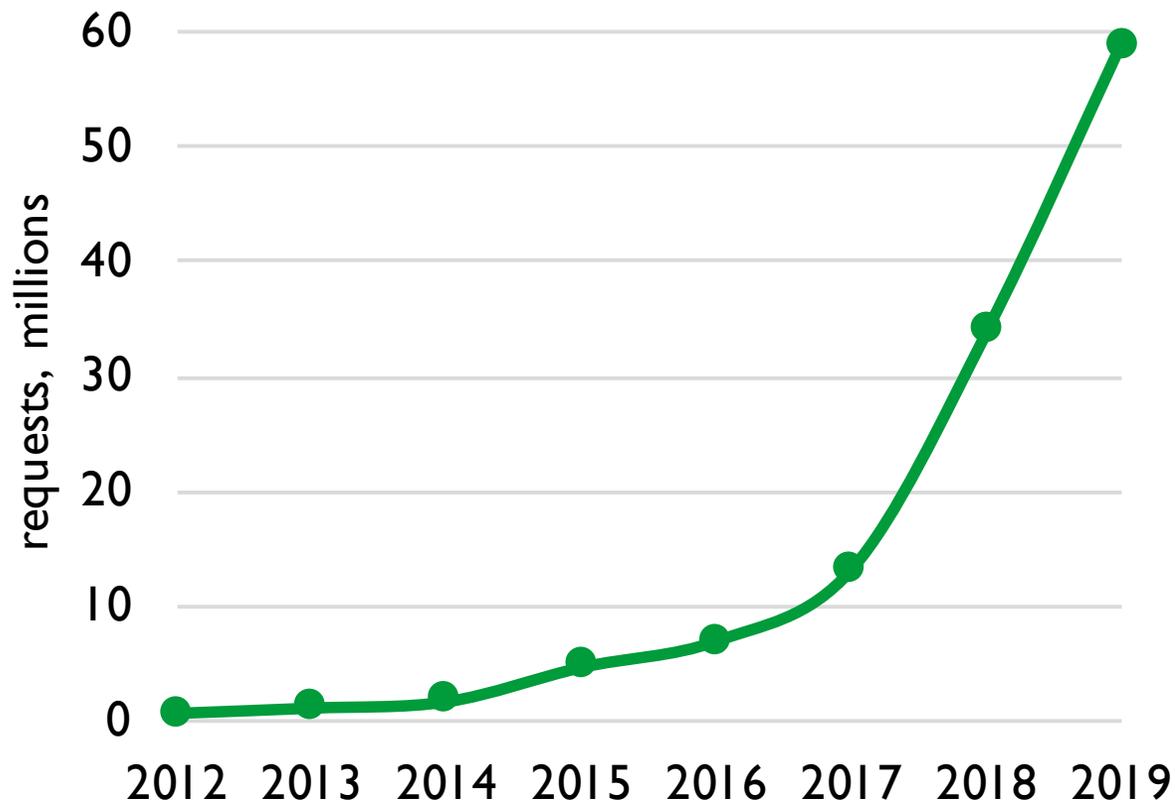


Quarterly Report
October 1-December 31, 2019
2019Q4
Virginia Prescription Monitoring Program

Key Findings for the Fourth Quarter (2019Q4)

- Enhancements to the PMP are ongoing and improvements to ease of use have contributed positively to overall utilization. Requests for a patient's prescription history exceed 16 million and rose 11% since the previous quarter.
- Prescribers queried the patient's prescription history before issuing 1,864,010 new opioid or benzodiazepine prescriptions this quarter. This was an increase of 8% from the previous quarter and more than double since 2018Q1.
- Through this period, 30,487 prescribers wrote at least one prescription for an opioid medication dispensed by a Virginia-licensed pharmacy (unchanged).
- Over five percent of Virginians, or 465,586 residents, received an opioid prescription. This excludes individuals who received buprenorphine products and, therefore, cannot be compared to previous reports.
- Due to revisions in analysis methodology, this quarterly report is *not comparable* to those released previously.

