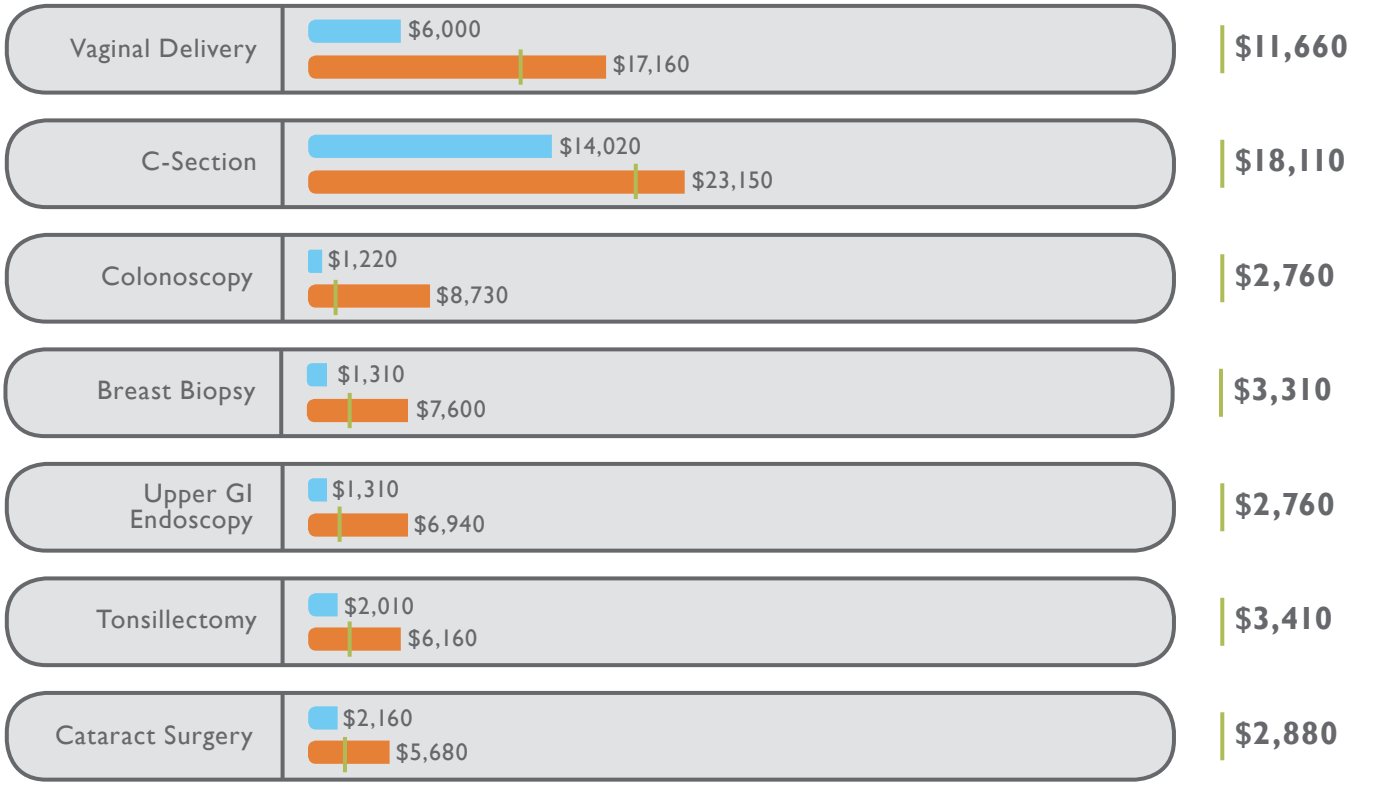
CAAC current role (C.R.S. 25.5-1-204 2018): The **advisory committee shall make recommendations** to the ED and the CO APCD administrator:		
Statute Language	**Historic Role**	**Future Proposed Role**
Procedures for the collection, retention, use, and disclosure of data from the Colorado all-payer health claims database, including procedures and safeguards to protect the privacy, integrity, confidentiality, and availability of any data;	CAAC provided input establishing the initial procedures for collection, retention, use, and disclosure of data prior to CO APCD implementation in 2012 and has reviewed any major changes in policies/procedures related to disclosure and availability of data. CAAC currently reviews and provides input into all public reports including Data Byte requests, CO APCD Annual report, Spot Analyses, white papers and interactive reports. CAAC also provides input into the public reporting roadmap and annual planning process.	Continued advisement regarding major changes to policies related to disclosure of data, privacy, integrity, confidentiality and availability. Continued support and review of all public reports, including input into the public reporting roadmap and review of Data Byte requests.
Guidelines for charging for custom reports from the Colorado all-payer health claims database;	CAAC has reviewed and provided input into CO APCD pricing structure since 2013, and has advised on CIVHC's efforts to create standard pricing and reduce pricing in an effort to expand access to data across stakeholders.	Continued guidance of pricing model as it evolves to help expand access to data across for the benefit of all Coloradans.
Procedures to ensure compliance with the "Health Insurance Portability and Accountability Act of 1996", Pub.L. 104-191, as amended, and implementing federal regulations; Procedures to ensure compliance with other state and federal privacy laws; and	CAAC helped develop procedures to ensure compliance with HIPAA and other state federal privacy laws during the planning phases of the CO APCD. No major changes or breaches in those policies have occurred since inception, thus no additional work has been done in the area.	Continued review and input regarding any major data security and privacy concerns that occur and advise on changes in policies as necessary.
Procedures for data confidentiality and data disposal if the Colorado all-payer health claims database ceases to exist.	CAAC helped develop policies and procedures for data confidentiality and data destruction during the planning phases of the CO APCD.	Provide input into any changes in current data confidentiality policies and data disposal policies.
CAAC current role (SB 18-1327): the **Advisory Committee shall**:		
Senate Bill Language	**Historic Role**	**Future Proposed Role**
Consult with the state department on the development of a grant application form; and	In August 2018, CIVHC, CAAC and the Department of Health Care Policy and Financing (HCPF) worked to update a new grant application form.	Annual review and advisement to CIVHC and HCPF on grant application and process.
Review applications for scholarship grants and recommend which scholarship grants to approve and the amount of each recommended grant.	A CAAC Scholarship Subcommittee was established in Aug 2018 comprised of members from different stakeholder groups. The subcommittee approves appropriate grant applications according to guidelines and recommends award amounts to CIVHC/HCPF.	Continued role in reviewing Scholarship applications and recommending dollar amounts to HCPF for final approval

