Data Analytics to Understand the Workforce

*Refer to "Data Specifications" for detailed measure explanations

Just as companies otherwise utilize health plan claims data to manage health benefits and services investments to facilitate a healthy, productive workforce, employers can utilize their data to understand the status of their workforce's substance and opioid use disorder (OUD) risks and trends. Data can be used to understand how well current benefits are helping prevent, treat, and support recovery from opioid misuse or OUD. In addition to their own independent data and analytics investments, employers should encourage their health plan or pharmacy benefits manager (PBM) to use this data to inform their product and service portfolio.

Depending on the structure of their health offerings, employers can go to multiple sources to receive their data: health insurer or health plan administrator, pharmacy benefit manager (PBM), data warehouse vendor, or insurance broker. Health plans and data warehouse vendors often have standardized reports that group substance use disorders (SUD) with mental health. If not, included here are a list of questions and measures employers may want to request to better understand their workforce substance use risks and status.

Different data vendors may define the recommended measures differently; it is important for employers to understand the meaning of the measures they receive. For general reference, detailed explanations of each measure can be found in Appendix C.

An employer's data should be examined, at minimum, annually and compared to previous years to identify positive or negative trends. If available, the measures should be compared to national, state, regional, and industry averages. Most measures can be stratified into basic subgroups to identify differences among them, such as: gender, age, employee type (hourly/salaried), relationship to employee (self/spouse/dependent), in-network/out-of-network, health plan types, and prescriber types (dental/medical). When looking at costs associated with each measure, employers should look at the total cost of care in addition to pharmacy or medical health costs separately. Reduced spending in one of these areas can often result in increased spend in the other.

Before an employer can utilize this data, the information must be de-identified within the requirements of HIPAA. Employers should also consult with an employment attorney to confirm compliance with HIPAA and any other applicable federal and state laws that may further restrict the use of claims data or include additional requirements for the de-identification of data.

What if an employer cannot access their data?

Each employer's data analytics capabilities vary based on their size, investments in data and analytics, insurance coverage, and health plan structure. For instance, the fewer employees an employer has, the greater the risk for identification and breach of privacy. Additionally, whether employers are fully-insured, self-insured, or uninsured may present barriers in the data they can access. Integration of pharmacy benefit and health plan data can determine the extent to which employers can relate diagnoses, treatment, and medication data.

Medical and Pharmacy Summary Analytics

The first step to prevention and treatment of OUD is understanding key characteristics of your employee population, including:

Enrollment Data | Number of members, average family size, percentage of males/females, average age, and member type (employees/spouses/dependents)

Medical and Pharmacy Spend | Medical and pharmacy spend including out-of-pocket expenses for members

Top Conditions and Medication | Prevalence, utilization, and total expenditures

Total Mental Health and SUD Expenditures | Mental health and SUD spending as a percentage of total spend

Workers compensation, disability, employee assistance program (EAP), and Family and Medical Leave Act (FMLA) data are also rich sources of mental health and OUD data. This section only focuses on analytics of medical and pharmacy data.

Prevention

By examining claims data related to opioid prescription patterns, employers can identify potential patterns of risk or implement actions to help prevent OUD among their workforce. Employers can use the information obtained from this data to design benefits to ensure that their employees have the support needed to prevent OUD. What is being prescribed, the rate of prescribing, length of prescribing, receipt of prescriptions from multiple sources, and top conditions being prescribed provide valuable insight into the status of opioid use in the employer's workforce. Employers may wish to stratify this data into additional subgroups.

How often are members being exposed to opioids?

Before exploring prescription patterns, employers should start with a basic look at the prevalence of opioid prescribing for pain control. To understand prescribing patterns across different types of opioids, request Morphine Milligram Equivalents (MME) per opioid, length of prescription, and whether the opioid is long-acting versus short-acting.

Measure to Request:

- Opioid Prescriptions

Why are members being prescribed opioids?

It is important to understand which conditions are correlated to opioid prescribing in order to fully understand prescribing patterns. This includes the top conditions that opioid prescriptions are written for and the rate per condition. This information can help employers understand why their workforce is receiving opioids and evaluate alternative options for non-opioid treatment for these conditions.

