

# OPIOID

## The Impact of the Opioid Crisis on the Healthcare System

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A Study of Privately Billed Services

A FAIR Health White Paper, September 2016



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## Summary

The current epidemic of opioid abuse, involving both prescription pain relievers and heroin, is having a major impact on the US healthcare sector. In its white paper issued in July 2016, *The Opioid Crisis among the Privately Insured*, FAIR Health reported on the epidemic's impact on healthcare services as evidenced by an increase of 3,203 percent in claim lines with an opioid dependence diagnosis from 2007 to 2014.<sup>1</sup> In this second white paper, FAIR Health examines the increasing healthcare costs and demand for specific services attributable to the epidemic.

FAIR Health, a national, independent, nonprofit organization dedicated to transparency in healthcare costs and health insurance information, has analyzed data from its database of over 21 billion privately billed healthcare claims to identify trends and patterns in these costs and services. Among the findings:

- The national aggregated dollar value of charges for opioid-related diagnoses, as well as of imputed allowed amounts for such diagnoses, rose over 1,000 percent from 2011 to 2015;
- In 2015, private payors' average costs for a patient diagnosed with opioid abuse or dependence were more than 550 percent higher—almost \$16,000 more per patient—than the per-patient average cost based on all patients' claims;
- Opioid abuse diagnoses involve significant emergency department charges, while opioid dependence charges are largely represented by laboratory tests and office outpatient visits; and
- States' average charges for services associated with opioid abuse and dependence diagnoses vary widely.

## Background

Since its inception around the beginning of the 21st century, the current epidemic of opioid abuse, dependence and overdoses has taken many lives, caused widespread suffering at every level of society and resulted in high economic costs. In a study by Hansen and colleagues, nonmedical use of prescription opioids alone was estimated to have cost the US economy \$53.4 billion in 2006.<sup>2</sup> A study by Birnbaum and colleagues arrived at a similar total, \$55.7 billion, for the societal costs of prescription opioid abuse in 2007.<sup>3</sup>

The two studies attributed different percentages of the economic burden to medical costs. Hansen's study attributed 79 percent of the costs to lost productivity (\$42 billion), 15 percent to criminal justice costs (\$8.2 billion) and only six percent to medical costs, comprising four percent for drug abuse treatment (\$2.2 billion) and two percent for medical complications (\$944 million). But, in Birnbaum's study, healthcare costs, defined more broadly, accounted for 45 percent (\$25.0 billion) of the total, while workplace costs accounted for 46 percent (\$25.6 billion) and criminal justice costs for only 9

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<sup>1</sup> *The Opioid Crisis among the Privately Insured: The Opioid Abuse Epidemic as Documented in Private Claims Data*, A FAIR Health White Paper, FAIR Health, July 2016, <http://www.fairhealth.org/servlet/servlet.FileDownload?file=01532000001nwd2>.

<sup>2</sup> Ryan N. Hansen, et al., "Economic Costs of Nonmedical Use of Prescription Opioids," *Clinical Journal of Pain* 27, no. 3 (2011): 194-202, doi:10.1097/AJP.0b013e3181ff04ca.

<sup>3</sup> Howard G. Birnbaum, et al., "Societal Costs of Prescription Opioid Abuse, Dependence and Misuse in the United States," *Pain Medicine* 12, no. 4 (2011): 657-67, doi:10.1111/j.1526-4637.2011.01075.x.

percent (\$5.1 billion). Whatever the precise distribution of the economic impact of the opioid crisis, its healthcare costs are clearly substantial and growing.

## Methodology

Using the International Classification of Diseases (ICD-9-CM and ICD-10-CM) diagnostic codes reported on claims in the FAIR Health dataset, FAIR Health examined claims of professional providers and segregated data that were indicative of opioid dependence (e.g., ICD-9-CM 304.00, opioid-type dependence, unspecified, and ICD-10-CM F11.20, opioid dependence, uncomplicated) and opioid abuse (e.g., ICD-9-CM 305.51, opioid abuse, continuous, and ICD-10-CM F11.10, opioid abuse, uncomplicated). Studies were conducted on aggregated categories of CPT<sup>4</sup> codes (maintained by the American Medical Association [AMA]) and HCPCS Level II codes (maintained by the Centers for Medicare & Medicaid Services [CMS]), such as laboratory tests (e.g., CPT 83925, opiates, drug and metabolites, each procedure), alcohol and/or drug services/therapy (e.g., HCPCS H0015, alcohol and/or drug services; intensive outpatient), evaluation and management (E&M; e.g., CPT 99283, emergency department visit moderate severity) and hospitalization (e.g., CPT 99233, subsequent hospital care per day, 35 minutes) and their individual component procedure codes.

The data were aggregated by a variety of key fields, including state, procedure code category (e.g., laboratory tests, alcohol and/or drug services/therapy, E&Ms, and hospitalizations), procedure code and year of service, to identify trends and patterns in utilization and cost by both charges and imputed allowed amounts. The data were evaluated with single and multiple variables to look for distinct trends and associations, which were then used to create graphical representations of the information.

In the graphical representations, below, the term “claim lines” refers to the individual procedures or services listed on an insurance claim. “Percent of claim lines” is the percent of all claim lines associated with a given grouping of diagnosis codes (e.g., codes associated with opioid abuse and dependence) in a given time period. “M” represents “million.” All charges and allowed amounts are based on data in the FAIR Health repository, which represents the claims experience for approximately 150 million covered lives.

## Year-over-Year Trends

### Total Annual Costs: Opioid Abuse and Dependence

Within the repository of FAIR Health data, national aggregated professional charges for opioid abuse and dependence diagnoses rose by more than 1,000 percent from 2011 (\$71.66 million) to 2015 (\$721.80 million) (figure 1). Those amounts represent the charges that providers billed for their procedures and services (hereafter called services). Allowed amounts, the maximum amount an insurer will pay for a covered health service, have been imputed by FAIR Health (based on its data on allowed amounts) to have increased by an even greater rate, 1,375 percent, during the same period, from \$32.42 million in 2011 to \$445.74 million in 2015.

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<sup>4</sup> CPT © 2015 American Medical Association (AMA). All rights reserved.

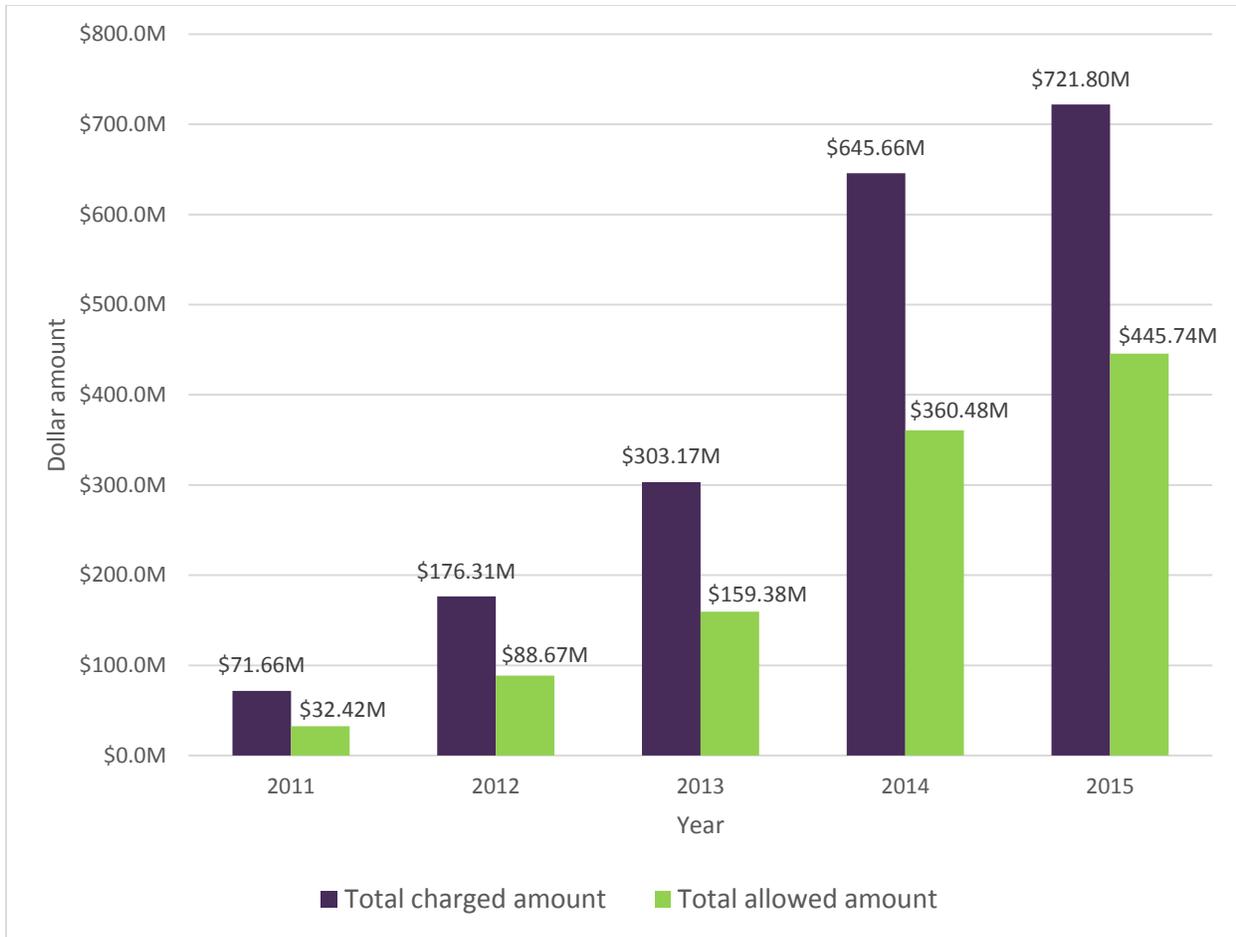
In 2015 alone, services billed with an opioid dependence diagnosis (generally a more severe diagnosis than opioid abuse) amounted to \$1,288 in charges per patient, and services billed with an opioid abuse diagnosis amounted to \$1,088 per patient. The two diagnoses are distinguishable according to DSM-IV criteria.<sup>5</sup> Dependence is characterized by such symptoms as tolerance (needing larger amounts to produce the same effect), withdrawal and repeated unsuccessful attempts to quit. Three or more symptoms in a 12-month period are required to make the diagnosis of dependence. Abuse, on the other hand, is identified by such symptoms as continued use despite recurrent social problems caused or exacerbated by the substance, and only one symptom in a 12-month period is needed for an abuse diagnosis. More recently, the DSM-5 has combined the categories of substance abuse and dependence into substance use disorder, measured on a continuum from mild to severe.<sup>6</sup>

