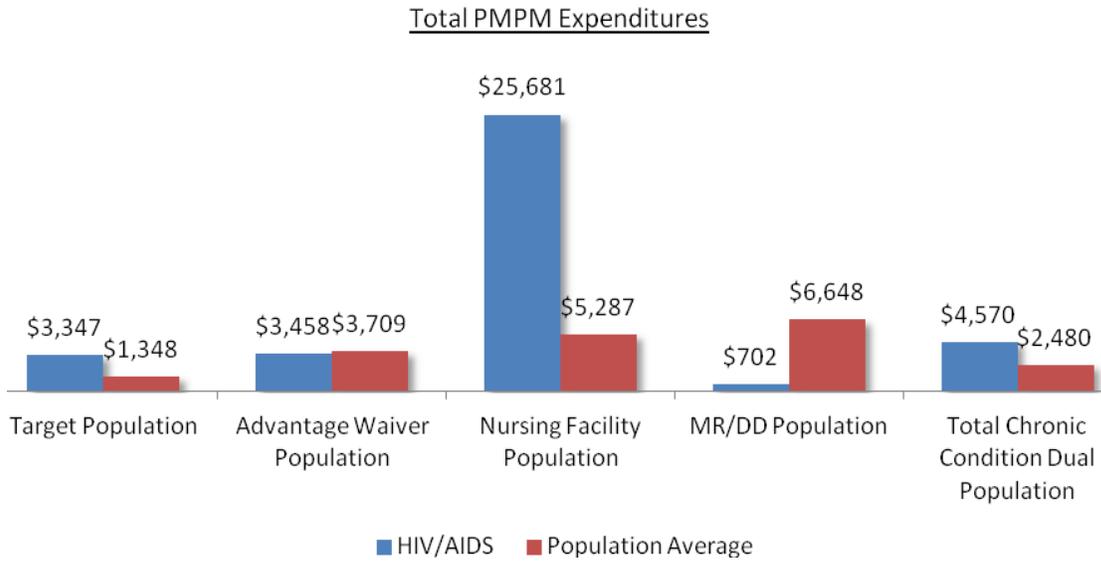




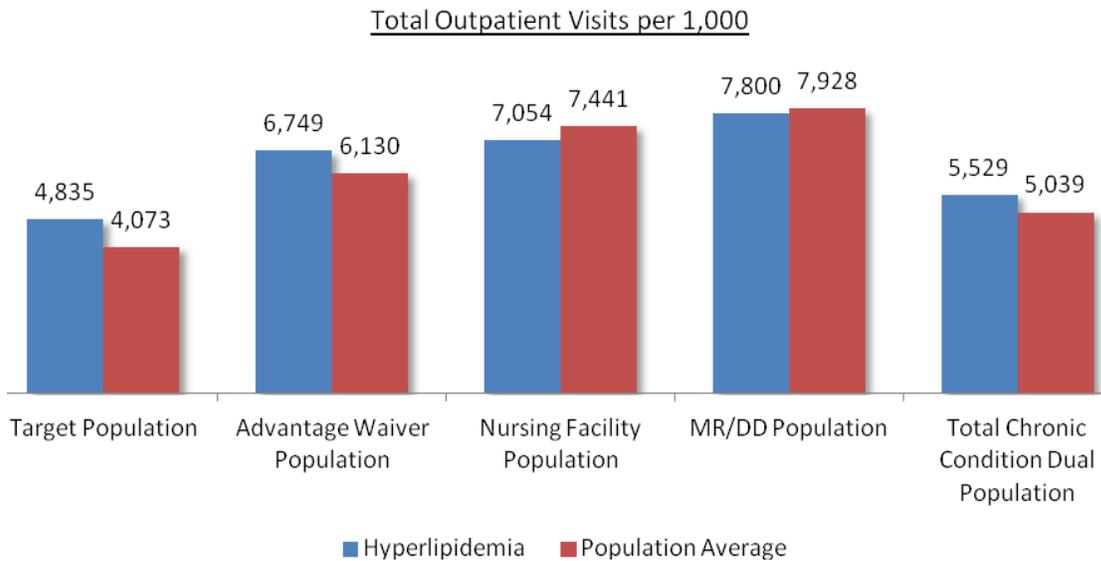
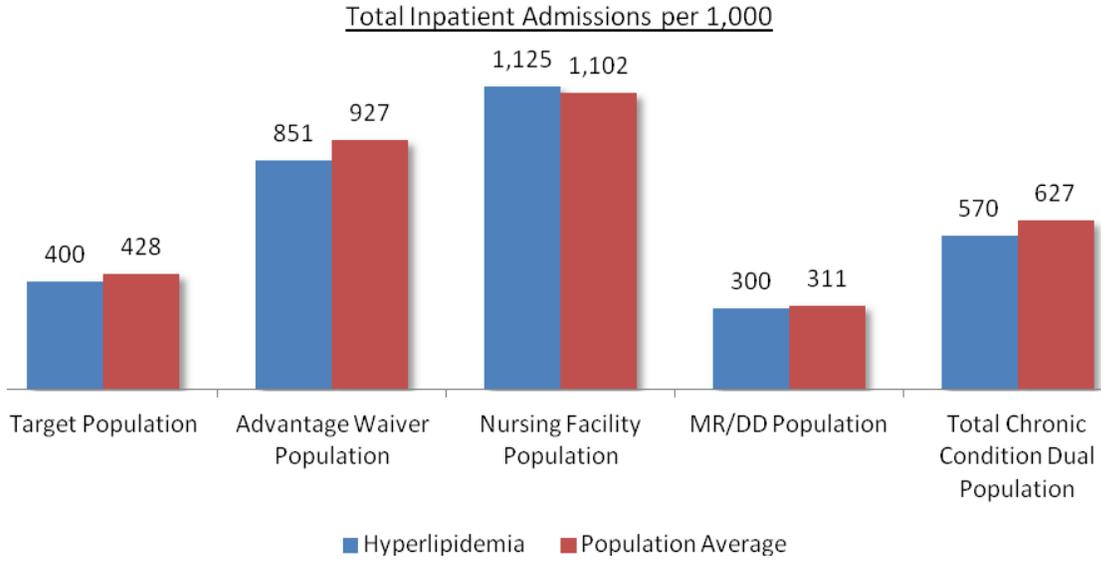
HIV/AIDS

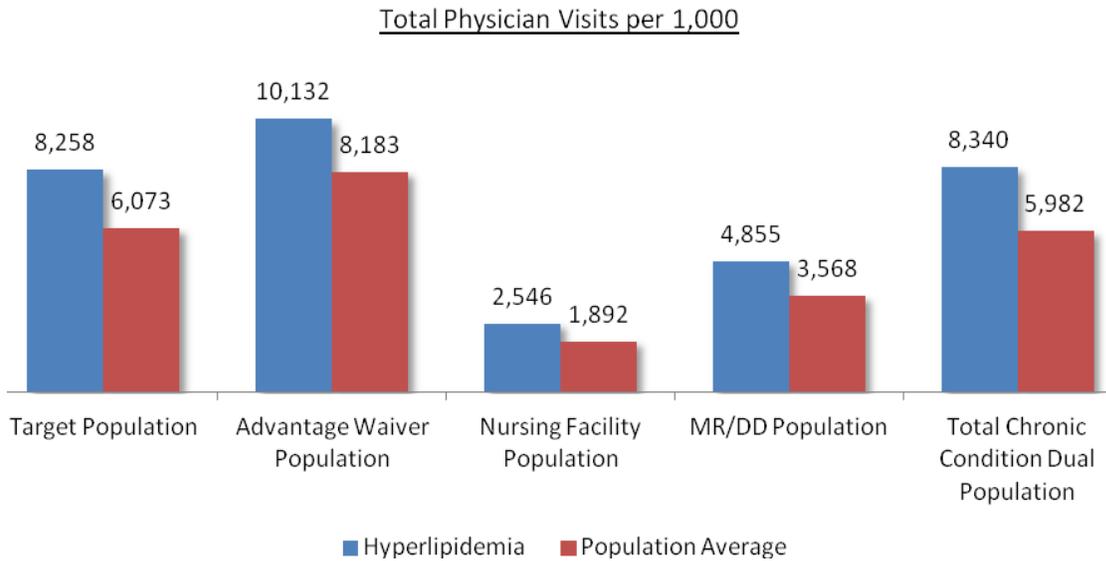
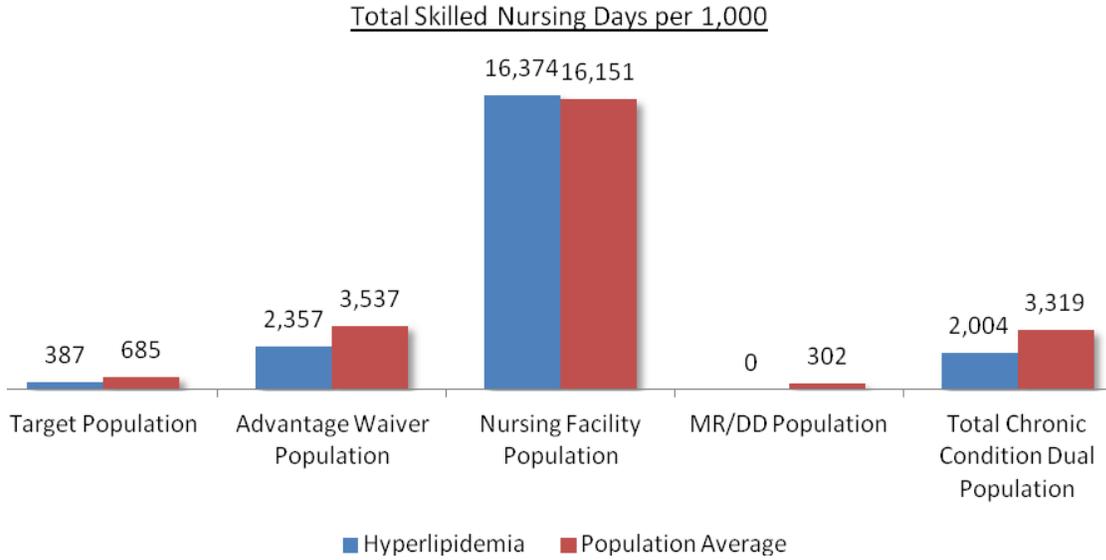


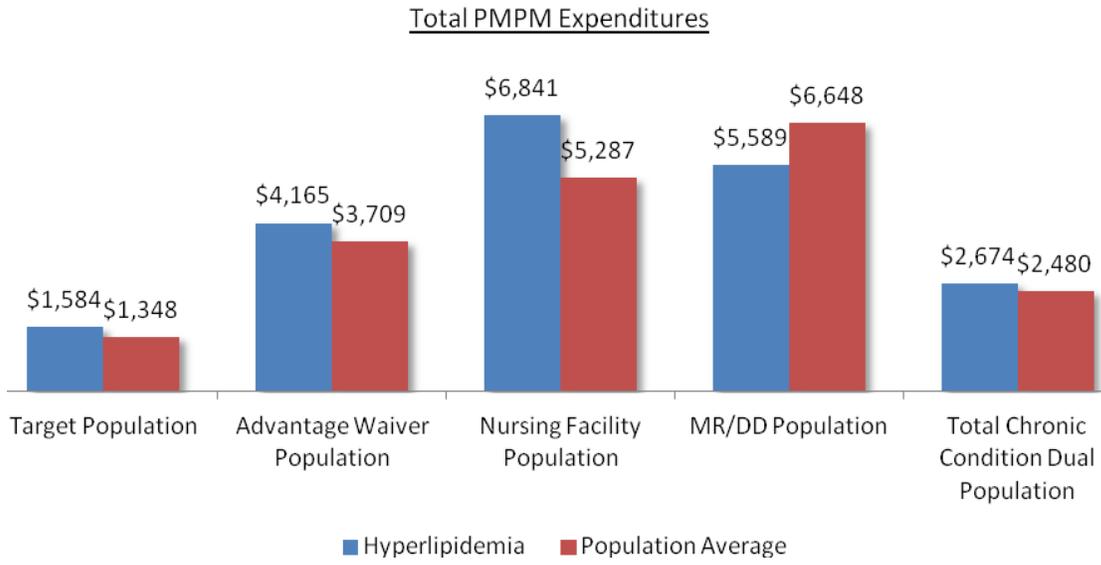




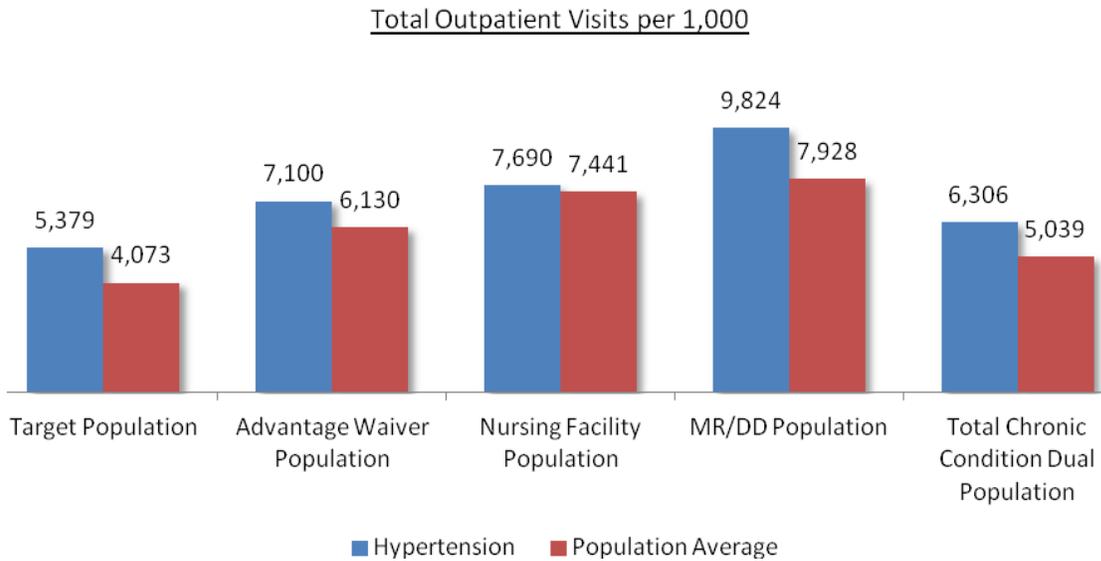
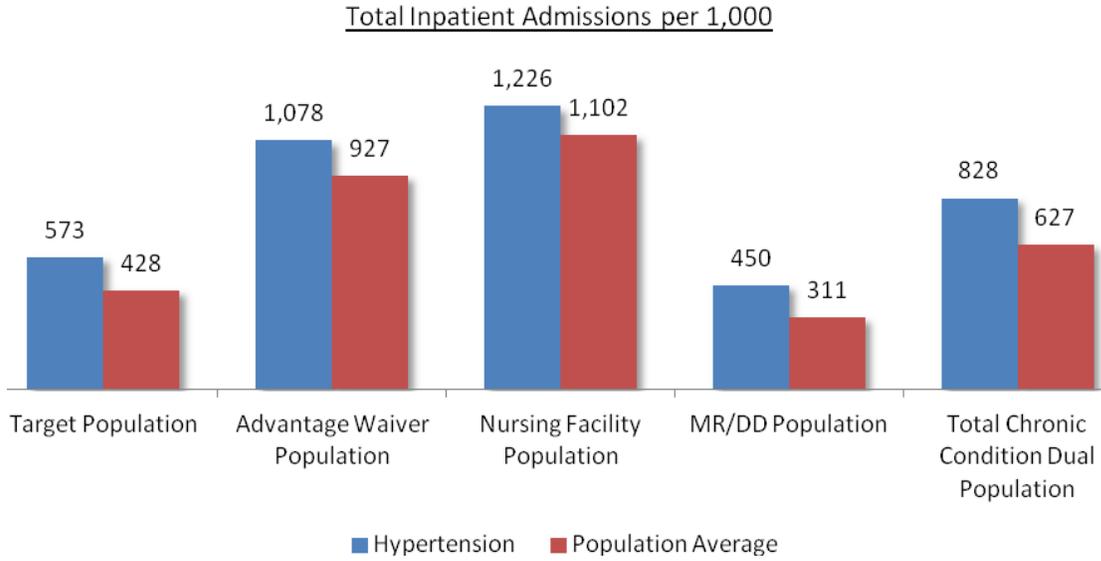
Hyperlipidemia

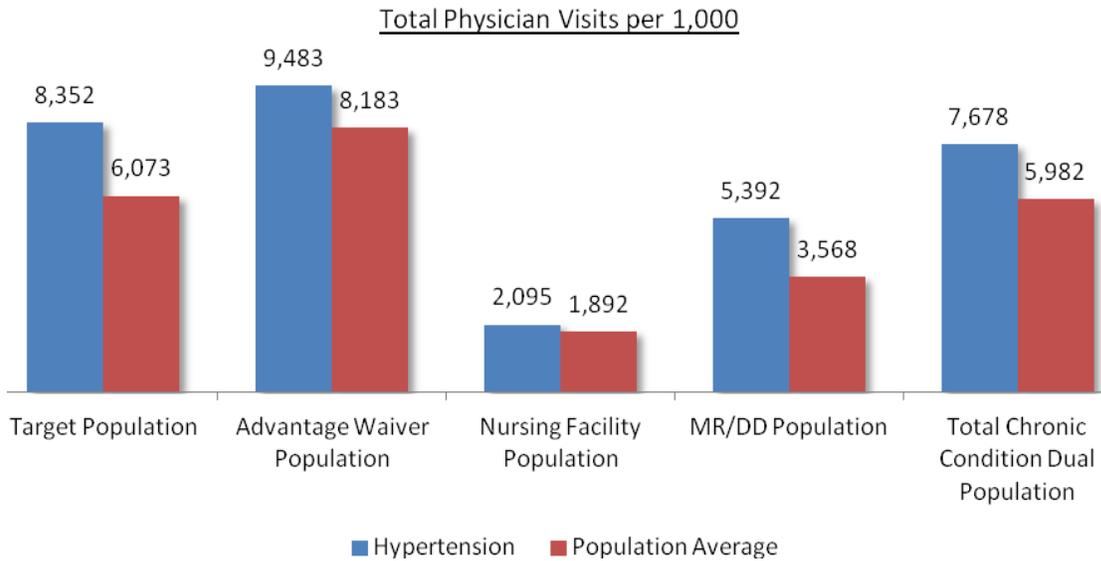
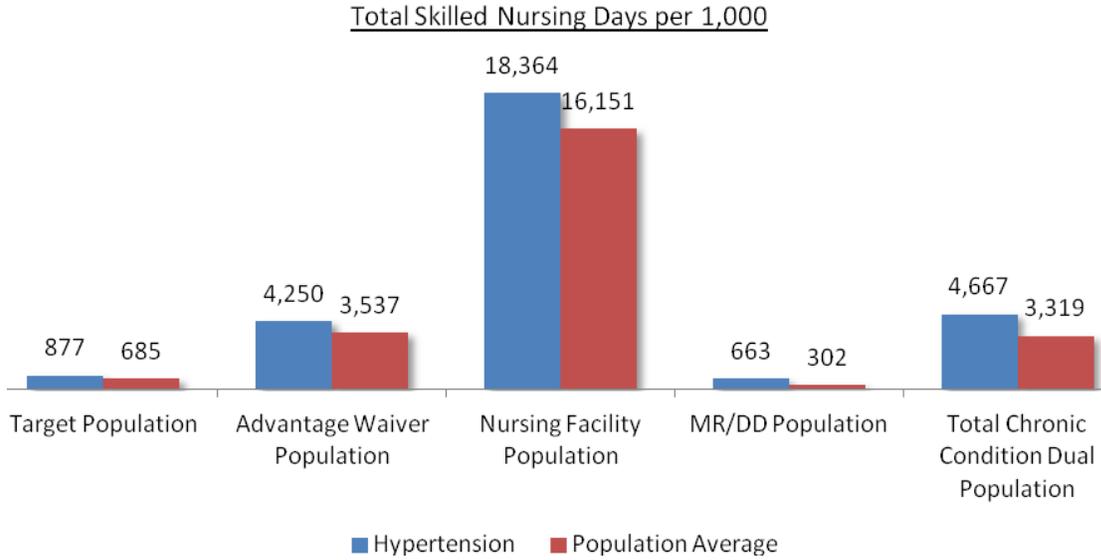


