



## Concerns Persist About Opioid Overdoses and Medicare Beneficiaries' Access to Treatment and Overdose-Reversal Drugs

### Key Takeaways

- More than 43,000 Medicare Part D beneficiaries suffered an opioid overdose in 2020.
- Nearly 1 in 4 Part D beneficiaries received opioids during the year.
- Growth slowed in the number of beneficiaries receiving drugs through Part D to treat opioid use disorder.
- Growth stopped in the number of beneficiaries receiving prescriptions for overdose-reversal drugs through Part D.
- Ensuring access to treatment and to overdose-reversal drugs in 2021 and beyond is particularly important as we do not yet know the full extent to which the stressors of the COVID-19 pandemic may have increased the need for these drugs.

### Why OIG Did This Review

The coronavirus disease 2019 (COVID-19) pandemic and its effects on the provision of health care have heightened concerns about opioid use and access to treatment. The pandemic has put people with opioid use disorder at particular risk, as they are at higher risk of developing COVID-19 and are more likely to experience hospitalizations or death from the illness.<sup>1</sup> These increased risks posed by COVID-19 make urgent the need to monitor opioid use as well as access to treatment and to the opioid overdose-reversal drug naloxone.

The Office of Inspector General (OIG) has been tracking opioid use and access to treatment and naloxone in Part D for the past several years.<sup>2</sup> Before 2020 and the COVID-19 pandemic, there were consistent decreases in opioid use in Part D. There was also growth in the use of medications to treat opioid use disorder—referred to as medication-assisted treatment (MAT) drugs—and naloxone. This data brief provides important information on opioid use, MAT drugs, and naloxone in Medicare Part D in 2020. It builds on a previously released OIG data snapshot about opioid use during the onset of the pandemic.<sup>3</sup>

### What OIG Found

More than 43,000 Part D beneficiaries suffered an opioid overdose—from prescription opioids, illicit opioids, or both—during 2020. This number may be higher, as additional beneficiaries could have overdosed but not received medical care that was billed to Medicare. Overall, nearly 1 in 4 Medicare Part D beneficiaries received opioids in 2020. The number of

beneficiaries receiving short-term opioid prescriptions dropped sharply in the early months of the pandemic, likely the result of a decrease in elective surgeries at that time. The number of beneficiaries who received MAT drugs through Part D increased, but at a slower rate in 2020 than in prior years. And, unlike in other recent years, there was no growth in 2020 in the number of beneficiaries receiving prescriptions for naloxone through Part D. These changes are likely related to COVID-19, as patients may have avoided seeing their health care providers during the pandemic, reducing the opportunity for providers to offer treatment. These slower growth rates add to ongoing concerns about access to MAT drugs and naloxone.

### What OIG Concludes

Monitoring opioid use and access to MAT drugs and naloxone has always been critical to fighting the opioid crisis in this country. The COVID-19 pandemic has made these efforts even more pressing. A May 2020 OIG data brief recommended that the Centers for Medicare & Medicaid Services (CMS) educate Part D beneficiaries and providers about access to MAT drugs and naloxone. We continue to encourage CMS to take these steps. It is also critical for CMS to closely monitor the number of beneficiaries receiving MAT drugs and naloxone and take action, if needed. OIG is also committed to continuing our work on opioid use and access to treatment.

# RESULTS

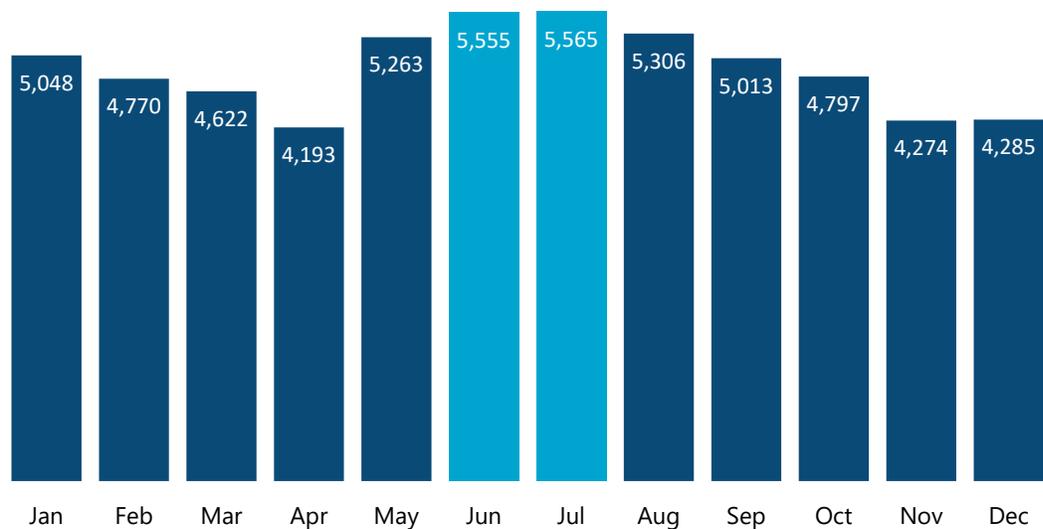
## More than 43,000 Part D beneficiaries suffered an opioid overdose during 2020

In 2020, at least 43,762 Part D beneficiaries suffered an opioid overdose. This is the number of Part D beneficiaries who received medical care for an opioid overdose, such as an emergency room visit, that was billed to Medicare.<sup>4</sup> The overdoses were linked to prescription opioids, illicit opioids, or both.

The total number of beneficiaries who suffered an opioid overdose may be higher, as additional beneficiaries could have overdosed but not received medical care that was billed to Medicare. For example, a beneficiary who suffered a fatal overdose alone at home during the year would not be counted if there was no medical care billed to Medicare.

In every month in 2020, the average number of beneficiaries who received medical care for an opioid overdose topped 4,000 per month. The number peaked in the summer of 2020 and then fell later in the year. As Exhibit 1 shows, in June and July, more than 5,500 beneficiaries received care for an overdose; while around 4,300 beneficiaries did so in November and December.

**Exhibit 1: The number of beneficiaries receiving medical care for an opioid overdose peaked in the summer of 2020.**



Source: OIG analysis of Medicare Part D data, 2021.

## Nearly 1 in 4 Medicare Part D beneficiaries received opioids in 2020

In 2020, nearly 1 in 4 beneficiaries received at least one prescription opioid through Medicare Part D. Twenty-four percent of beneficiaries—almost 12 million of the total of 50 million beneficiaries enrolled in Medicare Part D—received opioids. This is an overall decrease from 2019, when 26 percent of beneficiaries received opioids through Part D. It is also a decrease from previous years. From 2016 to 2018, the proportion of beneficiaries receiving opioids declined from 33 percent to 29 percent.<sup>5</sup> (See Appendix A for information about opioid use in each State.)