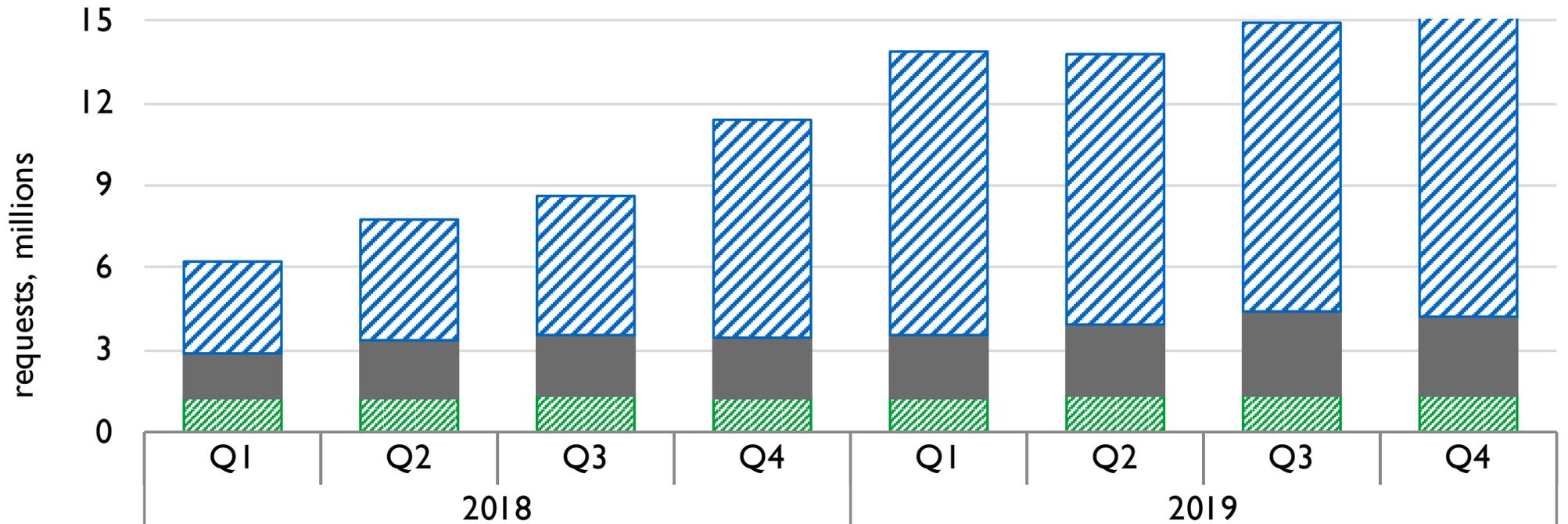
Increasing PMP utilization



- Requests for a patient's prescription history grow exponentially each year
- More than tripled in 2019Q4 since 2018Q1 and 11% increase from previous quarter
- Rapid rise in utilization of the PMP is primarily the result of expansions in integration within the electronic health record and pharmacy software applications
 - 75% of total requests are through an integrated application

Increasing PMP utilization

Prescription history requests by type, 2018Q1-2019Q4



Gateway (in state)	3,310,229	4,387,972	5,097,519	7,942,433	10,293,612	9,838,711	10,512,500	12,360,177
PMPi	1,656,772	2,104,949	2,119,586	2,214,233	2,304,254	2,631,224	2,997,430	2,833,550
NarxCare	1,227,950	1,304,721	1,398,552	1,244,777	1,275,636	1,332,175	1,396,875	1,359,457

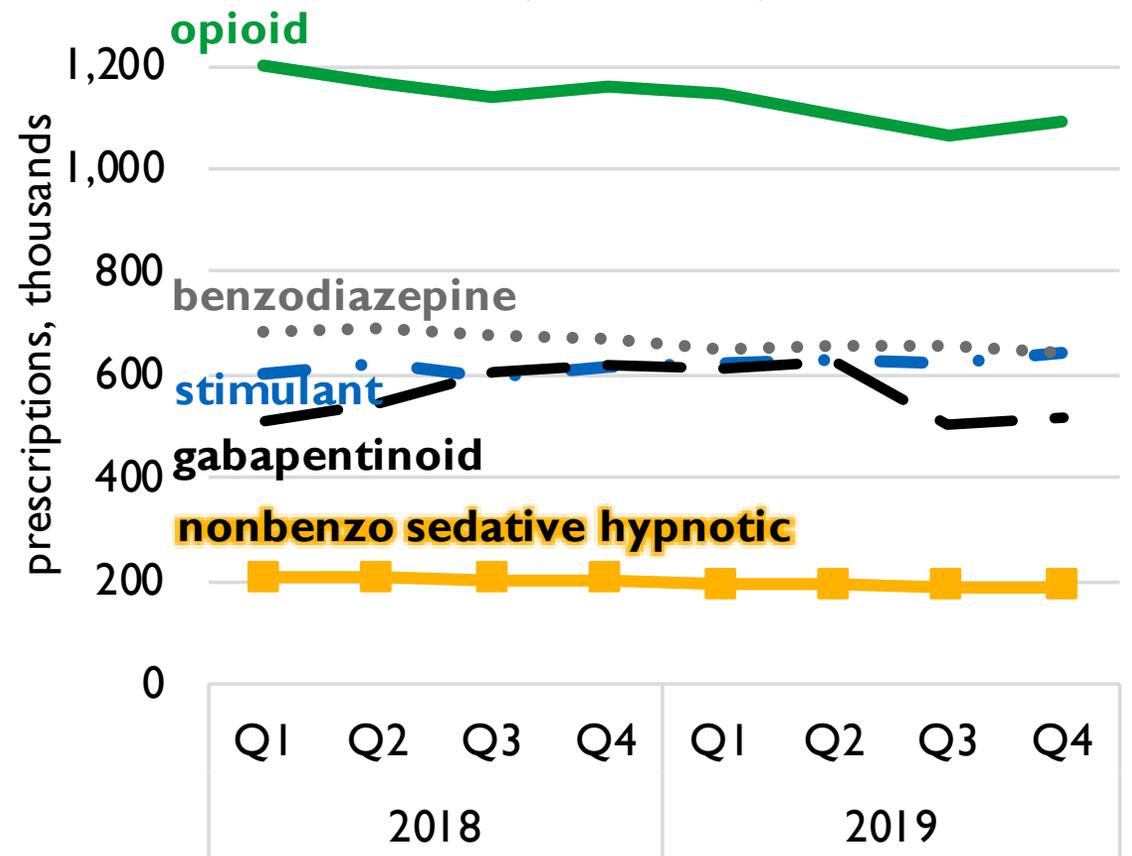
- Gateway: integrates PMP data within health record clinical workflow
- NarxCare (previously AWA Rx E): web-based application
- PMPi: interoperability among states' PMPs

