

# Colorado End-of-Life Options Act, 2023

## 2023 Data Summary, with 2017-2023 Trends and Totals

Prepared by the Center for Health and Environmental Data

Colorado Department of Public Health and Environment

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### Introduction

In 2016, Colorado voters approved Proposition 106, “Access to Medical Aid in Dying,” which amends Colorado statutes to include the Colorado End-of-Life Options Act, *Article 48 of Title 25, Colorado Revised Statutes (C.R.S.)*. This Act allows an eligible terminally-ill individual with a prognosis of six months or less to live to request and self-administer medical aid-in-dying medication in order to voluntarily end his or her life; authorizes a physician to prescribe medical aid-in-dying medication to a terminally ill individual under certain conditions; and creates criminal penalties for tampering with a person's request for medical aid-in-dying medication or knowingly coercing a person with a terminal illness to request the medication.

This Act requires prescribing physicians and health care professionals dispensing aid-in-dying medication to report to the Colorado Department of Public Health and Environment specific information outlined by the Act. CDPHE is required to use this information to ensure documentation requirements outlined in the Act are met, as well as to make available to the public an annual statistical report. The Board of Health adopted rules for reporting in 2017 (6 CCR 1009-4, *Reporting and Collecting Medical Aid-in-Dying Medication Information*).

This report is the seventh annual statistical report published per this Act, and describes Colorado’s participation in End-of-Life Options activities in 2023; it incorporates updates to previously-published statistics and includes summary statistics for the complete seven-year period of participation, 2017-2023.

### Data Collection and Statistics

Statistics presented in this report reflect patients for whom prescriptions for aid-in-dying medication were written; among those, patients to whom aid-in-dying medications were dispensed; and deaths among patients subsequent to prescription of aid-in-dying medication. Data used for this report are based on required reporting forms and death certificates received by CDPHE. More information about the reporting process and required forms as well as this annual report are available [online](#).

It is important to note that the Colorado End-of-Life Options Act does not authorize or require the Colorado Department of Public Health and Environment to follow up with physicians who prescribe aid-in-dying medication, patients, or their families to obtain information about use of aid-in-dying medication. Additionally, the Colorado End-of-Life Options Act requires that the cause of death assigned on a patient’s death certificate be the underlying terminal illness. Thus, statistics in this report for deaths are based on all deaths identified among individuals prescribed aid-in-dying medication, whether or not they used this medication, and noting that death may have been caused

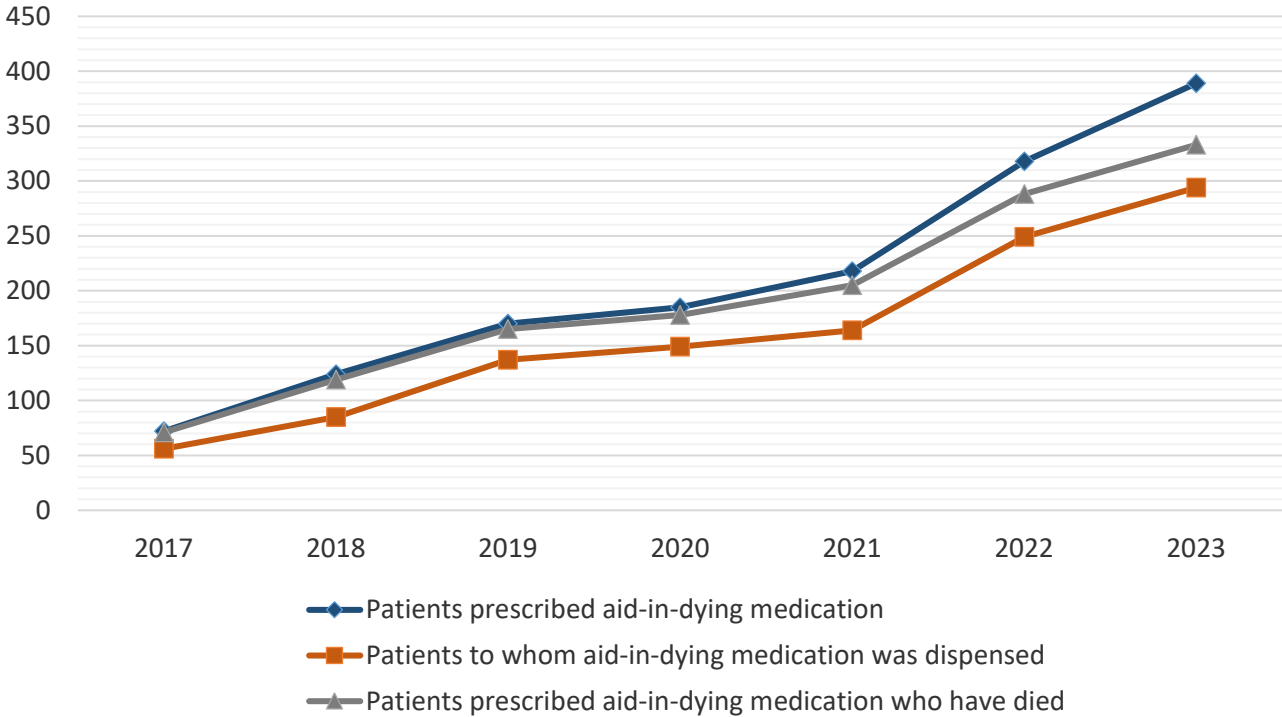
by ingestion of medical aid-in-dying medication, the underlying terminal illness or condition, or some other cause.