Administrator Duties with CAAC input (C.R.S. 25.5-1-204 2018): The administrator, with **input from the advisory committee** shall:		
Statute Language	**Historic Role**	**Future Proposed Role**
Shall incorporate and utilize publicly available data other than administrative claims data if necessary to measure and analyze a significant health care quality, safety, or cost issue that cannot be adequately measured with administrative claims data alone;	CIVHC has not historically engaged the CAAC in support regarding incorporating other data sources beyond claims data as this has solely been a focus in special projects with custom data recipients, not across the entire database.	As CIVHC considers adding additional data sources to public reporting (i.e. county health rankings, etc.), the CAAC could support (through help obtaining and/or input on report wireframe) adding new data sources to increase the value of public reports across stakeholders.
Shall require payer data sources to submit data necessary to implement the all-payer claims database;	CAAC supported developing initial data submission requirements and support adding new payers and data sources through Letters of Support and stakeholder input (i.e. Medicare FFS, self-insured, and dental data through DSG changes)	Continued review and input as necessary regarding addition of new payers as appropriate through DSG changes and state agency/CMS Qualified Entity programs.
Shall determine the data elements to be collected, the reporting formats for data submitted, and the use and reporting of any data submitted. Data collection shall align with national, regional, and other uniform all-payer claims databases' standards where possible.	CAAC helped support the development of initial data elements and report formatting. Currently, the CAAC reviews proposed DSG changes from CIVHC and HCPF on an annual basis and provides input and Letters of Support as appropriate.	Continued annual review and input of proposed DSG changes from CIVHC and HCPF and Letters of Support as appropriate.
May audit the accuracy of all data submitted;	CAAC has provided advance review of public reports and raises any concerns regarding accuracy of the data analyses which supports data submission and analytic accuracy.	Continued review of public reporting data for accuracy, and an CAAC review of improvement efforts in the continued quality improvement process.
May contract with third parties to collect and process the health care data collected pursuant to this section. The contract shall prohibit the collection of unencrypted social security numbers and the use of the data for any purpose other than those specifically authorized by the contract. The contract shall require the third party to transmit the data collected and processed under the contract to the administrator or other designated entity.	The CAAC supported CIVHC in the selection of the initial vendor for the CO APCD. With the switch to a new vendor in 2017, CIVHC updated the CAAC of the progress and requirements towards selecting a new vendor and the capabilities that would be enhanced through a new vendor selection.	Support from committee members with expertise, as necessary, in advising CIVHC on new third party vendor selection.
May share data regionally or help develop a multistate effort if recommended by the advisory committee.	The CAAC has been provided with updates on multi-state projects such as the Network for Regional Health Improvement Total Cost of Care Project, and provides an advanced review of multi-state public reports.	Continue to review and provide input into multi-state projects with a public reporting component, and support evaluation of a multi-state data warehouse if proposed by CIVHC/HCPF.

Variation in Prices for Common Health Care Services

Colorado All Payer Claims Database Episode-based Procedures

*Visit **www.civhc.org/shop-for-care** for named facility comparisons for these procedures as well as costs for imaging, and x-ray procedures.*

