

# Colorado ALTO Project



## Data Specifications Training Materials



**c|h|a**

Colorado Hospital Association

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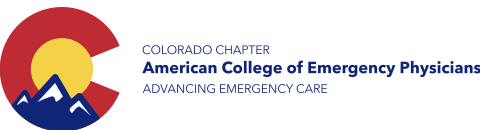
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## Our Partners

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# Colorado ALTO Project



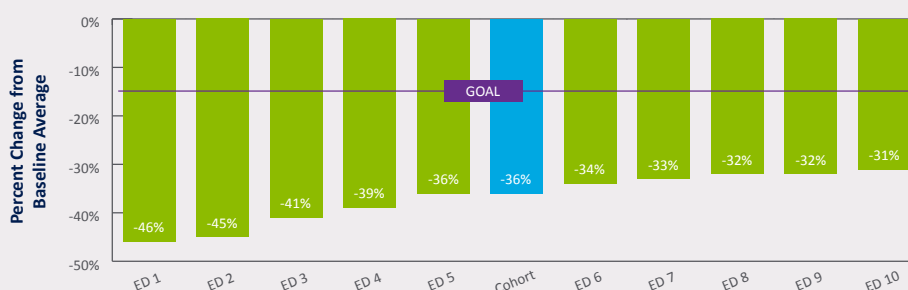
In 2017, Colorado Hospital Association (CHA) partnered with 10 hospital emergency departments (EDs) on a six-month pilot program with the goal of reducing the administration of opioids in the ED by 15 percent. This would be achieved by changing prescribing guidelines and using new protocols for alternatives to opioids (ALTOs) as first-line treatments for pain management, administering opioids sparingly or only as rescue medications.

**The Colorado Opioid Safety Pilot demonstrated the feasibility and effectiveness of using an ALTO approach as a first-line treatment for acute pain in the ED before turning to opioids. Based on this success, CHA will roll out this program statewide in 2018 through the Colorado ALTO Project.**

All 10 EDs successfully completed the opioid pilot, achieving a reduction in opioid administration rates of more than double the 15 percent goal on average.

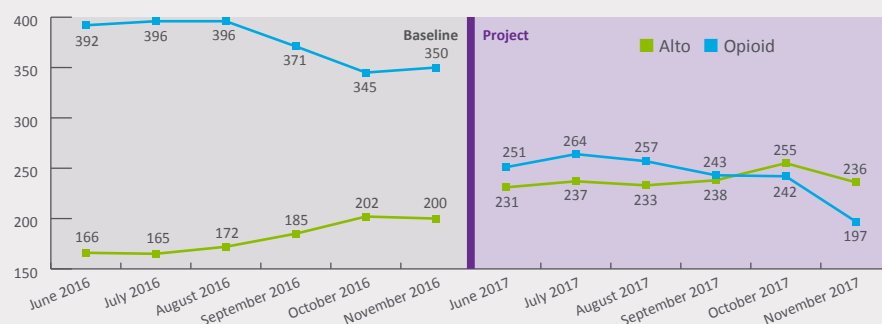
ED-Specific Percent Change in Opioid MEU (2016 vs 2017)

Percent Change from Baseline in MEUs per 1,000 ED Visits



In addition, the 10 EDs increased their use of ALTOs by more than 31 percent, with ALTO administration surpassing opioid administration near the end of the six-month pilot.

Number of Treated Pain Visits per 1,000 ED Visits



**CHA partnered with key stakeholders to develop and roll out the pilot program:**



COLORADO CHAPTER  
American College of Emergency Physicians  
ADVANCING EMERGENCY CARE



Quality Improvement Organizations  
Sharing Knowledge, Improving Health Care.  
CENTERS FOR MEDICARE & MEDICAID SERVICES



To learn more about the Colorado ALTO Project visit [www.cha.com/opioid](http://www.cha.com/opioid).

# Introduction:

## Colorado ALTO Project | Data Specifications Toolkit

### History of the Colorado ALTO Project

Colorado is at the center of the U.S. opioid epidemic with the 12th highest rate of misuse and abuse of prescription opioids across all 50 states. Prescription opioid misuse and abuse can begin with the legitimate use of opiates for the management of acute pain. Pain is the most common reason for admission into the Emergency Department (ED). Thus, Colorado's hospitals, particularly their EDs, are in a strong position to reduce opioid use in the general population and increase alternative pain management strategies.