Since the publication of past annual statistical reports, additional or amended reporting forms from health care providers concerning prescriptions in earlier years may have been submitted to CDPHE throughout 2023. CDPHE also received more death certificates associated with patients who were prescribed aid-in-dying medication in the prior year. This report incorporates this additional information received about patients participating in End-of-Life Options activities in prior years in addition to the new data for 2023.

Participation in End-of-Life Options Activities

In 2023, **389** patients received prescriptions for aid-in-dying medications under the provisions of the Colorado End-of-Life Options Act. This represents a 22% increase in the number of prescriptions compared to 2022. Among those prescribed aid-in-dying medication in 2023, CDPHE has received reports for **294** patients to whom aid-in-dying medication was dispensed. Also among those prescribed aid-in-dying medication, CDPHE has received death certificates for **333** patients through routine vital records registration. Note that not all of these deceased patients were dispensed aid-in-dying medication, and deaths may have been due to ingestion of aid-in-dying medication, the underlying terminal illness or condition, or other causes.

Figure 1. Trends in patients prescribed or dispensed aid-in-dying medication, or who have died following receiving a prescription, 2017-2023



87 unique Colorado physicians wrote prescriptions for aid-in-dying medication in 2023. Over the seven-year period 2017-2023, 248 unique Colorado physicians provided prescriptions. In 2023, the median age of patients prescribed aid-in-dying medication was 75 years (minimum age was in the 20's, maximum age was in the upper-90's or older).

Among patients prescribed aid-in-dying medication, the most common illnesses or conditions were cancers, progressive neurological or neurodegenerative disorders (including amyotrophic lateral sclerosis /ALS, Parkinson's disease, multiple sclerosis and progressive supranuclear palsy), major cardiovascular diseases (including heart disease, heart failure, stroke and vascular diseases) and chronic lower respiratory diseases (including chronic obstructive pulmonary disease). (Table 1)

**Table 1. Underlying terminal illnesses/conditions among patients prescribed aid-in-dying medication, 2019-2023 with 2017-2023 totals**

	2019		2020		2021		2022		2023		2017-2023 Total	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
<b>Total number of patients prescribed aid-in-dying medication</b>	170	100	185	100	218	100	318	100	389	100	1476	100
<b>Cancers - Total</b>	103	60.6	124	67.0	136	62.4	187	58.8	215	55.3	891	60.4
Pancreas	13	7.6	14	7.6	22	10.1	14	4.4	36	9.3	116	7.9
Breast	12	7.1	17	9.2	12	5.5	20	6.3	31	8.0	100	6.8
Lung and bronchus	15	8.8	18	9.7	22	10.1	39	12.3	25	6.4	139	9.4
Other	8	4.7	12	6.5	12	5.5	17	5.3	21	5.4	82	5.6
Central nervous system	8	4.7	10	5.4	12	5.5	8	2.5	18	4.6	61	4.1
Colon, rectum and anus	7	4.1	14	7.6	11	5.0	14	4.4	15	3.9	70	4.7
Prostate	5	2.9	9	4.9	7	3.2	8	2.5	12	3.1	52	3.5
Head and neck	8	4.7	5	2.7	4	1.8	6	1.9	7	1.8	41	2.8
Ovary	4	2.4	3	1.6	4	1.8	10	3.1	7	1.8	35	2.4
Uterus and endometrium	5	2.9	4	2.2	2	0.9	4	1.3	7	1.8	25	1.7
Leukemia	2	1.2	1	0.5	1	0.5	2	0.6	7	1.8	14	0.9
Kidney and urinary tract	2	1.2	2	1.1	8	3.7	10	3.1	5	1.3	29	2.0
Bladder	2	1.2	2	1.1	2	0.9	5	1.6	5	1.3	18	1.2
Esophagus	1	0.6	5	2.7	5	2.3	5	1.6	4	1.0	26	1.8
Bile duct	1	0.6	4	2.2	0	0.0	2	0.6	4	1.0	14	0.9
Lymphoma	2	1.2	0	0.0	3	1.4	4	1.3	4	1.0	13	0.9

