# Baseline characteristics before and after PS stratification

## AmbEMR

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | HCQ vs SSZ |  |  | AZM vs AMX |  |  |
|  | HCQ | SSZ |  | AZM | AMX |  |
| Characteristic | % | % | Std. diff | % | % | Std. diff |
| 15-19 | 0.1 | 0.1 | 0.00 |  |  |  |
| 20-24 | 0.7 | 0.6 | 0.01 | 0.8 | 0.7 | 0.01 |
| 25-29 | 1.3 | 1.4 | 0.00 | 1.3 | 1.2 | 0.00 |
| 30-34 | 2.3 | 2.3 | 0.00 | 2.6 | 2.3 | 0.02 |
| 35-39 | 3.5 | 3.4 | 0.01 | 3.7 | 3.7 | 0.00 |
| 40-44 | 5.3 | 5.1 | 0.01 | 5.8 | 5.4 | 0.02 |
| 45-49 | 7.4 | 7.5 | 0.00 | 7.7 | 7.3 | 0.01 |
| 50-54 | 10.5 | 10.5 | 0.00 | 10.1 | 10.5 | -0.01 |
| 55-59 | 13.2 | 12.9 | 0.01 | 13.5 | 14.0 | -0.01 |
| 60-64 | 13.9 | 14.1 | 0.00 | 13.9 | 14.2 | -0.01 |
| 65-69 | 13.8 | 13.7 | 0.00 | 13.7 | 14.1 | -0.01 |
| Gender: female | 78.3 | 78.4 | 0.00 | 83.2 | 82.9 | 0.01 |
| Medical history: General |  |  |  |  |  |  |
| Acute respiratory disease | 13.7 | 13.8 | 0.00 | 39.9 | 40.4 | -0.01 |
| Chronic obstructive lung disease | 7.1 | 6.9 | 0.01 | 9.2 | 10.4 | -0.04 |
| Depressive disorder |  |  |  | 19.8 | 19.7 | 0.00 |
| Diabetes mellitus | 13.2 | 13.7 | -0.02 | 14.6 | 14.9 | -0.01 |
| Hyperlipidemia | 28.8 | 29.1 | -0.01 | 33.2 | 32.8 | 0.01 |
| Pneumonia | 3.2 | 3.1 | 0.01 | 5.7 | 6.5 | -0.03 |
| Renal impairment | 5.2 | 5.3 | -0.01 | 6.7 | 7.2 | -0.02 |
| Urinary tract infectious disease | 5.8 | 5.5 | 0.01 | 10.4 | 10.5 | -0.01 |
| Medical history: Cardiovascular disease |  |  |  |  |  |  |
| Atrial fibrillation | 3.2 | 3.2 | 0.00 | 3.4 | 3.9 | -0.03 |
| Cerebrovascular disease | 3.1 | 3.1 | 0.00 | 3.6 | 3.4 | 0.01 |
| Coronary arteriosclerosis | 5.7 | 5.6 | 0.00 |  |  |  |
| Heart disease | 15.6 | 15.6 | 0.00 | 17.7 | 18.2 | -0.01 |
| Heart failure | 2.6 | 2.4 | 0.01 | 3.4 | 3.7 | -0.02 |
| Ischemic heart disease | 1.7 | 1.5 | 0.02 | 2.0 | 1.9 | 0.01 |
| Medication use |  |  |  |  |  |  |
| Agents acting on the renin-angiotensin system | 33.3 | 33.6 | -0.01 | 35.8 | 36.0 | 0.00 |
| Antidepressants | 35.7 | 35.7 | 0.00 | 44.2 | 44.2 | 0.00 |
| Drugs for obstructive airway diseases | 30.8 | 31.0 | 0.00 | 49.3 | 50.8 | -0.03 |
| Immunosuppressants | 52.2 | 52.1 | 0.00 | 55.1 | 55.5 | -0.01 |
| Opioids | 28.9 | 28.8 | 0.00 | 36.1 | 35.4 | 0.02 |
| Psycholeptics | 26.1 | 26.1 | 0.00 |  |  |  |