The increase in charges for opioid abuse and dependence diagnoses is probably due to a combination of more people becoming addicted to opioids each year and more people seeking medical help each year for their opioid abuse or dependence.

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<sup>5</sup> American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision: DSM-IV-TR*, Arlington, VA: American Psychiatric Association, 2000.

<sup>6</sup> American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition: DSM-5*, American Psychiatric Association Publishing, 2013.

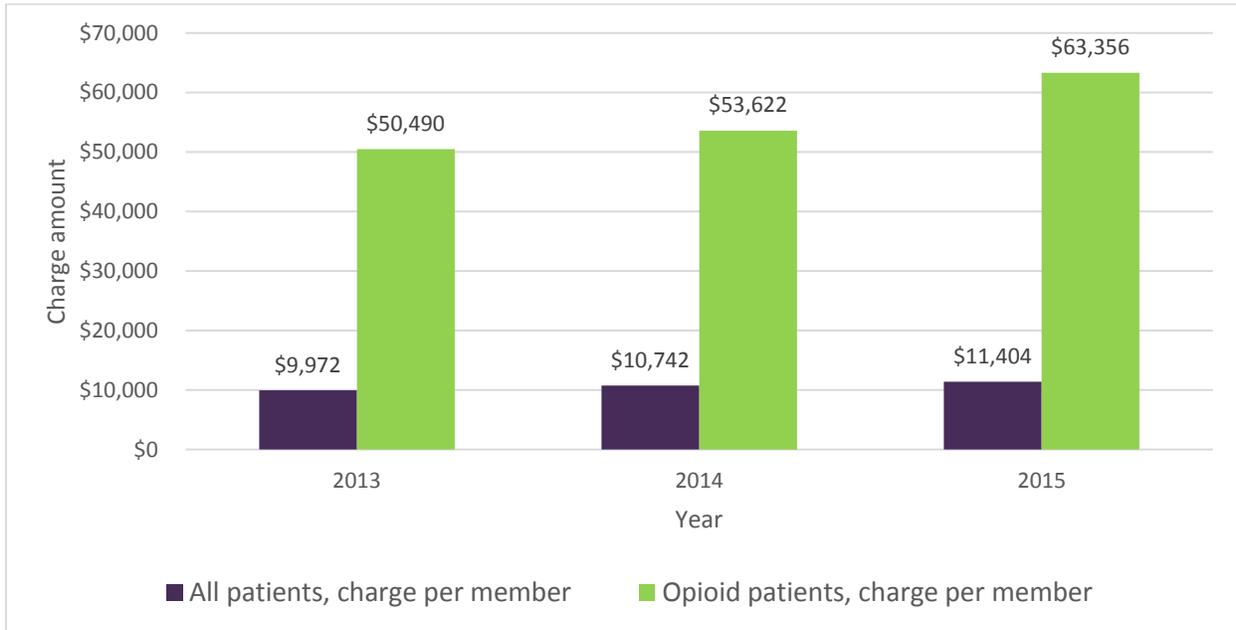


**Figure 1. Year-over-year national aggregated charges and imputed allowed amounts for private insurance claims for opioid abuse and dependence diagnoses during the time period 2011-2015.** Information presented in figure 1 and in all figures and tables herein is based on data in the FAIR Health repository.

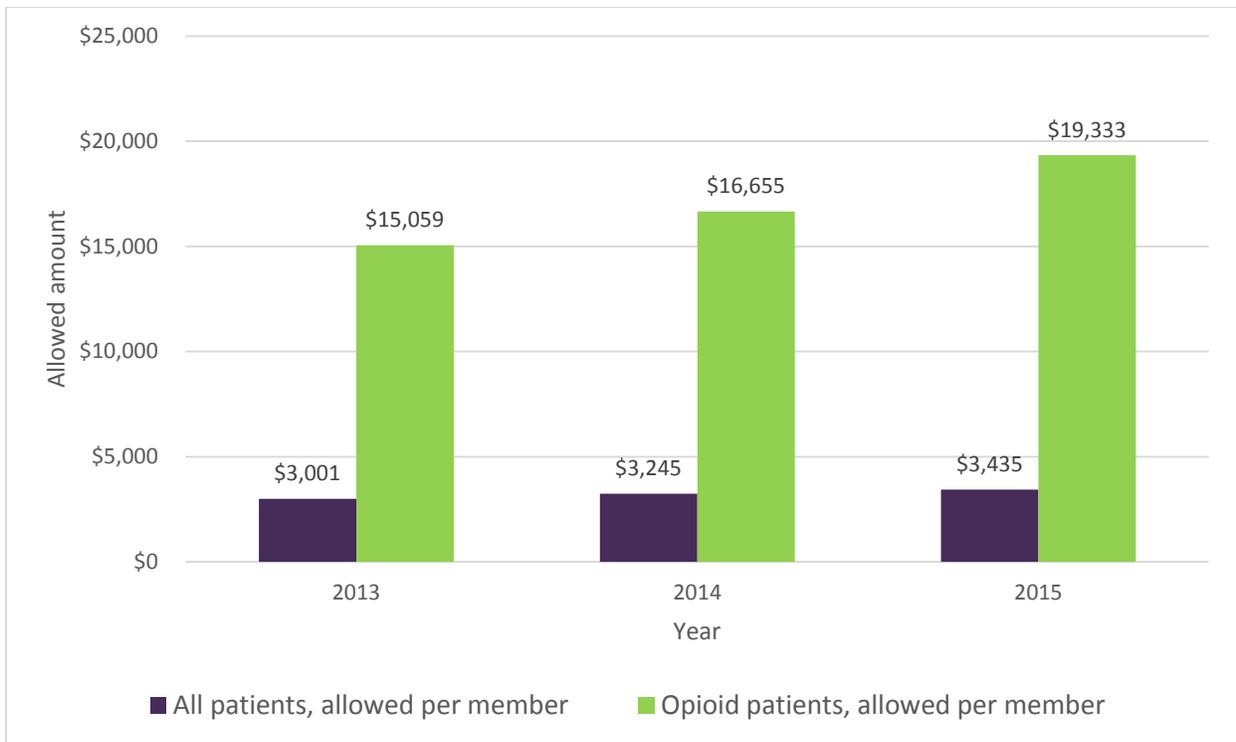
### Per-Patient Costs: Charges and Allowed Amounts

Based on FAIR Health data for 2015, the total annual cost burden for a patient with an opioid abuse or dependence diagnosis was significantly higher than that for a patient with no such diagnosis, due to the former type of patient’s high rates of comorbidities and utilization of medical services. The total annual charges associated with an individual who was diagnosed with opioid abuse or dependence were 556 percent higher than the average annual per-patient charge based on all patients’ charges, including charges for patients with opioid abuse or dependence diagnoses and all other patients’ charges (figure 2). In 2015, a per-patient charge average (across all diagnoses and all claim types for all patients in a commercial dataset) was \$11,404. The per-patient average total charge for a patient identified with an opioid abuse or dependence diagnosis for the same year was \$63,356. With respect to the amounts that are allowed by the insurance companies on a per-patient basis, the difference was 563 percent: the per-patient average allowed amount for all patients was \$3,435 compared to the per-patient average of \$19,333 for patients with an opioid abuse or dependence diagnosis (figure 3).

