



# Buprenorphine Treatment for Opioid Use Disorder in Philadelphia

How many clinicians are authorized to prescribe it, how many do, and how that compares with other cities and counties

## **Contents**

- 1 Overview
- 2 Philadelphia's health care provider workforce
- 3 Philadelphia's buprenorphine-waivered health care providers
- 14 Why providers may not be getting waivers
- 14 Buprenorphine prescribing among health care providers with waivers in Philadelphia
- 24 Buprenorphine availability by neighborhood
- 27 Conclusion
- 27 Methodology
- 29 Endnotes

# The Pew Charitable Trusts

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## About this report

This report was researched and written by Seth Budick, a senior officer with Pew's Philadelphia research and policy initiative, and Jen Sirko, formerly with Pew's research review and support team. Former Pew staff members Brett Beckerson and Meagan Pharis developed the research questions and initiated the report, and Donna Leong, formerly with Pew's Philadelphia research and policy initiative, contributed research. It was edited by Larry Eichel, a senior adviser to the initiative, along with Erika Compart, Demetra Aposporos, and Carol Hutchinson, and designed by Cara Bahniuk.

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**Cover photo:** PureRadiancPhoto/Shutterstock

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**The Pew Charitable Trusts** is driven by the power of knowledge to solve today's most challenging problems. Pew applies a rigorous, analytical approach to improve public policy, inform the public, and invigorate civic life.

## Overview

Of the largest cities and urban counties in the United States, Philadelphia is one of those hit hardest by opioid use disorder (OUD), outpacing all but a few in overdose deaths per capita. In 2020, it recorded 1,214 unintentional drug deaths, its second-highest number on record and the fourth straight year that the annual total surpassed 1,100.

Research has shown that one of the most effective ways to treat OUD is through three medications approved by the U.S. Food and Drug Administration—naltrexone, methadone, and buprenorphine—that block or reduce opioids' euphoric effects while relieving craving and withdrawal symptoms.

Buprenorphine, in particular, has some key advantages. First, it can be prescribed widely, including in office-based primary care—unlike methadone, which can generally be administered only in special clinics. And patients do not have to be opioid free for several days before starting buprenorphine, in contrast to naltrexone. Partly as a result of these and other benefits, Philadelphia's Department of Public Health, its Department of Behavioral Health and Intellectual disAbility Services, and others in the local treatment community have sought to increase patients' access to buprenorphine.

However, to prescribe buprenorphine for OUD in most settings, a medical provider must receive a special license from the U.S. Drug Enforcement Administration (DEA) that is often referred to as an "X-waiver." For years, all providers had to complete a training program to get a waiver. But in April 2021, the Biden administration removed that requirement for those prescribing buprenorphine to up to 30 patients at a time. Providers who want to treat additional patients must still undergo training—eight hours for physicians and 24 hours for advanced practice providers such as nurse practitioners and physician assistants. Trained clinicians can concurrently treat 100 or 275 patients, depending on the treatment setting and the clinician's credentials.

For this report, The Pew Charitable Trusts examined how many health care providers in Philadelphia had the waivers required to prescribe buprenorphine, how many were actually prescribing it as of the fall of 2020 (before the new federal guidelines took effect), and how that compares with the numbers in similar cities and counties. The analysis was based on data from IQVIA, a company that tracks prescriptions filled at pharmacies and via mail order; and the DEA, which monitors providers' X-waiver status.

The research showed that in Philadelphia, the issue is not so much the number of providers with waivers; rather, it is the number using those waivers to write prescriptions. This data suggests that although recent efforts in the city have focused on increasing the number of providers with waivers, the next step is to get more of them to start using their waivers.

Among the key findings:

- Roughly 6% of Philadelphia's health care providers had waivers allowing them to prescribe buprenorphine for OUD as of November 2020, with the number climbing steadily and at a faster pace than in many other large urban cities and counties with high rates of opioid overdose deaths. The 6% figure was relatively high among the 24 jurisdictions in this comparison but low measured against the need for treatment—as quantified by the number of drug overdose deaths in each city or county.
- Practitioners with X-waivers are overwhelmingly primary care doctors, psychiatrists, specialists in emergency medicine, and nurse practitioners with waiver rates of 14%, 31%, 21%, and 5%, respectively. Compared with other large urban cities and counties with high rates of opioid overdose deaths, these rates were relatively high among primary care physicians and specialists in emergency medicine but relatively low among other practitioners.

- Having a waiver does not ensure that a provider will prescribe buprenorphine. Of the 1,014 Philadelphia providers who had waivers as of September 2020, only 243 (24%) prescribed buprenorphine for OUD that month. That percentage was lower than in similar jurisdictions. Many of the clinicians in the city who obtained waivers in the 12 months ending in September 2020 have been slow to prescribe.
- Of those providers waived in Philadelphia, prescribing rates were highest among primary care physicians (26%), nurse practitioners (35%), and physician assistants (43%).
- A small number of providers—particularly those with the highest patient limit (275 simultaneous patients)—were responsible for the majority of prescriptions. Many providers, particularly among the 79% with 30-patient limits, wrote very few, if any, prescriptions.
- Although the recent change in guidelines for treating OUD with buprenorphine makes it easier for providers to begin prescribing the medication, the data suggests that providers, after being authorized to write prescriptions, have generally been slow to use that authority, and as a result, the overall availability of buprenorphine for OUD treatment may not change dramatically in the short term.

## Philadelphia’s health care provider workforce

Most Philadelphia health care providers who are eligible for X-waivers are doctors—either an M.D. (71%) or a doctor of osteopathic medicine (8%). Fifteen percent of providers are nurse practitioners, and 6% are physician assistants; both types of providers can also receive waivers to prescribe buprenorphine in Pennsylvania.<sup>1</sup>

Twenty percent of the physicians work in primary care. Nonpediatric specialists were the largest group of physicians, representing 63% of doctors. (See Table 1.)

Table 1

### Philadelphia Health Care Providers by Licensure and Type Most are doctors (predominantly specialists)

	Physician		Nurse practitioner	Physician assistant
	Count	Percentage	Count	Count
Primary care	2,684	20%	-	-
Specialist	8,209	63%	-	-
Pediatrics	1,855	14%	-	-
Student	237	2%	-	-
Missing	124	1%	-	-
<b>Total</b>	<b>13,109</b>		<b>2,525</b>	<b>940</b>

Notes: The data provider’s classification system treats nurse practitioners and physician assistants as generic categories without a corresponding specialty. Pediatrics includes pediatricians and those with pediatric specialties. Those categorized as “student” are participants in medical training programs. “Missing” refers to providers for whom more specific information was not available.

Source: Pew analysis of data provided by IQVIA

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Based on the facility type provided by IQVIA, the majority of Philadelphia’s providers (57%) practice in hospitals, with most of the remainder (37%) based at outpatient settings. (See Table 2.) Less common practice settings included academic (2%), residential or elder care (1%), and research, laboratory, or nontreatment settings (2% combined).

Table 2

## Philadelphia Health Care Providers by Licensure and Care Setting

Providers were concentrated in hospitals and, to a lesser extent, in outpatient care

	Physician	Nurse practitioner	Physician assistant	Total	% of total
Academic	287	12	7	306	2%
Ambulance	32	7	0	39	0%
Correctional	15	14	1	30	0%
Hospital	6,579	1,120	536	8,235	57%
Laboratory	74	16	4	94	1%
Nontreatment	143	8	2	153	1%
Outpatient	4,095	941	270	5,306	37%
Research	28	2	0	30	0%
Residential/elder	65	60	9	134	1%
Other	1	0	1	2	0%
Missing/unknown	1,790	345	110	2,245	NA
<b>Total</b>	<b>13,109</b>	<b>2,525</b>	<b>940</b>	<b>16,574</b>	<b>100%</b>

Note: Percentages exclude missing/unknown facility type.

Source: Pew analysis of data provided by IQVIA

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## Philadelphia’s buprenorphine-waivered health care providers

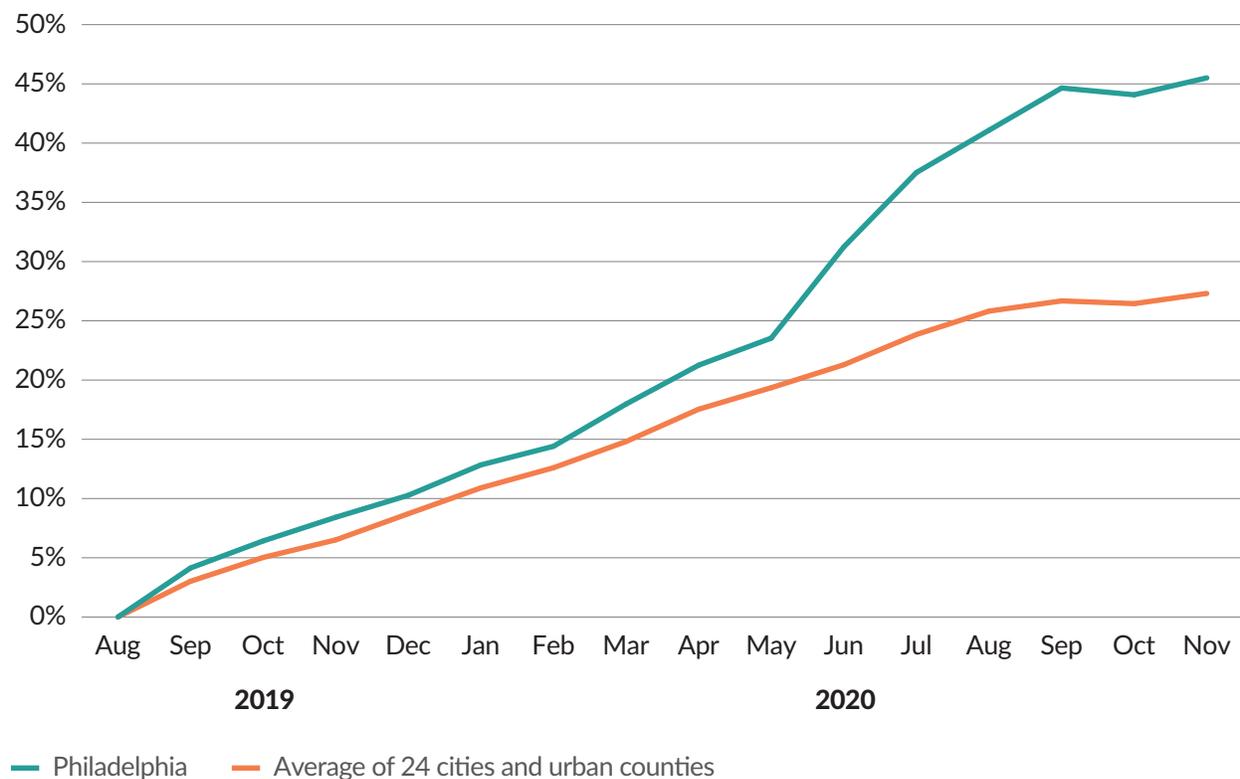
To prescribe buprenorphine for opioid use disorder in the United States, a health care provider must obtain an X-waiver; however, under the Biden administration’s April directive, providers are now required to attend a formerly mandatory special training only if they want to prescribe to more than 30 patients simultaneously.<sup>2</sup> In part because buprenorphine can be prescribed by any practitioner with a waiver—unlike methadone, which can be administered only at an opioid treatment program (i.e., a “methadone clinic”)—Philadelphia health officials want to improve access to treatment by increasing the number of providers with waivers. Evidence indicates that higher waiver rates and waiver caps are associated with increases in buprenorphine prescriptions; in February 2020, Philadelphia’s major health systems announced a commitment to secure waivers for their primary care providers.<sup>3</sup>

To assess the current number of providers with X-waivers, Pew analyzed rates in Philadelphia and found that 1,020 providers—6% of the provider population—had waivers as of November 2020. The number and percentage of providers with waivers in Philadelphia has grown consistently in recent years, increasing from 701 in August 2019 (the earliest available DEA data). That 46% growth in providers with waivers exceeded the 27% average rate of growth among 24 cities and urban counties with high rates of opioid overdoses and was probably driven in part by Philadelphia health systems’ recent efforts to secure waivers for their providers.<sup>4</sup> (See Figure 1.) The city has also funded waiver trainings by the Health Federation of Philadelphia.