## CCAE

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | HCQ vs SSZ |  |  | AZM vs AMX |  |  |
|  | HCQ | SSZ |  | AZM | AMX |  |
| Characteristic | % | % | Std. diff | % | % | Std. diff |
| 15-19 |  |  |  | 0.5 | 0.5 | 0.00 |
| 20-24 | 1.8 | 2.0 | -0.01 | 1.4 | 1.4 | 0.00 |
| 25-29 | 2.5 | 2.7 | -0.01 | 2.2 | 2.2 | 0.00 |
| 30-34 | 4.5 | 4.4 | 0.00 | 4.0 | 3.9 | 0.01 |
| 35-39 |  |  |  | 6.8 | 6.7 | 0.00 |
| 40-44 | 9.7 | 9.5 | 0.01 | 9.3 | 9.3 | 0.00 |
| 45-49 | 13.6 | 13.4 | 0.00 | 13.2 | 13.3 | 0.00 |
| 50-54 | 18.2 | 18.0 | 0.01 | 18.1 | 18.0 | 0.00 |
| 55-59 | 20.8 | 20.8 | 0.00 | 21.5 | 21.8 | -0.01 |
| 60-64 | 19.4 | 19.8 | -0.01 | 21.1 | 21.1 | 0.00 |
| 65-69 | 1.8 | 1.6 | 0.01 | 2.0 | 2.0 | 0.00 |
| Gender: female | 80.1 | 79.7 | 0.01 |  |  |  |
| Medical history: General |  |  |  |  |  |  |
| Acute respiratory disease | 35.1 | 34.8 | 0.01 | 58.0 | 57.5 | 0.01 |
| Chronic obstructive lung disease | 4.3 | 4.5 | -0.01 | 5.0 | 5.2 | -0.01 |
| Depressive disorder | 13.3 | 13.5 | 0.00 | 14.7 | 14.8 | 0.00 |
| Diabetes mellitus | 13.6 | 13.8 | -0.01 | 13.2 | 13.1 | 0.00 |
| Hyperlipidemia | 31.2 | 31.4 | 0.00 | 30.4 | 30.3 | 0.00 |
| Pneumonia | 4.0 | 4.0 | 0.00 | 5.7 | 5.5 | 0.01 |
| Renal impairment | 3.0 | 2.8 | 0.01 | 4.2 | 4.1 | 0.00 |
| Urinary tract infectious disease | 11.6 | 11.5 | 0.00 | 14.0 | 13.9 | 0.00 |
| Medical history: Cardiovascular disease |  |  |  |  |  |  |
| Atrial fibrillation | 1.4 | 1.3 | 0.01 | 1.7 | 1.8 | 0.00 |
| Cerebrovascular disease | 2.8 | 2.9 | -0.01 | 3.1 | 3.2 | -0.01 |
| Coronary arteriosclerosis |  |  |  | 5.0 | 4.9 | 0.00 |
| Heart disease | 15.5 | 15.4 | 0.00 | 17.8 | 17.9 | 0.00 |
| Heart failure | 1.9 | 2.0 | 0.00 | 2.5 | 2.4 | 0.01 |
| Ischemic heart disease | 3.0 | 3.1 | -0.01 | 3.3 | 3.1 | 0.01 |
| Medication use |  |  |  |  |  |  |
| Agents acting on the renin-angiotensin system | 24.5 | 24.6 | 0.00 | 27.1 | 26.9 | 0.00 |
| Antidepressants | 36.3 | 36.5 | 0.00 | 43.0 | 42.8 | 0.00 |
| Drugs for obstructive airway diseases | 29.5 | 29.5 | 0.00 | 41.1 | 40.7 | 0.01 |
| Immunosuppressants | 43.4 | 43.6 | 0.00 | 51.1 | 51.2 | 0.00 |
| Opioids | 39.0 | 39.3 | -0.01 | 41.4 | 41.2 | 0.00 |
| Psycholeptics | 33.4 | 33.3 | 0.00 | 38.2 | 38.1 | 0.00 |

## CPRD

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | HCQ vs SSZ |  |  | AZM vs AMX |  |  |
|  | HCQ | SSZ |  | AZM | AMX |  |
| Characteristic | % | % | Std. diff | % | % | Std. diff |
| 15-19 | 0.3 | 0.2 | 0.00 |  |  |  |
| 20-24 | 0.9 | 0.9 | -0.01 | 2.8 | 0.3 | 0.20 |
| 25-29 | 1.4 | 1.6 | -0.02 | 2.8 | 1.0 | 0.13 |
| 30-34 | 3.0 | 3.0 | 0.00 |  |  |  |
| 35-39 | 4.7 | 4.6 | 0.01 | 9.4 | 3.4 | 0.24 |
| 40-44 | 6.2 | 6.4 | 0.00 | 8.9 | 4.8 | 0.16 |
| 45-49 | 8.6 | 8.5 | 0.00 | 4.4 | 7.2 | -0.12 |
| 50-54 | 11.2 | 10.9 | 0.01 | 8.1 | 10.0 | -0.07 |
| 55-59 | 13.4 | 12.8 | 0.02 | 9.4 | 12.9 | -0.11 |
| 60-64 | 12.8 | 13.0 | -0.01 | 13.3 | 14.2 | -0.03 |
| 65-69 | 12.6 | 12.7 | 0.00 | 9.2 | 14.3 | -0.16 |
| Gender: female |  |  |  | 73.9 | 73.4 | 0.01 |
| Medical history: General |  |  |  |  |  |  |
| Acute respiratory disease | 9.4 | 9.3 | 0.01 | 29.2 | 21.1 | 0.19 |
| Chronic obstructive lung disease | 2.2 | 2.0 | 0.01 | 6.7 | 3.8 | 0.13 |
| Depressive disorder | 3.0 | 3.1 | 0.00 | <1.9 | 2.5 | -0.10 |
| Diabetes mellitus | 2.1 | 2.2 | -0.01 | 3.6 | 2.3 | 0.08 |
| Hyperlipidemia | 1.2 | 1.0 | 0.01 | <1.9 | 0.9 | -0.08 |
| Pneumonia | 0.9 | 0.6 | 0.03 | <1.9 | 1.4 | -0.05 |
| Renal impairment | 1.9 | 2.2 | -0.02 | 2.5 | 3.5 | -0.06 |
| Urinary tract infectious disease |  |  |  | <1.9 | 5.2 | -0.30 |
| Medical history: Cardiovascular disease |  |  |  |  |  |  |
| Atrial fibrillation | 0.8 | 0.7 | 0.02 | <1.9 | 1.1 | -0.03 |
| Cerebrovascular disease | 0.5 | 0.7 | -0.03 |  |  |  |
| Coronary arteriosclerosis | 0.1 | 0.1 | 0.00 |  |  |  |
| Heart disease | 3.4 | 3.1 | 0.01 | <1.9 | 3.8 | -0.18 |
| Heart failure | 0.7 | 0.6 | 0.01 |  |  |  |
| Ischemic heart disease | 1.2 | 1.3 | -0.01 |  |  |  |
| Medication use |  |  |  |  |  |  |
| Agents acting on the renin-angiotensin system | 19.4 | 19.4 | 0.00 | 22.2 | 26.5 | -0.10 |
| Antidepressants | 25.0 | 24.9 | 0.00 | 29.7 | 31.9 | -0.05 |
| Drugs for obstructive airway diseases |  |  |  | 29.2 | 33.0 | -0.08 |
| Immunosuppressants | 42.2 | 43.0 | -0.02 | 50.6 | 57.9 | -0.15 |
| Opioids | 39.0 | 38.9 | 0.00 | 45.3 | 39.3 | 0.12 |
| Psycholeptics | 16.7 | 16.5 | 0.00 | 15.6 | 19.9 | -0.11 |

