

VIII. Prescription Drugs

A licensed medicine that is regulated by legislation to require a medical prescription before it can be obtained

Key findings from this chapter:

Negative Trends

- Prescriptions for [Schedule 2 controlled substances](#) increased by 70% in Ottawa County between 2007 and 2010 (276.9 prescriptions per 1,000 up to 472.0). The statewide prescription rate increased by nearly 75% during this same time period (315.5 prescriptions per 1,000 up to 550.8). *Schedule 2 controlled substances include prescribed medications that have a high potential for abuse and may lead to severe psychological or physical dependence*
- Prescriptions for [Schedule 3 controlled substances](#) increased by 52% in Ottawa County between 2007 and 2010 (366.3 prescriptions per 1,000 up to 556.9). The statewide prescription rate increased by 70% during this same time period (625.7 prescriptions per 1,000 up to 1,066.6). *Schedule 3 controlled substances include prescribed medications that have a potential for abuse and may lead to high psychological dependence or moderate/low physical dependence*

Schedule II Controlled Substances (2007-2010)

Prescriptions Issued by Year (Ottawa County, State)

| Controlled Substances* | Common Brand Name(s) | Prescriptions Issued Per 1,000 Population | | | | | | | |
|---|-----------------------------------|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| | | Ottawa** | | | | Michigan | | | |
| | | 2007 | 2008 | 2009 | 2010 | 2007 | 2008 | 2009 | 2010 |
| Central Nervous System (CNS) Stimulants*** | | | | | | | | | |
| Amphetamine/Dextroamphetamine | Adderall, Dexedrine | 71.1 | 67.9 | 82.2 | 151.5 | 58.4 | 55.9 | 84.8 | 130.5 |
| Dexmethylphenidate | Focalin | 3.1 | 2.3 | 3.3 | 5.1 | 6.9 | 6.8 | 9.8 | 12.7 |
| Lisdexamfetamine | Vyvanse | 1.9 | 6.2 | 14.1 | 24.3 | 2.1 | 8.3 | 19.2 | 29.3 |
| Methylphenidate | Ritalin, Concerta, Daytrana | 85.1 | 75.6 | 79.7 | 114.8 | 70.6 | 67.0 | 87.7 | 112.3 |
| Sub-Total | | 161.2 | 152.0 | 179.3 | 295.7 | 138.0 | 138.0 | 201.5 | 284.8 |
| Narcotic (Opiate) Painkillers*** | | | | | | | | | |
| Fentanyl | Actiq, Duragesic, Fentora | 26.6 | 24.1 | 26.3 | 34.2 | 36.5 | 34.2 | 34.3 | 40.5 |
| Hydromorphone | Dilaudid | 7.3 | 7.3 | 8.1 | 11.4 | 8.4 | 8.9 | 10.6 | 13.8 |
| Meperidine | Demerol | 0.8 | 0.7 | 0.4 | 0.5 | 1.3 | 1.1 | 1.0 | 1.0 |
| Methadone | Methadose, Dolophine | 23.6 | 23.1 | 24.9 | 32.8 | 21.6 | 20.5 | 23.6 | 30.3 |
| Morphine | Kadian, MS Contin, Embeda, Avinza | 24.7 | 25.9 | 27.6 | 41.5 | 36.8 | 38.8 | 44.8 | 57.2 |
| Oxycodone/Oxycodone Combination | OxyContin, Percocet, Endocet | 31.9 | 32.2 | 35.2 | 54.4 | 65.5 | 68.6 | 85.0 | 117.3 |
| Oxymorphone | Opana | 0.3 | 0.5 | 0.7 | 0.7 | 1.0 | 1.5 | 2.3 | 4.1 |
| Sub-Total | | 115.2 | 113.8 | 123.2 | 175.5 | 171.1 | 173.6 | 201.6 | 264.2 |
| All Other Schedule II Prescriptions | | 0.5 | 1.1 | 0.6 | 0.8 | 6.4 | 0.5 | 0.9 | 1.8 |
| Total Schedule II Controlled Substances | | 276.9 | 266.9 | 303.1 | 472.0 | 315.5 | 312.1 | 404.0 | 550.8 |

Source: Michigan Automated Prescription System (MAPS), Bureau of Health Professions, Michigan Department of Community Health; U.S. Census Bureau Population Estimates

* The Controlled Substances Act (CSA) lists substances which were controlled in 1970 when the law was enacted. The drugs that are considered controlled substances under the CSA are divided into five schedules. Approximately 160 substances have been added, removed, or transferred from one schedule to another since 1970. A drug is placed in its respective schedule based on whether it has a currently accepted medical use in treatment in the United States, its relative abuse potential, and its likelihood of causing dependence. Substances in Schedule II have a high potential for abuse which may lead to severe psychological or physical dependence

** Ottawa County data reflects Schedule II controlled substances prescribed to people who live in a zip code that is entirely or partially within the County

*** The Schedule II controlled substances are utilized for the following purposes:

CNS Stimulants are used as part of a treatment program to control symptoms of Attention Deficit Hyperactivity Disorder (ADHD) in adults and children

Methylphenidate and Amphetamine/Dextroamphetamine are also used to treat narcolepsy

