

# COLORADO END-OF-LIFE OPTIONS ACT, YEAR FOUR 2020 DATA SUMMARY, WITH 2017-2020 TRENDS AND TOTALS

*Prepared by:*

Center for Health and Environmental Data

Colorado Department of Public Health and Environment

<http://cdphe.colorado.gov/center-for-health-and-environmental-data/registries-and-vital-statistics/medical-aid-in-dying>

## 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 (CDPHE) specific information outlined by the Act. This information is to be used to ensure documentation requirements outlined in the Act are met, as well as to make available to the public an annual statistical report. Rules for reporting were adopted by the Board of Health in 2017 (6 CCR 1009-4, Reporting and Collecting Medical Aid-in-Dying Medication Information).

This report is the fourth annual statistical report published per this Act, and describes Colorado’s participation in End-of-Life Options activities in 2020; incorporates updates to previously-published statistics; and includes summary statistics for the complete four-year period of participation, 2017-2020.

## 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 this annual report are available at: <http://cdphe.colorado.gov/center-for-health-and-environmental-data/registries-and-vital-statistics/medical-aid-in-dying>

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 2020. More death certificates associated with patients who were prescribed aid-in-dying medication in the prior year were also received by CDPHE in 2020. 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 2020.

## Participation in End-of-Life Options Activities

In 2020, **188** patients received prescriptions for aid-in-dying medications under the provisions of the Colorado End-of-Life Options Act. This represents a 9.9% increase in the number of prescriptions compared to 2019. Among those prescribed aid-in-dying medication in 2020, CDPHE has received reports for **145** patients to whom aid-in-dying medication was dispensed. Also among those prescribed aid-in-dying medication, CDPHE has received death certificates for **156** 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.

Prescriptions written in 2020 for aid-in-dying medication were provided by **70** unique Colorado physicians. Over the four-year period 2017-2020, prescriptions were provided by **159** unique Colorado physicians. In 2020, the median age of patients prescribed aid-in-dying medication was **73** years (minimum age was in the upper-20's, maximum age was in the upper-90's). Among patients prescribed aid-in-dying medication, the most common illnesses or conditions were malignant neoplasms (cancer), progressive neurological disorders (including amyotrophic lateral sclerosis /ALS, progressive supranuclear palsy, Parkinson's disease and multiple sclerosis), major cardiovascular diseases (including heart disease, stroke and vascular diseases) and chronic lower respiratory diseases (including chronic obstructive pulmonary disease, or COPD) (Table 1).

**Table 1. Underlying terminal illnesses/conditions among patients prescribed aid-in-dying medication, 2017-2020.**

	2017		2018		2019		2020		2017-2020 Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
<b>Total number of patients prescribed aid-in-dying medication</b>	72	100	123	100	171	100	188	100	554	100
<b>Malignant Neoplasm - Total</b>	47	65.3	78	63.4	105	61.4	118	62.8	348	62.8
Breast	1	1.4	6	4.9	12	7.0	18	9.6	37	6.7
Pancreas	8	11.1	9	7.3	13	7.6	15	8.0	45	8.1
Lung	11	15.3	9	7.3	13	7.6	14	7.4	47	8.5
Colon and rectum	4	5.6	5	4.1	7	4.1	13	6.9	29	5.2
Central nervous system	1	1.4	4	3.3	8	4.7	9	4.8	22	4.0
Prostate	7	9.7	4	3.3	5	2.9	8	4.3	24	4.3
Head and neck	6	8.3	5	4.1	8	4.7	5	2.7	24	4.3
Esophagus	2	2.8	4	3.3	1	0.6	5	2.7	12	2.2

