

# VETERANS HEALTH ADMINISTRATION

## Examining Trends in Telehealth Prescriptions of Controlled Substances within the VA: Modalities, Medications, Patient/Provider Relationships

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# Disclosures

## Funding/Disclosures

- Funding: Operations project through the Office of Connected Care
- We have no financial disclosures
- Views are our own and do not represent the policy or position of the Department of Veteran Affairs or US government



# Teams

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- VA Office of Connected Care
  - Kevin Galpin, MD
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## CONNECTED CARE

Expanding Veterans access to care through virtual technologies.

# POLL QUESTION #1

- What is your primary role in the VA?
  - Student, trainee, or fellow
  - Clinician/Prescriber
  - Researcher
  - Administrator, manager or policy-maker
  - Other



## POLL QUESTION #2

- How familiar are you with telehealth modalities within the VA? Specifically, telephone, CVT, and/or VVC?
  - Very familiar
  - Somewhat familiar
  - Not familiar
  - Familiar with telehealth, but other modality



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# AGENDA

- Background
  - Telehealth, controlled substances, regulations
  - Grant specific aims we are addressing
  - VA operations data
- Motivating questions
  - De-abstracting questions into queryable formats
- Methodology
  - Constructing datasets
- Results
  - Answering motivating questions



# Background



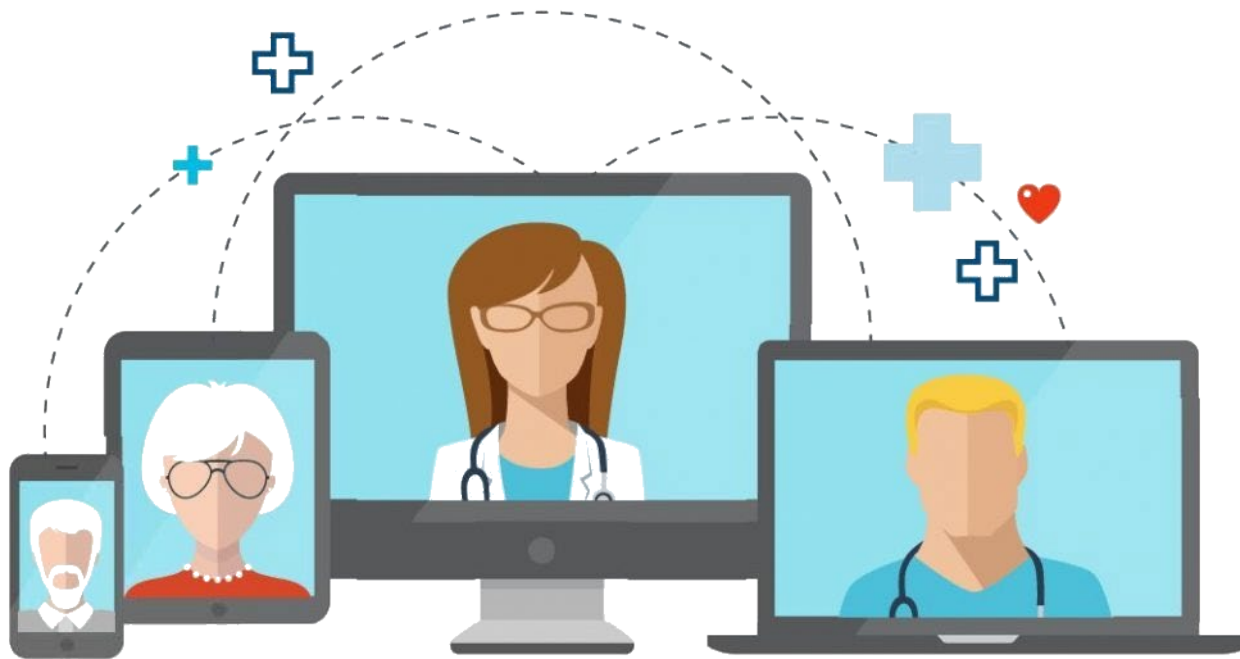
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# Telehealth



The office of connected care (OCC) is innovating the way VHA patients are able to access care outside of the traditional hospital environment and advocating for legislation in the controlled substance (CS) and telehealth (TH) space. Our goal is to organize the data so we can help quantify and clarify the trends in CS prescribing via TH encounters.



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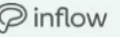
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# Controlled Substances

- Controlled substances regulations
  - e.g., X-waiver
- In 2018, DEA-registered practitioners exempt from initial in-person examinations when using telehealth to treat an opioid use disorder
- Public Health Emergency in 2020 allowed prescribing of controlled substances via telehealth after telehealth assessment

## USA Drug schedules



Comparison Chart

SCHEDULE	Medical use?	Potential for abuse	Potential for addiction	Examples
Schedule I				Ecstasy, methaqualone, peyote, heroin, LSD, cannabis
Schedule II				<b>Adderall</b> , Vicodin, cocaine, fentanyl, <b>Ritalin</b> , <b>Dexedrine</b> , oxycodone, methamphetamine, methadone, <b>Vyvanse</b> , hydromorphone, <b>Concerta</b> , meperidine
Schedule III				ketamine, Tylenol with codeine, anabolic steroids, testosterone
Schedule IV				Xanax, Soma, Ambien, Tramadol, Valium, Ativan, Darvocet, Darvon, Talwin
Schedule V				Robitussin AC, Lomotil, Motofen, Lyrica, Parepectolin

has medical uses, but is strictly regulated  
 moderate risk for abuse/addiction schedule I according to federal USA regulations; however, it is legal in many states  
 high risk for abuse/addiction mild or no risk for abuse/addiction

Source: [www.DEA.gov](http://www.DEA.gov)



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# Telehealth Modalities

- Telehealth modalities include synchronous, asynchronous and remote patient monitoring/home telehealth.
- This study focused on telephone, CVT, and VVC.
  - Telephone
    - Audio-only connection
  - Clinical Video Telehealth (CVT)
    - Uses video conferencing technology to conveniently, securely, and quickly provide Veterans with access to health care services from remote facilities.
  - VA Video Connect (VVC)
    - VA mobile app connecting patients and provider via live video



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# Collaboration with the OCC

- Telehealth is new → Federal policies are changing
- Regulations around prescribing need to be responsive to new information.
  - But what is the new information and how do we get it?



# Project Specific Aims

- SA1.** To examine the perspectives of VHA prescribers on the quality of care and safety of CS prescribing, including opioids for pain and MOUD, currently and if changes are implemented to more easily allow cross-state and other policies related to prescribing of CS.
- SA2.** To examine the perspectives of Veterans on the quality of care and safety of CS prescribing of opioids for pain and MOUD, currently and if changes are implemented to cross-state and other policies related to prescribing of CS.
- SA3.** To conduct a narrative review examining the evidence-based practices and policy approaches to CS prescribing via telehealth that maximize access to care and minimize risks.
- SA4.** To describe the total number and types of F2F, TH, and/or CC encounters involving CS prescriptions within VHA-paid care. We will examine variation by region (e.g., geographical region, VISN) to understand potential impacts if changes are implemented to cross-state and other policies related to prescribing of CS. In addition, through this SA we will establish a typology of CS (e.g., classes of CS) through which we can conduct further evaluations including SA5 which can establish different quality, safety, and outcomes based on different typologies of CS.
- SA5.** To begin an evaluation (e.g., database selection, variable operationalization, preliminary computations) to compare the quality, safety, and outcomes of CS through F2F, TH, and/or CC encounters, and identify factors (e.g., patient characteristics, provider characteristics, use of risk mitigation strategies) associated with observed differences in quality, safety, and/or clinical outcomes associated with CS modalities. It is reasonable in FY2023 that outcomes (quality, safety, adverse events) will be established for each CS typology established in SA4.
- SA6.** To establish a rapid, expert evaluation team to track Veterans and process outcomes associated with future modifications of VA or federal policy.



