U.S. Department of Health and Human Services

Office of Inspector General

Data Snapshot

February 2021, OEI-02-20-00400

Opioid Use in Medicare Part D During the Onset of the COVID-19 Pandemic

Why These Data Are Important

Opioid overdoses have resulted in more than 200,000 deaths nationwide since 2015. As the country continues to deal with the crisis, concerns about the use of opioids in Medicare Part D and the availability of treatment for opioid use disorder have heightened with the onset of the coronavirus disease 2019 (COVID-19) pandemic. The National Institute on Drug Abuse has warned that respiratory diseases, like COVID-19, are known to increase the risk of fatal overdose among people taking opioids.[1] In addition, a recent study found that people with opioid use disorder are more likely to contract COVID-19 and suffer complications.[2]

The Office of Inspector General (OIG) has been tracking opioid use in Part D since 2016.[3] From 2016 to 2019, Medicare Part D saw a steady decline in opioid use, along with an increased use of drugs for treatment of opioid use disorder. With the onset of COVID-19 and the new dangers it poses for beneficiaries taking opioids, it is imperative that the Department of Health and Human Services (HHS) closely monitor opioid use during this unprecedented time. This data snapshot describes opioid use in Part D during the onset of COVID-19, focusing on the first 8 months of 2020. For context, this snapshot also provides data on the first 8 months of 2019.

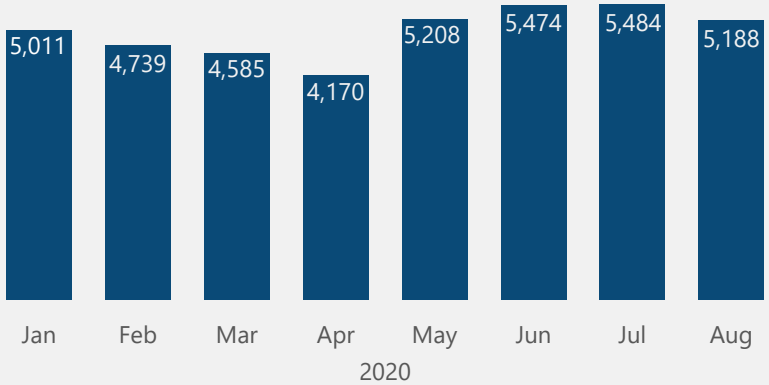
Key Takeaways

- ✓ It is critical to monitor the use of opioids in Part D, as COVID-19 presents new dangers for beneficiaries taking these drugs.
- ✓ As the pandemic took hold, about 5,000 Medicare beneficiaries per month suffered an opioid overdose.
- ✓ Almost a quarter of a million beneficiaries received high amounts of opioids in the first 8 months of 2020.
- ✓ At the same time, the number of beneficiaries receiving drugs for treatment of opioid use disorder increased slightly.
- ✓ Continued vigilance is needed as the country grapples with the COVID-19 pandemic and opioid crisis.

Opioid Overdoses

About 5,000 Medicare Part D beneficiaries per month suffered an opioid overdose during the first 8 months of 2020. In total, 31,651 Medicare Part D beneficiaries had an opioid overdose in the first 8 months of 2020. Each of these beneficiaries received medical care that was billed to Medicare for their overdose. Opioid overdoses occur when high doses of opioids, alone or in combination with other substances, cause breathing to slow to dangerous levels or stop altogether.

About **5,000** Medicare Part D beneficiaries per month suffered an **opioid overdose**.