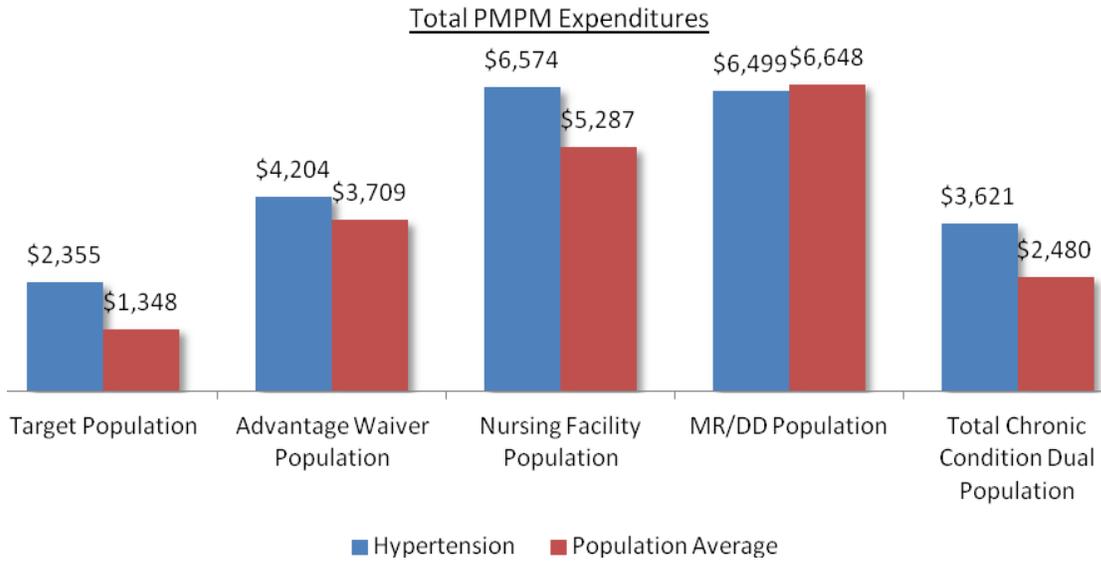




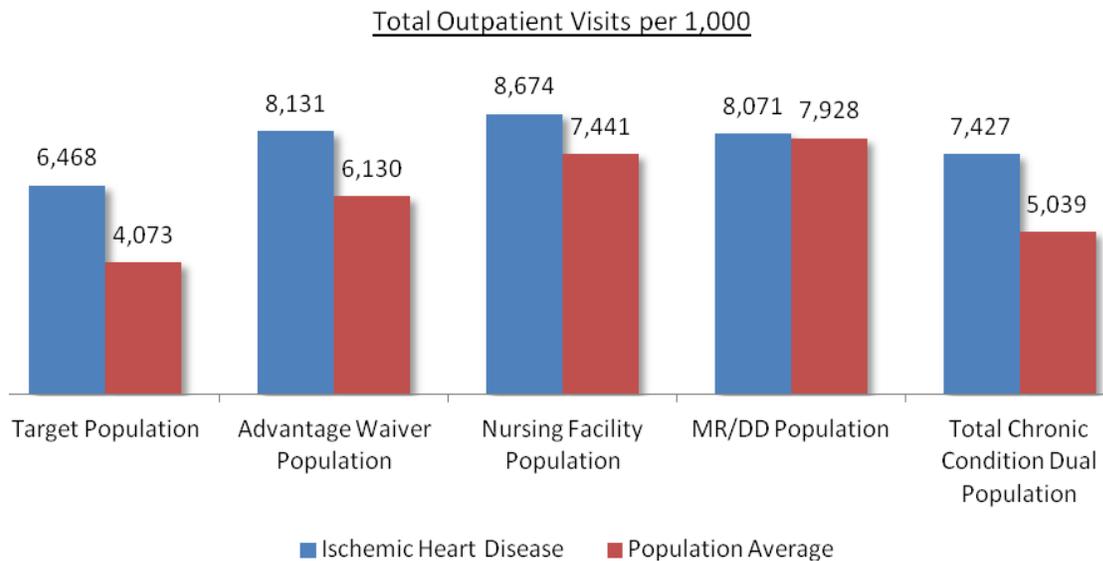
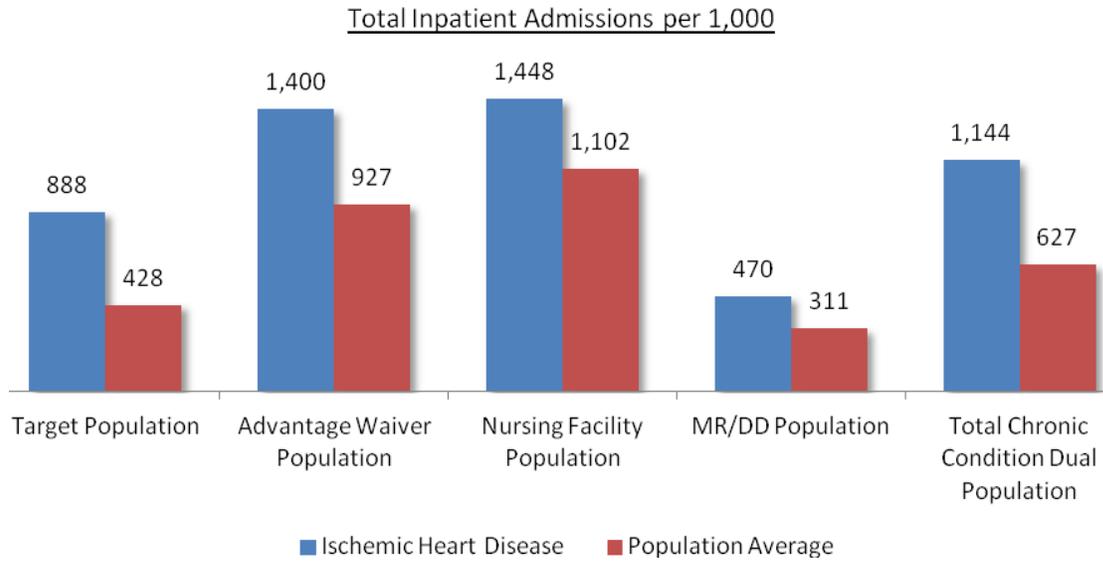
Hypertension



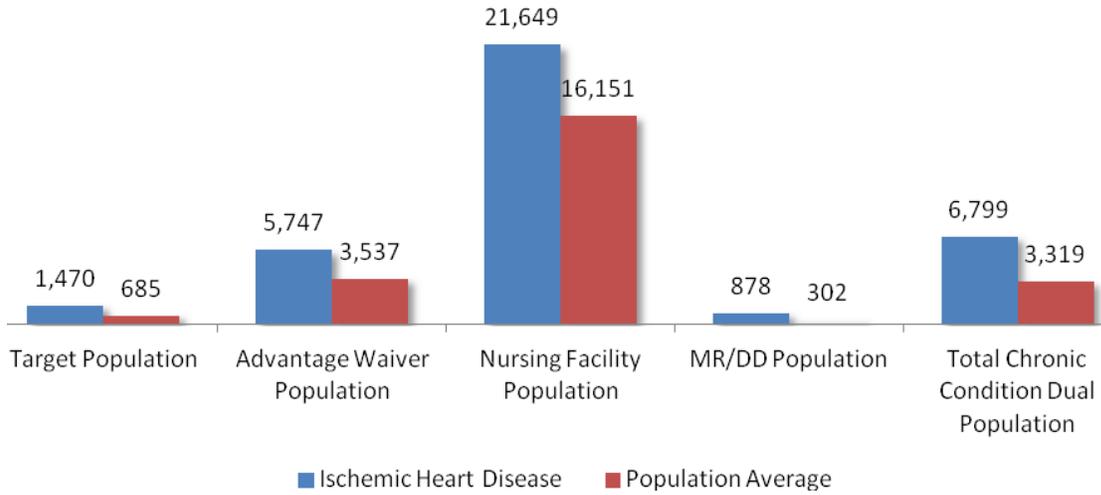




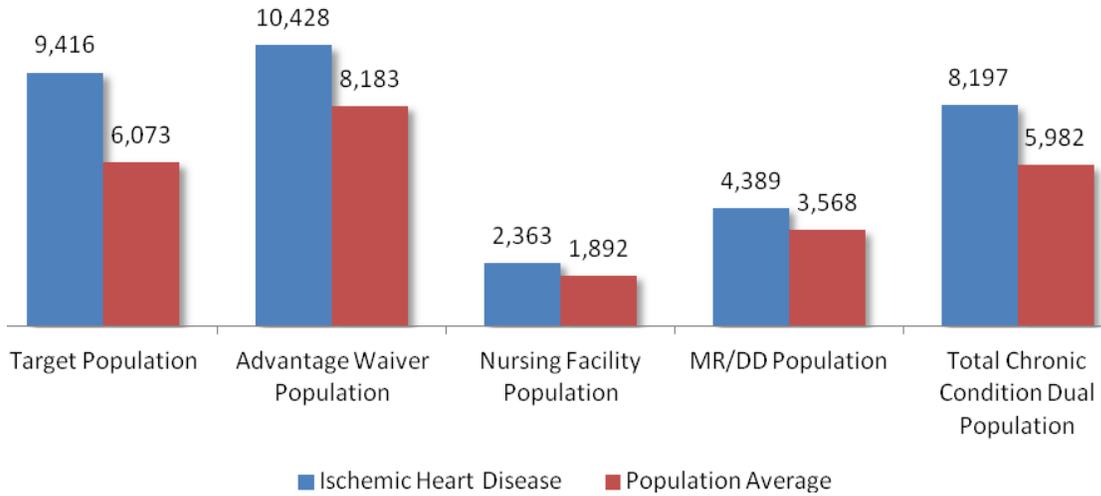
Ischemic Heart Disease

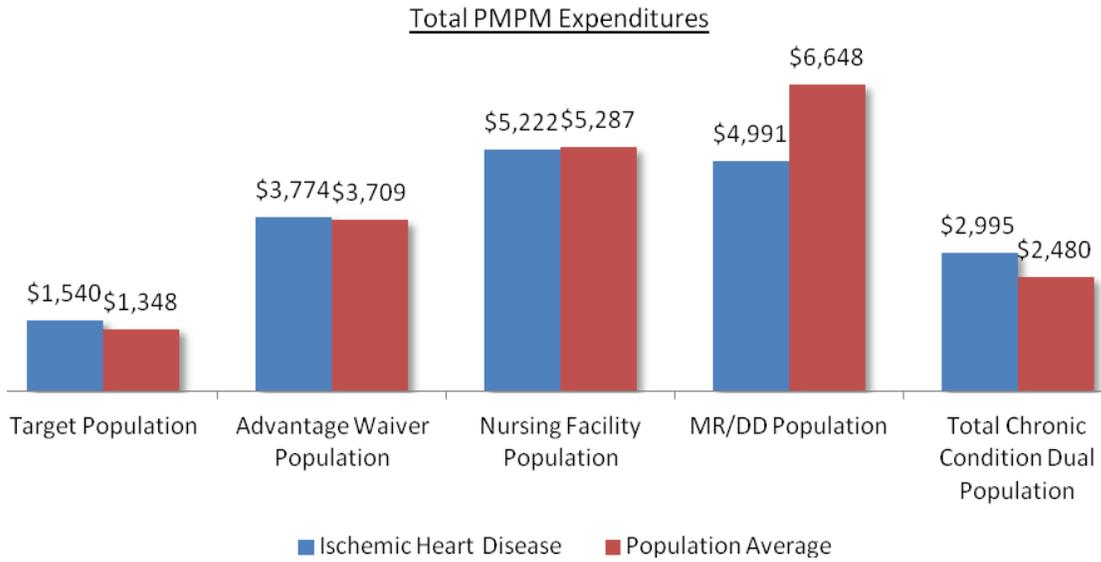


Total Skilled Nursing Days per 1,000

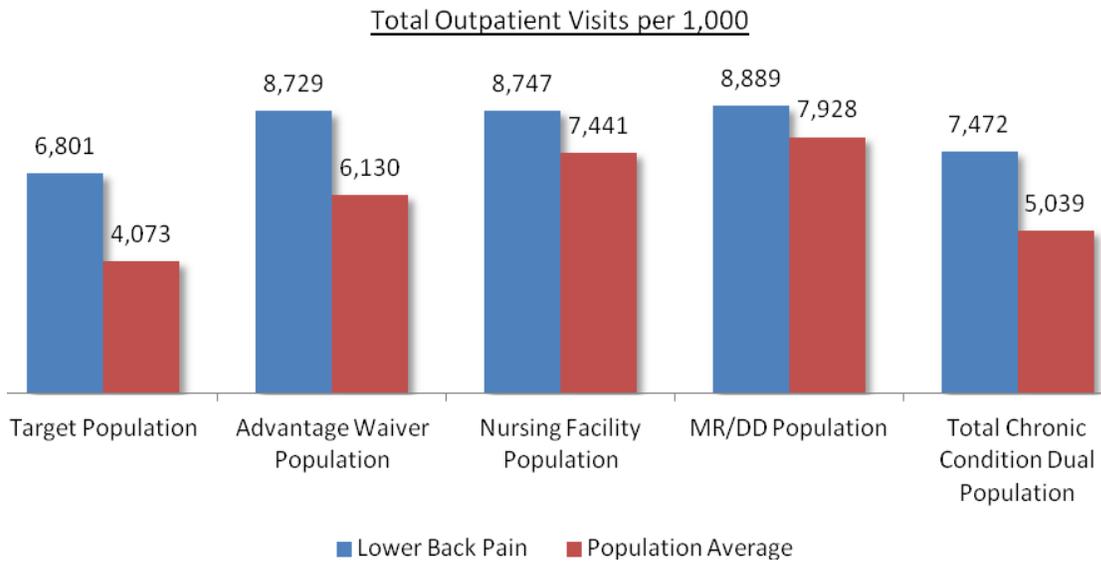
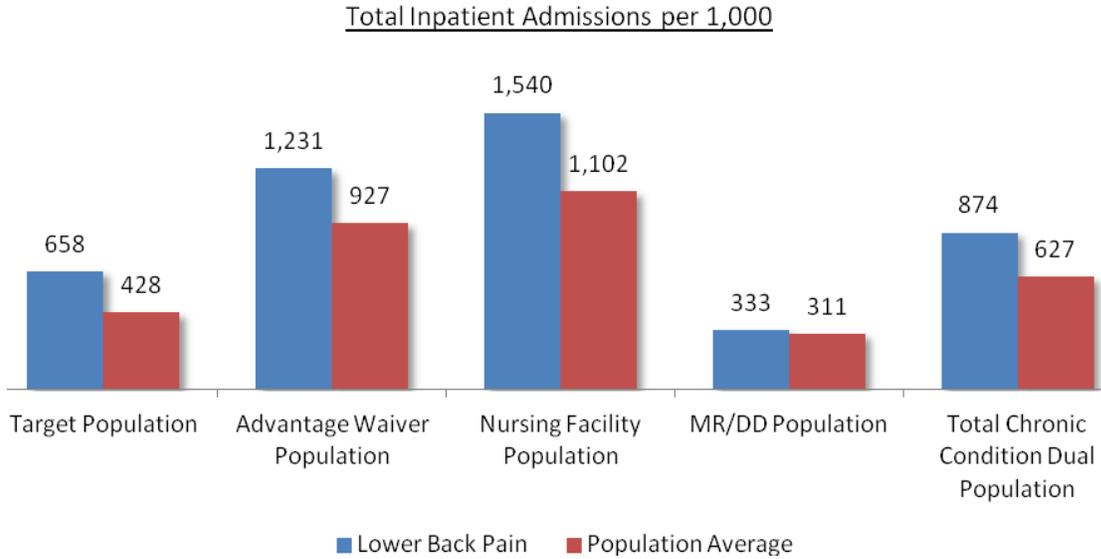


Total Physician Visits per 1,000

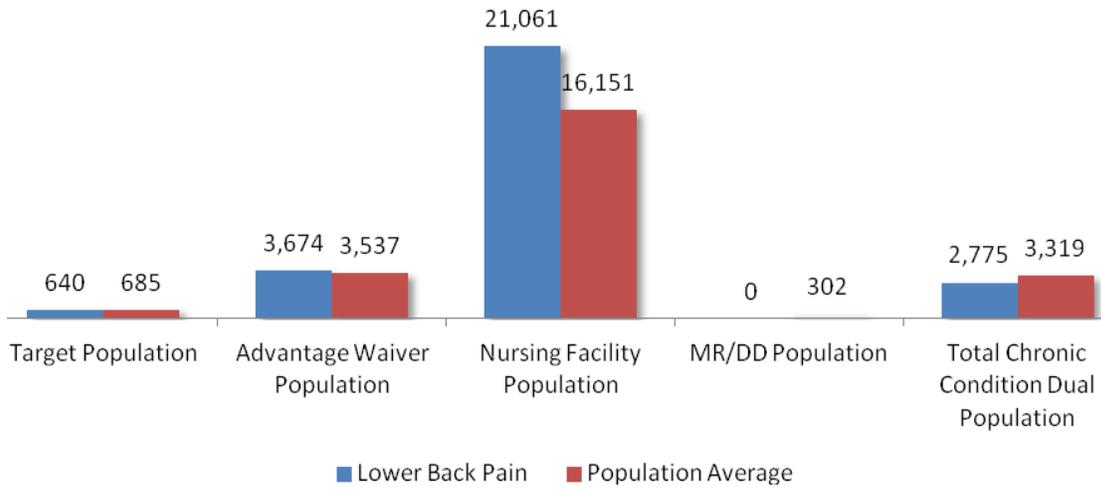




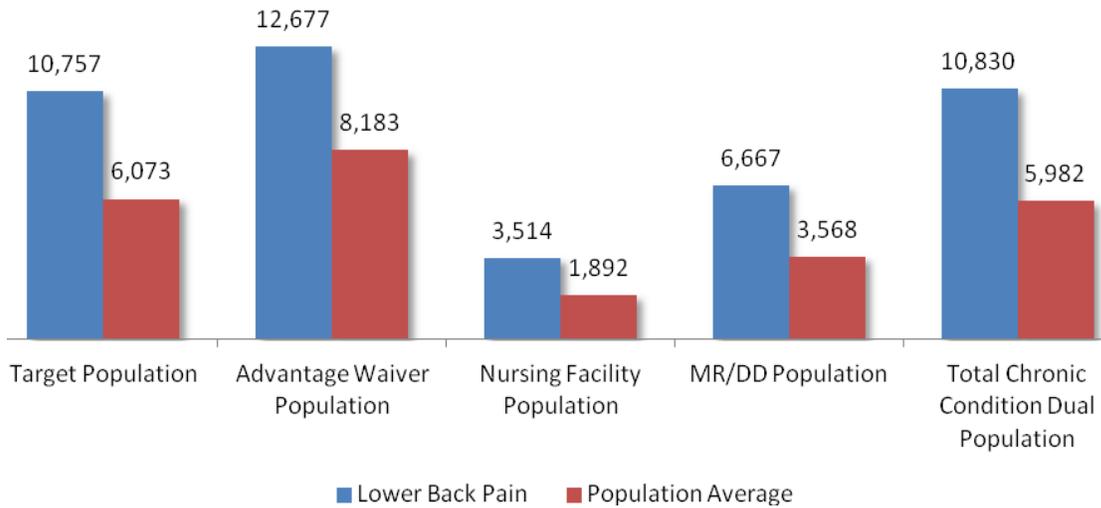
Lower Back Pain

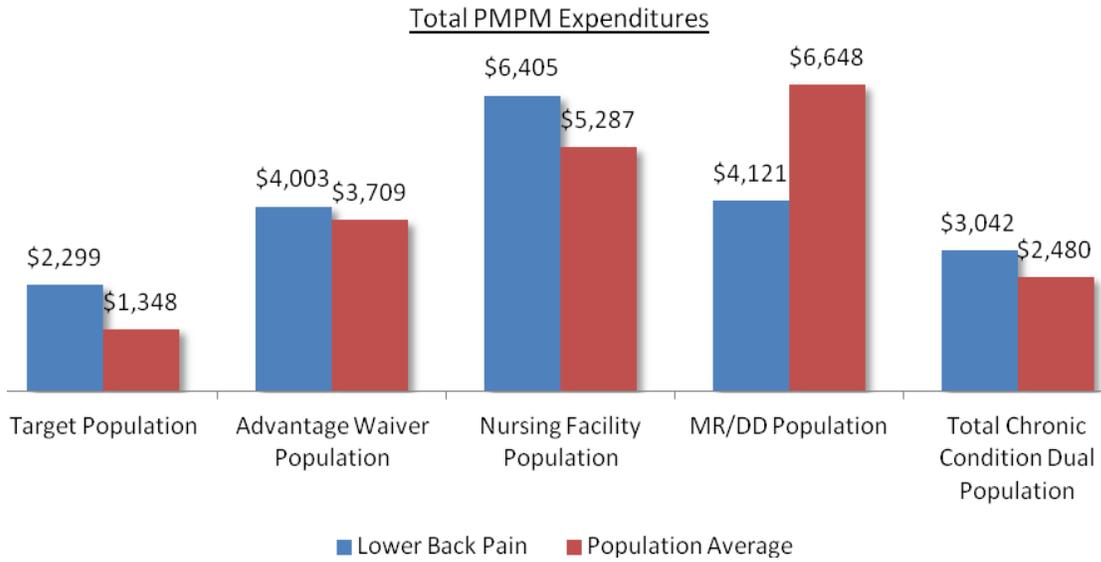


Total Skilled Nursing Days per 1,000

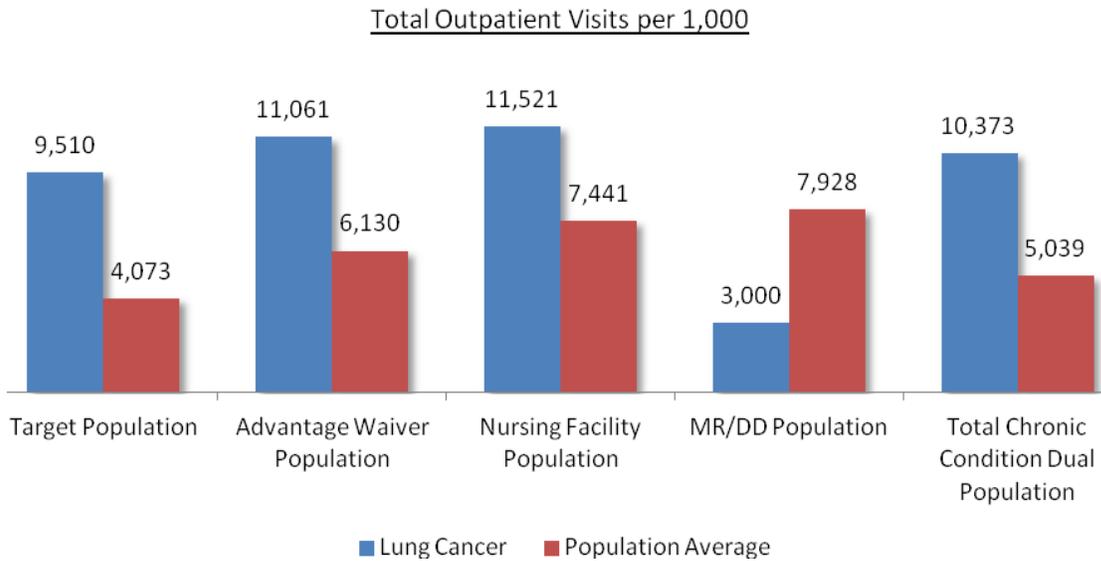
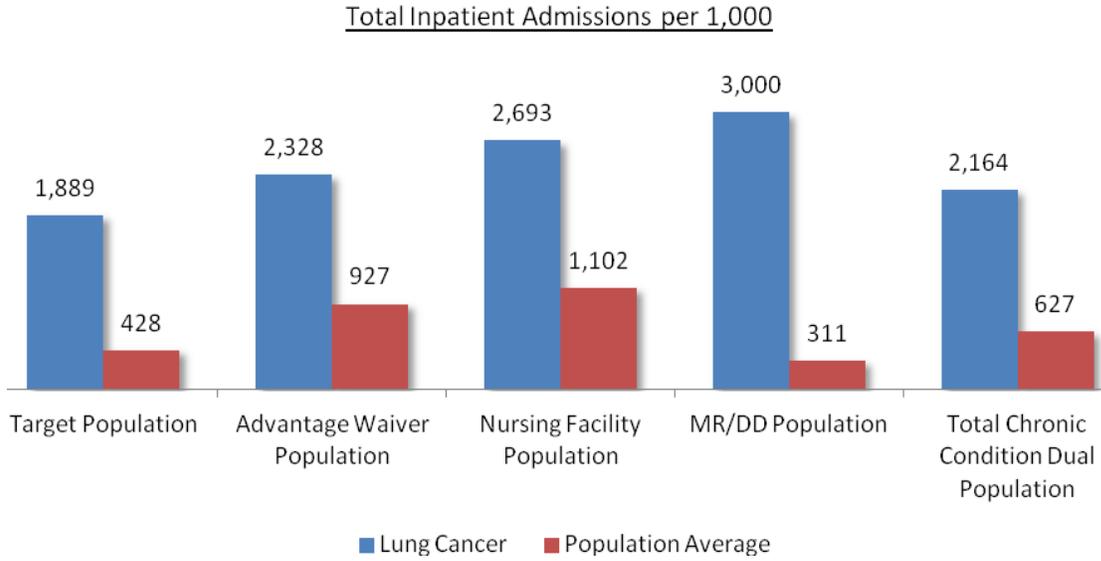