## DAGermany

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | HCQ vs SSZ |  |  | AZM vs AMX |  |  |
|  | HCQ | SSZ |  | AZM | AMX |  |
| Characteristic | % | % | Std. diff | % | % | Std. diff |
| 15-19 | 0.3 | 0.5 | -0.03 |  |  |  |
| 20-24 | 1.1 | 1.2 | -0.01 | <5.6 | <2.5 | 0.02 |
| 25-29 | 2.0 | 2.4 | -0.03 |  |  |  |
| 30-34 | 2.9 | 3.0 | -0.01 | <5.6 | 4.0 | -0.10 |
| 35-39 | 3.9 | 4.1 | -0.01 | 6.7 | 4.5 | 0.10 |
| 40-44 | 6.1 | 6.3 | -0.01 | 12.4 | 4.0 | 0.31 |
| 45-49 |  |  |  | 7.9 | 9.4 | -0.06 |
| 50-54 | 12.7 | 12.5 | 0.01 | 13.5 | 9.4 | 0.13 |
| 55-59 | 14.8 | 14.9 | 0.00 | 16.9 | 13.4 | 0.10 |
| 60-64 | 12.3 | 12.4 | 0.00 | 12.4 | 10.9 | 0.05 |
| 65-69 | 11.2 | 10.6 | 0.02 | 10.1 | 12.4 | -0.07 |
| Gender: female | 76.0 | 77.2 | -0.03 | 89.9 | 79.2 | 0.30 |
| Medical history: General |  |  |  |  |  |  |
| Acute respiratory disease | 12.2 | 12.0 | 0.01 | 61.8 | 55.4 | 0.13 |
| Chronic obstructive lung disease | 3.4 | 3.7 | -0.02 | 6.7 | 11.4 | -0.16 |
| Depressive disorder | 8.2 | 8.0 | 0.01 | 14.6 | 10.4 | 0.13 |
| Diabetes mellitus | 7.3 | 7.1 | 0.01 | 5.6 | 13.4 | -0.27 |
| Hyperlipidemia | 8.0 | 7.7 | 0.01 | 9.0 | 13.4 | -0.14 |
| Pneumonia | 2.0 | 1.6 | 0.04 | <5.6 | 6.9 | -0.22 |
| Renal impairment | 2.4 | 2.4 | 0.00 | <5.6 | 4.5 | -0.06 |
| Urinary tract infectious disease | 4.0 | 3.9 | 0.00 | 5.6 | 9.9 | -0.16 |
| Medical history: Cardiovascular disease |  |  |  |  |  |  |
| Atrial fibrillation | 0.8 | 0.7 | 0.00 |  |  |  |
| Cerebrovascular disease | 1.4 | 1.6 | -0.02 | <5.6 | <2.5 | 0.14 |
| Coronary arteriosclerosis | 1.1 | 1.1 | 0.00 | <5.6 | <2.5 | 0.06 |
| Heart disease | 10.6 | 10.6 | 0.00 | 11.2 | 21.8 | -0.29 |
| Heart failure | 2.0 | 2.4 | -0.03 | <5.6 | 6.9 | -0.30 |
| Ischemic heart disease | 4.7 | 4.6 | 0.00 | <5.6 | 7.9 | -0.14 |
| Medication use |  |  |  |  |  |  |
| Agents acting on the renin-angiotensin system | 16.8 | 16.5 | 0.01 | 29.2 | 39.6 | -0.22 |
| Antidepressants |  |  |  | 16.9 | 18.8 | -0.05 |
| Drugs for obstructive airway diseases | 7.4 | 7.2 | 0.01 | 19.1 | 21.8 | -0.07 |
| Immunosuppressants | 38.9 | 38.5 | 0.01 | 37.1 | 32.7 | 0.09 |
| Opioids | 12.2 | 12.3 | 0.00 | 20.2 | 27.2 | -0.16 |
| Psycholeptics | 4.8 | 5.3 | -0.02 | 16.9 | 10.4 | 0.19 |