Drug class

Percent change by drug class 2019Q3-Q4

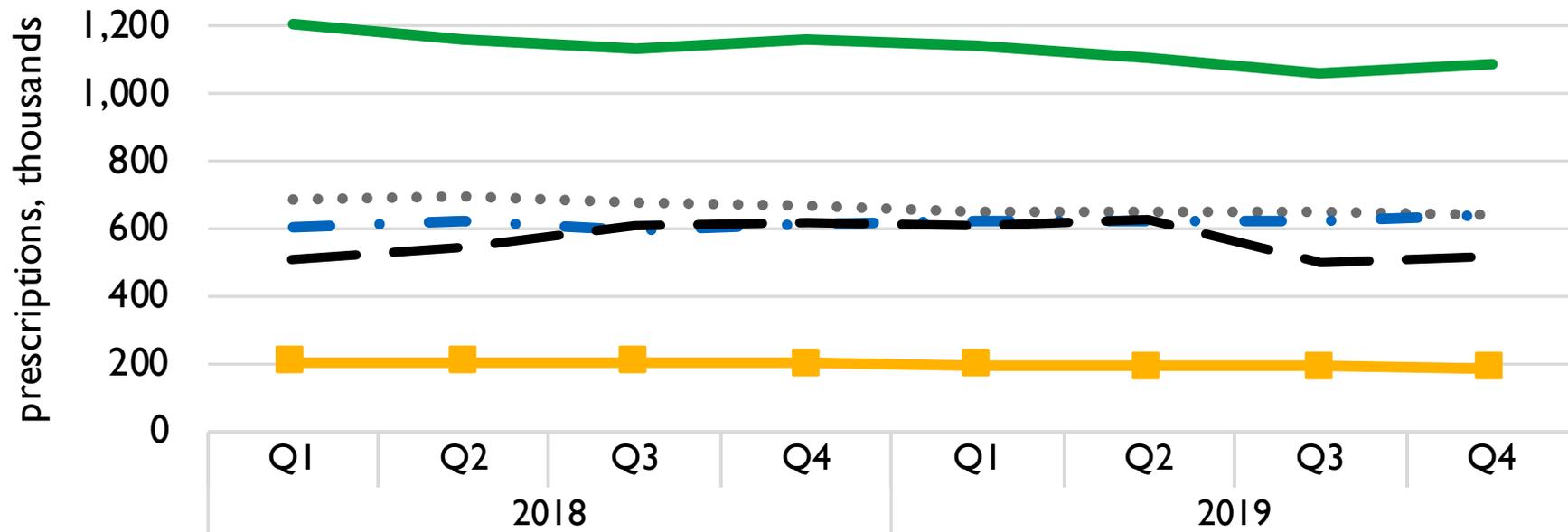
Opioid*	↓ 9%
Benzodiazepine	↓ 6%
Stimulant	↑ 6%
Gabapentinoid	↑ 1%
Nonbenzo sedative hypnotics	↓ 9%

Prescriptions dispensed by drug class, 2018Q1-2019Q4



*All opioids, including drugs not typically used in outpatient settings or otherwise not critical for calculating dosages in MME, such as cough and cold formulas including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants; opiate partial agonists (e.g., buprenorphine) is excluded

Prescriptions dispensed by drug class, 2018Q1-2019Q4



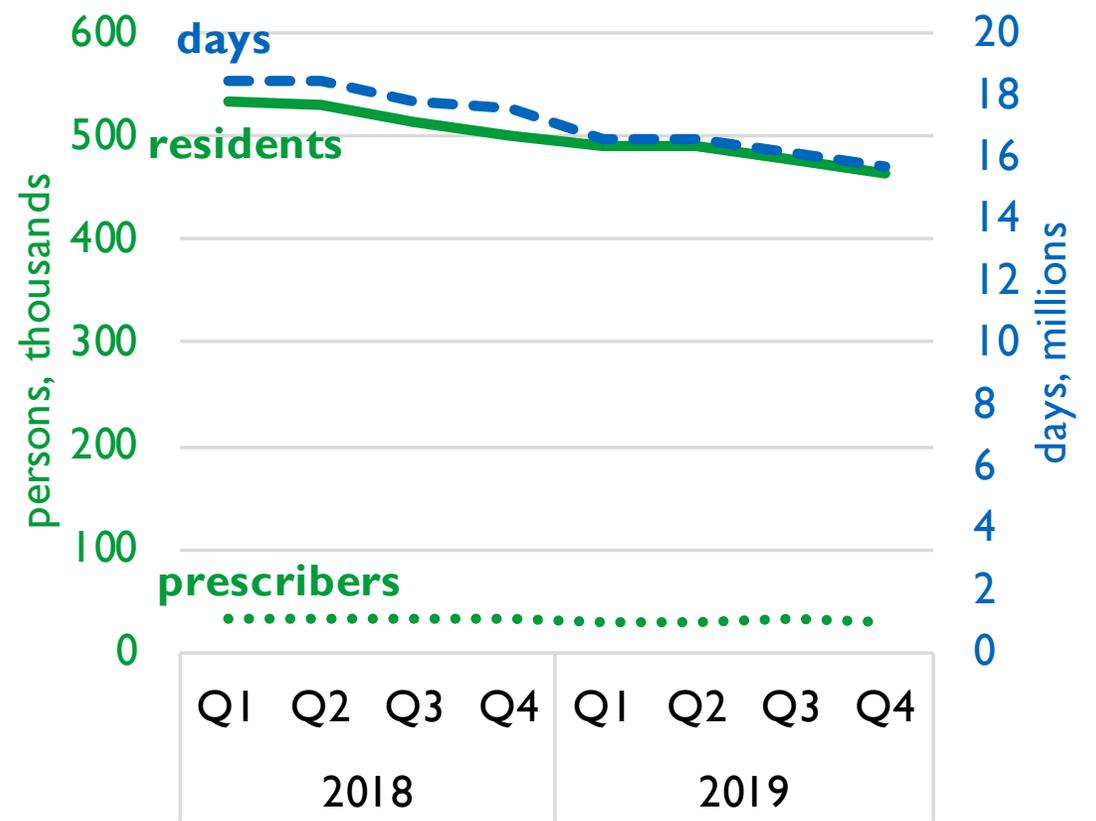
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	2018				2019			
opioid	1,203,264	1,165,865	1,136,852	1,159,303	1,143,469	1,103,293	1,064,619	1,089,898
benzodiazepine	687,158	691,731	679,696	668,971	652,621	654,493	654,057	643,239
stimulant	603,711	621,305	593,413	616,161	624,121	627,412	619,779	641,573
gabapentinoid	512,948	546,292	608,563	621,106	612,037	623,280	502,199	520,480
nonbenzo sedative hypnotic	207,221	207,492	203,357	201,486	194,179	191,287	190,267	188,852