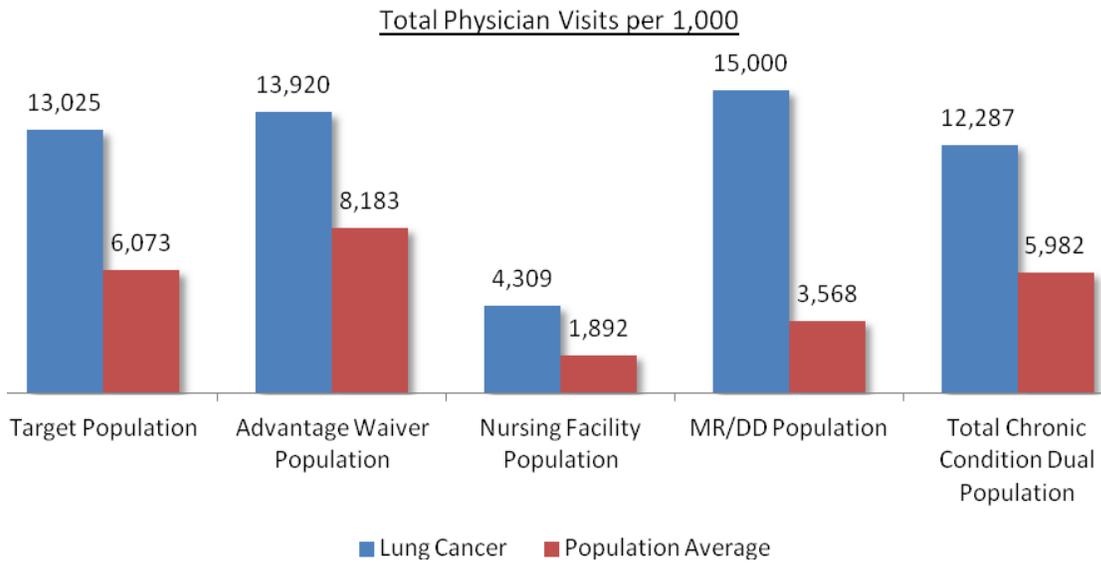
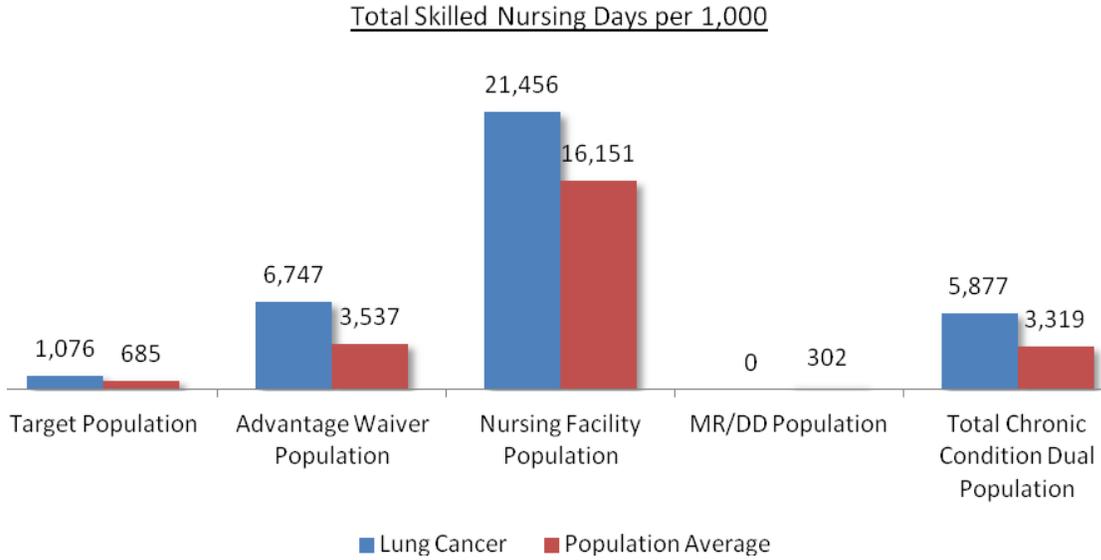
Total Physician Visits per 1,000

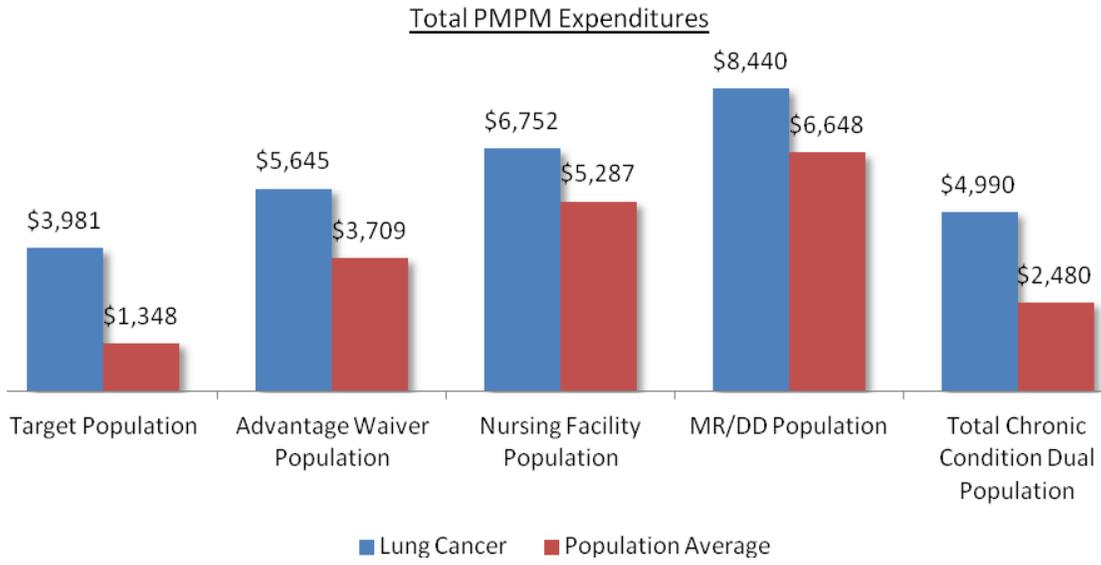




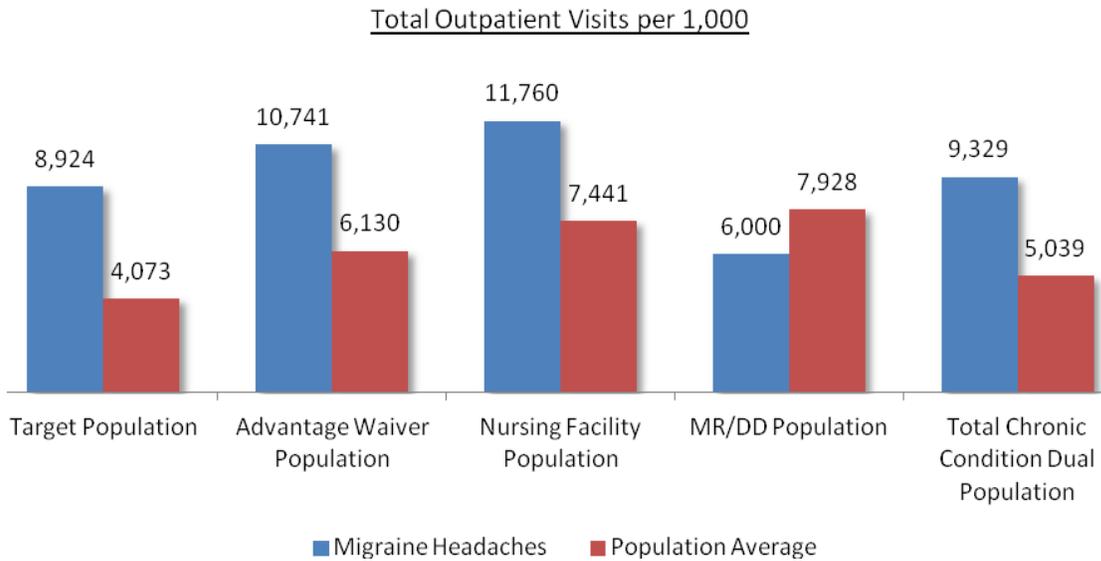
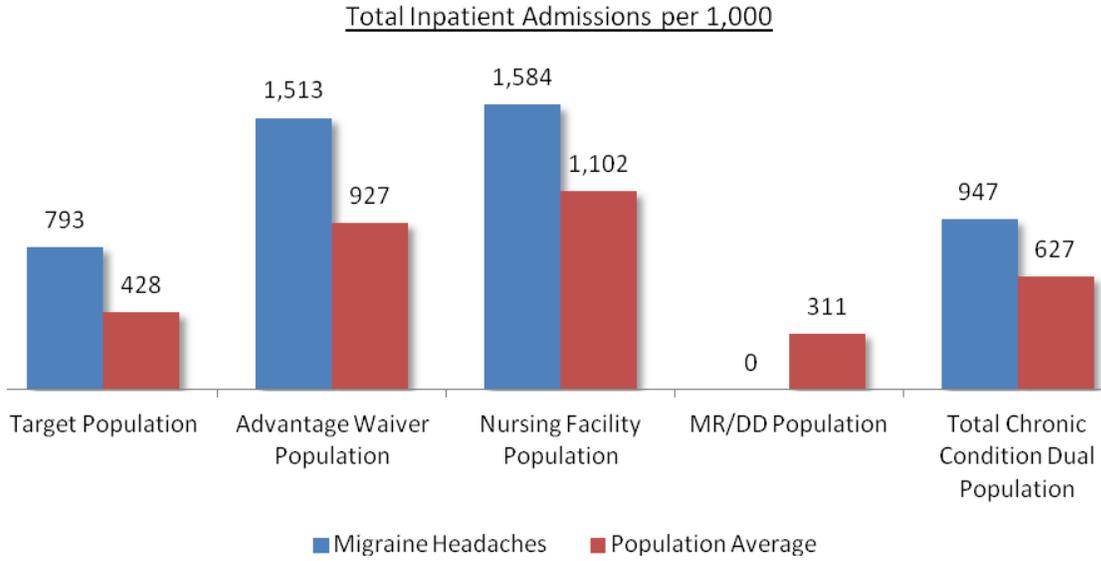
Lung Cancer

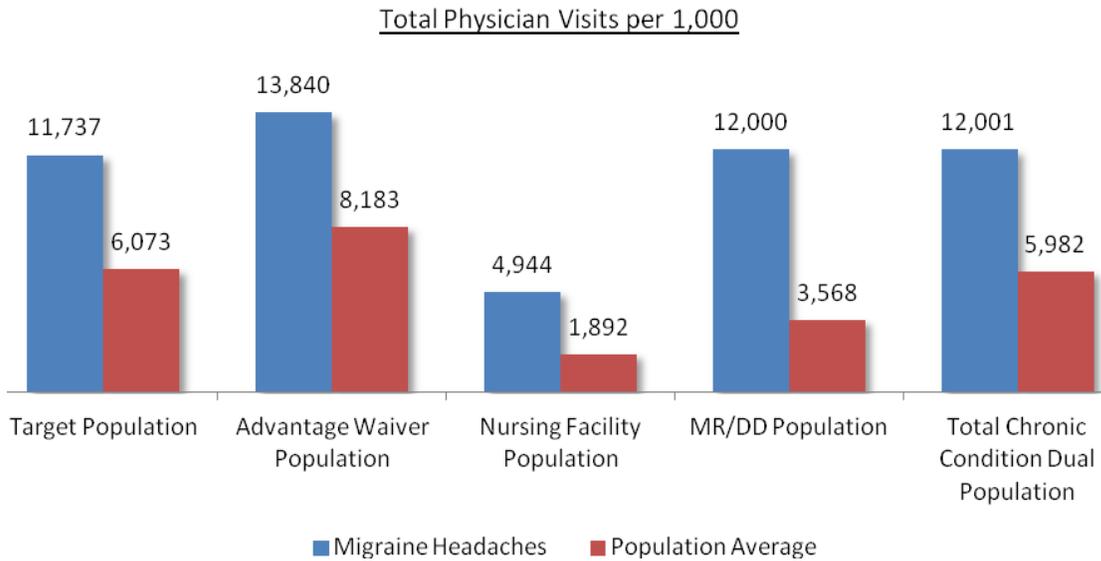
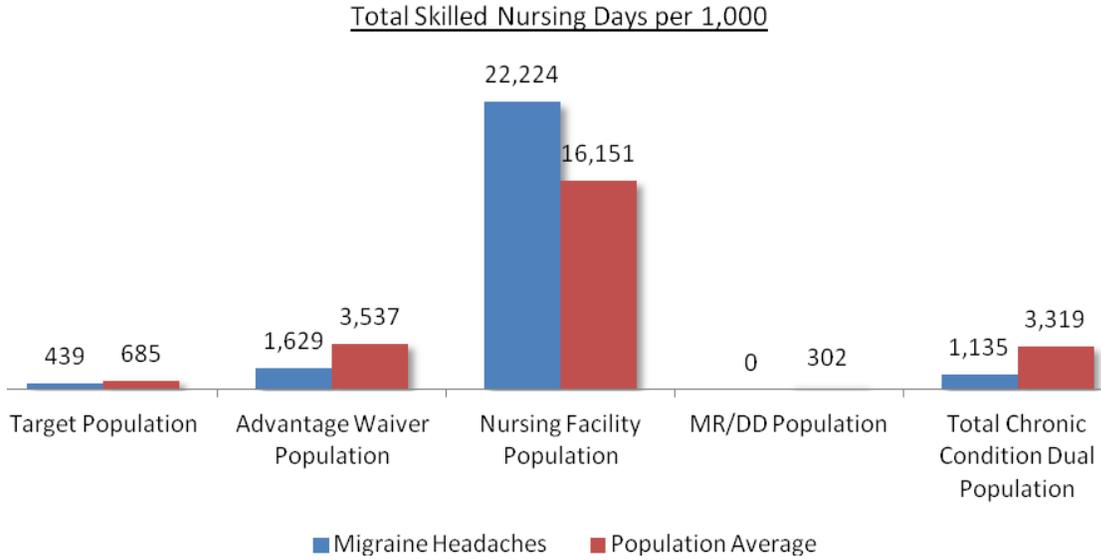


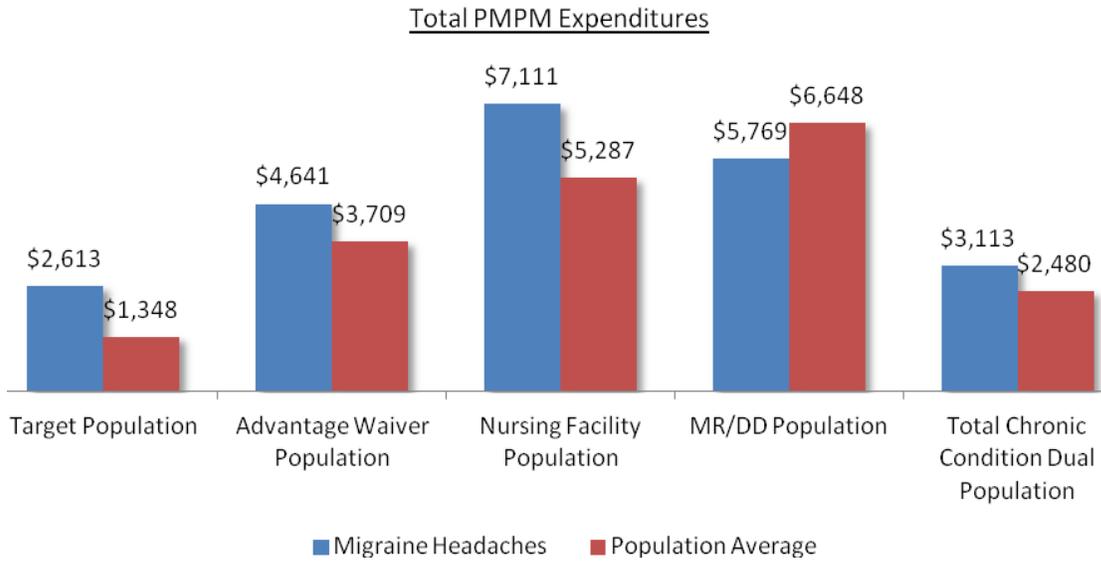




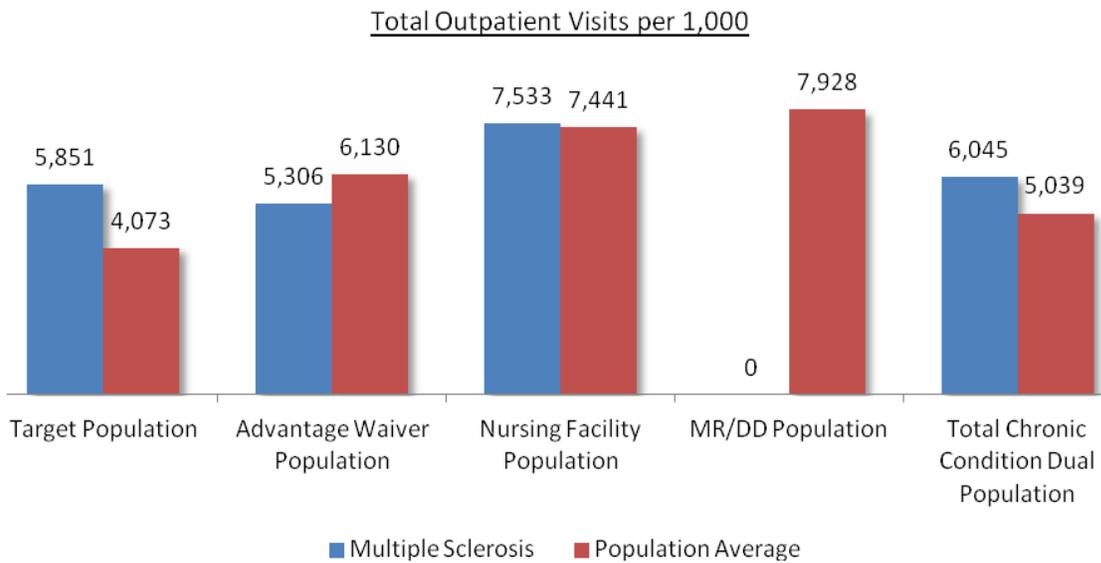
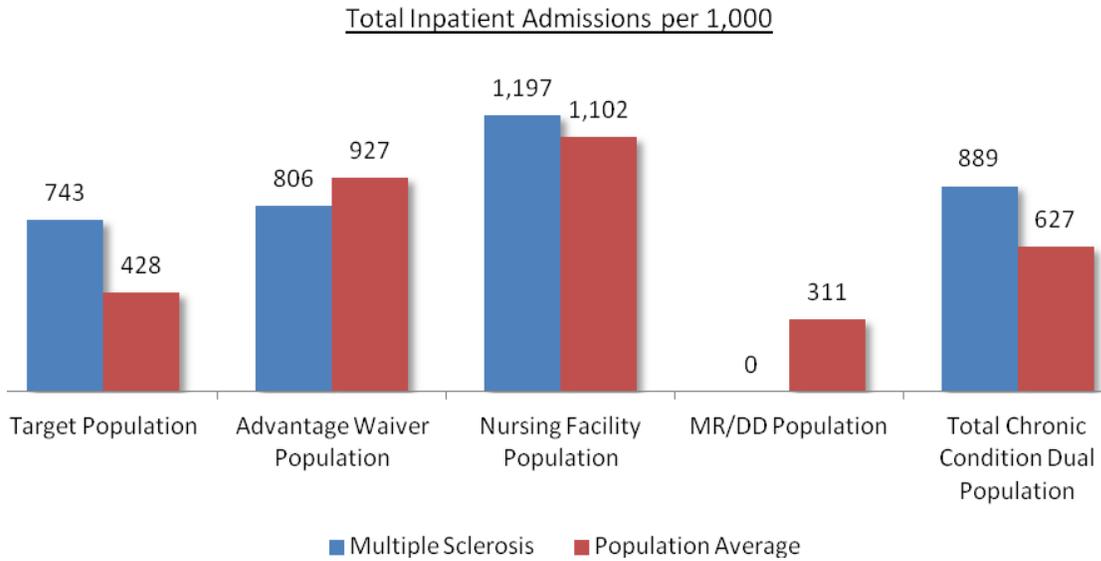
Migraine Headaches