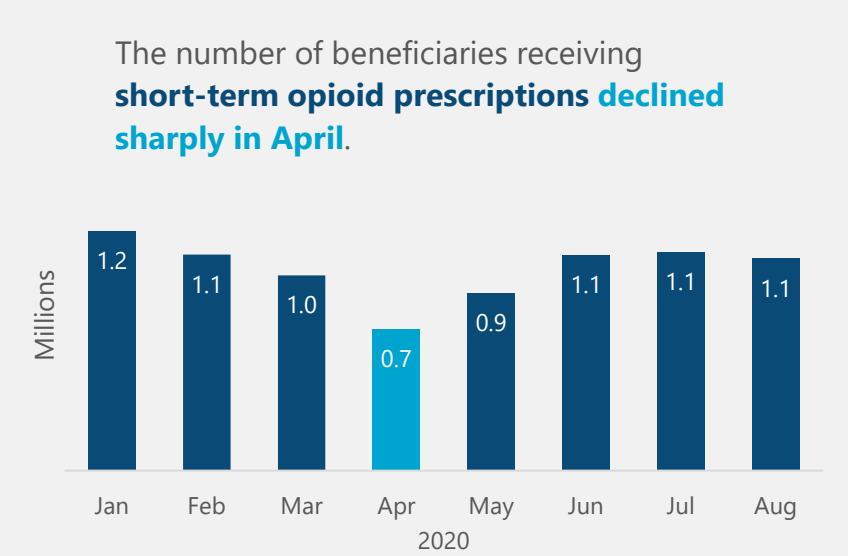


Source: OIG analysis of Medicare data, 2020.

Overdoses rose in the summer of 2020; June and July each had more than 5,400 beneficiaries who experienced an overdose. For comparison, during the corresponding 8-month period in 2019, an average of about 5,200 beneficiaries per month had an opioid overdose. Notably, these data may understate the total number of Medicare beneficiaries who suffered an overdose. Additional beneficiaries may have had overdoses but did not receive medical care that was billed to Medicare. For example, a beneficiary who suffered a fatal overdose alone at home may not be counted.

Opioid Prescribing

The number of beneficiaries receiving short-term opioid prescriptions dipped, with a particularly sharp decline in April. Overall, about 1 in 5 Part D beneficiaries (9.6 million) received an opioid through Part D in the first 8 months of 2020. More than half of these beneficiaries (6.0 million of 9.6 million) received a short-term opioid prescription, i.e., a prescription for 7 days or less. Short-term prescriptions are commonly prescribed for acute pain caused by injury or surgery.



The number of beneficiaries receiving short-term opioid prescriptions declined in the spring of 2020, particularly in April. In most months, about 1.1 million beneficiaries received a short-term opioid prescription—a similar rate as in 2019.[4] In April 2020, this number fell to 727,505—about one-third less than during a typical month before COVID-19. The decline is likely due to elective surgeries being postponed during the early months of the pandemic, particularly in April.

In contrast, the number of beneficiaries receiving longer-term opioid prescriptions—i.e., prescriptions for more than a week of opioids—was relatively similar during each of the first 8 months of 2020, ranging from a high of 3.4 million to a low of 3.2 million. This was slightly less than in 2019.[5]

About 220,000 Part D beneficiaries received high amounts of opioids in the first 8 months of 2020. Each of these beneficiaries received an average morphine equivalent dose (MED) of greater than 120 mg a day for at least 3 months from January through August 2020. MED is a measure that converts all the various opioids and strengths into one standard value.[6] The Centers for Disease Control and Prevention (CDC) recommends that prescribers use caution when ordering opioids at any dosage and that they avoid increasing dosages to the equivalent of 90 mg or more MED a day for chronic pain.[7] 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.[8] None of these beneficiaries had cancer or were in hospice care.

220,000 Part D beneficiaries received high amounts of opioids.

- Each received the equivalent of 16 oxycodone 5-mg tablets every day for 3 months.
- These levels carry health risks, including the risk of dependence.