# Motivating Questions



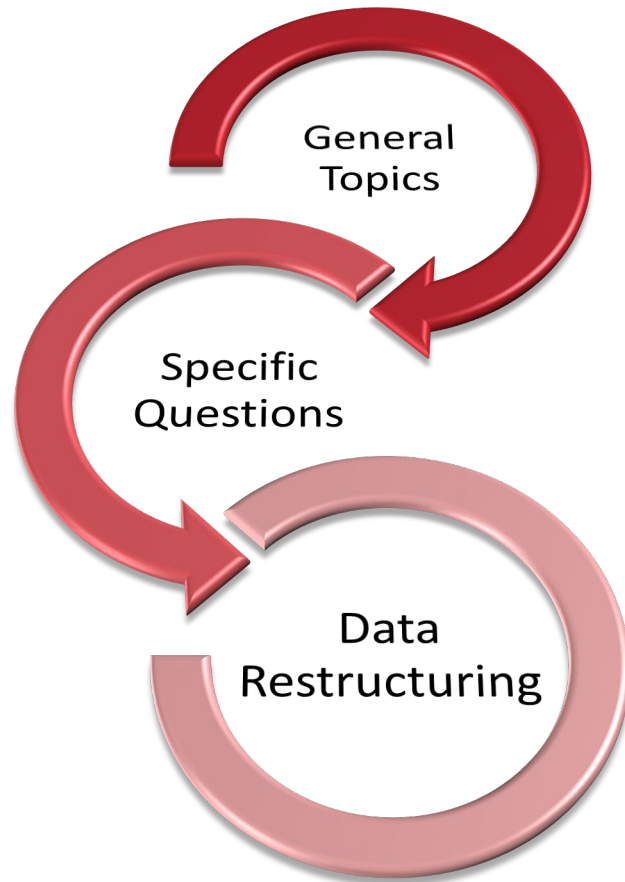
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# Iterative Project Development



- Databases designed to facilitate query turn around time
- Common types of questions used to inform data structure

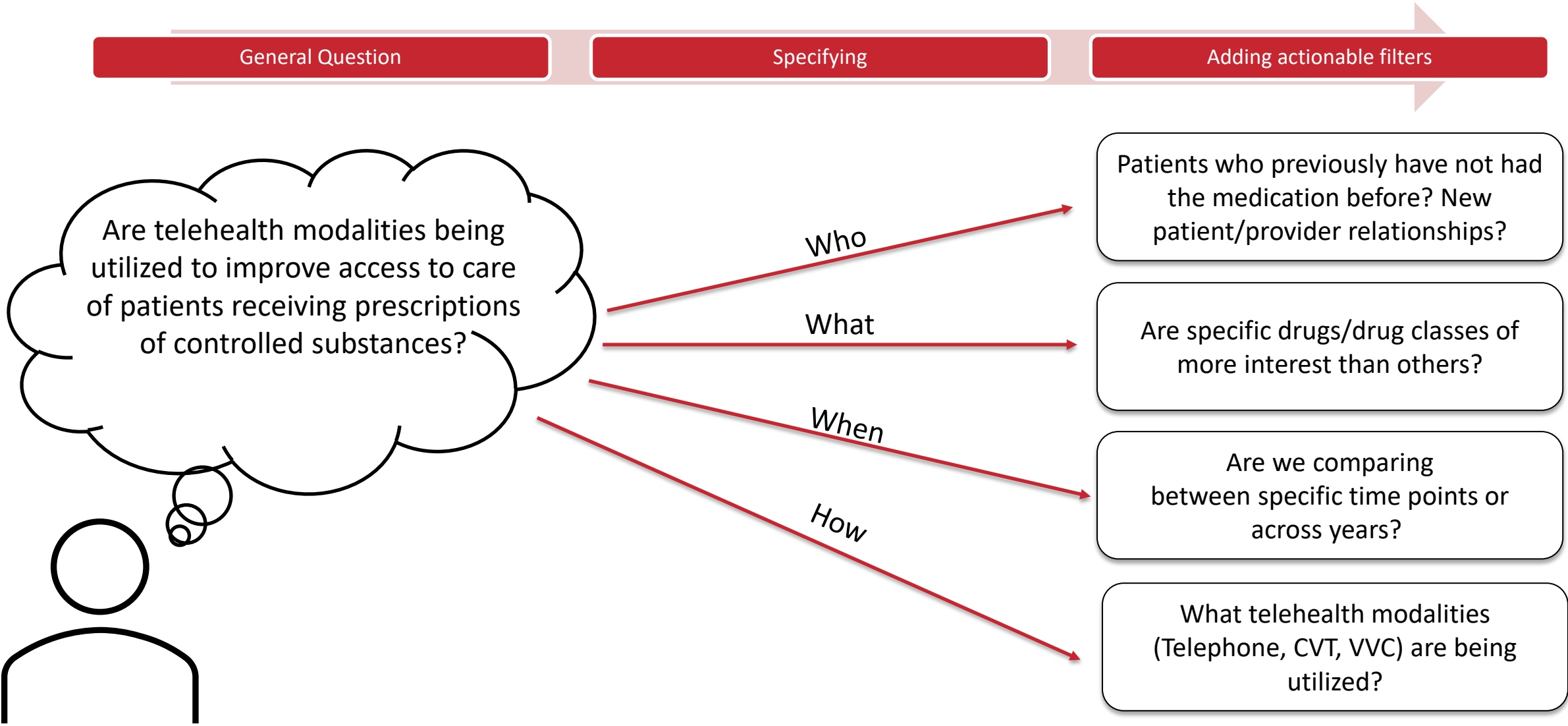


# Motivating Questions

- 2 central questions:
  - What telehealth modalities are being utilized and at what rate?
  - What are the characteristics of new patient/provider relationships beginning over TH with a CS prescribed?
- Many secondary questions:
  - Which controlled substances are prescribed the most through telehealth?
  - Does the type of relationship between patient/provider affect the modalities or substances being prescribed?
  - What aspects of a prescription can we use to categorize the relationship between a patient and provider?
  - Do trends change over time?



# De-Abstracting Questions





# Questions

Common types of questions could be deconstructed into 3 groups



## Prescription

- What medications are being prescribed?
- What class of drug is being prescribed?
- What modality of telehealth is being utilized?



## Patient/Provider

- Are relationships that begin over telehealth continuing?
- If so, do they continue over telehealth and/or in-person?