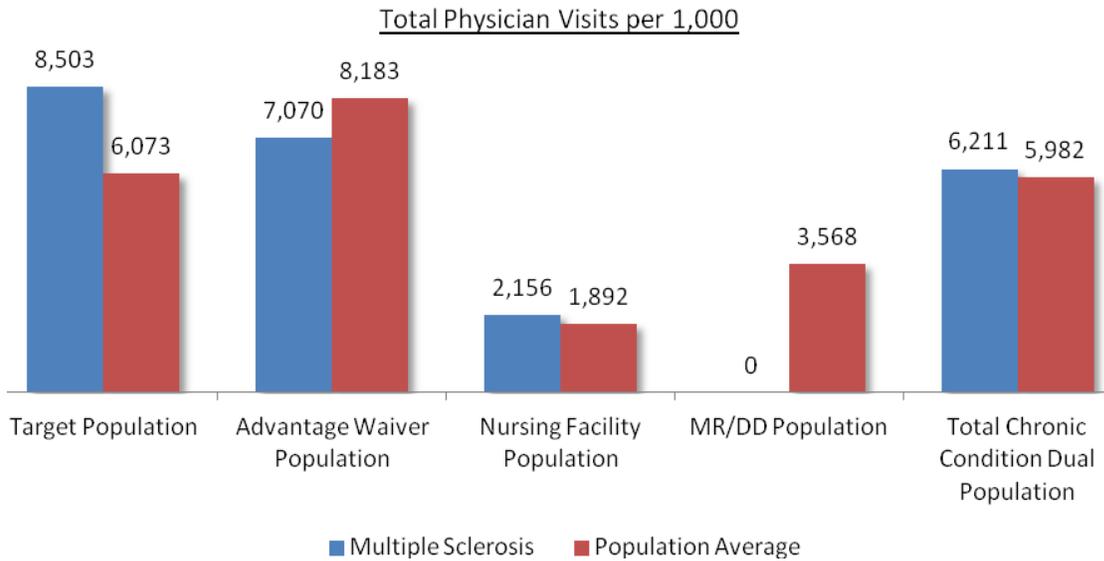
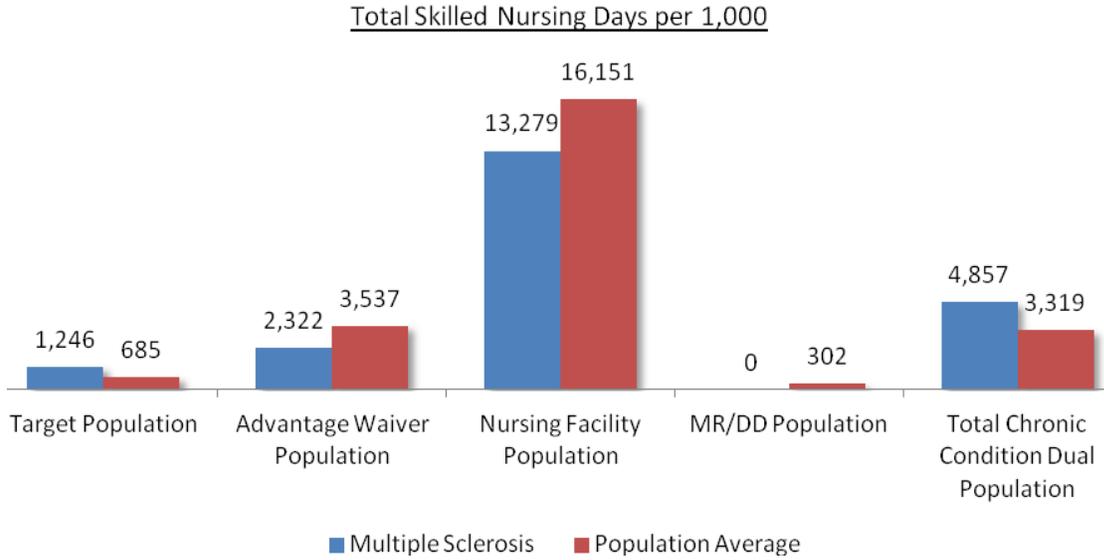


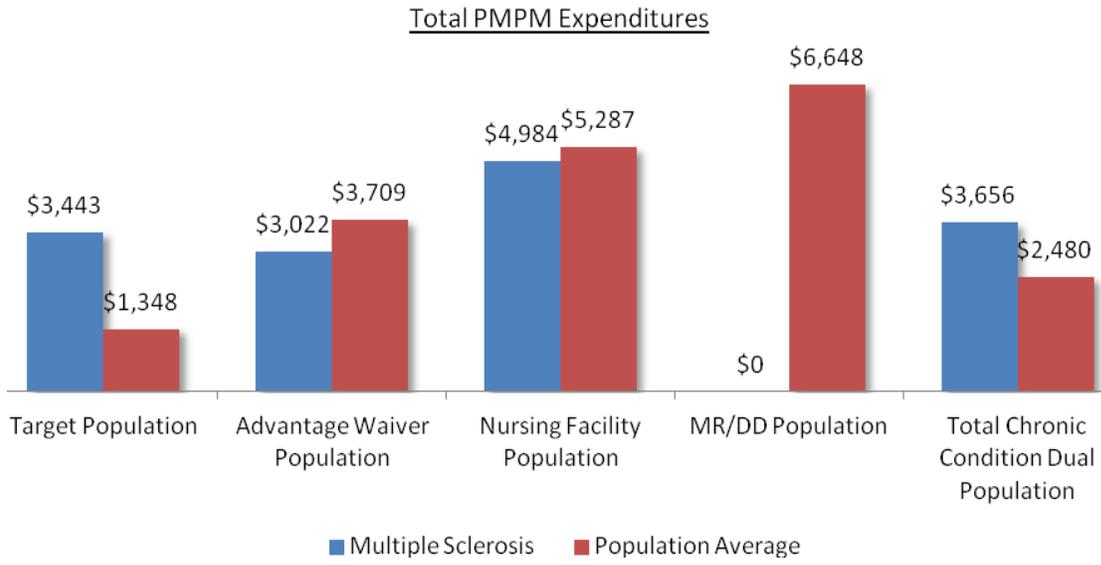




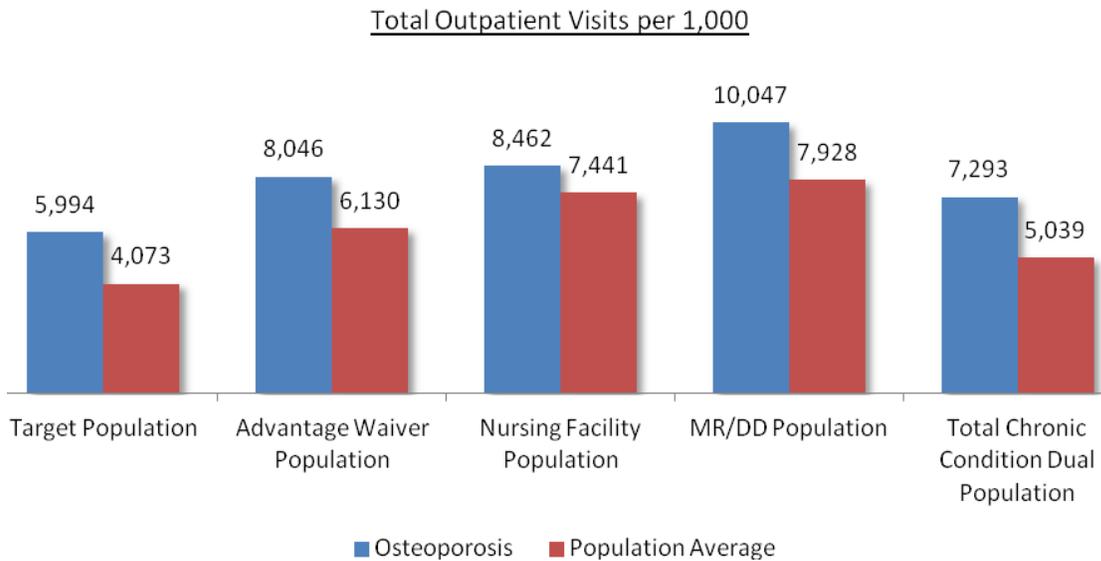
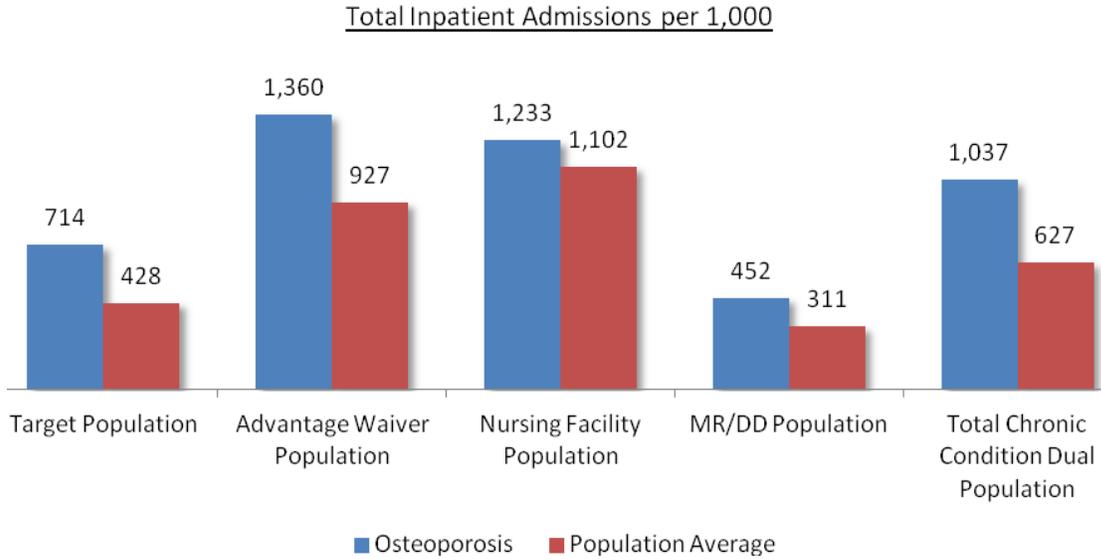
Multiple Sclerosis



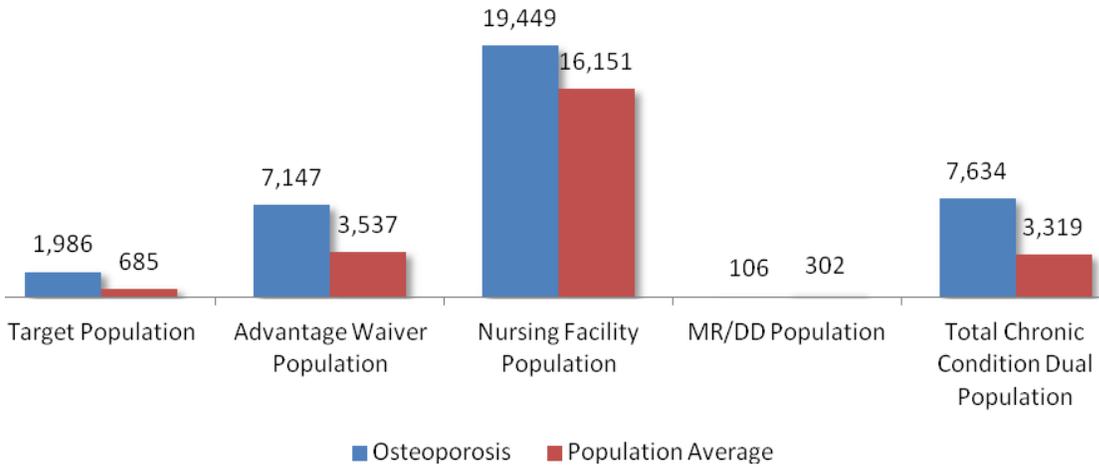




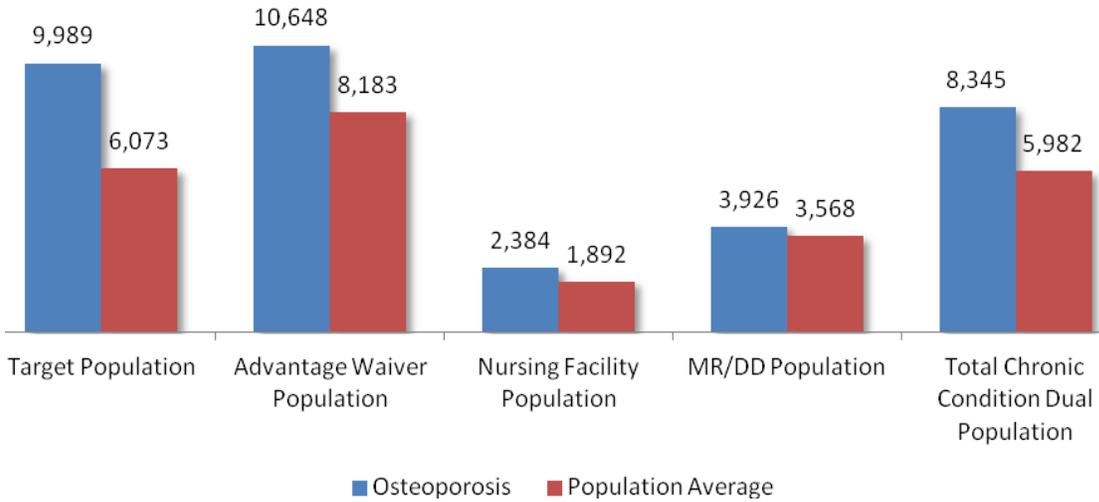
Osteoporosis

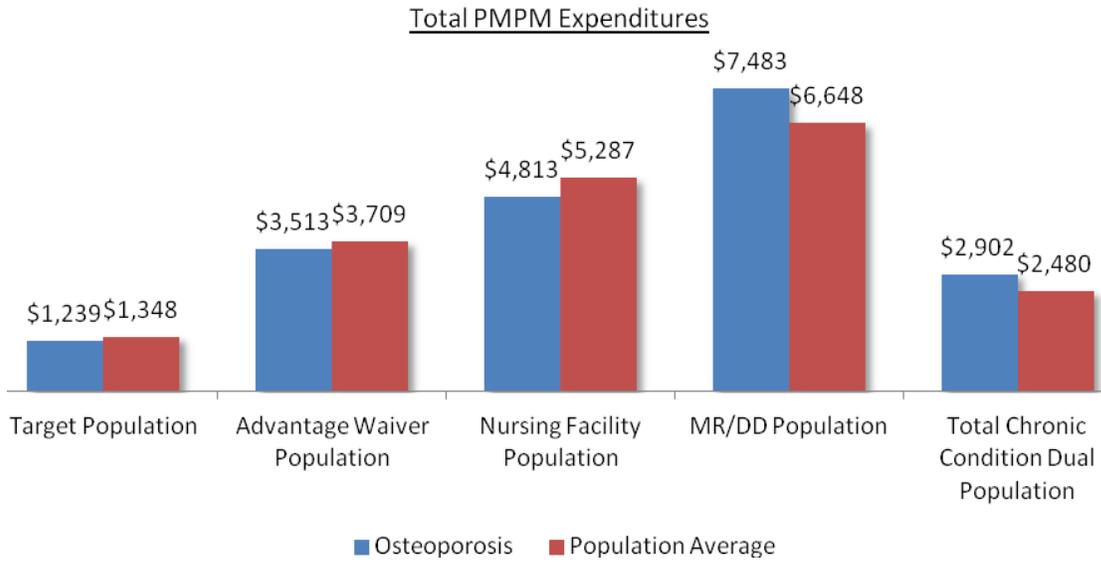


Total Skilled Nursing Days per 1,000

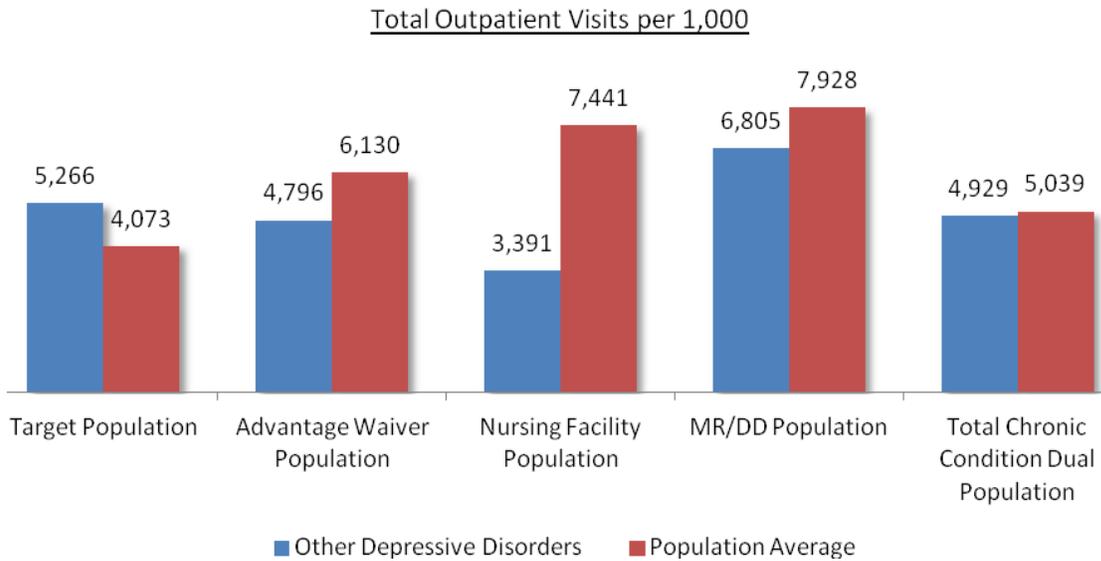
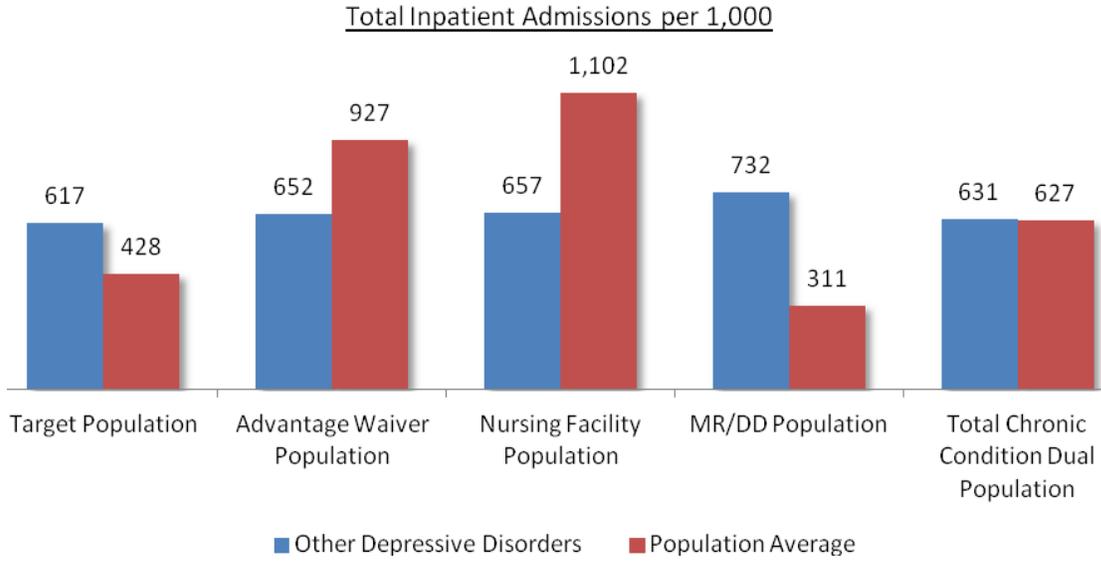


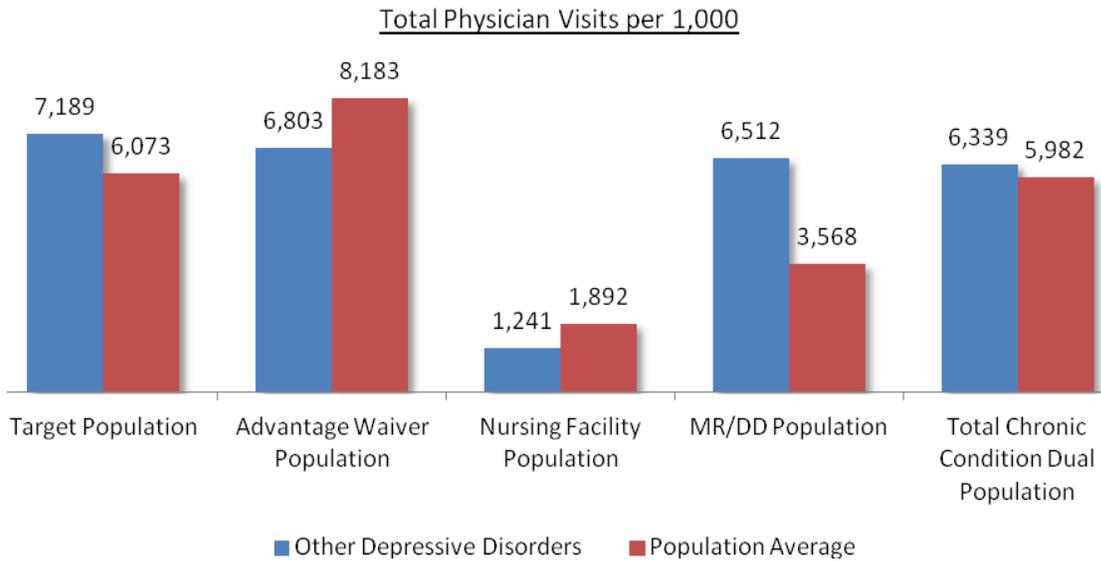
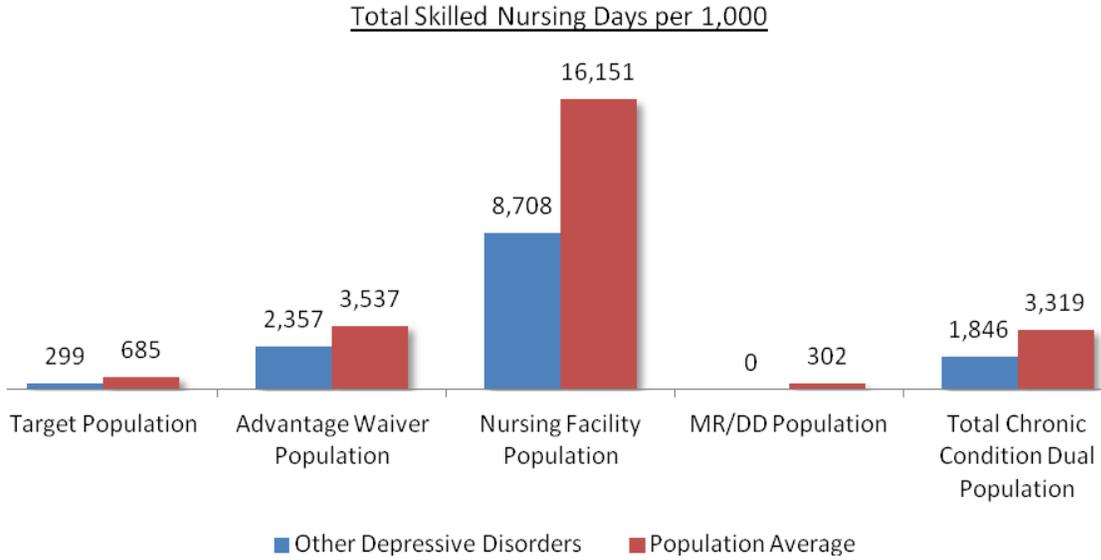
Total Physician Visits per 1,000

