



OHIO AUTOMATED RX REPORTING SYSTEM

2016 ANNUAL REPORT

**Celebrating 10 Years of Improving Patient Care
2006 - 2016**



**STATE OF
OHIO**
BOARD OF PHARMACY

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Executive Director

www.pharmacy.ohio.gov



OHIO AUTOMATED RX REPORTING SYSTEM

What is OARRS?

To address the growing misuse and diversion of prescription drugs, the Ohio General Assembly adopted legislation in 2004 authorizing the State of Ohio Board of Pharmacy to create a Prescription Monitoring Program (PMP), known as the Ohio Automated Rx Reporting System (OARRS). Established in 2006, OARRS collects information on all outpatient prescriptions for controlled substances dispensed by Ohio-licensed pharmacies and personally furnished by Ohio prescribers. This data is reported every 24 hours and is maintained in a secure database. Drug wholesalers are also required to submit information monthly on all controlled substances sold to an Ohio licensed pharmacy or prescriber.

OARRS is a tool that can be used to address prescription drug diversion and abuse. It serves multiple functions as a patient care tool, an early warning system for drug epidemics, and an investigative tool for drug diversion and insurance fraud. As the only statewide electronic database that stores all controlled substance dispensing and personal furnishing information, OARRS helps prescribers and pharmacists avoid potentially life-threatening drug interactions as well as identify individuals fraudulently obtaining controlled substances from multiple health care providers, a practice commonly referred to as “doctor shopping.” It can also be used by professional licensing boards to identify or investigate clinicians with patterns of inappropriate prescribing and dispensing and to assist law enforcement in cases of controlled substance diversion.

To learn more about OARRS, please visit: www.pharmacy.ohio.gov.

Submission of this Report

Pursuant to section 4729.85 of the Revised Code, the State of Ohio Board of Pharmacy respectfully submits the following report on opioid pain relievers and other controlled substances dispensed by Ohio pharmacies or personally furnished by prescribers. This report will be disseminated to the Governor, the President of the Senate, the Speaker of the House of Representatives, the Attorney General, the chairpersons of the standing committees of the House of Representatives and the Senate that are primarily responsible for considering health and human services issues, the Department of Public Safety, the State Dental Board, the Board of Nursing, the State Board of Optometry, the State Medical Board, and the State Veterinary Medical Licensing Board.

Dear Governor Kasich and Members of the Ohio General Assembly,

I am pleased to provide the 2016 Ohio Automated Rx Reporting System (OARRS) Annual Report. This report highlights the progress Ohio is making towards reducing the supply and diversion of opioids and other controlled substances. Highlights from the report include:

- The total doses of opioids dispensed to Ohio patients decreased by 162 million doses (or 20.4 percent) from 2012 to 2016.
- The total number of opioid prescriptions issued to Ohio patients decreased by 2.5 million (or 20 percent) between 2012 and 2016.
- The total doses of benzodiazepines dispensed to Ohio patients decreased by 43 million doses (or 14.5 percent) from 2012 to 2016.
- A 78.2 percent decrease in the number of individuals who see multiple prescribers to obtain controlled substances illicitly (commonly referred to as “doctor shopping”) between 2012 and 2016.

This year also saw the first full year of Ohio’s OARRS integration initiative. Announced by Governor Kasich in October 2015, the state has committed up to \$1.5 million a year to integrate OARRS directly into electronic medical records and pharmacy dispensing systems across the state, allowing instant access for prescribers and pharmacists. Since that announcement, the Board has made significant headway in integrating OARRS in 2016. Some highlights include:

- Mount Carmel Health System became the first major health system to integrate their electronic health records with OARRS under Ohio’s integration initiative. Integration allows instant access to OARRS for more than 2,300 prescribers and pharmacists in the Mt. Carmel Health System.
- 79 Independent pharmacies and 12 prescriber sites throughout Ohio are now integrated with OARRS.
- In December 2016, Discount Drug Mart completed integration with OARRS in its 73 Ohio stores.

As we look ahead to 2017, the Board will continue its integration efforts as well as its commitment to develop new and innovative features within OARRS to improve patient care. One such feature includes a proactive notification function that will alert prescribers of patients who meet certain risk criteria. Further, the Board plans to implement an OARRS training website for higher education and residency programs to simulate the use of the system for future prescribers and pharmacists.

Lastly, 2016 marks a special 10-year milestone for OARRS. In recognition of this achievement and all the important progress made over the years, this report includes a section that provides some of the major accomplishments of OARRS between 2006 and 2016.

On behalf of the State of Ohio Board of Pharmacy, I thank you for your leadership and commitment to preventing the abuse and diversion of controlled substances.

If you have any questions regarding the work of the Board, please do not hesitate to contact my office by phone (614-466-4143) or by e-mail: contact@pharmacy.ohio.gov.

Sincerely,



Steven W. Schierholt, Esq.
Executive Director
State of Ohio Board of Pharmacy

Section 1: Opioids Dispensed to Ohio Patients

In 2016, the number of opioid doses (i.e. number of pills) and prescriptions dispensed to Ohio patients continued to decrease. Total doses of opioids decreased from a high of 793 million in 2012 to 631 million in 2016, a 20.4 percent decrease (Chart #1). The total number of opioid prescriptions decreased by 2.5 million between 2012 and 2016, a 20 percent decrease (Chart #2).