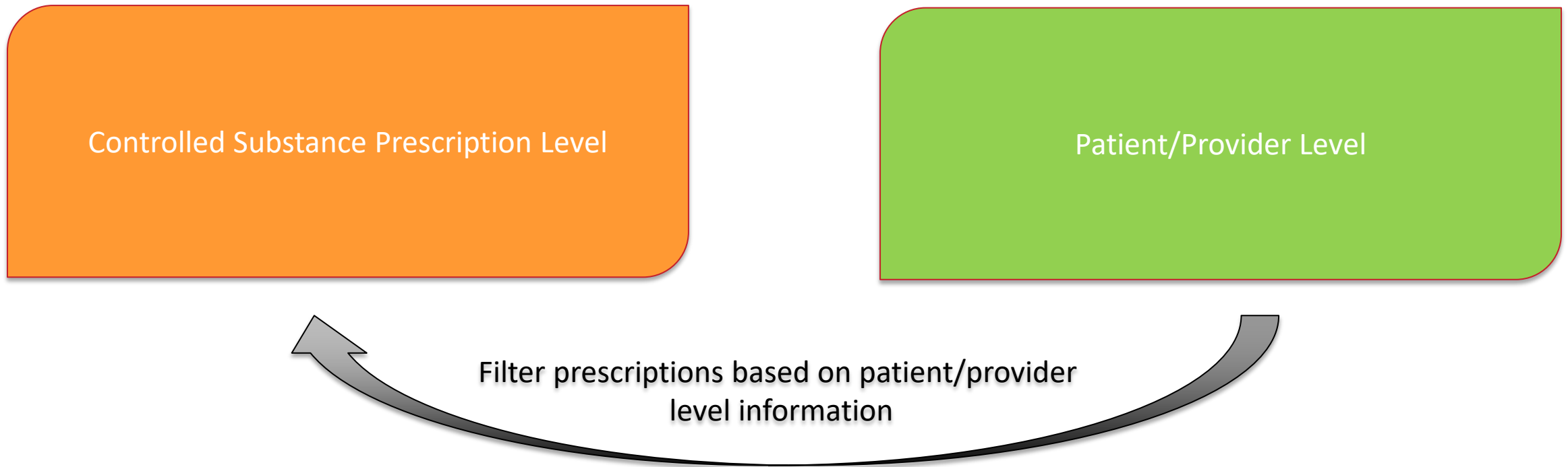
## Trends

- Differences by time
- Differences by subgroup
- Differences by patient/provider relationship type



# Databases

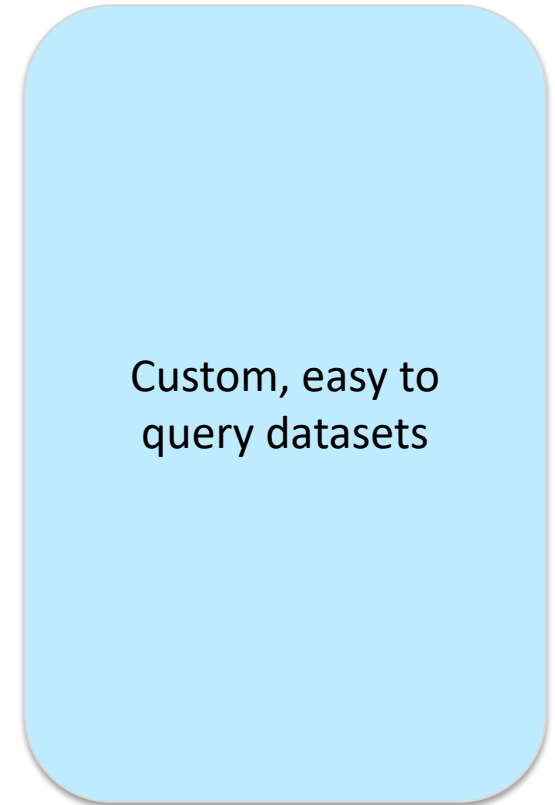
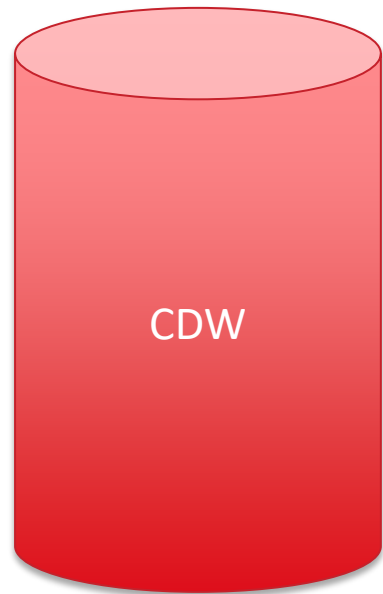
Based on the iterative design process, we decided to focus on producing 2 datasets that could be used alone or in conjunction to answer the major question groups.



# Methodology



# VA Data



# Dataset 1: Rx Level

**Goal:** Construct a dataset that can be queried to answer questions about specific controlled substance prescriptions

- Step 1: Identify all instances of a controlled substance being prescribed between FY 2014-2023
- Step 2: Stratify between TH (and TH modalities) and non-TH
- Step 3: Identify medication information (refill/original, mail/window, drug category, dosing, etc.)

## Major Flags

- Telehealth identifier
  - Primary and Secondary stopcodes
- Telehealth modality
  - Primary and Secondary stopcodes
- Drug class
  - PDMP drug classifications



# Dataset 2: Patient/Provider Level

**Goal:** Construct a dataset that can be queried to answer questions about characteristics of patient/provider relationships

- Step 1: Identify all outpatient encounters from 1/1/2000 to 9/30/2023 from the cohort of patients who have received a TH prescription of a CS (dataset 1)
- Step 2: Identify all unique patient provider relationships and date of first meeting
- Step 3: Stratify between TH (and modality) and non-TH
- Step 4: Identify total number of encounters between patients/providers (in all settings and in TH)



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# Dataset 3: Rx & Patient/Provider Level

**Goal:** Combine datasets 1 & 2 to answer questions about new patient/provider relationships

- Step 1: Merge datasets 1 & 2 on patient and provider
- Step 2: Identify TH CS prescription dates that matched first encounter date between patients/providers
  - These are new relationships starting with a CS prescribed via TH
- Step 3: Describe patient/provider relationships



# Dataset 3: Rx & Patient/Provider Level

## Major Flags

- First interaction over TH where CS was prescribed
- Longevity of relationship and proportion of TH encounters