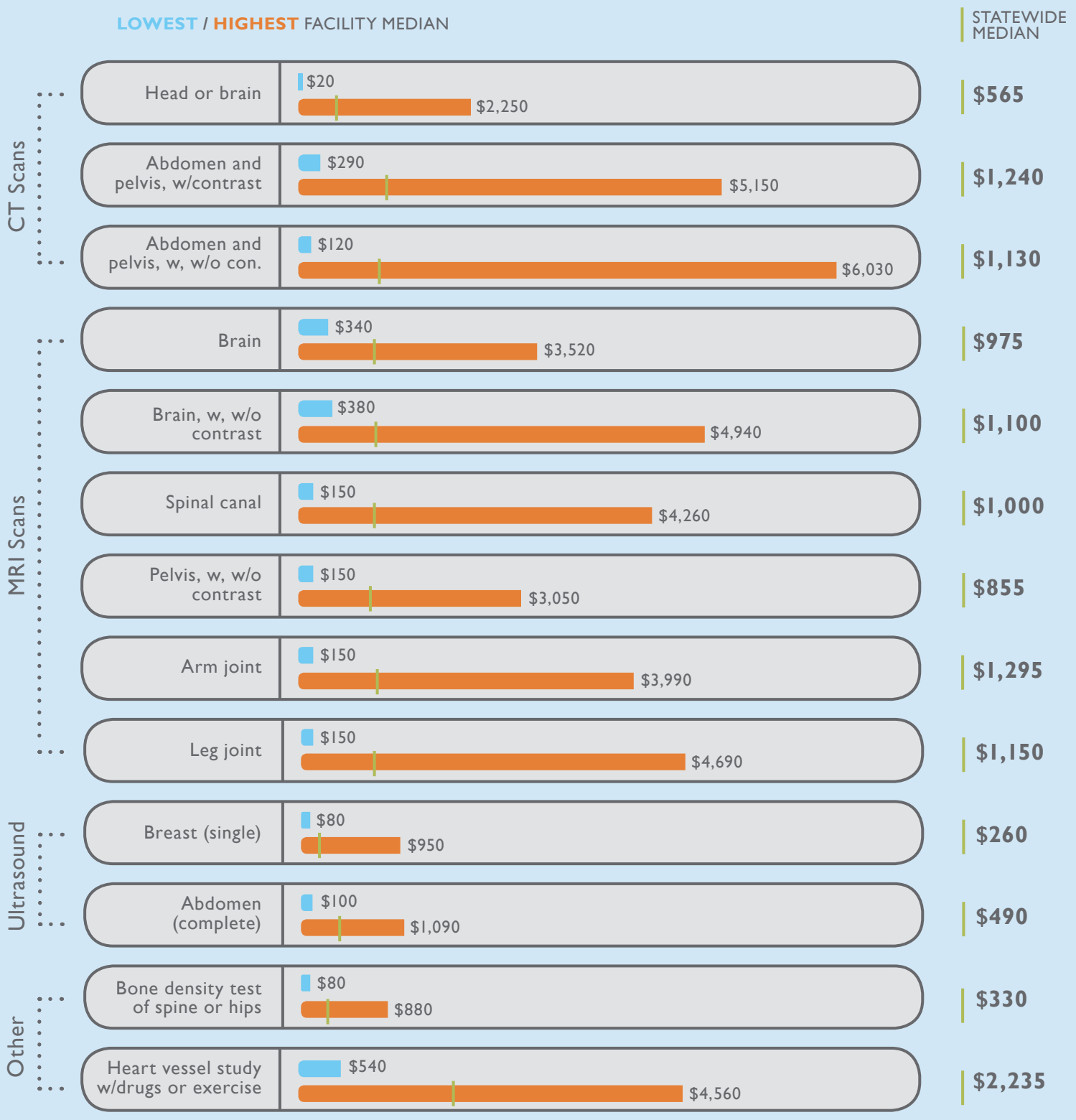


Data is based on 2017 claims submitted by commercial health insurance payers to the Colorado All Payer Claims Database. Dollar amounts reflect median "episodes of care" payments which is how much typically gets paid, in total, between patients and their commercial health insurance plans, for all bills associated with this service, pre, during, and post care.

Variation in Prices for Imaging Services, 2017

Colorado All Payer Claims Database

Visit www.civhc.org/shop-for-care for named facility comparisons for these imaging services along with episode-based procedure pricing.



Data is based on 2017 claims submitted by commercial health insurance payers to the Colorado All Payer Claims Database. Dollar amounts reflect median facility payments only and do not include any professional or ancillary fees that may be associated with the service.

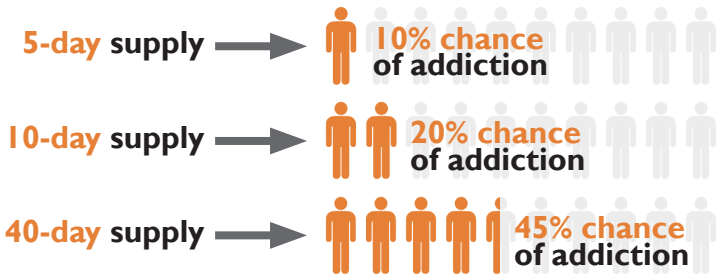
Prescribing Opioids in Colorado

Oxycodone, Percocet, and Vicodin

CIVHC
CENTER FOR IMPROVING VALUE IN HEALTH CARE

Opioid use disorders impact us all, not only patients. Working from within the health care system and across communities, together we can make a positive impact.

One critical approach to minimizing opioid use disorders is reducing the number of pills given to people with temporary, acute pain. Centers for Disease Control (CDC) research shows that people receiving a five-day supply of opioids the first time they are prescribed have a 10 percent chance of becoming addicted and using opioids long term (one year or more). The likelihood of using an opioid for over a year doubles to 20 percent for people receiving a 10-day supply and jumps up to 45 percent for patients receiving an initial 40-day supply.[i]



To help reduce long-term use and dependency when treating acute pain, the CDC suggests that providers offer alternative treatment options to opioids, and when necessary, prescribe the lowest effective dose for the shortest duration, typically three to seven days.[ii]