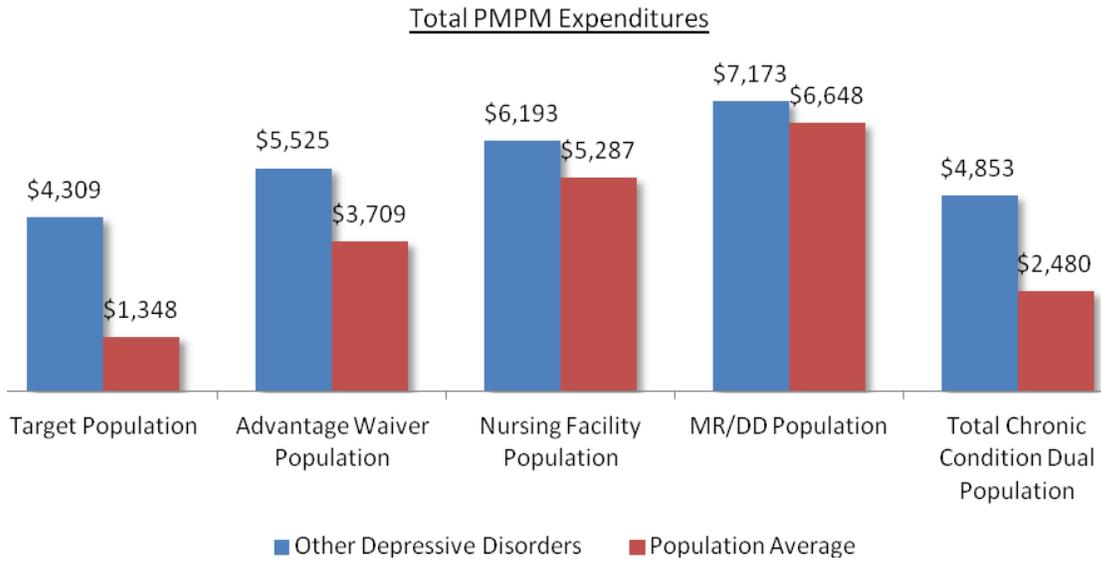




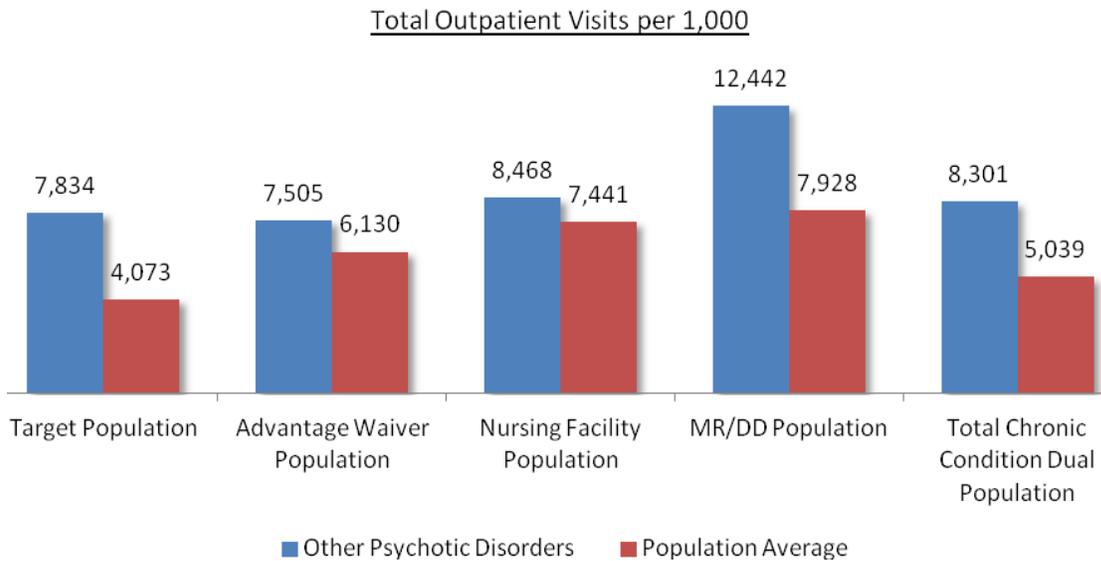
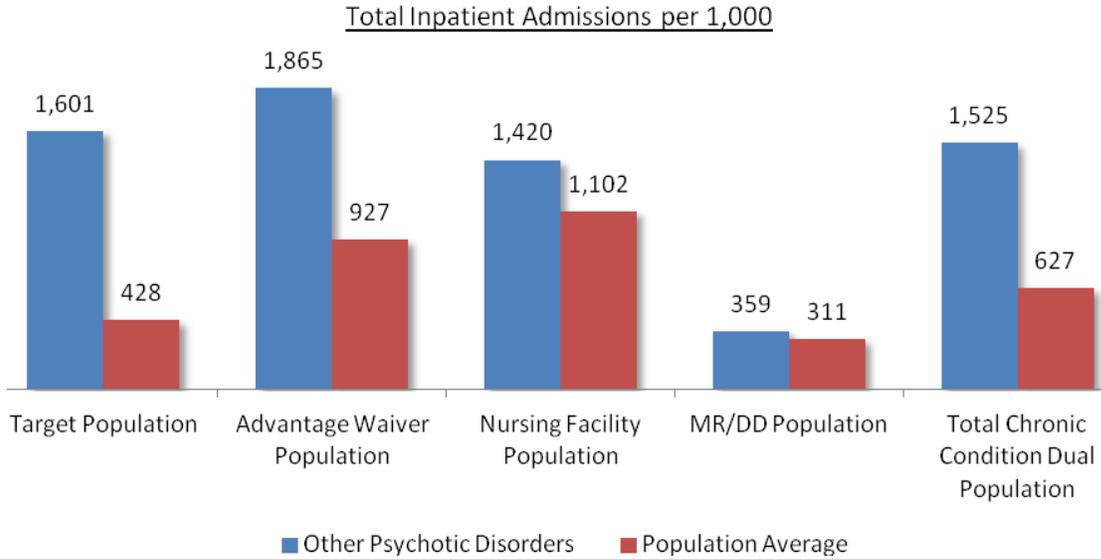
Other Depressive Disorders



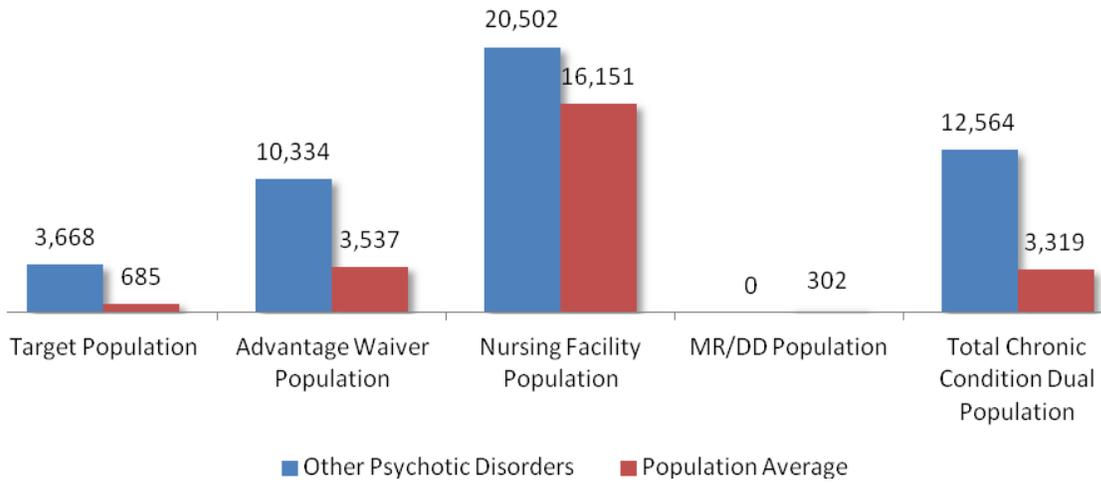




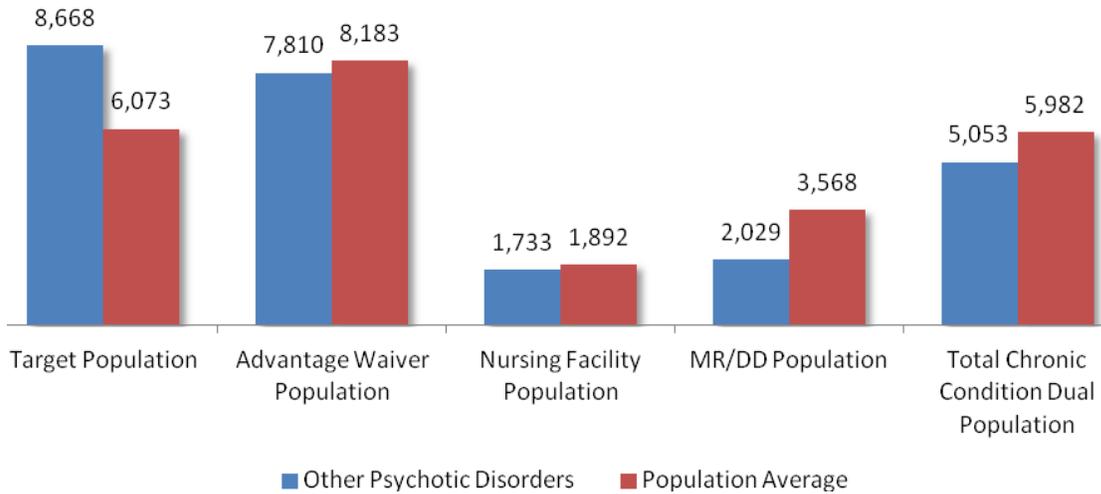
Other Psychotic Disorders

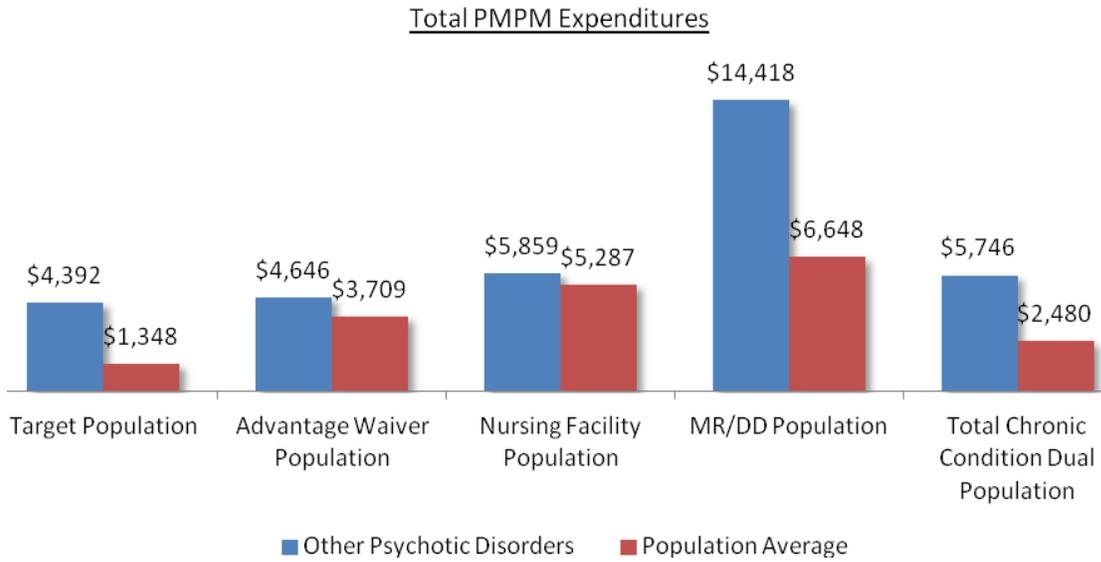


Total Skilled Nursing Days per 1,000

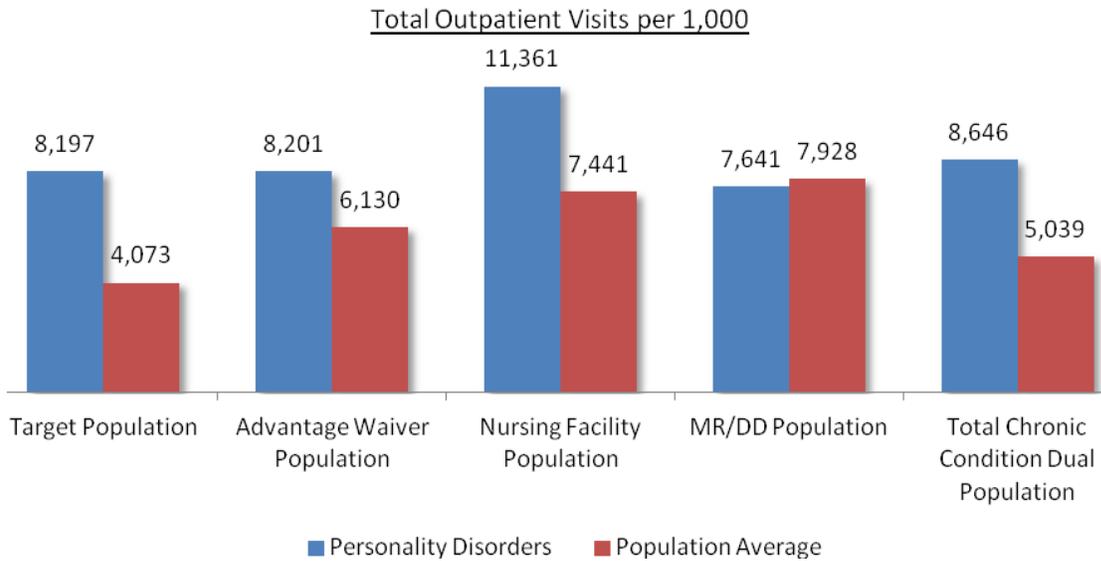
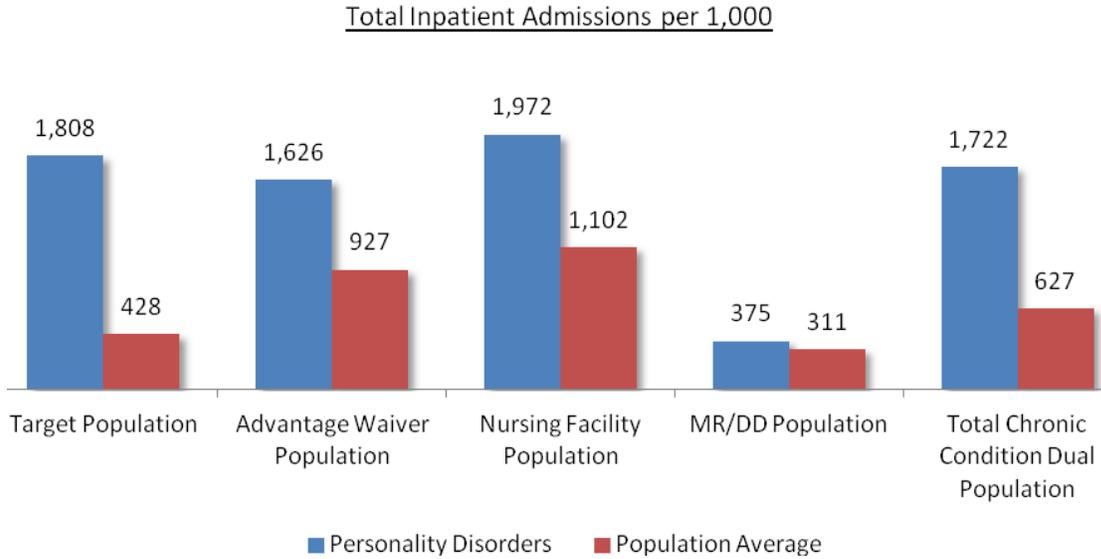


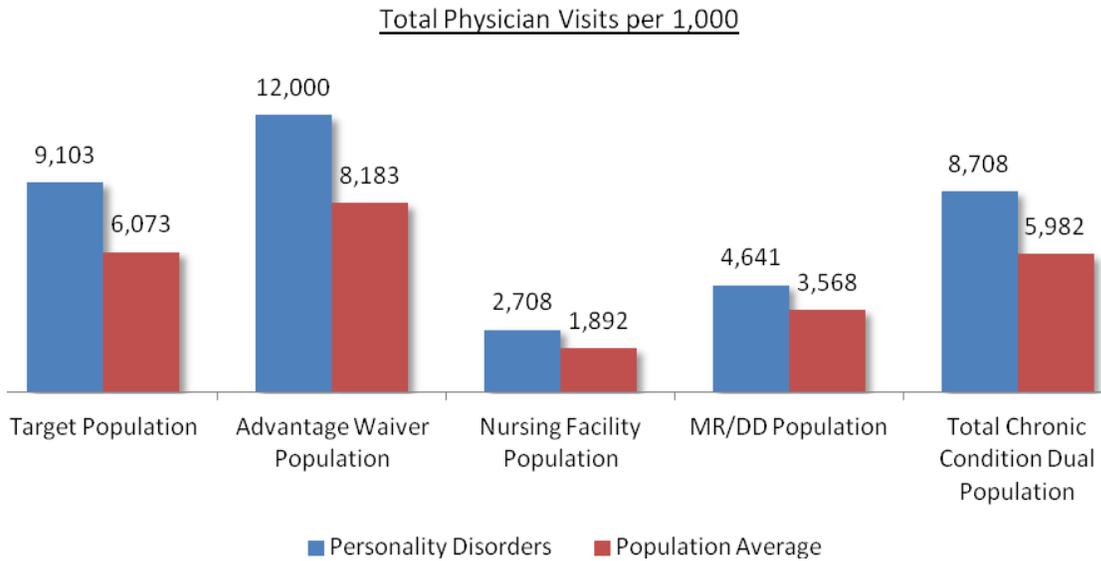
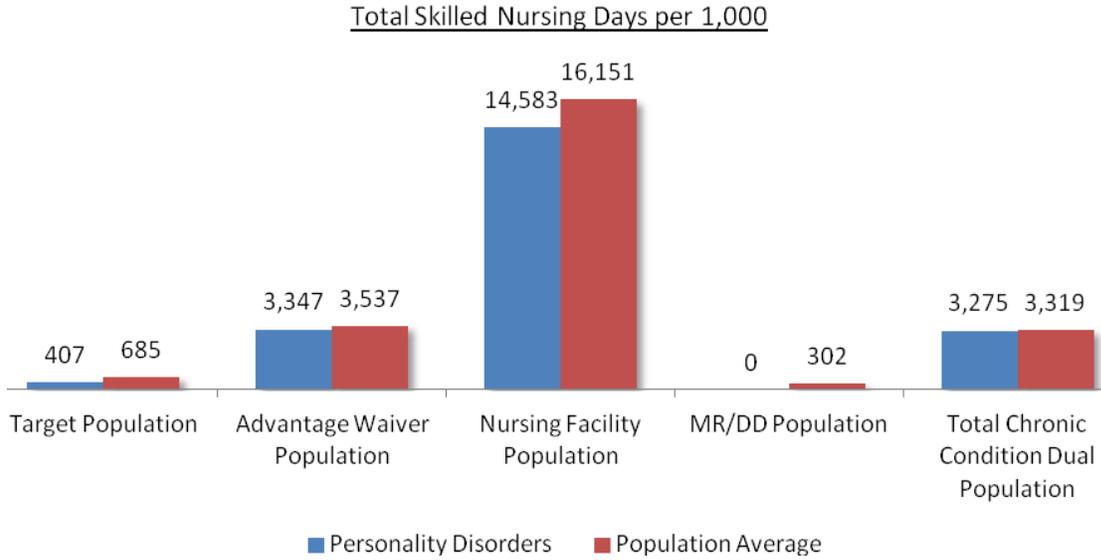
Total Physician Visits per 1,000