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# Results



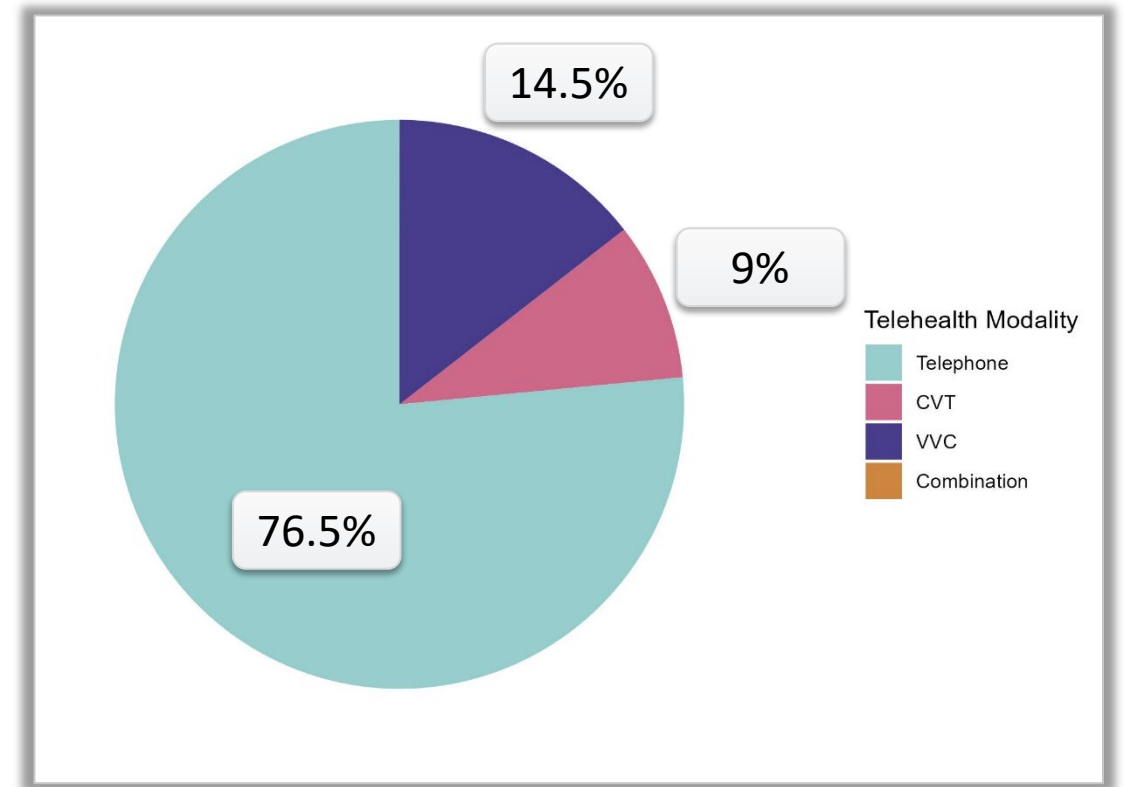
# Dataset 1: Rx Level

## Cohort

18,394,867 controlled substances prescribed over telehealth between FY 2014-2023

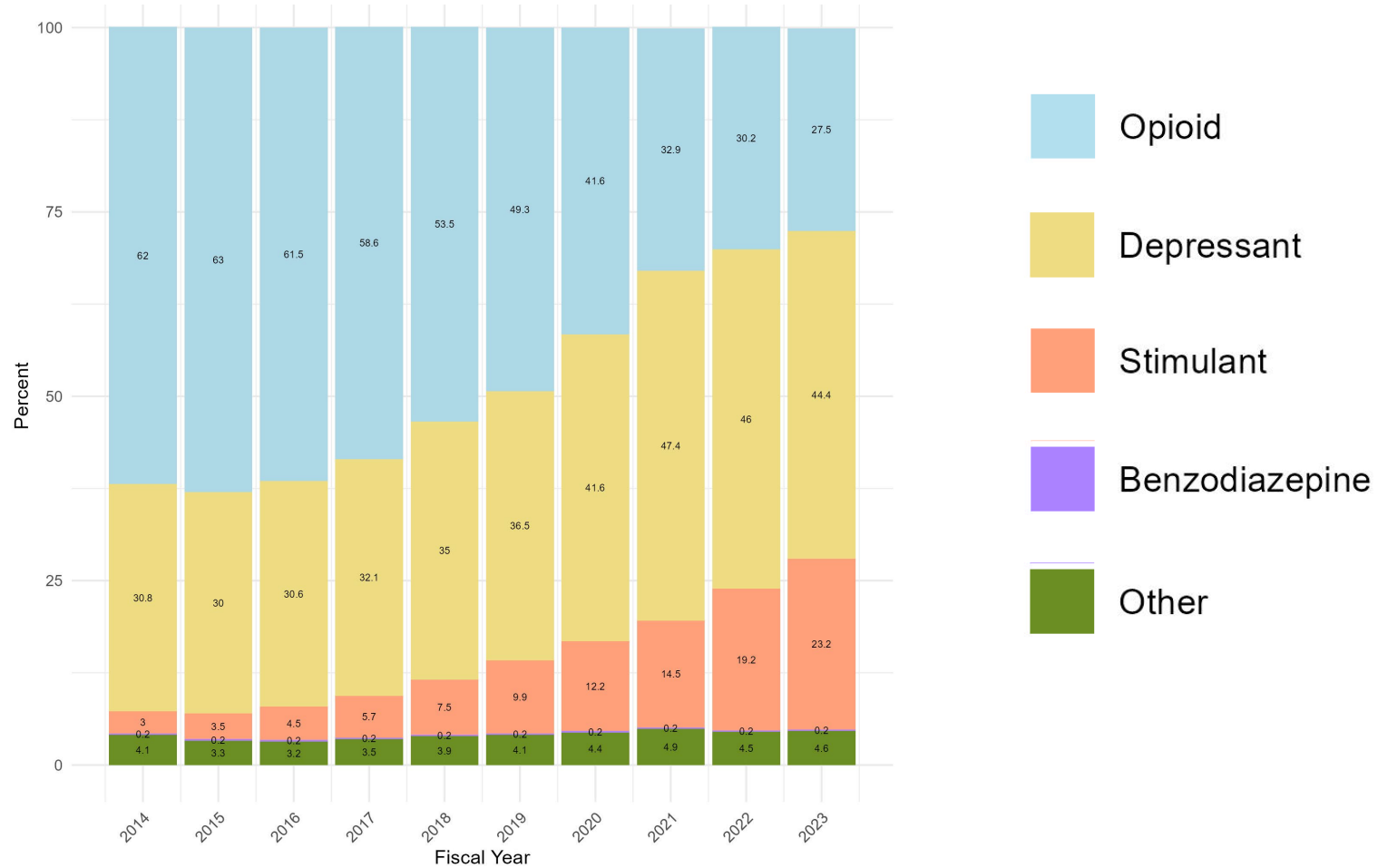
Modality	N	%
Telephone	14,075,858	76.5
VVC	2,660,936	14.5
CVT	1,656,970	9
Combination	1,103	<0.1

Whole Cohort



# Dataset 1: Rx Level

## Drug Categories Over Time – FY 2014-2023



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# Dataset 1: Rx Level

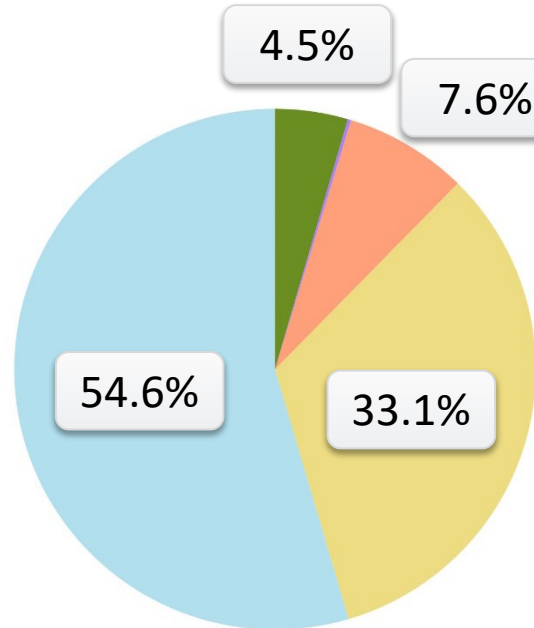
Top Controlled Substances Prescribed via Telehealth (N=18,394,867)			
Drug Name	n	%	cumulative %
ACETAMINOPHEN/HYDROCODONE TAB	2,942,272	16.0	16.0
ZOLPIDEM TAB	1,840,601	10.0	26.0
TRAMADOL TAB	1,649,146	9.0	35.0
CLONAZEPAM TAB	1,341,205	7.3	42.3
PREGABALIN CAP,ORAL	1,063,437	5.8	48.0
OXYCODONE TAB	844,524	4.6	52.6
LORAZEPAM TAB	839,179	4.6	57.2
ALPRAZOLAM TAB	809,216	4.4	61.6
MORPHINE TAB,SA	724,784	3.9	65.5
ACETAMINOPHEN/OXYCODONE TAB	718,364	3.9	69.4
AMPHETAMINE RESIN COMPLEX CAP,SA	554,803	3.0	72.5
AMPHETAMINE/DEXTROAMPHETAMINE TAB	466,244	2.5	75.0
DIAZEPAM TAB	426,641	2.3	77.3
TEMAZEPAM CAP,ORAL	416,503	2.3	79.6
BUPRENORPHINE/NALOXONE TAB,SUBLINGUAL	392,738	2.1	81.7
TESTOSTERONE INJ,SOLN	385,309	2.1	83.8
METHYLPHENIDATE TAB,SA	247,370	1.3	85.1
TESTOSTERONE GEL, TOP	245,586	1.3	86.5
METHYLPHENIDATE TAB	239,381	1.3	87.8
METHADONE TAB	234,157	1.3	89.1