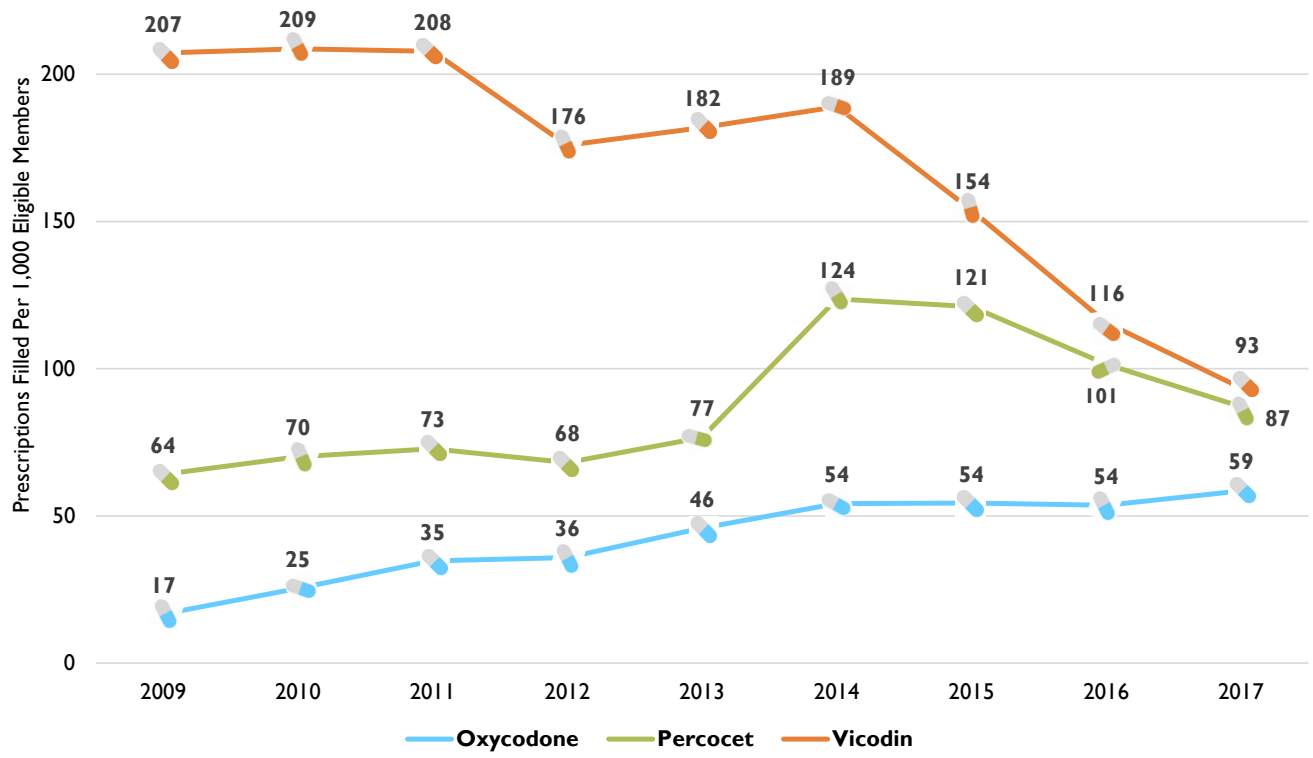
Opioid Prescribing Patterns in Colorado

To understand patterns in opioid days supply being prescribed and filled in Colorado, the Center for Improving Value in Health Care (CIVHC) used data from the Colorado All Payer Claims Database (CO APCD) to evaluate trends for short-acting versions of three commonly prescribed opioids: Oxycodone, Percocet, and Vicodin.

According to CO APCD data, between 2009 and 2017, Coloradans with Commercial, Medicaid and Medicare Advantage health insurance filled nearly 7 million prescriptions for the short-acting versions of Oxycodone, Vicodin and Percocet.

Oxycodone, Percocet, and Vicodin Prescription Trends in Colorado, 2009-2017

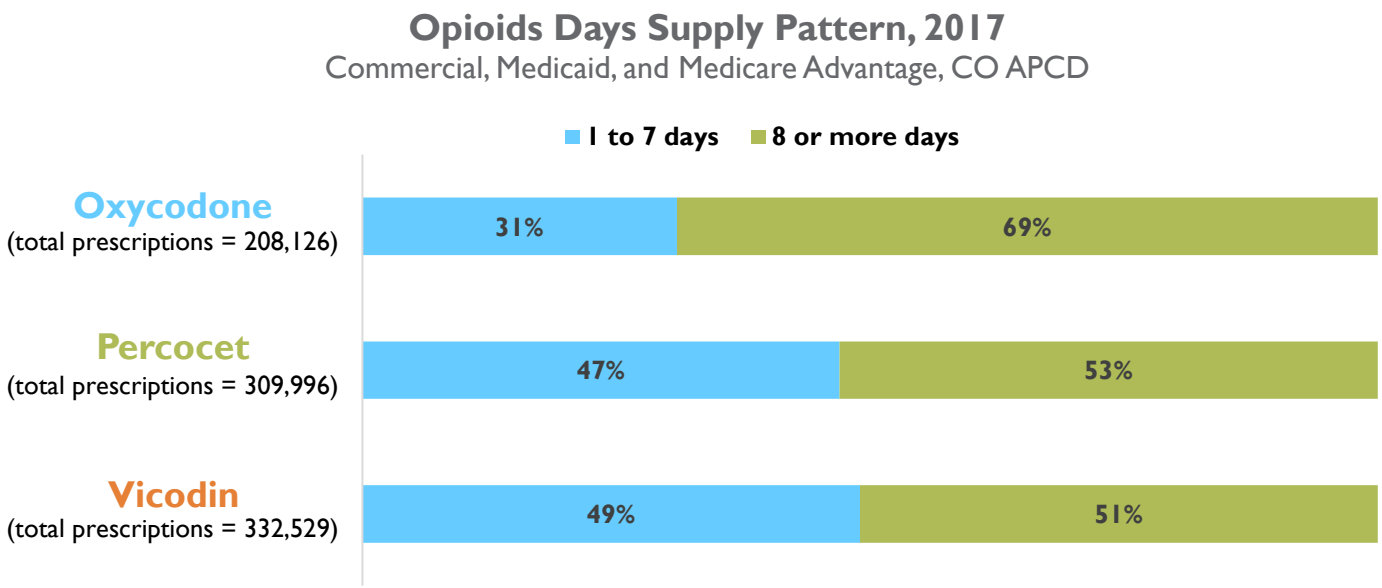
Commercial, Medicaid, and Medicare Advantage, CO APCD