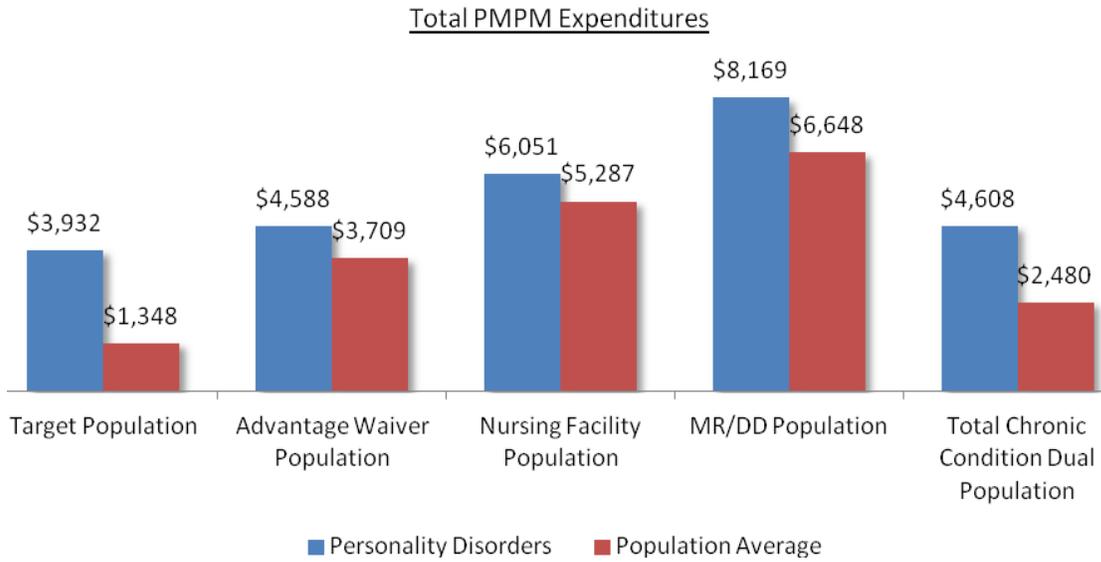




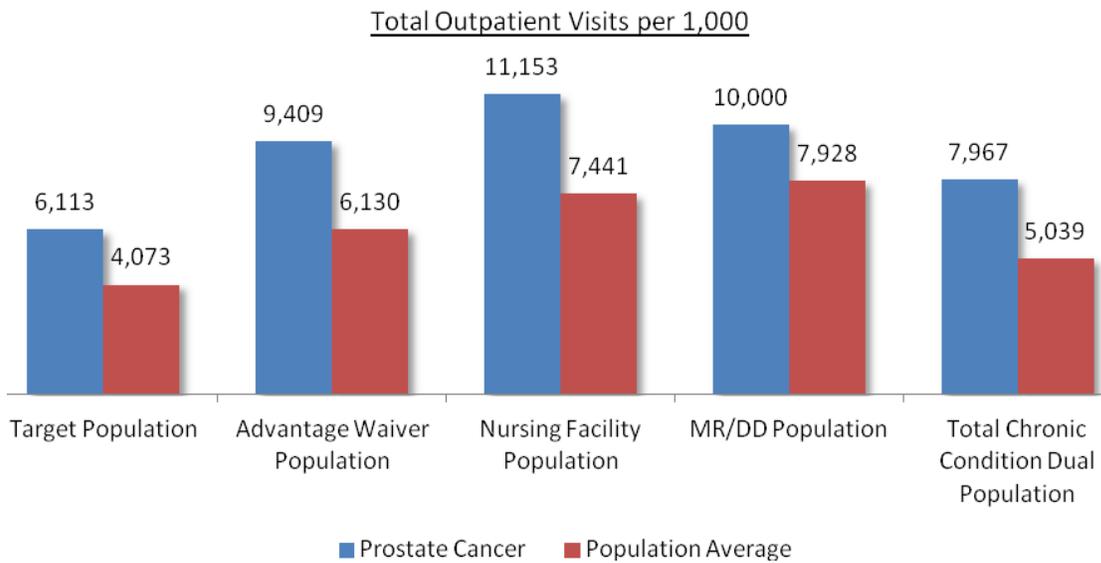
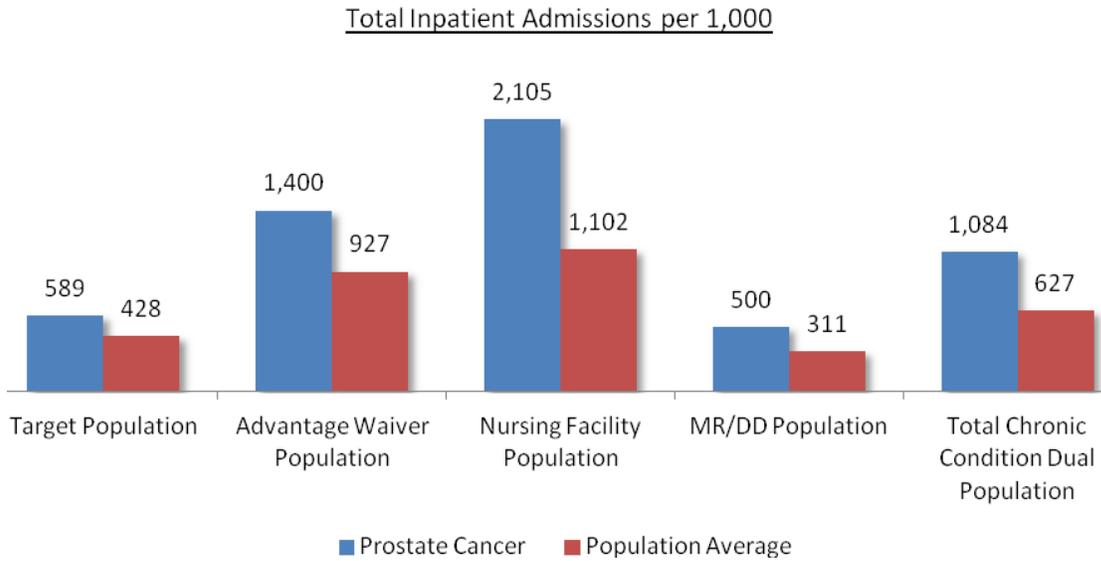
Personality Disorders

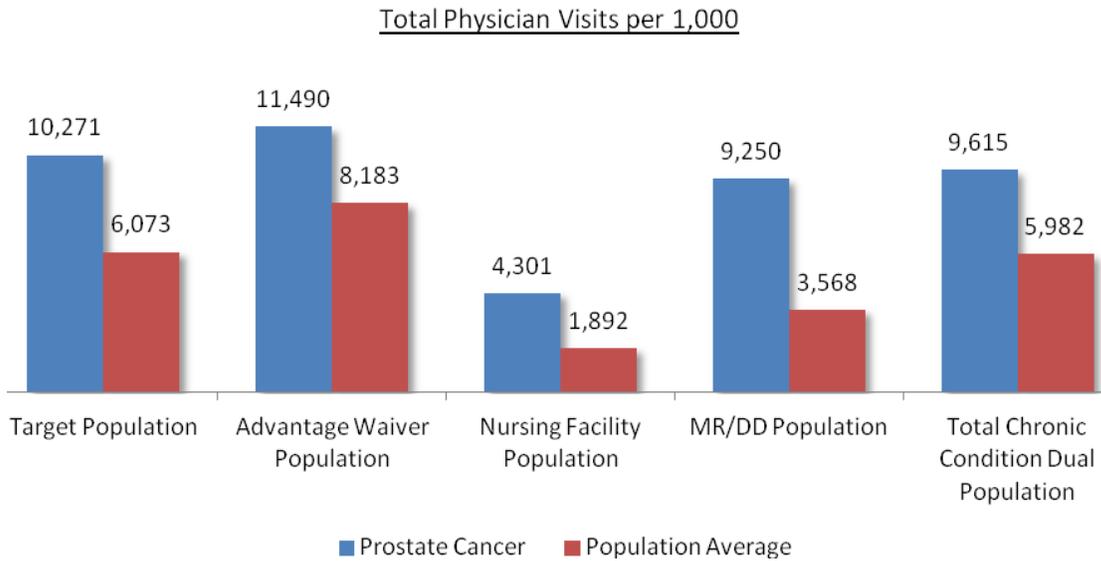
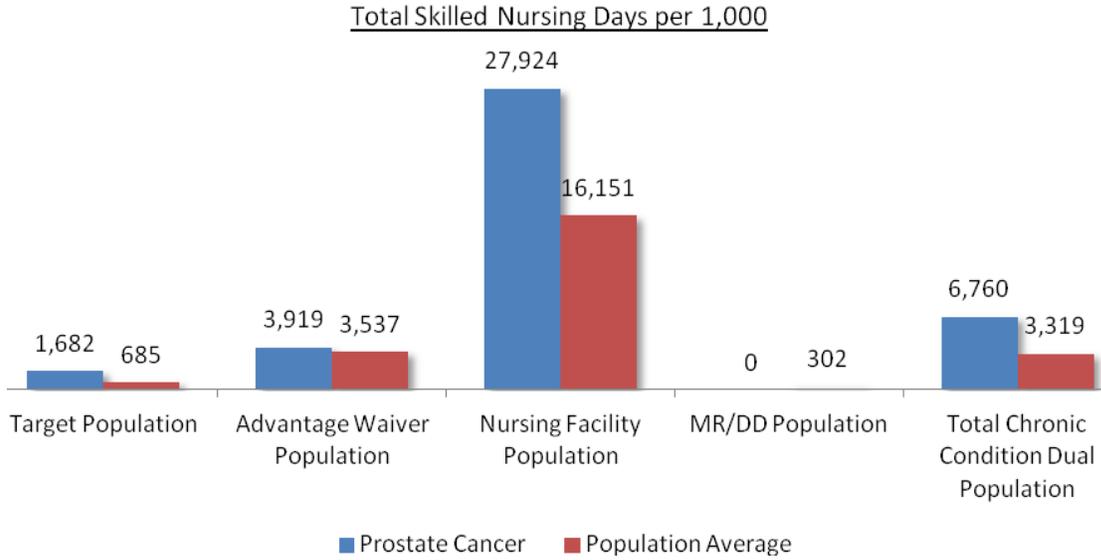


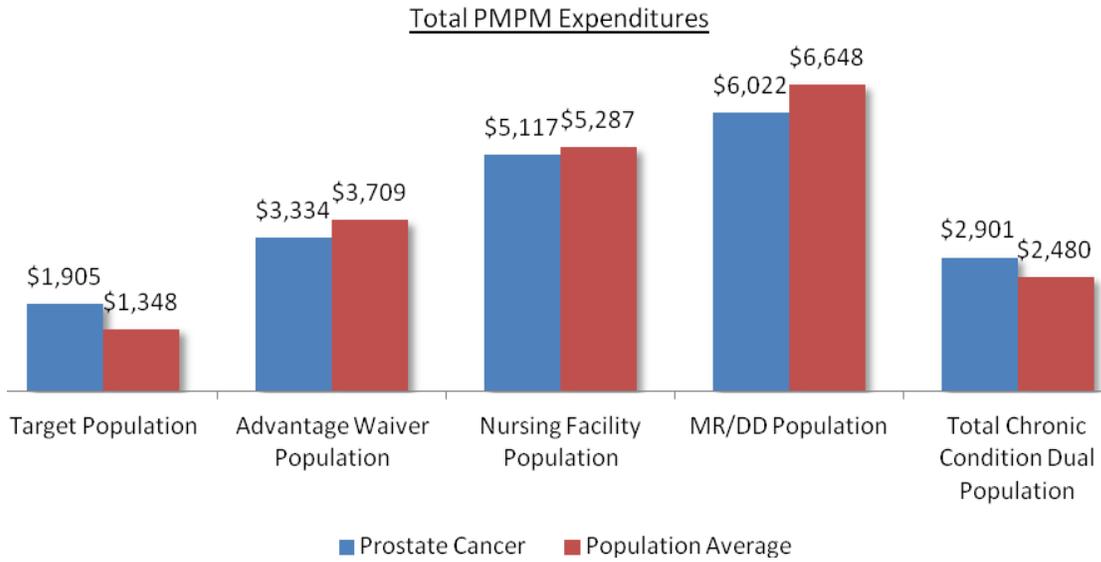




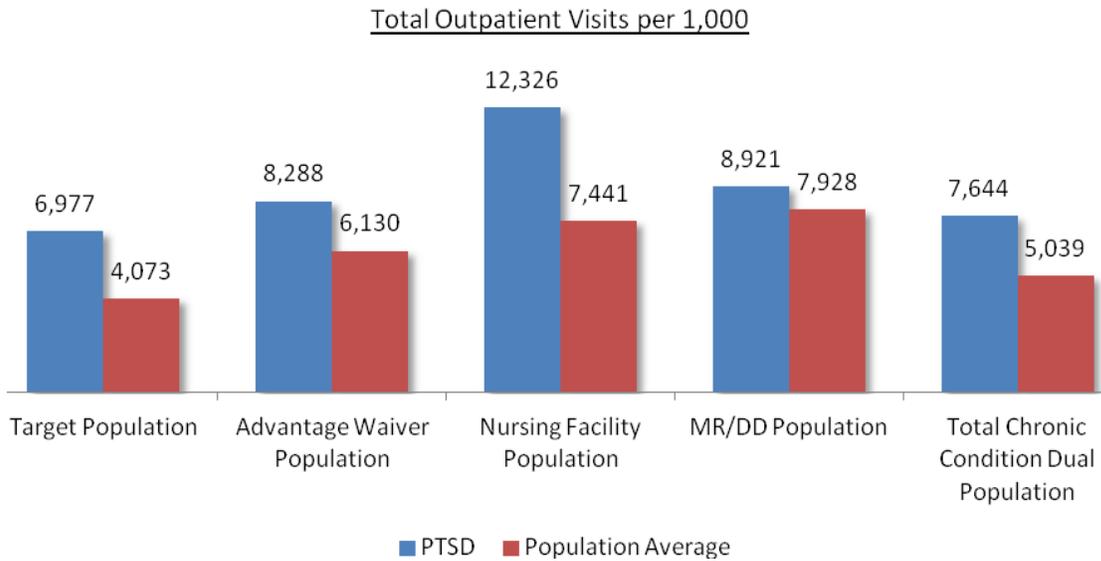
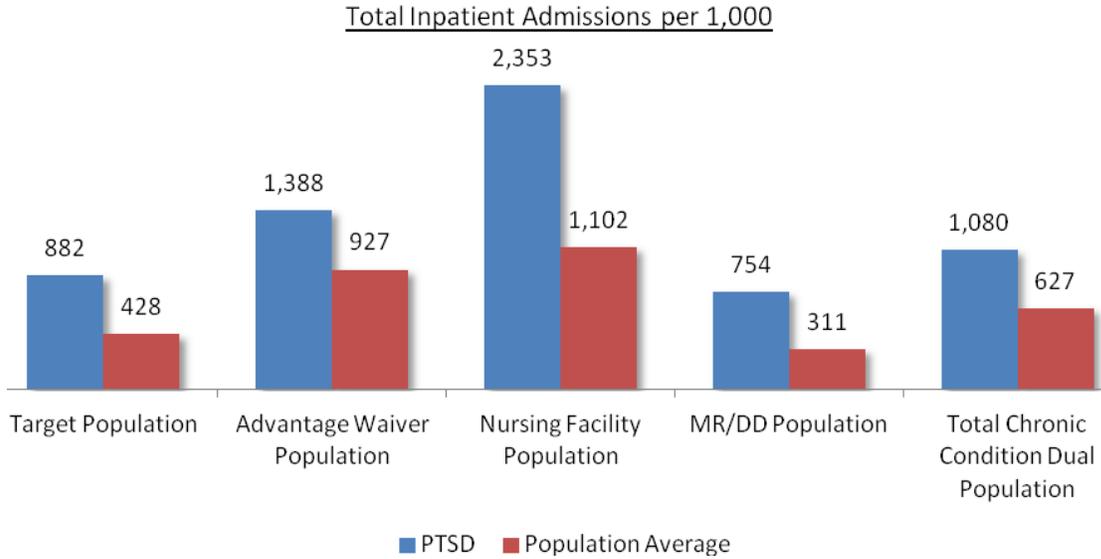
Prostate Cancer

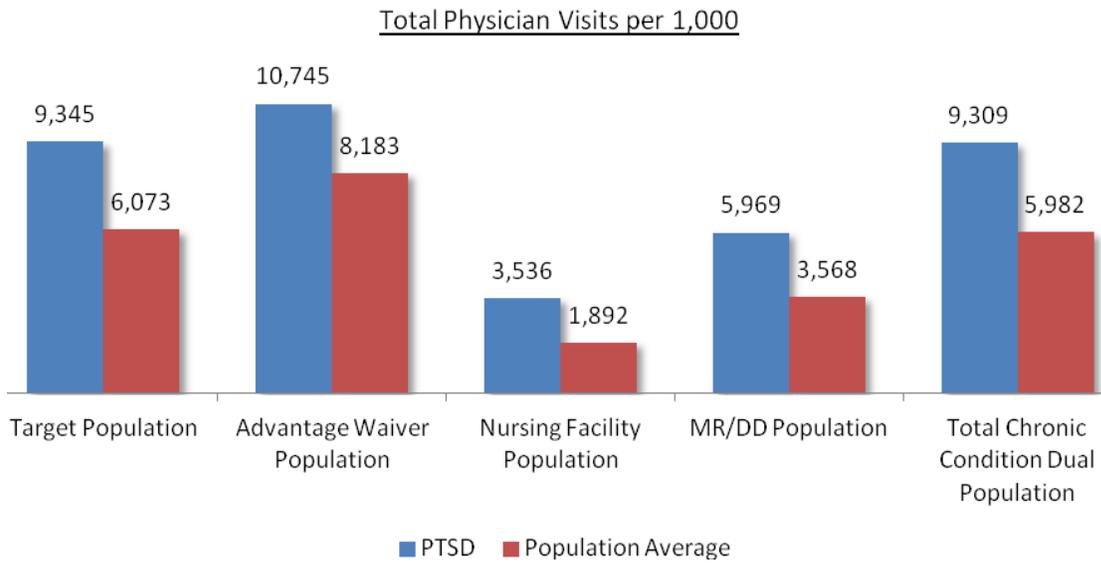
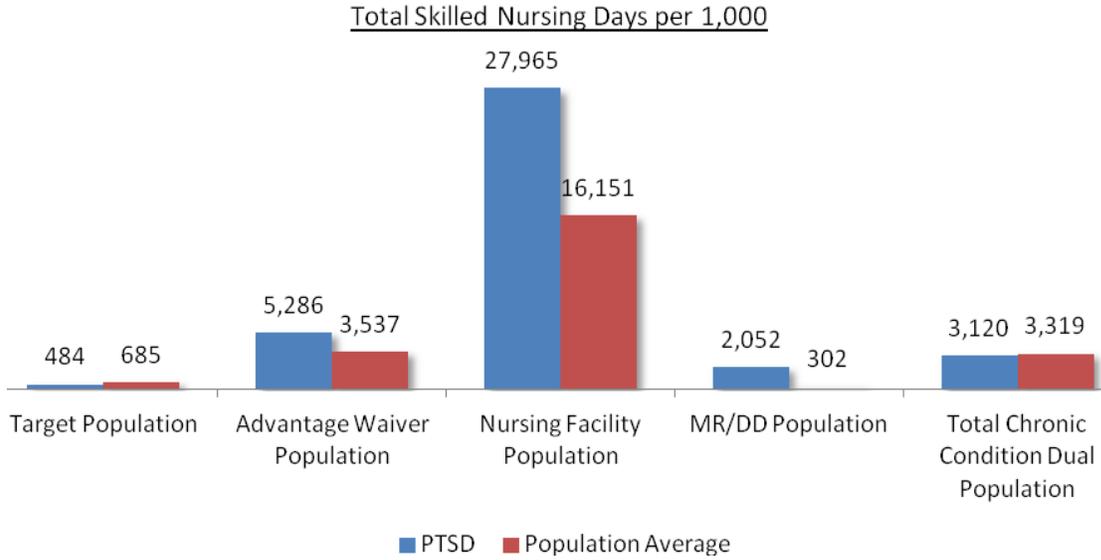


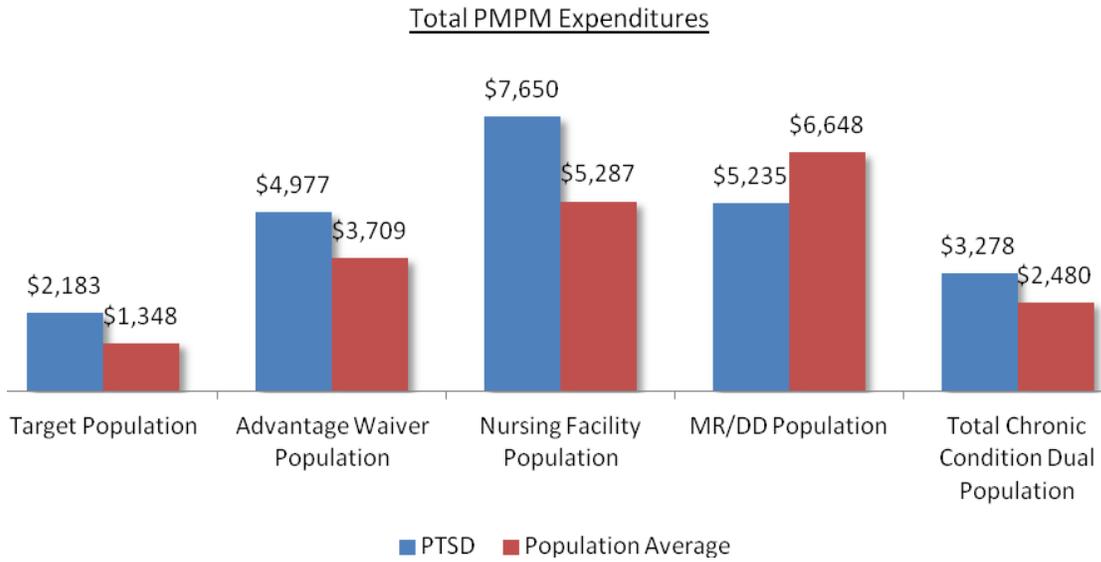




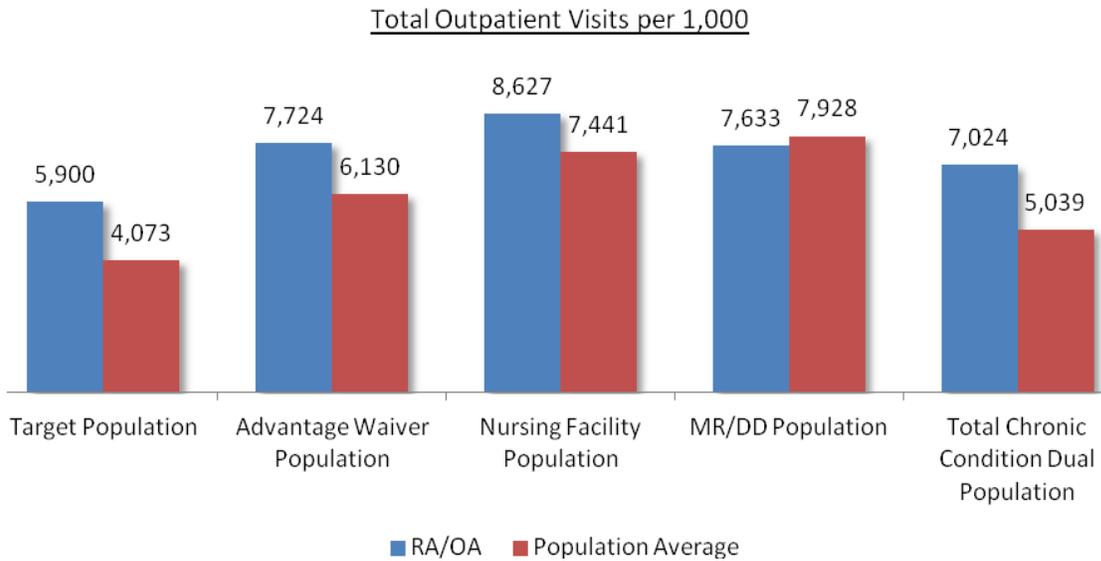
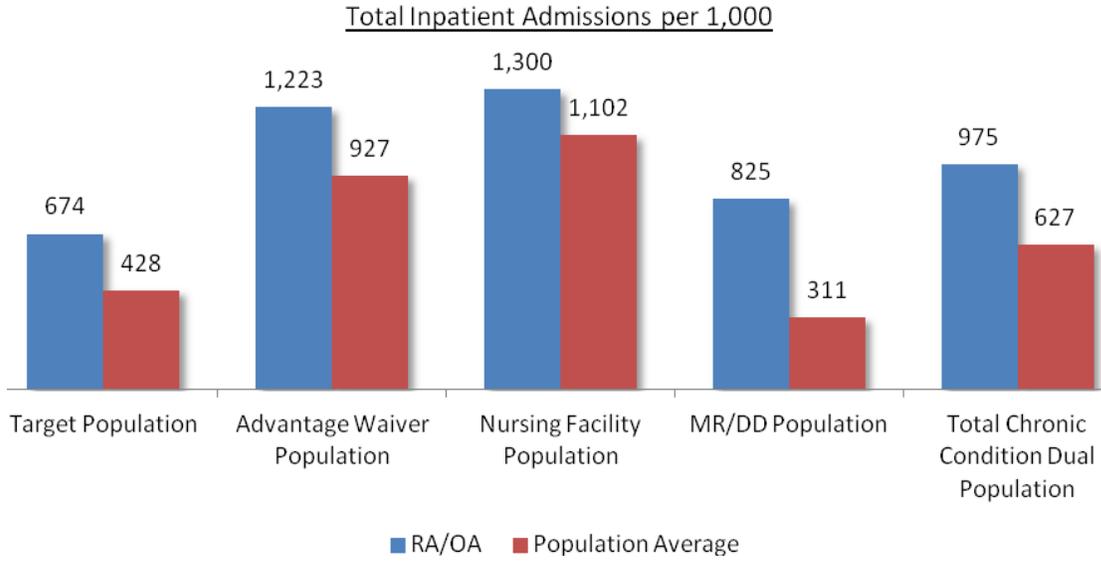
PTSD