Melanoma	2	1.2	1	0.5	4	1.8	5	1.6	3	0.8	20	1.4
Stomach	3	1.8	1	0.5	2	0.9	5	1.6	2	0.5	14	0.9
Multiple myeloma	3	1.8	1	0.5	2	0.9	8	2.5	1	0.3	17	1.2
Cervix	0	0.0	1	0.5	1	0.5	1	0.3	1	0.3	5	0.3
Progressive neurological or neurodegenerative disorders - Total	34	20.0	24	13.0	38	17.4	46	14.5	62	15.9	243	16.5
Amyotrophic lateral sclerosis	19	11.2	12	6.5	22	10.1	24	7.5	22	5.7	122	8.3
Parkinson's disease	5	2.9	2	1.1	6	2.8	10	3.1	20	5.1	48	3.3
Multiple sclerosis	1	0.6	0	0.0	1	0.5	3	0.9	8	2.1	15	1.0
Progressive supranuclear palsy	1	0.6	4	2.2	2	0.9	2	0.6	6	1.5	20	1.4
Other progressive neurological or neurodegenerative disorders	7	4.1	5	2.7	6	2.8	6	1.9	5	1.3	31	2.1
Corticobasal degeneration	1	0.6	1	0.5	1	0.5	1	0.3	1	0.3	7	0.5
Cardiovascular disease	14	8.2	15	8.1	13	6.0	26	8.2	37	9.5	118	8.0
Chronic lower respiratory disease	9	5.3	12	6.5	9	4.1	25	7.9	25	6.4	92	6.2
Interstitial lung disease	4	2.4	1	0.5	6	2.8	9	2.8	9	2.3	30	2.0
Severe protein calorie malnutrition	0	0.0	0	0.0	1	0.5	2	0.6	9	2.3	12	0.8
Chronic kidney disease	2	1.2	0	0.0	2	0.9	0	0.0	6	1.5	12	0.8
Cerebrovascular disease	0	0.0	2	1.1	3	1.4	3	0.9	5	1.3	15	1.0
Chronic liver disease	1	0.6	1	0.5	5	2.3	3	0.9	0	0.0	10	0.7
Other illnesses/conditions	3	1.8	6	3.2	5	2.3	17	5.3	21	5.4	53	3.6

*'Other illnesses/conditions' also includes patients for whom the underlying terminal illness or condition has not yet been reported to CDPHE.*



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In 2023, 37 unique pharmacists in Colorado dispensed aid-in-dying medications. Medications dispensed included combinations of diazepam, digoxin, morphine sulfate, and propranolol (DDMP or DDMP2), substitution of propranolol with amitriptyline (DDMA), or DDMA with addition of phenobarbital (DDMAPh). Secobarbital has not been prescribed or dispensed in Colorado for medical aid-in-dying since 2018; while DDMAPh began to be used commonly in early 2021. (Table 2)

**Table 2. Categories of medications dispensed to patients prescribed aid-in-dying medication, 2019-2023 with 2017-2023 totals**

	2019		2020		2021		2022		2023		2017-2023 Total	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Total number of patients to whom aid-in-dying medication was dispensed	137	100	149	100	164	100	249	100	294	100	1,134	100
DDMA combination	49	35.8	63	42.3	66	40.2	111	44.6	162	55.1	451	39.8
DDMP/DDMP2 combination	87	63.5	81	54.4	33	20.1	48	19.3	68	23.1	408	36
DDMAPh combination	0	0.0	4	2.7	65	39.6	88	35.3	63	21.4	220	19.4
Secobarbital	0	0.0	0	0	0	0	0	0	0	0	49	4.3
Other (morphine sulfate alone, or in some other combination)	1	0.7	1	0.7	0	0.0	2	0.8	1	0.3	6	0.5

### Characteristics of Patients Prescribed Aid-in-Dying Medication Who Have Died

Among patients who died following an aid-in-dying prescription written in 2023, the median duration of time between the date the prescription was written and date of death was 13 days (minimum of zero days, maximum of approximately eight months). Patients sometimes wait before filling their prescriptions or taking the medication, so this duration does not reflect the time that it takes for the medication to take effect. Table 3 presents characteristics of patients who have been prescribed aid-in-dying medication, and for whom a death certificate was subsequently registered with CDPHE. Again, it is important to note that these statistics reflect all deaths identified among individuals prescribed aid-in-dying medication, whether or not they used this medication, and irrespective of whether their death was caused by ingestion of medication, the underlying terminal illness or condition, or some other cause.