*All opioids, including drugs not typically used in outpatient settings or otherwise not critical for calculating dosages in MME, such as cough and cold formulas including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants; opiate partial agonists (e.g., buprenorphine) is excluded

Opioid prescriptions

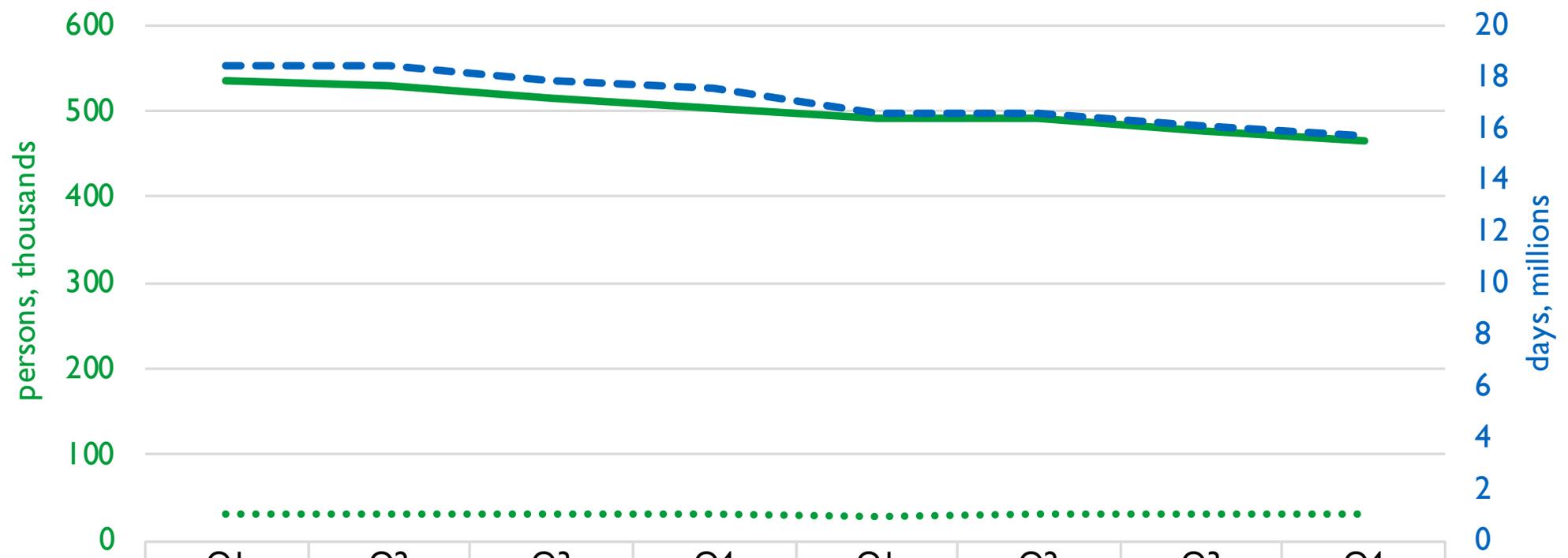
- 465,586 Virginia residents received an opioid prescription in 2019Q4 from 30,487 prescribers
- 15,746,518 opioid prescription days for commonwealth residents during 2019Q4
- Prescription days or days' supply refers to the number of days of medication prescribed

Opioid prescriptions for Virginia residents, 2018Q1-2019Q4



*CDC-defined opioids, excludes: 1) drugs not typically used in outpatient settings or otherwise not critical for calculating dosages in MME, such as cough and cold formulas including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants; 2) opiate partial agonists (e.g., buprenorphine)

