



Provider Webinar

Medication Related Risk in the IDD Population

June 14, 2023



- Welcome
- Medication Risks for the IDD Population
 - An overview of PHP's clinical pharmacy program
- Comprehensive Medication Therapy Reviews (CMTRs)
 - What is a CMTR and how it is used
- Clinical Pharmacy program outcomes
- Questions

- PHP is a Non- Traditional Managed Care Plan founded by provider agencies for people with intellectual and developmental disabilities (I/DD).
 - As the only IDD specific Managed Care Organization in the nation we have access to claims data specific to the IDD population which allows for in-depth analysis of issues & risks for the IDD population
- Under PHP's Model of Care we introduced a Clinical Pharmacy program. The following information will provide an overview of the outcomes from this program.
- The data will demonstrate the benefit of a clinical pharmacy program and highlight some areas of concern related medication risks within the population.



Adverse Drug Events



- What is an Adverse Drug Event/Reaction?
 - According to Bates et Al. – *“An Adverse Drug Event (ADE) or Adverse Drug Reaction (ADR) can be defined as an injury or illness resulting from a medical intervention related to a drug”*
- United States national statistics estimate that Adverse Drug Events account for somewhere in the range of 4.2% to 30% of hospital admissions annually.
- According to national estimates, ADE’s cost the US health system is approximately \$30 Billion per year
- There have been numerous studies that show that up to 90% of all ADE’s are avoidable



ADE/ADR Risks for the IDD Population



- Studies related to the risks of Adverse Medication Events specifically for those with Intellectual and Developmental Disabilities (IDD) are scarce in the medical research community.
- However, according to the available data we see that the risk of an ADE/ADR for a person with IDD is almost **double** that of their counterpart (same age, sex) without IDD (Leendertse et Al, 2008).
 - According to Weiss et Al (2018) the Risk factors ADE/ADR for persons with IDD are increased due to a variety of reasons, including:
 - Complex medication regimens
 - Increased in comorbidities.
 - Additionally, we also see risk factors of an ADE/ADR due to the high volume of person with IDD who are on medication regimens with polypharmacy risks:
 - Persons with IDD are describe as having increased risk for Polypharmacy with some national studies showing 80% of patients with IDD were prescribed five or more medications, and over 60% had 10 or more prescribed medications)
 - The studies available also highlighted the need for:
 - A need for better medication reconciliation
 - Improved communication and collaboration between all treating providers

An Overview of PHP's Approach to Healthcare Management



- Managed Care for the IDD population has enabled PHP to gather key data elements regarding health issues, utilization and cost
- Analysis of this data provides the basis for development of prospective programs to mitigate suboptimal outcomes
- Optimal outcomes for the IDD population are achieved through a collaborative clinical approach
- PHP provides prospective management of our members' care through collaboration in the following key areas:

Medication
Management

Hospital &
Skilled Facility
Nursing (SNF)
Management

Care
Management

Telemedicine
Outpatient
Management

Case Study # 1 – Medications as a Cause of Symptoms



Patient has had 11 falls in the last 6 months. She had a recent fall in the evening and was taken to the ER. A cat scan was taken of her head, neck and back, results negative. PT evaluations shows she is having difficulty walking, needs moderate assistance.

CMTR Findings:

- Patient is on Multiple Anticholinergic medications:
 - Phenobarbital
 - Quetiapine
 - Oxybutynin.
- A high anticholinergic burden can predispose patients to worsening cognition and an increased risk of falls.
- Recommendations:
- Monitor for additive anticholinergic side effects and evaluate the following alternatives:
 - Quetiapine may cause orthostatic hypotension, primarily in elderly patients, due to the strong binding affinity for the alpha 1 receptor.
 - Patient A has a history of falls. Please educate Patient A to rise slowly after sitting or lying for an extended period of time.
 - One of the metabolites of quetiapine, norquetiapine, has a relatively high binding affinity for the M1 receptor leading to increased risk of anticholinergic effects such as confusion, constipation, urinary retention, dizziness and increased risk of falls.
 - Consider tapering dose and discontinuing quetiapine given the compounded anticholinergic burden and the above noted drug interaction.

Case Study # 2 – Medication as a Cause of Psychiatric Admission



Patient is a 29 YO male who lives at home with Mom. He has a history of Asthma and Pervasive Developmental Disorder who was brought into the hospital by EMS/NYPD was activated by his mother due to aggressive behavior. According to the NYPD report the patient was combative at first but calmed down after being handcuffed.

On arrival to the Psychiatric ER the report indicated the patient needed numerous redirections during the evaluation and was upset about the police involvement, accusing them of “throwing him to the ground”. He endorsed violent thoughts towards his mother who her reported did not give him his money. Patient has current outpatient psychiatric care but admits not being compliant with medications but denies alcohol or recreational drug use.

CMTR findings:

- **Please evaluate for DC of Montelukast**
 - On March 4, 2020, the FDA decided a stronger warning and will require a Boxed Warning on montelukast sodium related to the risk for neuropsychiatric events associated with the drug.
 - The FDA is advising that montelukast should not be the first-choice treatment for allergic rhinitis, especially when symptoms are mild.
 - For patients with asthma, the FDA recommends that before prescribing montelukast, health care professionals consider the benefits and risks of possible mental health side effects. These may include: agitation, including aggressive behavior or hostility, attention problems, bad or vivid dreams, depression, disorientation or confusion.

Case Study # 3 – Medication as a Cause of Medical Admission



67-year-old with multiple admissions secondary to hypothermia which was mistaken as early onset sepsis.

CMTR Findings:

- Drug-Drug interaction levothyroxine and Certavit
 - Consider
 - ADJUST DOSING INTERVAL Concurrent administration of calcium-containing products may decrease the oral bioavailability of levothyroxine by one-third in some patients. Pharmacologic effects of levothyroxine may be reduced.
- Drug-Drug interaction levothyroxine and Ferrous gluconate
 - Consider:
 - ADJUST DOSING INTERVAL: Concurrent administration of iron-containing products and may decrease the oral bioavailability and pharmacologic effects of levothyroxine.
- Hypothermia is an adverse drug reaction (ADR) of antipsychotic drug (APD) use and may be due to certain medical conditions that affect your body's ability to regulate body temperature.
 - Examples include an underactive thyroid (hypothyroidism), poor nutrition or anorexia nervosa, diabetes, stroke, severe arthritis, Parkinson's disease, trauma, and spinal cord injuries.
 - Antipsychotics such as Seroquel can change the body's ability to regulate its temperature.

Case Study # 4 – Medication Reconciliation



Patient was admitted due to having stopped their Depakote medication regimen having through they may have been at toxic levels. No levels taken during admission. Cat Scan, Chest x-ray & EKG all negative and patient was discharged back home. On discharge Depakote was restarted and discharge medications included:

Klonopin (clonazepam) 0.5 mg BID
Clonidine decreased to 0.2 mg HS
Depakote 250 mg BID

CMTR findings:

- Medication Reconciliation Clarification:
 - The Psych consult note and MAR (Medication Administration Record) lists Clonazepam 0.5 mg BID however, there is NO claims history for Clonazepam. There are claims for Chlorpromazine 50 mg BID and Chlorpromazine is NOT listed on the MAR.
 - Please clarify if Chlorpromazine and Clonazepam are both ACTIVE

Other Admission Diagnoses that were determined to be drug related include:

- Myopathy and Rhabdomyolysis
- Hyperkalemia
- Drug induced Parkinsonism
- Theophylline Toxicity
- Syncope and Dizziness
- Bleeding and Thrombocytopenia
- Arrhythmias, Bradycardia, Tachycardia

PHP launched its Clinical Pharmacy program in 2018 and continued to build out the program to support with medication regimens across several key areas including:

- Transition of Care
- Total Polypharmacy review
- Statin use in Patients with Diabetes
- Partners Request
- High Risk Medication
- Statin use in cardiovascular disease
- Comprehensive medication Therapy Review
- Opioid use

Each review is categorized by the clinical pharmacy team to indicate the potential risk of the current regimen and provided to the PCP and the specialist providers as needed.

How the Clinical Pharmacy Review works



When indicated or requested, a Comprehensive Medication Therapy Review (CMTR) is performed by a Clinical Pharmacist. By utilizing our Patient Profile, the Clinical Pharmacist can review the member's case using:

- Current outpatient / inpatient medications
- PDE (prescription drug event) files showing fills/refills
- Review of clinical medical record
 - Patient profile built from claims data

Based on this in-depth review, the Clinical Pharmacist develops the CMTR document which indicates any concerns found and considerations for the PCP and/or Specialist prescriber.

- Each CMTR is also categorized as High, Moderate or Low risk
 - We request a response related to any High or Moderate risks identified



Physician Name: [REDACTED]	CMTR #: CMTR_ [REDACTED]	Date: 05/11/2023
Telephone: [REDACTED] Fax: [REDACTED]		
Member Name: [REDACTED]	ID#: 450000 [REDACTED]	DOB: [REDACTED] Sex: MALE

Comprehensive Medication Therapy Review CMTR

Dear Dr. [REDACTED]

I completed a comprehensive medication therapy review for [REDACTED]. He was identified as a candidate for **statin therapy** based on reported diagnoses, details are listed below. I reviewed the Community Medication List - Last 90 days (refer to medication list towards the end of this document).

I appreciate your time and any feedback you can provide. **If the reported diagnoses are not accurate or there are clinical reasons for not prescribing a statin, please provide your feedback** on the form and send back to me and I will share with the patients care management team as well as incorporate into the patient's record. Please feel free to contact me for any drug information needs.