In the summer of 2017, Colorado Hospital Association (CHA), Colorado American College of Emergency Physicians (CO ACEP), Colorado Consortium for Prescription Drug Abuse Prevention, Colorado Emergency Nurses' Association and Telligen QIN/QIO partnered to launch a six-month pilot to reduce the administration of opioids in the ED by 15 percent. Ten pilot hospitals were chosen to participate. The main tool used was the alternatives to opioids (ALTOs) approach from the CO ACEP *2017 Opioid Prescribing & Treatment Guidelines*.

All 10 EDs successfully implemented the ALTO approach and completed the opioid reduction pilot. Over the course of the six-month intervention period, in aggregate, ED clinicians decreased opioid usage (measured as MEUs per 1,000 ED visits) by 36 percent between 2017 and the comparable six-month baseline period in 2016, far exceeding the projected goal of 15 percent.

The success these 10 EDs experienced was only the beginning of the next phase of work. Along with more in-depth data analysis from the pilot comes the responsibility of sharing the success of implementing the ALTO approach with EDs across Colorado.

### Colorado ALTO Project Outcomes

CHA is committed to reducing opioids administration in Colorado EDs by implementing the ALTO approach from the CO ACEP 2017 Opioid Prescribing & Treatment Guidelines. Specifically, the goal of the project is to implement the ALTO approach for pain management in all EDs in Colorado and the aim is to achieve a statistically significant reduction in opioid administration in at least 50 percent of participating EDs.

### The Data Collection Manual for the Colorado ALTO Project

To ensure the validity and reliability of the multisite data set for the Colorado ALTO Project, the project team has compiled procedures and specifications for data in this document.

**For more information on the Colorado ALTO Data Specifications Training toolkit, contact Dominick Kuljis at [Dominick.Kuljis@cha.com](mailto:Dominick.Kuljis@cha.com).**

# SECTION 1: Study Population

## **The Colorado ALTO Project Population of Interest and Timeframe**

The Colorado ALTO Project is focused on administration of opioid medications and the administration of ALTOs in Colorado's EDs. In the hospital setting, the ED is a critical location to begin work towards decreasing the non-essential use of opioids around the state.

### **The population of interest:**

1. ED patients receiving an opioid or an ALTO administration
2. Adults age 18 years old to 100 years old

### **Timeframe:**

1. Baseline data: Three months of data collection prior to project launch.
  - a. Example: Project launch month is August 2018, baseline data collection period is May, June and July 2018.
2. Project data: Nine months of data collection.
  - a. Data submissions must start on the first of selected month. Data submissions must contain a full month of data.

## SECTION 2: Data Requirements

### Data Requirements

The Colorado ALTO Project will collect and analyze data on opioids and ALTOs administered in the ED during a patient visit. It is important to note, you are not collecting data on opioid or ALTO [prescriptions](#) from the ED. Should an ED choose to submit data to CHA for analysis, specific formatting for data collection will be required. Submission of total ED visits, opioids and ALTOs data will be required, and physician-level data will be [optional](#).

### Data Sources

Information about each patient's visit to the ED and demographic information about that patient will come from the CHA Discharge Database, an administrative claims database maintained at CHA. Hospitals will submit medication reports and total ED visits, based on data they extract from their Electronic Health Records (EHRs), pharmacy data and admissions data.

### Data Management

The CHA data team will connect the medication reports and the administrative claims data using the supplied Patient Account Number (PAN) and admission date. Once this connection has been made, all patient identifying information will be stripped from the data and replaced with a generated dummy ID. The study team will securely store all data received on an encrypted server with restricted access.

### File Format Requirements

Files will be sent to CHA every month in one of two formats: Microsoft Excel or delimited text files. Files must be named with the following format, using your facility's assigned ID and the year and month of data contained in the submission:

HospID\_ADM\_encounters\_YYYYMM\_baseline.xls  
HospID\_EHR\_YYYYMM.xls  
HospID\_EHR\_YYYYMM\_baseline.xls

Because the file names will be used to automatically process the data, the files names must follow the exact format above. Please do not add any additional labelling to the file name unless a resubmission is necessary. In this case, please add "\_V2" to the end of the file name:

HospID\_EHRYYYYMM\_V2.xls

Based on lessons learned from the pilot, for delimited text files the preferred delimiter is the pipe ("|"). Comma and tab-delimited files are acceptable but must be scrubbed of those characters embedded in the actual data.

The first line of the data set in each file must contain the column name. If possible, please use the field names in the data elements table below. If it is not possible to use these standardized names, whatever column names are used must remain consistent across each monthly data submission.