Table 3. Summary of patients who died following prescription of aid-in-dying medication, 2019-2023 with 2017-2023 totals

	2019		2020		2021		2022		2023		2017-2023 Total	
	Count	%	Count	%	Count	%	Count	%	Count	%	Count	%
Total number of decedents prescribed aid-in-dying medication	165	100	178	100	205	100	288	100	333	100	1,359	100
<b>Sex</b>												
Female	79	47.9	93	52.2	93	45.4	161	55.9	175	52.6	694	51.1
Male	86	52.1	85	47.8	112	54.6	127	44.1	158	47.4	665	48.9
<b>Age group</b>												
18-34	2	1.2	0	0.0	2	1.0	0	0.0	2	0.6	7	0.5
35-44	1	0.6	2	1.1	5	2.4	2	0.7	5	1.5	18	1.3
45-54	14	8.5	11	6.2	12	5.9	8	2.8	12	3.6	71	5.2
55-64	32	19.4	37	20.8	27	13.2	53	18.4	49	14.7	230	16.9
65-74	55	33.3	44	24.7	67	32.7	85	29.5	103	30.9	418	30.8
75-84	36	21.8	49	27.5	61	29.8	80	27.8	84	25.2	357	26.3
85+	25	15.2	35	19.7	31	15.1	60	20.8	78	23.4	258	19.0
<b>Race/ethnicity</b>												
White, non-Hispanic	159	96.4	170	95.5	190	92.7	271	94.1	309	92.8	1,277	94.0
White, Hispanic	2	1.2	3	1.7	8	3.9	7	2.4	9	2.7	39	2.9
Black/African American	1	0.6	1	0.6	0	0.0	1	0.3	2	0.6	6	0.4
Asian/Pacific Islander	3	1.8	4	2.2	5	2.4	5	1.7	8	2.4	26	1.9
American Indian/Alaska Native	0	0.0	0	0.0	0	0.0	1	0.3	1	0.3	2	0.1
Other or not stated	0	0.0	0	0.0	2	1.0	3	1.0	4	1.2	9	0.7
<b>Marital status</b>												
Married	74	44.8	84	47.2	90	43.9	121	42.0	148	44.4	613	45.1
Divorced	55	33.3	42	23.6	58	28.3	72	25.0	81	24.3	351	25.8
Widow/widower	21	12.7	41	23.0	40	19.5	68	23.6	74	22.2	281	20.7
Never been married	15	9.1	10	5.6	13	6.3	26	9.0	26	7.8	104	7.7
Unknown or not stated	0	0.0	1	0.6	4	2.0	1	0.3	4	1.2	10	0.7

Educational attainment												
8 <sup>th</sup> grade or less	2	1.2	4	2.2	1	0.5	2	0.7	0	0.0	11	0.8
9 <sup>th</sup> -12 <sup>th</sup> grade, no diploma or no GED completed	3	1.8	7	3.9	4	2.0	5	1.7	6	1.8	27	2.0
High school graduate or GED completed	36	21.8	35	19.7	38	18.5	47	16.3	70	21.0	268	19.7
Some college credit but no degree	23	13.9	24	13.5	21	10.2	31	10.8	49	14.7	183	13.5
Associate's degree	14	8.5	19	10.7	18	8.8	26	9.0	25	7.5	118	8.7
Bachelor's degree	46	27.9	53	29.8	60	29.3	88	30.6	98	29.4	389	28.6
Master's degree	26	15.8	25	14.0	46	22.4	62	21.5	52	15.6	238	17.5
Doctorate or professional degree	15	9.1	9	5.1	17	8.3	25	8.7	29	8.7	117	8.6
Unknown	0	0.0	2	1.1	0	0.0	2	0.7	4	1.2	8	0.6
Region of residence (county location)												
Denver Metro Area	99	60.0	96	53.9	130	63.4	192	66.7	203	61.0	844	62.1
Other Front Range Counties	38	23.0	43	24.2	43	21.0	62	21.5	60	18.0	285	21.0
Other Counties	28	17.0	37	20.8	32	15.6	32	11.1	67	20.1	223	16.4
Unknown	0	0.0	2	1.1	0	0.0	2	0.7	3	0.9	7	0.5
Region of residence (population density)												
Urban Counties	140	84.8	143	80.3	177	86.3	257	89.2	279	83.8	1,161	85.4
Rural Counties	20	12.1	28	15.7	22	10.7	25	8.7	43	12.9	155	11.4
Frontier Counties	5	3.0	5	2.8	6	2.9	4	1.4	8	2.4	36	2.6
Unknown	0	0.0	2	1.1	0	0.0	2	0.7	3	0.9	7	0.5
Place of death												
Residence	131	79.4	152	85.4	171	83.4	236	81.9	259	77.8	1,111	81.8
Nursing home/long-term care facility	12	7.3	11	6.2	19	9.3	22	7.6	29	8.7	107	7.9