An analysis of the increase in per-patient charges from 2013 to 2015 shows that the rise in charges from \$50,490 to \$63,356 for individuals with an opioid abuse or dependence diagnosis exceeds the per-patient increase from \$9,972 to \$11,404 based on all charges for all patients, both those with and those without opioid-related diagnoses. The former is a 125 percent increase whereas the latter is 114 percent.



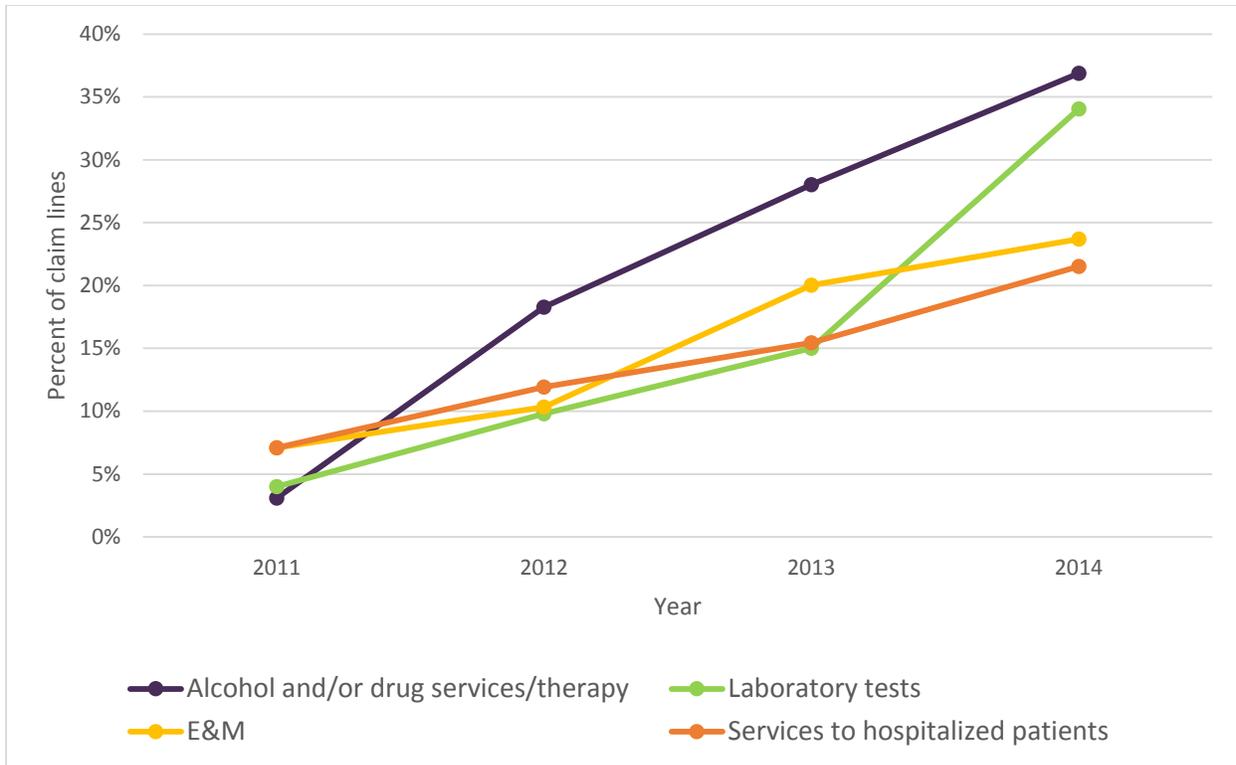
**Figure 2. Year-over-year national average charges per patient for private insurance claims for all patients and for patients with opioid abuse or dependence diagnoses during the time period 2013-2015.**



**Figure 3. Year-over-year national average allowed amounts per patient for private insurance claims for all patients and for patients with opioid abuse or dependence diagnoses during the time period 2013-2015.**

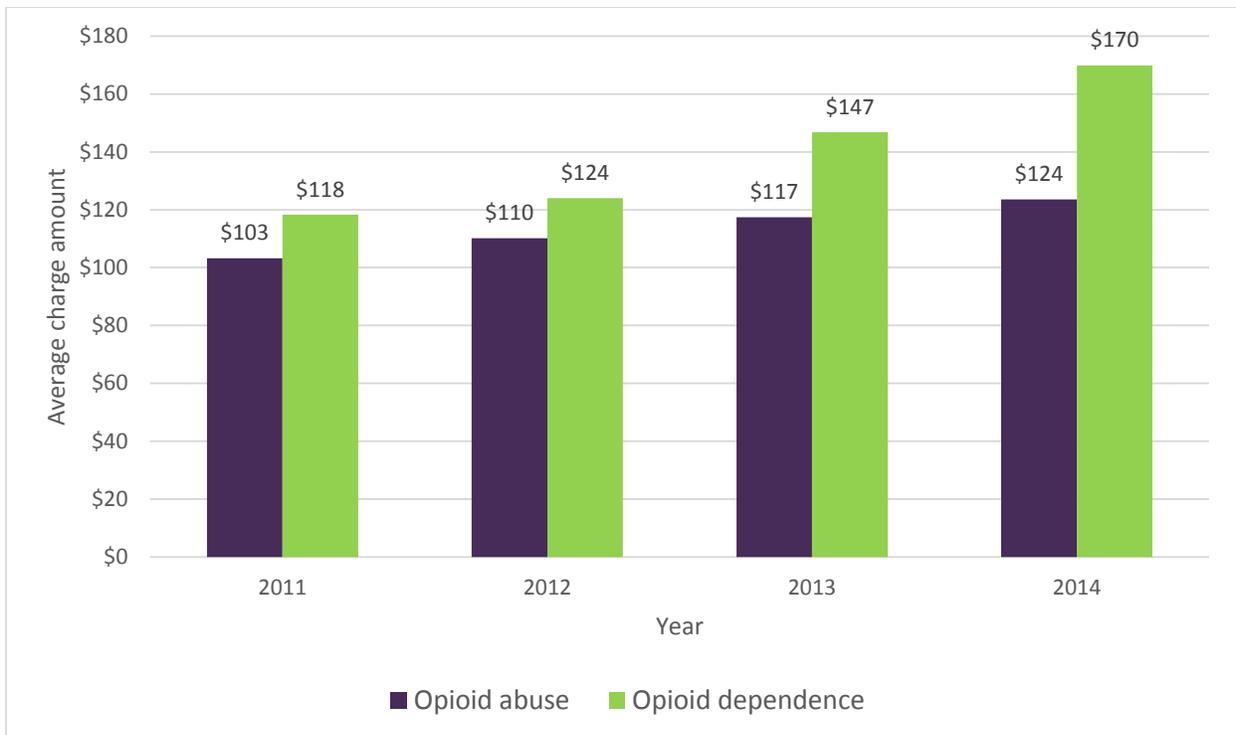
### Services Associated with Opioid Abuse and Dependence

The rise in total dollars of billed charges and allowed amounts from 2011 to 2015 for those patients with an opioid abuse or dependence diagnosis corresponds to a concomitant increase in claims for specific categories of services related to those diagnoses (figure 4). The different categories of services have not increased, however, at the same rate. The greatest increase from 2011 to 2014 was in alcohol and/or drug services/therapy, which increased 1,189 percent. Next were laboratory tests, which grew 848 percent in those years. E&Ms (a broad category that includes different types of physician-patient encounters) increased 335 percent. Professional services provided to hospitalized individuals had the lowest overall increase of this group, at 304 percent.



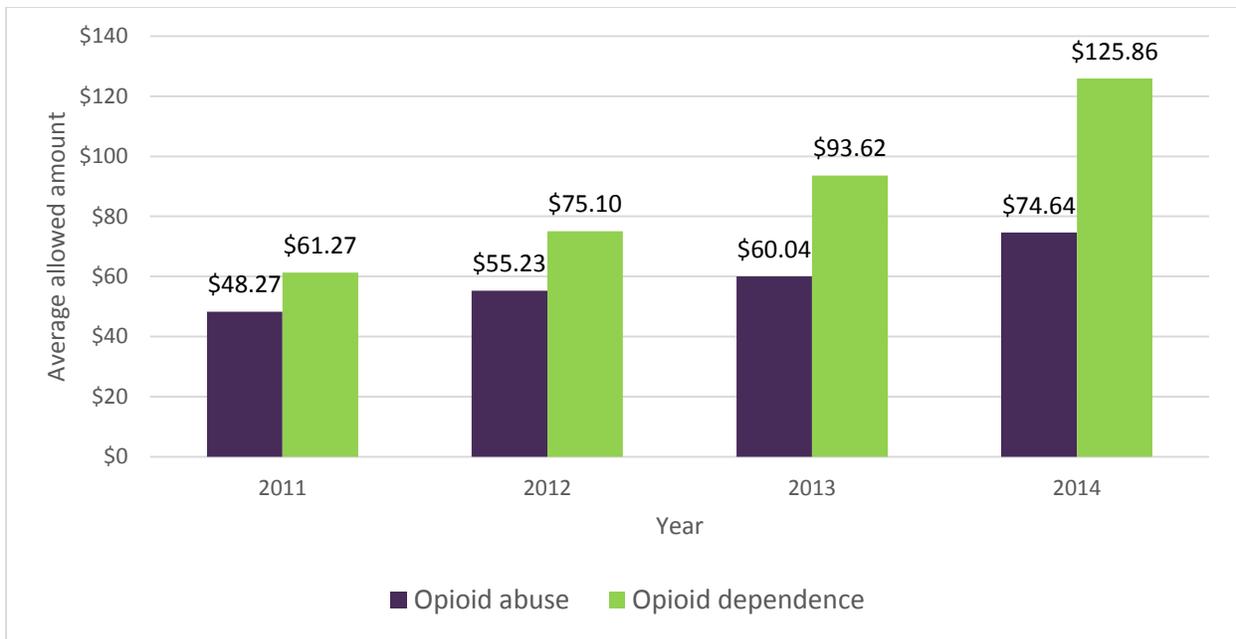
**Figure 4. Year-over-year services by procedure code categories billed with opioid abuse and dependence diagnoses during the time period 2011 to 2014.** The legend lists procedure code categories from highest to lowest rate of increase.