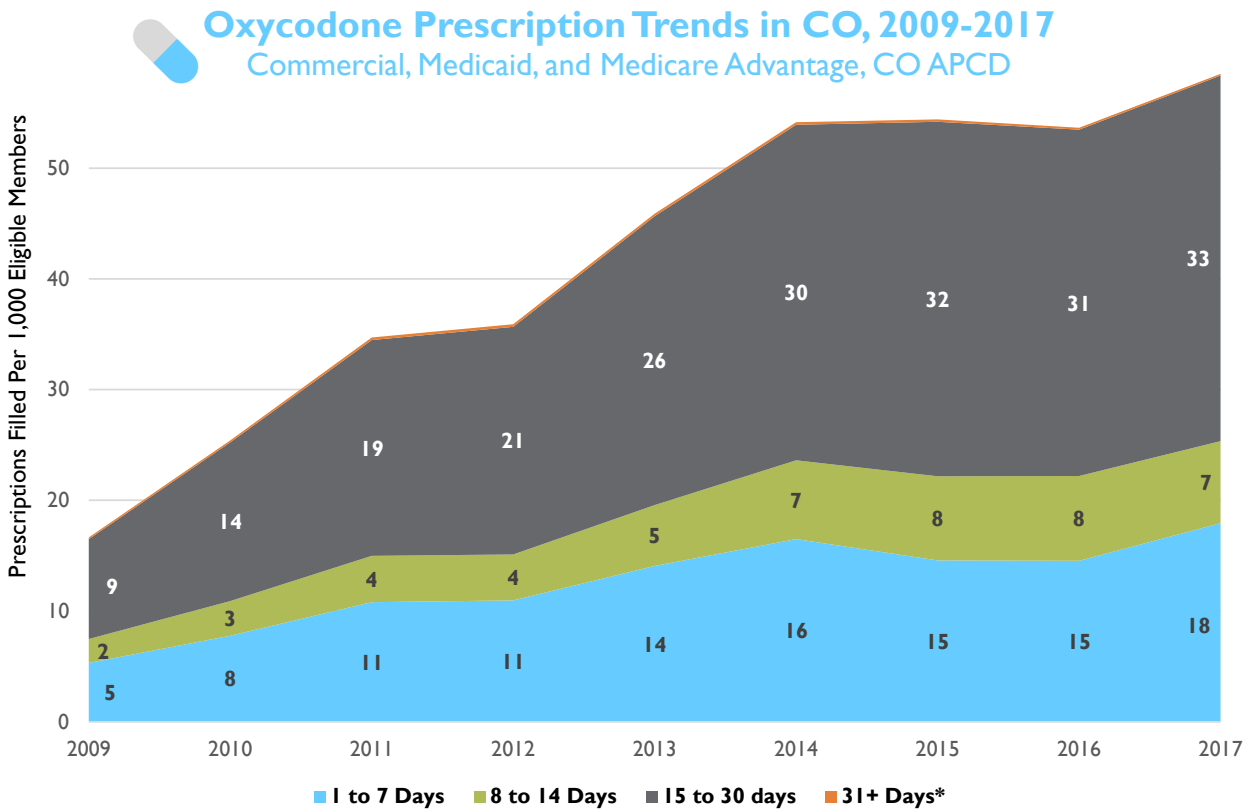


Evaluation of prescribing trends since 2009 indicate that:

- Although it is the least prescribed of the three opioids, rates of Oxycodone prescriptions increased 247 percent between 2009 and 2017.
- Rates of Percocet and Vicodin fills have steadily declined since reaching a peak in 2014 (30 percent and 51 percent reduction respectively).
- Vicodin prescription fills fell sharply in 2015, which could be a result of the Drug Enforcement Administration (DEA) changing the Vicodin drug schedule from a Schedule III to a Schedule II (higher potential for abuse and considered dangerous[iii]) in 2014. This change may also be related to the increase in Percocet and Oxycodone fills beginning in 2014 as an alternative to Vicodin.

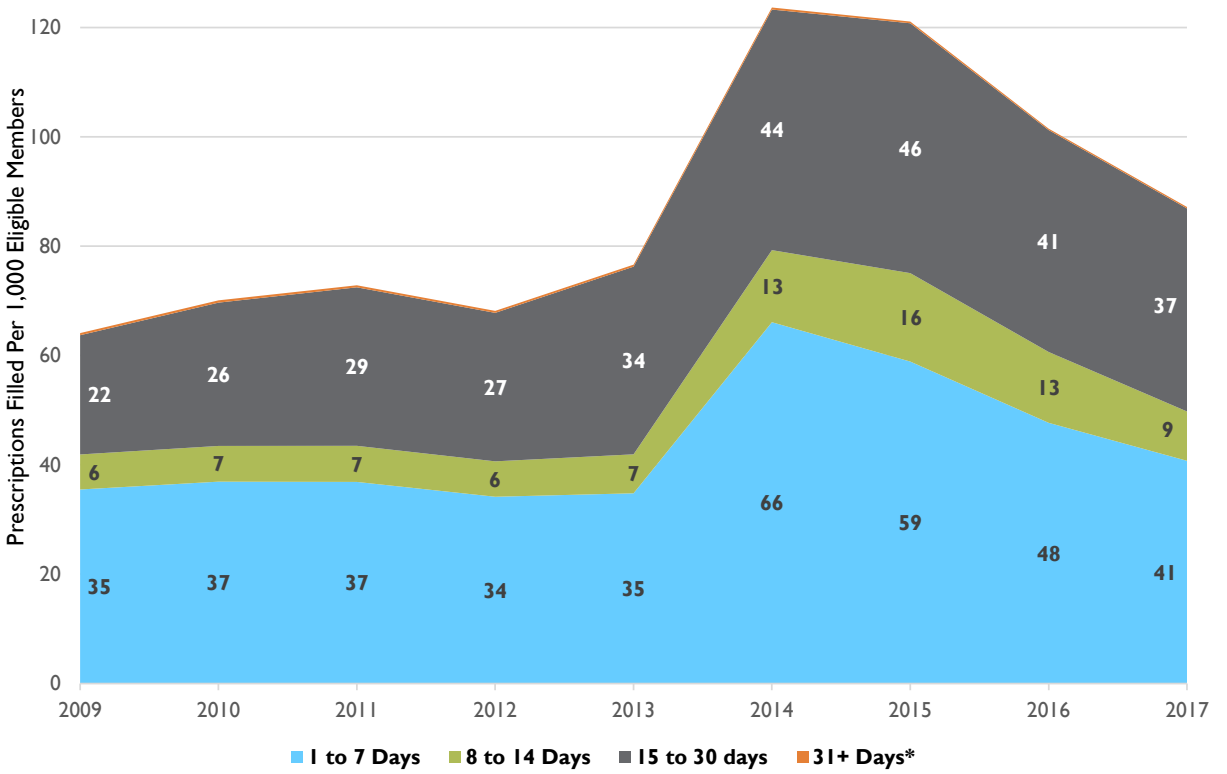
Although the opioid fill rate has fallen for two of the three opioids analyzed, for all three drugs across all payers, more than half of all prescriptions filled were for eight days or more. Oxycodone in particular has higher rates of 15-30 days supply compared to 1-7 days or 8-14 days, and 69 percent of all fills for Oxycodone were for eight or more days.