Chart #1 - Opioid Solid Doses Dispensed to Ohio Patients, by Year

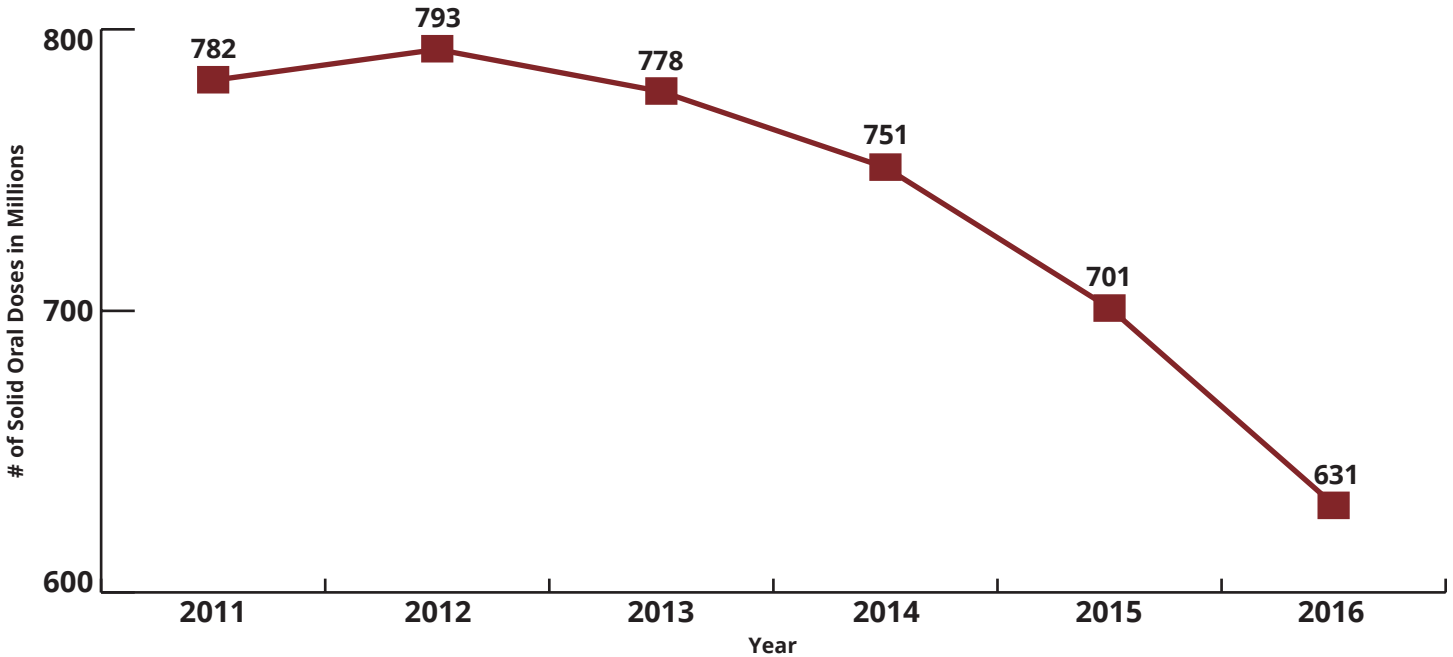
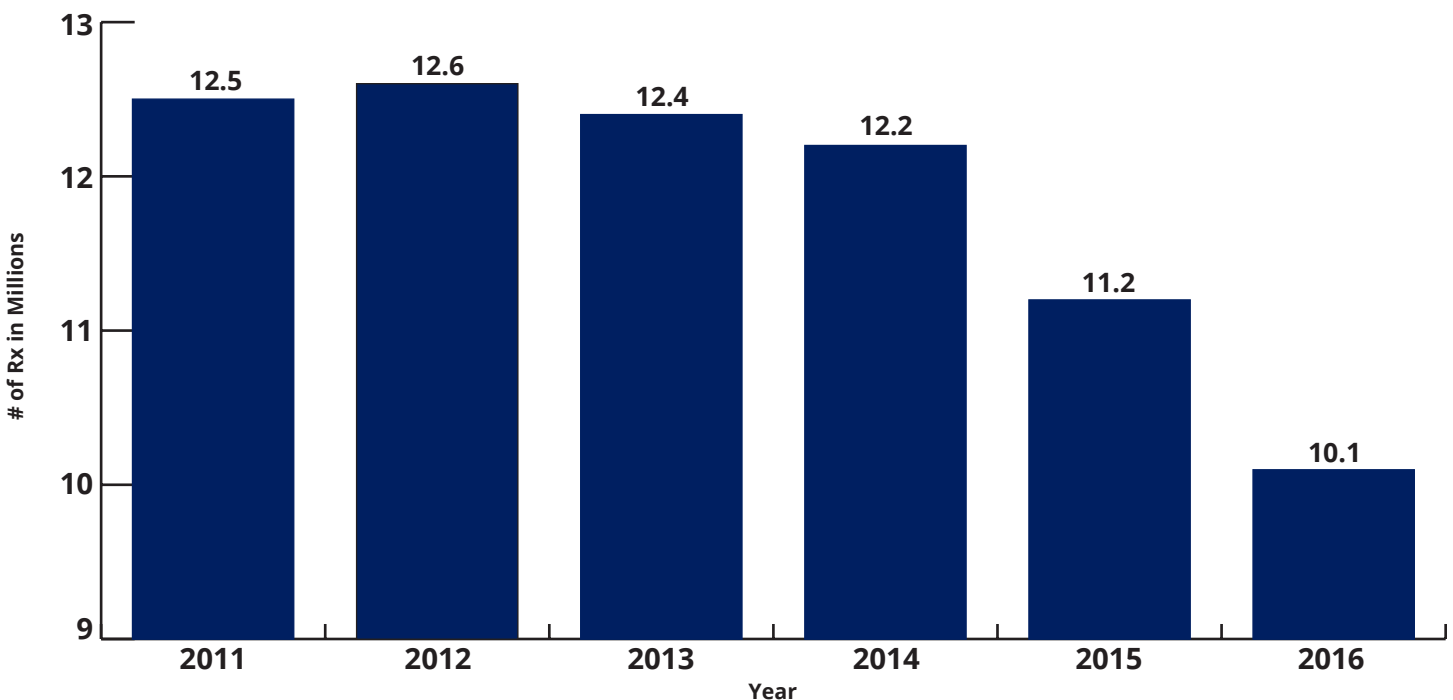