Measure to Request:

- Top Conditions for which Opioids are Prescribed

Are members receiving appropriate care to manage their pain?

Pain is a symptom rather than a diagnosable condition. The condition for which a member is experiencing pain determines the best clinical pathway for them to receive care. For this reason, examining claims data to evaluate the quality of pain treatment is challenging.

To begin, employers can consider the top conditions for which opioids are prescribed. An evaluation of the IBM® MarketScan® research database revealed that from 2016-2018, the top three conditions for which opioids are prescribed in Kentucky were back pain, arthritis and diabetes. Employers can also request this metric for their own members. Employers can ask for an evaluation of the types and sequences of pain management care that members are receiving to learn useful insights into whether or not comprehensive evidence-based pain treatment is the standard.

Additionally, employers can review claims data to learn if members using opioids long-term are receiving regular follow ups and assessment to monitor their condition, functional outcomes, and opioid use. Employers can also learn the rate of members who are receiving referrals for non-pharmacological therapies. Pharmacologic therapies can be clinically appropriate for treating pain, but should be supported by the use of nonpharmacologic therapies if appropriate.

Long Term Opioid-Therapy Measures to Request:

- Follow Up Visit Quarterly
- Quarterly Pain and Functional Assessments
- Referral for Non-pharmacological Therapy

Are members who are exposed to opioids at risk?

Prescription opioid use is not inherently dangerous. The risk lies in how, how much of, and how long the opioids are taken. Although health plan data cannot identify how members are taking opioids, it can provide insight into the other two factors. Key indicators can give insight into the questions employers may have around prescribing patterns within their health plan and how those patterns may support or deter opioid-related risks. Pharmacy and medical claims data can also give insight to patterns related to overdose or the risk of it.

Measures to Request:

- Use of Opioids at a High Dosage
- Opioid Total Days Covered
- Opioid Lag Days Between Prescriptions
- Use of Opioids from Multiple Providers

Are members overdosing on opioids?

Although capturing definitive information on opioid overdose within a population is difficult, certain measures can help indicate the prevalence of overdose or situations related to it.

Measures to Request:

- Opioid Overdose Rescue (Naloxone) Prescriptions
- Opioid Overdose/Poisoning
- ER Visits due to Overdose
- Concurrent Use of Opioids and Benzodiazepines

Treatment and Recovery

Analyzing pharmacy and medical data can inform employers about SUD diagnoses and their concurrent treatment patterns. Again, this data can be further stratified to be more informative.

How many members have been diagnosed with a substance use disorder?

Although likely an underestimate of how many health plan members are truly struggling with substance misuse or SUD, identifying how many individuals have been clinically diagnosed is an important step for employers to understand the breadth and severity of their workforce and dependents' situation. For further insight, employers should request a breakdown of SUDs by type.

Measures to Request:

- Substance Use Disorder Diagnoses
- Alcohol Use Disorder Diagnoses
- Opioid Use Disorder Diagnoses

Are members with a substance use disorder getting treatment?

Not all health plan members who are diagnosed with a substance use disorder will access treatment. Employers should analyze how many diagnosed members receive treatment to understand any barriers to accessing treatment. For further insight, employers should look at a breakdown of the types and levels of treatment their members are accessing. Additionally, a look at what kind of treatment is being utilized can provide valuable insight into whether or not members are getting evidence-based treatment.

Measures to Request:

- Identification of Alcohol and Other Drug Services
- Use of Pharmacotherapy for Opioid Use Disorder
- Counseling on Psychosocial and Pharmacologic Treatment Options for Opioid Addiction
- Follow-Up After High-Intensity Care for Substance Use Disorder

Quality Outcomes

It is clear that addiction treatment and recovery outcomes are highly individualized. Ideally, each individual will receive the right care, at the right place, at the right time for the optimal chance at a good outcome. What is not clear is how to adequately measure these outcomes. National standards are lacking. Addiction treatment programs have historically been siloed from other medical care, and models for recovery from SUDs do not exist as they do for other chronic diseases. Experts hold various opinions on what these outcomes look like and how they can be adequately measured. National and state leaders in healthcare quality measurement are working towards identifying these measures, and employers are well-suited to be influential in these discussions. This toolkit will be updated as these measures are made available.