Narcotic (Opiate) Painkillers are used to relieve moderate to severe pain

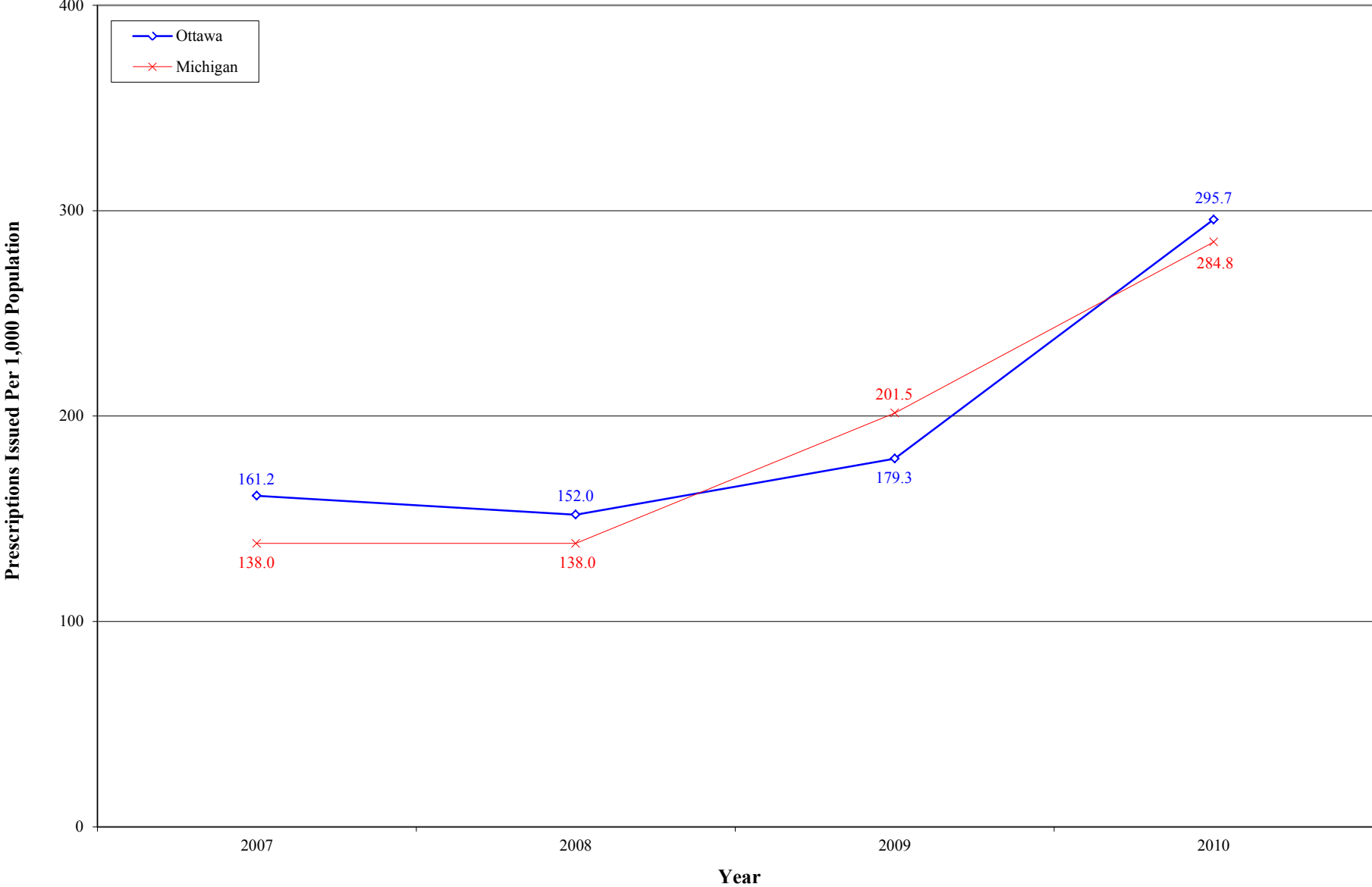
Fentanyl is used to treat episodes of extreme pain in cancer patients who are taking regularly scheduled doses of another narcotic analgesic pain medication

Hydromorphone is also used to decrease coughing

Methadone is used to prevent withdrawal symptoms in patients who are addicted to opiate drugs

Morphine is used when around-the-clock pain relief is needed for a long period of time

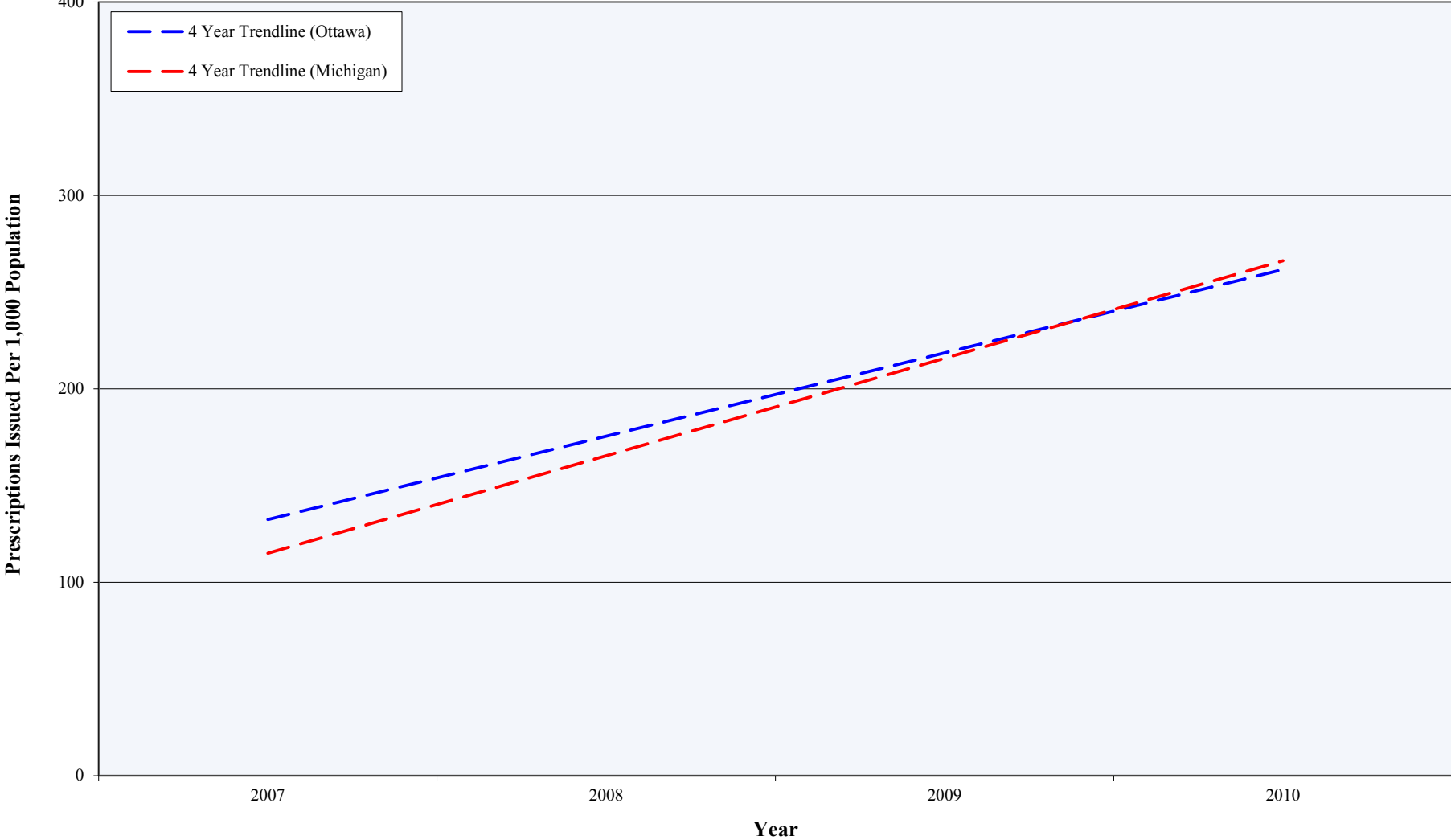
Central Nervous System Stimulants Prescribed (2007-2010)