Some of the decline in 2020 can be attributed to the sharp decline in the number of beneficiaries receiving short-term opioid prescriptions—i.e., prescriptions for 7 days or less—in the early months of the pandemic, particularly in April of 2020. Short-term prescriptions are commonly prescribed for acute pain caused by injury or surgery. Declines in these prescriptions were likely due to elective surgeries being postponed during the early months of the pandemic.<sup>6</sup> (See Appendix A for more information about monthly opioid use in 2020.)

Part D paid for 63.4 million opioid prescriptions, an average of 5.4 prescriptions per beneficiary receiving opioids in 2020.<sup>7</sup> This total number is a decrease from 2019, when Medicare paid for 66.5 million prescriptions. It is also a decline from previous years. From 2016 to 2018, the number of opioid prescriptions exceeded 70 million annually.<sup>8</sup>

Similarly, overall Part D spending for opioids also went down. Part D paid \$2.7 billion for opioids in 2020, compared to \$2.8 billion in 2019.

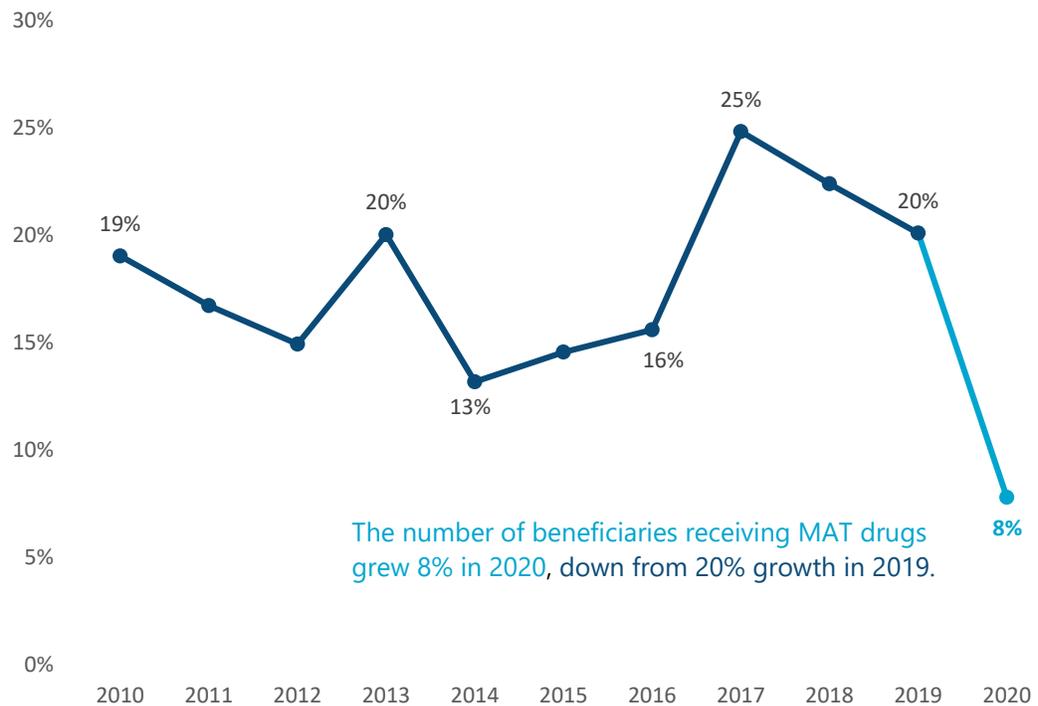
## Growth in the number of beneficiaries receiving drugs for medication-assisted treatment has slowed

Beneficiaries' use of drugs for medication-assisted treatment (MAT) in Part D increased in 2020, but at a slower rate than in recent years. These drugs help treat opioid use disorder, a problematic pattern of opioid use that leads to clinically significant impairment or distress.<sup>9</sup> Opioid use disorder is linked to the misuse of prescription opioids, illicit opioids, or both.

Ensuring access to MAT drugs is essential to fighting the opioid crisis, as they treat the patient's underlying disorder and have been shown to decrease illicit opioid use and opioid-related overdose deaths.<sup>10</sup> Part D covers two drugs indicated for the treatment of opioid use disorder: buprenorphine and naltrexone.<sup>11</sup>

In 2020, the number of Medicare beneficiaries receiving MAT drugs through Part D reached 225,546, an increase of 8 percent from 2019. As Exhibit 2 shows, the growth in the number of beneficiaries receiving MAT drugs slowed in 2020, compared to 2018 and 2019, when the growth rate topped 20 percent each year.

**Exhibit 2: Although the number of beneficiaries receiving MAT drugs through Part D increased in 2020, the rate of increase has slowed.**



The number of beneficiaries receiving MAT drugs grew 8% in 2020, down from 20% growth in 2019.

Source: OIG analysis of Medicare Part D data, 2021.

Growth in the number of Part D prescriptions for MAT drugs also slowed. From 2019 to 2020, this number rose from 1.9 million to 2.1 million, an increase of 11 percent—a lower percentage increase than in recent years. From 2018 to 2019, it grew 21 percent and from 2017 to 2018 it grew 24 percent.

The slower growth in the number of beneficiaries receiving MAT drugs may have been related to the COVID-19 pandemic. For example, patients may have delayed or avoided seeing their health care providers during the pandemic, reducing the opportunity for providers to offer treatment. The Centers for Disease Control and Prevention (CDC) estimates that 4 in 10 adults in the United States delayed or avoided medical care because of concerns related to COVID-19.<sup>12</sup>