Sincerely,

[REDACTED]

CMTR Example – Page 2 Considerations & Rationale



Physician Name: [REDACTED]	CMTR #: CMTR_45000[REDACTED]	Date: 05/11/2023
Telephone: [REDACTED] Fax: [REDACTED]		
Member Name: [REDACTED]	ID#: 45000[REDACTED]	DOB: [REDACTED] Sex: MALE

FINDINGS, RECOMMENDATIONS, RESOLUTIONS:

Please document if recommendation is accepted, any changes, additions, discontinuation of therapy, any non-pharmacological instructions OR any comment regarding rationale for declining pharmacy recommendations.

Consider addition of moderate intensity statin therapy
On 9-15-2022 [REDACTED] reported diagnosis E119 Type 2 diabetes mellitus without complications and on 12-6-2022 [REDACTED] reported diagnosis E7800 Pure hypercholesterolemia, unspecified. Based on the reported diagnoses [REDACTED] may be a candidate for the addition of statin therapy if he has normal liver function. Please note - on 4-18-2023 there is a diagnosis of liver disease unspecified. On 4-18-2023 a BMP and CBC were ordered and on 12/6/2022 a lipid panel and HgA1c were ordered. The American College of Cardiology/American Heart Association (ACC/AHA) 2019 guidelines on the primary prevention of cardiovascular disease detail recommendations for statin therapy treatment. Please refer to the last page for guideline details.
The National Cholesterol Education Program Adult Treatment Panel III advocates statins as first-line therapy for lowering LDL-C levels. Given that cholesterol is biosynthesized in the early morning hours, the US Food and Drug Administration (FDA) has recommended evening administration for statins with shorter half-lives (lovastatin 2 hours, simvastatin < 5 hours, and fluvastatin < 3 hours). In contrast, the FDA suggests daytime administration for statins with longer half-lives (atorvastatin 14 hours, rosuvastatin 19 hours, and pravastatin 22 hours (20170921). (lovastatin 40mg, fluvastatin 20 to 40mg, and simvastatin 20 to 40mg are also on formulary and evening administration is recommended.)
The following moderate intensity statins are on the formulary and can be administered in the morning.
Atorvastatin 10 to 20 mg
Rosuvastatin 5 to 10 mg
Pravastatin 40 to 80 mg

Accept or Physician's Feedback and Instructions:



Physician Name: [REDACTED]	CMTR #: CMTR_450000 [REDACTED]	Date: 05/11/2023
Telephone: [REDACTED] Fax: [REDACTED]		
Member Name: [REDACTED]	ID#: 450000 [REDACTED]	DOB: [REDACTED] Sex: MALE

Please discuss medication order changes or discontinuation of therapy where applicable with your patient and the patient's pharmacy. Please fax this form with your plan to me at (866) 278-7747.

If you need further clarification, or if you need assistance, please call me.

PHYSICIAN'S SIGNATURE: _____ Date: _____

Physician Name: _____ License #: _____

CMTR Example – Page 4 Current Medication List & Prescribers



Physician Name: [REDACTED]	CMTR #: CMTR_450006 [REDACTED]	Date: 05/11/2023
Telephone: [REDACTED] Fax: [REDACTED]		
Member Name: [REDACTED]	ID#: 450006 [REDACTED]	DOB: [REDACTED] Sex: MALE

Current Medication List based on Pharmacy fills

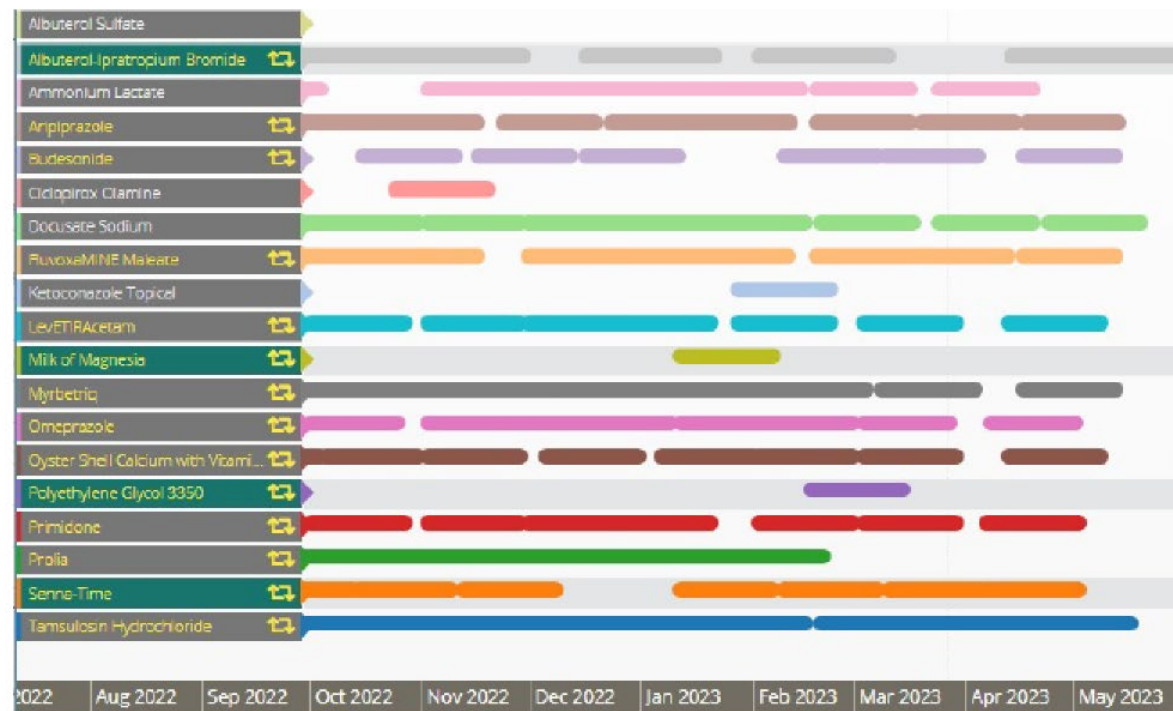
Date Filled	Drug Name	Brand/generic	Strength Description	Dose Form Description	Prescriber Name	Pharmacy Name	Quantity	Days Supply
02/18/2023	TAMSULOSIN	Tamsulosin Hydrochloride	0.4 mg	capsule	[REDACTED]	[REDACTED]	90	90
04/05/2023	SENNA	Senna-Time	8.6 mg	tablet	[REDACTED]	[REDACTED]	60	30
04/05/2023	PRIMIDONE	Primidone	250 mg	tablet	[REDACTED]	[REDACTED]	90	30
02/15/2023	POLYETHYLENE GLYCOL 3350	Polyethylene Glycol 3350	17 G/DOSE	powder for reconstitution	[REDACTED]	[REDACTED]	510	30
04/06/2023	OMEPRAZOLE	Omeprazole	20 mg	delayed release tablet	[REDACTED]	[REDACTED]	28	28
04/15/2023	MIRABEGRON	Myrbetriq	50 mg	tablet, extended release	[REDACTED]	[REDACTED]	30	30
04/11/2023	LEVETIRACETAM	Levetiracetam	250 mg	tablet	[REDACTED]	[REDACTED]	60	30
04/15/2023	FLUVOXAMINE	Fluvoxamine Maleate	100 mg	tablet	[REDACTED]	[REDACTED]	60	30
04/22/2023	DOCUSATE	Docosate Sodium	sodium 100 mg	capsule	[REDACTED]	[REDACTED]	30	30
04/11/2023	CALCIUM-VITAMIN D	Oyster Shell Calcium with Vitamin D	500 mg-5 mcg	tablet	[REDACTED]	[REDACTED]	60	30
04/15/2023	BUDESONIDE	Budesonide	0.5 mg/2 mL	suspension	[REDACTED]	[REDACTED]	120	30
04/16/2023	ARIPIPRAZOLE	Aripiprazole	10 mg	tablet	[REDACTED]	[REDACTED]	30	30
03/23/2023	AMMONIUM LACTATE TOPICAL	Ammonium Lactate	12%	lotion	[REDACTED]	[REDACTED]	400	30
04/12/2023	ALBUTEROL-IPRATROPIUM	Albuterol-Ipratropium Bromide	2.5 mg-0.5 mg/3 mL	solution	[REDACTED]	[REDACTED]	360	60

CMTR Example – Page 5 Medication Compliance



Physician Name: [REDACTED]	CMTR #: CMTR_450000 [REDACTED]	Date: 05/11/2023
Telephone: [REDACTED] Fax: [REDACTED]	ID#: 450000 [REDACTED]	DOB: [REDACTED] Sex: MALE

Medication Timeline: The bar in each row corresponds with the respective medication and timeframe that the medication is available to the patient. Gaps in the bar represents the timeframe when the drug was not available to the patient. (Derived from prescription fills/claims history)



CMTR Categorization by Risk



Priority	Reason
High	- An Acute threat to patient's health based on diagnoses and interactions with other medications or potential cause for future admissions based on patients diagnoses
	- Significant risk for causing current disease progression or complications related to continued use
	- Medication contraindicated based on disease or drug regimen
Medium	- Patient on multiple high-risk medications and/or on multiple anticholinergics and/or on multiple CNS medications
	- Duplicate drug therapy or Inappropriate medical regimen for diagnosis (based on commonly accepted guidelines)
Low	- Potential for drug / drug interaction or potential for adverse drug reaction
	- Additional medication warranted for appropriate treatment (based on commonly accepted guidelines)
	- Potential for diet / drug interaction or potential for adverse drug reaction
	- Inappropriate use of medication based on current information or Inappropriate dosing (amount of drug or dosing schedule), or change to alternative therapeutic medication
	- Adherence Issue
	- Drug-Drug interactions and Drug-Disease interactions that require additional monitoring which may lead to change in therapy
	- Addition of drug therapy preventative
	- No diagnosis to support the use of a drug
	- Inappropriate duration of use for medication