Chart #2 - Opioid Prescriptions Dispensed to Ohio Patients, by Year



Pursuant to section 4729.85 of the Revised Code, the Board is required to report opioid prescriptions dispensed by pharmacies to Ohio patients (See Table #1), including all of the following information:

- The number of prescribers who issued prescriptions for opioid pain relievers;
- The number of patients to whom opioid pain relievers were dispensed;
- The average quantity of opioid pain relievers dispensed per prescription;
- The average daily morphine equivalent dose (MED) of the opioid pain relievers dispensed per prescription.

Table #1. Opioids* Dispensed to Ohio Patients, by Year

Year	No. of Prescribers	No. of Patients	Average Quantity per Prescription	Average Daily MED per Prescription
2010	55,895	2,733,066	64.37	53.35
2011	66,554	2,761,707	64.55	48.58
2012	66,649	3,053,090	65.38	47.89
2013	65,452	2,686,169	65.20	46.66
2014	63,178	2,650,078	64.15	45.34
2015	57,673	2,615,768	64.59	44.92
2016	56,287	2,359,175	65.48	44.43

*Buprenorphine used to treat opioid dependence or addiction is excluded.

WHAT IS A MORPHINE EQUIVALENT DOSE?

A morphine equivalent dose (MED) is the amount of opioid prescription drugs, converted to a common unit (milligrams of morphine), that a patient currently has access to based on the information reported by prescribers and pharmacies to OARRS. Morphine is widely regarded as the “standard” for the treatment of moderate to severe pain and is commonly used as the reference point. As MED increases, the likelihood of an adverse event increases, therefore identifying at-risk patients is a crucial first step towards improving patient safety. OARRS utilizes opioid conversion factors created by the US Centers for Disease Control and Prevention (CDC).

The **Ohio Guidelines for Prescribing Opioids for the Treatment of Chronic, Non-Terminal Pain** use an 80 mg morphine equivalent dose (MED) as a “trigger threshold,” as the odds of an overdose are higher above that dose. The guidelines are intended to help health care providers review and assess their approach in the prescribing of opioids. The guidelines are points of reference intended to supplement and not replace the individual prescriber’s clinical judgment. The 80 mg MED is the maximum daily dose at which point the prescriber’s actions are triggered; however, the 80 mg MED trigger point is not an endorsement by any regulatory body or medical professional to utilize that dose or greater.

The State of Ohio, through the Governor’s Cabinet Opiate Action Team, has developed a number of prescribing guidelines to assist health care professionals in making safe choices for their patients. For more information on these guidelines, please visit:

www.opioidprescribing.ohio.gov.

Section 2: Opioids Personally Furnished by Ohio Prescribers

Pursuant to section 4729.85 of the Revised Code, the Board is required to report on the number of opioid pain relievers that have been personally furnished to a patient by an Ohio prescriber (See Table #2), including all of the following information:

- The number of prescribers who personally furnished opioid pain relievers;
- The number of patients to whom the opioid pain relievers were personally furnished;
- The average quantity of the opioid pain relievers that were furnished at one time;
- The average daily morphine equivalent dose (MED) of the opioid pain relievers that were furnished at one time.

Table #2. Opioids* Personally Furnished by Ohio Prescribers, by Year

Year	No. of Prescribers	No. of Patients	Average Quantity Per Instance	Average Daily MED per Instance
2010**	13	1,394	306.46	114.04
2011**	93	735	69.70	35.32
2012	198	2,215	15.02	19.92
2013	180	2,761	9.15	17.95
2014	192	2,085	10.11	19.64
2015	235	1,877	17.41	31.20
2016	113	1,465	28.26	29.29

*Buprenorphine used to treat opioid dependence or addiction is excluded.

**Mandatory reporting to OARRS by prescribers who personally furnish controlled substances went into effect on May 20, 2011.

WHAT IS THE DIFFERENCE BETWEEN DISPENSING AND PERSONALLY FURNISHING?