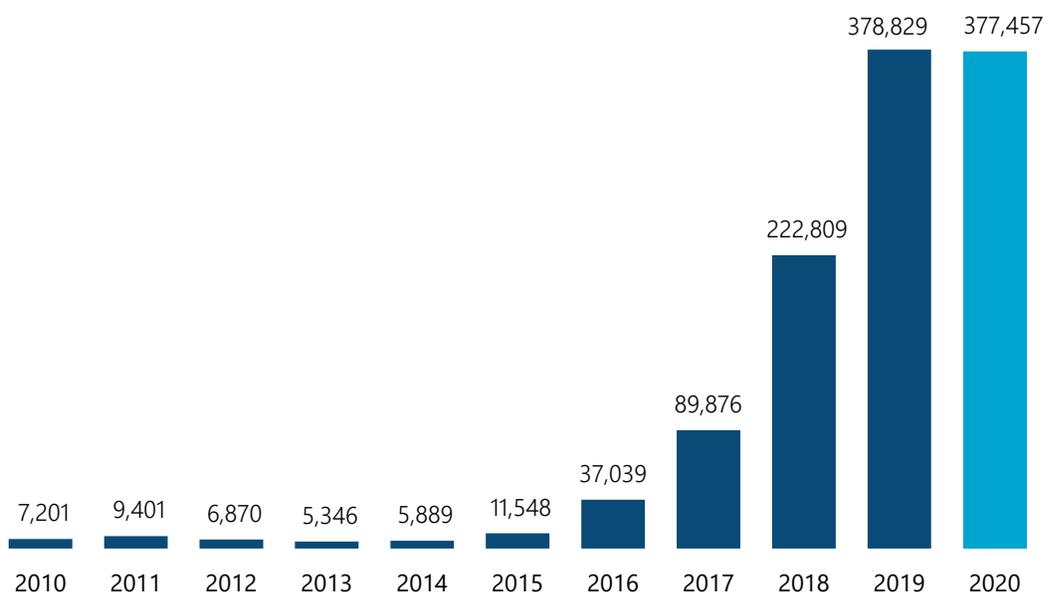
Nevertheless, this slower growth rate adds to OIG’s ongoing concerns about access to MAT drugs. A previous OIG report found that a limited number of beneficiaries with opioid use disorder receive MAT drugs through Part D. Specifically, in 2019, about 960,000 Medicare Part D beneficiaries had a diagnosis of opioid use disorder, yet just 13 percent of these beneficiaries received MAT drugs through Part D.<sup>13</sup> This may have resulted in part from beneficiaries having challenges in accessing providers who can prescribe buprenorphine—only certain health care practitioners who have waivers from the Substance Abuse and Mental Health Services Administration (SAMHSA) may prescribe buprenorphine for MAT.<sup>14</sup> A second recent OIG report found that 40 percent of U.S. counties did not have providers with a waiver.<sup>15</sup> See Appendix C for more information on the use of MAT drugs in Part D.

## The number of beneficiaries receiving prescriptions for overdose-reversal drugs through Part D did not grow

The number of beneficiaries receiving naloxone prescriptions through Part D did not grow in 2020, in contrast with trends in recent years.<sup>16</sup> Naloxone is a medication that can reverse the effects of an opioid overdose. Overdoses occur when high doses of opioids—alone or in combination with other substances—cause breathing to slow to dangerous levels or to stop altogether. When naloxone (such as the brand-name drug Narcan) is administered in a timely fashion, it can save lives by blocking the effects of opioids and restoring normal breathing.

A total of 377,457 beneficiaries received a naloxone prescription in 2020 paid for by Part D, very close to the number—378,829—who received a prescription in 2019.<sup>17</sup> As Exhibit 3 shows, 2020 marks the first time in recent years that the number of beneficiaries receiving prescriptions for naloxone did not grow. For comparison, this number grew 70 percent from 2018 to 2019.<sup>18</sup>

**Exhibit 3: The number of beneficiaries receiving prescriptions for naloxone—a drug that can reverse an opioid overdose—did not grow in 2020.**



Source: OIG analysis of Medicare Part D data, 2021.

The total number of Part D prescriptions for naloxone also stayed relatively constant. In 2020, Medicare Part D paid for 423,135 naloxone prescriptions, a 2-percent increase from 2019. (See Appendix C for more information on the use of naloxone in Part D.) Again, patients may have delayed or avoided seeing their health care providers during the pandemic, reducing the opportunity for providers to offer treatment. Some beneficiaries may have received naloxone from sources other than Part D.<sup>19</sup>

The lack of growth in the number of beneficiaries receiving naloxone raises concern, as opioid overdoses among Part D beneficiaries persist.

## About 225,000 Part D beneficiaries received high amounts of opioids in 2020

In 2020, a total of 225,463 beneficiaries received high amounts of opioids through Medicare Part D—i.e., each beneficiary had an average morphine equivalent dose (MED) of greater than 120 mg a day for at least 3 months. MED is a measure that converts all the various opioids and strengths into one standard value. These beneficiaries did not have cancer and were not in hospice care.

The number of beneficiaries receiving high amounts of opioids is a decrease from 2019, when 266,728 beneficiaries received high amounts. It is also a decline from previous years. (See Appendix D for more information about previous years.)

Although beneficiaries may receive opioids for legitimate purposes, these amounts raise concern as opioids carry a number of health risks.<sup>20</sup> CDC recommends that prescribers use caution when ordering opioids at any dosage and avoid increasing dosages to the equivalent of 90 mg or more MED a day for chronic pain.<sup>21</sup> For patients who are already taking high dosages of opioids, prescribers should offer them the opportunity to re-evaluate their continued use of these dosages, and prescribers should offer to work with them to taper their opioids to safer dosages.<sup>22</sup>

## About 29,000 beneficiaries were at serious risk because they received extreme amounts of opioids or appeared to be doctor shopping

Two subgroups of beneficiaries in particular are at serious risk of misuse or overdose: (1) beneficiaries who receive extreme amounts of opioids and (2) beneficiaries who appear to be doctor shopping. Other Part D beneficiaries may also be at serious risk but do not fall into either group.

A total of 29,306 beneficiaries were in these subgroups.<sup>23</sup> (This does not include beneficiaries who have cancer or were in hospice care.) Specifically, 27,325 beneficiaries received extreme amounts of opioids (i.e., had an average daily MED greater than 240 mg for 12 months) and 2,131 beneficiaries appeared to be doctor shopping (i.e., received high amounts of opioids and had 4 or more prescribers and 4 or more pharmacies). A total of 150 beneficiaries were in both groups.

The number of beneficiaries at serious risk in 2020 (29,306 beneficiaries) declined 13 percent from 2019, when OIG identified 33,809 beneficiaries.<sup>24</sup> Of note, the larger drop occurred in the number of beneficiaries who appeared to be doctor shopping. In 2020, there were about half as many beneficiaries who appeared to be doctor shopping than in 2019.<sup>25</sup> (See Appendix D for more detailed information.) Despite the decreases, tens of thousands of beneficiaries are still at serious risk.

Receiving extreme amounts of opioids or high amounts of opioids from multiple prescribers and pharmacies raises concern. It may signal that a beneficiary's care is not being monitored or coordinated properly or that a beneficiary's care needs to be reassessed.<sup>26</sup> It may also indicate that a beneficiary is seeking medically unnecessary drugs—perhaps to use them recreationally or to divert them—or that a beneficiary is addicted to opioids and at risk of overdose.