Figure 1

## Percentage Change in Buprenorphine-Waivered Health Care Providers in Philadelphia and Other Large Urban Jurisdictions

Counts show a steady increase from August 2019 through November 2020



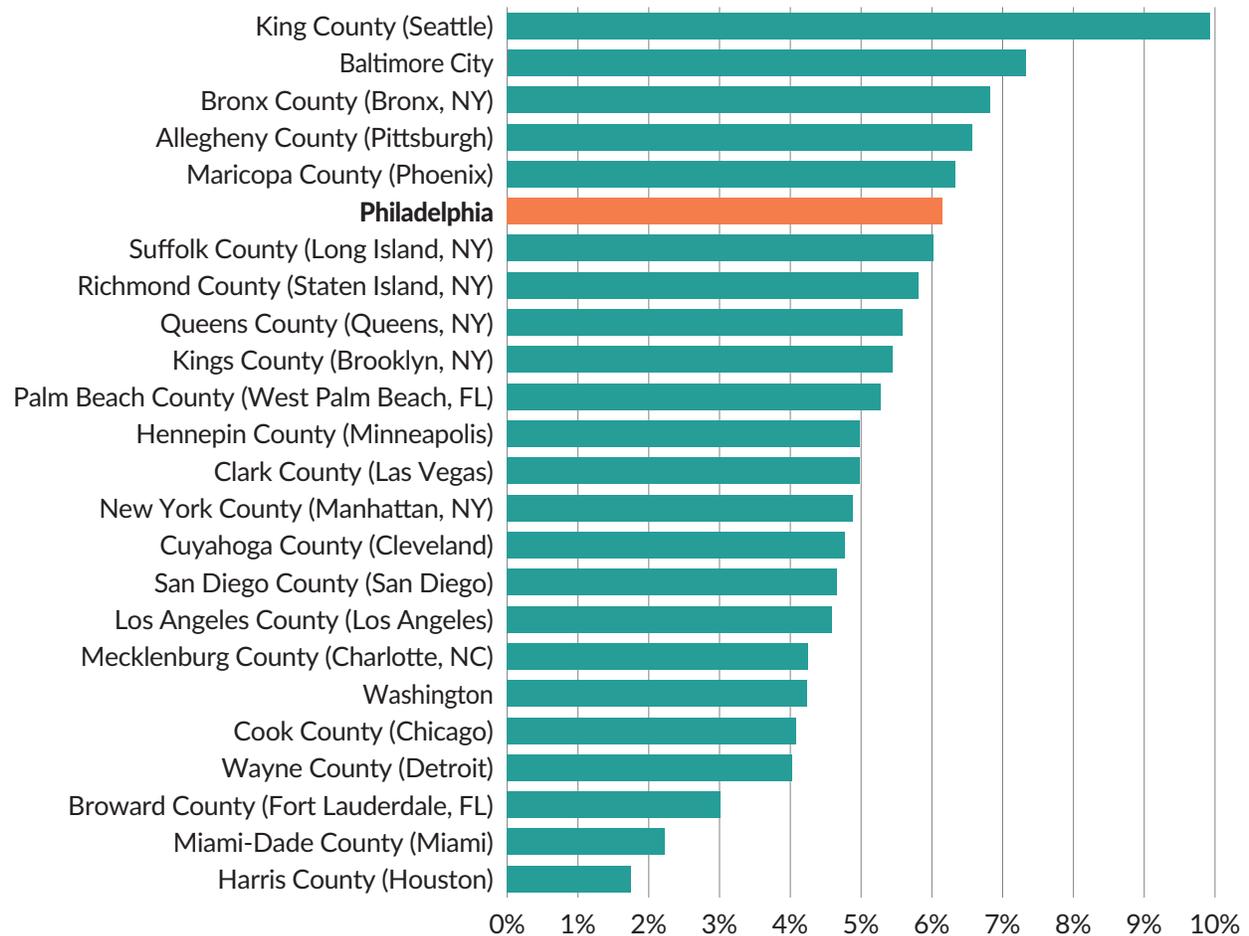
Sources: U.S. Drug Enforcement Administration; Pew analysis of data provided by IQVIA  
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At 6%, Philadelphia’s overall waiver rate was near the top of the range among 24 cities and urban counties with high rates of opioid overdoses. (See Figure 2.) Rates ranged from a low of roughly 2% in Harris County, Texas (which includes Houston), to a high of nearly 10% in King County, Washington (which includes Seattle). Generally, local health data in the U.S. is collected at the county level.

Figure 2

## Rate of Buprenorphine Waivers Among All Health Care Providers in Philadelphia and 23 Other Jurisdictions

Philadelphia has a comparatively high waiver rate



Note: Data is for November 2020.

Sources: U.S. Drug Enforcement Administration; Pew analysis of data provided by IQVIA

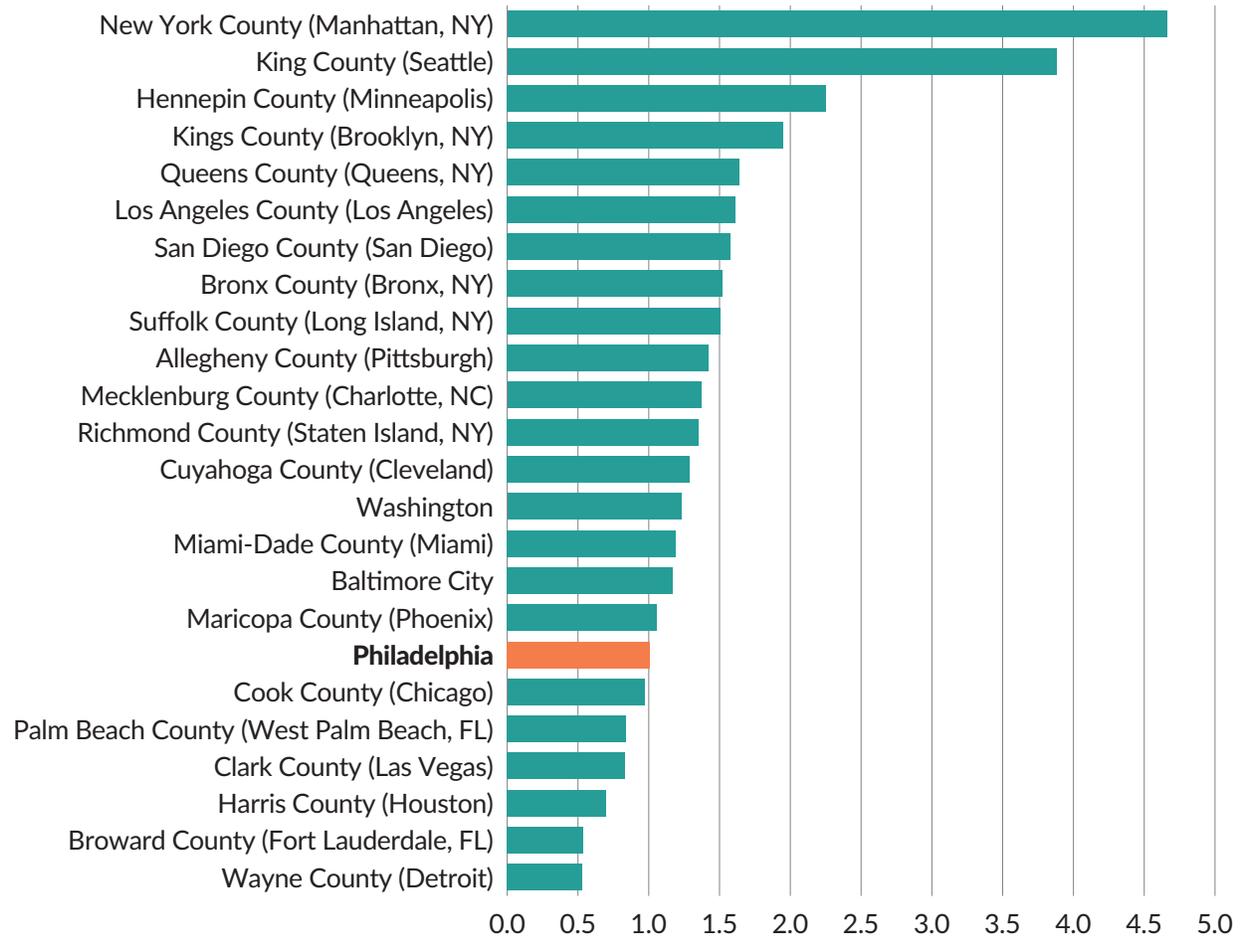
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Because the opioid epidemic is worse in some locations than in others, waiver rates alone may not fully capture how well the number of providers with waivers meets local needs. To measure those providers in the context of demand, we calculated the number of providers with waivers per drug overdose death for the same jurisdictions.<sup>5</sup> Given that Philadelphia has a high rate of overdose deaths, the city's overall number of providers with waivers per overdose death was relatively low.<sup>6</sup> (See Figure 3.)

Figure 3

## Buprenorphine-Waivered Health Care Providers Per Drug Overdose Death in Philadelphia and 23 Other Jurisdictions

The number of waived providers per drug death was relatively low in Philadelphia



Notes: Waiver data is for November 2020; overdose deaths are for 2019.

Sources: Pew analysis of data provided by IQVIA; U.S. Centers for Disease Control and Prevention

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In Philadelphia, physician specialists made up the largest category of providers with waivers, but at 14%, waiver rates were highest among primary care doctors. (See Table 3.) Nurse practitioners and physician assistants made up a relatively small share of providers with waivers and had slightly lower waiver rates than providers overall. Until April 2021, people in those two professions had to complete 24 hours of training to qualify for an X-waiver, compared with eight hours for doctors, and they have been eligible for the waiver only since 2017.

Table 3

## Buprenorphine Waiver Status of Philadelphia Health Care Providers by Licensure and Type

Primary care physicians were most likely to have waivers

Licensure	Specialty	Waivered	Not waived	% waived
Physician	Primary care	368	2,316	14%
	Specialist	452	7,757	6%
	Pediatrics	30	1,825	2%
	Student	1	236	0%
	Missing	1	123	1%
	Total (physicians)	852	12,257	6%
Nurse practitioner		131	2,394	5%
Physician assistant		37	903	4%
<b>Total (all providers)</b>		<b>1,020</b>	<b>15,554</b>	<b>6%</b>

Notes: Data is for November 2020. The data provider's classification system treats nurse practitioners and physician assistants as generic categories without a corresponding specialty. Pediatrics includes pediatricians and those with pediatric specialties. Students without medical licenses cannot prescribe without a co-signer.

Sources: U.S. Drug Enforcement Administration; Pew analysis of data provided by IQVIA

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Virtually all providers with waivers in Philadelphia worked in outpatient or hospital settings, where they had waiver rates of 9% and 5%, respectively. (See Table 4.) Providers practicing at several less common facility types had higher waiver rates. Correctional settings, which have a small number of health care providers, had a 43% waiver rate, by far the highest, reflecting the degree to which buprenorphine has become an important part of OUD treatment in Philadelphia's jails in recent years.<sup>7</sup>

Table 4

## Buprenorphine Waiver Status of Philadelphia Health Care Providers by Care Setting

Most providers with waivers practiced in outpatient care, where waiver rates were higher than in hospitals

	Waivered	Not waived	% Waivered
Academic	12	294	4%
Ambulance	6	33	15%
Correctional	13	17	43%
Hospital	384	7,851	5%
Laboratory	1	93	1%
Nontreatment	8	145	5%
Outpatient	468	4,838	9%
Research	1	29	3%
Residential/elder	18	116	13%
Missing/unknown	107	2,138	5%
Other	2	0	100%
<b>Total</b>	<b>1,020</b>	<b>15,554</b>	<b>6%</b>

Note: Data is for November 2020.