Dispensing is defined by law as the distribution of drugs by a pharmacist pursuant to a valid prescription from a prescriber. Personally furnishing is defined as the distribution of drugs by a prescriber to the prescriber's patients for use outside the prescriber's practice setting. Except in a limited number of circumstances, prescribers are not permitted to personally furnish a controlled substance in excess of a seventy-two-hour supply (ORC 4729.291 - Effective May 20, 2011).

Ohio prescribers who personally furnish controlled substances from their offices are required to report those medications to OARRS within 24 hours (ORC 4729.79 & OAC 4729-37-07). This also includes any samples.

Section 3: Benzodiazepines Dispensed to Ohio Patients

In 2016, the number of benzodiazepine doses and prescriptions dispensed to Ohio patients continued to decrease. Total doses of benzodiazepines decreased from a high of 297 million in 2012 to 254 million in 2016, a 14.5 percent decrease (Chart #3). The total number of benzodiazepine prescriptions decreased by 580,000 between 2012 and 2016, an 11.9 percent decrease (Chart #4).

Chart #3 - Benzodiazepine Solid Doses Dispensed to Ohio Patients, by Year

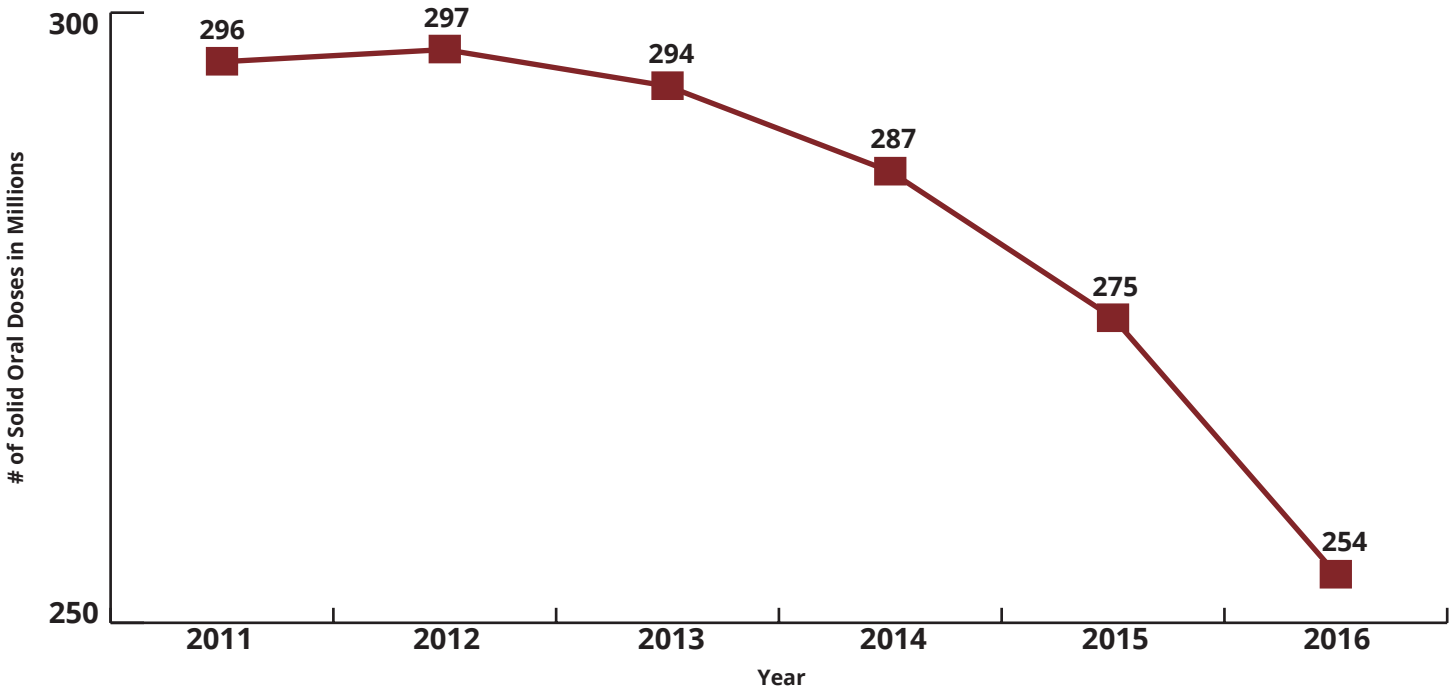
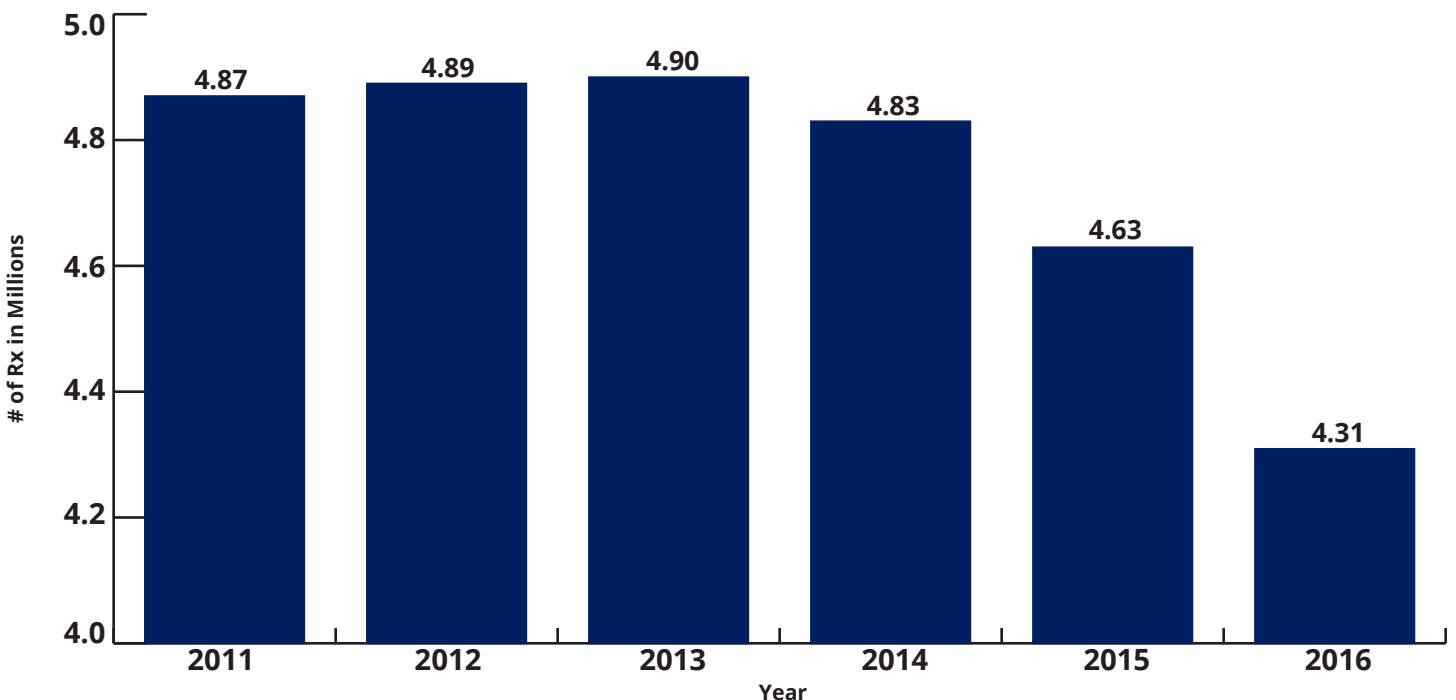