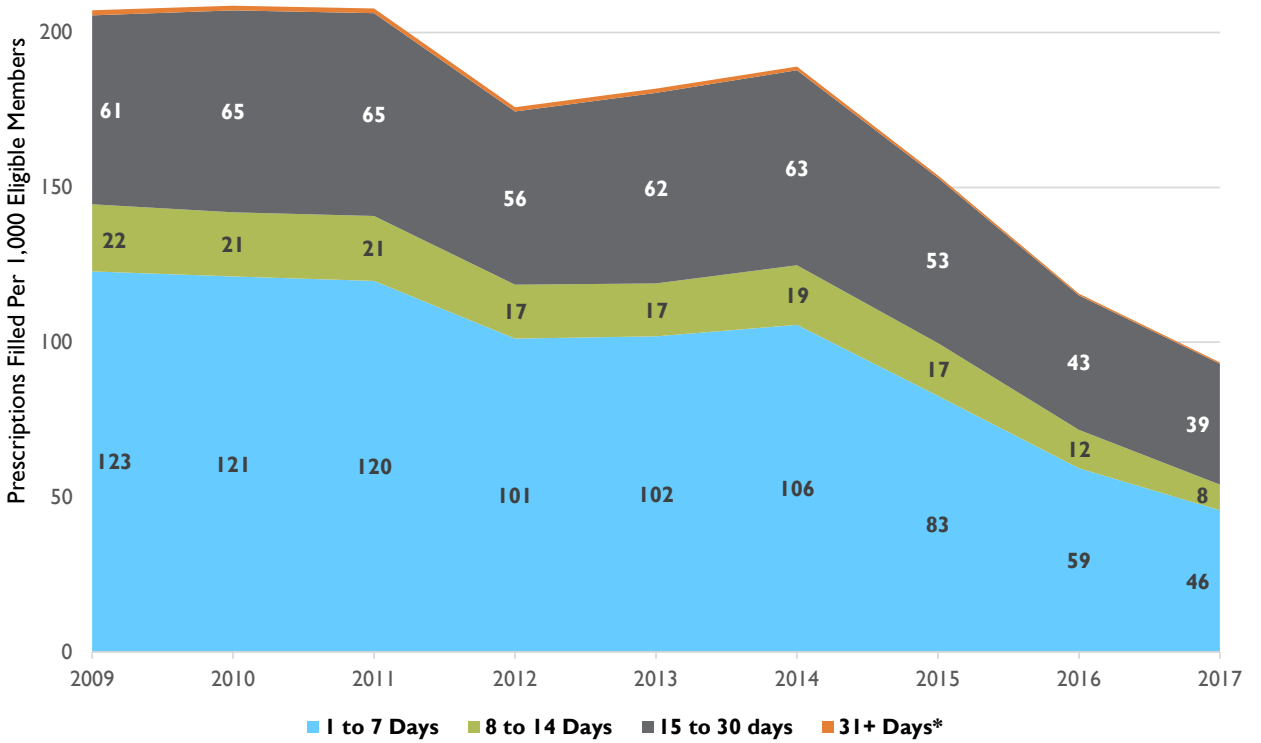
Percocet Prescription Trends in CO, 2009-2017

Commercial, Medicaid, and Medicare Advantage, CO APCD



Vicodin Prescription Trends in CO, 2009-2017

Commercial, Medicaid, and Medicare Advantage, CO APCD



*31+ Days supply results ranged from 1/1000 to >1/1000 for Oxycodone, Percocet, and Vicodin from 2009-2017.