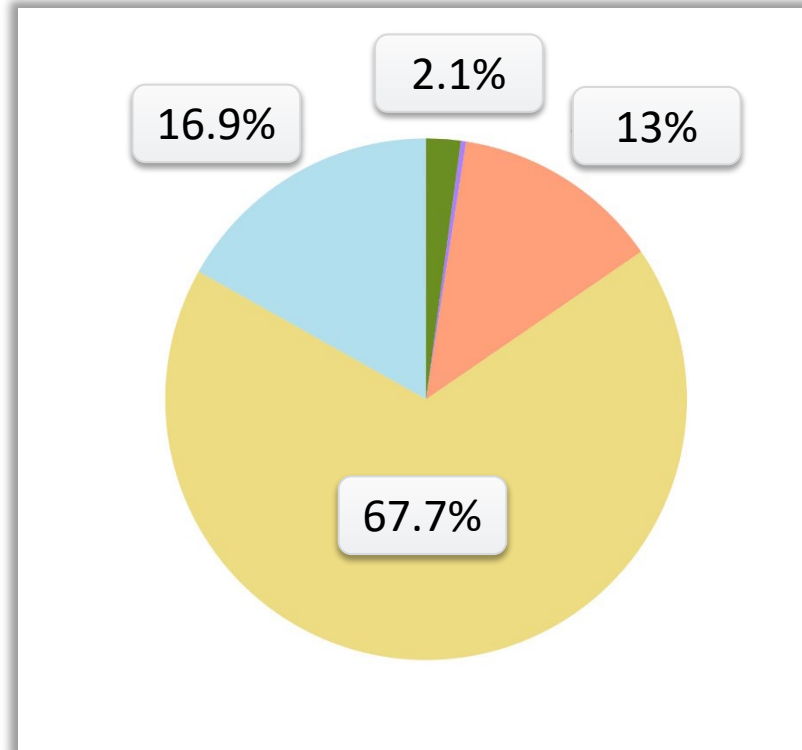
# Dataset 1: Rx Level

## Drug Categories by Modality

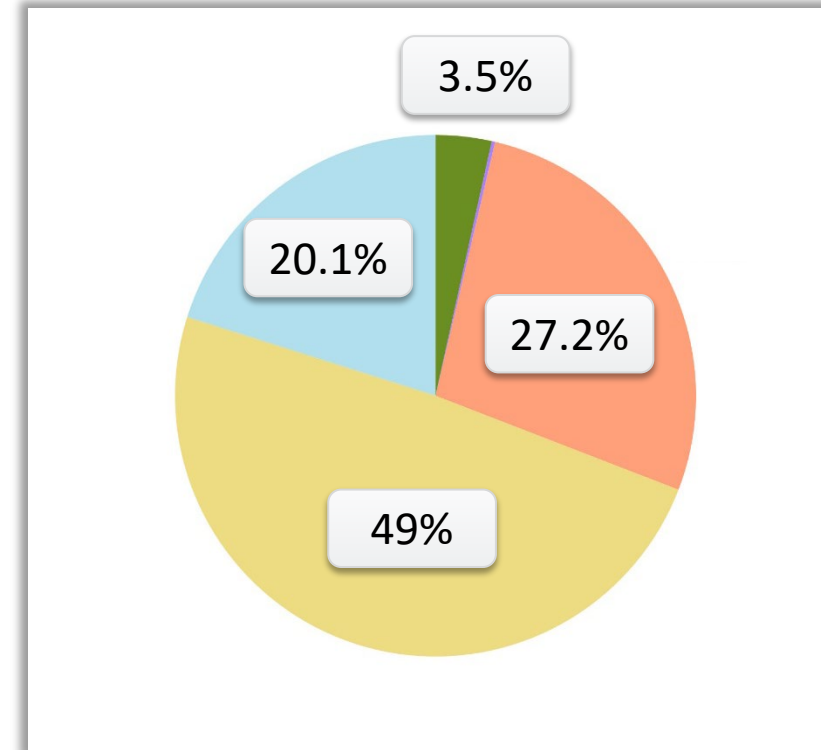
Telephone



CVT



VVC



# Dataset 2: Patient/Provider Level

## Cohort

- 15,206,660 patient/provider relationships where at least 1 CS was prescribed
  - Of these, there were 2,974,669 (19.6%) patient/provider relationships where at least 1 CS was prescription over TH
- Definition: Telehealth Interaction
  - A telehealth appointment during which at least 1 controlled substance was prescribed