Sources: U.S. Drug Enforcement Administration; Pew analysis of data provided by IQVIA

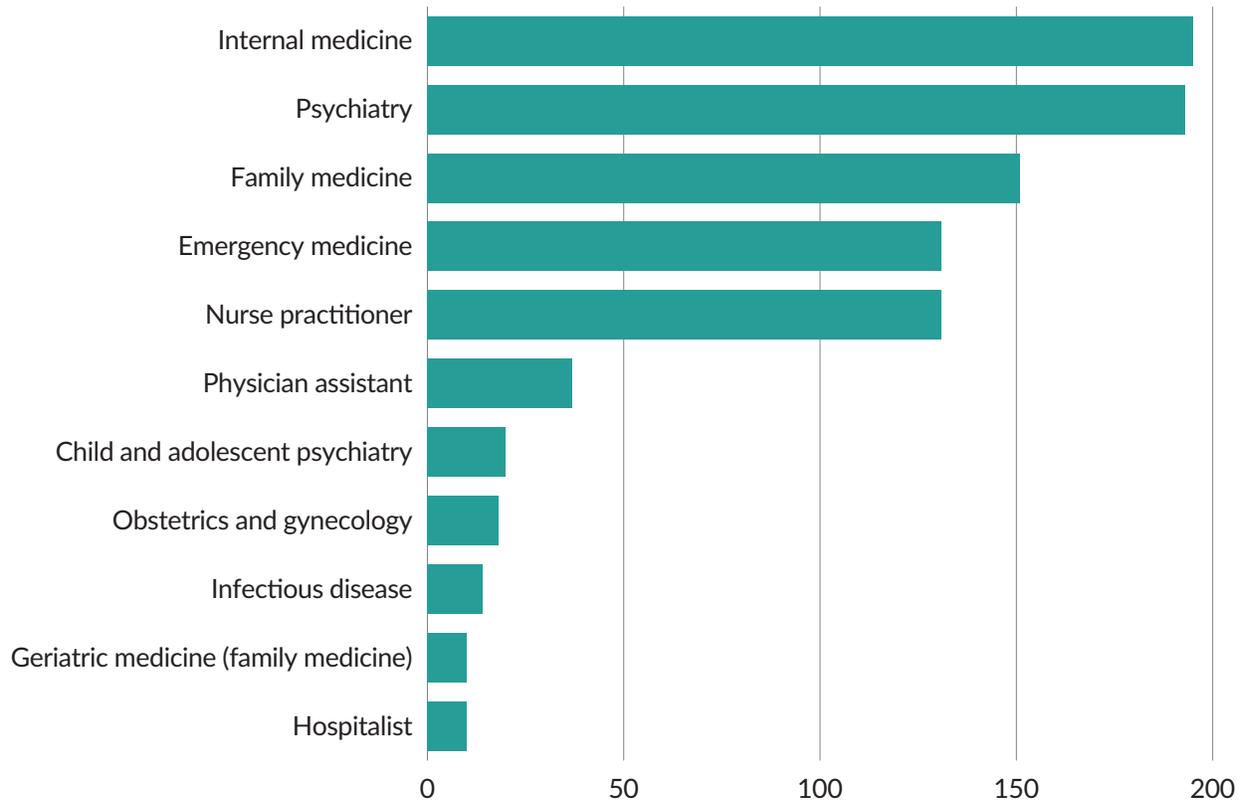
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Providers with X-waivers were highly concentrated in a small number of specialties. Figure 4 shows specialties that have 10 or more providers with waivers, which together accounted for 89% of those with waivers. The five most common specialties alone—two of which were in primary care (internal medicine and family medicine)—accounted for the vast majority of practitioners with waivers. Thirty-four percent were primary care physicians; 19% were psychiatrists, who commonly treat addiction; 13% were nurse practitioners; and 13% were emergency specialists, a group that frequently encounters patients experiencing overdose.

Figure 4

## Number of Buprenorphine-Waivered Health Care Providers in Philadelphia by Specialty

Providers with waivers are overwhelmingly primary care physicians, psychiatrists, nurse practitioners, and emergency care specialists



Notes: Data is for November 2020 and includes all specialties with 10 or more providers with waivers. The data provider's classification system treats nurse practitioners and physician assistants as generic categories without a corresponding specialty.

Sources: U.S. Drug Enforcement Administration; Pew analysis of data provided by IQVIA

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Similarly, providers with X-waivers were concentrated in outpatient care medical groups (45%) and acute care hospitals (35%). Only 6% practiced in psychiatric hospitals, which was the next most common care setting.<sup>8</sup>

Table 5 details the waiver rates among the most frequently waived specialties and in the most common care settings. Psychiatrists and emergency specialists had the highest waiver rates across settings. Unlike those specialties, waiver rates among primary care providers were highest in outpatient settings (21%), precisely where public health officials have hoped to improve patient access to buprenorphine for OUD.

Table 5

## Buprenorphine Waiver Rates of Philadelphia Health Care Providers by Specialty and Care Setting

Waiver rates were highest among psychiatrists, emergency medicine providers, and primary care physicians in outpatient settings

Licensure	Specialty	Outpatient	Hospital	Other	Overall
<b>Physician</b>	Primary care	21%	8%	10%	14%
	Specialist	5%	6%	5%	6%
	Psychiatry	31%	37%	23%	31%
	Emergency medicine	13%	26%	11%	21%
	Specialist (other)	2%	1%	1%	1%
	Other	3%	1%	1%	1%
	Total (physician)	9%	5%	6%	6%
<b>Nurse practitioner</b>		8%	2%	6%	5%
<b>Physician assistant</b>		8%	2%	2%	4%
<b>Total (all providers)</b>		9%	5%	6%	6%

Notes: Data is for November 2020. The data provider's classification system treats nurse practitioners and physician assistants as generic categories without a corresponding specialty.

Sources: U.S. Drug Enforcement Administration; Pew analysis of data provided by IQVIA

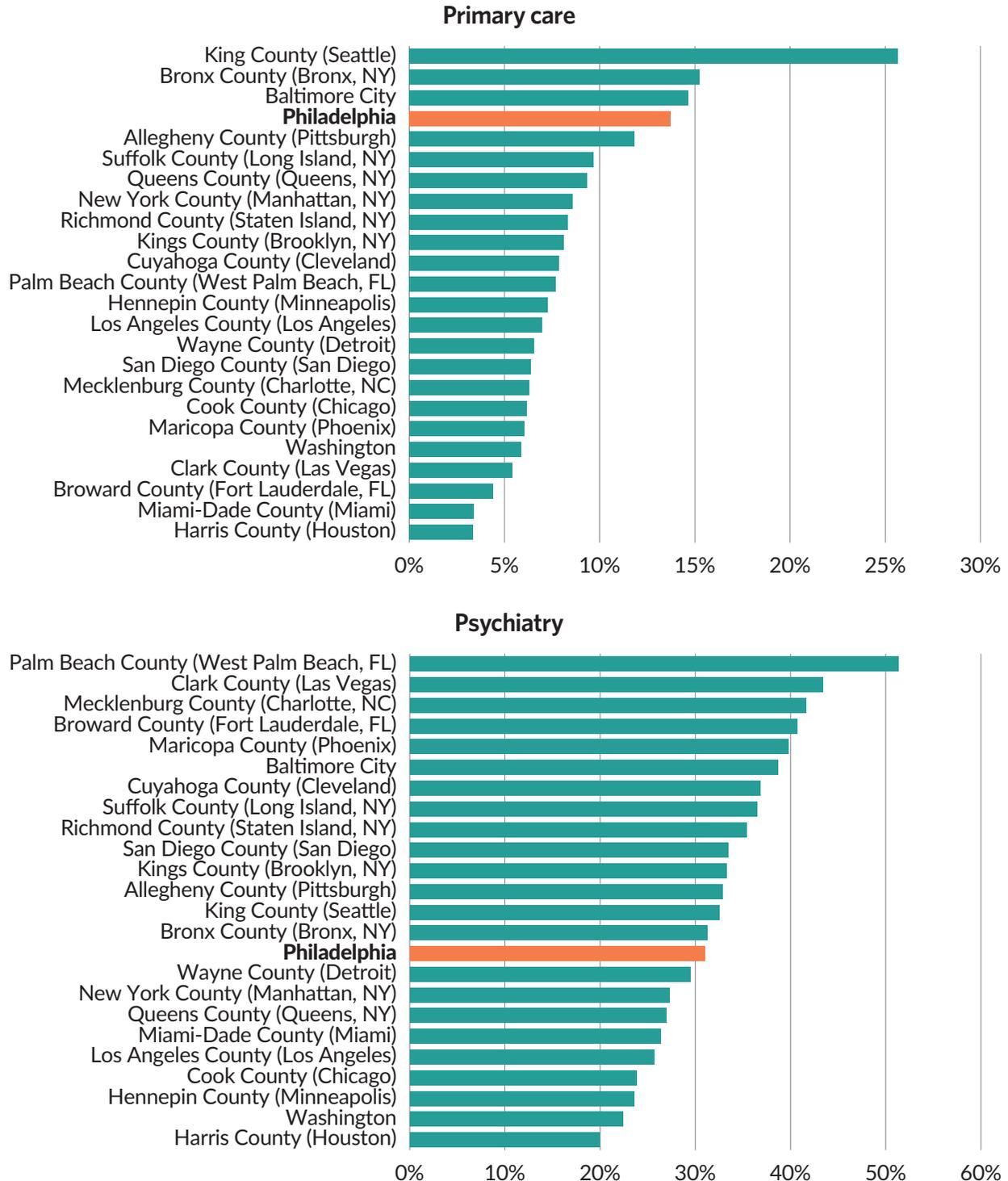
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Compared with other large urban jurisdictions with high overdose death rates, Philadelphia had relatively high waiver rates among primary care physicians and emergency specialists but lower rates among psychiatrists, nurse practitioners, and other specialists. (See Figure 5.) Calculating the rates per overdose death instead, the rates of providers with waivers in the city were relatively low across all specialties.