Source: Michigan Automated Prescription System (MAPS), Bureau of Health Professions, Michigan Department of Community Health; U.S. Census Bureau Population Estimates

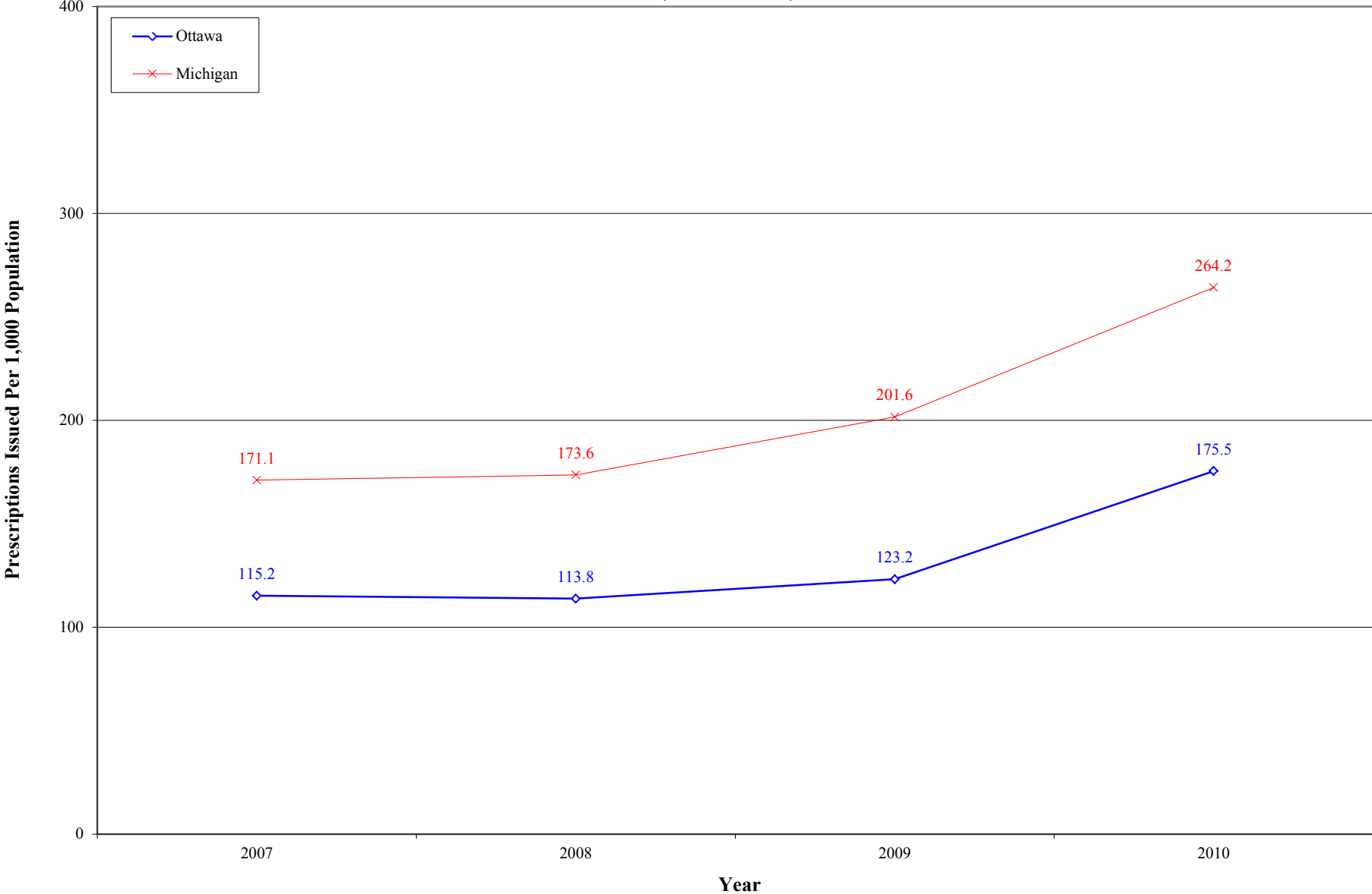
Central Nervous System Stimulants Prescribed

4 Year Trend



Source: Michigan Automated Prescription System (MAPS), Bureau of Health Professions, Michigan Department of Community Health; U.S. Census Bureau Population Estimates