Charges for opioid abuse and opioid dependence have both been rising, but not at the same rate. Based on the aggregate of charges for all services involving an opioid-related diagnosis, the average charge for a service for opioid dependence increased from \$118 (2011) to \$170 (2014) (figure 5). The average charge for a service for opioid abuse increased much less, from \$103 to \$124.



**Figure 5. Year-over-year average charges per service across all services and procedures with opioid abuse and opioid dependence diagnoses during the time period 2011-2014.**

Similarly, the average amounts that payors are allowing per year for services for opioid dependence and opioid abuse have been rising, with the increase greater for opioid dependence than for opioid abuse (figure 6). The average imputed allowed amount for an opioid dependence service more than doubled, from \$61.27 in 2011 to \$125.86 in 2014. The average allowed amount for an opioid abuse service increased from \$48.27 to \$74.64 in the same time period.



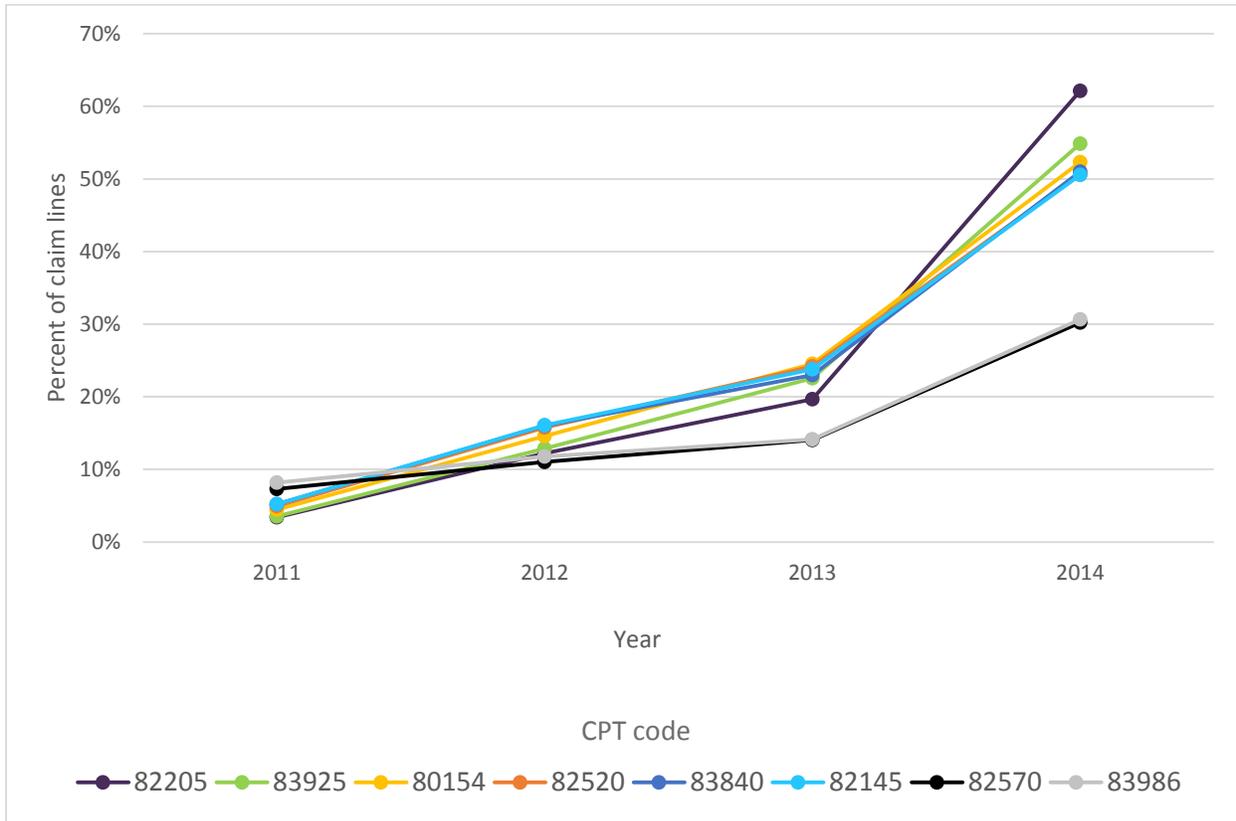
**Figure 6. Year-over-year average imputed per-service allowed amounts based on all services and procedures with opioid abuse or dependence diagnoses during the time period 2011-2014.**

Among the fastest-growing categories of services and procedures associated with opioid abuse and dependence are laboratory tests, which are used to screen for drug use. The *New York Times* reported that the size of the US drug-screening industry grew from \$800 million in 2000 to \$2 billion in 2013.<sup>7</sup> FAIR Health data show which particular laboratory tests associated with opioid abuse and dependence diagnoses increased the most from 2011 to 2014 (figure 7, table 1). Based on total claim lines for the period, the test for barbiturates (CPT 82205) grew the most, by more than 1,800 percent. The next greatest increase was for the test for opioids (CPT 83925), which grew by more than 1,500 percent. Testing for methadone specifically (CPT 83840), primarily in the context of monitoring compliance with methadone treatment programs, increased by 979 percent. Tests to screen for other drugs, such as benzodiazepines (CPT 80154), cocaine or metabolite (CPT 82520) and amphetamines and methamphetamines (CPT 82145), increased in use by roughly tenfold.<sup>8</sup>

<sup>7</sup> "The Soaring Cost of the Opioid Economy," *New York Times*, June 22, 2013, <http://www.nytimes.com/interactive/2013/06/23/sunday-review/the-soaring-cost-of-the-opioid-economy.html>.

<sup>8</sup> In its analysis of laboratory tests, this study used only claims that billed CPT and HCPCS codes associated with ICD-9-CM and ICD-10-CM diagnosis codes for opioid abuse and opioid dependence. It did not include claims with codes associated with ICD-9-CM and ICD-10-CM diagnosis codes for opioid use. The ICD-10-CM descriptions of these different diagnoses appear under diagnosis code F11 (opioid related disorders) at diagnoses codes F11.1- (opioid abuse), F 11.2- (opioid dependence) and F 11.9- (opioid use); see <http://www.icd10data.com/ICD10CM/Codes/F01-F99/F10-F19/F11->.

Most of these tests are urine tests, so tests routinely used in examining urine—creatinine (CPT 82570) and pH body fluid (CPT 83986)—also increased, but at lower rates.