Data Specifications

Below are the data specifications for measures recommended in the toolkit. Employers should reference this sheet when requesting their data from their data vendor, health plan, pharmacy benefit manager, or insurance broker. Some measures may have standardized definitions from nationally accredited organizations, while others depend on your data vendor's reporting. Either way, it is important for employers to be aware of the parameters that define each measure in order to accurately interpret their data.

Medical and Pharmacy Summary Analytics	
Enrollment Data	Number of members by type (employees/ spouses/dependents) Average family size Percentage of males vs. females Average age
Total Expenditures	Medical and pharmacy spending including out-of-pocket expenses for members
Top Conditions and Medications	Prevalence Total expenditures
Total Mental Health and Substance Use Disorder Expenditures	Medical and pharmacy spending

Employers should also consider and discuss how this data can be broken down, or further stratified. Included below are a list of standard stratifications. Some measures may benefit from additional stratifications. Other helpful measures include comparison of workplace data metrics to national, state, regional, and industry benchmarks (if available), as well as total cost per member, condition, or prescriptions.

Many measures exclude certain medical conditions such as cancer and end-of-life care, but there may be other exclusions to consider as well. Employers should discuss these exclusions with their data vendor.

Standard Stratifications
Gender
Age group
Employee type (hourly/salaried)
Relationship to Employee (self/spouse/dependent)
In network/out of network
Health plan type

Additional Data to Consider
Data compared to national, state, local, and industry benchmarks
Total cost per member
Total cost per condition
Total cost per prescription

Prevention

How often are members being exposed to opioids?			
	Rate per 1,000 of opioid prescriptions among members 18 years and older		
*Opioids Prescriptions	Numerator: Number receiving prescription opioids during the measurement year	Denominator: Members 18 years and older	Stratifications: Standard Additional • Type of Opioid • Length of Prescription • Long-Acting vs Short-Acting

Why are members being prescribed opioids?			
	Top conditions that opioids are most prescribed for among members 18 years and older		
*Top Conditions Opioids are Most Prescribed for	Numerator: Number receiving prescription opioids for each condition type	Denominator: Members 18 years and older who received prescription opioids during the measurement year	Stratifications: Standard Additional: • Prescription Rate per Condition

Are members receiving appropriate care to manage their pain?			
	Percentage of patients on long-term opioid therapy who have a follow-up visit at least quarterly		
Follow Up Visit Quarterly https://www.cdc.gov/drugoverdose/pdf/prescribing/CDC-DUIP-QualityImprovementAndCareCoordination-508.pdf	Numerator: Number of patients who had at least one in-person follow-up visit with the prescribing clinician at least quarterly	Denominator: Number of patients in an outpatient panel of patients 18 years of age or older with ≥ 60 days' supply of opioids within a quarter	Stratifications: Standard

***Indicates measures that do not have national standardized definitions**

Are members receiving appropriate care to manage their pain?			
Quarterly Pain and Functional Assessments **https://www.cdc.gov/drugoverdose/pdf/prescribing/CDC-DUIP-QualityImprovementAndCareCoordination-508.pdf**	Percentage of patients on long-term opioid therapy who had at least quarterly pain and functional assessments		
	Numerator: Number of patients with documented pain and functional assessments using a validated clinical assessment tool at least quarterly	Denominator: Number of patients in an outpatient panel of patients 18 years of age or older with ≥ 60 days' supply of opioids within a quarter	Stratifications: Standard
Referral for Nonpharmacologic Therapy **https://www.cdc.gov/drugoverdose/pdf/prescribing/CDC-DUIP-QualityImprovementAndCareCoordination-508.pdf**	Percentage of patients with chronic pain who had at least one referral or visit to nonpharmacologic		
	Numerator: Number of patients who had at least one referral to nonpharmacologic therapy	Denominator: Number of patients in an outpatient panel of patients 18 years of age or older with chronic pain	Stratifications: Standard