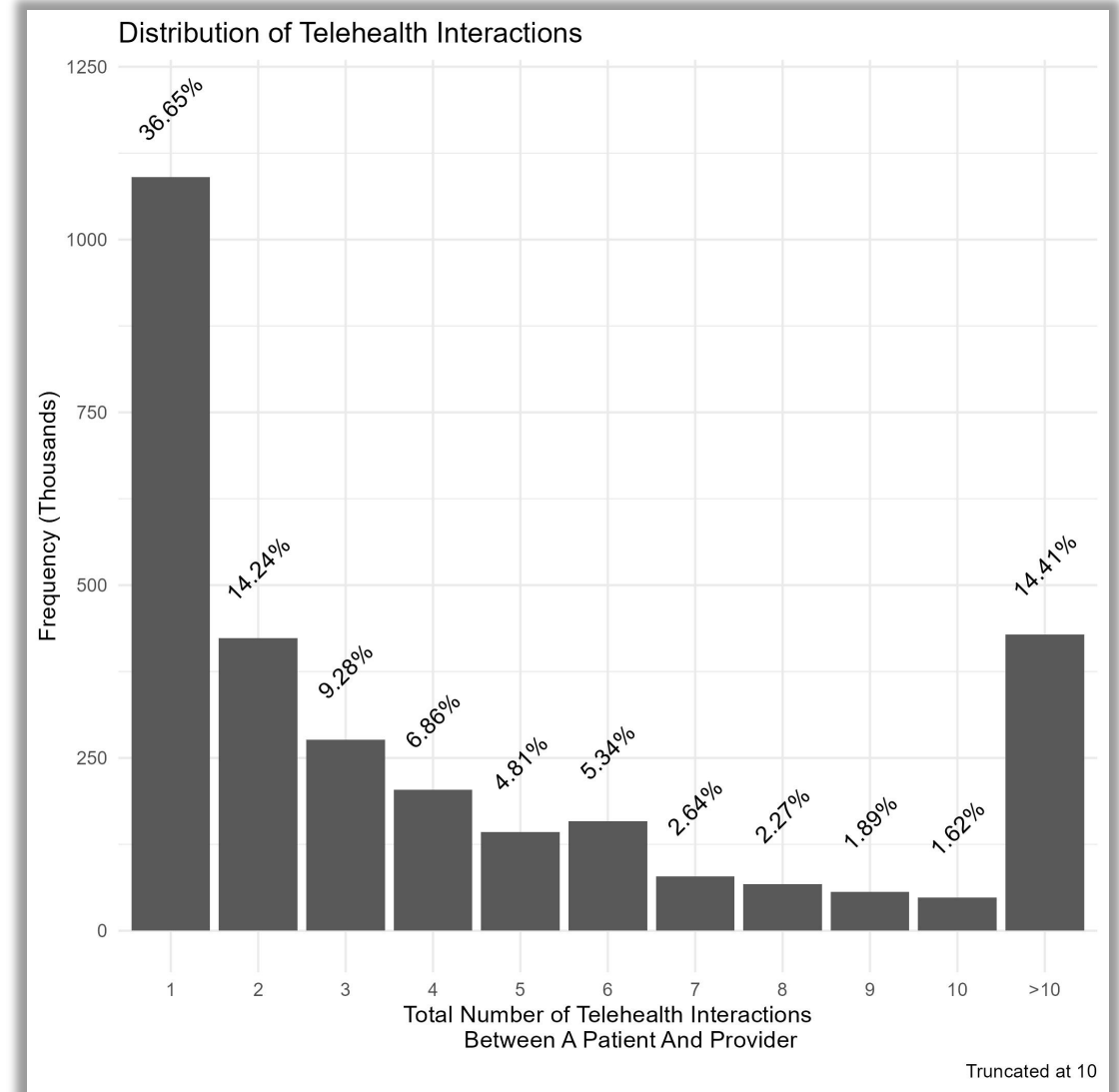


# Dataset 2: Patient/Provider Level

## Frequency of Telehealth Interactions

Among those who had at least 1 TH interaction, how common were additional TH interactions?

- A plurality of people have only 1 telehealth interaction with any given provider



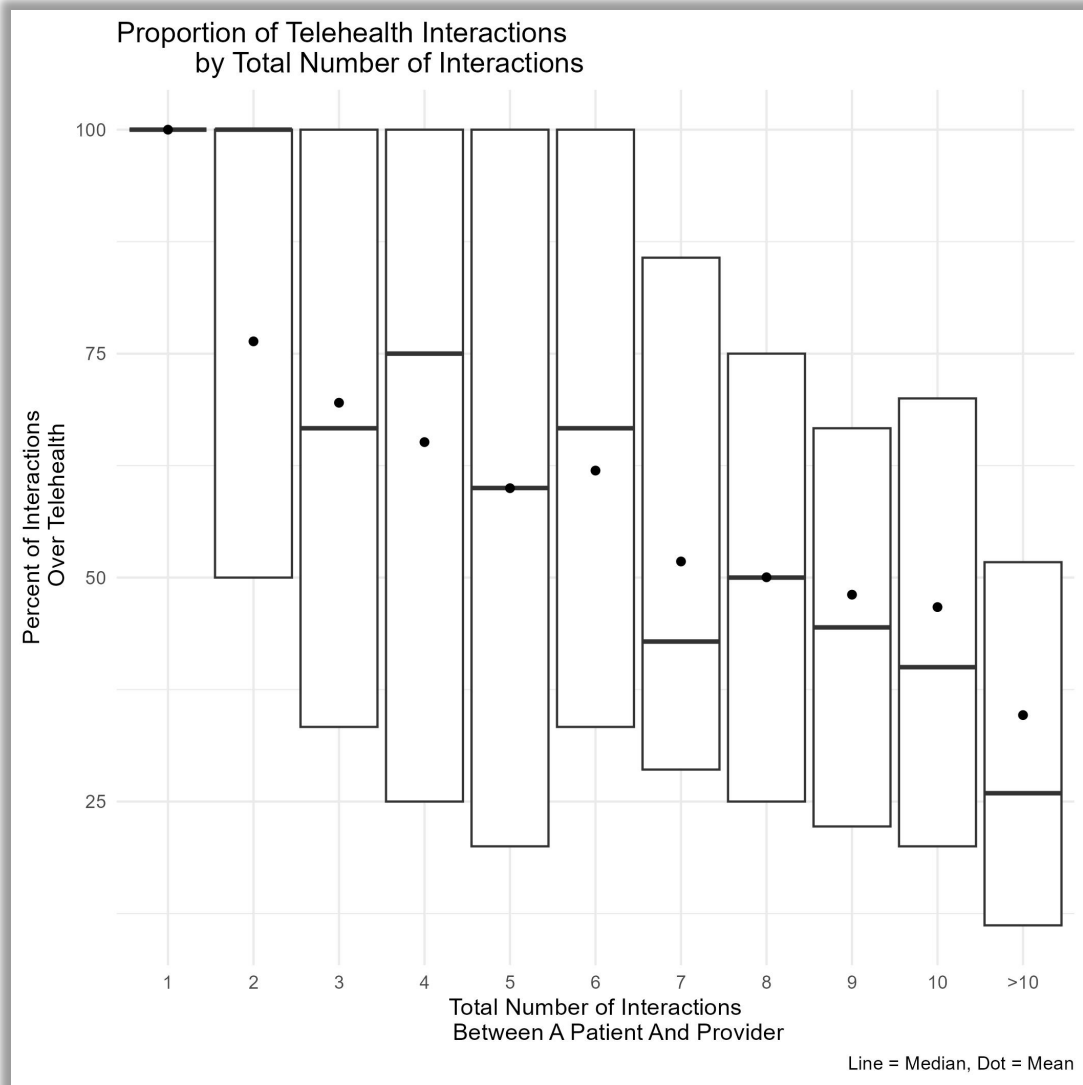


# Dataset 2: Patient/Provider Level

## Distribution of TH Interactions Compared to non-TH Interactions

Among those who had at least 1 telehealth interaction:

- As the number of interactions increased, the proportion of telehealth interactions compared to in-person interactions decreases.



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# Dataset 2 & 3: Patient/Provider Level

## Classifying Types of Relationships

Name	Description	N
TH Relationship	At least 1 controlled substance was prescribed over telehealth during the study period	2,974,669
New Relationship	A controlled substance was prescribed over telehealth during the first interaction between the patient and provider (i.e., No prior in-person encounters occurred)	1,972,233
Single-Instance Relationship	The patient and provider only had one interaction during which a controlled substance was prescribed, and the interaction occurred via telehealth	449,637 (22.3%)



## Examining New Relationships

Of all new relationships beginning over TH (N=1,972,233)

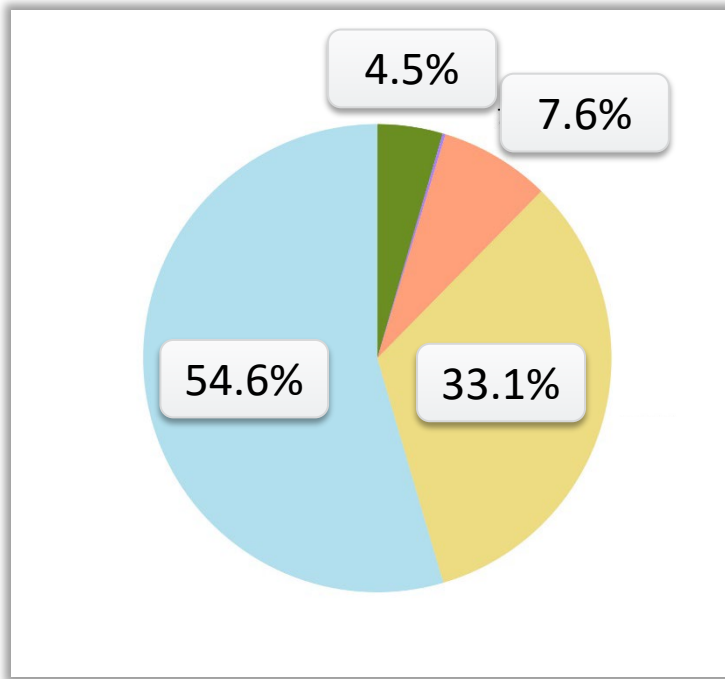
- 2,095,692 CS prescribed for an average of 1.06 prescriptions per first interaction
- Mean # of visits between patient and provider = 13.9
- Mean # of TH visits between patient and provider = 5.3
- 783,200 (39.7%) only had 1 TH visit
- 449,637 (21.5%) only had 1 total visit (single interaction)