## IMRD

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | HCQ vs SSZ |  |  | AZM vs AMX |  |  |
|  | HCQ | SSZ |  | AZM | AMX |  |
| Characteristic | % | % | Std. diff | % | % | Std. diff |
| 15-19 | 0.2 | 0.2 | 0.01 |  |  |  |
| 20-24 | 0.8 | 1.0 | -0.02 |  |  |  |
| 25-29 | 1.4 | 1.6 | -0.01 | 3.6 | 0.9 | 0.18 |
| 30-34 | 2.9 | 3.1 | -0.01 | 6.7 | 1.7 | 0.25 |
| 35-39 | 5.0 | 4.8 | 0.01 | 10.0 | 3.1 | 0.28 |
| 40-44 | 6.3 | 6.0 | 0.01 | 3.3 | 4.3 | -0.05 |
| 45-49 | 8.4 | 8.5 | 0.00 | 4.0 | 7.2 | -0.14 |
| 50-54 | 11.2 | 11.0 | 0.01 | 3.8 | 10.1 | -0.25 |
| 55-59 | 12.7 | 12.4 | 0.01 | 2.6 | 12.4 | -0.38 |
| 60-64 | 13.5 | 13.5 | 0.00 | 16.6 | 14.5 | 0.06 |
| 65-69 | 12.9 | 13.0 | 0.00 | 19.7 | 14.7 | 0.13 |
| Gender: female | 70.7 | 71.0 | 0.00 | 74.1 | 73.8 | 0.01 |
| Medical history: General |  |  |  |  |  |  |
| Acute respiratory disease | 9.2 | 9.1 | 0.00 | 20.6 | 20.9 | -0.01 |
| Chronic obstructive lung disease | 2.2 | 2.3 | -0.01 | 5.9 | 3.9 | 0.09 |
| Depressive disorder | 2.9 | 2.7 | 0.01 | 2.6 | 2.5 | 0.00 |
| Diabetes mellitus | 2.2 | 2.1 | 0.01 | 8.3 | 2.1 | 0.28 |
| Hyperlipidemia | 1.1 | 1.2 | 0.00 | <1.6 | 1.0 | -0.10 |
| Pneumonia | 0.7 | 0.7 | 0.00 | <1.6 | 1.1 | -0.02 |
| Renal impairment |  |  |  | <1.6 | 3.2 | -0.18 |
| Urinary tract infectious disease | 3.1 | 3.0 | 0.01 | 5.2 | 4.6 | 0.03 |
| Medical history: Cardiovascular disease |  |  |  |  |  |  |
| Atrial fibrillation | 0.7 | 0.6 | 0.01 | <1.6 | 1.1 | -0.11 |
| Cerebrovascular disease | 0.5 | 0.7 | -0.02 | <1.6 | 0.6 | -0.02 |
| Coronary arteriosclerosis | 0.1 | 0.1 | 0.02 |  |  |  |
| Heart disease | 2.8 | 2.6 | 0.01 | <1.6 | 3.8 | -0.23 |
| Heart failure | 0.4 | 0.4 | 0.01 |  |  |  |
| Ischemic heart disease | 1.0 | 1.0 | 0.00 |  |  |  |
| Medication use |  |  |  |  |  |  |
| Agents acting on the renin-angiotensin system | 0.6 | 0.8 | -0.02 |  |  |  |
| Antidepressants | 1.0 | 1.2 | -0.02 | <1.6 | 1.1 | -0.02 |
| Drugs for obstructive airway diseases | 0.5 | 0.4 | 0.00 | <1.6 | 0.7 | -0.07 |
| Immunosuppressants | 1.3 | 1.0 | 0.02 | <1.6 | 1.8 | -0.16 |
| Opioids | 0.6 | 0.6 | -0.01 |  |  |  |
| Psycholeptics | 0.4 | 0.4 | -0.01 |  |  |  |

## MDCD

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | HCQ vs SSZ |  |  | AZM vs AMX |  |  |
|  | HCQ | SSZ |  | AZM | AMX |  |
| Characteristic | % | % | Std. diff | % | % | Std. diff |
| 15-19 | 1.2 | 1.3 | -0.01 | 1.2 | 1.5 | -0.02 |
| 20-24 | 2.1 | 3.1 | -0.06 | 2.7 | 2.3 | 0.03 |
| 25-29 | 4.3 | 4.2 | 0.00 | 5.1 | 4.5 | 0.03 |
| 30-34 | 6.4 | 6.9 | -0.02 | 6.9 | 7.0 | -0.01 |
| 35-39 | 8.8 | 8.8 | 0.00 | 9.0 | 9.5 | -0.02 |
| 40-44 | 10.0 | 9.1 | 0.03 | 10.8 | 10.7 | 0.00 |
| 45-49 | 13.2 | 13.7 | -0.01 | 12.8 | 13.7 | -0.03 |
| 50-54 | 16.2 | 15.9 | 0.01 | 16.3 | 16.0 | 0.01 |
| 55-59 | 15.9 | 15.5 | 0.01 | 15.5 | 16.2 | -0.02 |
| 60-64 | 12.3 | 12.9 | -0.02 | 11.8 | 11.0 | 0.02 |
| 65-69 | 4.6 | 4.2 | 0.02 | 4.1 | 3.5 | 0.03 |
| Gender: female | 84.4 | 84.5 | 0.00 | 89.3 | 89.9 | -0.02 |
| Medical history: General |  |  |  |  |  |  |
| Acute respiratory disease | 41.5 | 41.6 | 0.00 | 61.4 | 63.4 | -0.04 |
| Chronic obstructive lung disease | 21.2 | 21.5 | -0.01 | 22.3 | 25.6 | -0.08 |
| Depressive disorder | 35.5 | 35.8 | -0.01 | 40.9 | 41.1 | 0.00 |
| Diabetes mellitus |  |  |  | 26.3 | 26.1 | 0.00 |
| Hyperlipidemia | 36.4 | 38.3 | -0.04 | 37.9 | 37.0 | 0.02 |
| Pneumonia | 8.5 | 8.0 | 0.02 | 12.1 | 12.4 | -0.01 |
| Renal impairment | 9.2 | 8.3 | 0.03 | 10.8 | 12.0 | -0.04 |
| Urinary tract infectious disease | 17.4 | 16.6 | 0.02 | 21.3 | 21.2 | 0.00 |
| Medical history: Cardiovascular disease |  |  |  |  |  |  |
| Atrial fibrillation | 3.2 | 3.2 | 0.00 | 2.8 | 3.0 | -0.01 |
| Cerebrovascular disease | 5.1 | 5.3 | -0.01 | 6.2 | 6.1 | 0.00 |
| Coronary arteriosclerosis | 9.6 | 10.1 | -0.02 | 9.8 | 10.0 | 0.00 |
| Heart disease | 29.0 | 28.8 | 0.00 | 32.2 | 33.2 | -0.02 |
| Heart failure |  |  |  | 9.4 | 10.5 | -0.04 |
| Ischemic heart disease | 7.1 | 8.0 | -0.03 | 8.4 | 7.5 | 0.04 |
| Medication use |  |  |  |  |  |  |
| Agents acting on the renin-angiotensin system | 32.5 | 32.9 | -0.01 | 35.0 | 35.0 | 0.00 |
| Antidepressants | 53.5 | 53.0 | 0.01 | 62.3 | 62.4 | 0.00 |
| Drugs for obstructive airway diseases | 46.2 | 46.5 | -0.01 | 59.0 | 60.3 | -0.03 |
| Immunosuppressants | 44.4 | 41.8 | 0.05 | 51.5 | 51.8 | 0.00 |
| Opioids | 62.0 | 62.7 | -0.01 | 67.6 | 68.7 | -0.02 |
| Psycholeptics | 49.3 | 50.0 | -0.01 | 57.4 | 57.6 | 0.00 |