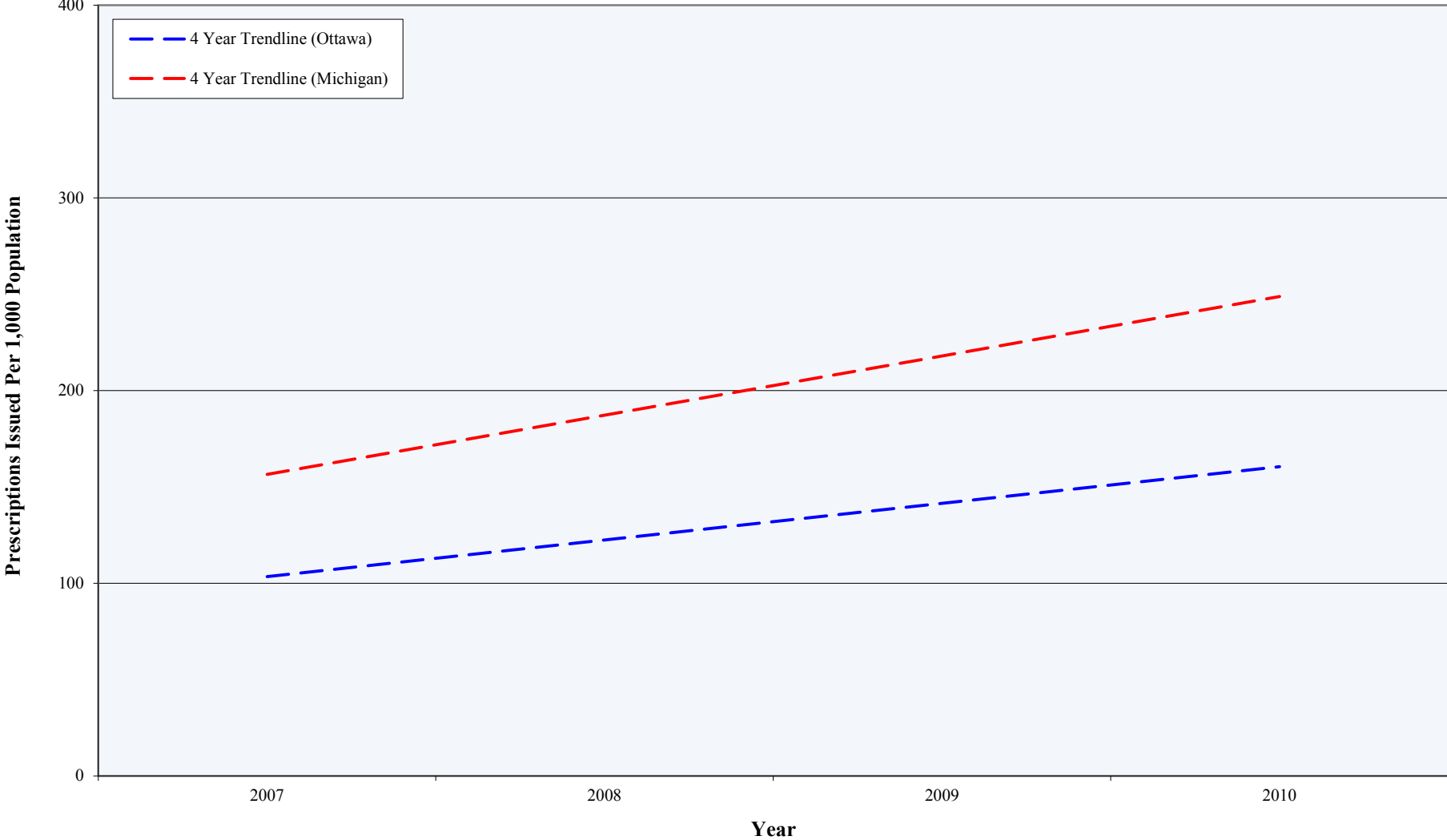
Narcotic Analgesics Prescribed (2007-2010)



Source: Michigan Automated Prescription System (MAPS), Bureau of Health Professions, Michigan Department of Community Health; U.S. Census Bureau Population Estimates