Furthermore, a beneficiary's receiving high amounts of opioids and having multiple prescribers and pharmacies may indicate that prescribers are not checking the beneficiary's opioid history before prescribing. States maintain databases—called prescription drug monitoring programs—that track prescriptions for controlled substances.<sup>27</sup> Prescribers can check these databases before ordering opioids to determine whether a beneficiary is already receiving opioids ordered by other prescribers.<sup>28</sup>

Raising particular concern, a total of 296 beneficiaries had an average daily MED of more than 1,000 mg a day for the entire year. (See the text box for an example.)

#### **Example of a Beneficiary at Serious Risk of Misuse or Overdose**

One beneficiary had an average daily MED of 1,565 mg for the entire year. This beneficiary received 56 opioid prescriptions in 2020. On 2 consecutive days in January, she received six opioid prescriptions, including two strengths of oxycodone; methadone; morphine; tapentadol; and fentanyl patches. Together, Part D paid \$9,577 for these six prescriptions—all ordered by the same prescriber and dispensed by the same pharmacy.

### **About 100 prescribers had questionable opioid prescribing for beneficiaries at serious risk**

About 30,000 prescribers ordered opioids for at least 1 beneficiary at serious risk of misuse or overdose (i.e., beneficiaries who received extreme amounts of opioids or appeared to be doctor shopping in 2020.)<sup>29</sup> The vast majority of these prescribers each ordered opioids for only one or two of these beneficiaries. Some prescribers ordered for many more.

A total of 98 prescribers stand out as having questionable prescribing; they were far outside the norm with their prescribing and warrant further scrutiny. They ordered opioids for the highest numbers of beneficiaries at serious risk. Specifically, 70 prescribers each ordered opioids for at least 32 beneficiaries who received extreme amounts of opioids in 2020. Further, 32 prescribers each ordered opioids for at least 7 beneficiaries who appeared to be doctor shopping. Four prescribers ordered opioids for high numbers of beneficiaries in both groups at serious risk.

The number of prescribers with questionable prescribing for beneficiaries at serious risk was a decrease of 31 percent from 2019, when there were 142 prescribers with questionable prescribing. This decline is similar to declines in previous years. Each year between 2016 and 2018, the number of prescribers with questionable opioid prescribing declined about 30 percent. (See Appendix E for more information about previous years.)

Although opioids may be necessary for some patients, prescribing to an unusually high number of beneficiaries at serious risk raises concerns. It may indicate that beneficiaries are receiving poorly coordinated care and could be in danger of overdose or dependence. It may also signal that prescribers are not checking State prescription drug monitoring databases, or that these databases do not have current data.

Prescribing to an unusually high number of beneficiaries at serious risk could also indicate that the prescriber is ordering medically unnecessary drugs that could be diverted for resale or recreational use. Another possibility is that the prescriber's identification has been sold or stolen and is being used for illegal purposes.

In total, these 98 prescribers ordered 67,956 opioid prescriptions—totaling \$18.8 million of Part D costs—for beneficiaries at serious risk in 2020.

### **Example of a Prescriber Who Ordered Opioids for Large Numbers of Beneficiaries At Serious Risk**

A nurse practitioner ordered 511 opioid prescriptions for 105 beneficiaries who received extreme amounts of opioids and 11 who appeared to be doctor shopping. Six of these beneficiaries had average daily MEDs that exceeded 500 mg for the entire year.

# CONCLUSION

Monitoring opioid use and access to treatment of opioid use disorder and to naloxone has always been critical to fighting the opioid crisis in this country. The COVID-19 pandemic has made these efforts even more pressing. The pandemic has heightened the risk for people with opioid use disorder, as they are at higher risk of developing COVID-19 and are more likely to experience hospitalization or death from the illness.

At least 43,000 Part D beneficiaries suffered an opioid overdose during 2020. In addition, nearly 1 in 4 beneficiaries received opioids through Part D in 2020. This is an overall decrease from previous years. It is important to note that the number of beneficiaries receiving short-term opioid prescriptions dropped sharply in the early months of the COVID-19 pandemic, likely due to elective surgeries being postponed.

Growth in beneficiaries' use of MAT drugs has slowed in 2020, and growth has stopped in the number of beneficiaries receiving prescriptions for the overdose-reversal drug naloxone through Part D. These changes add to ongoing concerns about access to MAT drugs and naloxone. MAT drugs treat the patient's underlying disorder and have been shown to decrease illicit opioid use and opioid-related overdose deaths. Naloxone—a drug that can reverse the effects of an opioid overdose—can save lives if it is on hand.

A recent OIG data brief recommended that CMS educate Part D beneficiaries and providers about access to MAT drugs and naloxone.<sup>30</sup> We continue to encourage CMS to take these steps. It is also critical for CMS to closely monitor access to both MAT drugs and naloxone and to take appropriate action if the numbers of beneficiaries receiving these drugs begin to fall off. Ensuring access to MAT drugs and naloxone in 2021 and beyond is particularly important as we do not yet know the full extent to which the stressors of the COVID-19 pandemic may have increased the need for these drugs.<sup>31</sup>

In addition, OIG is committed to working with our law enforcement partners and with CMS. We will refer prescribers with questionable opioid prescribing to CMS, as appropriate. We are also committed to continuing our work on access to treatment.<sup>32</sup>

# METHODOLOGY

We based this data brief on an analysis of prescription drug event (PDE) records for Part D drugs. These PDE records are for prescriptions that beneficiaries received through Part D. They do not include prescriptions paid for through other programs, prescriptions paid for in cash, or illicitly purchased drugs. Part D sponsors submit a PDE record to CMS each time a drug is dispensed to a beneficiary enrolled in their plans. Each record contains information about the drug and beneficiary, as well as the identification numbers for the pharmacy and the prescriber.

To obtain descriptive information about the drugs, beneficiaries, and prescribers, we matched PDE records to data from the First DataBank, the National Claims History File, Part C Encounter Data, CDC's Morphine Milligram Equivalent (MME) conversion file, and the National Plan and Provider Enumeration System (NPPES). First DataBank contains information about each drug, such as the drug name, strength of the drug, and therapeutic class (e.g., an opioid). The National Claims History File contains claims data from Medicare Parts A and B, including diagnosis codes. Part C Encounter Data contain medical claims data, including diagnosis codes, for beneficiaries enrolled in Medicare Advantage plans. CDC's MME conversion file contains information about each opioid drug's morphine milligram equivalence.<sup>33</sup> The NPPES contains information about prescribers, such as their name, address, and taxonomy (i.e., specialty). For the purposes of this study, we use the term "prescription" to mean one PDE record.