	2017		2018		2019		2020		2017-2020 Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
Endometrium	0	0.0	3	2.4	6	3.5	4	2.1	13	2.3
Bile duct	1	1.4	2	1.6	1	0.6	4	2.1	8	1.4
Ovary	2	2.8	5	4.1	4	2.3	2	1.1	13	2.3
Liver	0	0.0	0	0.0	2	1.2	2	1.1	4	0.7
Bladder	0	0.0	0	0.0	1	0.6	2	1.1	3	0.5
Melanoma	1	1.4	4	3.3	3	1.8	1	0.5	9	1.6
Kidney, bladder and urinary tract	1	1.4	3	2.4	3	1.8	1	0.5	8	1.4
Multiple myeloma	0	0.0	2	1.6	3	1.8	1	0.5	6	1.1
Stomach	0	0.0	1	0.8	3	1.8	1	0.5	5	0.9
Leukemia	0	0.0	1	0.8	2	1.2	1	0.5	4	0.7
Other malignant neoplasm	2	2.8	11	8.9	10	5.8	12	6.4	35	6.3
<b>Progressive neurological disorders - Total</b>	<b>12</b>	<b>16.7</b>	<b>27</b>	<b>22.0</b>	<b>32</b>	<b>18.7</b>	<b>27</b>	<b>14.4</b>	<b>98</b>	<b>17.7</b>
Amyotrophic lateral sclerosis	9	12.5	14	11.4	18	10.5	14	7.4	55	9.9
Progressive supranuclear palsy	0	0.0	5	4.1	1	0.6	4	2.1	10	1.8
Parkinson's disease	1	1.4	4	3.3	5	2.9	3	1.6	13	2.3
Multiple sclerosis	0	0.0	2	1.6	1	0.6	0	0.0	3	0.5
Other progressive neurodegenerative disorders	2	2.8	2	1.6	7	4.1	6	3.2	17	3.1
<b>Cardiovascular disease</b>	<b>7</b>	<b>9.7</b>	<b>6</b>	<b>4.9</b>	<b>13</b>	<b>7.6</b>	<b>16</b>	<b>8.5</b>	<b>42</b>	<b>7.6</b>
<b>Chronic lower respiratory disease</b>	<b>5</b>	<b>6.9</b>	<b>7</b>	<b>5.7</b>	<b>9</b>	<b>5.3</b>	<b>13</b>	<b>6.9</b>	<b>34</b>	<b>6.1</b>
<b>Cerebrovascular disease</b>	<b>0</b>	<b>0.0</b>	<b>2</b>	<b>1.6</b>	<b>1</b>	<b>0.6</b>	<b>2</b>	<b>1.1</b>	<b>5</b>	<b>0.9</b>
<b>Interstitial lung disease</b>	<b>1</b>	<b>1.4</b>	<b>0</b>	<b>0.0</b>	<b>4</b>	<b>2.3</b>	<b>0</b>	<b>0.0</b>	<b>5</b>	<b>0.9</b>
<b>Chronic kidney disease</b>	<b>0</b>	<b>0.0</b>	<b>2</b>	<b>1.6</b>	<b>2</b>	<b>1.2</b>	<b>0</b>	<b>0.0</b>	<b>4</b>	<b>0.7</b>
<b>Other illnesses/conditions</b>	<b>0</b>	<b>0.0</b>	<b>1</b>	<b>0.8</b>	<b>5</b>	<b>2.9</b>	<b>12</b>	<b>6.4</b>	<b>18</b>	<b>3.2</b>

'Other malignant neoplasm' includes cancers of the cervix, lymphoma, gallbladder, soft tissue, and others.

'Other progressive neurodegenerative disorders' includes corticobasal degeneration and others.

'Other illnesses/conditions' include chronic liver disease, autoimmune diseases and others.

In 2020, aid-in-dying medications were dispensed by 23 unique pharmacists in Colorado, and included a combination of diazepam, digoxin, morphine sulfate, and propranolol (DDMP or DDMP2) or amitriptyline (DDMA). Secobarbitol (brand name Seconol) was not prescribed or dispensed in Colorado for medical aid-in-dying in 2019 or 2020 (Table 2).

**Table 2. Categories of medications dispensed to patients prescribed aid-in-dying medication, 2017-2020.**

	2017		2018		2019		2020		2017-2020 Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
Total number of patients to whom aid-in-dying medication was dispensed	56	100	85	100	136	100	145	100	422	100
Secobarbitol	23	41.1	26	30.6	0	0	0	0	49	11.6
DDMP/DDMP2 compound	32	57.1	59	69.4	86	63.2	76	52.4	253	60.0
DDMA compound	0	0.0	0	0.0	49	36.0	69	47.6	118	28.0
Other (morphine sulfate alone, or in some other combination)	1	1.8	0	0.0	1	0.7	0	0.0	2	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 2020, the median duration of time between the date of prescription and date of death was 12 days (minimum of zero days, maximum of approximately 11 months). 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, 2017-2020.**