Opportunities

According to this analysis, in general, Colorado is seeing positive movement toward reducing the total number of prescriptions being filled across these three common opioids, and reducing the number of long duration prescriptions in some instances. However, more can be done to reduce the hundreds of thousands of prescriptions for opioids that get filled every year, and the percentage of longer duration fills. There is no easy solution for addressing opioid use disorder in Colorado and the U.S. and it is likely going to require a concerted, multi-pronged approach including:

- Provider education on recommended prescribing practices
- Patient education on the addictive properties of opioids
- More research and widespread acceptance of alternative pain management choices

The Colorado General Assembly has considered numerous opioid bills and encouraging steps have already been taken to reduce the number of individuals living with use disorders to prescription opioids including, but not limited to:

- Health First Colorado, the state's Medicaid program, issued new opioid prescription restrictions in 2017, limiting the duration of treatment and adding pain management consultation requirements to future refills.[iv]
- Colorado Hospital Association launched the Colorado Opioid Safety Pilot, designed to help educate Emergency Room provider to use alternatives to opioids as a first-line treatment for pain.[v]
- The Colorado Consortium for Prescription Drug Abuse Prevention works with the Colorado Department of Public Health and Environment and many other stakeholder groups including policy makers, providers, consumers and others to improve education, public outreach, research, safe disposal, and treatment. Their Take Meds Seriously and Take Meds Back public awareness campaigns are just two examples of their work.[vi]

Methodology

This analysis used claims submitted by health insurance payers (31 commercial, Medicaid and Medicare Advantage) from 2009-2017 to the Colorado All Payer Claims Database. Extended release (long-acting) versions of Oxycodone, Vicodin and Percocet were removed from the analysis to isolate short-acting opioids. These three drugs were chosen because they are among the top 20 highest volume prescription fills of all drugs in CO APCD. The drugs included brand and generic versions of the following:

Oxycodone

Oxycodone HCL 10mg tab
Oxycodone HCL 15mg tab
Oxycodone HCL 5mg tab

Percocet

Oxycodone HCL 10mg tab/Acetaminophen 325mg tab
Oxycodone HCL 15mg tab/Acetaminophen 325mg tab
Oxycodone HCL 5mg tab/Acetaminophen 325mg tab

Vicodin

Hydrocodone 10mg tab/Acetaminophen 300mg tab
Hydrocodone 10mg tab/Acetaminophen 325mg tab
Hydrocodone 10mg tab/Acetaminophen 400mg tab
Hydrocodone 10mg tab/Acetaminophen 500mg tab
Hydrocodone 10mg tab/Acetaminophen 650mg tab
Hydrocodone 10mg tab/Acetaminophen 660mg tab
Hydrocodone 10mg tab/Acetaminophen 750mg tab
Hydrocodone 2.5mg tab/Acetaminophen 325mg tab
Hydrocodone 2.5mg tab/Acetaminophen 500mg tab
Hydrocodone 5mg tab/Acetaminophen 300mg tab
Hydrocodone 5mg tab/Acetaminophen 325mg tab
Hydrocodone 5mg tab/Acetaminophen 400mg tab
Hydrocodone 5mg tab/Acetaminophen 500mg tab
Hydrocodone 5mg tab/Acetaminophen 500mg tab, UD
Hydrocodone 7.5mg tab/Acetaminophen 300mg tab
Hydrocodone 7.5mg tab/Acetaminophen 325mg tab
Hydrocodone 7.5mg tab/Acetaminophen 400mg tab
Hydrocodone 7.5mg tab/Acetaminophen 500mg tab
Hydrocodone 7.5mg tab/Acetaminophen 650mg tab
Hydrocodone 7.5mg tab/Acetaminophen 750mg tab

For more information regarding this analysis, please contact ColoradoAPCD@civhc.org. Special thanks to the CO APCD Advisory Committee and members of the Colorado Consortium for Prescription Drug Abuse Prevention for their input into this publication, and to the Colorado Health Foundation for their support of CO APCD public reporting.

[i] Shah, A., Hayes PharmD, C. J., & Martin, PharmD, PhD, B. C. (2017). Morbidity and Mortality Weekly Report: Characteristics of Initial Prescription Episodes and Likelihood of Long-Term Opioid Use — United States, 2006–2015. Centers for Disease Control and Prevention. Retrieved February 2018, from https://www.cdc.gov/mmwr/volumes/66/wr/mm6610a1.htm#F1_up

[ii] Dowell, MD, D., Haegerich, PhD, T. M., & Chou, MD, R. (2016). Morbidity and Mortality Weekly Report: CDC Guideline for Prescribing Opioids for Chronic Pain — United States, 2016. Centers for Disease Control and Prevention. Retrieved February 2018, from https://www.cdc.gov/mmwr/volumes/65/rr/rr6501e1.htm

[iii] United States Drug Enforcement Administration. Drug Scheduling. Retrieved October 2018 from https://www.dea.gov/drug-scheduling

[iv] Willams, M. (2017, July). Colorado Medicaid to Tighten Opioid Usage Policy. Retrieved February 2018, from Colorado Department of Health Care Policy and Financing: https://www.colorado.gov/pacific/hcpf/news/colorado-medicaid-tighten-opioid-usage-policy

[v] Center for Improving Value in Health Care. (2017, August). Change Agent Profile: Colorado Hospital Association - The Colorado Opioid Safety Pilot. Retrieved February 2018, from civhc.org: http://www.civhc.org/change-agent-gallery/colorado-hospital-association-and-the-colorado-opioid-safety-pilot/

[vi] The Colorado Consortium for Prescription Drug Abuse Prevention. (2017). About the Consortium. Retrieved February 2018, from The Colorado Consortium for Prescription Drug Abuse Prevention: http://www.corxconsortium.org/about-the-consortium/

The Effect of a Multisite Care Management Program on Spend and Utilization In Children with Medical Complexity

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BACKGROUND

Children with medical complexity (CMC) comprise only 6% of the pediatric population yet account for about one third of pediatric health care spending. Savings in this group can have an important impact on pediatric health care costs. Our objective in this study was to assess the impact of a multi-center care management program on spend and utilization in CMC