Are members who are prescribed opioids at risk?			
Use of Opioids at High Dosage **https://www.ncqa.org/hedis/measures/use-of-opioids-at-high-dosage/**	Percentage of members 18 years and older who received prescription opioids at a high dosage		
	Numerator: Number receiving prescription opioids at high dosage (average morphine equivalent dose [MED] > 120 mg) for ≥ 15 days during the measurement year	Denominator: Members 18 years and older who received prescription opioids during the measurement year	Stratifications: Standard

***Indicates measures that do not have national standardized definitions**

Are members who are prescribed opioids at risk?			
*Opioid Total Days Covered	Average number of days covered by an opioid prescription for members 18 years and older		
	Numerator: Total number of days that all opioids claims covered	Denominator: Members 18 years and older who received prescription opioids during the measurement year	Stratifications: Standard
*Opioid Lag Days Between Rx	Average number of days lapsed between opioid prescriptions for members 18 years and older		
	Numerator: Total number of days passed between the current prescription fill date and the previous prescription's run-out date	Denominator: Members 18 years and older who received prescription opioids during the measurement year	Stratifications: Standard
Use of Opioids from Multiple Providers https://www.ncqa.org/hedis/measures/use-of-opioids-from-multiple-providers/	For members 18 years and older, the percentage receiving prescription opioids for > 15 days during the measurement year who received opioids from multiple prescribers, multiple pharmacies, or multiple providers and pharmacies; three rates are reported		
	Numerator: Number receiving prescription opioids for ≥15 days during the measurement year who received opioids from multiple prescribers, multiple pharmacies, or multiple providers and pharmacies	Denominator: Members 18 years and older	Stratifications: Standard

Are members overdosing on opioids?			
*Opioid Overdose Rescue (Naloxone) Prescriptions	Rate per 1,000 members that have been prescribed an overdose reversal drug (Narcan/Naloxone) among members 18 years and older		
	Numerator: Number prescribed an overdose reversal drug in the measurement year	Denominator: Members 18 years and older	Stratifications: Standard

***Indicates measures that do not have national standardized definitions**

Are members overdosing on opioids?			
*Opioid Overdose/ Poisoning	Rate per 1,000 members of opioid overdose/poisoning among members 18 years and older; two rates are reported		
	Numerator: Number of (1) patients with an opioid overdose/poisoning or (2) total overdoses/ poisonings	Denominator: Members 18 years and older	Stratifications: Standard
*ER Visits due to Overdose	Rate per 1,000 of members that have had a visit to the emergency room (ER) due to overdose/poisoning among members 18 years and older who received prescription opioids		
	Numerator: Number of members who had an ER visit due to an overdose/ poisoning	Denominator: Members 18 years and older who received prescription opioids	Stratifications: Standard
Concurrent Use of Opioids and Benzodiazepines https://www.pqaalliance.org/assets/Measures/PQA%20Opioid%20Core%20Measure%20Set%20Description%202019-02-22.pdf	Percentage of members 18 years and older with concurrent use of prescription opioids and benzodiazepines during the measurement year		
	Numerator: Number with concurrent use of opioids and benzodiazepines for 30 or more cumulative days during the measurement year	Denominator: Members 18 years and older with multiple prescription claims for opioids with unique dates of service, for which the sum of the days' supply is 15 or more days	Stratifications: Standard

Treatment and Recovery

How many members have been diagnosed with a substance use disorder?			
*Substance Use Disorder Diagnosis (Dx)	Rate per 1,000 of members 18 years and older who have been diagnosed with substance use disorder (SUD)		
	Numerator: Number with substance use disorder (SUD) diagnosis	Denominator: Members 18 years and older	Stratifications: Standard
*Opioid Use Disorder Diagnosis (Dx)	Rate per 1,000 of members 18 years and older who have been diagnosed with opioid use disorder (OUD)		
	Numerator: Number with opioid use disorder (OUD) diagnosis	Denominator: Members 18 years and older	Stratifications: Standard

***Indicates measures that do not have national standardized definitions**

How many members have been diagnosed with a substance use disorder?			
***Alcohol Use Disorder Diagnosis (Dx)**	Rate per 1,000 of members 18 years and older who have been diagnosed with alcohol use disorder (AUD)		
	Numerator: Number with alcohol use disorder (AUD) diagnosis	Denominator: Members 18 years and older	Stratifications: Standard