Clinical pharmacist reaches out to PCP/Specialist for response if CMTR is classified as HIGH or MEDIUM

Patient Profile – Member Overview & Pharmacy Variables



Patient Information

Summary

ID:	Name:	Gender:	FEMALE
Date of Birth:	Age: 79	State:	New York
County:	ZIP Code:	Previous Year Total Medical Paid:	
Months Enrolled: 75	Current Year Total Medical Paid:	Street:	
Current Year Pharmacy Patient Paid:	Previous Year Pharmacy Patient Paid:	City:	
Begin Date:	Residence: ICF/DD	PHP Care Coordinator:	
PHP Care Manager:	Willow Brook Status:	PHP Care Coordinator Email:	
PHP Care Manager Email:	Medisked PCP:	Medisked PCP NPI:	
	Attributed PCP:	Attributed PCP NPI:	

Positive Medical & Pharmacy Variables

Anticoagulants Oral:	<u>Yes</u>	Asthma Medications:	<u>Drugs</u>	Biological Products:	<u>Yes</u>
COPD Chronic Medications:	<u>Drugs</u>	Drug Disease Interaction (highly plausible) :	<u>Yes</u>	Drug Interaction, MONITOR:	<u>Yes</u>
Drugs requiring a Risk Evaluation and Mitigation Strategy ...:	<u>Yes</u>	Drug Spend > 1K Per Fill:	<u>Yes</u>	Drugs With Monitoring Recommendations:	<u>Yes</u>
Drugs with US Black Box Warning:	<u>Yes</u>	Duplicate Drug Therapy:	<u>Yes</u>	Osteoporosis Medications:	<u>Yes</u>

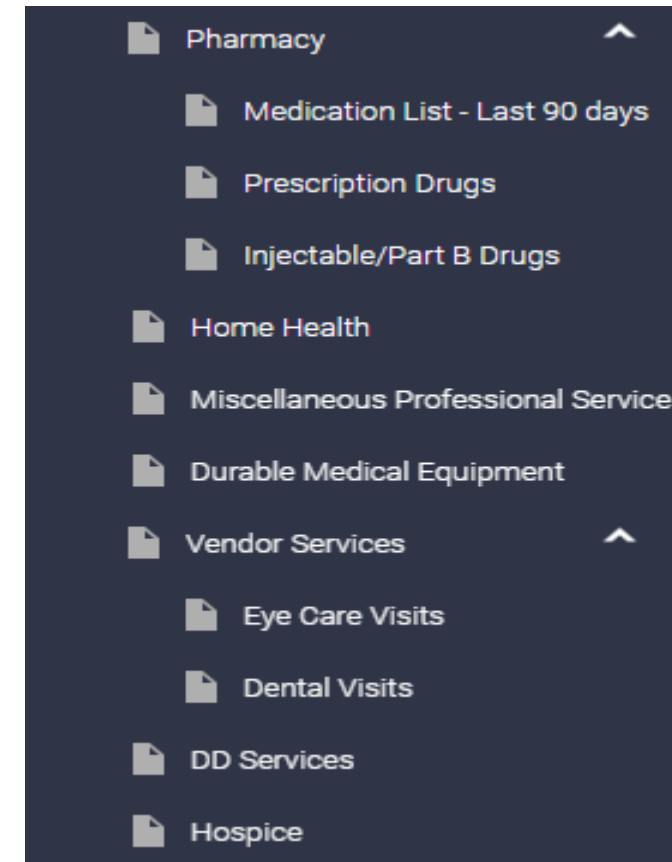
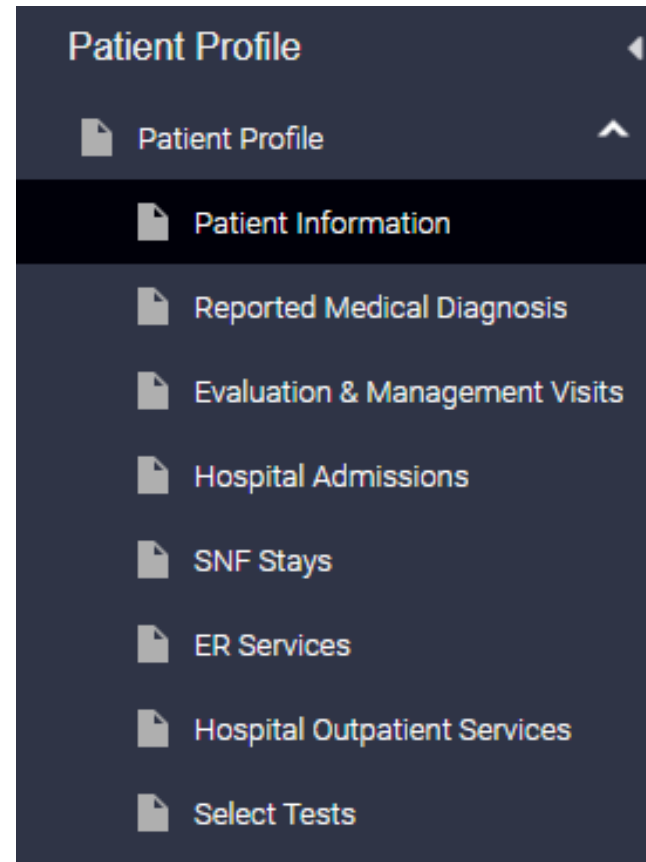
Patient Profile – Deep Dive Options



The Member profile is generated through claims data from various sources. The system compiles the data into a user-friendly profile that allows the end-user easy access to look at up-to-date clinical information by category.

- Each category listed here will provide a detailed report on the member by clinical area.

**Note: Access to this system is limited to internal use and specific PHP vendors. However, PHP is open and willing to share data with any PAR provider to support better outcomes for our members*



Patient Profiles – Medical & Pharmacy Variables



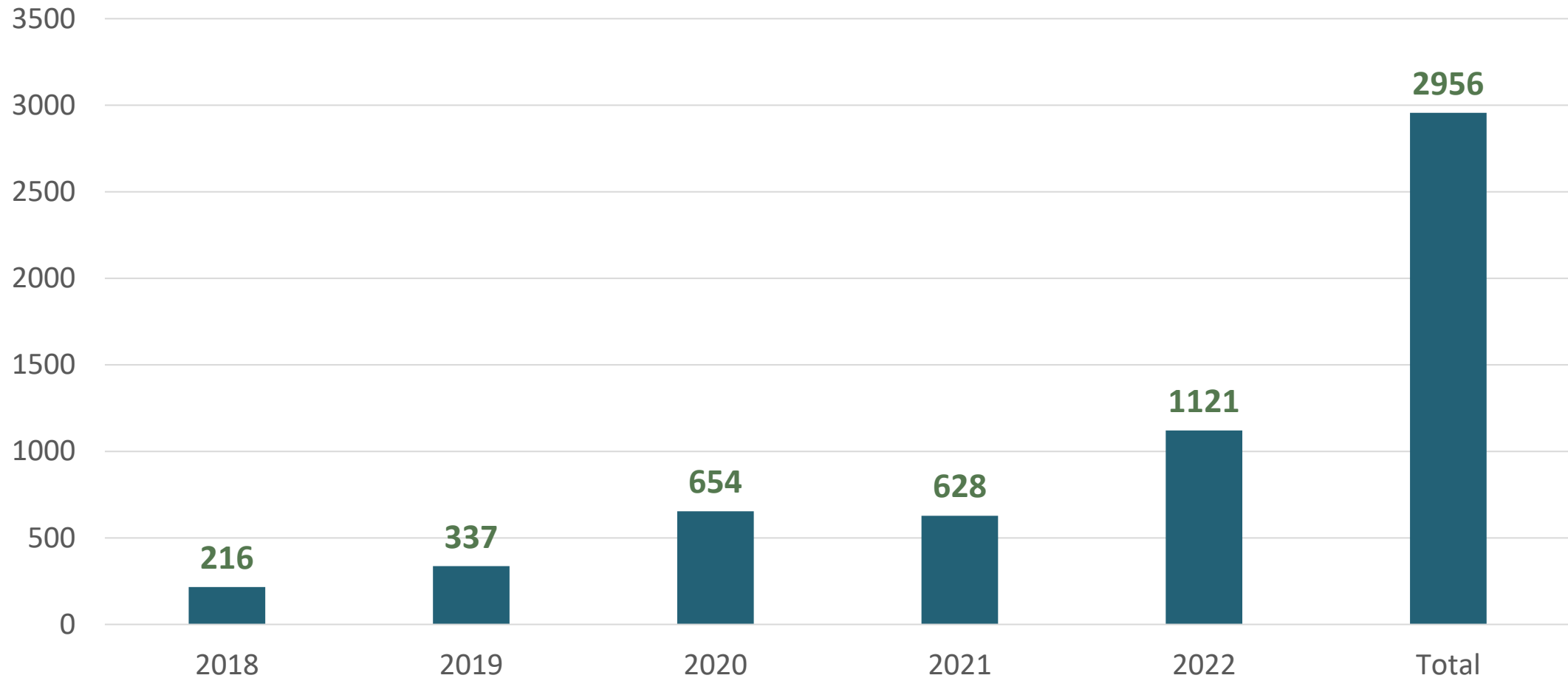
- Our Patient Profile automatically categorizes members under 54 different variables related to medication risks
- Data is updated Bi-Weekly
- The system allows users to select one or multiple risk factors to identify a cohort of members or deep dive into an individual member
- Examples of the reports include:
 - Chronic medication adherence
 - Drug-Disease interaction
 - Black Box Warnings
 - High Risk medications
 - Opioid reports
 - Polypharmacy

