Drug Misuse Exploration

003 Team Exploratory
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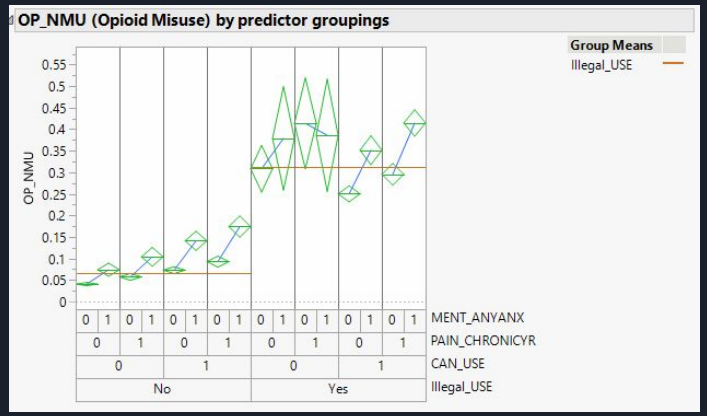
Problem Statement

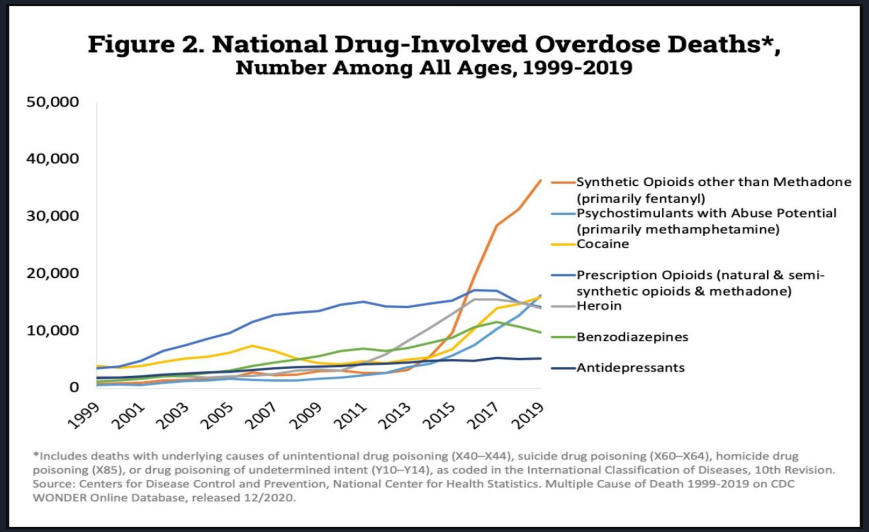
Patients with a history of *illegal drug use*, *chronic pain*, *anxiety*, *tobacco use*, and *cannabis use* are more likely to misuse prescribed medication.



Variability Summary for OP_NMU

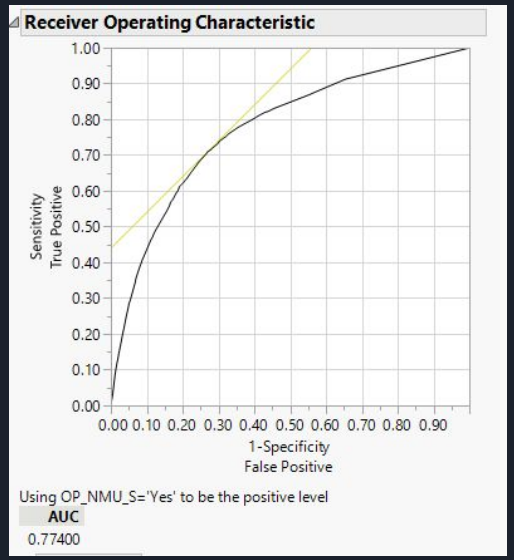
	Mean	Std Dev	Observations
OP_NMU	0.111104	0.314266	29873
Illegal_USE[No]	0.064957	0.246455	24293
Illegal_USE[Yes]	0.312007	0.463354	5580

The mean jumps 5x for opioid misuse if have used illicit drugs.



Approximately 12k people die each year in the U.S. from prescribed opioids alone, according to CDC graph (above).

Predicting Future Misuse



Parameter Estimates

Term	Estimate	Std Error	ChiSquare	Prob>ChiSq
Intercept	1.41350251	0.0395218	1279.1	<.0001*
Illegal_USE[No]	0.67934596	0.0233395	847.22	<.0001*
CAN_USE[0]	0.16481463	0.0245915	44.92	<.0001*
PAIN_CHRONICYR[0]	0.13015619	0.020739	39.39	<.0001*
MENT_ANYANX[0]	0.26901635	0.0237361	128.45	<.0001*
TOBACCO_FREQ[Don't know]	0.12121738	0.0793437	2.33	0.1266
TOBACCO_FREQ[Everyday]	-0.1817144	0.0414859	19.19	<.0001*
TOBACCO_FREQ[Not at all]	0.58686063	0.0367199	255.43	<.0001*
MENT_DEP[0]	-0.0142221	0.0326904	0.19	0.6635

When running a logistic model, we found the following predictors to be significant when determining future prescribed drug misuse.

- History of illegal drug use
- Cannabis use
- Chronic Pain
- Mental Anxiety
- Tobacco use

Recommendations:

- Alternative medication to prescribe for chronic pain or those suffering from anxiety
- Observing those prescribed opioids for trends in misuse