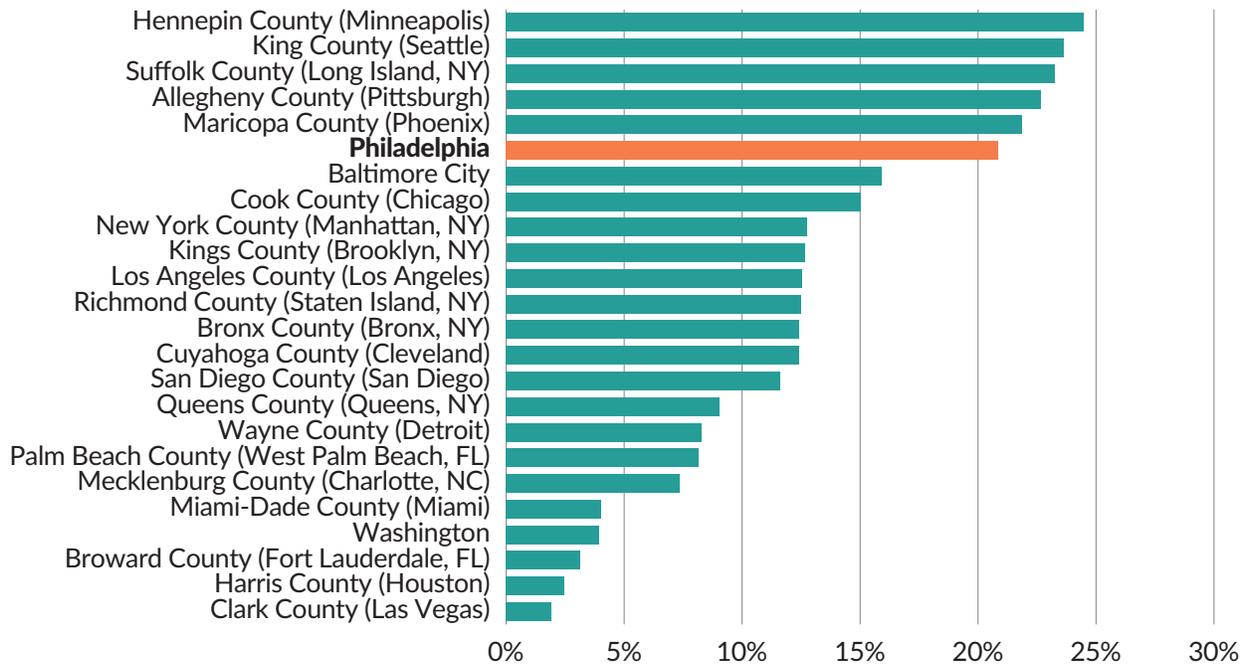
Figure 5

## Rate of Buprenorphine Waivers Among Health Care Providers in Philadelphia and 23 Other Jurisdictions by Specialty

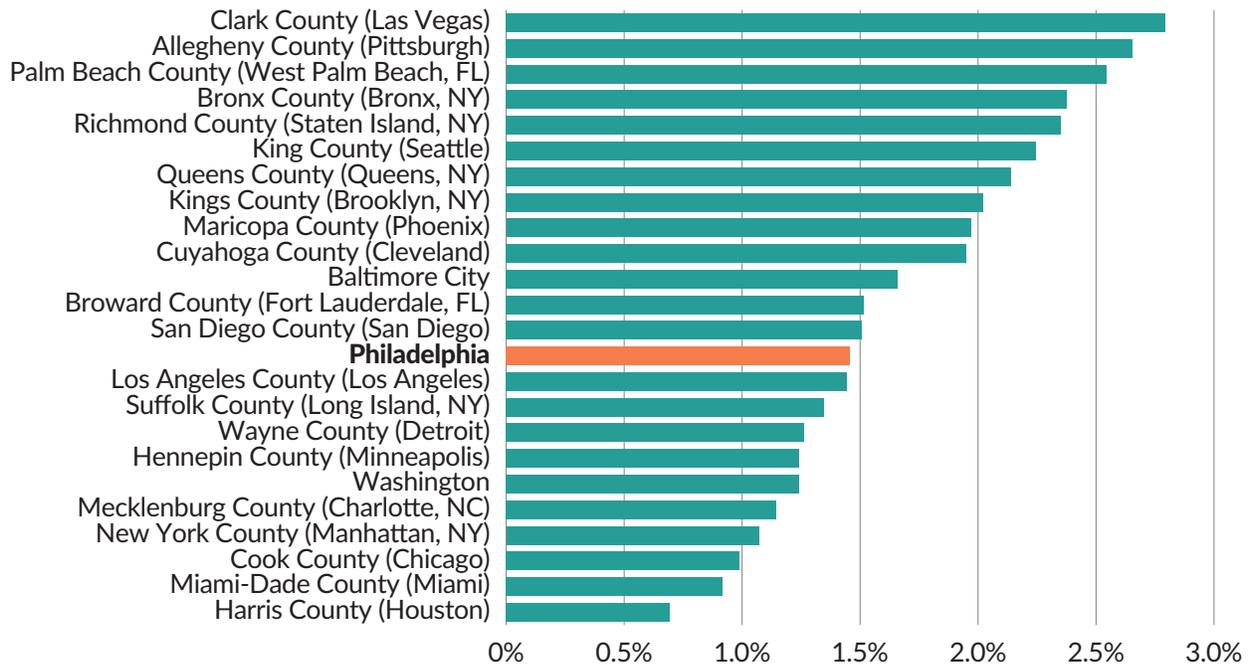
Waiver rates in Philadelphia were comparatively high among primary care physicians, emergency specialists, and physician assistants



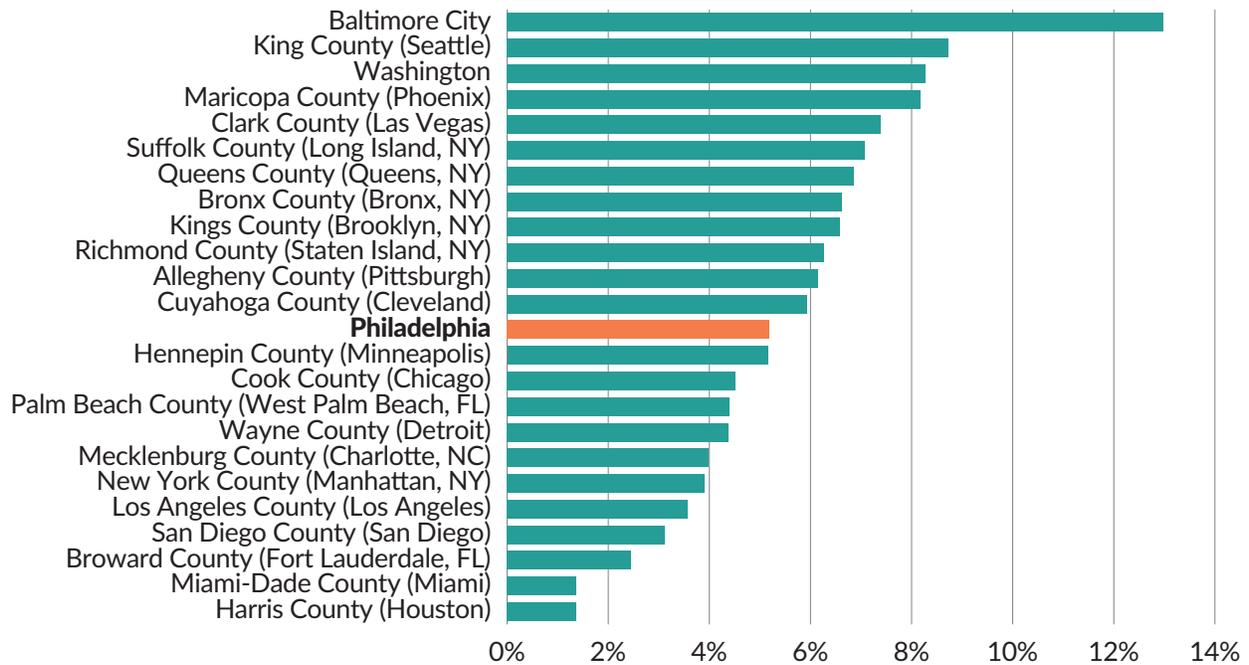
### Emergency



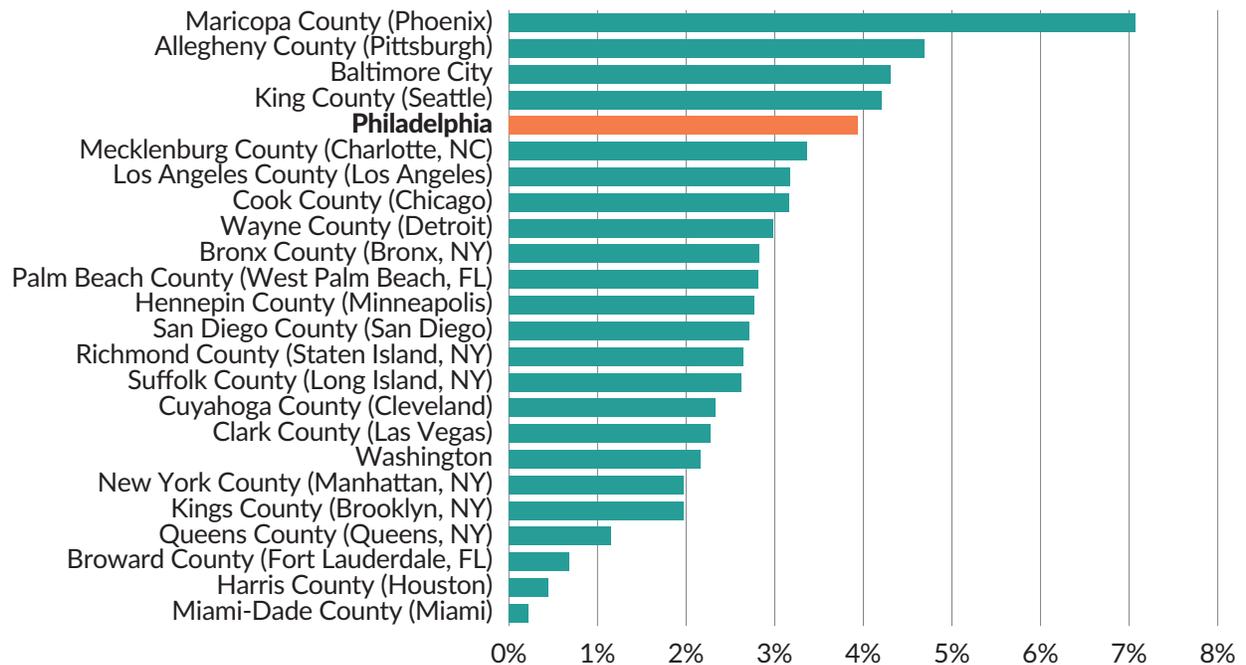
### Specialist (other)



### Nurse practitioner



### Physician assistant



Notes: Data is for November 2020. The data provider's classification system treats nurse practitioners and physician assistants as generic categories without a corresponding specialty.

Source: Pew analysis of data provided by IQVIA

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## Why providers may not be getting waivers

Waiver rates among health care providers vary for several reasons. The training requirement itself has been a barrier to obtaining a buprenorphine waiver.<sup>9</sup> And this may be particularly true for the 24 hours of training mandated for nurse practitioners and physician assistants. The recent Biden administration guidelines will reduce that barrier for clinicians prescribing buprenorphine to a maximum of 30 patients but not for those who want to prescribe to more patients simultaneously.

Additional factors are the need for behavioral health support to address mental health and behavioral issues, the difficulty for a clinician to make time for training, a lack of confidence in treating OUD, resistance from colleagues, low reimbursement rates, and a perceived lack of patient demand.<sup>10</sup> And clinicians may be deterred by the various forms of stigma surrounding OUD treatment, including the perception that OUD patients have complex needs or are “difficult,” concerns about illegal diversion of medications, a fear of being inundated with requests for medication, and a philosophical opposition to using medication to treat OUD, as opposed to an abstinence-based approach.<sup>11</sup>

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### MAT Act

Although the federal government’s recent guidelines allow providers to begin prescribing buprenorphine without first taking a training course, the proposed Mainstreaming Addiction Treatment (MAT) Act, H.R. 1384, would go further toward eliminating the restrictions on that medication.<sup>12</sup> The legislation, introduced in February 2021, would eliminate the waiver requirement, encourage practitioners to integrate substance use treatment into their practices, and provide educational resources to assist them in treating patients.

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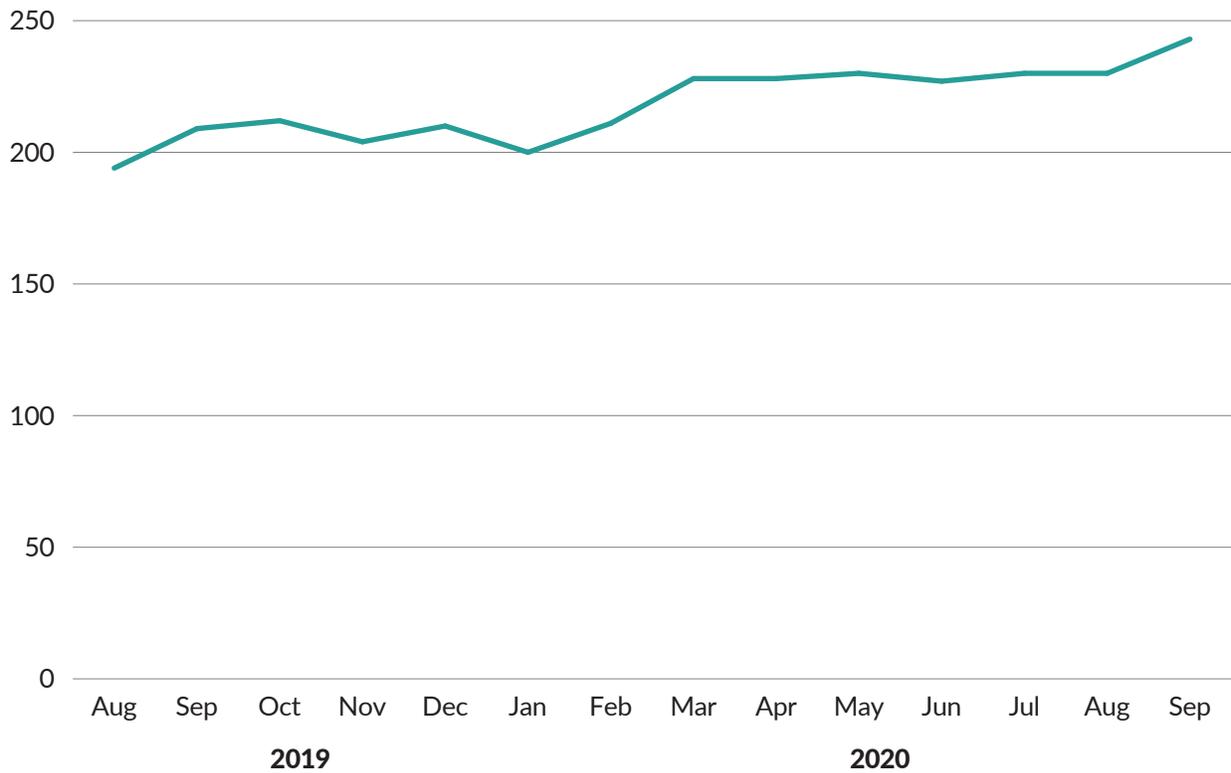
## Buprenorphine prescribing among health care providers with waivers in Philadelphia

Of the 1,014 Philadelphia providers who had X-waivers in September 2020, only 243 (24%) prescribed buprenorphine for OUD that month. Even so, the number of Philadelphia providers who prescribe buprenorphine has been growing steadily—up by 25% since August 2019—outpacing the average 14% increase in other large urban jurisdictions with high rates of overdoses. (See Figure 6.)