Filter	Medical & Pharmacy Variables	Value	Count
<input type="checkbox"/>	Drugs with US Black Box Warning	Yes	537
<input type="checkbox"/>	Duplicate Drug Therapy	Yes	103
<input type="checkbox"/>	Generic Dispensing Rate < 80%	Yes	55
<input type="checkbox"/>	High Risk Medication with Renal ...	Yes	15
<input type="checkbox"/>	High Risk Medication Drug-Drug i...	Yes	47
<input type="checkbox"/>	High Risk Medication Use with C...	Yes	181
<input type="checkbox"/>	High Risk Medication with Diseas...	Yes	105
<input type="checkbox"/>	High Risk Medications to Avoid B...	Yes	189
<input type="checkbox"/>	Hospital Admission	Yes	134
<input type="checkbox"/>	Major Drug Interaction, ADDITION...	Yes	1
<input type="checkbox"/>	Major Drug Interaction, ADJUST ...	Yes	57
<input type="checkbox"/>	Major Drug Interaction, ADJUST ...	Yes	0
<input type="checkbox"/>	Major Drug Interaction, CONTRAI...	Yes	25
<input type="checkbox"/>	Major Drug Interaction, GENERAL...	Yes	111
<input type="checkbox"/>	Major Drug Interaction, MONITOR...	Yes	160
<input type="checkbox"/>	Opioids	Yes	35
<input type="checkbox"/>	Osteoporosis Medications	Yes	110
<input type="checkbox"/>	PDC < 80% Antidepressants	Yes	6
<input type="checkbox"/>	PDC < 80% Antipsychotics	Yes	4
<input type="checkbox"/>	PDC < 80% Asthma Medications	Yes	7
<input type="checkbox"/>	PDC < 80% Beta Blockers	Yes	10
<input type="checkbox"/>	PDC < 80% COPD Chronic Medic...	Yes	8
<input type="checkbox"/>	PDC < 80% Non-insulin Diabetes ...	Yes	6

Filter	Medical & Pharmacy Variables	Value	Count
<input type="checkbox"/>	Acumen:SUPD	SUB OP...	14
<input type="checkbox"/>	Anticholinergic Burden	Yes	494
<input type="checkbox"/>	Anticoagulants Oral	Yes	59
<input type="checkbox"/>	Antidepressants	Both	101
<input type="checkbox"/>	Antiplatelet Oral	Yes	151
<input type="checkbox"/>	Antipsychotic	Both	361
<input type="checkbox"/>	Anxiolytics/Hypnotics	Yes	446
<input type="checkbox"/>	Asthma Medications	Both	42
<input type="checkbox"/>	Biological Products	Yes	396
<input type="checkbox"/>	CHF Diagnosis	Yes	15
<input type="checkbox"/>	CKD Diagnosis	Yes	12
<input type="checkbox"/>	COPD Chronic Medications	Both	19
<input type="checkbox"/>	Cox-2 Selective NSAIDs and Non...	Yes	236
<input type="checkbox"/>	Dementia Medications	Both	30
<input type="checkbox"/>	Diabetes Medications	Both	190
<input type="checkbox"/>	Dialysis	Yes	4
<input type="checkbox"/>	Disease Modifying Anti-Rheumati...	Both	0
<input type="checkbox"/>	Diuretics	Yes	234
<input type="checkbox"/>	Drug Disease Interaction (highly p...	Yes	414
<input type="checkbox"/>	Drug Dose Range Checking	Yes	43
<input type="checkbox"/>	Drug Interaction, MONITOR	Yes	1,160
<input type="checkbox"/>	Drug Spend > 1K Per Fill	Yes	267
<input type="checkbox"/>	Drugs With Monitoring Recomme...	Yes	1,620

Filter	Medical & Pharmacy Variables	Value	Count
<input type="checkbox"/>	Acumen:SUPD	SUB OP...	6
<input type="checkbox"/>	Anticholinergic Burden	Yes	256
<input type="checkbox"/>	Anticoagulants Oral	Yes	38
<input type="checkbox"/>	Antidepressants	Both	53
<input type="checkbox"/>	Antiplatelet Oral	Yes	100
<input type="checkbox"/>	Antipsychotic	Both	167
<input type="checkbox"/>	Anxiolytics/Hypnotics	Yes	194
<input type="checkbox"/>	Asthma Medications	Both	27
<input type="checkbox"/>	Biological Products	Yes	166
<input type="checkbox"/>	CHF Diagnosis	Yes	13
<input type="checkbox"/>	CKD Diagnosis	Yes	7
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<input type="checkbox"/>	Diabetes Medications	Both	141
<input type="checkbox"/>	Dialysis	Yes	3
<input type="checkbox"/>	Disease Modifying Anti-Rheumat...	Both	0
<input type="checkbox"/>	Diuretics	Yes	131
<input type="checkbox"/>	Drug Disease Interaction (highly ...	Yes	227
<input type="checkbox"/>	Drug Dose Range Checking	Yes	27
<input type="checkbox"/>	Drug Interaction, MONITOR	Yes	520
<input type="checkbox"/>	Drug Spend > 1K Per Fill	Yes	141
<input type="checkbox"/>	Drugs With Monitoring Recomme...	Yes	537

All CMTRs Completed Year over Year



CMTRs Completed by Type



CMTR Overview							
Year	2018	2019	2020	2021	2022	Total	Percentage
Total CMTR's	216	280	584	494	609	2183	
CMTR Type							
Transition of Care			463	421	456	1340	61.38%
Total PolyPharm review		57	70	134	512	773	35.41%
Statin use in Patients with Diabetes			68	55	42	165	7.56%
Partners Request			13	15	36	64	2.93%
HRM				0	33	33	1.51%
Statin use in cardiovascular disease			39	0	25	64	2.93%
Comprehensive Medication Therapy Review				3	17	20	0.92%
Opioid			1	0	0	1	0.05%

Polypharmacy Overview



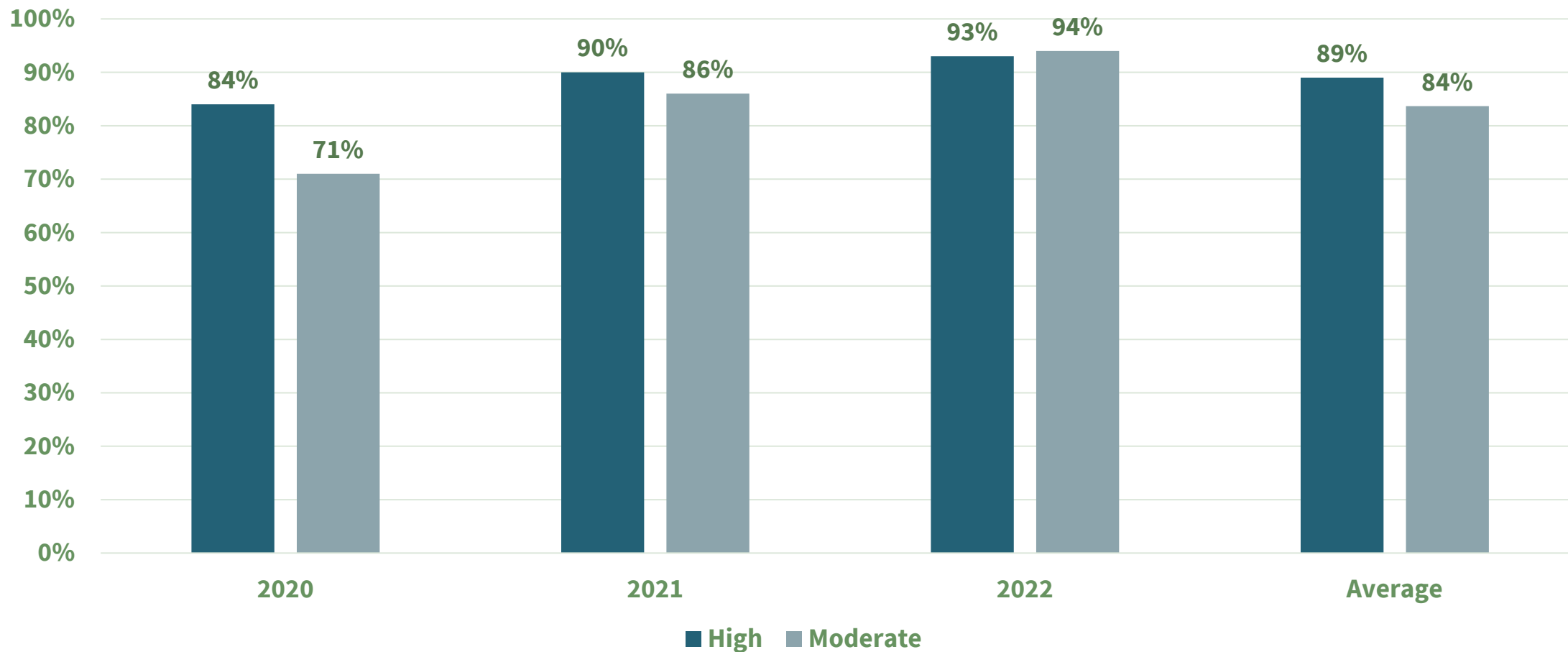
- Across PHP’s full population **20%** of members are currently prescribed 10 or more medications
- From the 773 Polypharmacy reviews completed over 4 years the outcomes showed risk levels for an AME:
 - 57% of Polypharmacy reviews were identified as having significant findings
 - 31% had low priority findings
 - Only 2% had no concerns identified