## Analysis of Opioid Overdoses

To determine the number of Part D beneficiaries who had an opioid overdose in 2020, we used inpatient and outpatient (including professional) claims data from the National Claims History File and Part C encounter data. We considered a beneficiary to have had an overdose if the beneficiary had at least one claim from Medicare Parts A, B, or C with a diagnosis of an opioid poisoning from prescription or illicit opioids between January 1, 2020, and December 31, 2020.

## Analysis of Part D Utilization of Opioids, MAT Drugs, and Naloxone

We identified all PDE records for opioids that beneficiaries received in 2020.<sup>34</sup> We calculated the total number of Part D beneficiaries who received opioids in 2020. We then calculated the total number of opioid prescriptions paid for by Part D in 2020 and the average number of opioid prescriptions per beneficiary. We compared the 2020 data to the data from 2016, 2017, 2018 and 2019 in our previous data briefs, which used the same methodology. Next, we calculated total Part D spending for

opioids from 2010 to 2020. To do this, we summed four fields on the PDE records that represent the total gross drug costs: ingredient cost, dispensing fee, vaccine administration fee, and sales tax.

Next, we calculated the proportion of beneficiaries who received opioids in the Nation and in each State in 2020. We based this analysis on the PDE records and Medicare enrollment data.

We then identified all PDE records for (1) MAT drugs indicated for the treatment of opioid use disorder and (2) naloxone (the opioid overdose-reversal drug). We first calculated the total number of beneficiaries who received MAT drugs and the number of prescriptions for these drugs from 2010 through 2020.<sup>35</sup> Next, we calculated the total number of beneficiaries who received naloxone and the number of prescriptions for naloxone from 2010 through 2020.<sup>36</sup>

## Beneficiary Analysis

We determined the amount of opioids that each beneficiary received in 2020. To do this, we calculated each beneficiary's average daily morphine equivalent dose (MED).<sup>37</sup> The MED converts opioids of different ingredients, strengths, and forms into equivalent milligrams of morphine. It allows us to sum dosages of different opioids to determine a beneficiary's daily opioid level.

To calculate each beneficiary's average daily MED, we first calculated the MED for each prescription (i.e., for each PDE record).<sup>38</sup> To do this, we used the following equation:

$$MED = \frac{(Strength\ per\ unit) \times (Quantity\ dispensed) \times (MME\ conversion\ factor)}{(Days\ supplied)}$$

Next, we summed each beneficiary's MED for each day of the year based on the dates of service and days supply on each PDE record. We refer to this as the daily MED. We excluded from this analysis beneficiaries who had a diagnosis of cancer or a hospice stay at any point in 2020.<sup>39</sup>

We analyzed the MED data using the same criteria that we used in our previous analysis of the 2016, 2017, 2018 and 2019 data.<sup>40</sup> We began by determining the extent to which beneficiaries received high amounts of opioids. To do this, we calculated each beneficiary's average daily MED over each 90-day period in 2020. We determined that a beneficiary received high amounts of opioids if he or she exceeded an average daily MED of 120 mg for any 90-day period and had received opioids for 90 or more days in the year. The MED of 120 mg exceeds the 90-mg MED level that CDC recommends avoiding for patients with chronic pain.

We then determined the extent to which these beneficiaries received extreme amounts of opioids. We calculated each beneficiary's average daily MED over the entire year. We considered a beneficiary who exceeded an average daily MED of

240 mg for the entire year and had received opioids for 360 days or more to have received an extreme amount of opioids.

Next, we determined the extent to which beneficiaries appeared to be doctor shopping. To do this, we calculated the total number of prescribers and pharmacies from which each beneficiary received opioids in 2020. We considered beneficiaries to have appeared to be doctor shopping if they exceeded an average daily MED of 120 mg for any 90-day period, received opioids for 90 or more days in the year, and received opioids from four or more prescribers and four or more pharmacies.

Lastly, we compared the number of beneficiaries who received high amounts of opioids and who were at serious risk of opioid misuse or overdose to the numbers of beneficiaries that we had previously identified in our analyses of the 2016, 2017, 2018 and 2019 data.

## Prescriber Analysis

For this analysis, we identified prescribers who ordered opioids for a high number of beneficiaries at serious risk—i.e., beneficiaries who received extreme amounts of opioids and beneficiaries who appeared to be doctor shopping. We considered these prescribers to have questionable prescribing patterns that warrant further scrutiny. We used the National Provider Identifiers (NPIs) on the PDE records to identify prescribers. We considered each NPI to be a unique prescriber.<sup>41</sup>

In total, 22,910 prescribers ordered opioids for beneficiaries who received extreme amounts of opioids and 10,080 prescribers ordered opioids for beneficiaries who appeared to be doctor shopping. For each of these prescribers, we calculated the number of beneficiaries in each group for whom the prescriber ordered opioids. We then identified the prescribers who ordered opioids for the highest number of beneficiaries in each group. Each of these prescribers is an extreme outlier in terms of the number of beneficiaries to whom he or she prescribed opioids in one of the groups at serious risk. These prescribers were more than 3 standard deviations above the mean and in the top 0.3 percent.

## Limitations

This analysis is based on Part D PDE records; it is not based on a review of medical records. The analysis does not include data on opioids, MAT drugs, or naloxone that beneficiaries may have received from sources other than Part D.

## Standards

We conducted this study in accordance with the *Quality Standards for Inspection and Evaluation* issued by the Council of the Inspectors General on Integrity and Efficiency.

# APPENDIX A

## State Data

Exhibit A-1: Alabama had the highest proportion of beneficiaries receiving opioids through Medicare Part D, while Hawaii and New York had the lowest proportion.

Proportion of Beneficiaries in Each State Who Received Opioids Through Medicare Part D in 2020			
Alabama	36%	Arizona	23%
Arkansas	34%	Virginia	23%
Louisiana	32%	Nevada	23%
Mississippi	32%	Iowa	23%
Oklahoma	31%	Alaska	22%
Georgia	30%	Illinois	22%
Tennessee	30%	Wisconsin	22%
Kentucky	30%	New Mexico	22%
Missouri	29%	North Dakota	21%
South Carolina	29%	South Dakota	21%
Kansas	28%	Maryland	21%
Indiana	28%	Delaware	20%
North Carolina	28%	California	20%
Utah	27%	Pennsylvania	20%
Texas	27%	Minnesota	19%
Idaho	27%	District of Columbia	18%
West Virginia	26%	Maine	18%
Oregon	25%	Connecticut	18%
Wyoming	25%	Massachusetts	18%
Montana	25%	New Jersey	17%
Michigan	24%	Rhode Island	17%
Washington	24%	New Hampshire	17%
Colorado	24%	Vermont	16%
Nebraska	24%	New York	15%
Florida	23%	Hawaii	15%
Ohio	23%		

Source: OIG analysis of Medicare Part D data, 2021.