Opioid prescriptions

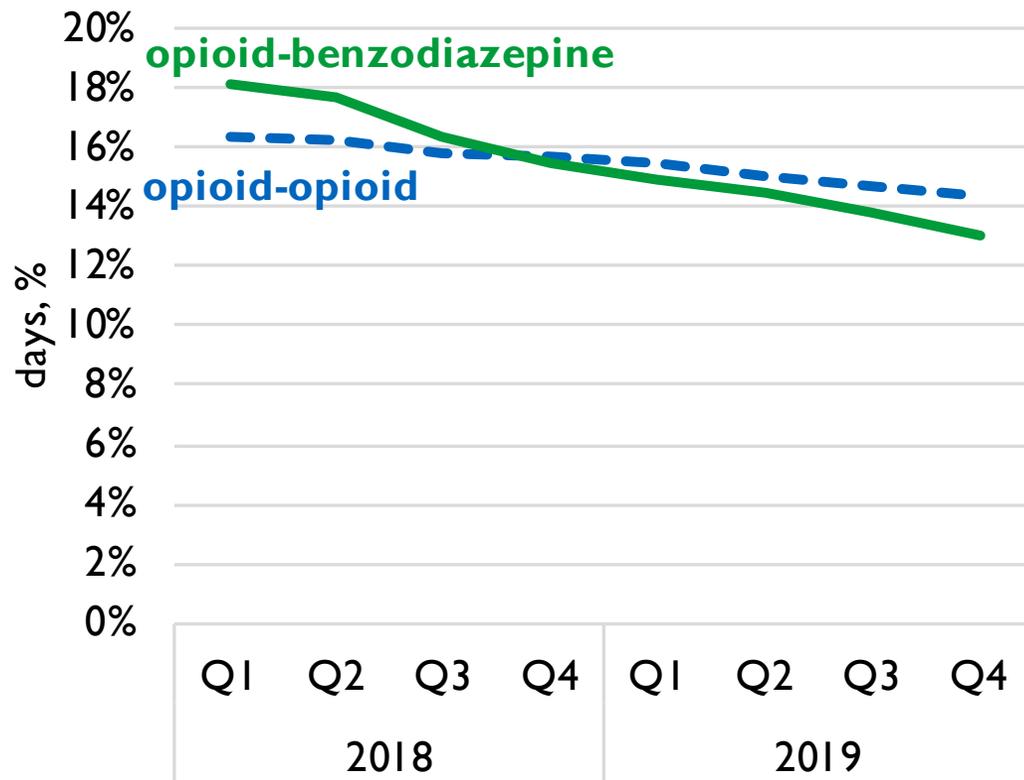


	2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
residents	535,557	529,382	515,585	502,067	490,869	490,843	477,642	465,586
prescribers	31,247	31,689	31,728	31,375	29,211	30,502	30,638	30,487
days	18,469,551	18,411,580	17,838,543	17,593,803	16,568,985	16,545,969	16,130,148	15,746,518

*CDC-defined opioids, excludes: 1) drugs not typically used in outpatient settings or otherwise not critical for calculating dosages in MME, such as cough and cold formulas including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants; 2) opiate partial agonists (e.g., buprenorphine)

Overlapping prescriptions

Overlapping opioid and opioid-benzodiazepine prescription days, 2018Q1-2019Q4



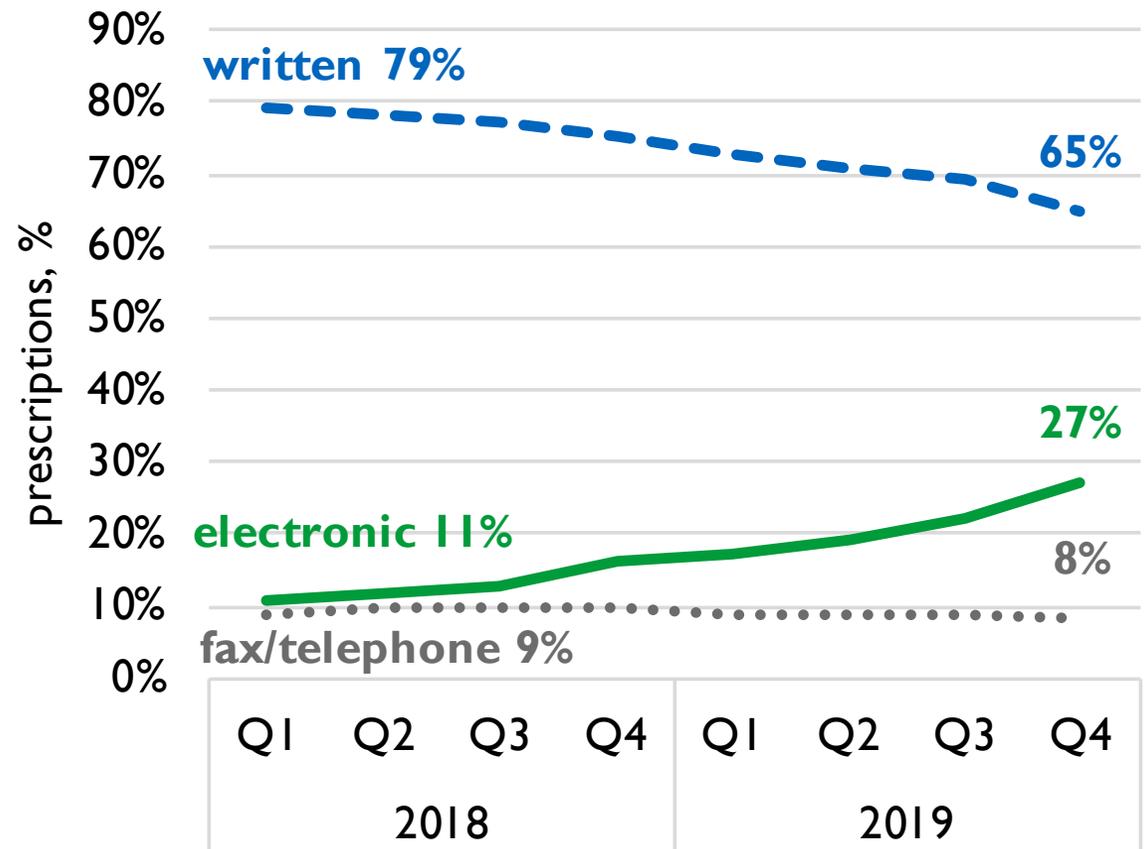
- Overlapping **opioid** prescriptions, which increase a patient's MME, and concurrent **opioid and benzodiazepine** prescribing increases the risk of overdose
- **Opioid-benzo** days decreased from 18% to 13% since 2018Q1
- Trend in **opioid-opioid** days remained stable (15%)