Are members with a substance use disorder getting treatment?			
Identification of Alcohol and Other Drug Services **https://www.ncqa.org/hedis/measures/identification-of-alcohol-and-other-drug-services/**	Number and percentage of members who had a service for alcohol and other drug (AOD) abuse or dependence (i.e., a claim with both a diagnosis of AOD abuse or dependence and a specific AOD-related service) during the measurement year		
	Numerator: Number who had a service for substance abuse or dependence	Denominator: Members 18 years and older with substance abuse or dependence diagnosis during the measurement year	Stratifications: Standard
Use of Pharmacotherapy for Opioid Use Disorder **http://www.qualityforum.org/qps/3400**	Percentage of members ages 18 to 64 with an OUD who filled a prescription for or were administered or ordered an FDA-approved medication for the disorder during the measure year. The measure will report any medications used in medication-assisted treatment of opioid dependence and addiction and four separate rates representing the following types of FDA-approved drug products: buprenorphine; oral naltrexone; long-acting, injectable naltrexone; and methadone.		
	Numerator: Number who filled a prescription for or were administered or ordered an FDA-approved medication for the disorder during the measure year	Denominator: Number of members ages 18 to 64 with at least one encounter with a diagnosis of opioid abuse, dependence, or remission (primary or other) at any time during the measurement year	Stratifications: Standard Additional: • Duration of Use Per Prescription

***Indicates measures that do not have national standardized definitions**

Are members with a substance use disorder getting treatment?			
Counseling on Psychosocial and Pharmacologic Treatment Options for Opioid Addiction https://aspe.hhs.gov/report/review-medication-assisted-treatment-guidelines-and-measures-opioid-and-alcohol-use/e-summary-medication-assisted-treatment-quality-measures	Percentage of patients 18 years and older with a diagnosis of current opioid addiction who were counseled regarding psychosocial and pharmacologic treatment options for opioid addiction with the 12-month reporting period		
	Numerator: Number counseled regarding psychosocial and pharmacologic treatment options for opioid addiction with the 12-month reporting period	Denominator: Members 18 years and older with a diagnosis of current opioid addiction	Stratifications: Standard
Follow-Up After High Intensity Care for Substance Use Disorder https://www.ncqa.org/wp-content/uploads/2019/02/20190208_06_FUI.pdf	Percentage of acute inpatient hospitalizations, residential treatment or detoxification visits for a diagnosis of substance use disorder (SUD) that result in a follow-up visit or service for SUD among members 13 years and older		
	Numerator: Number of acute inpatient hospitalizations, residential treatment or detoxification visits for a diagnosis of SUD that result in a follow-up visit or service for SUD	Denominator: Members 13 years and older with a diagnosis of current opioid addiction	Stratifications: Standard

References

[1]American Psychiatric Publishing (2013, May 18) Diagnostic and Statistical Manual of Mental Disorders: DSM-5

[2]American Society of Addiction Medicine (2013, July) Terminology Related to Addiction, Treatment, and Recovery. Retrieved from https://www.asam.org/docs/default-source/public-policy-statements/1-terminology-atr-7-135f81099472bc604ca5b7ff000030b21a.pdf?sfvrsn=0

[3]Attridge, M., Amaral, T., Bjornson, T., Goplerud, E., Herlihy, P., McPherson, T., Paul R., Routledge, S., Sharar, D., Stephenson, D., & Teems, L. (2009). EAP effectiveness and ROI. EASNA Research Notes, Vol. 1, No. 3. Retrieved from http://www.easnsa.org.