# APPENDIX B

## Use of Opioids in Part D in 2020

Exhibit B-1: The number of beneficiaries receiving short-term opioid prescriptions dropped sharply in the spring of 2020.\*



\*Short-term opioid prescriptions are prescriptions for 7 days or less of opioids.  
Source: OIG analysis of Medicare Part D data, 2021.

# APPENDIX C

## Use of Medication-Assisted Treatment Drugs and Naloxone in Part D

**Exhibit C-1: Both the number of beneficiaries and the number of prescriptions for medication-assisted treatment (MAT) drugs for opioid use disorder increased between 2016 and 2020, but growth was slower in 2020 than other years.**

	Number of beneficiaries who received a MAT drug through Part D	Percentage change from previous year	Number of Part D prescriptions for MAT drugs	Percentage change from previous year
2016	113,967	--	1,030,757	--
2017	142,267	25%	1,278,553	24%
2018	174,150	22%	1,591,706	24%
2019	209,212	20%	1,927,075	21%
2020	225,546	8%	2,134,987	11%

Source: OIG analysis of Medicare Part D data, 2021.

**Exhibit C-2: The number of beneficiaries and the number of prescriptions for naloxone changed slightly in 2020.**

	Number of beneficiaries who received naloxone through Part D	Percentage change from previous year	Number of Part D prescriptions for naloxone	Percentage change from previous year
2016	37,039	--	39,902	--
2017	89,876	143%	96,300	141%
2018	222,809	148%	239,366	149%
2019	378,829	70%	414,185	73%
2020	377,457	0%	423,135	2%

Source: OIG analysis of Medicare Part D data, 2021.

# APPENDIX D

## Beneficiaries Receiving Opioids Through Part D

**Exhibit D-1: About 225,000 beneficiaries received high amounts of opioids through Part D in 2020.**

	Number of beneficiaries who received high amounts of opioids	Percentage change from previous year
2016	501,008	--
2017	458,935	-8%
2018	353,751	-23%
2019	266,728	-25%
2020	225,463	-15%

Source: OIG analysis of Medicare Part D data, 2021.

**Exhibit D-2: About 29,000 beneficiaries were at serious risk in 2020.**

	Number of beneficiaries who received an extreme amount of opioids	Percentage change from previous year	Number of beneficiaries who appear to be doctor shopping	Percentage change from previous year	Total number of beneficiaries at serious risk*	Percentage change from previous year
2016	69,563	--	22,308	--	89,843	--
2017	57,611	-17%	14,814	-34%	71,260	-21%
2018	40,374	-30%	8,796	-41%	48,558	-32%
2019	29,734	-26%	4,346	-51%	33,809	-30%
2020	27,325	-8%	2,131	-51%	29,306	-13%

\*Numbers in the "total" column do not equal the sums of the numbers in the corresponding "extreme amount" and "doctor shopping" columns because beneficiaries can be in both groups.

Source: OIG analysis of Medicare Part D data, 2021.

# Appendix E

## Prescribers With Questionable Opioid Prescribing for Beneficiaries at Serious Risk

Exhibit E-1: Almost 100 prescribers ordered opioids for a high number of beneficiaries at serious risk in 2020.

	Number of prescribers with questionable opioid prescribing for beneficiaries at serious risk*	Percentage change from previous year
2016	401	--
2017	282	-30%
2018	198	-30%
2019	142	-28%
2020	98	-31%

\* For more information, see these previous OIG data briefs: *Opioids in Medicare Part D: Concerns About Extreme Use and Questionable Prescribing* (OEI-02-17-00250), July 2017; *Opioid Use in Medicare Part D Remains Concerning* (OEI-02-18-00220), June 2018; *Opioid Use Decreased in Medicare Part D, While Medication-Assisted Treatment Increased* (OEI-02-19-00390), July 2019; and *Opioid Use in Medicare Part D Continued To Decline in 2019, but Vigilance Is Needed as COVID-19 Raises New Concerns* (OEI-02-20-00320), August 2020.

Source: OIG analysis of Medicare Part D data, 2017-2021.

# ACKNOWLEDGMENTS AND CONTACT

## Acknowledgments

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# ENDNOTES

<sup>1</sup> Wang, Q.Q., Kaelber, D.C., Xu, R. et al. "COVID-19 risk and outcomes in patients with substance use disorders: analyses from electronic health records in the United States." *Molecular Psychiatry* 26, 30–39 (2021). Accessed at <https://doi.org/10.1038/s41380-020-00880-7> on July 13, 2021.

<sup>2</sup> OIG first began tracking opioid use in Part D in 2014. In 2016 OIG began to conduct more in-depth reviews that determined the number of beneficiaries who were receiving high amounts of opioids, as well as the number of beneficiaries who were at serious risk for opioid misuse or overdose and the number of prescribers with questionable opioid prescribing for these beneficiaries. OIG has subsequently released additional data briefs in 2017, 2018, and 2019. See OIG, *Questionable Billing and Geographic Hotspots Point to Potential Fraud and Abuse in Medicare Part D*, OEI-02-15-00190, June 2015; OIG, *High Part D Spending on Opioids and Substantial Growth in Compounded Drugs Raise Concerns*, OEI-02-16-00290, June 2016; OIG, *Opioids in Medicare Part D: Concerns About Extreme Use and Questionable Prescribing*, OEI-02-17-00250, July 2017; OIG, *Opioid Use in Medicare Part D Remains Concerning*, OEI-02-18-00220, June 2018; OIG, *Opioid Use Decreased in Medicare Part D, While Medication-Assisted Treatment Increased*, OEI-02-19-00390, July 2019; and OIG, *Opioid Use in Medicare Part D Continued To Decline in 2019, but Vigilance Is Needed as COVID-19 Raises New Concerns*, OEI-02-20-00230, August 2020.

<sup>3</sup> OIG, *Opioid Use in Medicare Part D During the Onset of the COVID-19 Pandemic*, OEI-02-20-00400, February 2021.