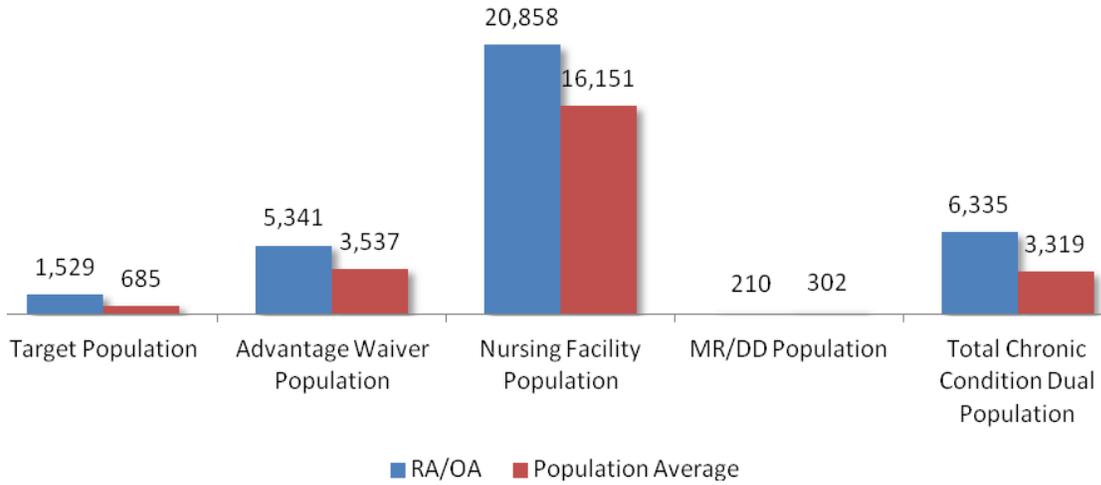




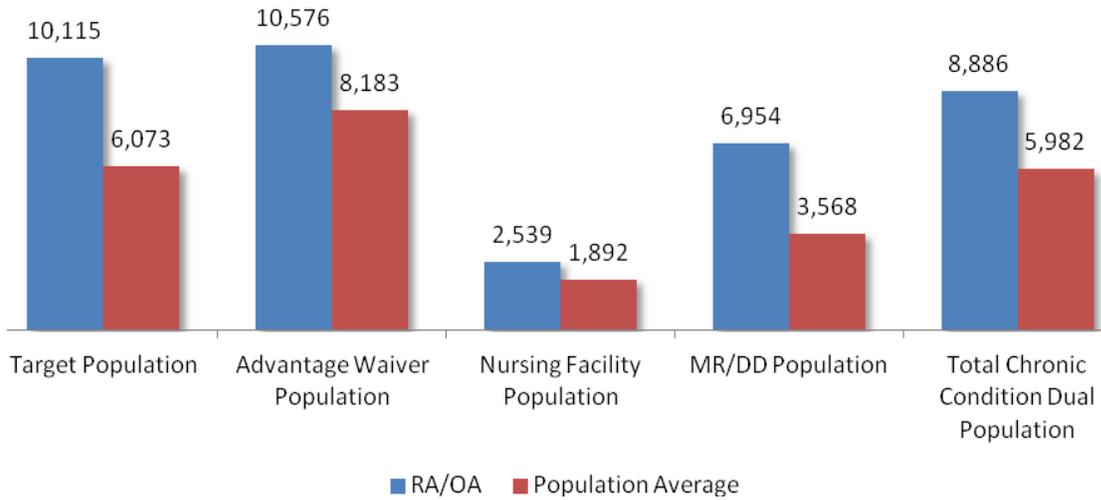
RA/OA

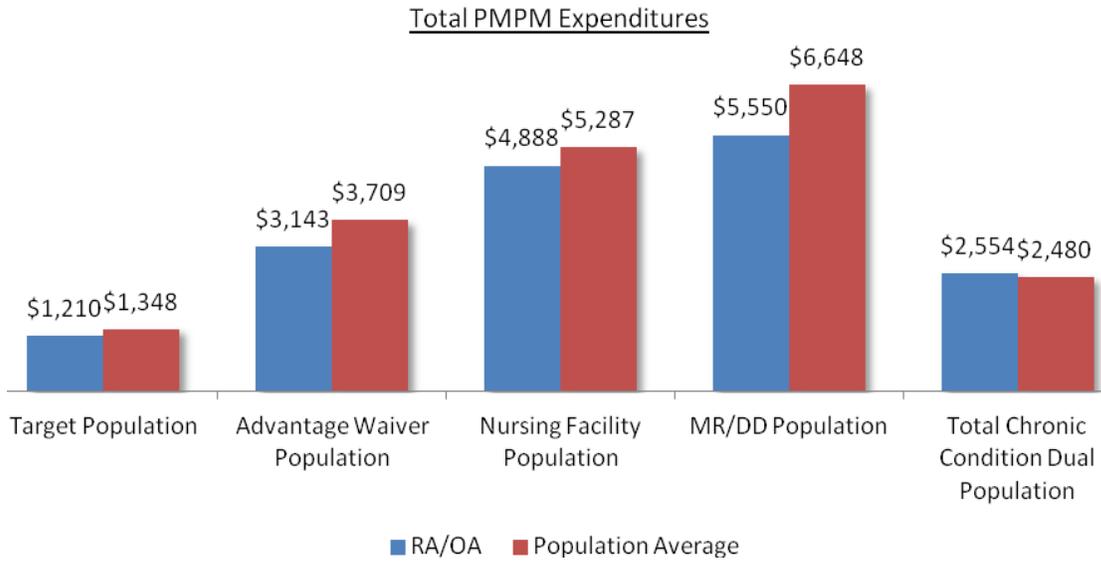


Total Skilled Nursing Days per 1,000

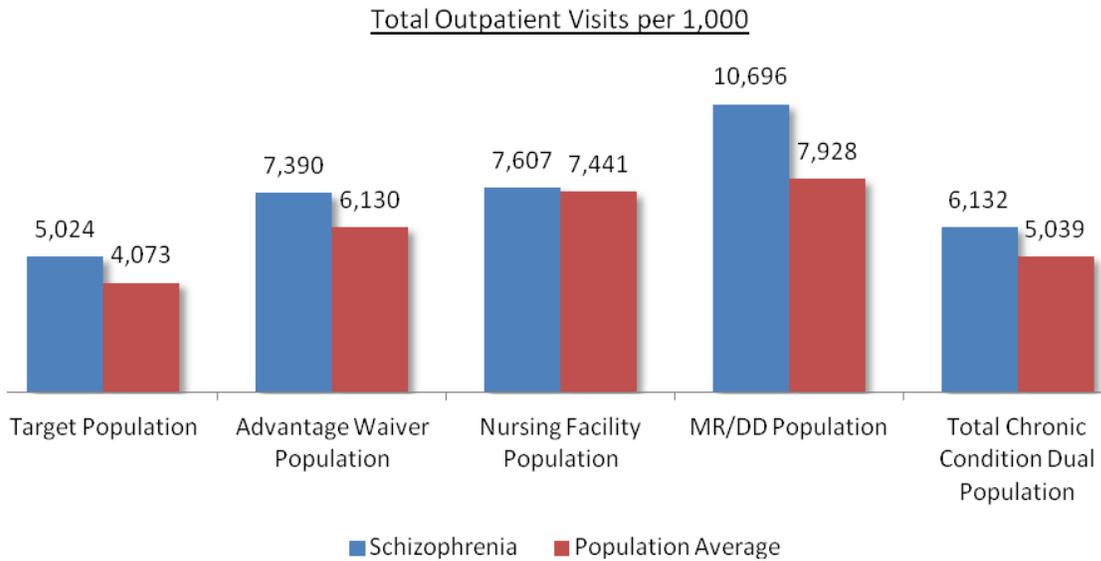
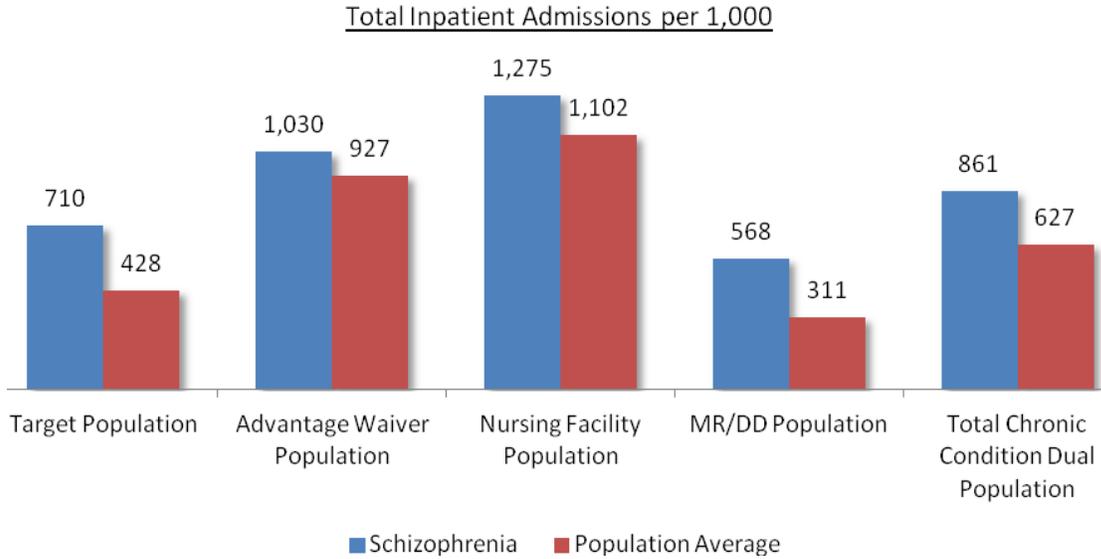


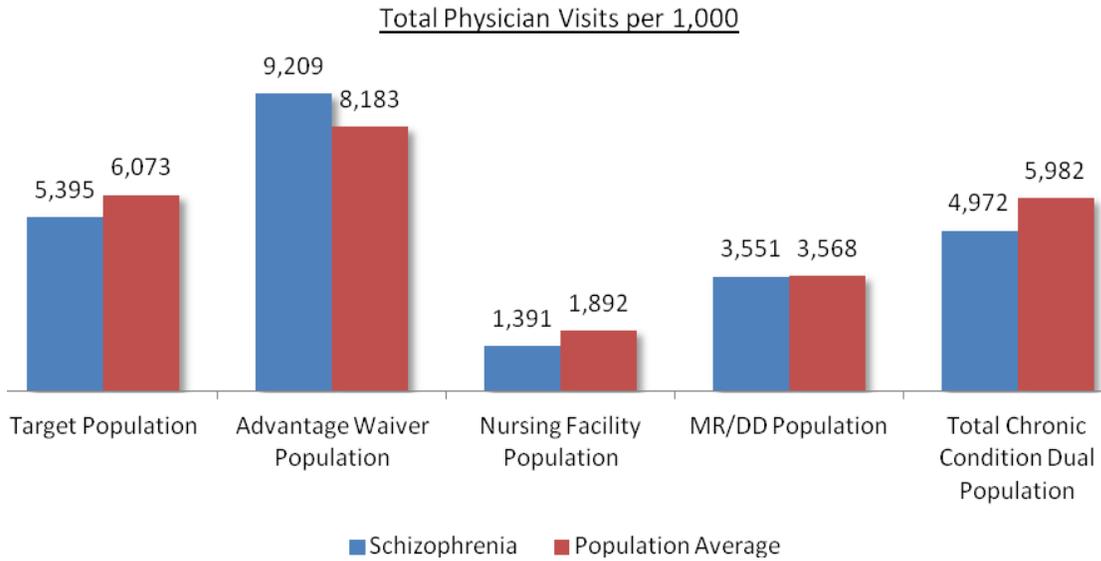
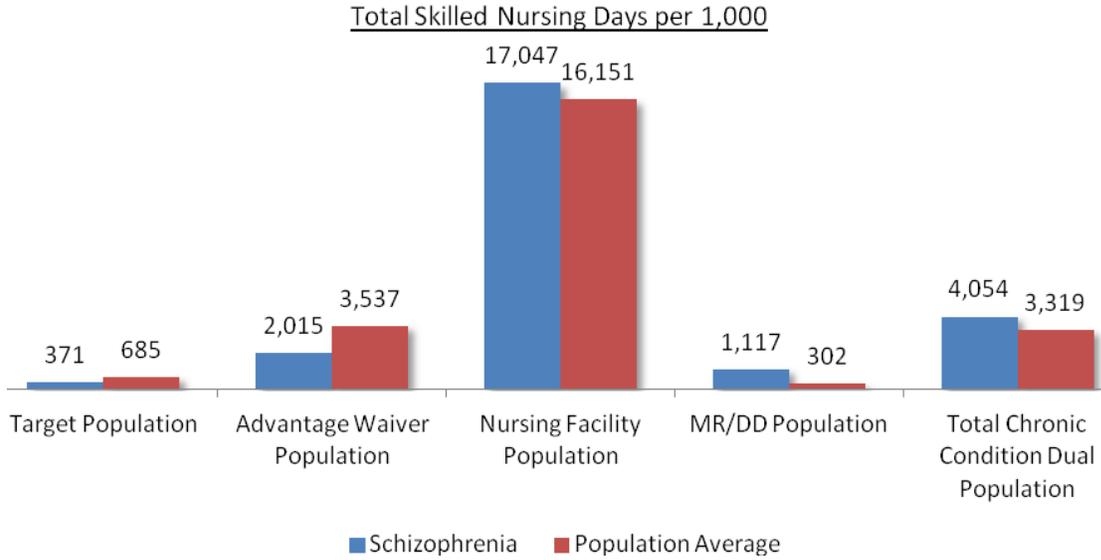
Total Physician Visits per 1,000

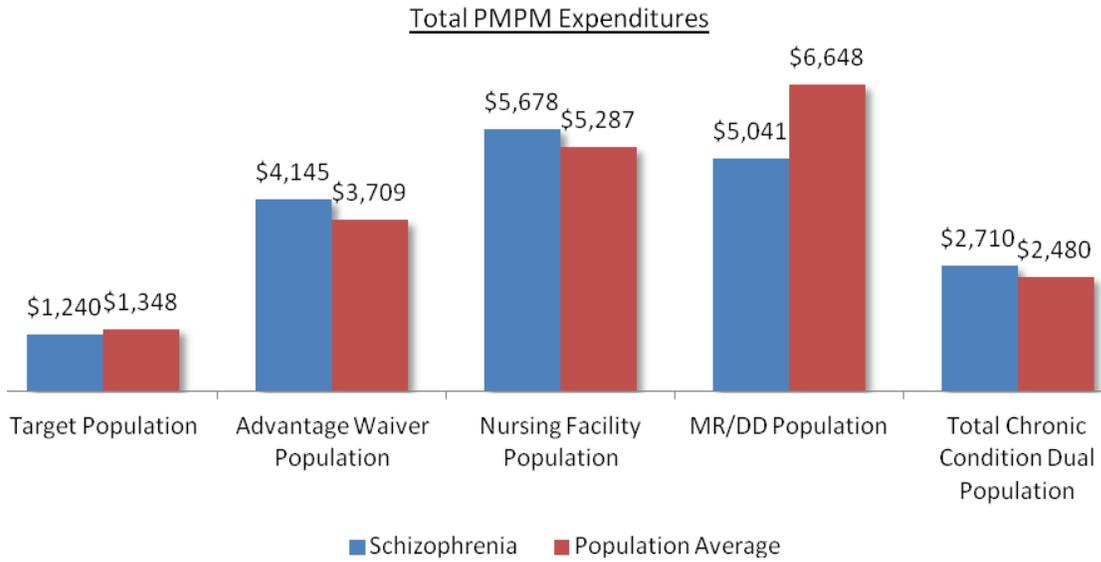




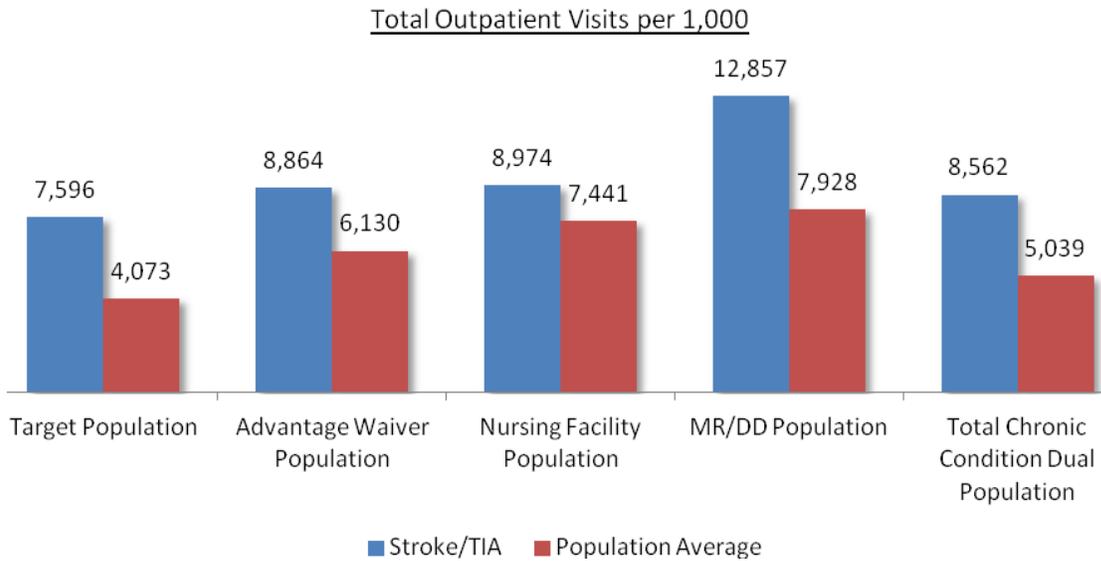
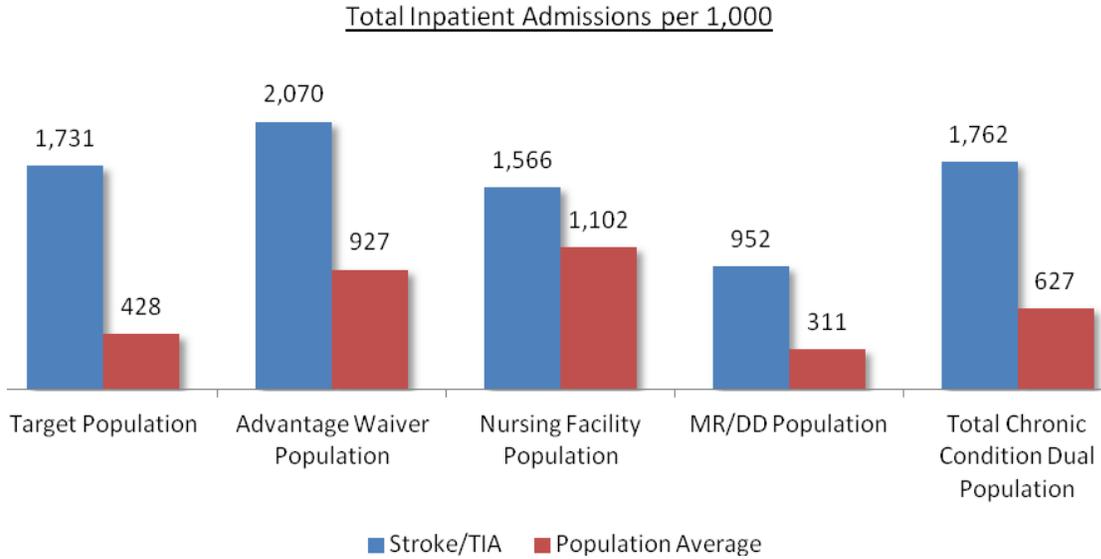
Schizophrenia