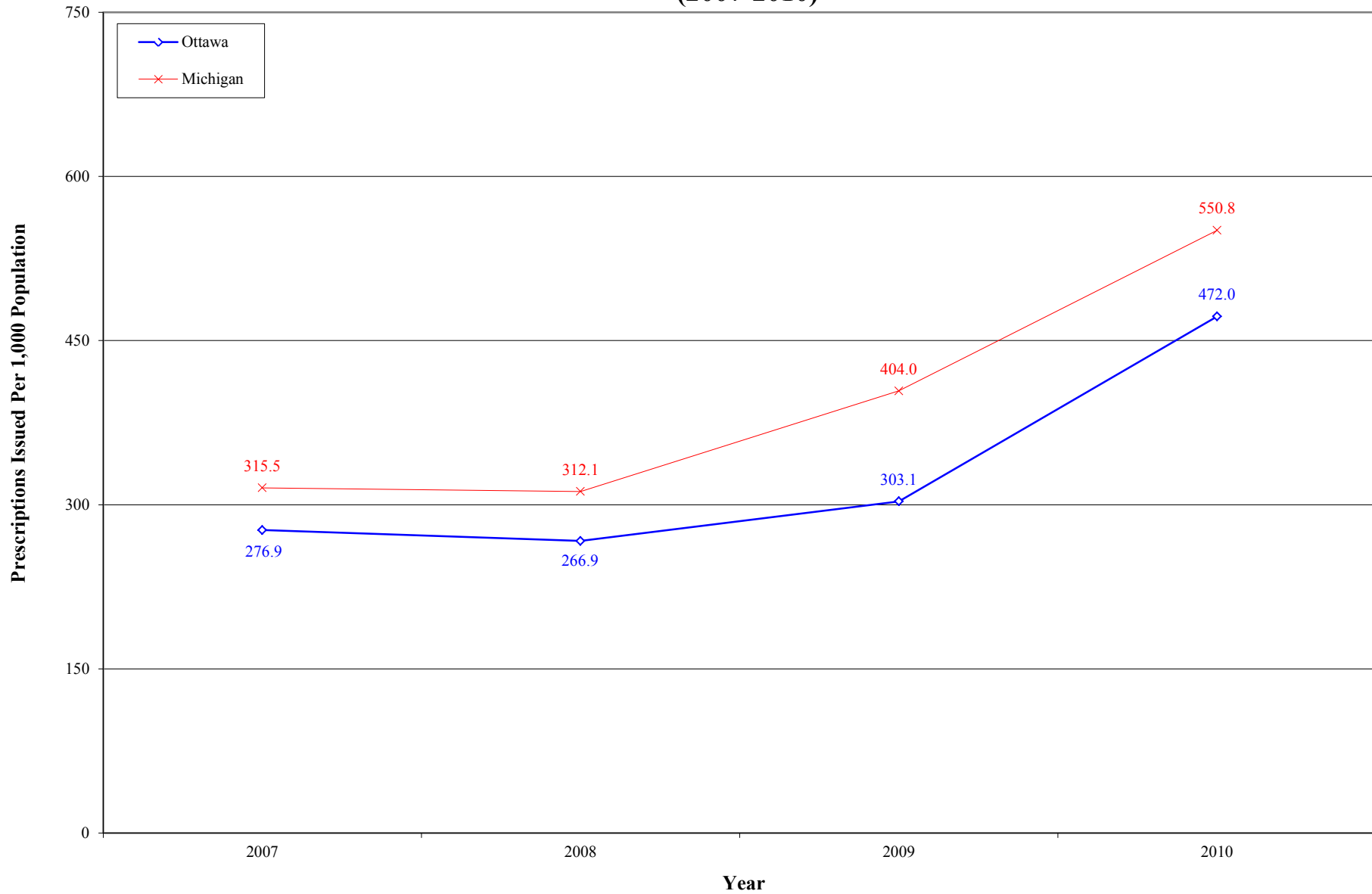
Narcotic Analgesics Prescribed

4 Year Trend



Source: Michigan Automated Prescription System (MAPS), Bureau of Health Professions, Michigan Department of Community Health; U.S. Census Bureau Population Estimates

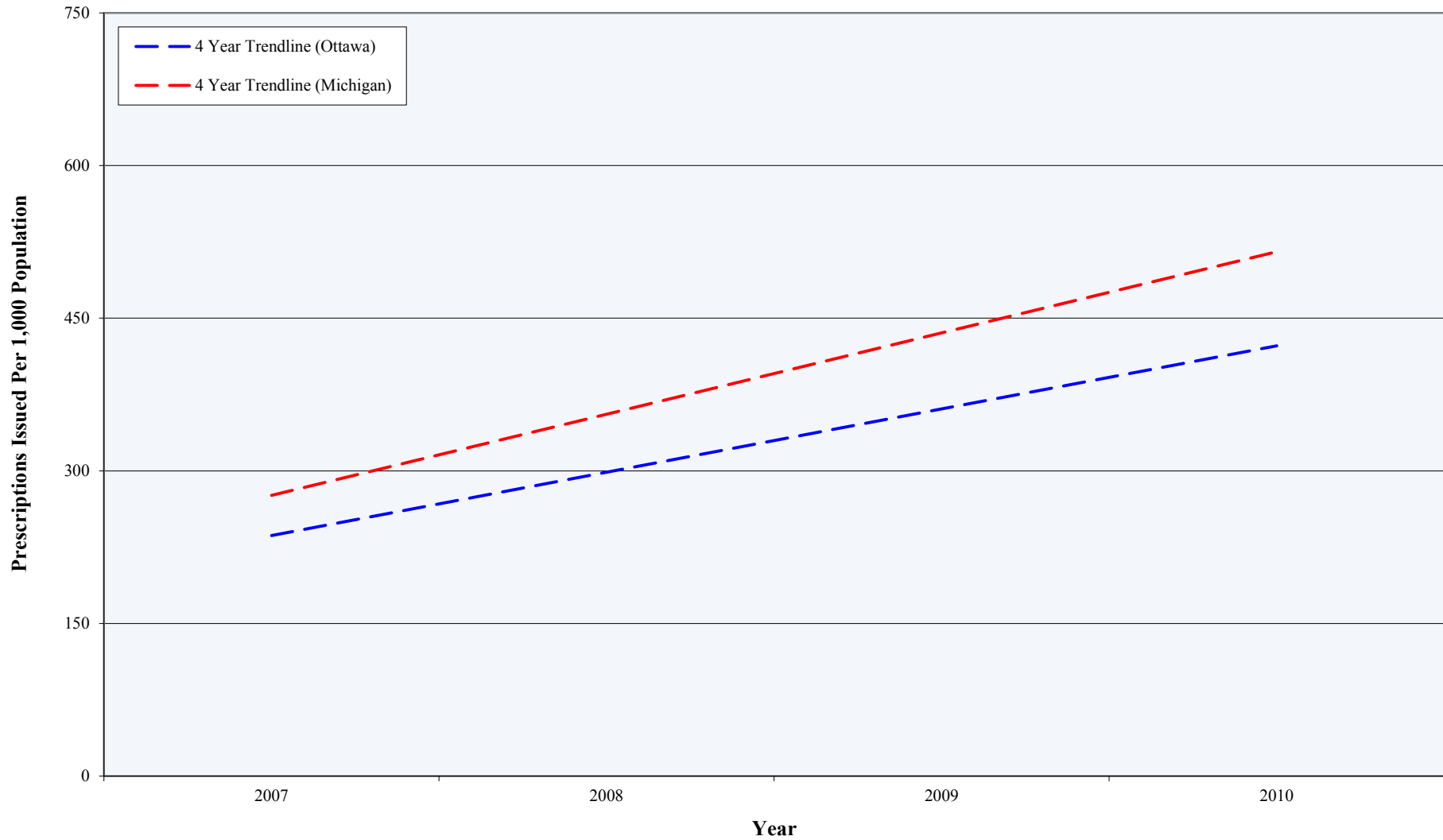
Total Schedule II Controlled Substances Prescribed (2007-2010)



Source: Michigan Automated Prescription System (MAPS), Bureau of Health Professions, Michigan Department of Community Health; U.S. Census Bureau Population Estimates

Total Schedule II Controlled Substances Prescribed

4 Year Trend



Source: Michigan Automated Prescription System (MAPS), Bureau of Health Professions, Michigan Department of Community Health; U.S. Census Bureau Population Estimates

Schedule III Controlled Substances (2007-2010)

