Agenda

1. Introductions
2. Risks and compliance considerations
3. Fact based approach
4. Network analysis example
5. Benchmarking example
6. Questions and answers/discussion
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Introductions

About Sandhi
Sandhi is a fan of David Bowie and the Manager of Risk Management Analytics at SCAN Health Plan, in that order.

He received his B.A. in Sociology from the University of California at Riverside in 2008 and is a Certified Scrum Master (CSM).

His passion for data has allowed him to understand and leverage technology in new and innovative ways. For the last 8 years he has applied this knowledge to develop digital risk solutions to help identify and manage risk using machine learning and artificial intelligence techniques. This includes detecting Fraud, Waste and Abuse, Compliance, and Operational risks.
About Fran
Fran Grabowski
Director, Digital Risk Solutions
#TeamPwC
AIDS/LifeCycle Global Captain
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Fran has 16 years of experience focusing on developing effective data analytics to identify relevant organizational risks, operational inefficiencies, and data integrity issues. He helps healthcare organizations leverage data to address risks related to regulatory compliance, complex processes, and sensitive personal health information. Fran assists clients in building the people, process, and technology capabilities to support analytics-based decision-making, automation, and data governance strategies.

Fran’s primary focus is on Rx Analytics, including operational and compliance monitoring capabilities for controlled substances, drug diversion, and 340B. Fran is a member of ISACA and is a Certified Information Systems Auditor (CISA).

Fran is the Global Captain of #TeamPwC for AIDS/LifeCycle, which over the past four years has raised over $1.2 million towards HIV/AIDS related services, advocacy and research.

About Ben
Ben Wright
Director
Healthcare Compliance
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benjamin.w.wright@pwc.com

Ben is a director with PwC’s Healthcare Compliance practice. He has over 9 years of experience in healthcare compliance to include being a Compliance and Privacy Officer, successfully managing a Corporate Integrity Agreement, and remediating compliance risks for a variety of organizations facing significant regulatory and brand risk. His experience includes working with payers, providers, PBMs, pharmacy, and medical technology organizations.
Evolving risk - Scrutiny expanding to payers and providers

Yesterday's challenges
1. Provider overprescribing
2. Member drug seekers “Doctor Shopping”
3. Diversion

Today's news
1. Increasing state PDMP requirements
2. CMS & state prescribing limits
3. Increasing criminal & civil actions
4. Proposed opioid production reduction
5. More dangerous elicit supply (fentanyl)

Lack of, or ineffective
- Visibility into processes and across systems
- Comprehensive policies, guidelines, & controls
- Comprehensive care (mental + physical)
- Training and education

Is being compounded by new risks
- PDMP data used for investigations
- Increased attention on payers and providers
- Drug diversion costs & potential shortages
- Legal/settlement costs
The Multi-pronged enforcement approach

Setting the stage

• August 2017 – President Trump declares opioid crisis a national emergency, allowing additional resources to states and federal agencies.

• October 2017 – Acting HHS Secretary Eric D. Hargan declares the opioid crisis a public health emergency, implements “Five-Point Strategy”


• Enforcement is only one prong of a nationwide multi-pronged approach, and enforcement itself consists of multiple prongs – administrative actions, civil actions, and criminal actions, each of which can proceed in parallel

Approach

- **Administrative actions** – Drug Enforcement Agency revocations of registration and immediate suspension orders

- **Civil actions** – Civil claims under the CSA or the False Claims Act, state law claims brought by state Attorneys General or others

- **Criminal actions** – State Attorneys General, the DOJ, and U.S. Attorneys have stepped up criminal actions against entities and individuals for opioid-related offenses

- **Parallel proceedings** – Administrative, Civil, and Criminal actions may proceed simultaneously

Examples of criminal cases charging doctors with death - Resulting sentencing enhancement

In March 2019, a Kansas doctor was sentenced to life in prison for conspiracy to distribute prescription drugs outside the course of medical practice; unlawfully prescribing opioids and other medications; obstruction; and money laundering

In April 2019, a New York doctor was indicted on 19 counts of distributing oxycodone, fentanyl, and other controlled substances to a particular patient, including one count for distributing fentanyl that caused the patient’s death

In May 2019, a Virginia doctor was convicted at trial of 861 federal drug charges: one count of maintaining a place for the purpose of illegal distributing controlled substances, one count of possession with intent to distribute controlled substances, and 859 counts of illegal prescribing Schedule II controlled substances, including opioids that caused a patient’s death

Regulators taking action

How are you preparing for this new, emboldened enforcement strategy?