Chart #4 - Benzodiazepine Prescriptions Dispensed to Ohio Patients, by Year



Section 4: OARRS Usage and Doctor Shoppers

The number of queries in OARRS has increased from 1.78 million in 2011 to 24.11 million in 2016, an increase of more than 1,250 percent (see Chart #5). Conversely, the number of individuals who see multiple prescribers in order to procure controlled substances illicitly (commonly referred to as “doctor shopping”) continues to decrease (see Chart #6).

Chart #5 - OARRS Queries, by Year

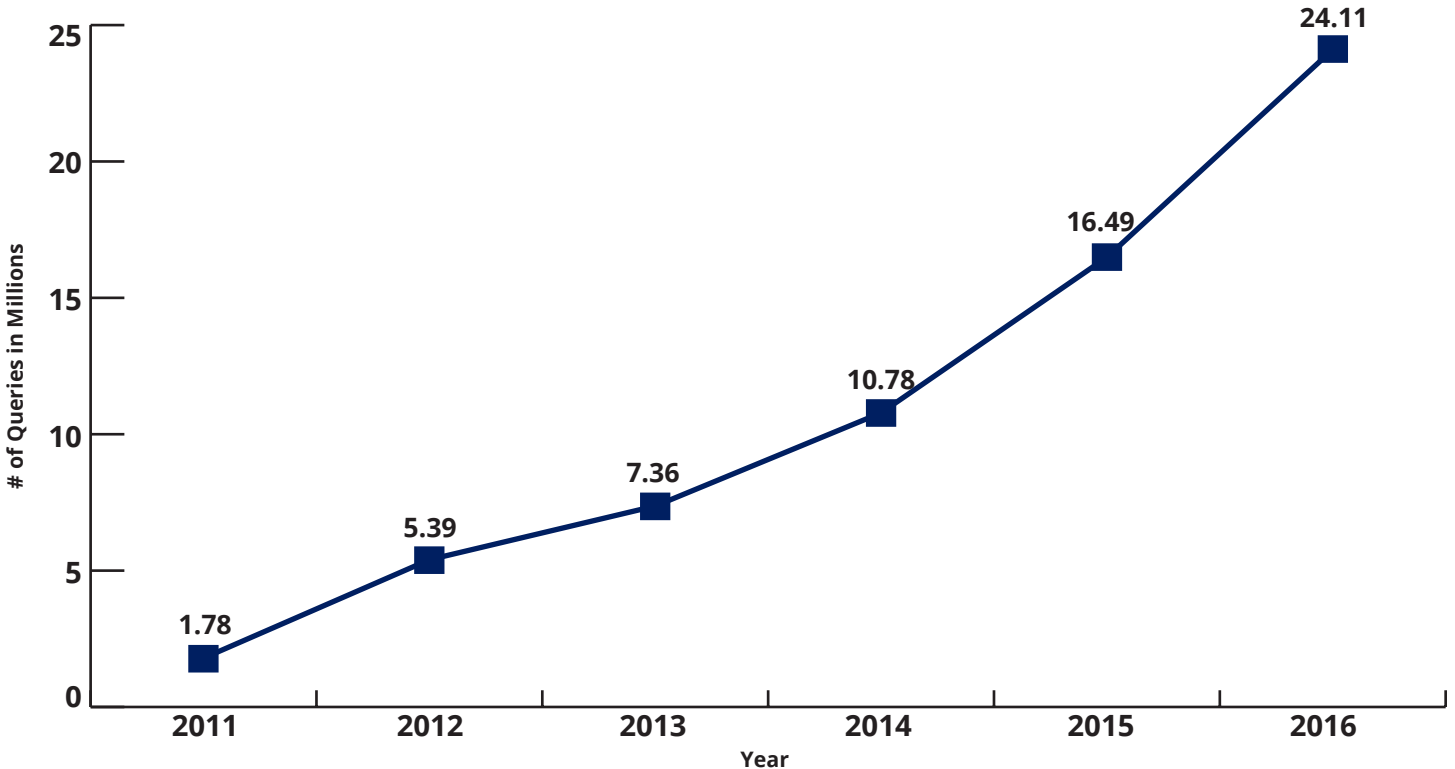
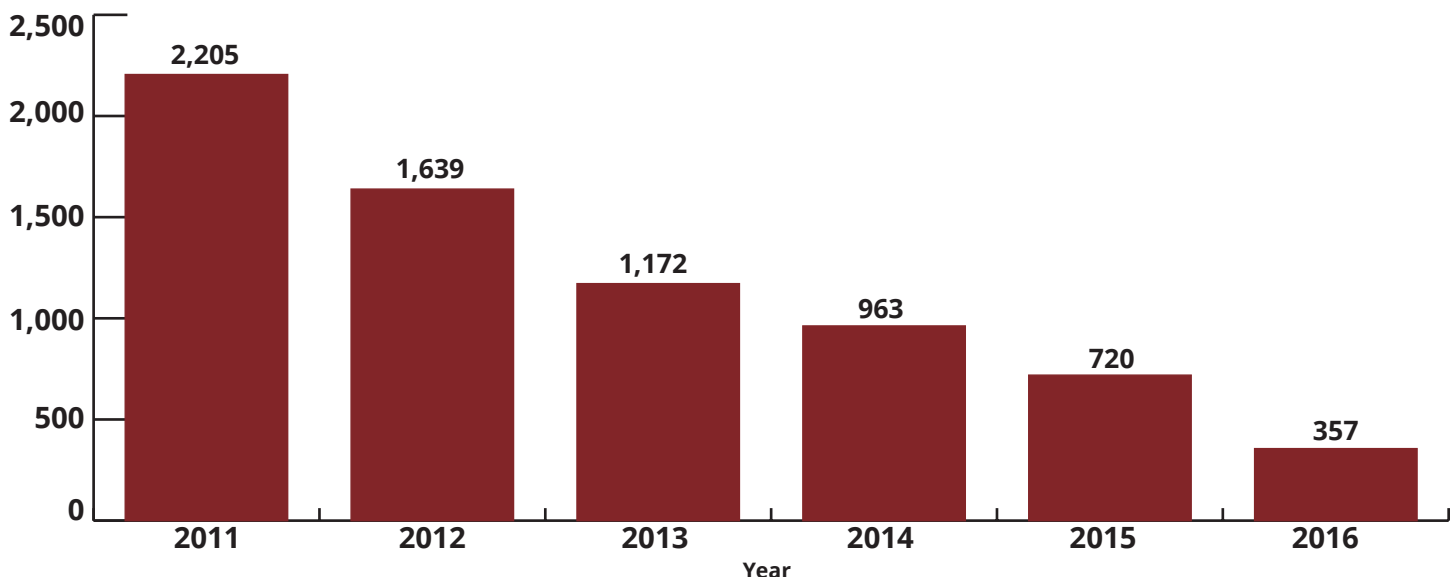


Chart #6 - Total Doctor Shoppers*, by Year



*In this chart, a doctor shopper is defined as an individual receiving a prescription for a controlled substance from five or more prescribers in one calendar month.

The average number of weekday OARRS report requests increased from 64,042 in January 2016 to 110,733 in December 2016, an increase of 73 percent (see Table #3).

Table #3 - Average Weekday OARRS Report Requests in 2016, by Month

Month	Average Weekday OARRS Report Requests
January	64,042
February	79,171
March	76,159
April	73,291
May	76,420
June	77,042
July	83,064
August	82,130
September	83,544
October	95,830
November	106,031
December	110,733

WHEN ARE HEALTH CARE PROVIDERS REQUIRED TO REQUEST A PATIENT'S OARRS REPORT?

For Prescribers:

With limited exceptions, Ohio law requires a prescriber to check OARRS before initially prescribing or personally furnishing an opioid analgesic or a benzodiazepine to a patient. The prescriber must also make periodic requests for patient information from OARRS if treatment with an opioid or benzodiazepine continues for more than 90 days. The requests must be made at intervals not exceeding ninety days, determined according to the date the initial request was made.