Figure 6

## The Number of Providers With Waivers Prescribing Buprenorphine for OUD in Philadelphia

Active prescriber counts increased from August 2019 through September 2020



Sources: U.S. Drug Enforcement Administration; Pew analysis of data provided by IQVIA

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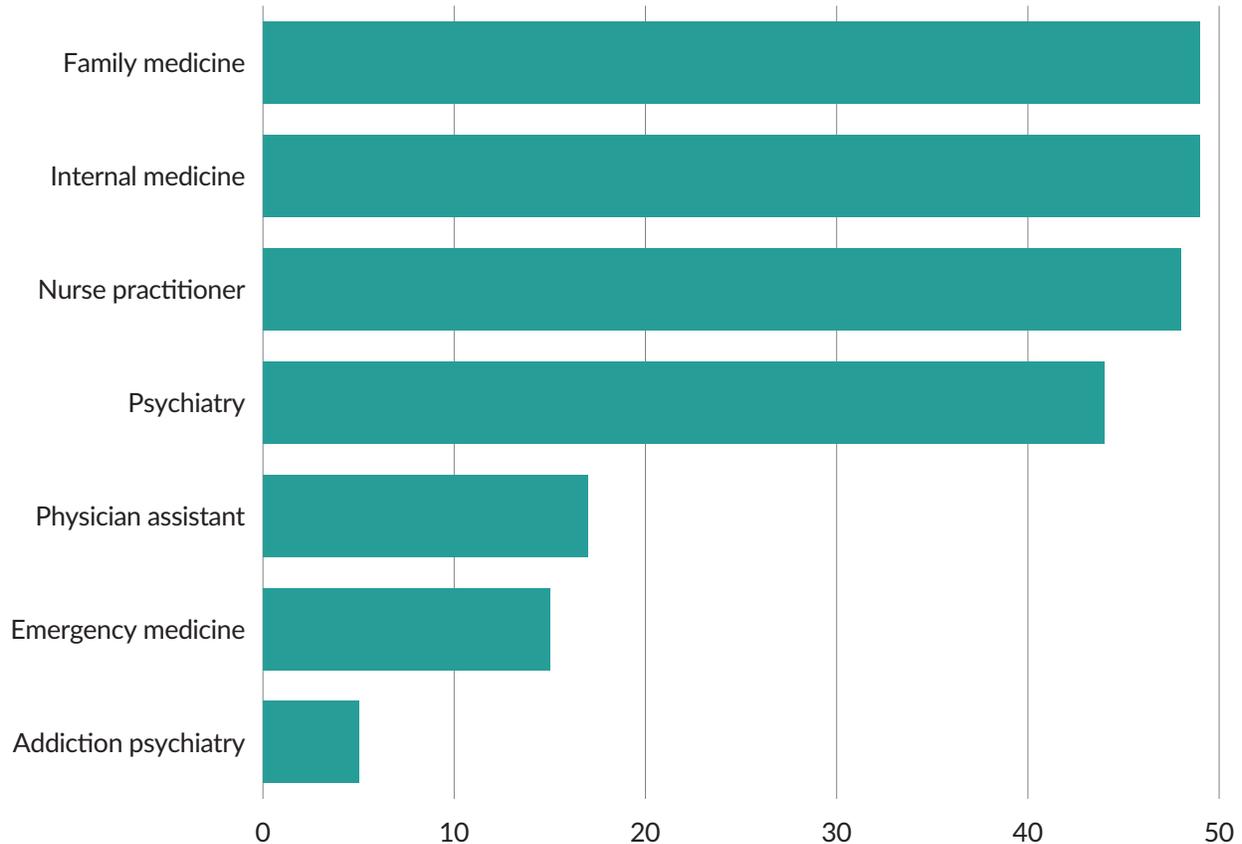
But prescriptions for buprenorphine in Philadelphia rose by only 11% over that period. In fact, the percentage of providers who prescribed for OUD as of September 2020 was 5 percentage points lower than it had been a year earlier. That trend of slightly reduced prescribing rates over time matches similar results in the other jurisdictions, where the average fell from 32% to 29%, which could be related to the COVID-19 pandemic. During that period, fewer patients started treatment with buprenorphine, perhaps because of reduced visits to emergency rooms or the challenge of initiating treatment via telemedicine.<sup>13</sup>

Buprenorphine prescribers and providers with waivers overall were concentrated in similar disciplines—primary care physicians, nurse practitioners, and psychiatrists, in particular—and in the same care settings: outpatient group practices and acute care hospitals. (See Figure 7.)

Figure 7

## Number of Buprenorphine-Waivered Health Care Providers in Philadelphia Who Prescribed the Drug, by Specialty

Prescribers are overwhelmingly primary care providers, nurse practitioners, or psychiatrists



Notes: Data is for September 2020 and includes all specialties with five or more prescribing providers. The data provider's classification system treats nurse practitioners and physician assistants as generic categories without a corresponding specialty.

Sources: U.S. Drug Enforcement Administration; Pew analysis of data provided by IQVIA

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Prescribing rates in Philadelphia were particularly high among primary care physicians (26%), nurse practitioners (35%), and physician assistants (43%), and among providers in outpatient settings (34%). (See Table 6.) In fact, those four groups prescribed at the highest rates of any group, while rates among psychiatrists and emergency specialists were lower, regardless of setting. Though fewer in number, addiction psychiatrists and infectious disease specialists also had high prescribing rates, at 56% and 29%, respectively.

Table 6

## Buprenorphine Prescribing Rates Among Philadelphia Health Care Providers With Waivers, by Specialty and Care Setting

Prescribing rates are highest among primary care physicians, nurse practitioners, and physician assistants in outpatient settings

Licensure	Specialty	Outpatient	Hospital	Overall
<b>Physician</b>	Primary care	33%	19%	26%
	Specialist	27%	11%	18%
	Psychiatry	30%	14%	22%
	Emergency medicine	8%	9%	9%
	Specialist (other)	28%	9%	20%
	Other	31%	0%	16%
	Total (physician)	31%	13%	21%
<b>Nurse practitioner</b>		40%	30%	35%
<b>Physician assistant</b>		62%	23%	43%
<b>Total (all providers)</b>		34%	14%	24%

Notes: Data is for September 2020. The data provider's classification system treats nurse practitioners and physician assistants as generic categories without a corresponding specialty.

Sources: U.S. Drug Enforcement Administration; Pew analysis of data provided by IQVIA

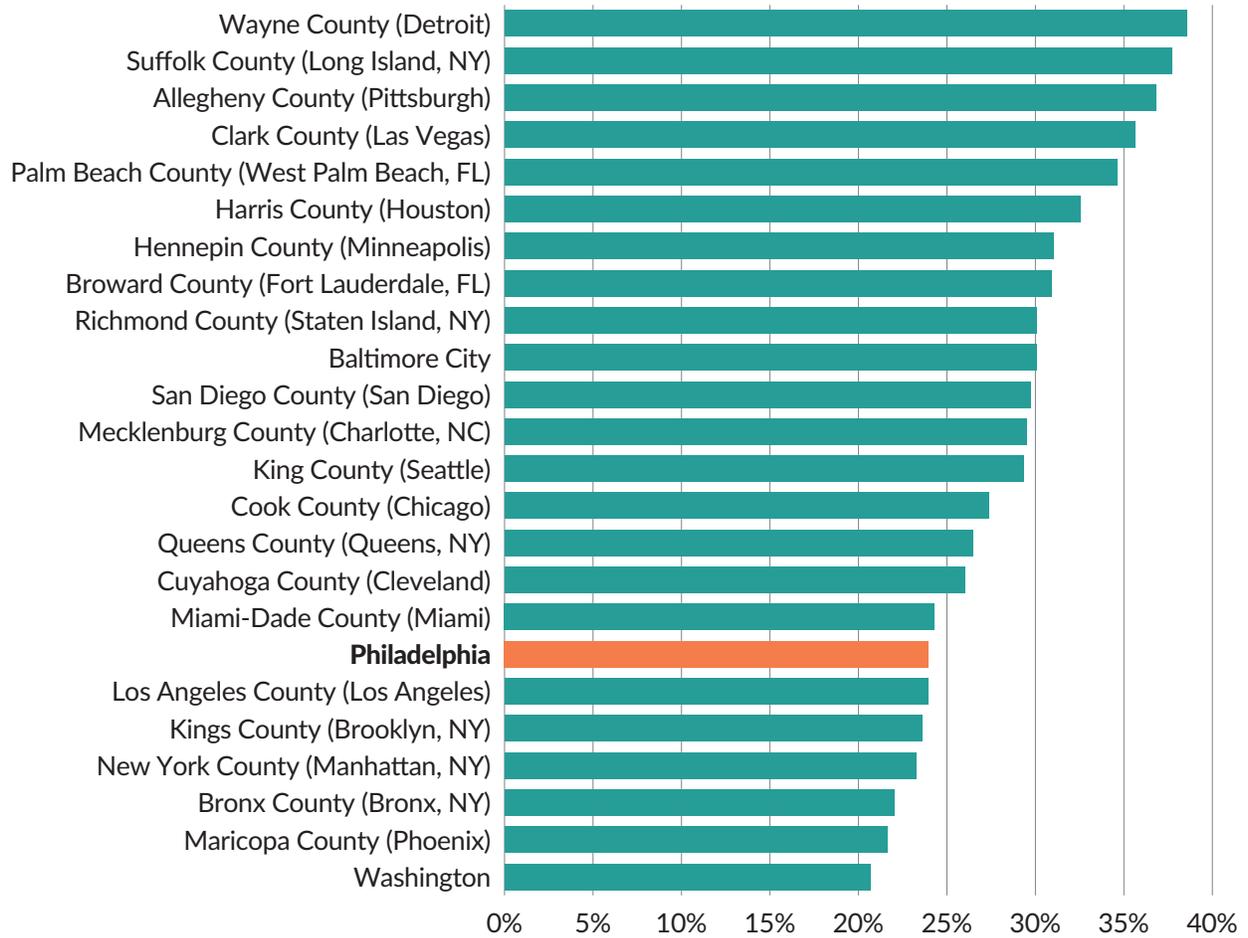
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Although waiver rates overall in Philadelphia were relatively high compared with the 23 other jurisdictions, prescribing among providers with waivers was comparatively less common. (See Figure 8.) Compared with other cities and counties, the share of providers with waivers who prescribed buprenorphine was at the middle or low end of the range across all specialties, particularly among primary care physicians, psychiatrists, and other specialists. (See Figure 9.) Not surprisingly, given the high rate of overdoses in Philadelphia, prescribing rates per overdose death were among the lowest of the jurisdictions studied. (See Figure 10.)

Figure 8

## Buprenorphine Prescribing Rates Among Health Care Providers With Waivers in Philadelphia and 23 Other Jurisdictions

Prescribing rates were relatively low in Philadelphia



Note: Data is for September 2020.