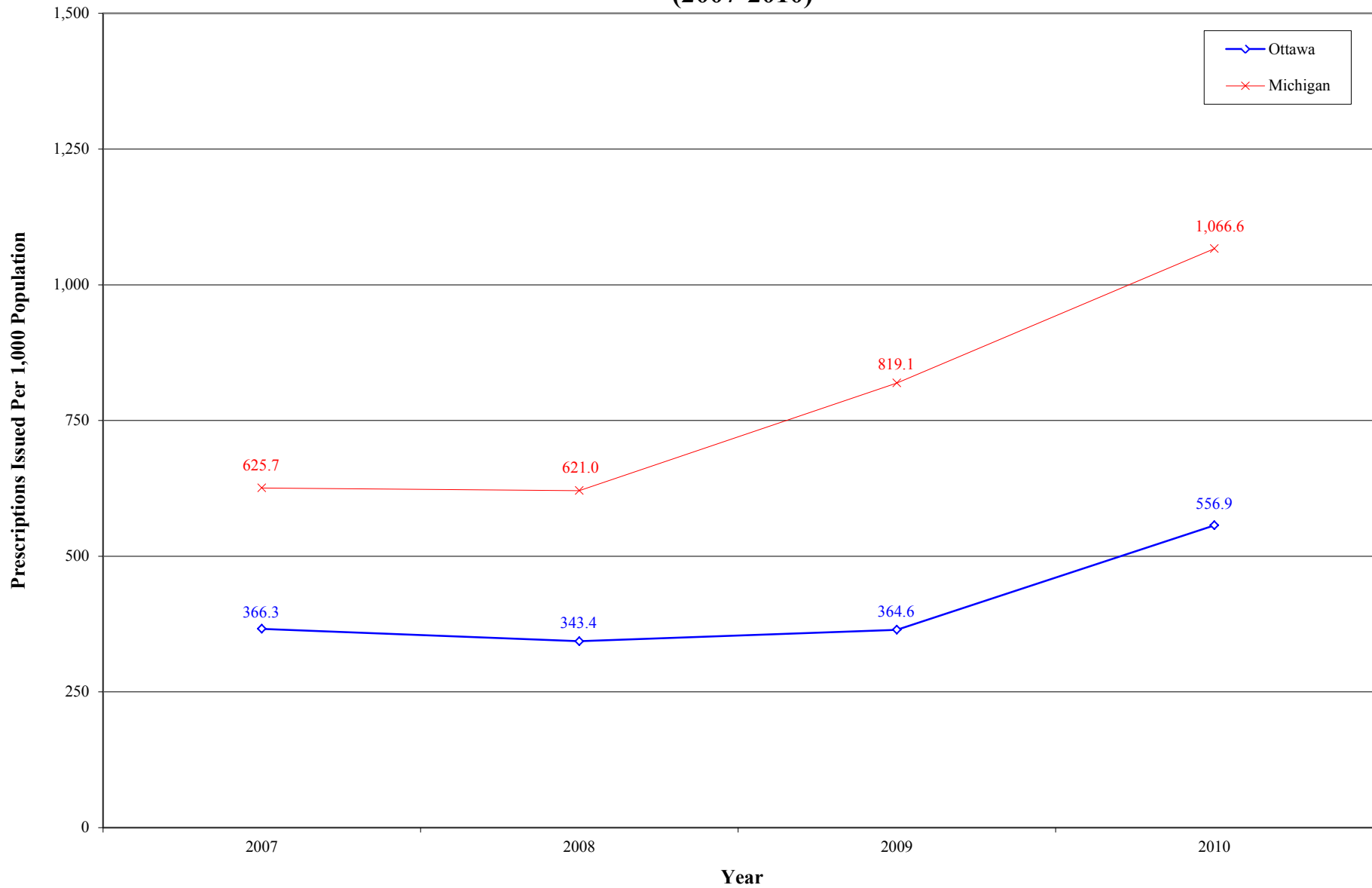
Prescriptions Issued by Year (Ottawa County, State)

| Controlled Substances* | Common Brand Name(s) | Prescriptions Issued Per 1,000 Population | | | | | | | |
|---|----------------------|---|--------------|--------------|--------------|--------------|--------------|--------------|----------------|
| | | Ottawa** | | | | Michigan | | | |
| | | 2007 | 2008 | 2009 | 2010 | 2007 | 2008 | 2009 | 2010 |
| Opioid Antagonists | | | | | | | | | |
| Buprenorphine/Naloxone*** | Subutex, Suboxone | 3.1 | 5.1 | 5.9 | 13.5 | 11.0 | 16.9 | 32.2 | 49.4 |
| Narcotic (Opiate) Painkillers/Antitussives | | | | | | | | | |
| Hydrocodone Combination*** | Vicodin, Norco | 300.5 | 288.5 | 308.1 | 465.8 | 497.7 | 500.8 | 655.8 | 860.6 |
| Opioid/Acetaminophen Combination | | | | | | | | | |
| Codeine Combination*** | Tylenol #3 | 32.8 | 29.2 | 29.5 | 41.0 | 77.1 | 67.9 | 88.5 | 105.8 |
| Barbiturates | | | | | | | | | |
| Butalbital Combination*** | Fiorinal | 3.7 | 3.5 | 3.1 | 4.2 | 3.9 | 3.5 | 4.8 | 5.6 |
| Cannabinoids | | | | | | | | | |
| Dronabinol*** | Marinol | 0.3 | 0.1 | 0.0 | 0.0 | 1.1 | 0.5 | 0.1 | 0.0 |
| All Other Schedule III Prescriptions | | 25.9 | 17.0 | 18.0 | 32.4 | 34.9 | 31.4 | 37.7 | 45.2 |
| Total Schedule III Controlled Substances | | 366.3 | 343.4 | 364.6 | 556.9 | 625.7 | 621.0 | 819.1 | 1,066.6 |

Source: Michigan Automated Prescription System (MAPS), Bureau of Health Professions, Michigan Department of Community Health; U.S. Census Bureau Population Estimates

- * The Controlled Substances Act (CSA) lists substances which were controlled in 1970 when the law was enacted. The drugs that are considered controlled substances under the CSA are divided into five schedules. Approximately 160 substances have been added, removed, or transferred from one schedule to another since 1970. A drug is placed in its respective schedule based on whether it has a currently accepted medical use in treatment in the United States, its relative abuse potential, and its likelihood of causing dependence. Substances in Schedule III have a potential for abuse, less than substances in Schedules I and II, and may lead to high psychological dependence or moderate or low physical dependence
- ** Ottawa County data reflects Schedule II controlled substances prescribed to people who live in a zip code that is entirely or partially within the County
- *** The Schedule III controlled substances are utilized for the following purposes:
Buprenorphine/Naloxone is used to prevent withdrawal symptoms in people who are addicted to opioid drugs
Hydrocodone is only available in combination with other ingredients, such as acetaminophen. Hydrocodone combination drugs can be used to relieve moderate to severe pain or to relieve coughs
Codeine Combination drugs are used to relieve mild to moderate pain
Butalbital Combination drugs are used to relieve tension headaches. They include a combination of acetaminophen, butalbital, and caffeine
Dronabinol is used to treat nausea and vomiting caused by chemotherapy. It is also used to treat loss of appetite and weight loss in people who have Acquired Immunodeficiency Syndrome (AIDS)