Ohio's health care regulatory boards have also adopted the following regulations on when an OARRS report must be requested:

- Medical Board Rules 4731-11-11, 4731-11-12, 4731-11-04 & 4730-2-10
- Nursing Board Rule 4723-9-12
- Dental Board Rule 4715-6-01

For Pharmacists:

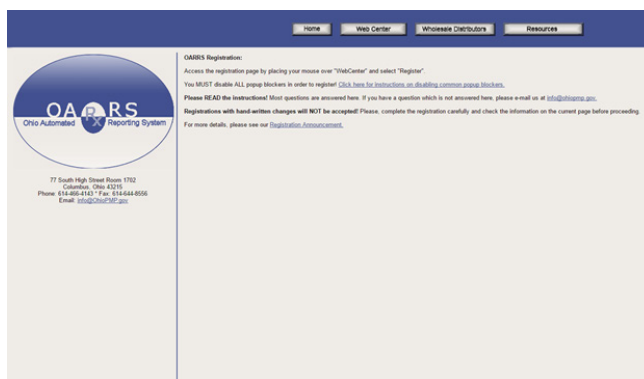
Prior to dispensing an outpatient prescription for a controlled substance, rule 4729-5-20 of the Ohio Administrative Code requires a pharmacist to request and review an OARRS report covering at least a one year period in any of the following circumstances:

1. A patient adds a different or new controlled substance to their therapy that was not previously included.
2. An OARRS report has not been reviewed for that patient during the preceding 12 months.
3. A prescriber or patient is outside the usual pharmacy geographic area.
4. A pharmacist has reason to believe the patient has received prescriptions for controlled substances from more than one prescriber in the preceding three months.
5. A patient is exhibiting signs of potential abuse or diversion.

For more information on the requirements for checking OARRS, visit: www.pharmacy.ohio.gov/check

Celebrating 10 Years of Improving Patient Care 2006 - 2016

OCT. 2006 – OARRS begins operation.



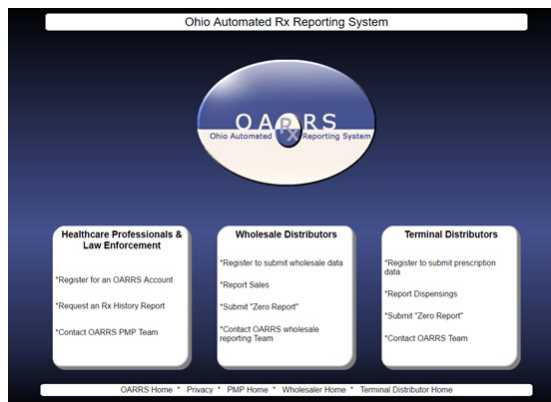
Original OARRS website design.

JUN. 2007 – OARRS staff begin development of interstate data sharing framework.

These efforts eventually lead to the development of PMP Gateway, allowing OARRS to share data with prescription monitoring programs throughout the country.

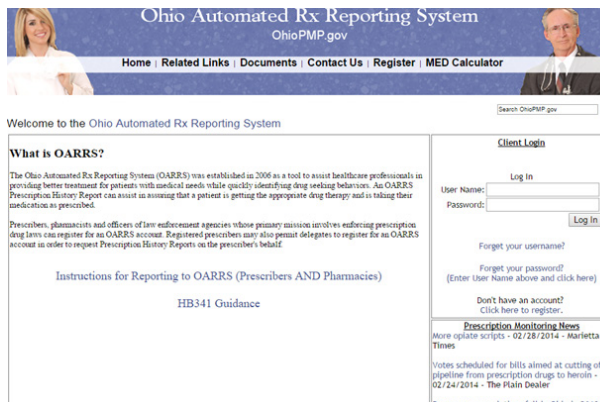


2007 OARRS website design.



2008-2009 OARRS website design.

SEP. 2009 – Pharmacies are required to report dispensing information weekly.



2010-2014 OARRS website design.

JUN. 2011 – HB 93 (Burke & Johnson) signed into law.

This legislation made the following changes relating to OARRS:

- Requires health care licensing boards to adopt rules requiring use of OARRS.
- Allows pharmacists and prescribers to have delegates to query OARRS on their behalf.
- Allows access to OARRS by the Ohio Department of Medicaid and the Ohio Bureau of Workers' Compensation.
- Allows for interstate data sharing between OARRS and other prescription monitoring programs.

JUL. 2011 – First NARxCHECK site goes live in Ohio.

AUG. 2011 – OARRS connects with Indiana’s prescription monitoring program, allowing OARRS users to obtain information on Indiana patients. This marks the the first successful interstate exchange of live prescription monitoring program data in the country.



OCT. 2011 – Board of Pharmacy adopts rules requiring the use of OARRS by pharmacists.

DEC. 2011 – Medical Board adopts rules requiring the use of OARRS by physicians and physician assistants.

JAN. 2012 – OARRS connects with Michigan’s prescription monitoring program, allowing OARRS users to obtain information on Michigan patients.

AUG. 2013 – OARRS connects with Kentucky’s prescription monitoring program, allowing OARRS users to obtain information on Kentucky patients.

SEP. 2013 – Access to OARRS is expanded for medical directors of Ohio Medicaid managed care plans.

OCT. 2013 – New features added to OARRS to support the release of Ohio’s Opioid Prescribing Guidelines for Chronic Pain.

To assist with the implementation of the Ohio Guidelines for Prescribing Opioids for the Treatment of Chronic, Non-Terminal Pain, the Board of Pharmacy made the following improvements to OARRS:

- Adding an “Active Cumulative Morphine Equivalent” (ACME) score, which helps prescribers easily recognize the amount of opioid prescription drugs, converted to a common unit, to which the patient currently has access based on their prescription history.
- Adding a morphine equivalence table and a daily MED calculator to show prescribers how the active cumulative morphine equivalent score is calculated.
- Including links to Ohio’s opioid prescribing guidelines in each patient report.