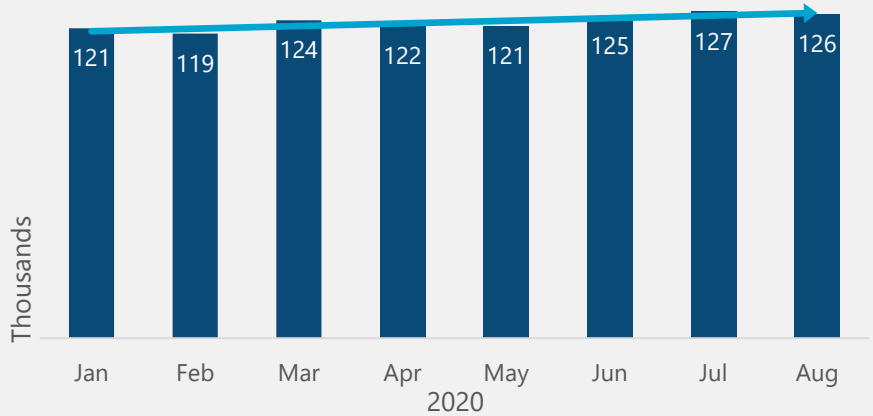
The number of beneficiaries receiving high amounts of opioids in the first 8 months of 2020 decreased 15 percent from the same period in 2019. This downward trend is consistent with trends in previous years. The number of beneficiaries receiving high amounts of opioids has decreased each year since 2016, when OIG began tracking this number.

Nonetheless, vigilance is needed. These high amounts raise concern because, in addition to carrying the risk of dependence and overdose, opioids also carry a number of other health risks.[9]

Treatment and Prevention

Beneficiaries' use of drugs for medication-assisted treatment increased, with a total of almost 195,000 beneficiaries receiving these drugs through Part D at any point in the first 8 months of 2020. Medication-assisted treatment is a proven method of treating opioid use disorder that combines medication with behavioral health services.[10] Medicare Part D covers two drugs—buprenorphine and naltrexone—for this purpose.[11] Ensuring access to these drugs is an important step in HHS's efforts to decrease illicit opioid use and opioid-related overdose deaths.

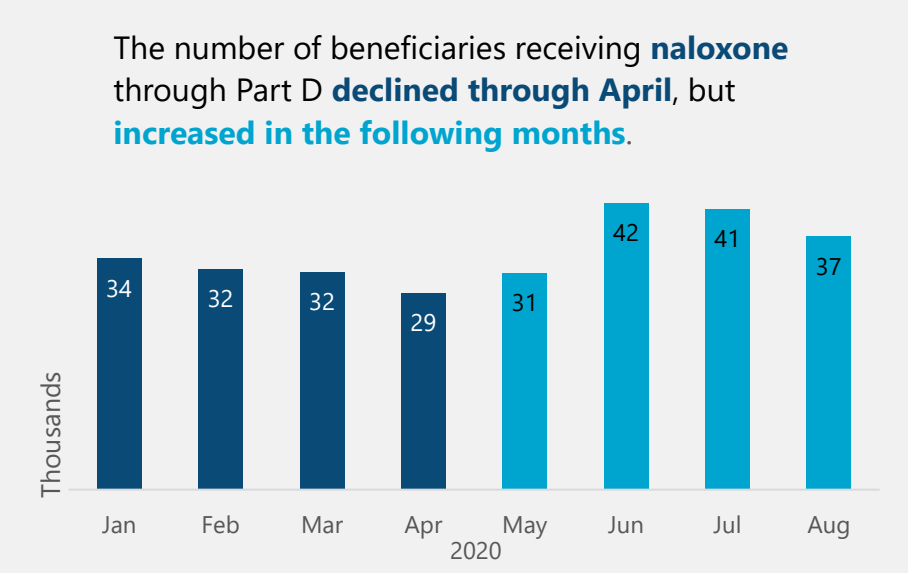
The number of beneficiaries receiving drugs for **medication-assisted treatment increased slightly during the onset of COVID-19.**



Source: OIG analysis of Medicare Part D data, 2020.

The number of beneficiaries receiving drugs for medication-assisted treatment increased slightly in the first 8 months of 2020. In August, 126,274 Part D beneficiaries received a drug for medication-assisted treatment, an increase of 5,596 from 120,678 in January. The overall number of beneficiaries receiving these drugs represents an increase of 10 percent compared to the same period in 2019.[12] Despite these increases, concerns remain about access to drugs for medication-assisted treatment. In 2019, just 13 percent of Part D beneficiaries with a diagnosis of opioid use disorder received drugs for medication-assisted treatment through Part D.[13] It is also important to remember that we do not yet know the extent to which the COVID-19 pandemic has increased the need for these drugs and the number of beneficiaries suffering from opioid use disorder.