<sup>4</sup> We considered a beneficiary to have had an overdose if the beneficiary had at least one claim from Medicare Parts A, B, or C with a diagnosis of an opioid poisoning from prescription or illicit opioids.

<sup>5</sup> In 2018, 29 percent of beneficiaries received an opioid through Part D; a decrease from 2017, when 31 percent did; and a decrease from 2016, when 33 percent did.

<sup>6</sup> In 2020, 8.3 million beneficiaries received a short-term opioid prescription—i.e., prescription for 7 days or less—which was a decline from 2019, when 9.2 million beneficiaries did so. The number of beneficiaries receiving longer-term prescriptions—prescriptions for more than a week of opioids—also declined from 6.5 million in 2019 to 6.1 million in 2020.

<sup>7</sup> This represents the total number of opioid prescriptions paid for under Part D, including those in the deductible stage of the benefit when some beneficiaries pay the full cost. For the purposes of this study, we use the term "prescription" to mean one PDE record.

<sup>8</sup> In 2018, 2017, and 2016, Part D paid for 71 million, 76 million, and 79 million opioid prescriptions, respectively.

<sup>9</sup> *Diagnostic and Statistical Manual of Mental Disorders: DSM-5*. Arlington, VA: American Psychiatric Publishing, 2013.

<sup>10</sup> SAMHSA, *Treatment Improvement Protocol 63: Medications for Opioid Use Disorder* (2020). Accessed at [https://store.samhsa.gov/sites/default/files/SAMHSA\\_Digital\\_Download/PEP20-02-01-006\\_508.pdf](https://store.samhsa.gov/sites/default/files/SAMHSA_Digital_Download/PEP20-02-01-006_508.pdf) on March 31, 2021. CMS has taken steps to ensure that Part D sponsors provide access to MAT drugs on their formularies. Formularies are lists of covered drugs, which are often divided into tiers with different cost-sharing. CMS expects that Part D plans place MAT drugs on tiers with lower cost-sharing (i.e., generic or preferred brand-name tiers). For more information, see CMS, *Announcement of Calendar Year (CY) 2020 Medicare Advantage Capitation Rates and Medicare Advantage and Part D Payment Policies and Final Call Letter*, April 1, 2019, p. 204.

<sup>11</sup> Naltrexone is also approved to treat alcohol use disorder. A third drug, methadone, is covered by Medicare Part B, but not by Part D. In 2020, Medicare Part B began covering drugs for medication-assisted treatment, including methadone, that are dispensed by opioid treatment programs. Drugs covered by Part B are not included in this review.

<sup>12</sup> Czeisler MÉ, Marynak K, Clarke KE, et al. "Delay or Avoidance of Medical Care Because of COVID-19–Related Concerns—United States, June 2020." *MMWR [Morbidity and Mortality Weekly Report]* 2020;69:1250–1257. Accessed at <https://www.cdc.gov/mmwr/volumes/69/wr/mm6936a4.htm#suggestedcitation> on April 21, 2021.

<sup>13</sup> See OIG, *Opioid Use in Medicare Part D Continued To Decline in 2019, but Vigilance Is Needed as COVID-19 Raises New Concerns*, OEI-02-20-00230, August 2020. We identified beneficiaries with a diagnosis of opioid use disorder in 2019 using CMS's National Claims History File and Part C Encounter data. A diagnosis of opioid use disorder indicates that an individual has a problematic pattern of opioid use that leads to clinically significant impairment or distress.

<sup>14</sup> 21 U.S.C. § 823(g). Also see 86 Fed. Reg. 22439 for changes that went into effect in April 2021.

<sup>15</sup> OIG, *Geographic Disparities Affect Access to Buprenorphine Services for Opioid Use Disorder*, OEI-12-17-00240 (January 2020). See also OIG, *Medicare Part D Beneficiaries at Serious Risk of Opioid Misuse or Overdose: A Closer Look*, OEI-02-19-00130 (May 2020).

<sup>16</sup> CMS encourages Part D sponsors to include at least one naloxone product on a formulary tier with low or no cost-sharing. CMS, *Announcement of Calendar Year (CY) 2020 Medicare Advantage Capitation Rates and Medicare Advantage and Part D Payment Policies and Final Call Letter*, April 1, 2019, p. 203.

<sup>17</sup> The total number of beneficiaries who received naloxone may be underestimated. This number includes only naloxone prescriptions that were paid for by Part D. Beneficiaries may receive naloxone from sources other than Part D.

<sup>18</sup> See OIG, *Opioid Use in Medicare Part D Continued To Decline in 2019, but Vigilance Is Needed as COVID-19 Raises New Concerns*, OEI-02-20-00230, August 2020.

<sup>19</sup> Notably, most States allow for third-party prescriptions, which means that family members or friends of an at-risk patient can get a prescription for naloxone in their own name. In addition, a number of recent initiatives have increased community-based distribution of naloxone.

<sup>20</sup> In addition to the risk of dependence and overdose, opioids carry other health risks, including respiratory depression, constipation, drowsiness, and confusion. Older adults may also be at an increased risk of injury, as research has shown that the risk of fracture may increase as drug dosage increases. See Diane L. Chau, Vanessa Walker, Latha Pai, et al., "Opiates and Elderly: Use and Side Effects," *Clinical Interventions in Aging*, Vol. 3, No. 2 (2008), p. 276. CDC, "CDC Guideline for Prescribing Opioids for Chronic Pain: United States, 2016," *MMWR [Morbidity and Mortality Weekly Report] Recommendations and Reports*, Vol. 65, No. 1, March 18, 2016, pp. 1–49. Accessed at <https://www.cdc.gov/mmwr/volumes/65/rr/pdfs/rr6501e1.pdf> on May 8, 2020. Kathleen W. Saunders, Kate M. Dunn, Joseph O. Merrill, et al., "Relationship of Opioid Use and Dosage Levels to Fractures in Older Chronic Pain Patients," *Journal of General Internal Medicine*, Vol. 25, No. 4 (2010), pp. 310–315.

<sup>21</sup> The CDC Guideline provides recommendations for prescribing opioids for chronic pain outside of cancer treatment, palliative care, and end-of-life care. It recommends that prescribers avoid increasing opioids to morphine equivalent dosages of greater than or equal to 90 mg a day or carefully justify the decision to increase to this level. CDC, "CDC Guideline for Prescribing Opioids for Chronic Pain: United States, 2016." (See previous endnote for full *MMWR* citation and link.)