The Department of Health & Human Services is beginning to hold accountable those parties engaging in illegal prescribing practices by better investigating fraud and through regulatory changes in the guidelines that govern opioid distribution.

The Centers for Medicare & Medicaid Services is also sharpening its focus on the issue by pressuring its Part D sponsors to better manage drug overutilization within their plans and by proposing new limits for opioid prescriptions.
Not just a “clinical issue” for your contracted providers

**Clinical**
- Identification of provider training opportunities
- Tailored treatment plans to address opioid naïve, chronic, and other at risk populations
- Expanded requirements for Drug Screenings
- New ways and places to engage at risk members and communities

**Financial**
- Increased cost of Fraud, Waste, and Abuse schemes
- Increased long term cost of care for those with Substance Use Disorder
- Increased funds for treatment
- Growing number of lawsuits over negligent prescribing practices and diversion oversight is growing

**Compliance, Regulatory**
- Federal Controlled Substance Act, the False Claims Act, and specific State reporting/PDMP requirements
- DEA/DOJ has hired new federal prosecutors who focus exclusively on providers and pharmacies who improperly prescribe/distribute opioids and other controlled substances
- Increased scrutiny on FWA programs

**Brand Impact**
- Increased investigation and publicity of diversion activities, over-prescribing, and access to comprehensive care

18.7M pills diverted from healthcare organizations in 2018

Source: Protenus, DRUG DIVERSION DIGEST: 2018 SIX MONTH RETROSPECTIVE; June 2018.

What’s **my role** in our controlled substances strategy?

- **Chief Information Officer**
- **Chief Medical Officer**
- **Chief Financial Officer**
- **Internal Auditor**
- **Compliance Officer**
Controlled substance prescribing & diversion considerations

Assess the policies, standards, processes, procedures, and controls related to prescribing and diversion

- FWA analytics & monitoring capabilities
- Changing standards of care; clinical guidelines
- Provider and Pharmacy authorizations, limits, and overrides
- Internal documents referencing opioids
- Mental health / trauma screening
- Opioid alternatives
- Informed consent
- Formulary management
- Identification of high-risk co-prescriptions
- Pain contracts / controlled substance agreements
- Medication assisted treatment
- Opioid prescription volume, strength, and frequency above Federal and State guidelines and/or above provider/member cohorts
- Provider compliance over utilization of State PDMPs
- Training & education
- Notification to regulatory bodies, such as States or the U.S. Drug Enforcement Administration, as necessary

Are we measuring and mitigating risks effectively?
Do we know all the regulations and are we compliant?
Are we putting our clinicians in a position to better identify, treat, and prevent Substance Use Disorder and Overdose?
Are we leveraging all of our data assets to prevent and identify FWA and drug diversion?

Leverage facts to drive productive conversations

- Identify trends and outliers among cohorts
- Identify provider’s that require commendation, monitoring, education, and investigation
- Identify members at risk for Substance Use Disorder and/or overdose for provider outreach, education, treatment
- Monitor compliance
- Measure impact of policy/guidelines changes and initiatives

Controlled substance financial impacts

Assess the financial impact of controlled substances

Direct & Indirect Cost Impact
- Benchmark costs of top MDCs, DRGs, and ICD-10 Codes with and without the presence of Opioid
- Identify potential cost savings of addressing opioid related member encounters
- Analyse potentially avoidable hospital admissions and ED visits
- Leverage new programs / innovations to reduce costs (i.e. Project Engage at Christiana Care Health System; Alternative to Opioids Program (“ALTO”) at St. Joseph’s Health)
- Diversion schemes

$66\%$
of opioid-abuse related members relied on public health insurance (33% Medicare, 33% Medicaid)