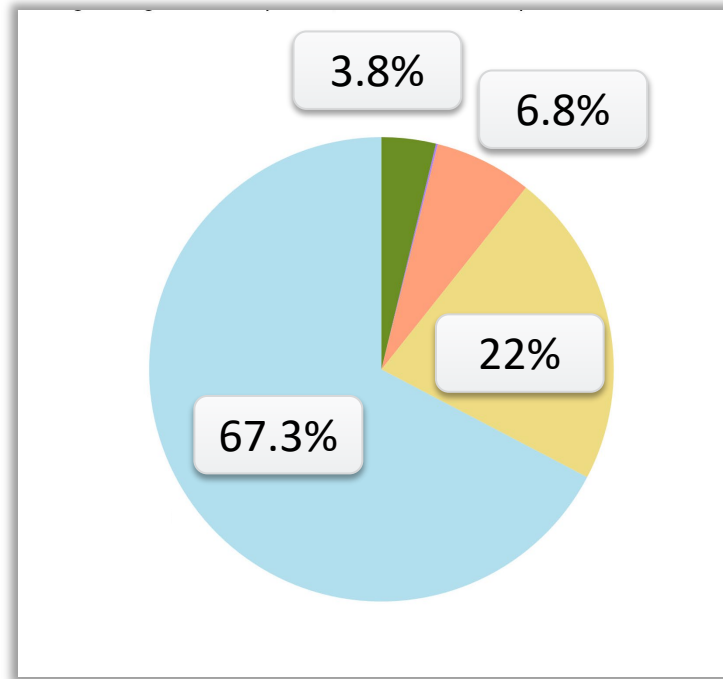
# Using Datasets 1 and 2

## Characterizing Substances Prescribed During An Interaction by Relationship Longevity and Telehealth Modality: Telephone Rx