## MDCR

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | HCQ vs SSZ |  |  | AZM vs AMX |  |  |
|  | HCQ | SSZ |  | AZM | AMX |  |
| Characteristic | % | % | Std. diff | % | % | Std. diff |
| 45-49 | 0.1 | <0.1 | 0.01 | 0.1 | 0.1 | 0.02 |
| 55-59 | 0.8 | 0.8 | -0.01 | 1.0 | 1.2 | -0.02 |
| 60-64 | 1.8 | 2.0 | -0.02 | 2.2 | 2.3 | -0.01 |
| 65-69 | 24.4 | 24.4 | 0.00 | 29.0 | 28.7 | 0.01 |
| Gender: female | 71.8 | 71.5 | 0.00 | 75.7 | 75.7 | 0.00 |
| Medical history: General |  |  |  |  |  |  |
| Acute respiratory disease | 27.4 | 27.2 | 0.00 | 42.5 | 44.4 | -0.04 |
| Chronic obstructive lung disease | 15.7 | 16.0 | -0.01 | 16.7 | 18.1 | -0.04 |
| Depressive disorder | 9.2 | 9.2 | 0.00 | 10.3 | 11.0 | -0.02 |
| Diabetes mellitus | 22.9 | 22.7 | 0.00 | 20.6 | 20.4 | 0.00 |
| Hyperlipidemia | 40.7 | 41.3 | -0.01 | 39.8 | 39.7 | 0.00 |
| Pneumonia | 9.2 | 9.1 | 0.00 | 11.6 | 12.0 | -0.01 |
| Renal impairment | 11.1 | 11.2 | 0.00 | 12.7 | 12.5 | 0.01 |
| Urinary tract infectious disease | 13.5 | 12.7 | 0.02 | 15.6 | 16.1 | -0.01 |
| Medical history: Cardiovascular disease |  |  |  |  |  |  |
| Atrial fibrillation | 10.4 | 10.2 | 0.01 | 10.3 | 10.6 | -0.01 |
| Cerebrovascular disease |  |  |  | 11.8 | 11.3 | 0.02 |
| Coronary arteriosclerosis |  |  |  | 20.7 | 20.5 | 0.01 |
| Heart disease |  |  |  | 45.7 | 46.0 | -0.01 |
| Heart failure | 10.0 | 10.4 | -0.01 | 11.4 | 11.2 | 0.01 |
| Ischemic heart disease | 10.1 | 10.4 | -0.01 | 10.7 | 10.2 | 0.02 |
| Medication use |  |  |  |  |  |  |
| Agents acting on the renin-angiotensin system |  |  |  | 47.7 | 48.3 | -0.01 |
| Antidepressants | 31.7 | 31.3 | 0.01 | 36.2 | 37.1 | -0.02 |
| Drugs for obstructive airway diseases | 33.2 | 32.8 | 0.01 | 41.8 | 43.0 | -0.02 |
| Immunosuppressants | 45.5 | 42.8 | 0.05 | 48.5 | 49.3 | -0.02 |
| Opioids | 43.8 | 43.2 | 0.01 | 42.9 | 43.2 | 0.00 |
| Psycholeptics | 34.5 | 33.6 | 0.02 | 37.9 | 38.2 | -0.01 |

## OpenClaims

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | HCQ vs SSZ |  |  | AZM vs AMX |  |  |
|  | HCQ | SSZ |  | AZM | AMX |  |
| Characteristic | % | % | Std. diff | % | % | Std. diff |
| 15-19 | 0.3 | 0.3 | 0.00 | 0.3 | 0.3 | 0.00 |
| 20-24 | 1.2 | 1.2 | 0.00 | 1.0 | 1.0 | 0.00 |
| 25-29 | 1.9 | 1.8 | 0.00 | 1.8 | 1.8 | 0.00 |
| 30-34 | 2.9 | 2.9 | 0.00 | 3.0 | 2.9 | 0.00 |
| 35-39 | 4.3 | 4.3 | 0.00 |  |  |  |
| 40-44 | 5.8 | 5.7 | 0.00 | 6.0 | 5.9 | 0.00 |
| 45-49 | 8.2 | 8.1 | 0.00 |  |  |  |
| 50-54 | 11.5 | 11.5 | 0.00 | 11.5 | 11.5 | 0.00 |
| 55-59 | 13.7 | 13.8 | 0.00 | 14.0 | 14.0 | 0.00 |
| 60-64 | 13.6 | 13.5 | 0.00 | 13.9 | 14.1 | 0.00 |
| 65-69 |  |  |  | 12.7 | 12.7 | 0.00 |
| Gender: female | 79.3 | 79.1 | 0.00 | 83.5 | 83.5 | 0.00 |
| Medical history: General |  |  |  |  |  |  |
| Acute respiratory disease | 19.9 | 19.9 | 0.00 | 33.1 | 31.5 | 0.03 |
| Chronic obstructive lung disease | 7.6 | 7.8 | 0.00 | 9.4 | 9.3 | 0.00 |
| Depressive disorder | 9.6 | 9.8 | -0.01 | 11.7 | 11.5 | 0.01 |
| Diabetes mellitus | 15.7 | 16.0 | -0.01 | 16.8 | 16.7 | 0.00 |
| Hyperlipidemia | 26.0 | 26.4 | -0.01 | 27.1 | 26.8 | 0.01 |
| Pneumonia |  |  |  | 6.1 | 5.8 | 0.01 |
| Renal impairment | 6.1 | 6.0 | 0.00 | 7.5 | 7.5 | 0.00 |
| Urinary tract infectious disease |  |  |  | 10.6 | 10.5 | 0.00 |
| Medical history: Cardiovascular disease |  |  |  |  |  |  |
| Atrial fibrillation | 3.6 | 3.6 | 0.00 | 4.0 | 4.0 | 0.00 |
| Cerebrovascular disease | 3.2 | 3.3 | 0.00 | 3.6 | 3.5 | 0.00 |
| Coronary arteriosclerosis | 6.8 | 6.9 | 0.00 | 7.7 | 7.6 | 0.00 |
| Heart disease | 18.1 | 18.3 | 0.00 | 20.4 | 20.3 | 0.00 |
| Heart failure | 3.9 | 4.0 | 0.00 |  |  |  |
| Ischemic heart disease | 3.5 | 3.6 | 0.00 | 4.0 | 3.9 | 0.00 |
| Medication use |  |  |  |  |  |  |
| Agents acting on the renin-angiotensin system | 31.4 | 31.4 | 0.00 | 38.0 | 37.9 | 0.00 |
| Antidepressants | 34.7 | 34.8 | 0.00 | 46.0 | 45.8 | 0.00 |
| Drugs for obstructive airway diseases |  |  |  | 45.8 | 45.5 | 0.01 |
| Immunosuppressants | 44.7 | 44.7 | 0.00 | 51.4 | 51.5 | 0.00 |
| Opioids | 35.4 | 35.5 | 0.00 | 43.5 | 43.2 | 0.01 |
| Psycholeptics | 29.7 | 29.9 | 0.00 | 39.3 | 39.2 | 0.00 |