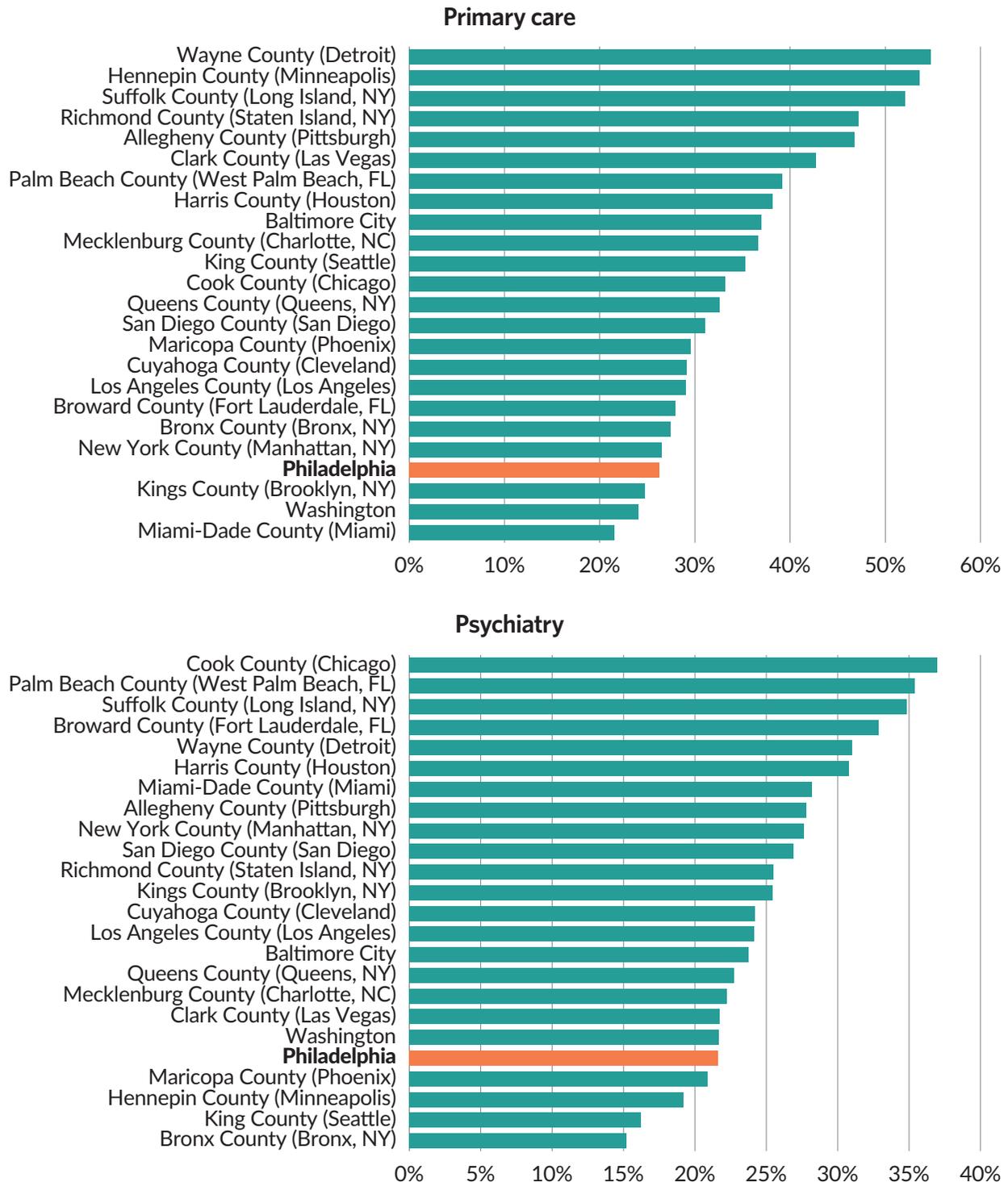
Sources: U.S. Drug Enforcement Administration; Pew analysis of data provided by IQVIA

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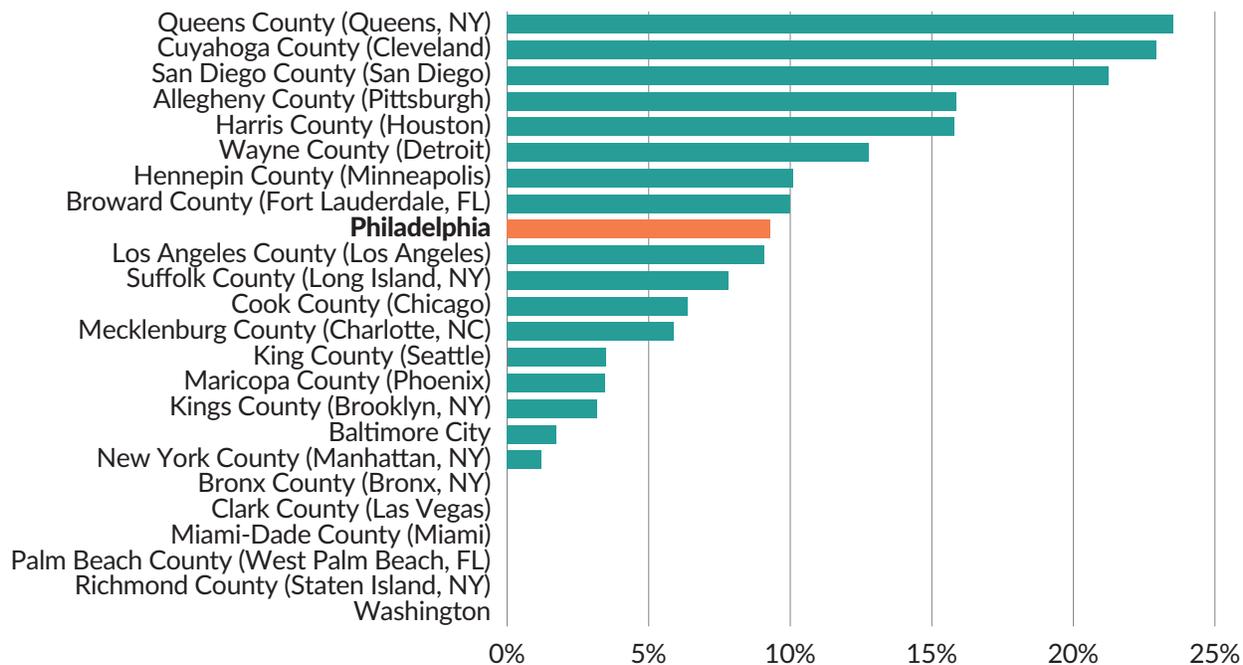
Figure 9

## Buprenorphine Prescribing Rates Among Health Care Providers With Waivers in Philadelphia and 23 Other Jurisdictions, by Specialty

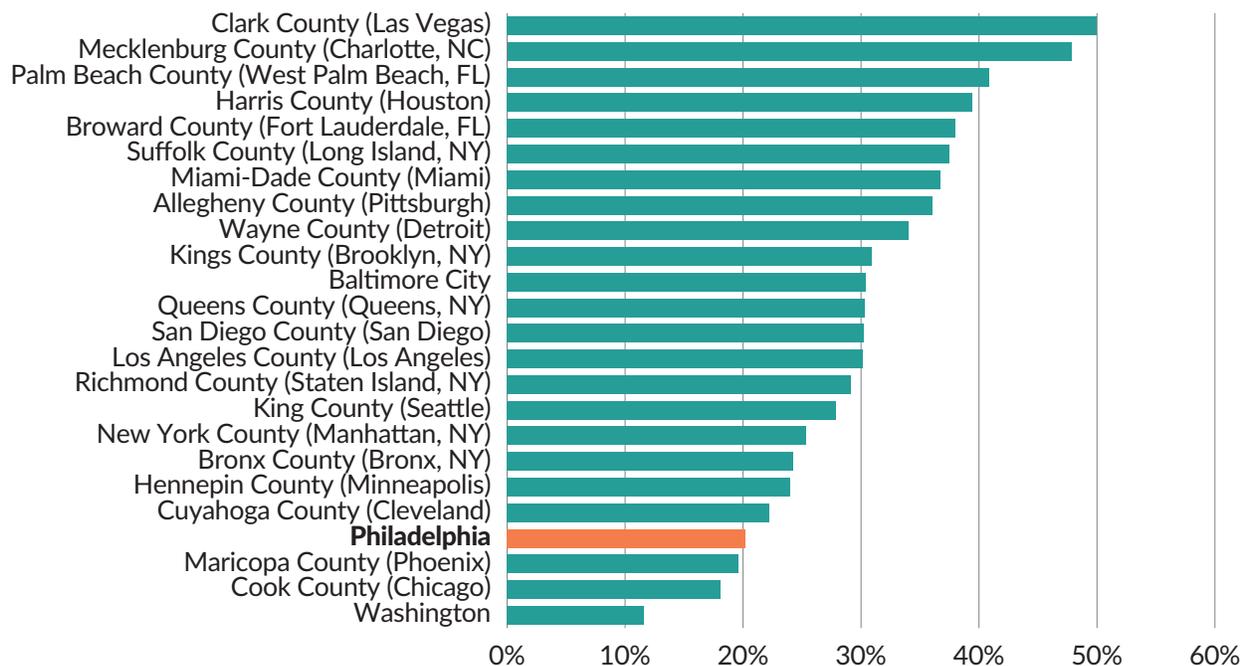
Prescribing rates in Philadelphia were comparatively high among emergency specialists, nurse practitioners, and physician assistants



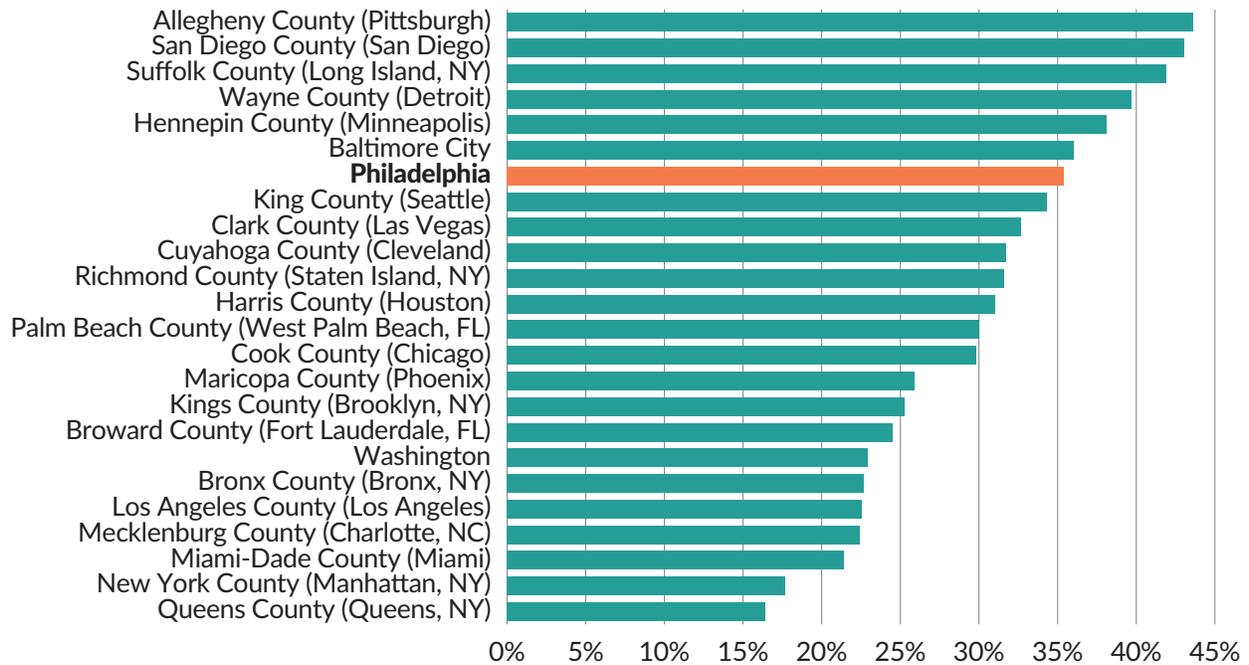
### Emergency



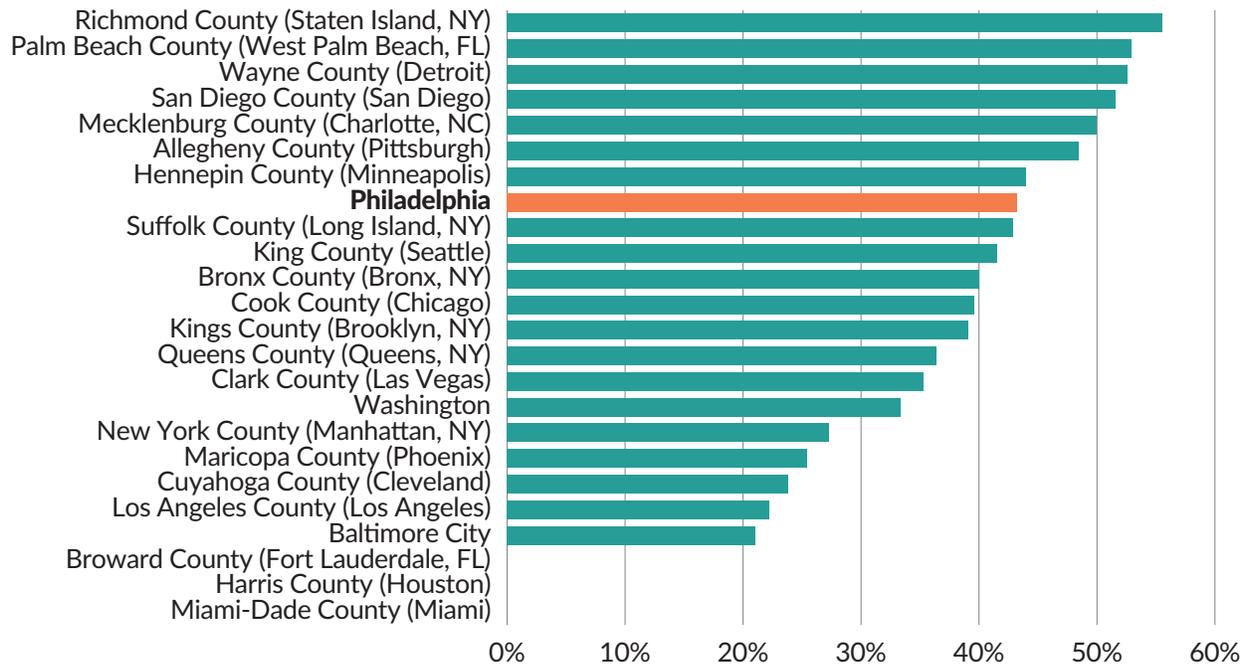
### Specialist (other)



### Nurse practitioner



### Physician assistant



Notes: Data is for September 2020. The data provider's classification system treats nurse practitioners and physician assistants as generic categories without a corresponding specialty.