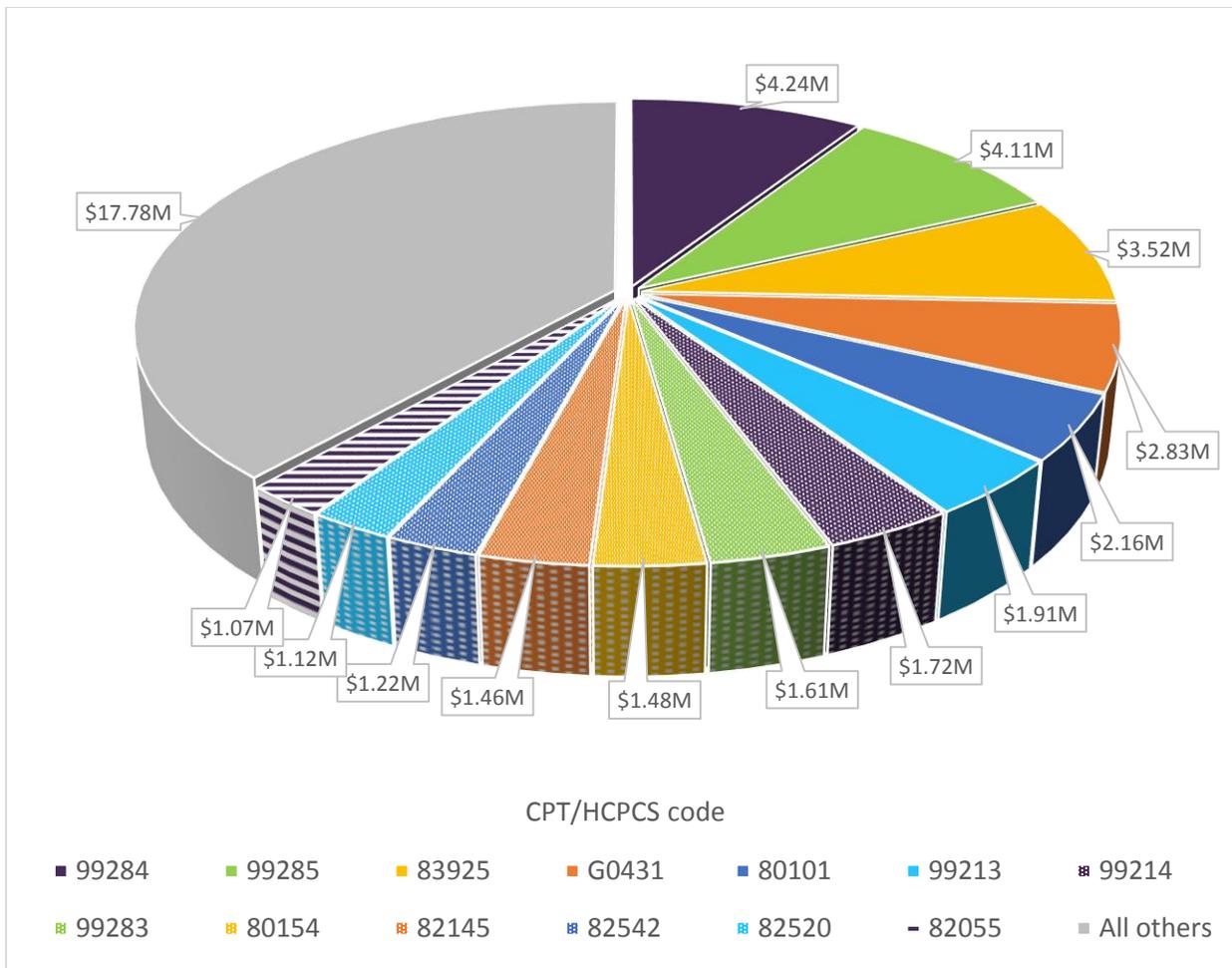
**Figure 7. Top rising CPT codes associated with opioid abuse and dependence diagnoses within the laboratory test category during the time period 2011-2014.** The legend lists CPT codes from highest to lowest rate of increase. For a concise list of those CPT codes referenced above, together with their accompanying percent increase, see table 1 below.

**Table 1. Top increases in CPT codes associated with opioid abuse and dependence diagnoses within the laboratory test category during the time period 2011-2014, by percentage increase in claim lines.**

<b>CPT CODE</b>	<b>Description</b>	<b>Percent Increase</b>
<b>82205</b>	BARBITURATES, NOT OTHERWISE SPECIFIED	1819
<b>83925</b>	OPIATE(S), DRUG AND METABOLITES, EACH PROCEDURE	1555
<b>80154</b>	BENZODIAZEPINES	1171
<b>82520</b>	COCAINE OR METABOLITE	1023
<b>83840</b>	METHADONE	979
<b>82145</b>	AMPHETAMINE OR METHAMPHETAMINE	971
<b>82570</b>	URINE CREATININE	414
<b>83986</b>	PH BODY FLUID NOT OTHERWISE SPECIFIED	375

## **Opioid Abuse versus Opioid Dependence**

Because opioid abuse is more readily diagnosed than opioid dependence (the former requiring only one symptom for diagnosis, the latter three), it is not surprising that the top charges billed for them differ. Among the top aggregated charges associated with the CPT and HCPCS codes billed with opioid abuse, three emergency department codes—CPT 99283, 99284 and 99285—make up a large portion (figure 8). The three codes added up to \$9.95 million in charges and \$4.96 million in imputed allowed amounts in the period 2011-2014. Two drug screens (HCPCS G0431 and CPT 80101) also were associated with substantial charges, which totaled \$5 million combined in that same period. The test for opioids (CPT 83925) also was a top opioid abuse cost, amounting to \$3.52 million in charges and \$1.28 million in imputed allowed amounts.



**Figure 8. Aggregated charges for codes related to opioid abuse diagnoses during the time period 2011-2014.** Proceeding clockwise from 99284 (\$4.24 million), the codes are arranged from largest to smallest charges. “All others” include other codes that had lower aggregated charges than the individually identified codes. For a concise list of those procedure codes referenced above, together with 80th percentile charges and imputed allowed amounts, see table 2 below.

The drug screening codes HCPCS G0431 and CPT 80101 and the opioid test CPT 83925 were among the codes recently replaced by new codes. The AMA replaced the two CPT codes in 2015. CMS replaced the Level II HCPCS code G0431 in 2016. The replacement codes appear associated with higher costs, and since the volume of services is increasing, the result may be an even larger increase in costs in years to come.

FAIR Health produces charge benchmark modules that include the 80th percentile of charges, among other percentiles, for both CPT and Level II HCPCS codes. FAIR Health also produces benchmark modules that include the 80th percentile, among other percentiles, of imputed allowed amounts for CPT codes. For the codes in figure 8, the 80th percentile benchmark charge and the 80th percentile imputed

allowed amount are listed below, with notes indicating which codes were replaced in 2015 or 2016 (table 2).

**Table 2. National 80th percentile charges and imputed allowed amounts for top codes related to opioid abuse diagnoses.**

CPT/ HCPCS Codes	Description	80th Percentile Charges*	80 <sup>th</sup> Percentile Allowed**
99284	EMERGENCY DEPARTMENT VISIT HIGH SEVERITY AND LIFE THREATENING	\$635	\$355
99285	EMERGENCY DEPARTMENT VISIT HIGH/URGENT SEVERITY	\$998	\$557
83925	OPIATE(S), DRUG AND METABOLITES, EACH PROCEDURE <sup>1</sup>	\$84	\$31
G0431	DRUG SCREEN, QUALITATIVE; MULTIPLE DRUG CLASSES BY HIGH-COMPLEXITY TEST METHOD <sup>2</sup>	\$475	N/A
80101	DRUG SCREEN, QUALITATIVE; SINGLE DRUG CLASS METHOD <sup>3</sup>	\$60	\$27
99213	OFFICE OUTPATIENT VISIT 15 MINUTES	\$146	\$81
99214	OFFICE OUTPATIENT VISIT 25 MINUTES	\$216	\$120
99283	EMERGENCY DEPARTMENT VISIT MODERATE SEVERITY	\$382	\$213
80154	BENZODIAZEPINES <sup>4</sup>	\$85	\$25
82145	AMPHETAMINE OR METHAMPHETAMINE <sup>5</sup>	\$65	\$24
82542	COLUMN CHROMATOGRAPHY/MASS SPECTROMETRY NONDRUG ANALYTE	\$74	\$28
82520	COCAINE OR METABOLITE <sup>6</sup>	\$65	\$24
82055	ALCOHOL <sup>7</sup>	\$75	\$28

\* National 80th percentile values from FH<sup>®</sup> Medical/Surgical Benchmarks module November 2014 and FH Healthcare Common Procedure Coding System (HCPCS) Benchmarks module December 2014.