The number of beneficiaries receiving naloxone—a drug that can reverse an opioid overdose—declined through April, but increased in the following months to total more than a quarter-million beneficiaries. Naloxone (such as the brand-name drug Narcan) is a medication that can reverse the effects of an opioid overdose if administered in a timely fashion. Ensuring that individuals have naloxone on hand in the event of an overdose is critical for reducing the number of overdose deaths.



Source: OIG analysis of Medicare Part D data, 2020.

The number of beneficiaries receiving naloxone through Part D decreased in the first few months of 2020 before substantially increasing as summer approached. A total of 256,976 beneficiaries received naloxone during the 8-month period in 2020, a 4-percent decrease from the same period in 2019. HHS recommends that providers strongly consider prescribing naloxone to patients with an increased risk of opioid overdose, such as those who receive higher opioid amounts and those with a history of overdose or use of illicit opioids.[14] Further, OIG recommended in September 2020 that the Centers for Medicare & Medicaid Services (CMS) pursue strategies to increase the number of at-risk Medicaid beneficiaries who receive naloxone.[15]

What OIG Concludes

The COVID-19 pandemic has heightened concerns related to opioid misuse and overdose, as well as concerns related to access to treatment. Respiratory diseases, like COVID-19, are known to increase the risk of fatal overdose among people taking opioids.[16] In addition, a recent study found that people with opioid use disorder are more likely to contract COVID-19 and suffer complications.[17]

This data snapshot provides the first look at opioid use and treatment during the pandemic, an unprecedented and extraordinarily challenging time for this country's healthcare system. We found that at least 5,000 Part D beneficiaries per month suffered an opioid overdose during the first 8 months of 2020. Further, almost a quarter of a million beneficiaries received high amounts of opioids. At the same time, the number of beneficiaries receiving drugs for medication-assisted treatment increased slightly from January through August 2020. In addition, the number of beneficiaries receiving naloxone—a drug that can reverse an opioid overdose—declined through April but increased in the following months.

As the COVID-19 pandemic continues to affect millions of Americans, vigilance remains essential. OIG is committed to continuing our work on opioid use and access to treatment. CMS has also continued its efforts to prevent inappropriate prescribing of opioids and to ensure access to treatment during the pandemic. For example, in 2020, Medicare began covering treatment services for opioid use disorder, including drugs for medication-assisted treatment, furnished by opioid treatment programs.[18] In addition to CMS's continuing these efforts, it is essential that CMS—and HHS—monitor trends in prescriptions for drugs for medication-assisted treatment and naloxone and take appropriate action if the numbers of prescriptions begin to fall off. These drugs can save lives and are critical to addressing the opioid crisis amidst the COVID-19 pandemic.

Methodology

We based this data snapshot on an analysis of prescription drug event (PDE) records for Part D drugs, Medicare claims data, and Part C encounter data. 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 the beneficiary. The National Claims History File contains claims data—including diagnosis codes—from Medicare Parts A and B. Part C encounter data contain medical claims data—including diagnosis codes—for beneficiaries enrolled in Medicare Advantage plans.

To obtain descriptive information about the drugs, we matched PDE records to data from First DataBank and CDC's Morphine Milligram Equivalent (MME) conversion file. First DataBank contains information about each drug, such as the therapeutic class (e.g., an opioid). CDC's MME conversion file contains information about each opioid drug's morphine milligram equivalence.[19] For the purposes of this data snapshot, we use the term "prescription" to mean one PDE record.

Opioid Overdoses

To determine the number of Part D beneficiaries who had an opioid overdose in the first 8 months of 2020, we used inpatient and outpatient 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 August 31, 2020.