## Optum

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | HCQ vs SSZ |  |  | AZM vs AMX |  |  |
|  | HCQ | SSZ |  | AZM | AMX |  |
| Characteristic | % | % | Std. diff | % | % | Std. diff |
| 15-19 | 0.3 | 0.4 | -0.02 | 0.2 | 0.3 | 0.00 |
| 20-24 | 1.1 | 1.1 | -0.01 | 0.9 | 1.0 | -0.01 |
| 25-29 | 1.8 | 1.8 | 0.00 | 1.5 | 1.4 | 0.01 |
| 30-34 | 3.3 | 3.3 | 0.00 | 3.0 | 2.8 | 0.01 |
| 35-39 | 4.9 | 4.8 | 0.00 | 4.3 | 4.4 | -0.01 |
| 40-44 | 6.8 | 6.5 | 0.01 | 6.6 | 6.4 | 0.01 |
| 45-49 | 8.9 | 8.9 | 0.00 | 8.6 | 8.9 | -0.01 |
| 50-54 | 11.6 | 11.7 | 0.00 |  |  |  |
| 55-59 | 12.7 | 12.8 | 0.00 | 13.9 | 13.6 | 0.01 |
| 60-64 | 11.9 | 11.9 | 0.00 | 13.3 | 13.0 | 0.01 |
| 65-69 | 11.6 | 11.7 | 0.00 | 12.4 | 12.6 | -0.01 |
| Gender: female | 77.6 | 77.6 | 0.00 | 84.0 | 83.9 | 0.00 |
| Medical history: General |  |  |  |  |  |  |
| Acute respiratory disease | 34.2 | 34.2 | 0.00 | 57.7 | 57.7 | 0.00 |
| Chronic obstructive lung disease | 11.1 | 11.2 | 0.00 | 13.0 | 13.1 | 0.00 |
| Depressive disorder | 18.4 | 18.2 | 0.00 | 21.3 | 21.2 | 0.00 |
| Diabetes mellitus | 20.7 | 21.1 | -0.01 | 20.4 | 20.7 | -0.01 |
| Hyperlipidemia | 46.4 | 47.1 | -0.01 | 46.4 | 46.3 | 0.00 |
| Pneumonia | 6.3 | 6.4 | 0.00 | 9.0 | 9.0 | 0.00 |
| Renal impairment | 9.7 | 9.9 | 0.00 | 11.5 | 11.7 | -0.01 |
| Urinary tract infectious disease |  |  |  | 18.6 | 18.5 | 0.00 |
| Medical history: Cardiovascular disease |  |  |  |  |  |  |
| Atrial fibrillation | 4.8 | 4.8 | 0.00 | 5.2 | 5.5 | -0.01 |
| Cerebrovascular disease | 6.1 | 6.0 | 0.00 | 6.6 | 6.8 | -0.01 |
| Coronary arteriosclerosis | 10.7 | 11.0 | -0.01 | 11.6 | 11.8 | 0.00 |
| Heart disease | 27.3 | 27.9 | -0.01 | 30.4 | 30.6 | 0.00 |
| Heart failure | 6.1 | 6.4 | -0.01 | 7.6 | 7.4 | 0.01 |
| Ischemic heart disease | 6.5 | 6.6 | -0.01 | 7.1 | 7.3 | 0.00 |
| Medication use |  |  |  |  |  |  |
| Agents acting on the renin-angiotensin system | 32.4 | 32.7 | -0.01 |  |  |  |
| Antidepressants | 35.0 | 34.9 | 0.00 | 43.0 | 42.8 | 0.00 |
| Drugs for obstructive airway diseases | 29.2 | 29.5 | 0.00 | 41.2 | 41.1 | 0.00 |
| Immunosuppressants | 43.0 | 42.2 | 0.02 | 48.3 | 48.4 | 0.00 |
| Opioids | 38.8 | 38.9 | 0.00 | 42.7 | 42.0 | 0.01 |
| Psycholeptics | 30.1 | 29.9 | 0.00 | 36.5 | 36.6 | 0.00 |