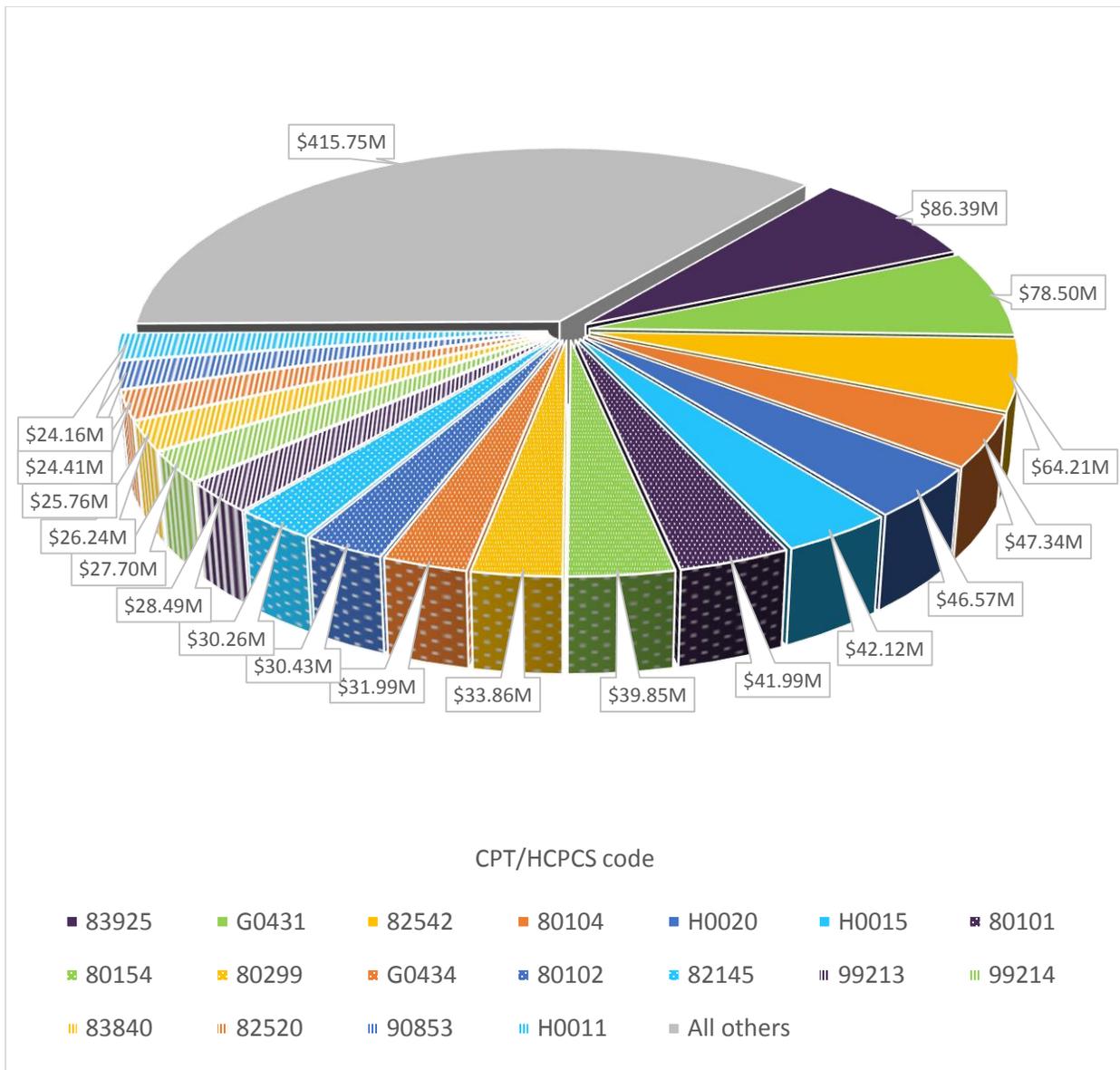
\*\* Imputed allowed amounts determined using methodology to be introduced in FH Allowed Benchmarks modules in March 2017.

- |                |   |
|----------------|---|
| 1 Deleted 2015 | Replaced with CPT codes 80361, 80362, 80363, 80364        |
| 2 Deleted 2016 | Replaced with HCPCS codes G0477 through G0483             |
| 3 Deleted 2015 | Replaced with CPT codes 80300, 80301, 80302, 80303, 80304 |
| 4 Deleted 2015 | Replaced with CPT codes 80346, 80347                      |
| 5 Deleted 2015 | Replaced with CPT codes 80324, 80325, 80326               |
| 6 Deleted 2015 | Replaced with CPT codes 80353, 80361, 86160, 86161, 86162 |
| 7 Deleted 2015 | Replaced with CPT codes 80320, 80321, 80322               |

Although emergency department codes made up a large percentage of the charges associated with opioid abuse diagnoses in the period 2011-2014 (figure 8), they do not even appear among the top 18 codes for the highest charges associated with opioid dependence diagnoses in that same period (figure 9). Patients diagnosed with opioid dependence are more likely than those diagnosed with opioid abuse to be treated in substance abuse programs rather than on an emergency basis. In such substance abuse treatment programs, laboratory tests are common and are associated with the highest charges related

to opioid dependence. During the period 2011-2014, the opioid test, CPT 83925, was the procedure code with the highest amount of aggregated charges at \$86.39 million; it had an aggregated imputed allowed amount of \$32.05 million. In the same period, general E&M codes were among the top 18 codes for those with an opioid dependence diagnosis, with two codes for office outpatient visits (CPT 99213 and 99214) having totals of \$56 million in aggregated charges and \$30.75 million in aggregated allowed amounts.

It should be noted that 266 distinct services are associated with opioid dependence diagnoses, of which only the top 18 are represented individually in figure 9. Table 3 shows the national 80th percentile charges and imputed allowed amounts for those 18 codes. Within the “all others” category in figure 9 are additional laboratory codes, such as pH body fluid (CPT 83986); behavioral health codes, such as mental health partial hospitalization, treatment, less than 24 hours (HCPCS H0035); and specialty pharmaceuticals such as injection, naltrexone (HCPCS J2315).



**Figure 9. Aggregated charges for codes related to opioid dependence diagnoses during the time period 2011-2014.** Proceeding clockwise from CPT 83925 (\$86.39 million), the codes are arranged from largest to smallest total aggregated charges. “All others” include other codes that had smaller total aggregated charges than the individually identified codes. For a concise list of those procedure codes referenced above, together with 80th percentile charges and imputed allowed amounts, see table 3 below.

**Table 3. National 80th percentile charges and imputed allowed amounts for top codes related to opioid dependence diagnoses.**

<b>CPT/ HCPCS Codes</b>	<b>Description</b>	<b>80th Percentile Charges*</b>	<b>80th Percentile Allowed**</b>
<b>83925</b>	OPIATE(S), DRUG AND METABOLITES, EACH PROCEDURE <sup>1</sup>	\$84	\$31
<b>G0431</b>	DRUG SCREEN, QUALITATIVE; MULTIPLE DRUG CLASSES BY HIGH-COMPLEXITY TEST METHOD <sup>2</sup>	\$475	N/A
<b>82542</b>	COLUMN CHROMATOGRAPHY/MASS SPECTROMETRY NONDRUG ANALYTE	\$74	\$28
<b>80104</b>	DRUG SCREEN, QUALITATIVE; MULTIPLE DRUG CLASSES <sup>3</sup>	\$100	\$45
<b>H0020</b>	ALCOHOL AND/OR DRUG SERVICES; METHADONE ADMINISTRATION AND/OR SERVICE	\$25	N/A
<b>H0015</b>	ALCOHOL AND/OR DRUG SERVICES; INTENSIVE OUTPATIENT	\$294	N/A
<b>80101</b>	DRUG SCREEN, QUALITATIVE; SINGLE DRUG CLASS METHOD <sup>3</sup>	\$60	\$27
<b>80154</b>	BENZODIAZEPINES <sup>4</sup>	\$85	\$25
<b>80299</b>	QUANTITATION OF THERAPEUTIC DRUG, NOT OTHERWISE SPECIFIED	\$90	\$26
<b>G0434</b>	DRUG SCREEN MULTI DRUG CLASS	\$164	
<b>80102</b>	DRUG CONFIRMATION, EACH PROCEDURE <sup>3</sup>	\$107	\$31
<b>82145</b>	AMPHETAMINE OR METHAMPHETAMINE <sup>5</sup>	\$65	\$24
<b>99213</b>	OFFICE OUTPATIENT VISIT 15 MINUTES	\$146	\$81
<b>99214</b>	OFFICE OUTPATIENT VISIT 25 MINUTES	\$216	\$120
<b>83840</b>	METHADONE <sup>6</sup>	\$69	\$26
<b>82520</b>	COCAINE OR METABOLITE <sup>7</sup>	\$65	\$24
<b>90853</b>	GROUP PSYCHOTHERAPY	\$100	\$73
<b>H0011</b>	ALCOHOL AND/OR DRUG SERVICES; ACUTE DETOXIFICATION	\$298	N/A