[4]B2B International (2017, January) National Employer Survey Prescription Drugs & The US Workforce [Powerpoint Slides]. Retrieved from https://www.nsc.org/Portals/0/Documents/NewsDocuments/2017/National-Employer-Addiction-Survey-Methodology.pdf?ver=2018-07-05-105114-883

[5]Bureau of Labor Statistics (nd.) Civilian Unemployment Rate. Retrieved from https://www.bls.gov/charts/employment-situation/civilian-unemployment-rate.htm

[6]Centers for Disease Control and Prevention (2016, March 16) Opioid Prescribing. Retrieved from https://www.cdc.gov/features/opiod-prescribing-guide/index.html

[7]Dahlhamer J, Lucas J, Zelaya, C, et al. Prevalence of Chronic Pain and High-Impact Chronic Pain Among Adults — United States, 2016. MMWR Morb Mortal Wkly Rep 2018;67:1001–1006. DOI: http://dx.doi.org/10.15585/mmwr.mm6736a2

[8]Integrated Benefits Institute (2019, April) Opioids, Pain, and Absence: Productivity Implications Among US Workers. Retrieved from https://www.ibiweb.org/opioids-pain-and-absence/

[9]National Safety Council (n.d.) Drugs at Work. Retrieved from https://www.nsc.org/home-safety/safety-topics/other-poisons

[10]National Quality Partners (2018) National Quality Partners Playbook: Opioid Stewardship

[11]Schroeder AR, Dehghan M, Newman TB, Bentley JP, Park KT. (2018, December 3) Association of Opioid Prescriptions From Dental Clinicians for US Adolescents and Young Adults With Subsequent Opioid Use and Abuse. JAMA Intern Med. 2019;179(2):145–152. doi:10.1001/jamainternmed.2018.5419

[12]Society for Human Resource Management (2017, December) 2017 Talent Acquisition Bechmarking Report. https://www.shrm.org/hr-today/trends-and-forecasting/research-and-surveys/Documents/2017-Talent-Acquisition-Benchmarking.pdf

[13]Substance Abuse and Mental Health Services Administration (SAMHSA) (2011, April 1) Screening, Brief Intervention, and Referral to Treatment (SBIRT) in Behavioral Healthcare, https://www.samhsa.gov/sites/default/files/sbitwhitepaper_0.pdf.

[14]Substance Abuse and Mental Health Services Administration (2019, January 1) Recovery and Recovery Support. Retrieved from https://www.samhsa.gov/find-help/recovery

[15]Substance Abuse and Mental Health Services Administration (2016, March 7) Common Comorbidities. Retrieved from https://www.samhsa.gov/medication-assisted-treatment/treatment/common-comorbidities

[16]Substance Abuse and Mental Health Services Administration. (2017, November) Words Matter: How Language Choice Can Reduce Stigma. Retrieved from https://www.samhsa.gov/capt/sites/default/files/resources/sud-stigma-tool.pdf

[17]Syda K, Zhou J., Rowan S., McGregor, J, Perez R, Evans C, Gellad W, Calip G., (2020, February 3) Overprescribing of Opioids to Adults by Dentists in the U.S, 2011-2015. American Journal of Preventative Medicine. 2020;58:473-486. https://doi.org/10.1016/j.amepre.2019.11.006

[18]United States Surgeon General (n.d) Surgeon General's Advisory on Naloxone and Opioid Overdose. Retireved from https://www.surgeongeneral.gov/priorities/opioid-overdose-prevention/naloxone-advisory.html

[19]U.S. Department of Health and Human Services (HHS), Office of the Surgeon General. (2016, November) Facing Addiction in America: The Surgeon General's Report on Alcohol, Drugs, and Health. Washington, DC: HHS.

[20]U.S Department of Health and Human Services. Substance and Mental Health Services Administration. (2018) Tip 63: Medications for Opioid Use Disorder. HHS Publication No. (SA) 18-5063FULLDOC

[21]U.S. Department of Health and Human Services (2019, May). Pain Management Best Practices Inter-Agency Task Force Report: Up¬dates, Gaps, Inconsistencies, and Recommendations. Retrieved from U. S. Department of Health and Human Services website: https://www.hhs.gov/ash/advisory-committees/pain/reports/index.html

[22]Wide-ranging online data for epidemiologic research (WONDER). Atlanta, GA: CDC, National Center for Health Statistics; 2017

[23]White House Council of Economic Advisors (2017, November) The Underestimated Cost of the Opioid Crisis. Retrieved from https://www.whitehouse.gov/sites/whitehouse.gov/files/images/The%20Underestimated%20Cost%20of%20the%20Opioid%20Crisis.pdf