Analysis of Part D Utilization of Opioids, Drugs for Medication-Assisted Treatment, and Naloxone

We identified all PDE records for opioids that beneficiaries received between January 1, 2020 and August 31, 2020, and between January 1, 2019, and August 31, 2019.[20] We calculated the total number of Part D beneficiaries who received an opioid in each of these months, as well as the total number of beneficiaries who received an opioid in each 8-month period.[21] For each of these months and each of the 8-month periods, we also determined the number of beneficiaries who received short-term prescriptions for opioids (i.e. days supply of 7 days or less) and the number who received longer-term prescriptions (i.e., days supply of greater than 7 days.)

We then identified all PDE records for (1) drugs for medication-assisted treatment indicated for the treatment of opioid use disorder and (2) naloxone (the opioid-overdose reversal drug). For each month and for each of the 8-month periods described above, we calculated the total number of beneficiaries who received drugs for medication-assisted treatment and who received naloxone.[22]

Beneficiary Analysis

We determined the amount of opioids that each beneficiary received in the first 8 months of 2020 and the first 8 months of 2019. To do this, we calculated each beneficiary's average daily morphine equivalent dose (MED).[23] 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).[24] 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 8-month time period, using 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 the 8-month time period. We identified beneficiaries with a cancer diagnosis or hospice stay by using CMS's National Claims History File and Part C encounter data.

We then determined 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. We determined that a beneficiary received high amounts of opioids if the beneficiary exceeded an average daily MED of 120 mg for any 90-day period and had received opioids for 90 or more days in the 8-month time period. The MED of 120 mg exceeds the 90-mg MED level to which CDC recommends prescribers avoid increasing dosages for patients with chronic pain. These criteria are consistent with our previous analysis of the 2016, 2017, 2018, and 2019 data.

Limitations

This analysis is based on Part D PDE records, Medicare claims data, and Part C Encounter data. It does not include review of medical records, nor does it include data on drugs—including opioids, drugs for medication-assisted treatment, and naloxone—that beneficiaries may have received from sources other than Part D. In addition, this analysis may underestimate the number of overdoses, as additional beneficiaries may have had overdoses but did not receive medical care that was billed to Medicare.

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.

Acknowledgments

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This report was prepared under the direction of Jodi Nudelman, Regional Inspector General for Evaluation and Inspections in the New York regional office, and Nancy Harrison and Meridith Seife, Deputy Regional Inspectors General.

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Endnotes

[1] Dr. Nora Volkow, Director, National Institute on Drug Abuse, National Institutes of Health, *COVID-19: Potential Implications for Individuals with Substance Abuse Disorders*, April 6, 2020. Accessed at https://www.drugabuse.gov/about-nida/noras-blog/2020/04/covid-19-potential-implications-individuals-substance-use-disorders on January 20, 2021.

[2] National Institutes of Health, *Substance Use Disorder Linked to COVID-19 Susceptibility*, September 14, 2020. Accessed at https://www.nih.gov/news-events/news-releases/substance-use-disorders-linked-covid-19-susceptibility on October 27, 2020.

[3] OIG, *Opioid Use in Medicare Part D Continued To Decline in 2019, but Vigilance Is Needed as COVID-19 Raises New Concerns*, OEI-02-20-00320, August 2020.

[4] Each month in 2019, between 1.1 million and 1.2 million Part D beneficiaries received a short-term opioid prescription, i.e., a prescription for 7 days or less.

[5] In 2019, the number of beneficiaries who received longer-term opioid prescriptions (i.e., for more than 7 days) ranged from 3.3 million to 3.5 million.

[6] MED is also referred to as morphine milligram equivalents (MME).

[7] 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," *MMWR [Morbidity and Mortality Weekly Report] Recommendations and Reports*, Vol. 65, No. 1, March 18, 2016.

[8] 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/Dosage_Reduction_Discontinuation.pdf on November 9, 2020.

[9] 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 January 20, 2021. 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.

[10] Opioid use disorder is a problematic pattern of opioid use that leads to clinically significant impairment or distress. For more information about effectiveness of the drugs in treating opioid use disorder, see Substance Abuse and Mental Health Services Administration, *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 on December 2, 2020.