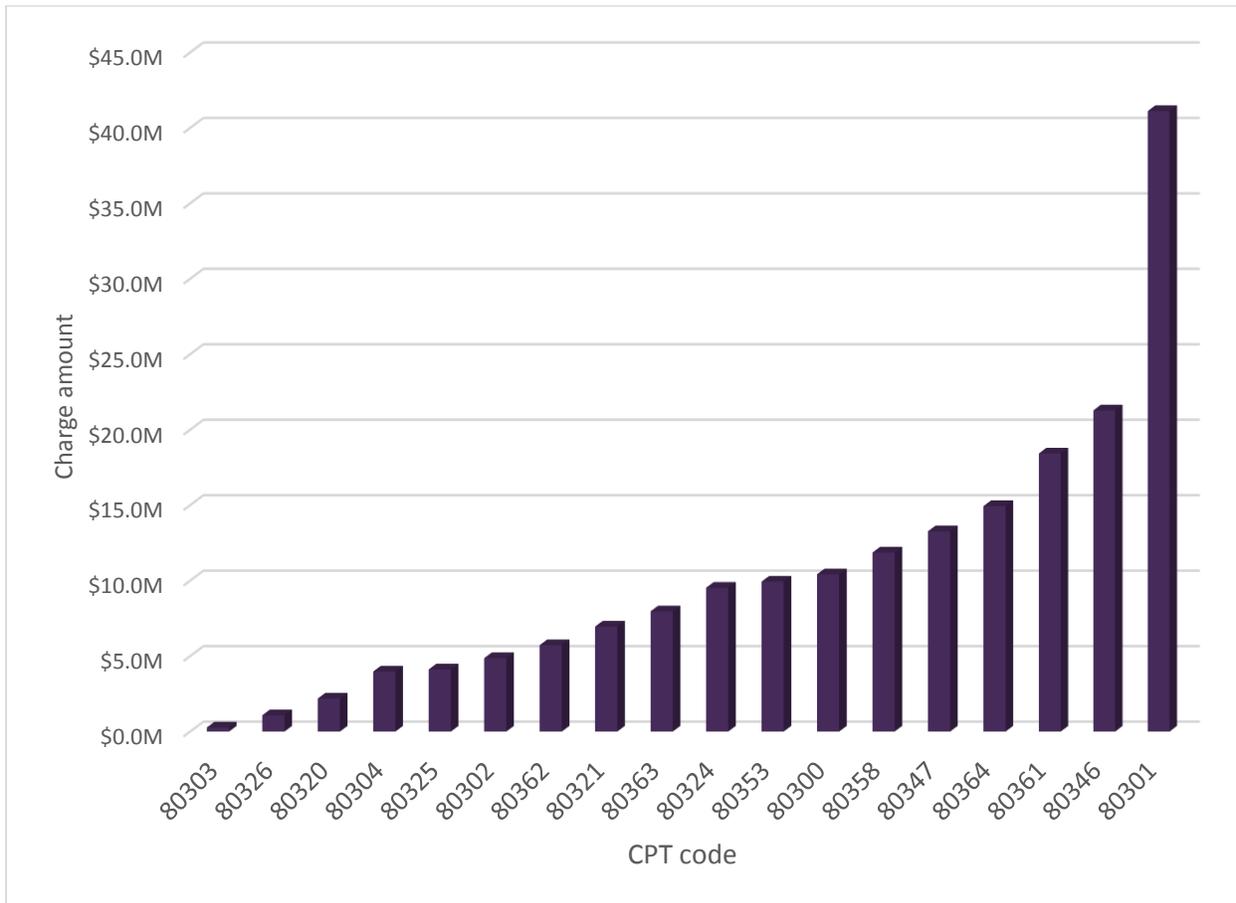
\* National 80th percentile values from FH Medical/Surgical Benchmarks module November 2014 and FH Healthcare Common Procedure Coding System (HCPCS) Benchmarks module December 2014.

\*\* Imputed allowed amounts determined using methodology to be introduced in FH Allowed Benchmarks modules in March 2017.

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| 4 Deleted 2015 | Replaced with CPT codes 80346, 80347                      |
| 5 Deleted 2015 | Replaced with CPT codes 80324, 80325, 80326               |
| 6 Deleted 2015 | Replaced with CPT codes 80358                             |
| 7 Deleted 2015 | Replaced with CPT codes 80353, 80361, 86160, 86161, 86162 |

## Replacement Codes

The aggregated charges for the replacement codes for laboratory tests related to opioid abuse and dependence diagnoses that appeared on a substantial number of 2015 claims totaled \$206.34 million for that year alone (figure 10).



**Figure 10. Aggregated charges for replacement codes associated with opioid abuse and dependence diagnoses in 2015.** For a concise list of those procedure codes referenced above, together with 80th percentile charges and imputed allowed amounts, see table 4 below.

Higher costs are associated with the replacement codes than their predecessors. The increase in costs likely is attributable to several factors whose relative impact is difficult to distinguish in this transitional period. The former codes have been replaced with a higher number of generally more granular codes that are not necessarily direct equivalents of the replaced codes. In addition, testing protocols can differ and evolve; the use of more expensive processes and equipment could affect costs. Before 2015, the methadone assay was billed with CPT 83840; now it is billed with CPT 80358. According to the FH Medical/Surgical Benchmarks module November 2014, the 80th percentile charge for CPT 83840 was

\$69; for the new code, CPT 80358, the 80th percentile charge according to the FH Medical/Surgical Benchmarks module May 2016 was \$150.

Similarly, the 80th percentile charge for the cocaine assay, when billed with the old code, CPT 82520, was \$65 in November 2014; with the new code, CPT 80353, the 80th percentile charge as of May 2016 was \$103. Also in November 2014, the 80th percentile charge for CPT 83925, the test for opiates, drug and metabolites (each procedure), was \$84; in May 2016, the 80th percentile charge for four replacement codes CPT 80361, a test for opiates, and CPT 80362, 80363 and 80364, tests for opioid and opiate analogs, for one or two, three or four, or five or more, respectively, ranged from \$224 to \$531.

It should be noted that when new codes are introduced, there often is an initial period when billing practices are inconsistent and charges and allowed amounts fluctuate. Currently, a number of stakeholders, including the AMA, insurers and government program directors, are evaluating the various tests and considering appropriate billing and payment models for the revised system of coding for the laboratory tests associated with opioid diagnoses.

Table 4 lists the 80th percentile charges and imputed allowed amounts for the 2015 replacement codes represented in figure 10.

**Table 4. National 80th percentile charges and imputed allowed amounts for 2015 replacement codes associated with opioid abuse and dependence diagnoses.**

<b>CPT Codes</b>	<b>Description</b>	<b>80th Percentile Charges*</b>	<b>80th Percentile Allowed**</b>
<b>80300</b>	DRUG SCREEN LIST A ANY NUMBER	\$200	\$80
<b>80301</b>	DRUG SCREEN LIST A SINGLE DRUG	\$636	\$255
<b>80302</b>	DRUG SCREEN LIST B	\$248	\$100
<b>80303</b>	DRUG SCREEN MULTIPLE CLASS	\$160	\$64
<b>80304</b>	DRUG SCREEN MULTIPLE CLASS	\$155	\$62
<b>80320</b>	ALCOHOL	\$100	\$49
<b>80321</b>	ALCOHOL BIOMARKERS 1 OR 2	\$123	\$60
<b>80324</b>	AMPHETAMINES 1 OR 2	\$127	\$62
<b>80325</b>	AMPHETAMINES 3 OR 4	\$223	\$110
<b>80326</b>	AMPHETAMINES 5 OR MORE	\$325	\$160
<b>80346</b>	BENZODIAZEPINES 1-12	\$250	\$123
<b>80347</b>	BENZODIAZEPINES 13 OR MORE	\$700	\$344
<b>80353</b>	COCAINE	\$103	\$51
<b>80358</b>	METHADONE	\$150	\$74
<b>80361</b>	OPIATES 1 OR MORE	\$224	\$110
<b>80362</b>	OPIOIDS AND OPIATE ANALOGS 1 OR 2	\$159	\$78
<b>80363</b>	OPIOIDS AND OPIATE ANALOGS 3 OR 4	\$318	\$156
<b>80364</b>	OPIOIDS AND OPIATE ANALOGS 5 OR MORE	\$531	\$261

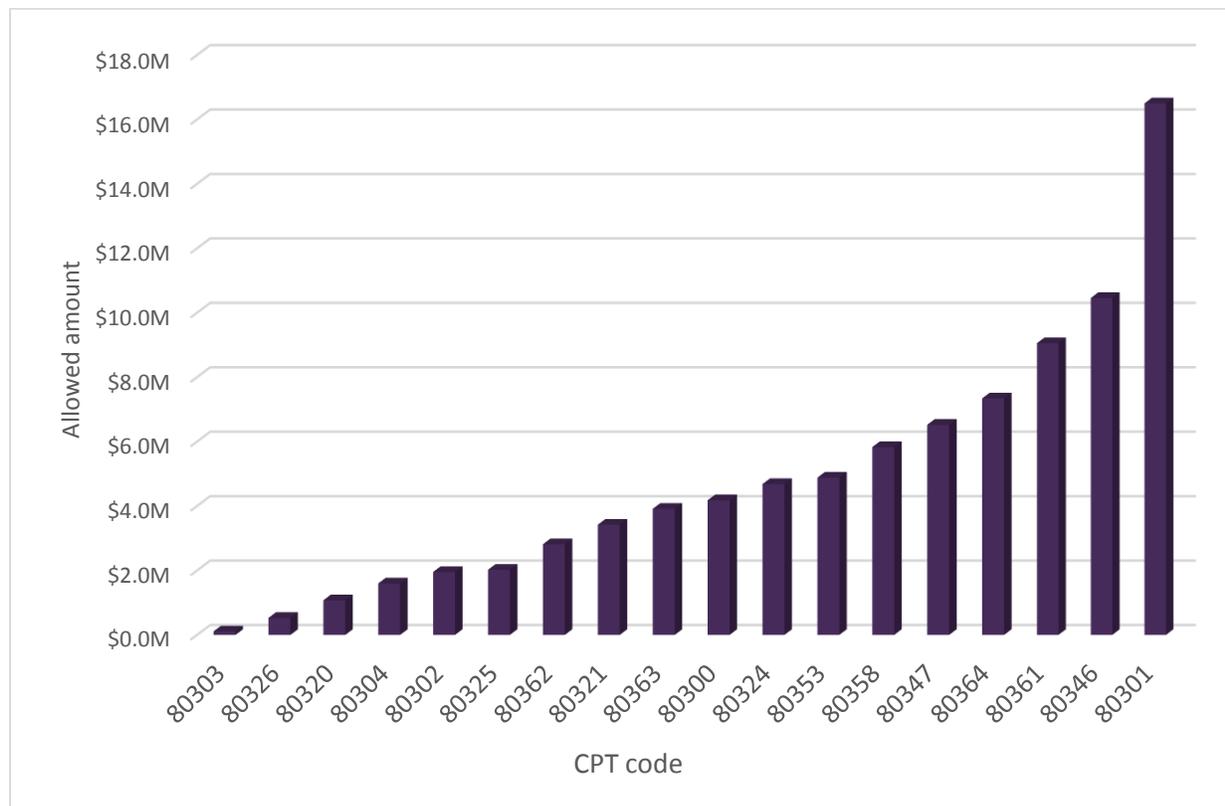
\* National 80th percentile values from FH Medical/Surgical Benchmarks module May 2016.

