

## Supplemental Online Content

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**eTable.** Regional Representation for Commercial and Medicare Advantage Enrollees in the Current Study Sample Relative to the US Population  
**eAppendix.** Outcomes From Claims Data

This supplemental material has been provided by the authors to give readers additional information about their work.

eTable. Regional Representation for Commercial and Medicare Advantage Enrollees in the Current Study Sample Relative to the US Population

The OptumLabs® Data Warehouse includes de-identified commercial and Medicare Advantage claims from one of the largest commercial health insurers in the US. Below is a table showing the regional representation of our study sample relative to the U.S. population as a whole.

	<b>Study Sample in 2020</b>	<b>Entire US population</b>
N	6 million	328 million
Region:		
East	12.8%	17.1%
Midwest	24.9%	20.8%
South	43.6%	38.3%
West	18.7%	23.9%

Data on entire US population come from the U.S. Census:

[https://www.census.gov/popclock/data\\_tables.php?component=growth](https://www.census.gov/popclock/data_tables.php?component=growth).

eAppendix. Outcomes From Claims Data

**Outpatient visits:**

An outpatient visit was defined as an opioid use disorder (OUD) visit if the first or second diagnosis in the claim was an OUD and the claim was for one of the following outpatient Current Procedural Terminology (CPT) and Healthcare Common Procedure Coding System (HCPCS) codes:

90791, 90792, 90801-90802, 90804-90815, 90820, 90832-08940, 90842-90849, 90853, 90855, 90857, 90862, 90865, 90867-90871, 90875, 90876, 90880, 90900-90902, 90904, 90906, 90908, 90910, 97003, 97004, 98961, 98962, 99058, 99078, 99201-99205, 99211-99215, 99241-99245, 99341-99345, 99347-99350, 99382-99387, 99392-99397, 99401-99404, 99408, 99409, 99411, 99412, 99420, 99490, 99495, 99496, 99510, 0359T-0374T, G0071-G0082, G0155, G0175, G0351, G0396, G0397, G0442, G0443, G0463, G0466, G0467, G0469, G0470, G0505, G0507, G0513-G0515, H0001 (without modifier and with modifiers U1, HN, HO, TS), H0002, H0004 (without modifier and with modifiers TF, HD, HF, HG, HR, HQ), H0005 (without modifier and with modifiers HD, HQ), H0006 (without modifier and with modifier HD), H0007, H0014, H0022, H0023, H0028, H0029, H0031 (without modifier and with modifiers TS, HO, HN, HA, HM), H0034, H0036-H0040, H0046 (without modifier and with modifier HE), H0049, H0050, H1011, H2000 (without modifier and with modifiers HP, HO), H2001, H2010 (without modifier and with modifiers HF, HO, HQ, HE, HM, HP), H2011, H2013- H2015 (without modifier and with modifiers HQ, HE, HN), H2016-H2018, H2019 (without modifier and with modifier HM, HN, HO, HQ, HR),

H2020-H2033, H2037, H5010, H5020, H5025, H5030, H5220, H5230, H5240, H5299, M0064, Q3014, S3005, S9110, S9127, S9454, S9482, S9484, S9485, T1006 (without modifier and with modifier SA), T1007, T1011 with modifier HE, T1012 with modifier HE, T1012, T1015 (without modifier and with modifiers HF, HA), T1016 with modifier HB, T1017 (with modifiers HE, HK, TL), T1018 with modifier HF, T1023-T1027, T1040, T1041, T2010-T2015, T2018-T2023, T2034, T2036, T2037, Z0001, Z0002.

#### **Fills for OUD medications:**

OUD medication fills were defined as pharmacy claims or CPT/HCPCS for buprenorphine (including buprenorphine/naloxone), naltrexone and methadone formulations. For OUD medications that are injections or facility administered medications, we used the following HCPCS and CPT codes: buprenorphine (HCPCS: J0570-J0575, J0592, Q9991, Q9992, G0516, G0518; CPT: 11981, 11982), naltrexone (J2315), and methadone (H0020, J1230, S0109).

#### **Urine OUD toxicology tests:**

We defined urine toxicology tests for OUD to be claims for CPT/HCPCS codes: 80305-80307, G0480-G0483 and G0659 that were associated with an OUD diagnosis code (ICD-10 code F11.xxx).

#### **Telemedicine:**

We defined telemedicine as visits with telemedicine modifier codes (GT, GQ, or 95) or visits with HCPCS codes specific to telemedicine and potentially applicable to OUD treatment (G0425-7, G0508-9).