## PanTher

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | HCQ vs SSZ |  |  | AZM vs AMX |  |  |
|  | HCQ | SSZ |  | AZM | AMX |  |
| Characteristic | % | % | Std. diff | % | % | Std. diff |
| 15-19 | 0.2 | 0.3 | -0.01 | 0.2 | 0.3 | -0.02 |
| 20-24 | 1.0 | 1.0 | 0.00 | 1.1 | 0.8 | 0.03 |
| 25-29 | 1.8 | 1.9 | -0.01 | 1.9 | 1.6 | 0.02 |
| 30-34 | 3.1 | 3.0 | 0.00 | 2.9 | 2.9 | 0.00 |
| 35-39 | 4.2 | 4.2 | 0.00 | 4.1 | 4.1 | 0.00 |
| 40-44 | 5.9 | 5.6 | 0.01 | 5.7 | 6.0 | -0.01 |
| 45-49 | 7.9 | 7.9 | 0.00 | 7.3 | 7.4 | 0.00 |
| 50-54 | 11.6 | 11.5 | 0.00 | 10.5 | 10.3 | 0.01 |
| 55-59 | 14.0 | 14.3 | -0.01 | 13.2 | 13.9 | -0.02 |
| 60-64 | 13.5 | 13.4 | 0.00 | 13.9 | 13.8 | 0.00 |
| 65-69 | 12.3 | 12.6 | -0.01 | 12.4 | 12.5 | 0.00 |
| Gender: female | 78.2 | 78.6 | -0.01 | 82.9 | 82.7 | 0.01 |
| Medical history: General |  |  |  |  |  |  |
| Acute respiratory disease | 17.9 | 18.1 | 0.00 | 52.6 | 51.8 | 0.02 |
| Chronic obstructive lung disease | 8.6 | 8.9 | -0.01 | 15.2 | 15.1 | 0.00 |
| Depressive disorder | 15.6 | 15.7 | 0.00 | 23.9 | 23.4 | 0.01 |
| Diabetes mellitus | 15.0 | 15.3 | -0.01 | 18.8 | 18.4 | 0.01 |
| Hyperlipidemia | 30.5 | 30.6 | 0.00 | 39.7 | 39.4 | 0.01 |
| Pneumonia | 5.0 | 5.0 | 0.00 | 14.7 | 12.4 | 0.07 |
| Renal impairment | 7.4 | 7.7 | -0.01 | 13.2 | 12.6 | 0.02 |
| Urinary tract infectious disease | 7.2 | 7.1 | 0.00 | 13.7 | 13.2 | 0.02 |
| Medical history: Cardiovascular disease |  |  |  |  |  |  |
| Atrial fibrillation |  |  |  | 6.9 | 7.1 | -0.01 |
| Cerebrovascular disease |  |  |  | 4.8 | 4.5 | 0.01 |
| Coronary arteriosclerosis | 8.3 | 8.5 | -0.01 | 12.5 | 12.5 | 0.00 |
| Heart disease | 20.7 | 21.1 | -0.01 | 31.1 | 30.3 | 0.02 |
| Heart failure | 4.7 | 4.9 | -0.01 | 9.4 | 8.6 | 0.03 |
| Ischemic heart disease | 4.4 | 4.5 | 0.00 | 7.2 | 7.0 | 0.01 |
| Medication use |  |  |  |  |  |  |
| Agents acting on the renin-angiotensin system | 30.8 | 31.3 | -0.01 | 36.9 | 36.5 | 0.01 |
| Antidepressants | 35.8 | 36.3 | -0.01 | 48.1 | 48.3 | 0.00 |
| Drugs for obstructive airway diseases | 34.6 | 35.0 | -0.01 | 58.6 | 59.1 | -0.01 |
| Immunosuppressants | 49.2 | 50.2 | -0.02 | 55.1 | 55.5 | -0.01 |
| Opioids | 39.6 | 40.3 | -0.01 | 52.3 | 52.2 | 0.00 |
| Psycholeptics | 35.1 | 35.5 | -0.01 | 49.2 | 49.5 | -0.01 |