## SECTION 3: Requested Data Elements

### Components and Data Format from Electronic Health Record

Medications of interest are:

#### Opiates:

- Buprenorphine
- Codeine
- Fentanyl nasal spray
- Hydrocodone
- Hydromorphone
- Meperidine
- Methadone
- Morphine
- Oxycodone
- Tramadol

#### ALTOS:

- Ketamine
- Lidocaine nasal spray
- Lidocaine IV
- Lidocaine patch
- Lidocaine topical
- Toradol (ketorolac tromethamine)
- Haldol (haloperidol)
- Acetaminophen
- Ibuprofen
- Bentyl (dicyclomine)

### EHR Components

These are the measures that should be pulled from the EHR and sent to CHA on a monthly basis

#### Electronic Health Record – Medication Administration

Name	Type	Notes
Hospital_ID	Num	This is the standard 3-digit ID assigned by CHA for all Discharge Claims. Please contact our data team if you do not know the ID number for your facility.
Patient_Account_Number	Alpha-numeric	This should be the unique identifier for this patient AND visit. This account number is given to the patient once a bill has been created and sent to the patient. This is not an MRN or CSN.
Medical_Record_Number	Alpha-numeric	This should be the identifier unique to this patient that is used any time this patient visits your facility (doesn't change between visits).
Admission_Date	Date	Format: MM/DD/YYYY. Date of admission into the emergency department.
Discharge_Date	Date	Format: MM/DD/YYYY. Date of discharge from the emergency department. If patient is admitted as inpatient, can also be date of discharge from hospital.
Admin_Date_Time	Date	Format: MM/DD/YYYY(hh:mm:00). The date and time (if available) of medication administration.
Medication	Char	Name of medication
Admin_route	Char	IV, PO, TD, IM, IN, etc.
Admin_dose	Num	
Admin_unit	Char	Only mg, g, or mcg. <b>(No Volumes)</b>
Infusion	Char	Yes or No (to determine infusion vs. bolus)
Provider_NPI_Number*	Num*	Unique 10-digit physician provider identification number issued by CMS*

\* Data submission is optional

## SECTION 3: Requested Data Elements continued

Data Format EHR Component Opioids

- Each administration of a medication will need to be on **its own line of data** in the file
- Acceptable:**

Hospital ID	Patient Account Number	Medical Record Number	Admission Date	Discharge Date	Admin Date / Time	Medication	Admin Route	Admin Dose	Admin Unit	Infusion	Provider NPI Number
999	ABCDEF	A1B2C3	01/01/2016	01/03/2016	01/01/2016(:04:55:00)	Hydromorphone	IV	.2	mg	Yes	
999	ABCDEF	A1B2C3	01/01/2016	01/03/2016	01/01/2016(:05:07:00)	Hydromorphone	IV	5/325	mg	Yes	00000
999	123456	789002	01/01/2016	01/02/2016	01/01/2016(:20:23:00)	Hydrocodone	PO	2	mg	No	00000

**NOTE:** same patient, same visit, received 2 different administrations of medication, each medication is on its own line.

- Unacceptable:**

Hospital ID	Patient Account Number	Medical Record Number	Admission Date	Discharge Date	Admin Date / Time	Medication	Admin Route	Admin Dose	Admin Unit	Infusion	Provider NPI Number
999	ABCDEF	A1B2C3	01/01/2016	01/03/2016	01/01/2016(:04:55:00)	Dilaudid	IV	.5	mg	No	00000
					01/01/2016(:05:07:00)	Hydromorphone	Intravenous	15	mL	No	00000
999	123456	789002	01/01/2016	01/02/2016	01/01/2016(:20:23:00)	Vicodin	Sublingual	2	mg	No	00000

**NOTE:** same patient, same visit, received 2 different administrations of medication, but two administrations of hydromorphone are sharing one line of data.

Data Format EHR Component ALTOS

- Each administration of a medication will need to be on its own line of data in the file
- Acceptable:**

Hospital ID	Patient Account Number	Medical Record Number	Admission Date	Discharge Date	Admin Date / Time	Medication	Admin Route	Admin Dose	Admin Unit	Infusion	Provider NPI Number
999	ABCDEF	A1B2C3	01/01/2016	01/03/2016	01/01/2016(:07:45:00)	Acetaminophen	PO	50	mg	No	00000
999	ABCDEF	A1B2C3	01/01/2016	01/03/2016	01/01/2016(:08:19:00)	Lidocaine	IV	.5	mg	No	
999	123456	789002	01/01/2016	01/02/2016	01/01/2016(:23:42:00)	Ibuprofen	PO	200	mg	No	00000

**NOTE:** same patient, same visit, received 2 different administrations of medication, each medication is on its own line.