Hospice facility	11	6.7	8	4.5	7	3.4	14	4.9	12	3.6	55	4
Hospital inpatient	3	1.8	1	0.6	4	2	4	1.4	4	1.2	18	1.3
Other or unknown	8	4.8	6	3.4	4	2	12	4.2	29	8.7	68	5.1
<b>Hospice enrollment status</b>												
Under hospice care	130	78.8	155	87.1	174	84.9	233	80.9	277	83.2	1,133	83.4
Not under hospice care or unknown	35	21.2	23	12.9	31	15.1	55	19.1	55	16.5	224	16.5
Unknown	0	0.0	0	0.0	0	0.0	0	0.0	1	0.3	2	0.1

*'Denver Metro Area' includes Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas and Jefferson Counties.*

*'Other Front Range' includes El Paso, Larimer, Pueblo and Weld Counties.*

*'Rural counties' represent a non-metropolitan county with no cities over 50,000 residents*

*'Frontier counties' represent counties with population density of 6 or fewer residents per square mile*

*'Place of death - Other/unknown' includes outpatient facilities, emergency departments, residences other than the decedent's and unspecified locations.*

## Monitoring Compliance with Reporting Requirements

To comply with the Colorado End-of-Life Options Act, physicians who prescribe aid-in-dying medication, and those health care providers who dispense such medication, must submit documentation to CDPHE per rules promulgated by the Colorado Board of Health.

Physicians who prescribe aid-in-dying medication must submit:

- Attending/prescribing physician form
- Patient's completed written request for medical aid-in-dying medication
- Written confirmation of mental capacity from a licensed mental health provider (if applicable)
- Consulting physician's written confirmation of diagnosis and prognosis

Health care providers who dispense aid-in-dying medication must submit:

- Medication dispensing form

Table 4 contains a summary of documentation received by CDPHE concerning patients who were prescribed aid-in-dying medication. This information is based on reporting forms and supplemental documentation received by CDPHE as of **February 20, 2023**.



**Table 4. Documentation received for patients participating in the Colorado End-of-Life Options Act, 2019-2023 with 2017-2023 totals**

Form/Document	2019	2020	2021	2022	2023	2017-2023 Total
	Count	Count	Count	Count	Count	Count
Attending/prescribing physician form	146	157	186	263	316	1,239
Patient's completed written request	130	154	183	261	304	1,175
Mental health provider's confirmation	1	3	0	3	0	8
Consulting physicians written confirmation	130	153	183	262	300	1,150
Medication dispensing form	137	149	164	249	299	1,139
Death certificate	165	178	205	288	333	1,359

While reporting of the required documentation (including prescribing forms, patients' written requests, consulting physicians' written confirmations, and mental health provider confirmation when applicable) may be incomplete, attending/prescribing forms received contained physicians' signed attestations that all requirements of the Colorado End-of-Life Options Act have been met, and that required documentation is complete and contained in patients' records. Efforts continue to educate physicians and other health care providers about reporting requirements.

Additional instructions for reporting, including specific regulations and forms, and past reports are available on the Colorado Medical Aid in Dying [website](#).

## Confidentiality

Colorado's End-of-Life Options Act states that the information reported to CDPHE is not a public record and is not available for public inspection. To comply with that statutory mandate, CDPHE will not disclose any information that identifies patients, physicians, pharmacists, family members, witnesses or other participants in activities covered by the Colorado End-of-Life Options Act. The information presented in this report is limited to such categories within a reporting field to ensure that confidentiality is preserved.

For more information, visit the Colorado Medical Aid-in-Dying webpage, [cdphe.colorado.gov/center-for-health-and-environmental-data/registries-and-vital-statistics/medical-aid-in-dying](https://cdphe.colorado.gov/center-for-health-and-environmental-data/registries-and-vital-statistics/medical-aid-in-dying)