<sup>22</sup> In September 2019, HHS issued a guide for clinicians on how to appropriately reduce or discontinue long-term use of opioids. The guide provides insights for clinicians on when and how to work with patients to taper opioids. The guide emphasizes that prescribers should decide based on the patient's individual circumstances whether tapering is appropriate. It also reiterates that under most circumstances, HHS does not recommend abrupt opioid dose reduction or discontinuation. See HHS, *HHS Guide for Clinicians on the Appropriate Dosage Reduction or Discontinuation of Long-Term Opioid Analgesics*, September 2019. Accessed at [https://www.hhs.gov/opioids/sites/default/files/2019-10/8-Page%20version\\_HHS%20Guidance%20for%20Dosage%20Reduction%20or%20Discontinuation%20of%20Opioids.pdf](https://www.hhs.gov/opioids/sites/default/files/2019-10/8-Page%20version_HHS%20Guidance%20for%20Dosage%20Reduction%20or%20Discontinuation%20of%20Opioids.pdf) on March 30, 2021.

<sup>23</sup> This group of beneficiaries is a subset of the 225,463 beneficiaries who received high amounts of opioids.

<sup>24</sup> Between 2016 and 2019, the number of beneficiaries OIG identified as at serious risk of opioid misuse or overdose decreased between 21 percent and 32 percent annually.

<sup>25</sup> A total of 6,753 of the beneficiaries identified as being at serious risk in 2020 were also identified as such in 2016, 2017, 2018, and 2019. Together, these beneficiaries represents 23 percent of the 29,306 beneficiaries identified as being at serious risk in 2020.

<sup>26</sup> CDC recommends that clinicians evaluate benefits and harms with patients within 1 to 4 weeks of starting opioid therapy for chronic pain or of dose escalation. CDC also recommends that clinicians evaluate benefits and harms of continued therapy with patients every 3 months or more frequently. If benefits do not outweigh harms of continued opioid therapy, clinicians should optimize other therapies and work with patients to taper opioids to lower dosages or to taper and discontinue opioids. CDC, "CDC Guideline for Prescribing Opioids for Chronic Pain: United States, 2016." (See endnote 20 for full *MMWR* citation and link.)

<sup>27</sup> Missouri lacked a Statewide prescription drug monitoring program in 2020; instead, St. Louis County operated a program. Missouri's Governor signed legislation in June 2021 that will create a Statewide program. See Missouri Senate Bill 63 (2021). Accessed at [SB63 - Modifies provisions relating to the monitoring of certain controlled substances](#) on June 8, 2021.

<sup>28</sup> State requirements for checking this information vary. For more information about prescription drug monitoring programs, see the website of the Prescription Drug Monitoring Program Training and Technical Assistance Center, Brandeis University, at <http://www.pdmpassist.org/>.

<sup>29</sup> A total of 30,142 prescribers ordered opioids for at least 1 beneficiary at serious risk of opioid misuse or overdose in 2020.

<sup>30</sup> OIG, *Medicare Part D Beneficiaries at Serious Risk of Opioid Misuse or Overdose: A Closer Look*, OEI-02-19-00130, May 2020.

<sup>31</sup> In April 2021, HHS issued Practice Guidelines for the Administration of Buprenorphine for Treating Opioid Use Disorder. Under these new Guidelines, practitioners planning to treat fewer than 30 patients are exempt from certain requirements related to training, counseling and other ancillary services. See 86 Fed. Reg. 22439.

<sup>32</sup> See OIG, *Utilization of Medication-Assisted Treatment in Medicare*, OEI-02-20-00390, forthcoming, and OIG, *SAMHSA Is Missing Opportunities To Better Monitor Access to Medication Assisted Treatment Through the Buprenorphine Waiver Program*, OEI-BL-20-00260, June 2021.

<sup>33</sup> These files contain MME conversion factors for each National Drug Code. MED and MME are interchangeable terms.

<sup>34</sup> Using CMS's Integrated Data Repository, we reviewed 63,434,155 PDE records for opioids with dates of service in 2020. To identify PDE records for opioids, we matched the NDCs on the PDE records with two files: First DataBank and CDC's MME conversion file.

<sup>35</sup> Part D covers two MAT drugs indicated for opioid use disorder: buprenorphine and naltrexone. Some buprenorphine products indicated for opioid use disorder also contain naloxone, e.g., Suboxone. To identify PDE records for MAT drugs containing buprenorphine or naltrexone, we matched the NDCs to First Databank. We reviewed each drug and included all formulations indicated for the treatment of opioid use disorder. Note that some of these formulations are also indicated for alcohol use disorder. We based this on PDE records from CMS's Integrated Data Repository.

<sup>36</sup> To identify PDE records for naloxone, we matched the NDCs to First Databank. We included formulations indicated for the emergency treatment of a known or suspected opioid overdose in this analysis. We based this on PDE records from CMS's Integrated Data Repository.

<sup>37</sup> For more information on calculating opioid dosage, see CDC, *Calculating Total Daily Dose of Opioids for Safer Dosage*. Accessed at [https://www.cdc.gov/drugoverdose/pdf/calculating\\_total\\_daily\\_dose-a.pdf](https://www.cdc.gov/drugoverdose/pdf/calculating_total_daily_dose-a.pdf) on March 30, 2021.

<sup>38</sup> We included opioids dispensed in 2019 with days of use in 2020. This analysis excludes PDE records for injection, intravenous, and intrathecal opioids, as well as opioids indicated for medication-assisted treatment.

<sup>39</sup> We identified beneficiaries with a cancer diagnosis or hospice stay by using CMS's National Claims History File and Part C Encounter data. In total, we identified 2,736,399 beneficiaries with cancer or in hospice care who received at least 1 opioid.

<sup>40</sup> We selected these criteria because they closely align with the criteria that CMS used in 2016 and 2017 for its Overutilization Monitoring System. Through 2017, CMS's Overutilization Monitoring System identified beneficiaries who had a daily MED of 120 mg for 90 days plus four or more prescribers and four or more pharmacies. Note that the guidance uses the term "more than 3 prescribers and more than 3 pharmacies," which is the equivalent of "4 or more prescribers and 4 or more pharmacies." The criteria for the Overutilization Monitoring System changed in 2018. See CMS, *Announcement of Calendar Year (CY) 2018 Medicare Advantage Capitation Rates and Medicare Advantage and Part D Payment Policies and Final Call Letter and Request for Information*, April 3, 2017. Accessed at <https://www.cms.gov/Medicare/Health-Plans/MedicareAdvtgSpecRateStats/Downloads/Announcement2018.pdf> on March 30, 2021.

<sup>41</sup> For our analysis, we counted prescribers in group practices separately.