- Unacceptable:**

Hospital ID	Patient Account Number	Medical Record Number	Admission Date	Discharge Date	Admin Date / Time	Medication	Admin Route	Admin Dose	Admin Unit	Infusion	Provider NPI Number
999	ABCDEF	A1B2C3	01/01/2020	01/03/2016	01/01/2016(:07:45:00)	Acetaminophen		1	Pill	No	00000
					01/01/2016(:08:19:00)	Xylocaine	IV	.5	mg	No	00000
999	123456	789002	01/01/2016	01/02/2016	01/01/2016(:23:42:00)	Advil	mouth	200	mg	No	00000

**NOTE:** same patient, same visit, received 2 different administrations of medication, but two administrations of hydromorphone are sharing one line of data.



## SECTION 3: Requested Data Elements continued

### Summarized Total ED Visits per Month

Each hospital will need to submit the total number of ED visits per month (including any patient that was later admitted to inpatient from the ED).

#### Total ED Visits—from ED Admissions

Name	Type	Notes
Hospital_ID	Num	This is the standard 3-digit ID assigned by CHA for all Discharge Claims. Please contact our data team if you do not know the ID number for your facility
Data_Start_Date	Date	MM/DD/YYYY
Data_End_Date	Date	MM/DD/YYYY
Total_ED_Visits	Num	Total ED visits for the date range.

- Data Format ADM
- **Acceptable:**

Hospital_ID	Data_Start_Date	Data_End_Date	Total_ED_Visits
999	01/01/2016	01/31/2016	796
999	02/01/2016	02/28/2016	800
999	03/01/2016	03/31/2016	808

## SECTION 4: Privacy and Data Security

Colorado Hospital Association complies with the Privacy Rule, also known as the Standards for Privacy of Individually Identifiable Health Information, the regulations are issued by the Department of Health and Human Services in relation to the Health Insurance Portability and Accountability Act of 1996 (HIPAA). This became a requirement on April 14, 2003. For more information about the Privacy Rule, see:

[http://privacyruleandresearch.nih.gov/pdf/research\\_repositories\\_final.pdf](http://privacyruleandresearch.nih.gov/pdf/research_repositories_final.pdf)

The data repository will contain data about patient ED visits at participating facilities. It will not contain individual identifiable health information as defined by the Privacy Rule, however it will contain a limited data set of Protected Health Information (PHI) such as dates of service to patients.

### Data Storage

Study materials with PHI will be stored in a secure manner to avoid unintended access by non-study personnel. The following University of Colorado guidelines for health care personnel expand on the safe storage and transmission of all types of Protected Health Information, secure disposal of electronic PHI, and the protection of PHI from risks.

The study team will take the following steps to protect electronic PHI:

- Protect computer's ePHI with strong passwords
- Whenever possible, do not store ePHI on a portable storage device
- Avoid emailing PHI, but if necessary then encrypt e-mail messages containing PHI
- Back up ePHI
- Use virus protection software and keep it updated
- Mask work with password-protected screen savers
- Encrypt ePHI when not in use

All e-mails containing PHI will be encrypted.

Additional steps to secure PHI include:

- Lock all entrances to offices containing PHI when feasible
- Store paper PHI documents in a file cabinet with a lock
- Periodically update and scan computer antivirus protection software
- Thoroughly and immediately dispose of PHI you no longer need and do not need to retain

**For additional information on policies, please visit:**

<http://www.ucdenver.edu/research/ORC/HIPAA/Pages/default.aspx>.

**If you have any questions about the safety of data during transmission or the storage of data, please contact Dominick Kuljis.**

## SECTION 5: Data Collection and Transmission

In addition to safe storage, the Colorado ALTO Project data will be safe during transmission as well. A secure Sharepoint site will be used to upload the data files collected from the EHR and ADM. Do not email data files to CHA. The link below will direct you to the site:

[\*https://cohosp.sharepoint.com/sites/opioid\*](https://cohosp.sharepoint.com/sites/opioid)

Before uploading the file please ensure that the correct filename format is used. If you are resubmitting data, please follow the following filename format:

HospID\_ADM\_encounters\_YYYYMM\_V2.xls

HospID\_EHR\_YYYYMM\_baseline\_V3.xls

HospID\_EHR\_YYYYMM\_V4.xls

The latest submitted version will be used for the final data analysis. For questions or concerns about the Data Manual submission process, contact the project data analyst, Dominick Kuljis, at [Dominick.Kuljis@cha.com](mailto:Dominick.Kuljis@cha.com).

## Notes

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## Notes

[illegible]

## Notes

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