$\sim$1.9B
is the low estimate of annual hospital costs attributable to members who with an opioid overdose between Oct. 2017 and Oct. 2018

$40\%$
of overdose members admitted have organ failure

$\$11,731$
is the average hospital cost for a overdose member admitted and treated

Expanded coverage and requirements
- Understand potential revenue opportunities related to H.R.6:
- Mandatory Medicare Opioid Screenings
- Expansion of Medicare coverage, the number of members seen by a physician (100), and the number of practitioners eligible to prescribe buprenorphine
- The 100% bundled payment for newly eligible treatments significantly increases coverage for MAT treatment and promotes treatment expansion in the covered categories.
- New grant incentives ($10M for each of FY 2019 - 2023) for hospitals and other entities to develop robust opioid overdose member protocols.
- HHS to award grants to establish or operate comprehensive opioid recovery centers.

How are we lowering costs of care? How will new laws impact our members?
**Fact based approach**

### Fundamentals: Definitions and measures

Most of the following can be used in reference to both members and providers.

<table>
<thead>
<tr>
<th>Prescriptions</th>
<th>Co-prescription(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Active prescription/order</td>
<td>Two or more active prescriptions for a member at any point in time, such as multiple opioids or opioids and other high risk drugs</td>
</tr>
<tr>
<td>Days supply</td>
<td>Opioid rate</td>
</tr>
<tr>
<td>Dispense amount divided by maximum prescribed amount of the medication used in 1 day</td>
<td>% of total Prescriptions that are Opioids</td>
</tr>
<tr>
<td>Morphine equivalent dose</td>
<td>Morphine equivalent daily dose</td>
</tr>
<tr>
<td>The period between when the drug was prescribed, and when it runs out based on suggested dosage</td>
<td>The period between when the drug was prescribed, and when it runs out based on suggested dosage</td>
</tr>
<tr>
<td>Opioid naive</td>
<td>Controlled substance/pain agreement</td>
</tr>
<tr>
<td>No opiates prescribed within previous 60 days.</td>
<td><strong>Agreement</strong> between a member and their provider to help ensure members understand their role and responsibilities regarding their treatment (e.g., how to obtain refills, conditions of medication use), the conditions under which their treatment may be terminated, and the responsibilities of the healthcare provider.</td>
</tr>
<tr>
<td>Chronic opioid</td>
<td>Medication assisted treatment</td>
</tr>
<tr>
<td>&gt;=60 Days Supply within past 90 days</td>
<td><strong>Use of FDA-approved medications to treat opioid addiction.</strong> Coupled with counselling, MAT treats the whole person and significantly reduces the rate of relapse. Medi-Cal, Medicare, and many private insurance plans cover MAT.</td>
</tr>
<tr>
<td>High dose chronic</td>
<td></td>
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<tr>
<td>&gt;=60 Days Supply of &gt;=90 MED within past 90 days</td>
<td></td>
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</tbody>
</table>
Drug utilization within the longitudinal health record

Are we looking at the full picture when assessing risk?

We can look for these...

- 50 MME/DAY (aka MEDD)
- Opioid + Benzo

Days

<table>
<thead>
<tr>
<th>Days</th>
<th>Opioid + Benzo</th>
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</table>

Prescription 1: Hydrocodone 5mg - up to 4 per day = 20 MME

Oxycodone 10mg XR - 2 per day = 30 MME

Alprazolam 25mg - 3-4 times daily

But risk isn’t limited to the specific days of co-prescription! Broaden your view!

Key metrics to monitor and the questions they answer

The following are example analytics, however a tailored approach by cohort should be considered