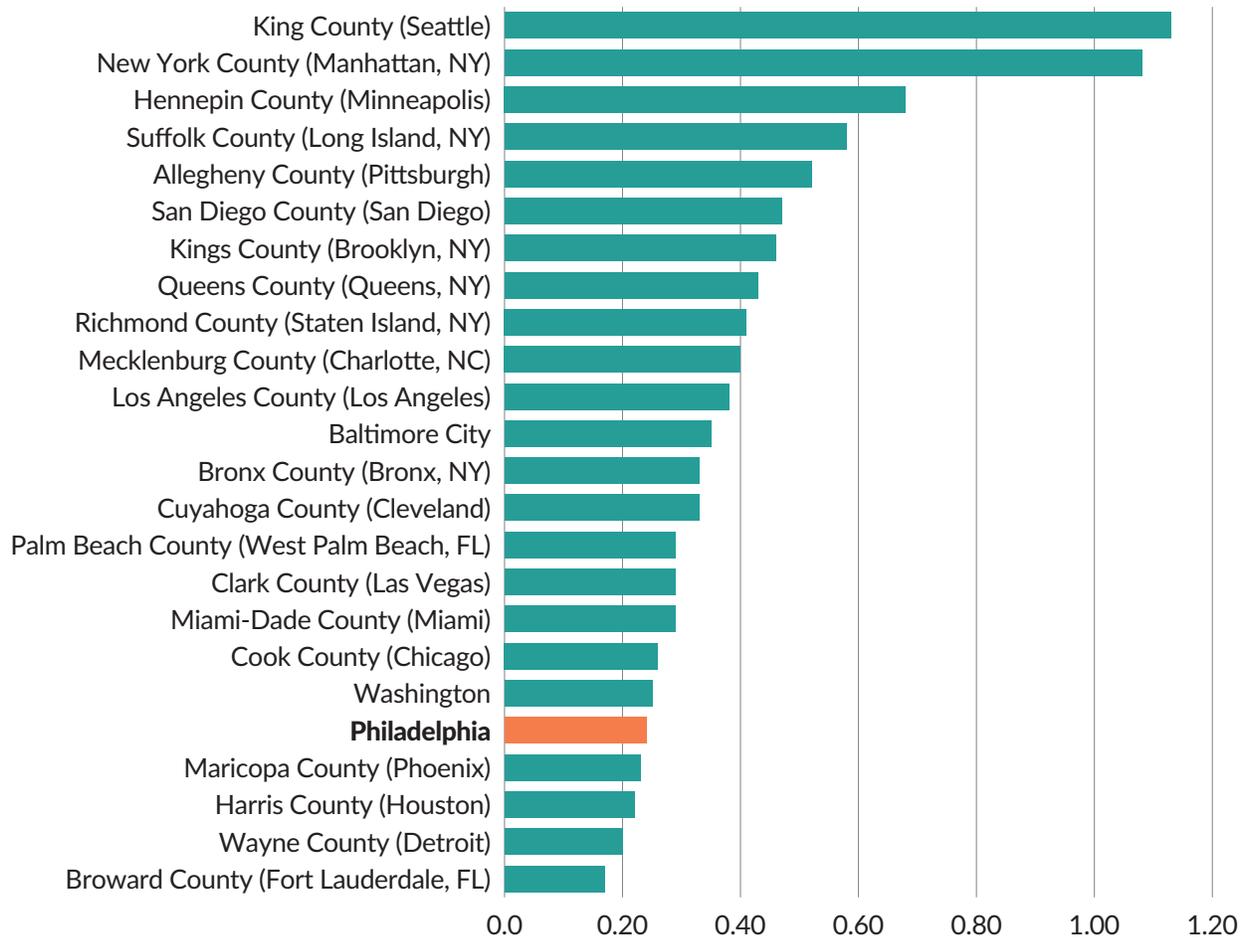
Sources: U.S. Drug Enforcement Administration; Pew analysis of data provided by IQVIA

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Figure 10

## Health Care Providers With Waivers and Prescribing Buprenorphine Per Drug Overdose Death in Philadelphia and 23 Other Jurisdictions

Prescribing per drug death was relatively low in Philadelphia



Notes: Prescribing data is for September 2020; overdose deaths are for 2019.

Sources: U.S. Drug Enforcement Administration; Pew analysis of data provided by IQVIA; U.S. Centers for Disease Control and Prevention

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As the data indicates, obtaining a waiver alone does not ensure that a provider will prescribe buprenorphine. That depends on many of the same factors that deter providers from getting waivers in the first place. Pew is looking at these and other possible explanations in ongoing qualitative research with care providers in Philadelphia.

One explanation for the relatively low percentage of clinicians writing prescriptions in Philadelphia is the fact that providers with waivers in the city are heavily concentrated in hospitals. A national survey of recently waived providers showed that those in hospital- or health system-based practices were significantly less likely to prescribe buprenorphine than those in individual office-based practices.<sup>14</sup> The same was true of emergency departments. And clinicians in hospitals who dispense buprenorphine to patients to relieve acute withdrawal symptoms under the so-called three-day rule would not be captured in our dataset.<sup>15</sup>

Another factor may be that many providers with waivers in Philadelphia had received them only recently; just 12% of clinicians who had gotten their waivers in the 12 months before September 2020 prescribed buprenorphine that September. That compared with 30% of providers who had waivers for a year or more. Those numbers are consistent with other studies looking at regional or national provider populations.<sup>16</sup>

Other research finds that providers who lack confidence in managing patients with OUD are less likely to prescribe but believe that additional training and mentoring would make additional prescribing more likely.<sup>17</sup> These and similar results suggest that prescribing rates may rise over time.

Depending on their patient limit, providers with waivers can prescribe to a maximum of 30, 100, or 275 patients at a time. As of September 2020, most Philadelphia providers with waivers (79%) had 30-patient limits, but those with 100- or 275-patient caps accounted for 57% of the city's 56,075 treatment slots.

And providers with the higher patient limits are much more likely to prescribe. Only 15% of providers with 30-patient caps prescribed buprenorphine in September 2020, compared with 47% and 84% of those with 100- and 275-patient limits, respectively. (See Table 7.) Among those who did prescribe, providers with 100- and 275-patient caps wrote an average of roughly 28 and 116 prescriptions, respectively, compared with 12 prescriptions for those with the 30-patient limit.<sup>18</sup> As a result, the vast majority of prescriptions were written by providers with the higher patient volume waiver caps, a result consistent with other recent research.<sup>19</sup>

Table 7

## Patient Slots and Prescribing Among Philadelphia Health Care Providers With Waivers, by Patient Cap

Most prescriptions were written by providers with the highest cap

Patient cap	Waivered	Slots	Waivered and prescribed	% prescribed	Average number of prescriptions	Average number of prescriptions (prescribers only)	Total prescriptions
30	800	24,000	120	15%	1.7	11.6	1,392
100	153	15,300	72	47%	13.3	28.2	2,032
275	61	16,775	51	84%	96.9	115.9	5,910
<b>Total</b>	<b>1,014</b>	<b>56,075</b>	<b>243</b>	<b>24%</b>	<b>9.2</b>	<b>38.4</b>	<b>9,334</b>

Note: Data is for September 2020.

Source: Pew analysis of data provided by IQVIA

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Federally qualified health centers (FQHCs)—community-based facilities that receive federal funds to provide primary care services in underserved areas—are key sites for accessing those services for many Philadelphians.<sup>20</sup> Physicians at FQHCs are overwhelmingly involved in primary care. In Philadelphia, 43% of primary care doctors at FQHCs had waivers, and 36% of those primary care doctors with waivers prescribed buprenorphine for OUD. (See Table 8.) Those rates compare with 21% and 26%, respectively, among primary care physicians in outpatient settings overall. Similar trends applied for nurse practitioners and physician assistants.

Table 8

## Philadelphia Health Care Provider Buprenorphine Waiver Status and Prescribing Activity by Specialty and FQHC Affiliation

FQHC providers had waivers and prescribed at relatively high rates

Specialty	Waivered	% waived	% waived and prescribed
<i>FQHC</i>			
Primary care physicians	45	43%	36%
Pediatric physicians	2	5%	0%
Other specialist physicians	5	12%	40%
Nurse practitioners	31	23%	48%
Physician assistants	12	29%	83%
<b>Total</b>	<b>95</b>	<b>27%</b>	<b>45%</b>
<i>Outpatient overall</i>			
Primary care physicians	230	21%	26%
Nurse practitioners	77	8%	35%
Physician assistants	21	8%	43%

Notes: The data provider’s classification system treats nurse practitioners and physician assistants as generic categories without a corresponding specialty. Waiver counts and percentages are as of November 2020; prescribing percentages are as of September 2020.

Source: Pew analysis of data provided by IQVIA

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## Buprenorphine availability by neighborhood

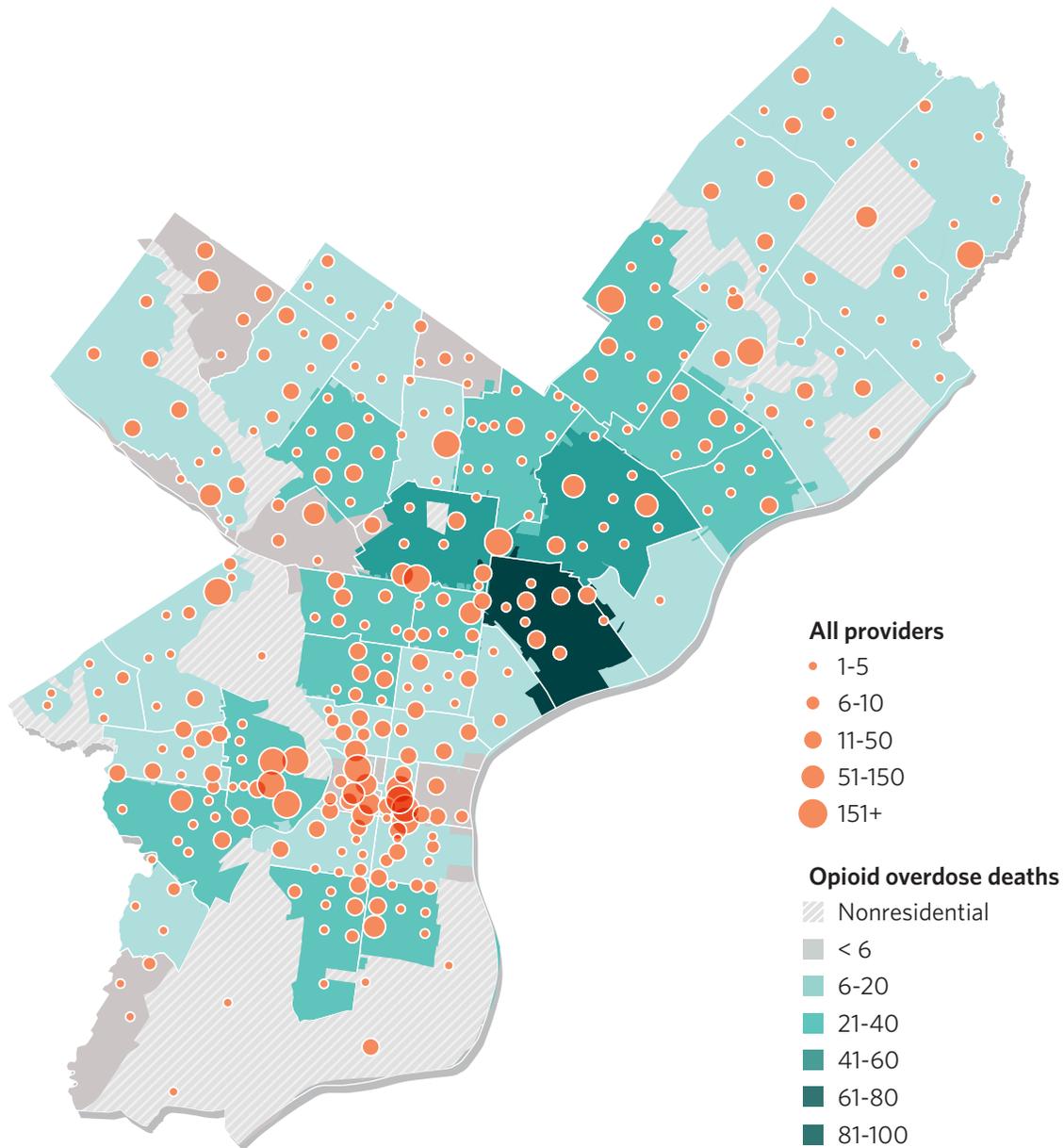
The opioid overdose crisis in Philadelphia is highly concentrated in some neighborhoods. The largest numbers of city residents who overdosed in 2020 lived in Kensington, in other neighborhoods in Lower North and Lower Northeast Philadelphia, and in South Philadelphia and West Philadelphia. (There is a strong general overlap between where overdose victims live and where overdoses occur.)<sup>21</sup> But how well does the location of OUD providers match those in need of treatment?