Number of Polypharmacy CMTRs (From July 2019 - December 2022)	
Year	No. of CMTRs
2019	57
2020	70
2021	134
2022	512
Total	773

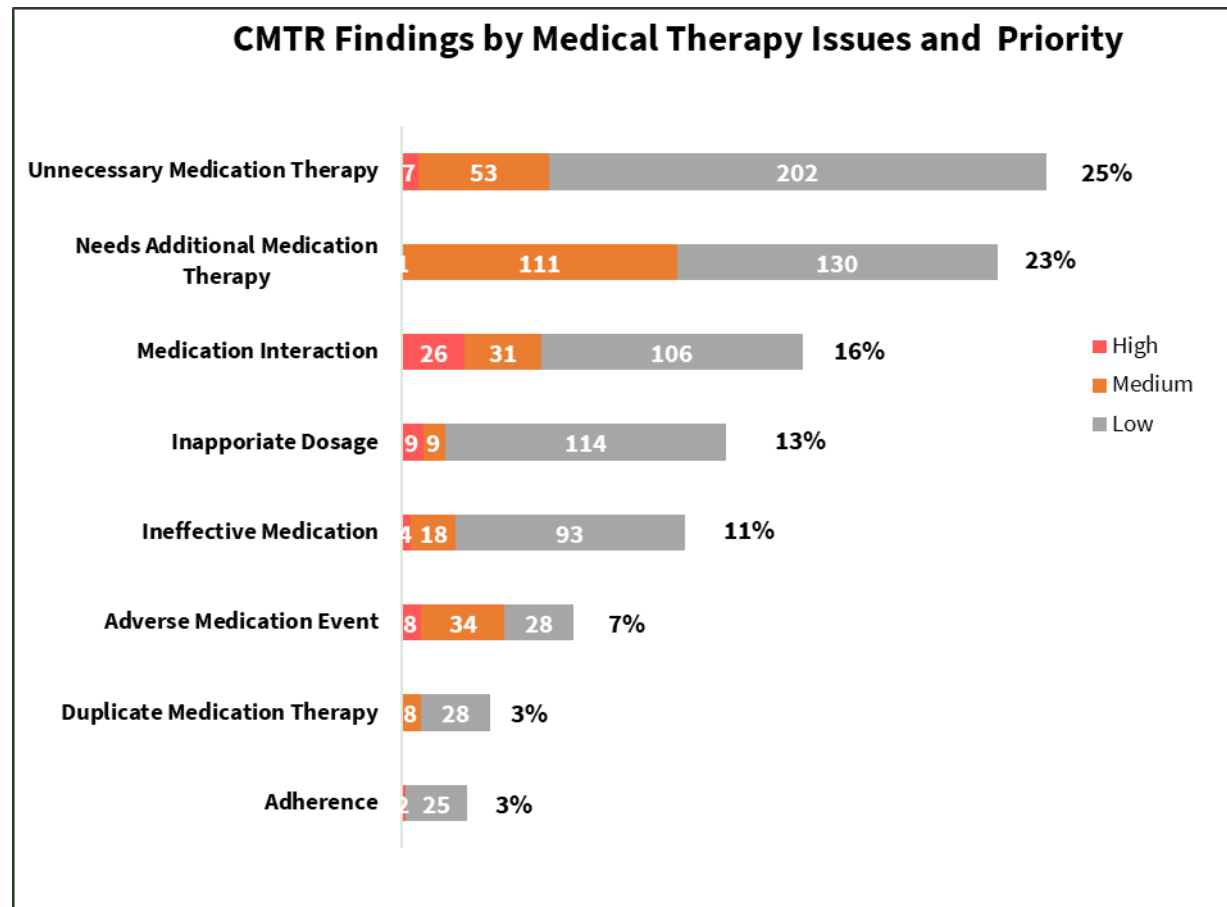
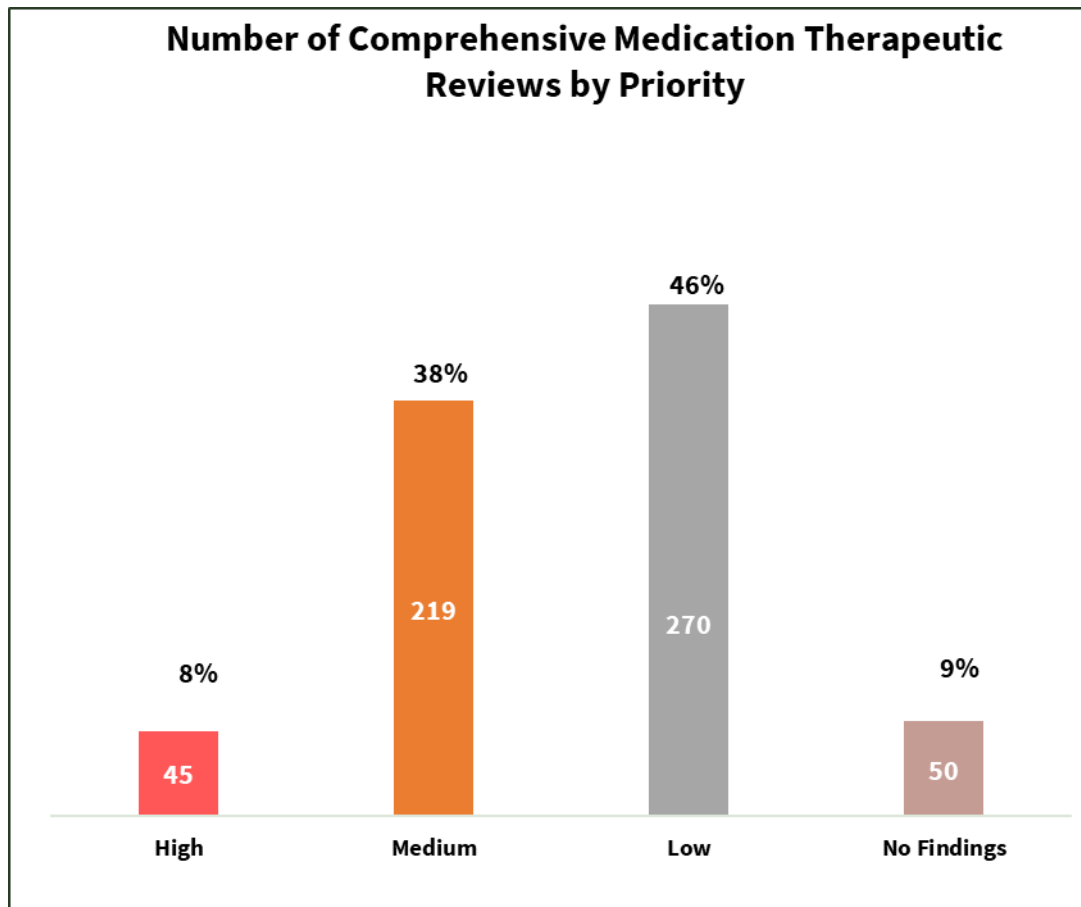
- From the 1,340 CMTR's completed for transitions of care completed over 3 years the outcomes showed risk levels for an AME:
 - 28% High risk
 - 35% Medium risk
 - 33% Low risk
 - Only 4% had no concerns identified

Number of Transitions of Care CMTRs (2020 through 2022)	
Year	No. of CMTRs
2020	463
2021	421
2022	456
Total	1,340

Overall Provider Response rates for High & Moderate findings



Overview of Clinical Pharmacy Comprehensive Medication Reviews (CMTR) for Transitions of Care for 2020*