*CDC-defined opioids, excludes: 1) drugs not typically used in outpatient settings or otherwise not critical for calculating dosages in MME, such as cough and cold formulas including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants; 2) opiate partial agonists (e.g., buprenorphine)

Electronic prescribing for opioids

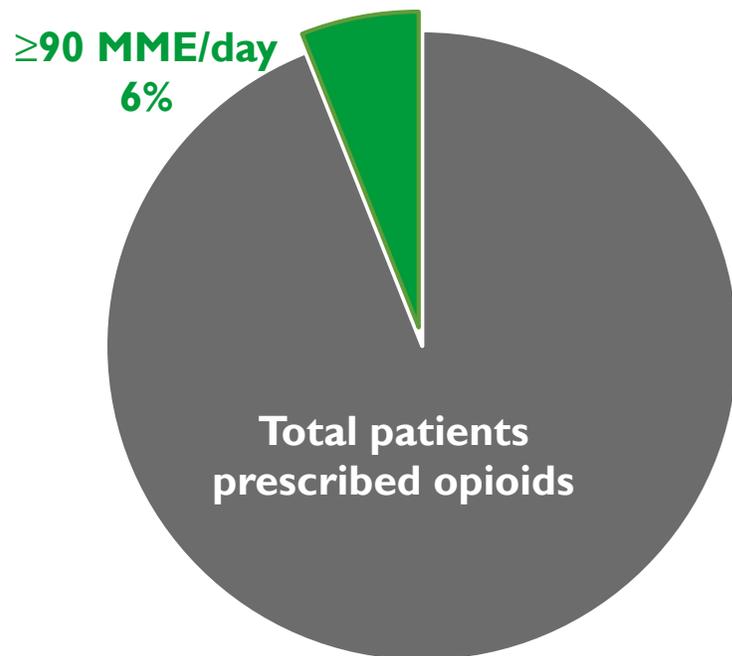
- Beginning July 1, 2020 any prescription containing an opioid must be transmitted electronically from the prescriber to the dispenser (*Code of Virginia* § 54.1-3408.02)
- 27% of opioids prescriptions were **electronic** in 2019Q4
 - More than doubled since 2018Q1

Opioid prescriptions by transmission type, 2018Q1-2019Q4



Patients receiving ≥ 90 MME/day

Patients receiving ≥ 90 MME/day, 2019Q4



- Morphine milligram equivalent (MME) allows comparison between the strength of different types of opioids
 - CDC guidelines specify dosages of ≥ 90 /day should be avoided due to risk for fatal overdose
- 6% of opioid prescription recipients had an average dose ≥ 90 MME/day (2019Q4)

*CDC-defined opioids, excludes: 1) drugs not typically used in outpatient settings or otherwise not critical for calculating dosages in MME, such as cough and cold formulas including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants; 2) opiate partial agonists (e.g., buprenorphine)

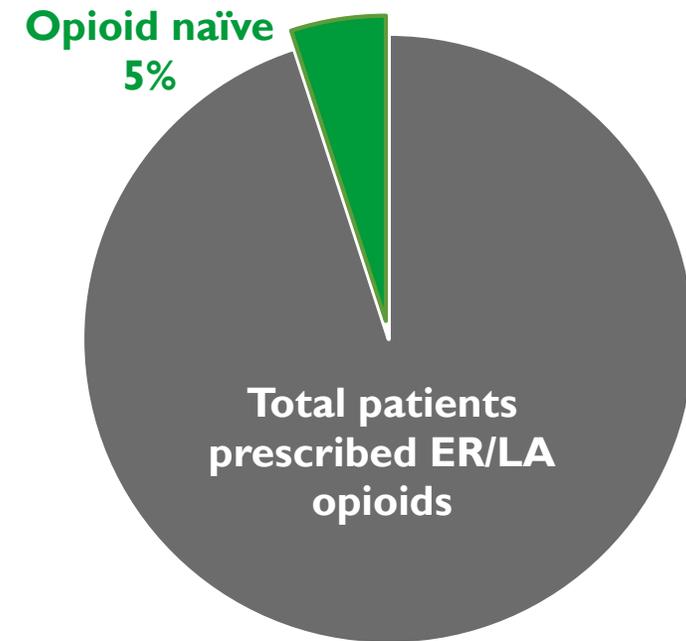
Reference: Dowell D, Haegerich TM, Chou R. CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016. MMWR Recomm Rep 2016;65(No. RR-1):1–49.