[11] A third drug, methadone, is covered by Medicare Part B, but not by Part D, and is not included in this review. In 2020, Medicare Part B began covering drugs for medication-assisted treatment, including methadone, that are dispensed by opioid treatment programs.

[12] The number of beneficiaries receiving drugs for medication-assisted treatment through Part D increased every year between 2006—the start of the program—and 2019. From 2018 to 2019, it increased 20 percent. See OIG, *Opioid Use in Medicare Part D Continued To Decline in 2019, but Vigilance is Needed as COVID-19 Raises New Concerns*, OEI-02-20-00320. July 2020.

[13] See OIG, *Opioid Use in Medicare Part D Continued to Decline in 2019, but Vigilance Is Needed as COVID-19 Raises New Concerns* (OEI-02-20-00320), July 2020. In addition, a forthcoming OIG report will determine the extent to which beneficiaries with opioid use disorder received drugs for medication-assisted treatment through Medicare. See OIG, *Utilization of Medication-Assisted Treatment in Medicare,* OEI-02-10-00390, forthcoming. Also see OIG, *Work Plan 2021* at https://oig.hhs.gov/reports-and-publications/workplan/summary/wp-summary-0000484.asp.

[14] HHS, *Naloxone: The Opioid Reversal Drug that Saves Lives*. Accessed at https://www.hhs.gov/opioids/sites/default/files/2018-12/naloxone-coprescribing-guidance.pdf on January 5, 2021.

[15] For more information about OIG's recommendation, see OIG, *CMS Should Pursue Strategies To Increase the Number of Beneficiaries Acquiring Naloxone Through Medicaid* (OEI-BL-18-00360), September 2020.

[16] Dr. Nora Volkow, Director, National Institute on Drug Abuse, National Institutes of Health, *COVID-19: Potential Implications for Individuals with Substance Abuse Disorders*, April 6, 2020.

[17] National Institutes of Health, *Substance Use Disorder Linked to COVID-19 Susceptibility*, September 14, 2020.

[18] The Substance Use-Disorder Prevention that Promotes Opioid Recovery and Treatment (SUPPORT) for Patients and Communities Act required Medicare coverage of opioid use disorder treatment services furnished by opioid treatment programs beginning January 1, 2020. See P.L. No. 115-271 § 2005. For more information about this coverage, see CMS, *Opioid Use Disorder Treatment Services*. Accessed at https://www.medicare.gov/coverage/opioid-use-disorder-treatment-services on January 8, 2021. For more information about CMS's efforts to address opioid use in Medicare Part D, see CMS, *Improving Drug Utilization Review Controls in Part D*. Accessed at https://www.cms.gov/Medicare/Prescription-Drug-Coverage/PrescriptionDrugCovContra/RxUtilization on January 8, 2021. For a broad overview of CMS's efforts to address the opioid crisis, see CMS, *CMS Roadmap: Strategy to Fight the Opioid Crisis*, June 2020. Accessed at https://www.cms.gov/About-CMS/Agency-Information/Emergency/Downloads/Opioid-epidemic-roadmap.pdf on January 20, 2021.

[19] These files contain MME conversion factors for each National Drug Code. Morphine equivalent dose (MED) and MME are interchangeable terms.

[20] To identify PDE records for opioids, we matched the National Drug Codes on the PDE records with two files: First DataBank and CDC's MME conversion file.

[21] We also calculated the proportion of Part D beneficiaries who received an opioid in the first 8 months of 2020. To do this, we determined the total number of beneficiaries who were enrolled in Medicare Part D during this time period by using the Beneficiary Enrollment Database.

[22] To identify PDE records for naloxone, we matched the NDCs to First Databank. In this analysis, we included formulations indicated for the emergency treatment of a known or suspected opioid overdose. We based this on PDE records from CMS's Integrated Data Repository.

[23] 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 on January 20, 2021.

[24] We included opioids dispensed in 2018 with days of use in 2019. This analysis excludes PDE records for injection, intravenous, and intrathecal opioids, as well as opioids indicated for medication-assisted treatment.