	2017		2018		2019		2020		2017-2020 Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
Total number of decedents prescribed aid-in-dying medication	71	100	117	100	164	100	156	100	508	100
<b>Sex</b>										
Female	32	45.1	60	51.3	80	48.8	82	52.6	254	50.0
Male	39	54.9	57	48.7	84	51.2	74	47.4	254	50.0
<b>Age group</b>										
18-34	0	0.0	1	0.9	2	1.2	1	0.6	4	0.8
35-44	1	1.4	2	1.7	1	0.6	0	0.0	4	0.8
45-54	2	2.8	11	9.4	14	8.5	9	5.8	36	7.1
55-64	10	14.1	21	17.9	31	18.9	34	21.8	96	18.9
65-74	23	32.4	41	35	54	32.9	35	22.4	153	30.1
75-84	22	31.0	25	21.4	37	22.6	46	29.5	130	25.6
85+	13	18.3	16	13.7	25	15.2	31	19.9	85	16.7
<b>Race/ethnicity</b>										
White, non-Hispanic	67	94.4	109	93.2	158	96.3	148	94.9	482	94.9
White, Hispanic	3	4.2	7	6.0	2	1.2	3	1.9	15	3.0
Black/African American	0	0.0	1	0.9	1	0.6	1	0.6	3	0.6
Asian/Pacific Islander	1	1.4	0	0.0	3	1.8	4	2.6	8	1.6
<b>Marital status</b>										
Married	35	49.3	59	50.4	73	44.5	74	47.4	241	47.4
Divorced	19	26.8	23	19.7	55	33.5	35	22.4	132	26.0
Widow/widower	16	22.5	21	17.9	22	13.4	36	23.1	95	18.7
Never been married	1	1.4	14	12.0	14	8.5	10	6.4	39	7.7
Unknown	0	0.0	0	0.0	0	0.0	1	0.6	1	0.2
<b>Educational attainment</b>										
8th grade or less	1	1.4	1	0.9	2	1.2	4	2.6	8	1.6
9th-12th grade, no diploma or no GED completed	1	1.4	1	0.9	3	1.8	7	4.5	12	2.4
High school graduate or GED completed	18	25.4	24	20.5	37	22.6	32	20.5	111	21.9
Some college credit but no degree	13	18.3	21	17.9	20	12.2	22	14.1	76	15.0

	2017		2018		2019		2020		2017-2020 Total	
	Count	%	Count	%	Count	%	Count	%	Count	%
Associate's degree	9	12.7	7	6.0	14	8.5	14	9.0	44	8.7
Bachelor's degree	19	26.8	24	20.5	46	28	46	29.5	135	26.6
Master's degree	3	4.2	24	20.5	27	16.5	23	14.7	77	15.2
Doctorate or professional degree	7	9.9	15	12.8	15	9.1	7	4.5	44	8.7
Unknown	0	0.0	0	0.0	0	0.0	1	0.6	1	0.2
<b>Region of residence</b>										
Denver Metro Area (Adams, Arapahoe, Boulder, Broomfield, Denver, Douglas, Jefferson)	45	63.4	78	66.7	97	59.1	81	51.9	301	59.3
Other Front Range (El Paso, Larimer, Pueblo, Weld)	17	23.9	21	17.9	38	23.2	39	25.0	115	22.6
Other Counties	9	12.7	18	15.4	29	17.7	34	21.8	90	17.7
Unknown	0	0.0	0	0.0	0	0.0	2	1.3	2	0.4
<b>Place of death</b>										
Residence	59	83.1	101	86.3	131	79.9	134	85.9	425	83.7
Nursing home/long-term care facility	9	12.7	6	5.1	11	6.7	8	5.1	34	6.7
Hospice facility	0	0.0	3	2.6	11	6.7	7	4.5	21	4.1
Hospital inpatient	0	0.0	1	0.9	3	1.8	1	0.6	5	1.0
Other or unknown	3	4.2	6	5.2	8	4.9	6	3.8	23	4.5
<b>Hospice enrollment status</b>										
Under hospice care	63	88.7	100	85.5	129	78.7	133	85.3	425	83.7
Not under hospice care or unknown	8	11.3	16	13.7	35	21.3	23	14.7	82	16.1
Unknown	0	0.0	1	0.9	0	0.0	0	0.0	1	0.2

'Place of death - Other/unknown' includes outpatient facilities, emergency departments or 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 **January 29, 2021**.

**Table 4. Documentation received for patients participating in the Colorado End-of-Life Options Act, 2017-2020**

Form/Document	2017	2018	2019	2020	2017-2020 Total
	Count	Count	Count	Count	Count
Attending/prescribing physician form	63	107	147	155	472
Patient's completed written request	50	89	128	150	417
Mental health provider's confirmation	1	0	1	3	5
Consulting physicians written confirmation	30	85	127	149	391
Medication dispensing form	56	85	136	145	422
Death certificate	71	117	164	156	508

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 at <http://cdphe.colorado.gov/center-for-health-and-environmental-data/registries-and-vital-statistics/medical-aid-in-dying>.

## 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.