<table>
<thead>
<tr>
<th>Measure/metric</th>
<th>Description</th>
<th>Value/questions to Ask</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of members with active opioids</td>
<td>Members with active opioid prescriptions</td>
<td>How do providers and locations compare to their peers?</td>
</tr>
<tr>
<td>% of members over MEDD threshold</td>
<td>Threshold applied to the sum of the Morphine Equivalent Daily Dose for all of a member’s active prescriptions. Calculated for each day</td>
<td>Regulators have set various thresholds with which providers must comply in regards to treatment and reporting activities. Are providers compliant? How do providers, locations, and members compare to their peers?</td>
</tr>
<tr>
<td>% of chronic members</td>
<td>Members who have an active opioid prescription for six weeks or longer</td>
<td>How do providers and locations compare to their peers? How do providers, locations, and members compare to their peers? Are there alternative treatments or actions that can be taken to reduce these members’ reliance on opioids?</td>
</tr>
<tr>
<td>% of native members</td>
<td>Members who haven’t had an active opioid prescription for ninety days</td>
<td>How do providers, locations, and members compare to their peers? Are there actions, such as education opportunities, that can be taken to help prevent long-term reliance?</td>
</tr>
<tr>
<td>% of co-prescribed members</td>
<td>Members that are prescribed an opioid and at least one other high-risk drug such as Barbiturates, Benzodiazepines, Carisoprodols, Gabapentinoids, Sedative Hypnotics, or Stimulants</td>
<td>There are clinical risks to certain drug combinations and some combinations are popular among the addicted. How do providers, locations, and members compare to their peers? Are there alternative treatments or actions that can be taken to reduce potential harm by the co-prescribed drugs?</td>
</tr>
<tr>
<td>% of member cohort still active</td>
<td>Naive members that receive their opioid prescription around the same time, and for similar medical necessities, should have a similar reduction of MEDD over time</td>
<td>Do we see the expected trend? How do providers, locations, and members compare to their peers?</td>
</tr>
<tr>
<td>% of members with pain contracts</td>
<td>Members that are required to sign a Controlled-substance Agreement with their provider</td>
<td>Regulations and organizations have various requirements for contracts between the member and their provider surrounding controlled substances. Are providers compliant? Are members compliant?</td>
</tr>
<tr>
<td># of providers and locations per member</td>
<td>Distinct providers and locations per member over a specified time period</td>
<td>Members with drug-seeking behaviors often visit multiple providers and locations. While data is limited to just one system’s data, there are still opportunities to identify outliers. How do members compare to their peers?</td>
</tr>
</tbody>
</table>
Example data analytics project approach

1. Extract & integrate disparate data in secure repository
2. Validate & profile data
3. Develop hypothesis, models, measures/KPIs
4. Test hypothesis, analyze models, monitor KPIs

- Formularies
- Encounters & claims data
- Authorizations & limits
- Office of Pharmacy Affairs (OPA) registry & database, CMS Medicaid exclusion file, etc
- Longitudinal health record

- Compliance effectiveness
- Doctor shopping
- Diversion
- FWA
- Cost of care
- Data integrity
- Benchmarking
- Prescribing patterns
- Pain agreements
- Risk scores
- Safety
- Cost of care
- Outliers

Network Analysis Example

4

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About SCAN Health Plan

- Non-profit Medicare Advantage organization serving California
- SCAN serves approximately 200,000 members, largely in the Southern California region
- *Keeping Seniors Healthy & Independent*

Fraud scheme background

- In early 2017, members reported receiving *unwanted* Lidocaine ointments by mail.
- Scheme started hitting the industry in 2015, but had not yet affected SCAN at scale.

**OVER THE COUNTER**

- Lidocaine 5% average AWP of about $355 per prescription in 2017.

**PRESCRIPTION**

- Diclofenac Sodium has an AWP of about $1,100 per prescription in 2017.

**EXTRA CREAMS**

\[ \text{extra creams} \]
Anomaly identified by trend analysis

What are the chances?

One member would be served by many pharmacies?

Every member got the same high quality?

Dozens of members go to the same pharmacy outside California?

Several pharmacies shared the same address?
Cracking the case

Data Prep and Blending

Analysis

Output to HTML

Investigation - Network Analysis

- Analysed full population of members
- Identified members with high quantity of prescriptions
- Assessed pharmacies for % of members with high-quantify fills
- Relationships and weighting considerations key to analysis

○ PHARMACY
○ MEMBER
Investigation - Network Analysis

- Red “X” indicates a pharmacy that we were able to take action against, typically as termination from our network.

Impact

Financial
- Helped to “stop the bleeding.”
- 2 year projected potential cost avoidance in the millions.