Example of an ACME score on an OARRS report.

JAN. 2014 – OARRS adds a new feature, the Practice Insight Report, to allow prescribers to review their prescribing history.

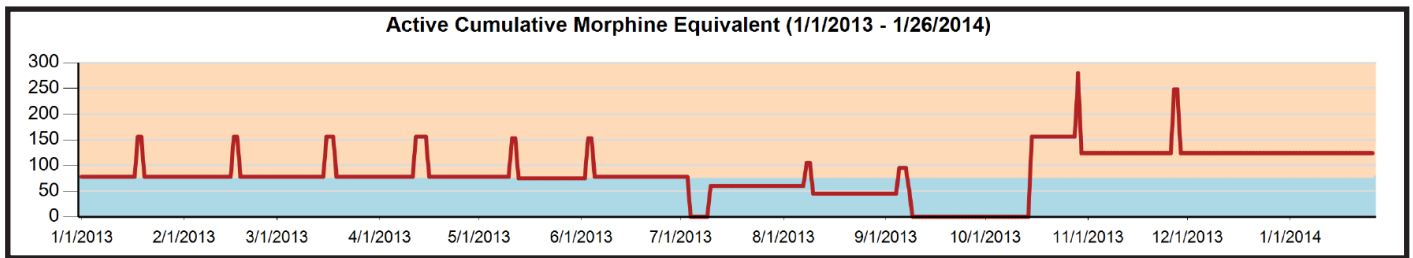
APR. 2014 – OARRS connects with West Virginia’s prescription monitoring program, allowing OARRS users to obtain information on West Virginia patients.

WV Board of Pharmacy
Controlled Substance
Monitoring Program



MAY 2014 – Board of Pharmacy adopts rule requiring daily reporting of dispensing data to OARRS.

AUG. 2014 – New graph feature added to OARRS report that provides health care providers a visualization of a patient’s previous opioid usage.



Example of an ACME graph on an OARRS report.

SEP. 2014 – Prescribers treating opioid dependent newborns permitted to review the mother’s OARRS report.

SEP. 2014 – OARRS expands access to medical directors of Ohio Bureau of Workers’ Compensation managed care plans.

JAN. 2015 – As part of HB 341 (Smith, R.), prescribers of opioids or benzodiazepines as well as practicing Ohio pharmacists are required to obtain access to OARRS.

MAR. 2015 – Board of Pharmacy begins to link data from OARRS to overdose death data provided by the Ohio Department of Health to identify prescribers linked to drug overdose decedents. The Board works closely with prescriber regulatory boards to conduct joint investigations of prescribers for violations of criminal and administrative law.

APR. 2015 – As part of HB 341 (Smith, R.), mandatory checks of OARRS are required prior to prescribing opioids or benzodiazepines.

APR. 2015 – Veterans Health Administration begins reporting patient information daily to OARRS.

AUG. 2015 – Kroger Co. integrates OARRS into their pharmacy computer platform, providing an instant check prior to a patient receiving any controlled substance prescription at their 226 Ohio stores.

SEP. 2015 – Redesigned OARRS website and new training materials for health care professionals released.



Current OARRS website design.

OCT. 2015 – Governor Kasich announces \$1.5 million annual investment to allow for direct integration of OARRS into electronic medical records and pharmacy dispensing systems.



Governor John R. Kasich and Board of Pharmacy Executive Director Steven Schierholt at the announcement of Ohio's OARRS integration initiative.

FEB. 2016 – Board of Pharmacy issues updated rules requiring increased use of OARRS by pharmacists prior to dispensing controlled substance medications.

In addition to the updated rules, the Board released new education materials designed to assist pharmacists in talking with patients in situations where they may need to refuse to fill a prescription. For more information, visit: www.pharmacy.ohio.gov/OARRSrules.



Example of pharmacist educational materials.

SEP. 2016 – Board of Pharmacy begins monthly referrals to Ohio health care licensing boards of clinicians who may have violated Ohio law by prescribing opioids and benzodiazepines and failing to check OARRS.

OCT. 2016 – Board of Pharmacy receives \$400,000, two-year federal grant from the U.S. Department of Justice to hire two additional agents to review data in OARRS and initiate criminal and/or administrative investigations against prescribers.

NOV. 2016 – Mount Carmel Health System becomes the first major health system to integrate their electronic health records with OARRS under Ohio's new integration initiative.

DEC. 2016 – OARRS begins collecting data on the dispensing of a non-controlled prescription drug, gabapentin.

In December 2016, Ohio pharmacies dispensed 29,618,930 doses of gabapentin to Ohio patients. Gabapentin was the most dispensed drug collected in OARRS in December, exceeding the second most collected drug, oxycodone, by more than 9 million doses.



The State of Ohio Board of Pharmacy is committed to protecting the health and safety of all Ohioans by preventing, detecting and investigating the illegal distribution or abuse of dangerous drugs and regulating the practice of pharmacy. Should you need any assistance or additional information, please do not hesitate to contact the Board.

State of Ohio Board of Pharmacy
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