Providers’ primary practice locations overall are highly concentrated at hospitals throughout the city, the largest of which are mainly located in University City and Center City, which are not where most overdose victims live. (See Figure 11.) But there are provider primary practice locations in every ZIP code in the city.

Figure 11

## Primary Practice Location of All Philadelphia Health Care Providers Overlaid With Unintentional Opioid-Related Drug Deaths by Resident ZIP Code, 2020

Providers are largely concentrated in hospitals in central Philadelphia and at other city hospitals, while overdoses were heavily concentrated in neighborhoods outside the city's core



Note: Overdose deaths exclude individuals experiencing homelessness and those missing ZIP code data.

Sources: Pew analysis of data provided by IQVIA; Philadelphia Medical Examiner's Office

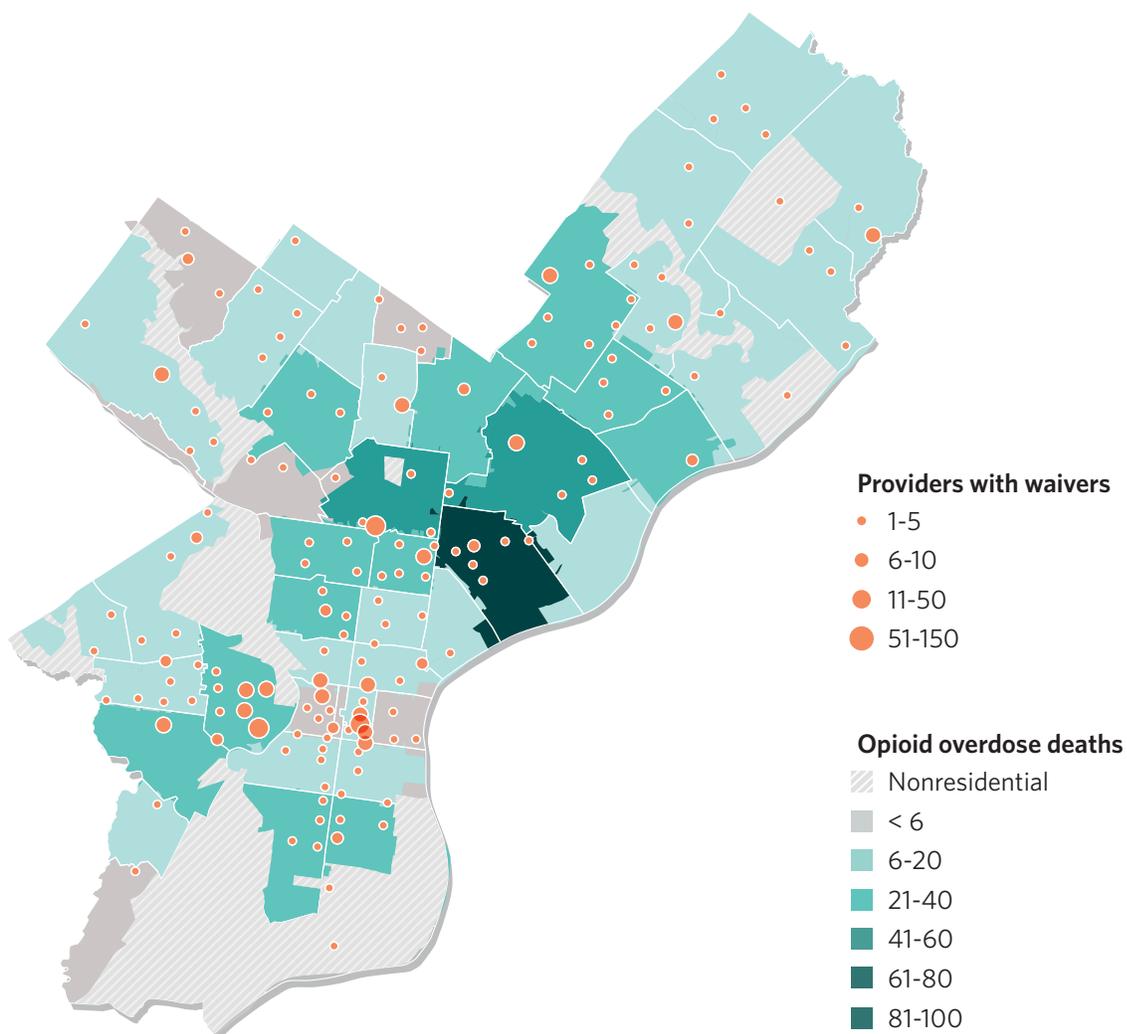
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In addition, the primary practice locations of providers with X-waivers are concentrated in central Philadelphia, with one or more present in most neighborhoods; this does not account for mobile provider units.<sup>22</sup> (See Figure 12.) And the same pattern holds for providers with waivers who prescribed. As a result, although at least some buprenorphine coverage exists throughout the city, some of the hardest-hit neighborhoods have only a small number of prescribing providers.

Figure 12

## Primary Practice Location of Buprenorphine-Waivered Philadelphia Health Care Providers Overlaid With Unintentional Opioid-Related Drug Deaths by Resident ZIP Code, 2020

Many providers with waivers are in central Philadelphia but are also dispersed throughout the city



Notes: Waiver data is as of November 2020. Overdose deaths exclude individuals experiencing homelessness and those missing ZIP code data.

Sources: U.S. Drug Enforcement Administration; Pew analysis of data provided by IQVIA; Philadelphia Medical Examiner's Office

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A recent study suggested that the majority of Philadelphia households are able to access a buprenorphine provider relatively easily by public transit.<sup>23</sup> But having a limited population of potential buprenorphine prescribers in a neighborhood may decrease the odds that someone seeking treatment will find one nearby who is accepting new patients or a particular form of payment (e.g., Medicaid).<sup>24</sup> And because the population of individuals with OUD is far larger than the number receiving treatment, improving local availability may be an important step toward decreasing the likelihood of overdose.<sup>25</sup>

## Conclusion

The percentage of Philadelphia's health care provider workforce that has waivers to prescribe buprenorphine is comparable to or higher than those of many large urban jurisdictions that have also been strongly affected by the opioid crisis. But relative to the need for treatment, Philadelphia is not as well served, either in terms of the number of medical providers with waivers or the number who have actually used those waivers to write prescriptions.

In addition, buprenorphine is more available at some facilities, including FQHCs, than at others, and in some neighborhoods, including central Philadelphia, than elsewhere in the city. Recent changes to federal guidelines will make it easier for providers to begin prescribing, but based on past waiver and prescribing trends, that may not substantially change the availability of medications to treat OUD in the short term.

Addressing the need for treatment will require additional research on barriers to prescribing buprenorphine in Philadelphia and a concerted effort to make it as accessible as possible to the many Philadelphians with OUD.

## Methodology

Data on the health care provider population and buprenorphine prescribing in Philadelphia and 23 other large urban jurisdictions was purchased from IQVIA, a health care information company that collects data on providers and prescriptions. The data consisted of two files.

The first (from the OneKey database) included all health care providers (doctors, nurse practitioners, and physician assistants) as of April 1, 2020, who were affiliated with a health care organization, such as a hospital or private practice, or were unaffiliated but had an office mailing address in the jurisdictions of interest. This list was derived from licensed data from the American Medical Association as well as state licensing and certification authorities, the National Provider Identifier, the DEA, claims and prescription data, primary research, and other administrative data sources. Many affiliated providers had multiple affiliations, in which case the affiliation through which the provider was most likely to be practicing was selected. IQVIA made this "best affiliation" determination based on primary research (phone and web), claims data, drug distribution data, and license data.

The second file contained buprenorphine prescribing records for the same set of providers over a recent two-year period (October 2018 to September 2020). The prescribing data was based on pharmacy sales and included aggregate monthly tabulations of the number of buprenorphine prescriptions filled (from the Xponent PlanTrak database). This data is derived from a robust reporting sample of pharmacies across the retail and mail order channels.

The treatment indication for each buprenorphine formulation, either for pain or OUD, was determined by searching its NDC code (a universal product identifier for drugs administered to people in the U.S.) in the FDA Orange Book, Daily Med, and RxNav databases. For formulations for which treatment indications were not found (probably as a result of an old or expired NDC code), indications were borrowed from the NDC numbers in the same "product group," as defined by IQVIA. The treatment indications were then reviewed and confirmed by a

medical doctor. Only formulations with indications for OUD were included in analyses of provider prescribing. The prescription dataset was joined to the provider data using a unique IQVIA provider identifier. Providers with waivers who prescribed buprenorphine were defined as those who prescribed the medication for OUD at least once in a given month.

Data on provider waiver status and patient limits was obtained from the DEA by downloading a list of providers that included all those registered to prescribe and handle controlled substances under the Controlled Substances Act. Pew downloaded this data monthly beginning in August 2019. This data was joined to the provider data using the provider's DEA number. To ensure that no providers with waivers were missed in this step, a quality control check was conducted to investigate providers who appeared to be prescribing for OUD but for whom the DEA data did not indicate an X-waiver. The DEA files were searched by combinations of geography and last name to see whether a data error might have prevented a match between the files. But no additional matches were found during these checks.

For all provider analysis, the very small share of "inactive" providers (0.1%) was excluded. Primary provider specialties were determined by IQVIA based on the specialty designated by the original data source and updated based on IQVIA's research and direct confirmation. For analyses of provider counts by specialty, each unique primary specialty was associated with one of several broad categories: primary care (excluding pediatrics), pediatrics, specialist, and student. Two other categories, other and missing, captured the small number of providers in other minor categories and those who lacked taxonomic data.

For analysis of provider care setting, IQVIA's class of trade business classifications for the primary provider affiliation, which are based on industry-standard definitions, were mapped to a broad set of facility types: academic, ambulance, correctional, hospital, laboratory, nontreatment, outpatient, research, residential/elder, other, and missing/unknown. Relatively high counts for missing/unknown were the result of unaffiliated providers lacking facility type data.

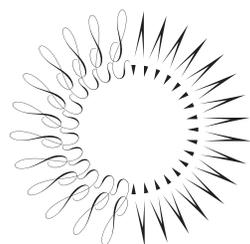
Comparable jurisdictions were selected based on their having large populations (generally 1 million or greater), being home to large cities, or having per capita opioid overdose death rates similar to Philadelphia's. A few additional counties with innovative approaches to OUD treatment were also included.

The Philadelphia Medical Examiner's Office provided locations of opioid overdose deaths for 2020 at the ZIP code level. Drug overdose death rates at the county level were downloaded from the CDC WONDER database. Opioid overdose deaths accounted for most drug overdoses during this period; the two metrics closely track each other. But overall drug overdoses were chosen as the denominator because of greater consistency in that metric among jurisdictions. Deaths were selected, rather than prevalence estimates of substance use disorder from the National Survey on Drug Use and Health, because those estimates are not available at the county level.

## Endnotes

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