Business:
- Demonstrated issue to business partners
- Clearly visualized normal behavior versus abnormal behavior
- Prioritized resources and investigations
- Identified more pharmacies with similar practices
Medicare Part D opioid analysis

- Analysis developed from data published by CMS to give health plans and systems their first look at how their providers’ prescribing patterns compare to their peers

- The data is limited in that it only includes providers that prescribed drugs paid for by the Medicare Part D program between 2013 and 2017

- While this does not provide you the complete picture of prescribing practices or drug utilization, it does provide a unique, and first of its kind, peer comparison* not available within your own data

*PwC has exercised reasonable care in the collecting, processing, and reporting of this information but has not independently verified, validated, or audited the data to verify the accuracy or completeness of the information. PwC gives no express or implied warranties, including but not limited to any warranties of merchantability or fitness for a particular purpose or use and shall not be liable to any entity or person using this document, or have any liability with respect to this document. This information is for general purposes only, and is not a substitute for consultation with professional advisors.

Data sources

Provider Affiliations Source
For Provider Systems: Compiled by Definitive Healthcare from the Centers for Medicare and Medicaid Services (CMS) Provider Utilization and Payment Data: Physician and Other Supplier Public Use File (PUF).

For Health Plans: Health Plan Provided Data

Opioid data source
The Centers for Medicare & Medicaid Services (CMS) has prepared a public data set, the Medicare Part D Opioid Prescriber Summary File, which presents information on the individual opioid prescribing rates of health providers that participate in Medicare Part D program. This file is a prescriber-level data set that provides data on the number and percentage of prescription claims (includes new prescriptions and refills) for opioid drugs, and contains information on each provider’s name, specialty, state, and ZIP code. This summary file was derived from the 2017 Part D Prescriber Summary Table.

Medicare Part D opioid analysis - Key measures

- **Opioid rate**: Percentage of prescriptions made by a provider and reimbursed by Medicare that are opioids. Drop down on upper right corner allows you to view this measure for "All opioids" or "Long Acting Opioids."

- **Opioid days supply**: The average days supply of the opioid prescriptions ordered by a provider.

- **Opioid volume**: Count of opioid claims. Combine with above measures to assess risk. For example, if a provider’s opioid rate is high, but they prescribed a low volume of opioids, their risk level is low.

- **Member opioid rate**: Percentage of Medicare beneficiaries that receive prescriptions from a provider that were prescribed an opioid.

Opioid prescribing rate analysis

- **Count of Primary and Secondary Affiliations**
- **Outlier analysis that compares provider opioid rates to plan/system peers within their specialty; Size indicates volume of opioid claims**
- **Overall health plan/system measures**
- **Distribution of provider opioid rates by the number of standard deviations away from their specialty's national average; i.e. Red = >3**
- **Opioid Rate comparison between healthcare plan/system and national average by specialty**
- **Color indicates the number of standard deviations away from their specialty’s national average**
- **Left: Opioid Claim Count colored by a variable measure of your choice. Right: Individual provider opioid rates compared with national average for their specialty; descending sort by opioid claim count**

Hover over circles (primary affiliations) and boxes (secondary affiliations) to view detailed provider information.
Opioid days supply analysis

- Distribution of provider opioid average day supply by the number of standard deviations away from their specialty’s national average. I.e. Red = >3
- Average day supply comparison between healthcare plan/system and national average by specialty (system, specialty, and provider level)
- Use drop down to view measures for different opioid types: All/Long Lasting

Outlier analysis that compares provider opioid average day supply to plan/system peers within their specialty. Size indicates volume of opioid claims.

Hover over circles (primary affiliations) and boxes (secondary affiliations) to view detailed provider information.

Overall health system measures.

Color indicates the number of standard deviations away from their specialty’s national average.

Left: Opioid Claim Count colored by a variable measure of your choice. Right: Individual provider average day supply compared with national average for their specialty; descending sort by opioid claim volume.

5 year trend analysis & provider mapping

- Average opioid rate trends from 2013 - 2017; Red is national and blue is the health plan/system
- Average days supply trends from 2013 - 2017; Red is national and blue is the health plan/system

Educate

Rates vs Days provides a full picture

Recognize

Monitor

Investigate
Thank you