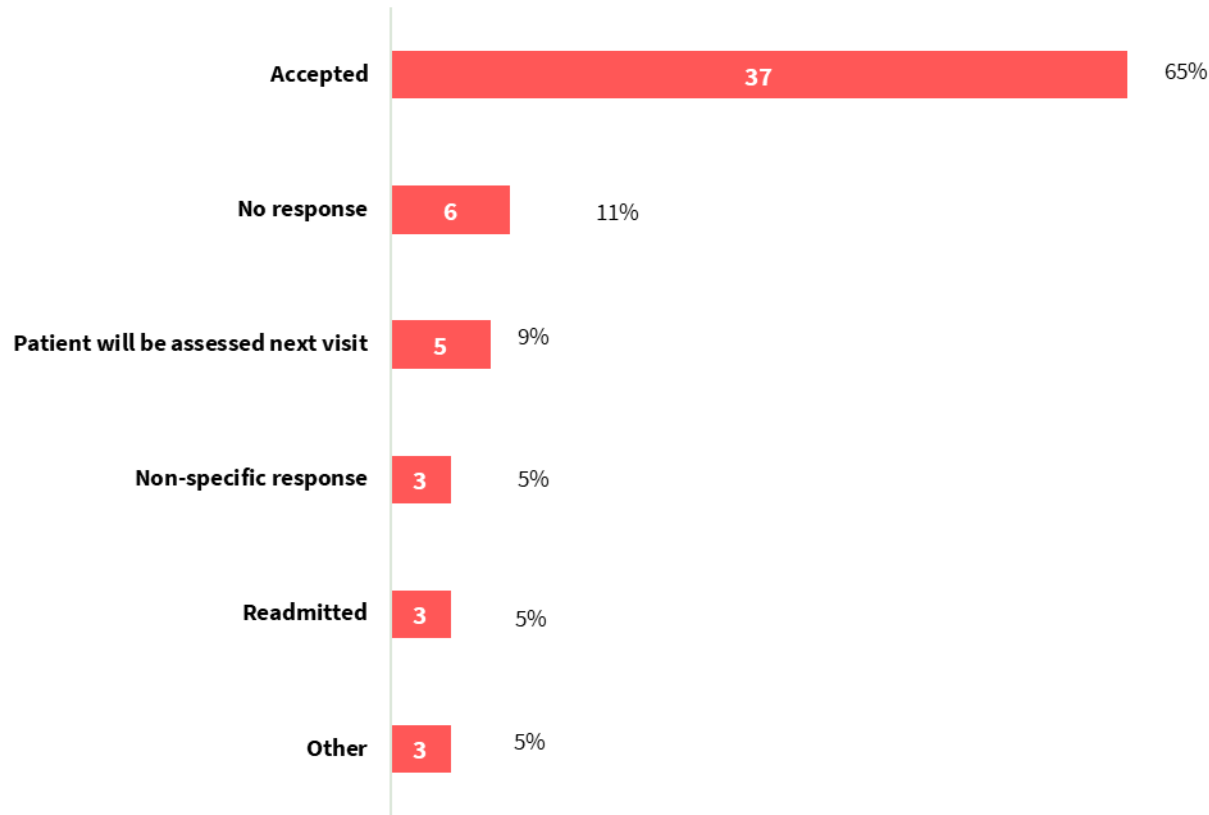


*79% of CMTRs done for transitions of care - 34% high or medium priority, most common issue unnecessary medication therapy

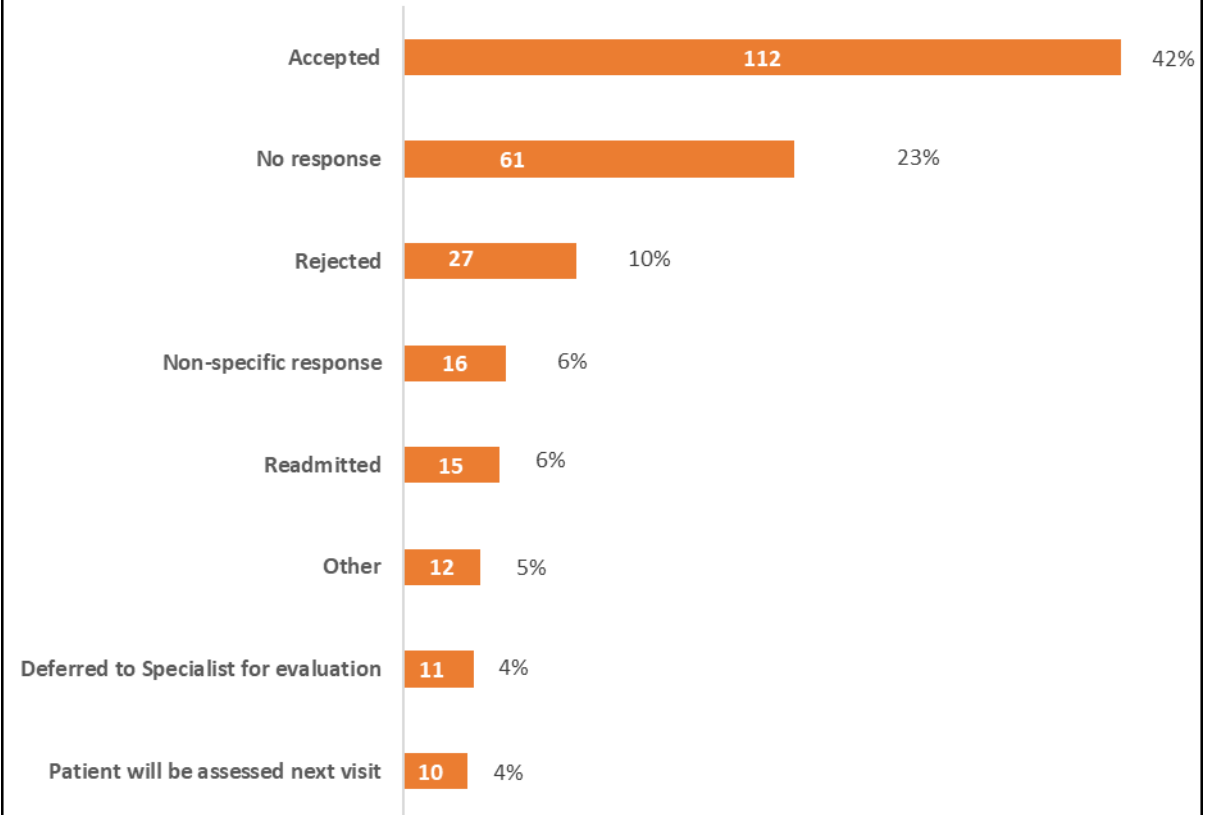
Overview of Outcomes for 2020



Provider Resolution of High Priority Reviews

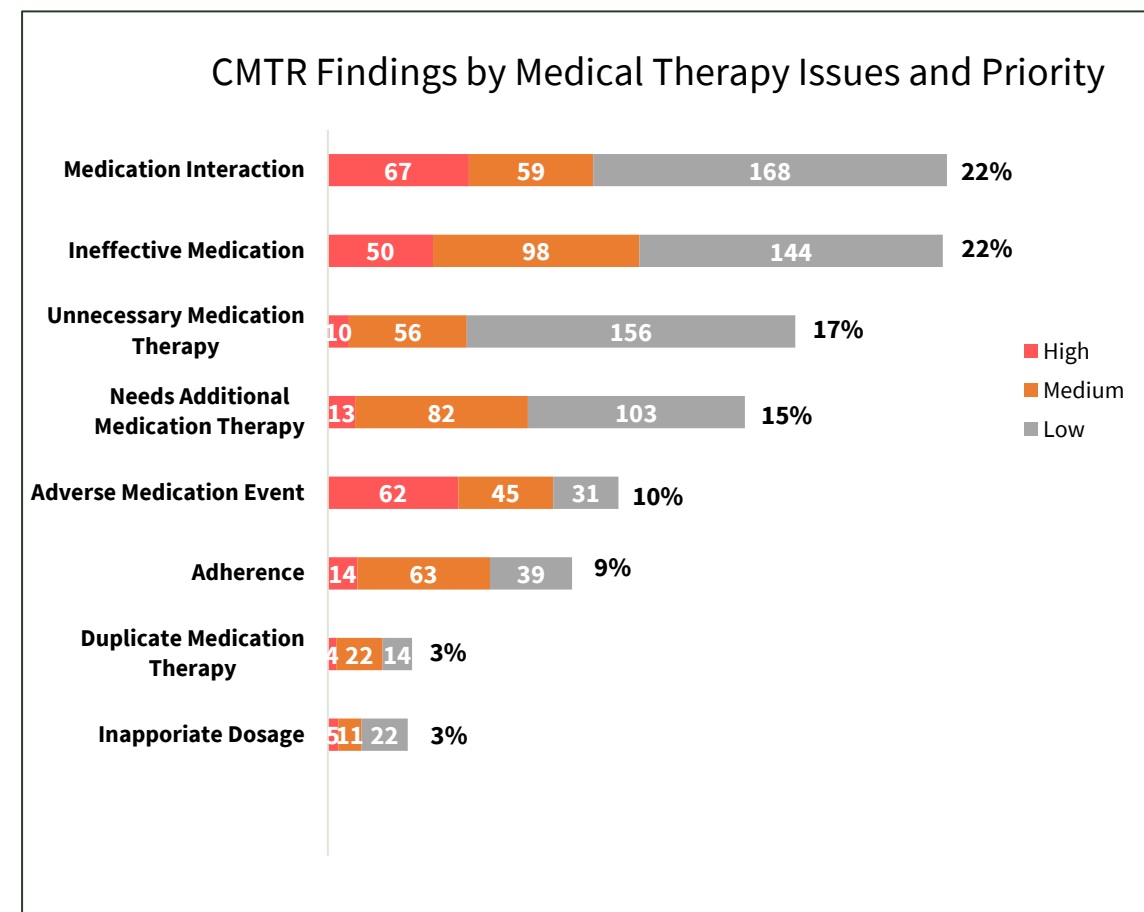
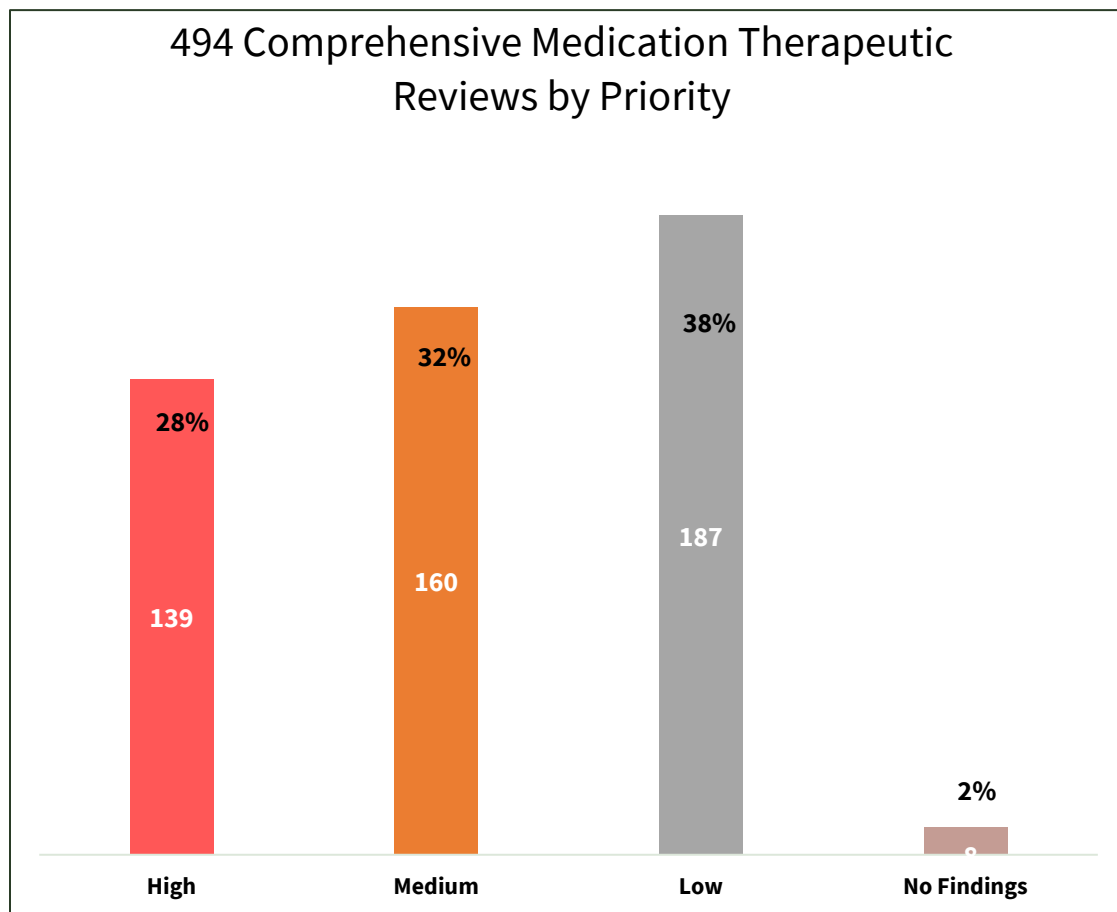