DOI: <http://dx.doi.org/10.15585/mmwr.rr6501e1>

Opioid naïve patients receiving ER/LA opioids

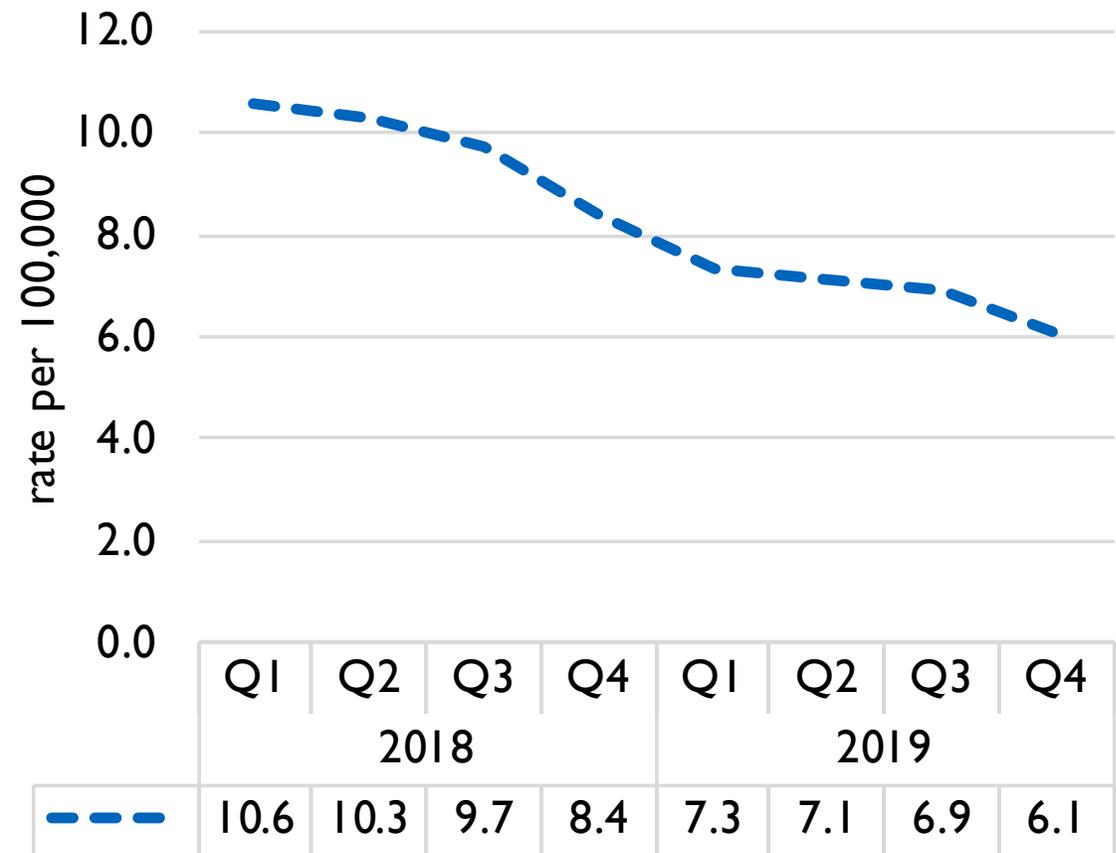
- Extended-release or long acting (ER/LA) opioids put patients at greater risk of respiratory depression and overdose compared to immediate-release (IR)
 - Opioid naïve patients are at particularly high risk of overdose from ER/LA opioids
- Opioid naïve refers to patients who have not taken an opioid medication within the previous 45 days

Opioid naïve patients receiving ER/LA opioids, 2019Q4



Multiple provider episodes for opioids

- ≥ 5 prescribers and ≥ 5 pharmacies in a 6 month period
- Can be an indicator of doctor shopping and/or inadequate care coordination
- Dropped from 10.6 to 6.1 per 100,000 residents in the 2 year period