## SIDIAP

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | HCQ vs SSZ |  |  | AZM vs AMX |  |  |
|  | HCQ | SSZ |  | AZM | AMX |  |
| Characteristic | % | % | Std. diff | % | % | Std. diff |
| 20-24 | 0.6 | <1.0 | -0.02 | <2.8 | <0.7 | 0.07 |
| 25-29 | 2.0 | 4.6 | -0.15 |  |  |  |
| 30-34 | 4.6 | 4.3 | 0.01 | <2.8 | 4.0 | -0.12 |
| 35-39 | 7.2 | 13.3 | -0.20 | 6.1 | 5.4 | 0.03 |
| 40-44 | 8.3 | 5.6 | 0.11 | 3.3 | 6.1 | -0.13 |
| 45-49 | 7.4 | 7.3 | 0.00 | 5.7 | 5.8 | -0.01 |
| 50-54 | 10.5 | 7.7 | 0.10 | 17.6 | 8.3 | 0.28 |
| 55-59 | 11.5 | 9.5 | 0.06 | 17.5 | 10.5 | 0.20 |
| 60-64 | 10.9 | 11.1 | -0.01 | 12.9 | 12.9 | 0.00 |
| 65-69 | 11.1 | 8.7 | 0.08 | 5.0 | 12.5 | -0.27 |
| Gender: female | 75.9 | 79.8 | -0.09 | 79.9 | 77.9 | 0.05 |
| Medical history: General |  |  |  |  |  |  |
| Acute respiratory disease | 17.4 | 26.6 | -0.22 | 29.4 | 20.6 | 0.20 |
| Chronic obstructive lung disease | 2.4 | 1.7 | 0.05 | 3.7 | 2.7 | 0.05 |
| Depressive disorder | 3.1 | 9.0 | -0.25 | <2.8 | 4.9 | -0.11 |
| Diabetes mellitus | 2.8 | 2.3 | 0.03 | <2.8 | 3.5 | -0.10 |
| Hyperlipidemia | 4.0 | 7.8 | -0.16 | 3.8 | 6.3 | -0.12 |
| Pneumonia | 2.2 | 7.3 | -0.24 | <2.8 | 3.4 | -0.14 |
| Renal impairment | 2.0 | 2.1 | -0.01 | <2.8 | 2.8 | -0.03 |
| Urinary tract infectious disease | 7.4 | 6.0 | 0.06 | 5.5 | 10.8 | -0.19 |
| Medical history: Cardiovascular disease |  |  |  |  |  |  |
| Atrial fibrillation | 0.5 | 4.1 | -0.24 |  |  |  |
| Cerebrovascular disease | 2.2 | <1.0 | 0.13 | 5.5 | 4.3 | 0.06 |
| Heart disease | 7.0 | 9.2 | -0.08 | 6.9 | 10.0 | -0.11 |
| Heart failure | 1.1 | 3.3 | -0.15 | <2.8 | 1.5 | -0.10 |
| Ischemic heart disease | 1.5 | <1.0 | 0.13 | <2.8 | 3.4 | -0.09 |
| Medication use |  |  |  |  |  |  |
| Agents acting on the renin-angiotensin system | 27.2 | 27.0 | 0.00 | 21.0 | 31.1 | -0.23 |
| Antidepressants | 21.9 | 27.7 | -0.13 | 33.8 | 29.2 | 0.10 |
| Drugs for obstructive airway diseases | 24.2 | 21.1 | 0.07 | 34.3 | 41.2 | -0.14 |
| Immunosuppressants | 33.1 | 30.3 | 0.06 | 26.9 | 30.8 | -0.08 |
| Opioids | 22.9 | 23.5 | -0.01 | 13.2 | 22.5 | -0.24 |
| Psycholeptics | 37.1 | 44.2 | -0.14 | 41.1 | 41.6 | -0.01 |

## VA

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | HCQ vs SSZ |  |  | AZM vs AMX |  |  |
|  | HCQ | SSZ |  | AZM | AMX |  |
| Characteristic | % | % | Std. diff | % | % | Std. diff |
| 20-24 | 0.1 | 0.2 | -0.02 | <0.1 | 0.1 | 0.00 |
| 25-29 | 0.6 | 0.6 | -0.01 | 0.4 | 0.3 | 0.03 |
| 30-34 | 1.1 | 1.1 | 0.00 | 1.2 | 1.1 | 0.02 |
| 35-39 | 1.5 | 1.7 | -0.02 | 1.3 | 1.4 | -0.01 |
| 40-44 | 2.7 | 2.8 | -0.01 | 3.1 | 2.7 | 0.02 |
| 45-49 | 5.1 | 5.0 | 0.00 | 5.9 | 5.4 | 0.02 |
| 50-54 | 8.8 | 8.7 | 0.00 | 9.6 | 9.0 | 0.02 |
| 55-59 | 13.4 | 13.1 | 0.01 | 12.9 | 14.3 | -0.04 |
| 60-64 | 17.3 | 17.6 | -0.01 | 17.1 | 18.0 | -0.02 |
| 65-69 | 17.1 | 17.0 | 0.00 | 17.2 | 17.0 | 0.00 |
| Gender: female | 13.2 | 13.1 | 0.00 | 18.7 | 17.5 | 0.03 |
| Medical history: General |  |  |  |  |  |  |
| Acute respiratory disease | 11.8 | 11.3 | 0.02 | 40.3 | 40.4 | 0.00 |
| Chronic obstructive lung disease |  |  |  | 26.1 | 27.6 | -0.03 |
| Depressive disorder | 21.8 | 21.6 | 0.00 | 29.5 | 28.5 | 0.02 |
| Diabetes mellitus | 24.1 | 24.1 | 0.00 | 28.0 | 28.2 | 0.00 |
| Hyperlipidemia |  |  |  | 47.0 | 47.0 | 0.00 |
| Pneumonia |  |  |  | 12.9 | 11.4 | 0.04 |
| Renal impairment | 7.0 | 7.1 | 0.00 | 11.4 | 11.2 | 0.01 |
| Urinary tract infectious disease | 3.4 | 3.1 | 0.02 | 7.4 | 7.2 | 0.01 |
| Medical history: Cardiovascular disease |  |  |  |  |  |  |
| Atrial fibrillation | 5.9 | 5.8 | 0.00 | 7.9 | 8.1 | -0.01 |
| Cerebrovascular disease | 4.3 | 4.3 | 0.00 | 6.1 | 5.4 | 0.03 |
| Coronary arteriosclerosis | 14.8 | 15.2 | -0.01 | 18.6 | 18.0 | 0.02 |
| Heart disease | 30.6 | 31.1 | -0.01 | 38.7 | 37.7 | 0.02 |
| Heart failure | 5.9 | 6.1 | -0.01 | 11.3 | 10.2 | 0.04 |
| Ischemic heart disease | 11.1 | 11.1 | 0.00 | 15.2 | 15.1 | 0.00 |
| Medication use |  |  |  |  |  |  |
| Agents acting on the renin-angiotensin system | 38.8 | 39.0 | 0.00 | 44.8 | 44.9 | 0.00 |
| Antidepressants | 35.3 | 34.8 | 0.01 |  |  |  |
| Drugs for obstructive airway diseases | 28.2 | 28.0 | 0.00 | 48.3 | 49.0 | -0.01 |
| Immunosuppressants | 47.0 | 46.3 | 0.01 | 54.7 | 55.5 | -0.02 |
| Opioids | 32.0 | 31.5 | 0.01 | 45.3 | 44.1 | 0.02 |
| Psycholeptics | 24.0 | 24.0 | 0.00 | 36.2 | 35.7 | 0.01 |