Provider Resolution of Medium Priority Reviews



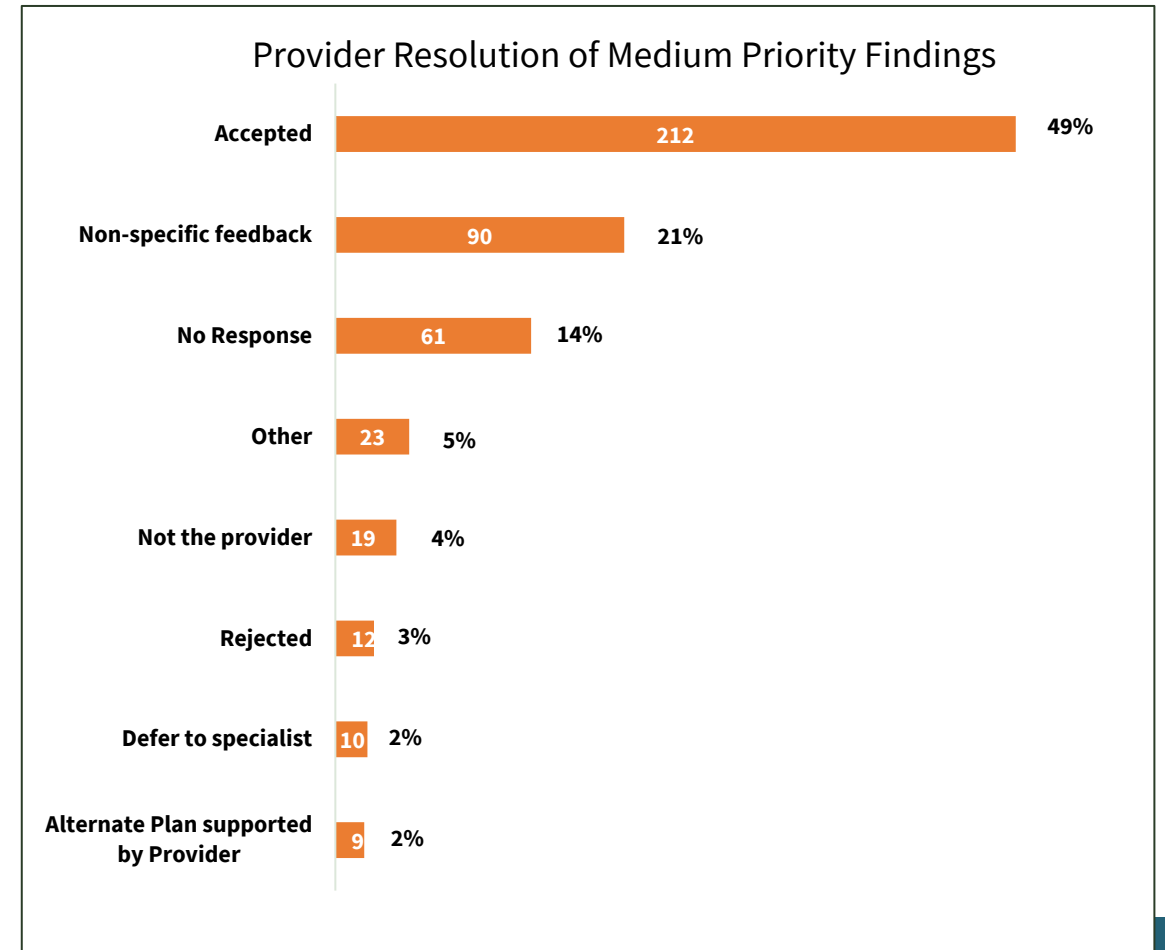
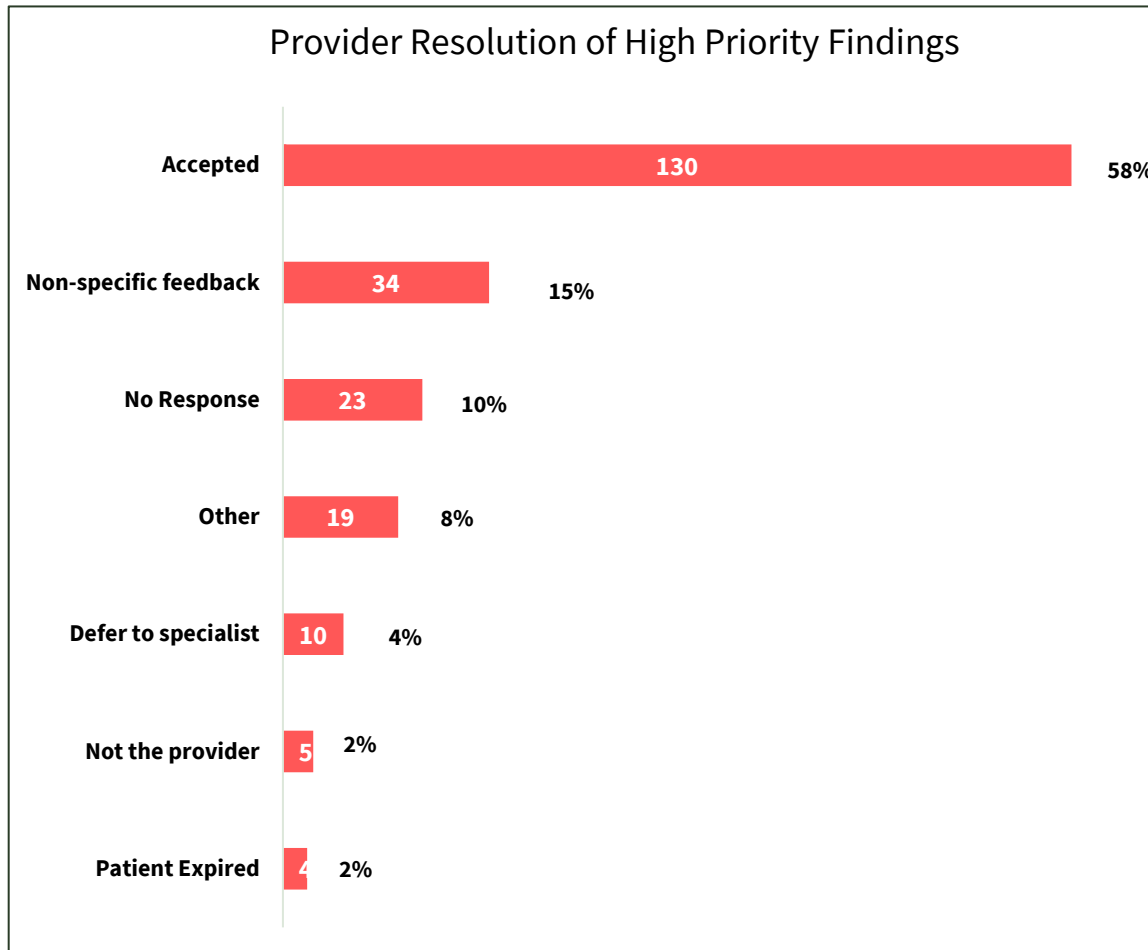
*84% of providers responded to high priority reviews while 71% responded to medium priority reviews