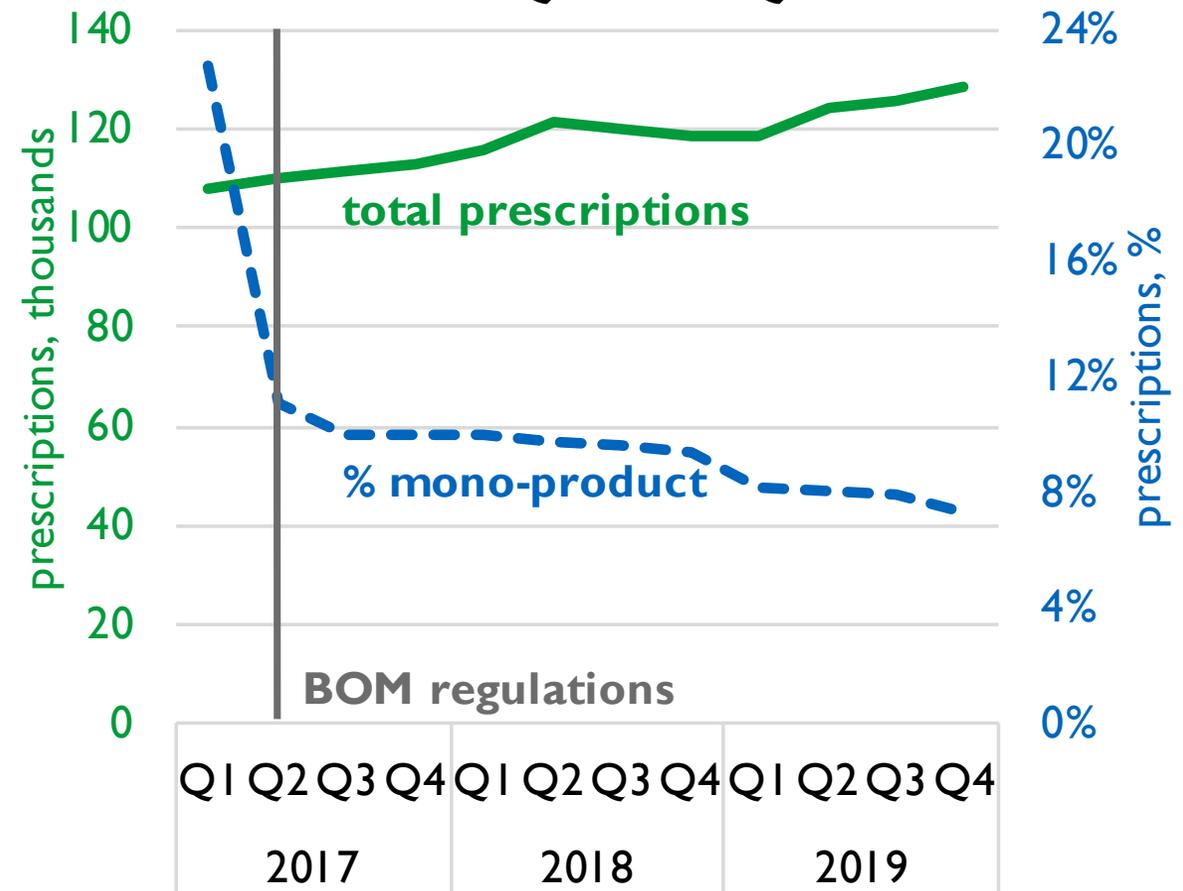


*CDC-defined opioids, excludes: 1) drugs not typically used in outpatient settings or otherwise not critical for calculating dosages in MME, such as cough and cold formulas including elixirs, and combination products containing antitussives, decongestants, antihistamines, and expectorants; 2) opiate partial agonists (e.g., buprenorphine)

Buprenorphine

- *Regulations Governing Prescribing of Opioids and Buprenorphine (18VAC85-21-10, effective March 2017)*
 - Limited prescribing buprenorphine without naloxone (mono-product) for opioid use disorder (OUD)
- Buprenorphine is an opiate receptor partial agonist
- Immediate decline in mono-product prescriptions that has since stabilized (7% in 2019Q4)

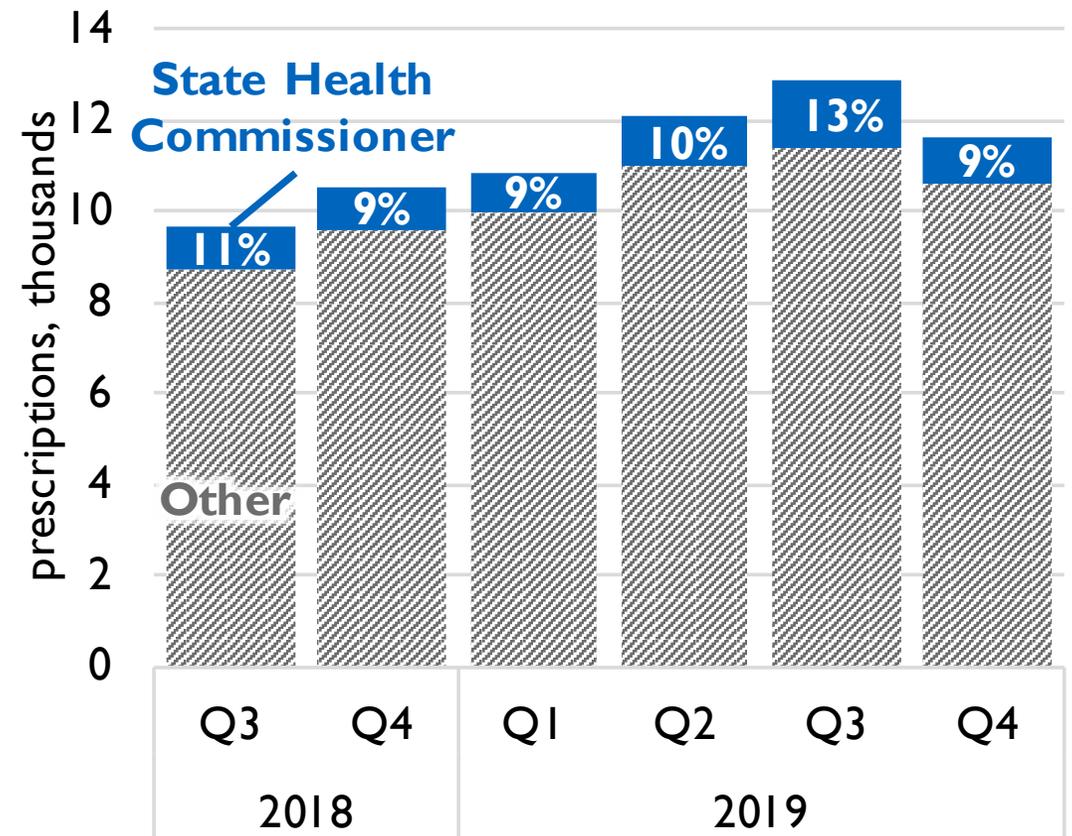
Buprenorphine prescribing for OUD, 2017Q1-2019Q4



Naloxone

- State Health Commissioner's standing order authorizes Virginia pharmacies to dispense naloxone without a prescription
- 9% of total dispensations in 2019Q4 were dispensed using the standing order
- Naloxone became reportable to PMP as of July 1, 2018
 - Narcan[®] accounts for 98% of total naloxone dispensations

Naloxone prescriptions dispensed in pharmacies by prescriber, 2018Q3-2019Q4





Technical notes

- Covered substances
 - Schedule II-V medications, naloxone
 - Gabapentin is a Schedule V in Virginia
 - Cannabidiol and THC-A oils from in state pharmaceutical processor
- PMP relies on pharmacies and other dispensers to submit accurate, timely information. Dispensers can correct or submit post-dated data at any time; therefore, PMP data is expected to change.
- Due to revisions in analysis methodology, this quarterly report is *not comparable* to those released previously. Quarters referenced are based upon the calendar year.
- Buprenorphine is an opiate receptor partial agonist and is excluded from the opiate receptor full agonist analyses (i.e., “opioid”)
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