OBJECTIVES

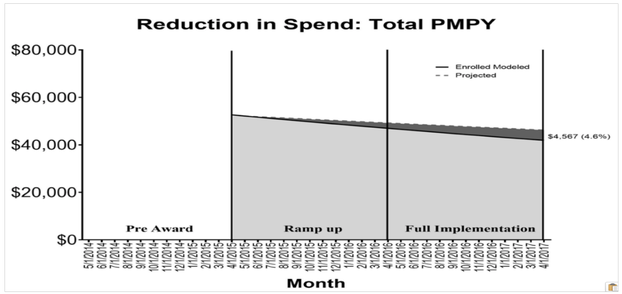
To assess the impact of a multi-center care management program on spend and utilization in CMC

METHODS

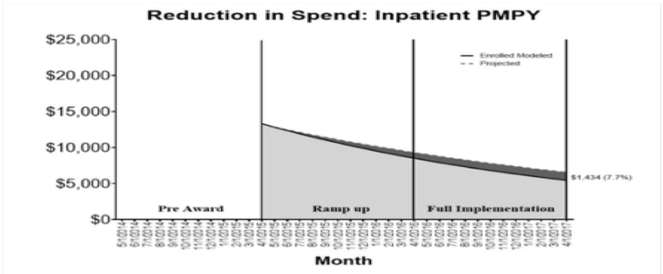
We present a prospective cohort study of a population of 4530 CMC enrolled in a learning collaborative (LC) designed to improve care for CMC. Four change concepts were implemented: 1) patient registry, 2) dynamic care teams, 3) access plans and 4) care plans. CMC age 0-21 years were identified using 3M Clinical Risk Group (CRG) categories 5b-9. Healthcare claims data were provided by state Medicaid agencies, managed care organizations, or hospital health plans. The primary outcome was total per-member-per-year (PMPY) standardized spending; secondary outcomes included number of hospital days and admissions, ED visits and prescriptions. An interrupted time series approach using a 1:1 propensity score match was used to compare difference in differences in spend between enrolled patients and the propensity matched patients who were eligible but not enrolled. Spend and utilization changes over time were assessed using statistical process control methods within the same cohort over a ramp up period and a period of full implementation with >80% adherence to the change concepts.

RESULTS

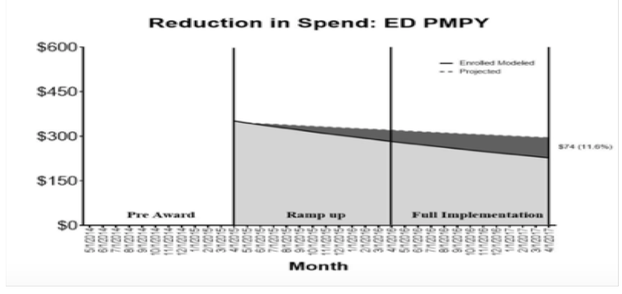
Overall there was a 4.2% decrease in in total PMPY spend for the enrolled group when compared to the propensity matched group (p=.018),



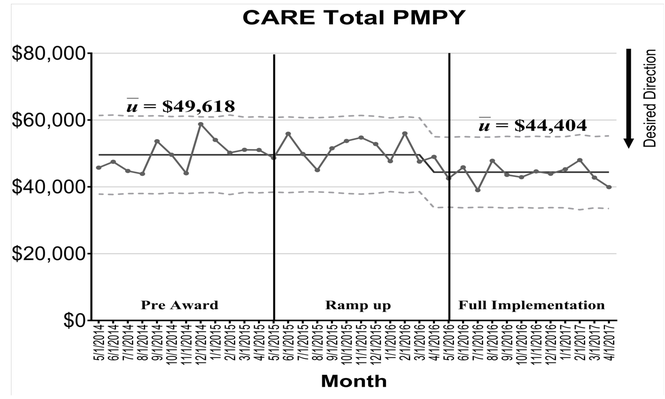
7.2% decrease in in inpatient spend (p=.042)



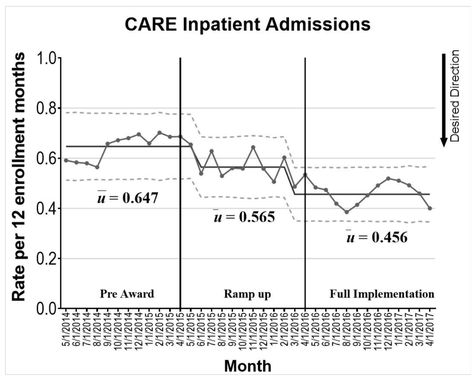
a 11.6% decrease in ED spend (p=.044).

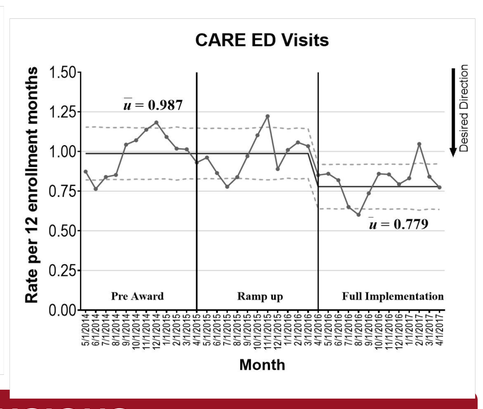


There was a downward shift in the in rate of PMPY spend for at the end of the ramp-up period and the stable lower spend for the Full Implementation



A similar change in rate was seen for inpatient admissions and ED visits





CONCLUSIONS

CMC enrolled in an LC showed significant decreases in total spend and inpatient and ED spend. Ion. Additional research is needed to determine more specific causal factors for the results and if these results are sustainable over time and replicable in other settings

ACKNOWLEDGEMENTS

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