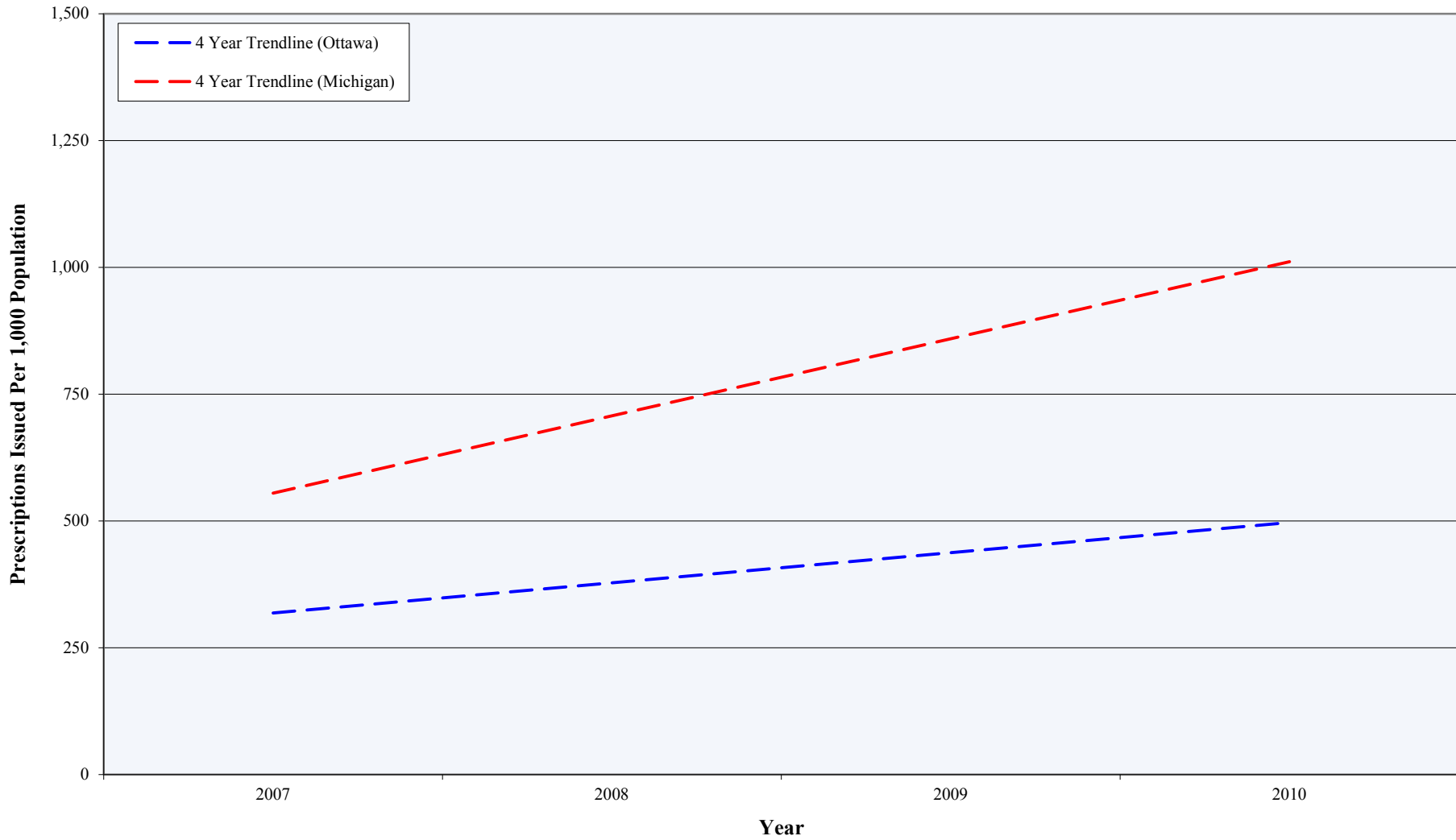
Total Schedule III Controlled Substances Prescribed (2007-2010)



Source: Michigan Automated Prescription System (MAPS), Bureau of Health Professions, Michigan Department of Community Health; U.S. Census Bureau Population Estimates

Total Schedule III Controlled Substances Prescribed

4 Year Trend



Source: Michigan Automated Prescription System (MAPS), Bureau of Health Professions, Michigan Department of Community Health; U.S. Census Bureau Population Estimates

Pediatric ADHD* (1997, 2008)

Prescription Rate By Year (Hospital Service Area, State)

| Hospital Service Area (HSA) | Population Using ADHD Medication** | | 2008 Rank*** (Highest to Lowest) |
|-----------------------------|------------------------------------|------|-------------------------------------|
| | 1997 | 2008 | |
| Allegan | 4.4% | 4.0% | 24 |
| Grand Haven | 4.9% | 5.0% | 6 |
| Grand Rapids | 4.3% | 4.3% | 17 |
| Holland | 2.9% | 3.7% | 39 |
| Muskegon | 4.0% | 5.4% | 4 |
| Zeeland | 2.9% | 3.1% | 68 |
| Michigan | 3.6% | 3.6% | n/a |