\*\* Imputed allowed amounts determined using methodology to be introduced in FH Allowed Benchmarks modules in March 2017.

The aggregated imputed allowed amounts for the 2015 replacement codes (figure 11) show a similar cost differential between older and newer codes, with the replacement codes receiving higher imputed allowed amounts. For example, in November 2014, the imputed allowed 80th percentile amount<sup>9</sup> for CPT 80101, a qualitative drug screen of a single drug class method, was \$27; in May 2016, the imputed allowed 80th percentile amounts for its replacement CPT codes 80304 and 80301, multiple drug class procedure and screen using a single drug class method, were \$62 and \$255.23, respectively, representing increases of 230 percent and 945 percent. Similarly, the imputed 80th percentile allowed amount for CPT 83925, the test for opiates, drug and metabolites (each procedure), was \$31 in November 2014; in May 2016, the imputed 80th percentile allowed amounts for its replacement CPT

<sup>9</sup> Imputed allowed amounts determined using methodology to be introduced in FH Allowed Benchmarks modules in March 2017.

codes 80362 and 80363, tests for opioid and opiate analogs, for one or two, and for three or four, were \$78.18 and \$156.27, respectively, representing increases of 252 percent and 504 percent.



**Figure 11. Aggregated imputed allowed amounts for replacement codes in 2015.** For a concise list of those procedure codes referenced above, together with 80th percentile charges and imputed allowed amounts, see table 4 above.

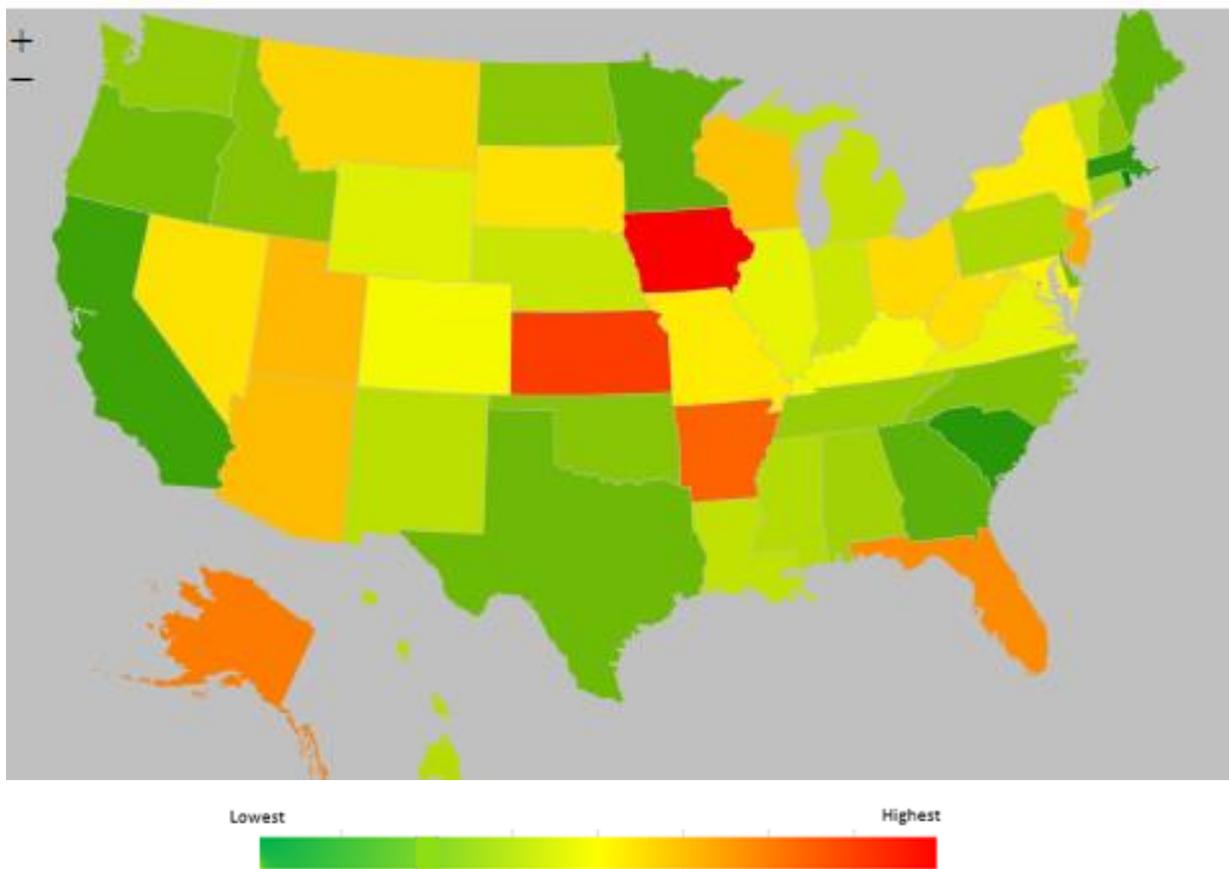
### State-by-State Pattern

The average charges for services associated with opioid abuse and dependence diagnoses vary by state. As seen in figure 12, the states with the highest associated average per-service charges in 2014 were Iowa (\$263), Washington, DC (\$247), Kansas (\$238), Arkansas (\$222) and Alaska (\$212). The states with the lowest associated charges were Rhode Island (\$45), South Carolina (\$60), Massachusetts (\$62), California (\$71) and Georgia (\$85).

In Iowa and Kansas, two states with high average per-service charges, the CPT codes with opioid abuse and dependence diagnoses that were most frequently billed on claims were for a 15-minute office visit (99213), a 25-minute office visit (CPT 99214), drug screens (HCPCS G0434, G0431) and naloxone (HCPCS J2315)—all of which are generally associated with higher charges.

In Rhode Island, South Carolina, Massachusetts and California, all of which have low average per-service charges, the most frequently billed CPT codes associated with opioid abuse and dependence diagnoses were for methadone administration (HCPCS H0020) and various laboratory tests, including urinalyses, which are less expensive overall.

Further study is needed to identify the reasons behind the state-to-state differences in the codes that are most frequently billed. It may be that in states such as Iowa and Kansas there has been an increase in new opioid abuse and dependence cases, requiring more expensive early services, whereas in states such as Rhode Island more patients have already been in treatment programs for some time.



**Figure 12. Average per-service charges for all opioid abuse and dependence diagnoses by state in 2014.**

## Conclusion

The opioid crisis is having a profound economic impact on the healthcare system. Both billed charges and allowed amounts for services associated with opioid abuse and opioid dependence have increased dramatically in recent years. Certain categories of care, including alcohol and/or drug services/therapy and laboratory tests, have increased in utilization more than others. Top charges associated with opioid

abuse differ from those associated with opioid dependence. Replacement codes with higher billed charges and higher imputed allowed amounts than those they replaced appear to be adding to the costs. Although states vary in the level of their average per-service charges, the overall pattern is one of increasing demand for treatment for opioid abuse and dependence, with correspondingly higher costs for payors. By reporting on the particular components of those costs, FAIR Health hopes to inform and assist insurers as they design benefits, providers as they adjust to increasing demand for services and procedures, and legislators and policy makers as they try to make decisions in the best interests of public health. FAIR Health is committed to continuing to provide a robust, independent data source for the use of all stakeholders in addressing the opioid crisis.

## About FAIR Health

FAIR Health is a national, independent, nonprofit organization dedicated to bringing transparency to healthcare costs and health insurance information through data products, consumer resources and health systems research support. FAIR Health uses its database of over 21 billion privately billed medical and dental claims to power an award-winning free consumer website and to create data products serving all healthcare stakeholders, including government officials, researchers, consumers, providers, insurers and other businesses. FAIR Health has been certified by the Centers for Medicare & Medicaid Services (CMS) as a Qualified Entity, eligible to receive all Medicare claims data for use in its nationwide transparency efforts. In addition, FAIR Health's data have been authorized as the official data source for a variety of state health programs, including workers' compensation and Personal Injury Protection (PIP) programs, and have been officially designated as standards for state consumer protection laws governing surprise out-of-network bills and emergency services. For more information, visit [www.fairhealth.org](http://www.fairhealth.org).

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