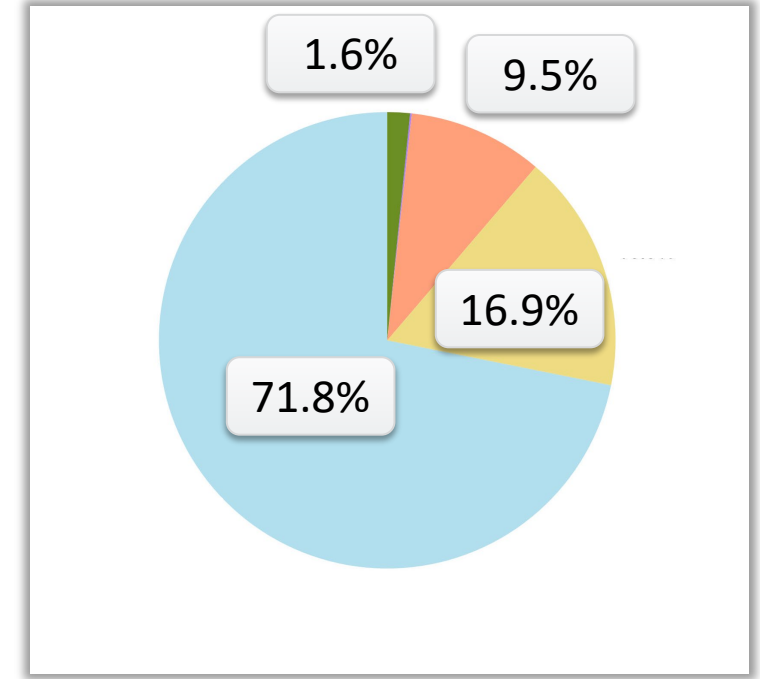
TH Relationships



New Relationships



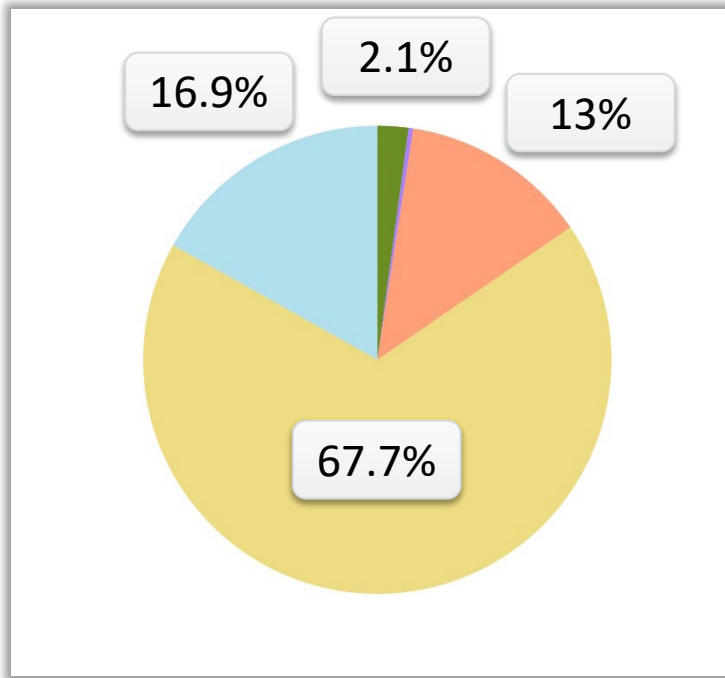
Single-Instance Relationships



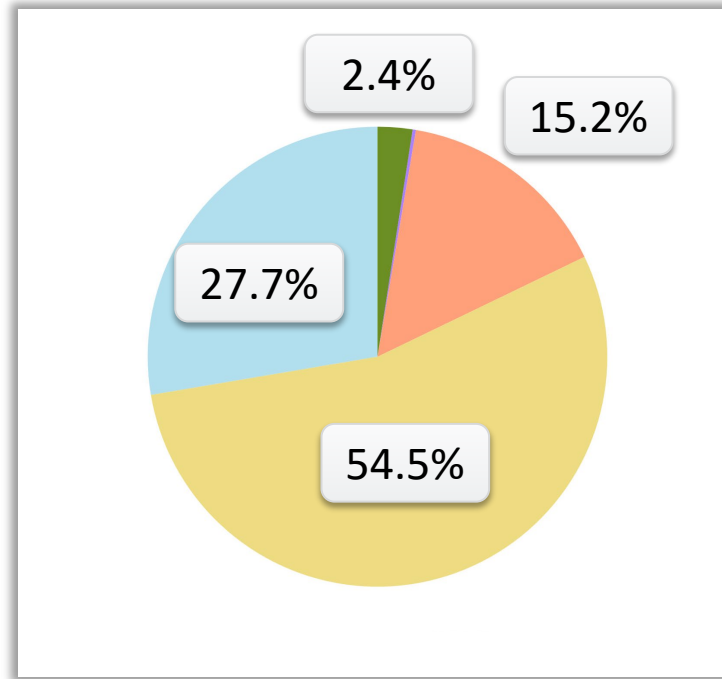
# Using Datasets 1 and 2

## Characterizing Substances Prescribed During An Interaction by Relationship Longevity and Telehealth Modality: CVT Rx

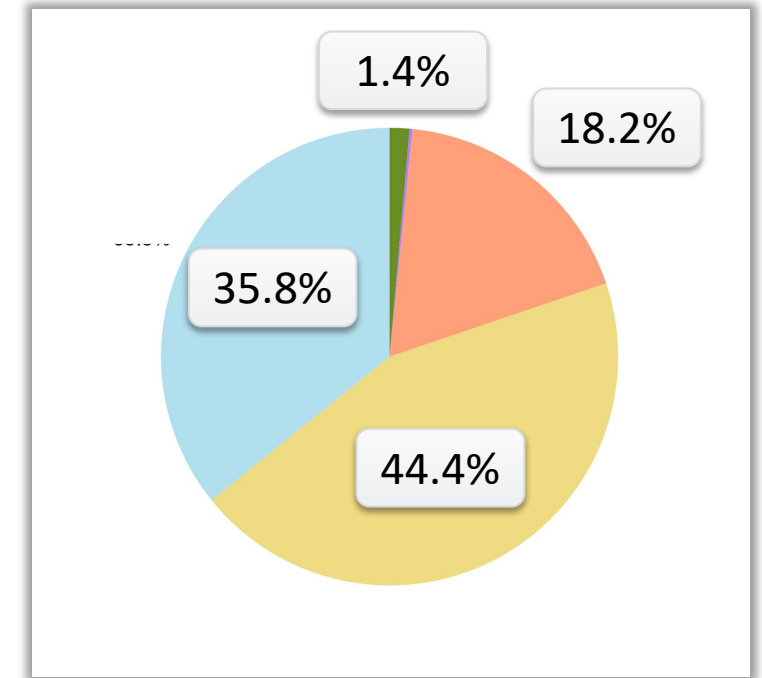
TH Relationships



New Relationships



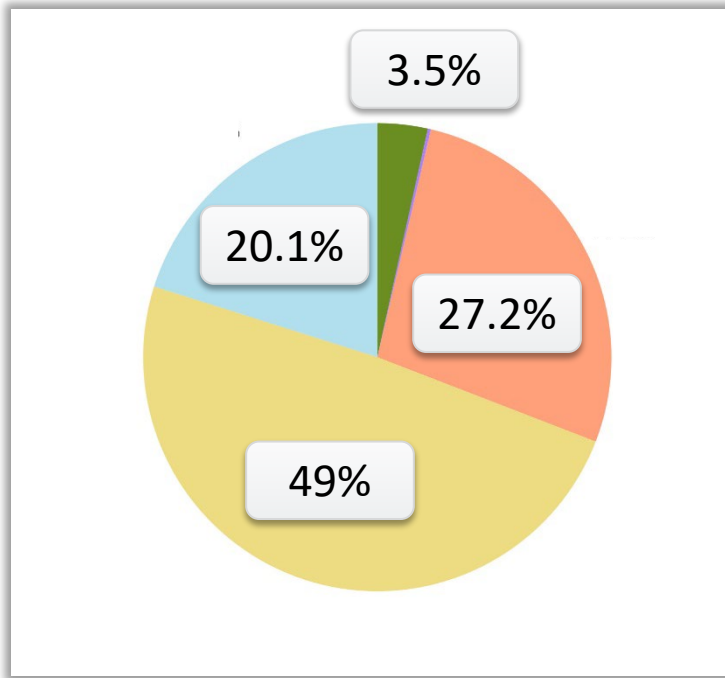
Single-Instance Relationships



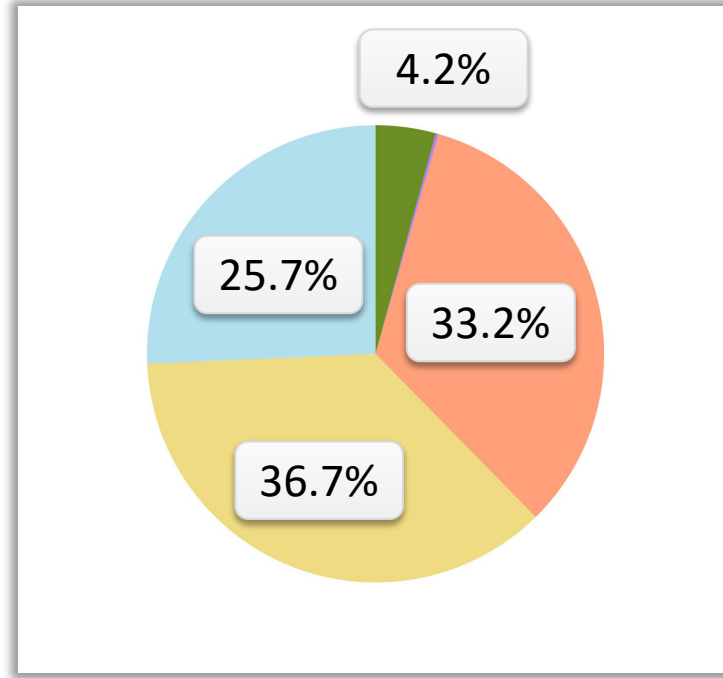
# Using Datasets 1 and 2

## Characterizing Substances Prescribed During An Interaction by Relationship Longevity and Telehealth Modality: VVC Rx

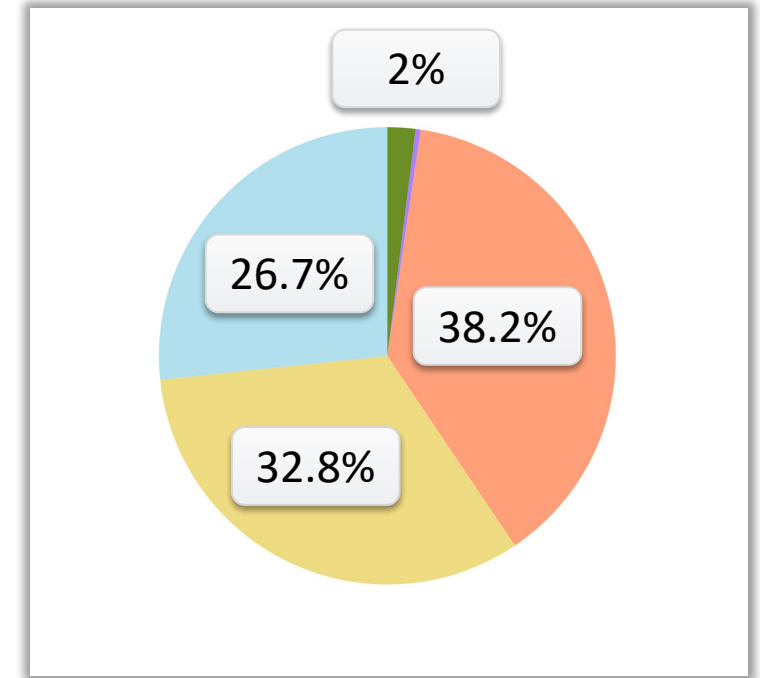
TH Relationships



New Relationships



Single-Instance Relationships



# Motivating Questions: Future Directions

- Can we determine whether a prescriber is providing covering care to a patient based on their interaction history?
  - What telehealth modalities are covering providers using to prescribe controlled substances?
  - What are the typical patient characteristics/medical history when a covering provider would prescribe medication?
  - Are the types of substances that a covering physician typically prescribes the same as a non-covering physician?
  - Are single-instance relationships where an opioid was prescribed after surgery, inpatient stays, ED visits, or during hospice care?
- Can we construct more variables to categorize patient/provider relationships based on geographical area, healthcare system, or provider type?



# Discussion/Questions



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