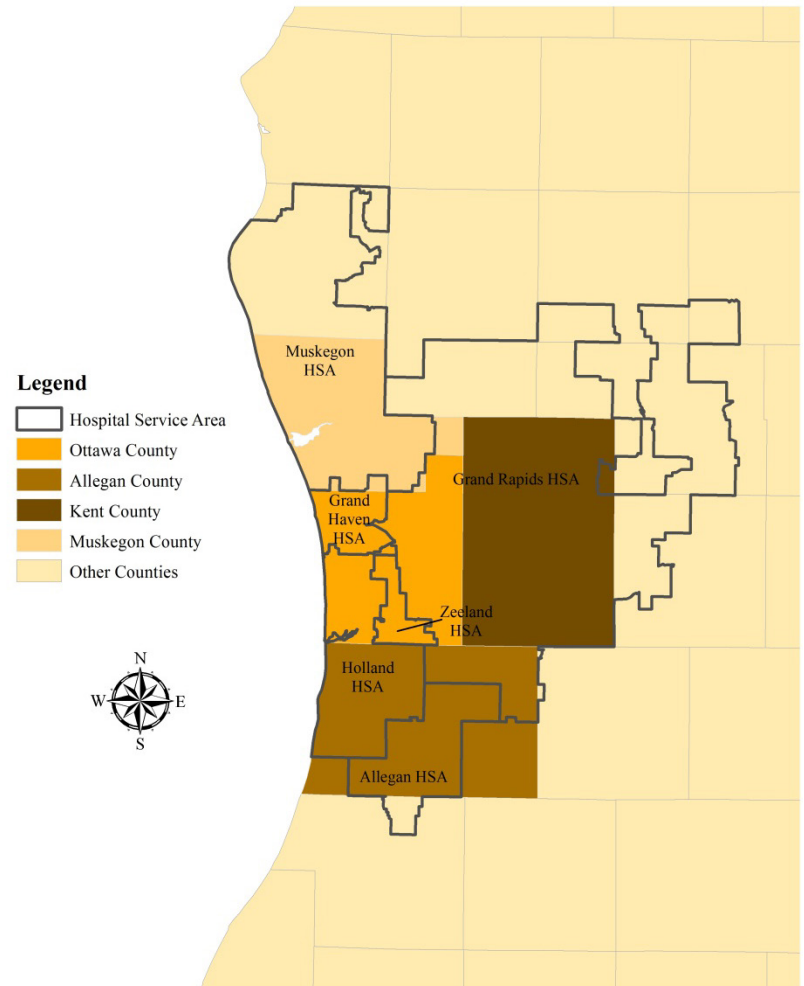
Source: Center for Healthcare Research & Transformation, Health Care Variation in Michigan

* Attention deficit hyperactivity disorder (ADHD) is a condition characterized by a persistent pattern of inattention or hyperactivity

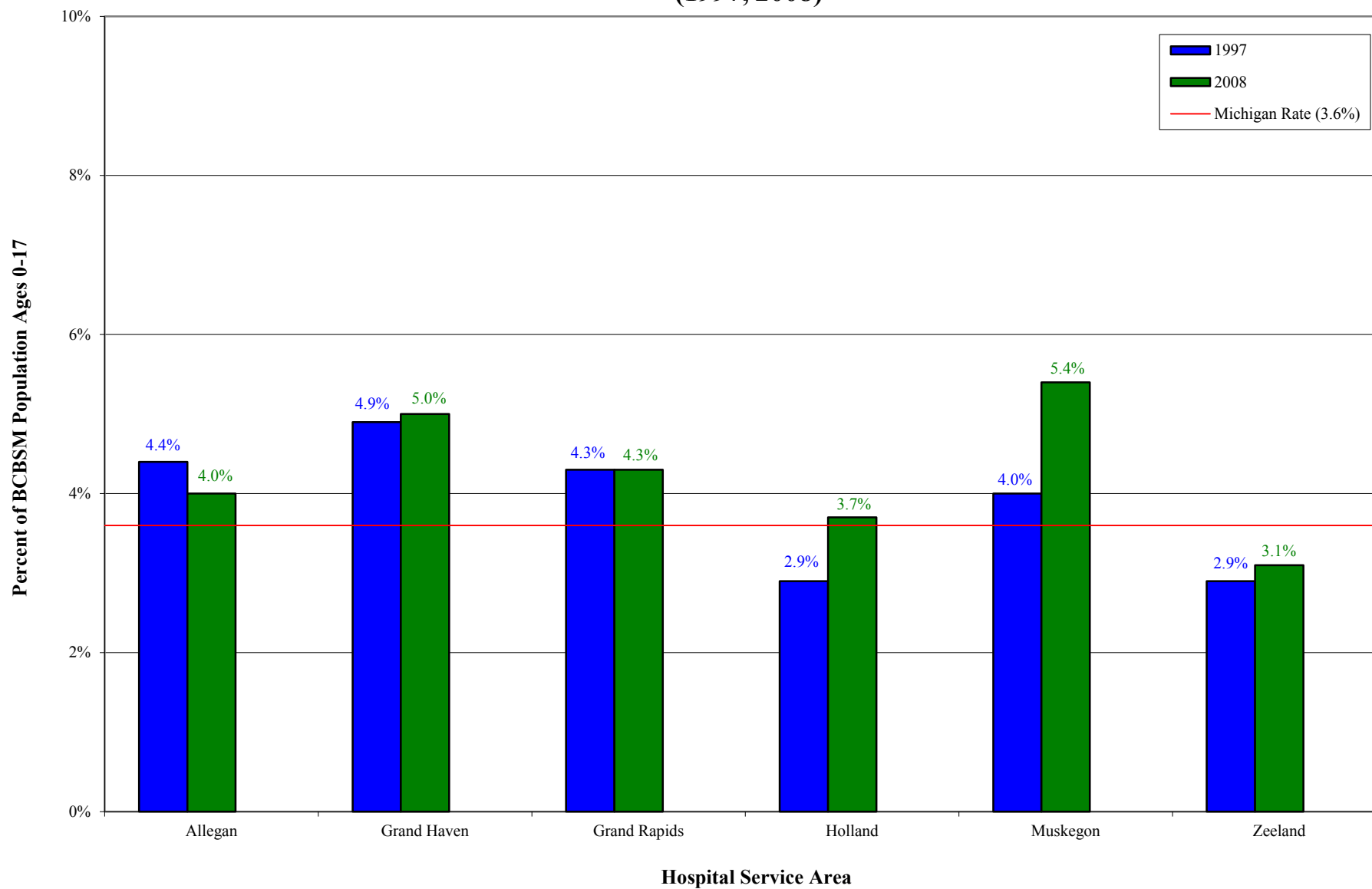
** Among the Blue Cross Blue Shield of Michigan (BCBSM) population ages 0-17

***Among 87 HSAs with 2008 data available. There were 22 HSAs excluded from the rank because their 2008 data was suppressed

Hospital Service Area Map



Population Using ADHD Medication (1997, 2008)



Source: Center for Healthcare Research & Transformation, Health Care Variation in Michigan