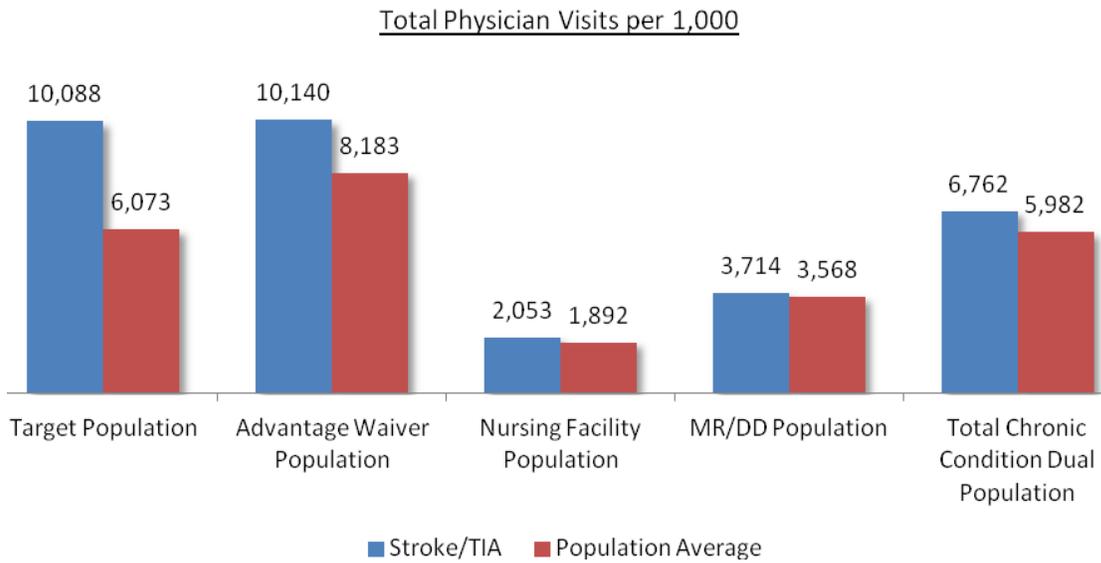
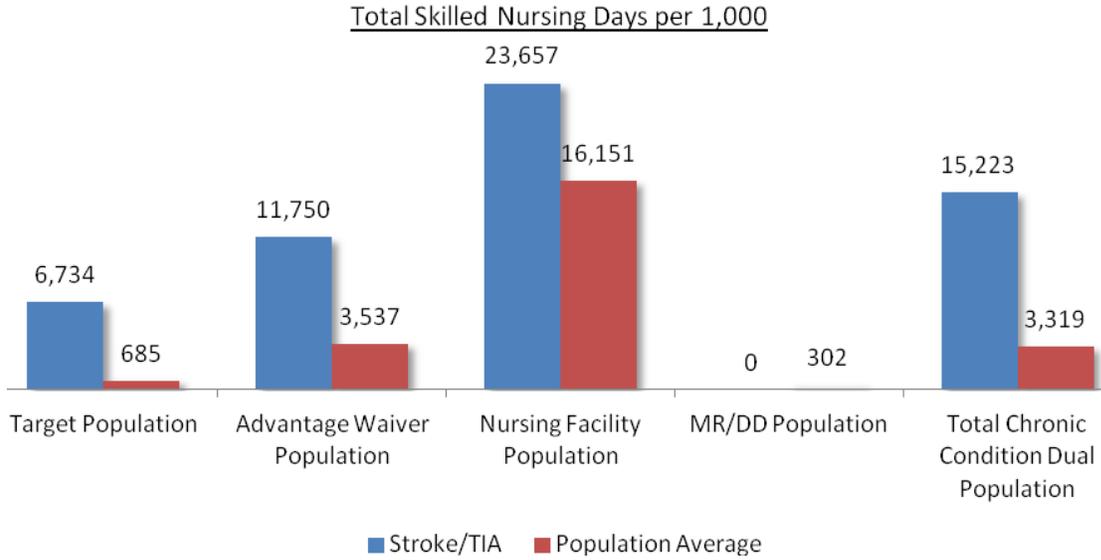


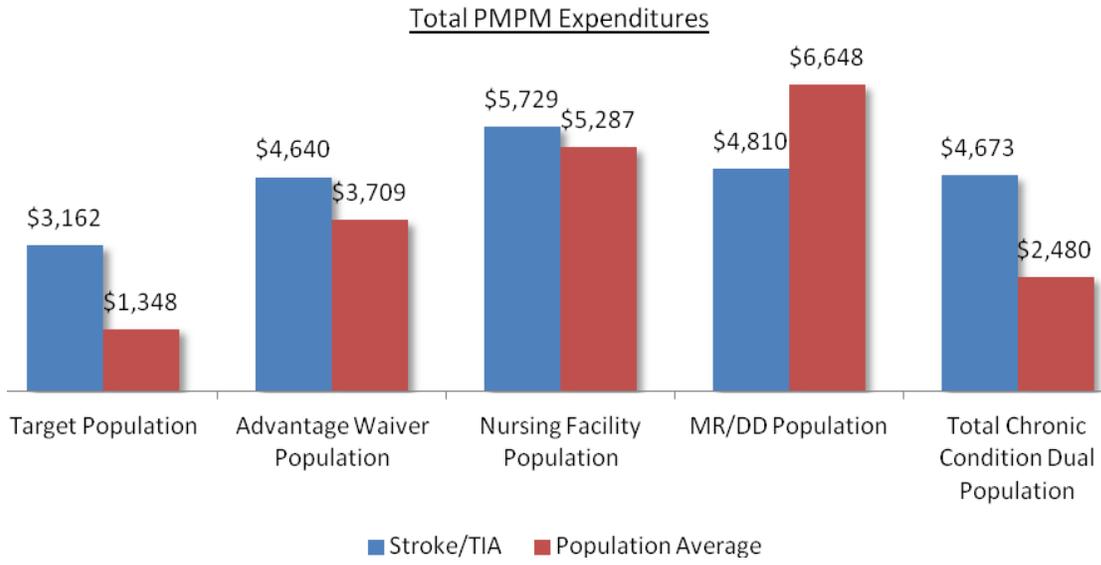




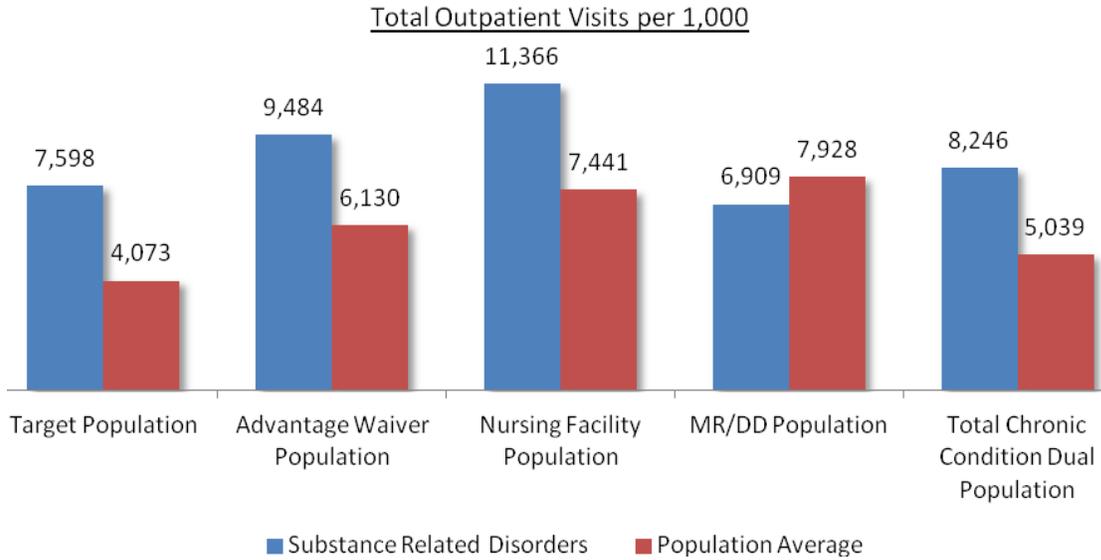
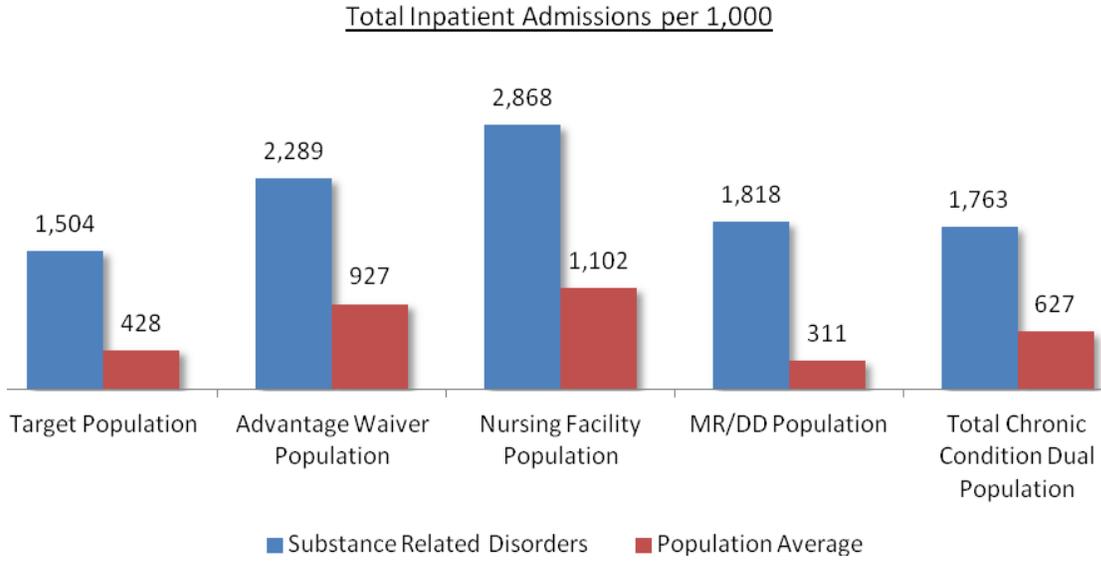
Stroke/TIA



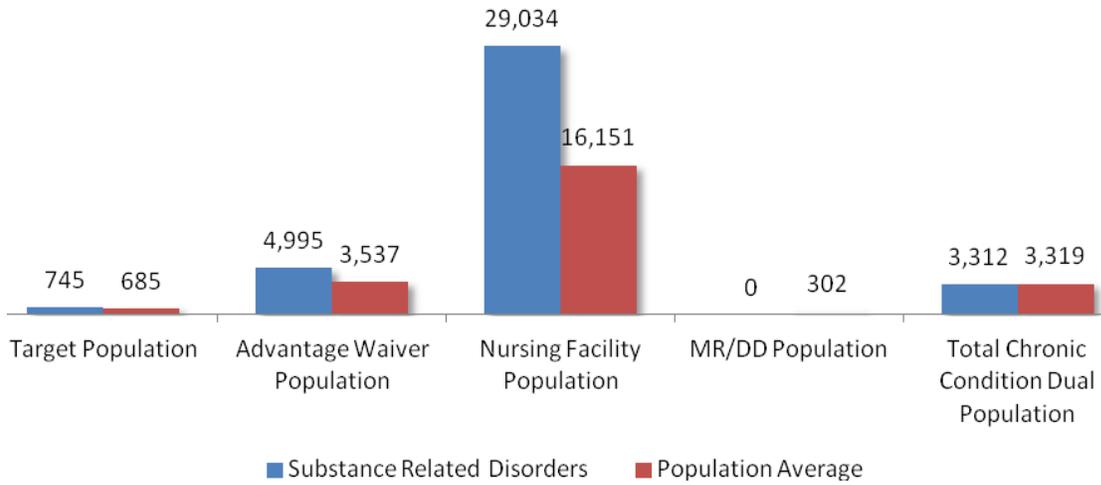




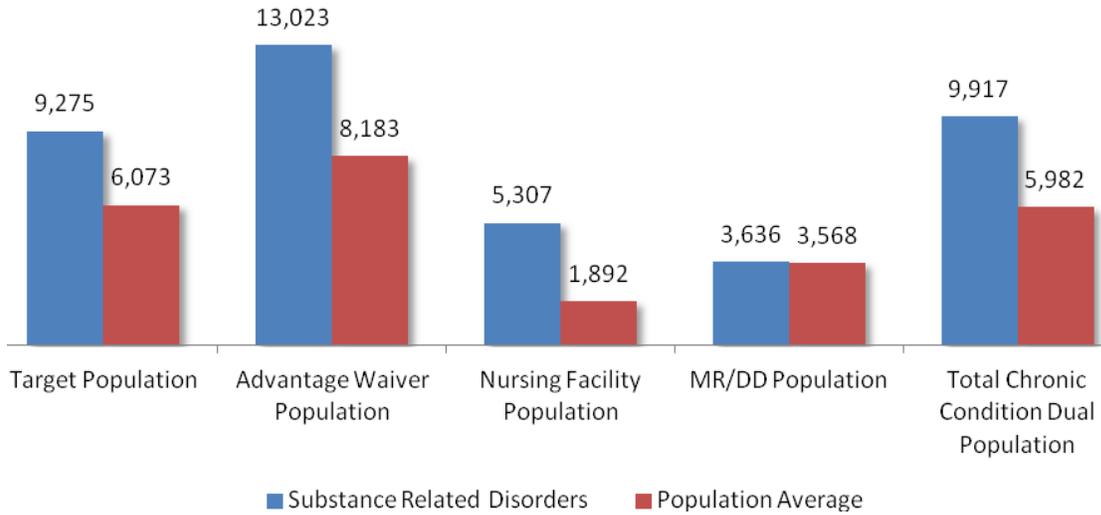
Substance Related Disorders

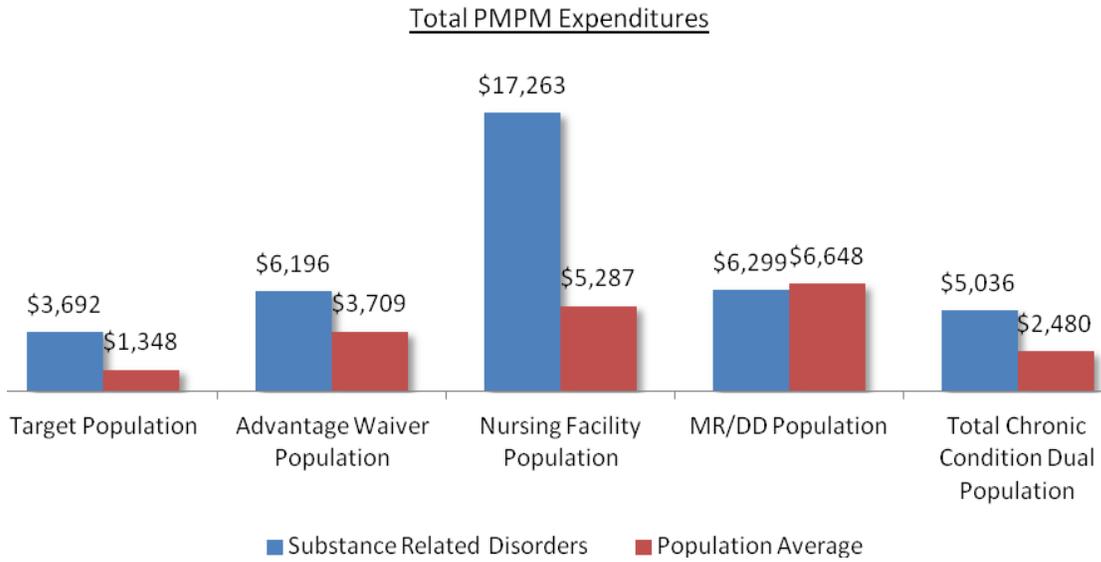


Total Skilled Nursing Days per 1,000

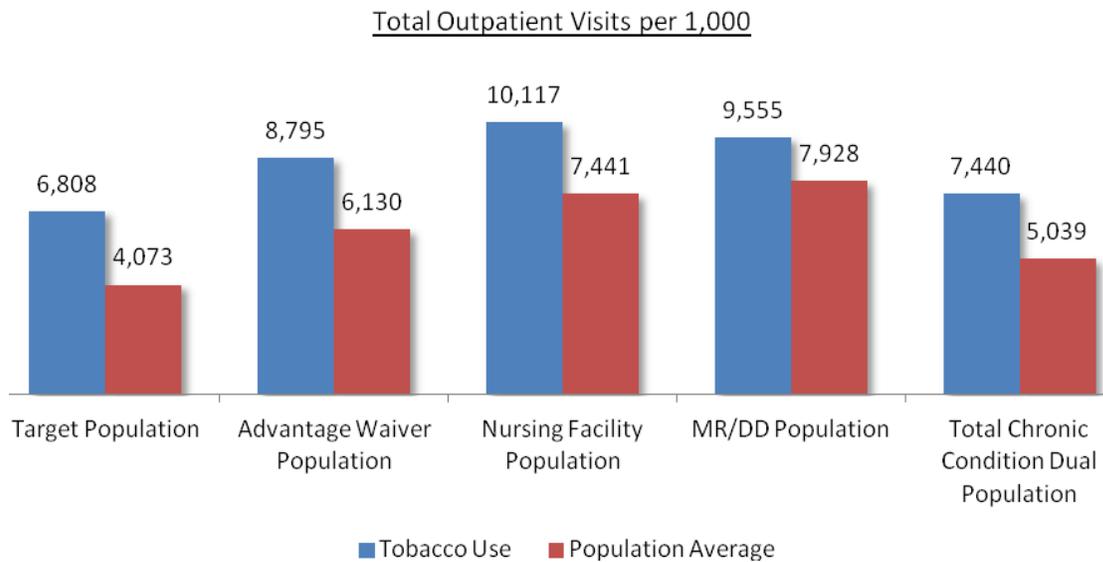
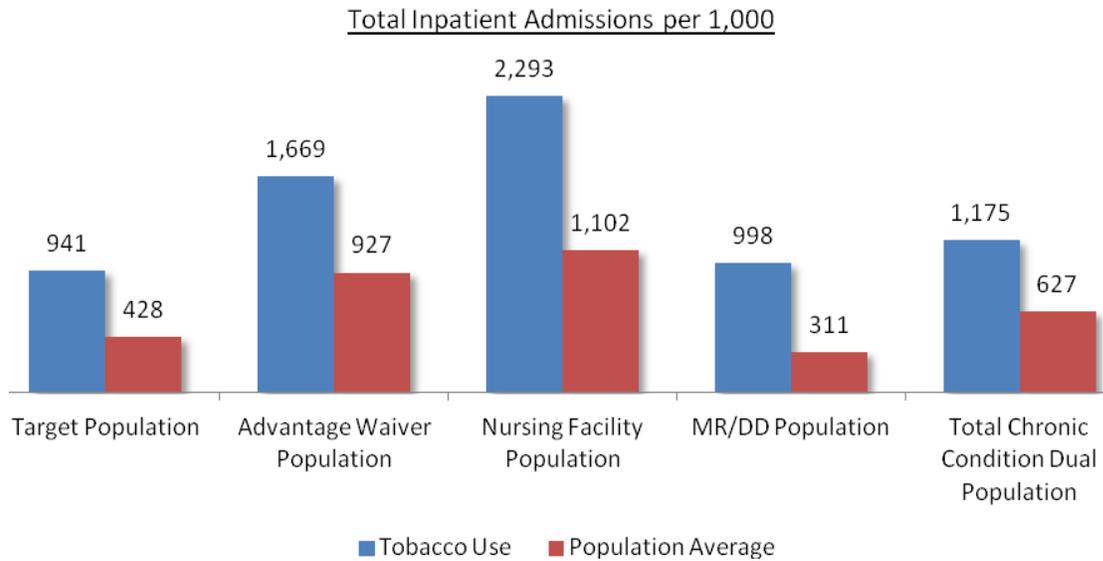


Total Physician Visits per 1,000

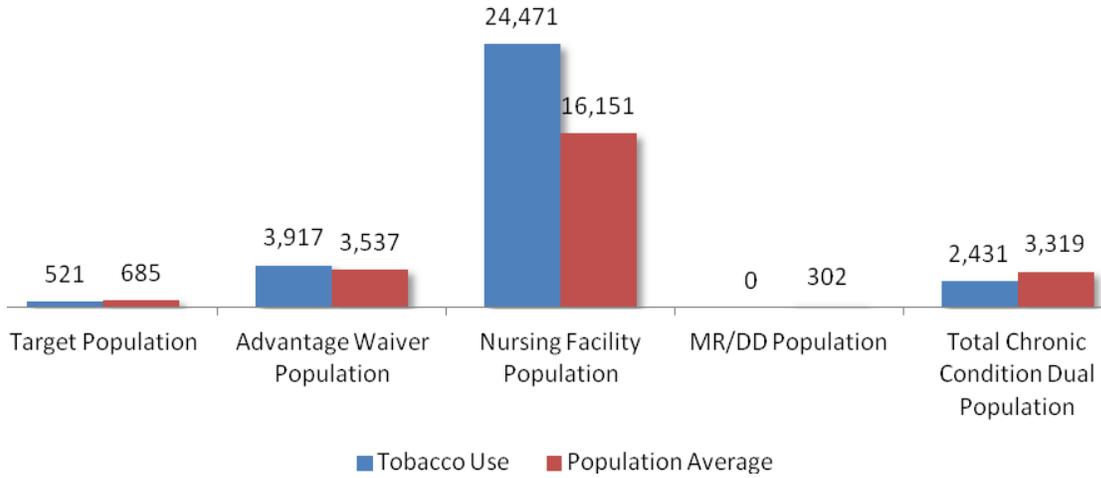




Tobacco Use



Total Skilled Nursing Days per 1,000



Total Physician Visits per 1,000