Overview of Clinical Pharmacy Comprehensive Medication Reviews (CMTR) for Transitions of Care for 2021*



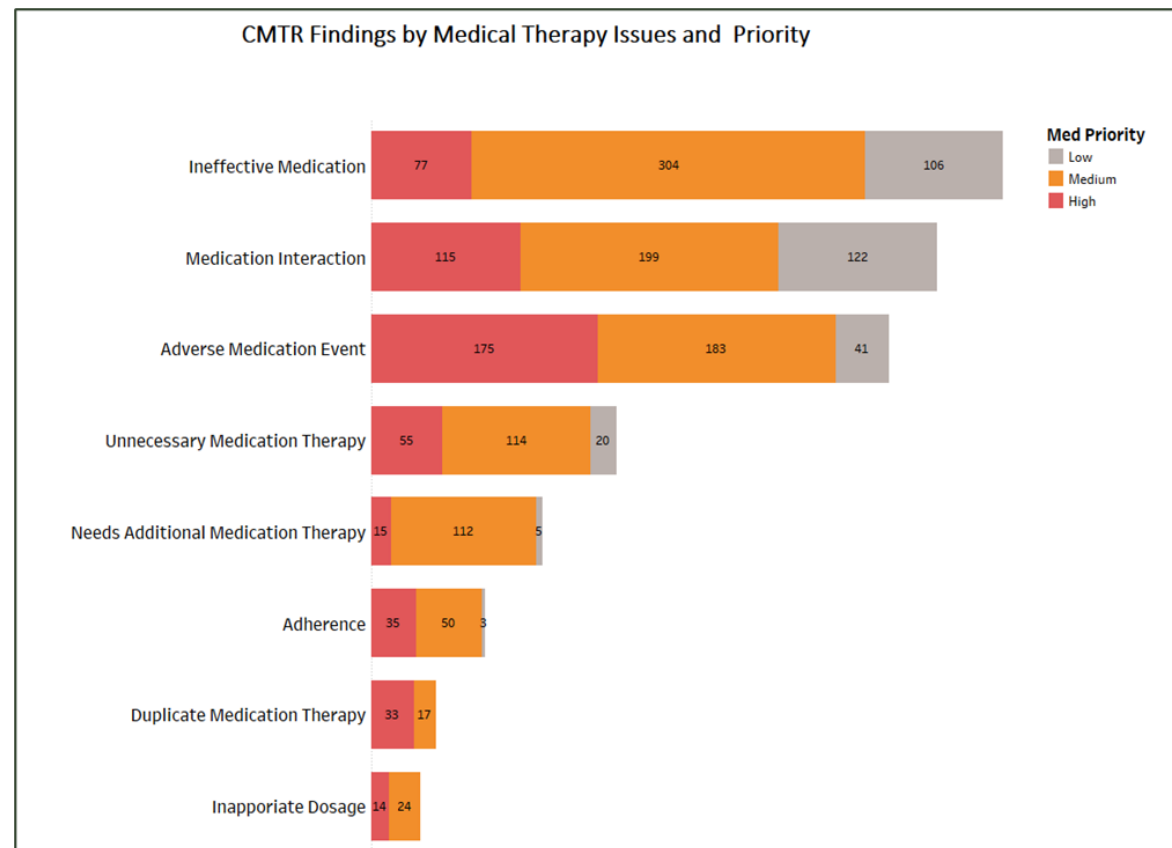
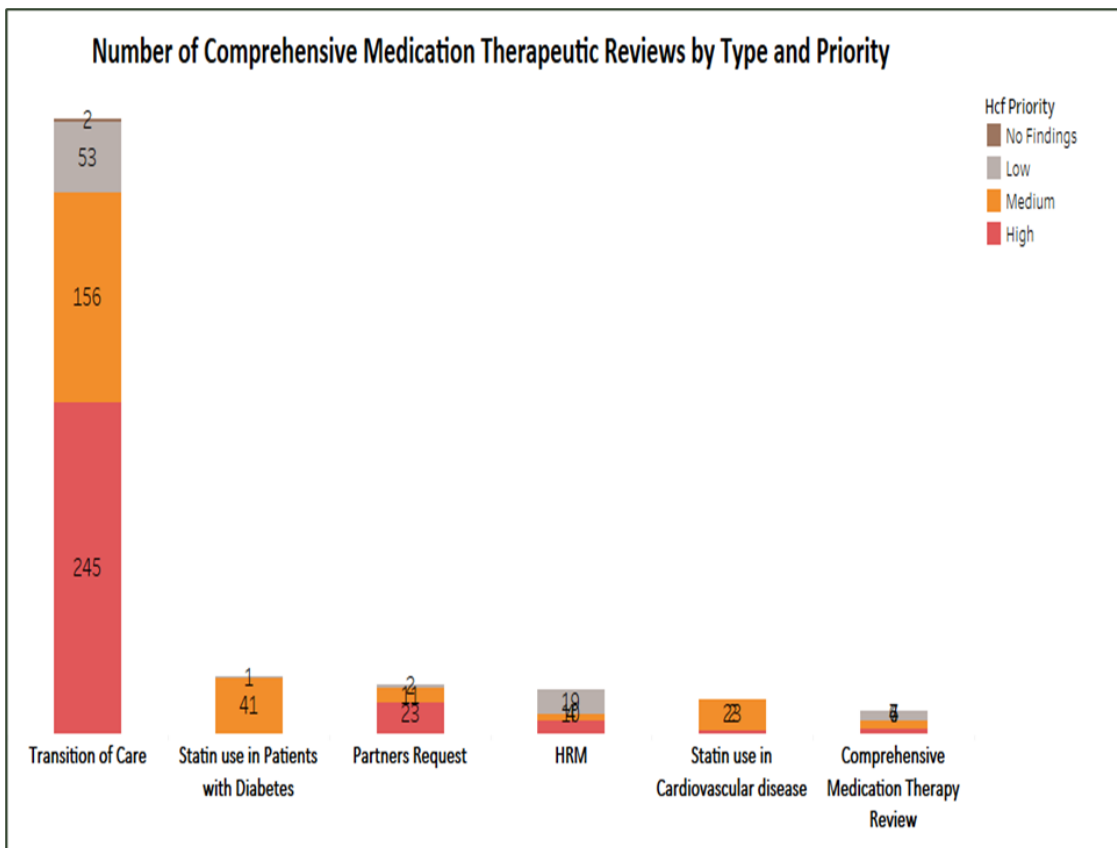
*85% of CMTRs done for transitions of care - 60% high or medium priority, most common issue was Medication Interaction

Overview of Outcomes for 2021



*90% of providers responded to high priority reviews while 86% responded to medium priority reviews

Overview of Clinical Pharmacy Comprehensive Medication Reviews (CMTR) for Transitions of Care for 2022*

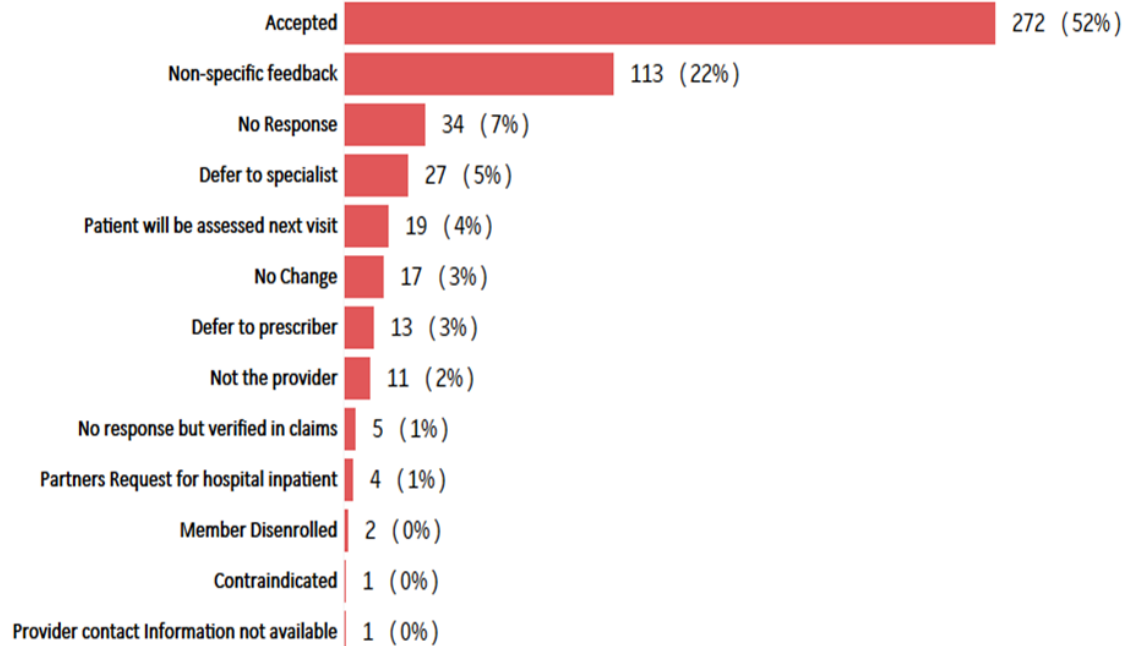


*76% of CMTRs done for transitions of care - 88% high or medium priority, most common issue was Ineffective Medication

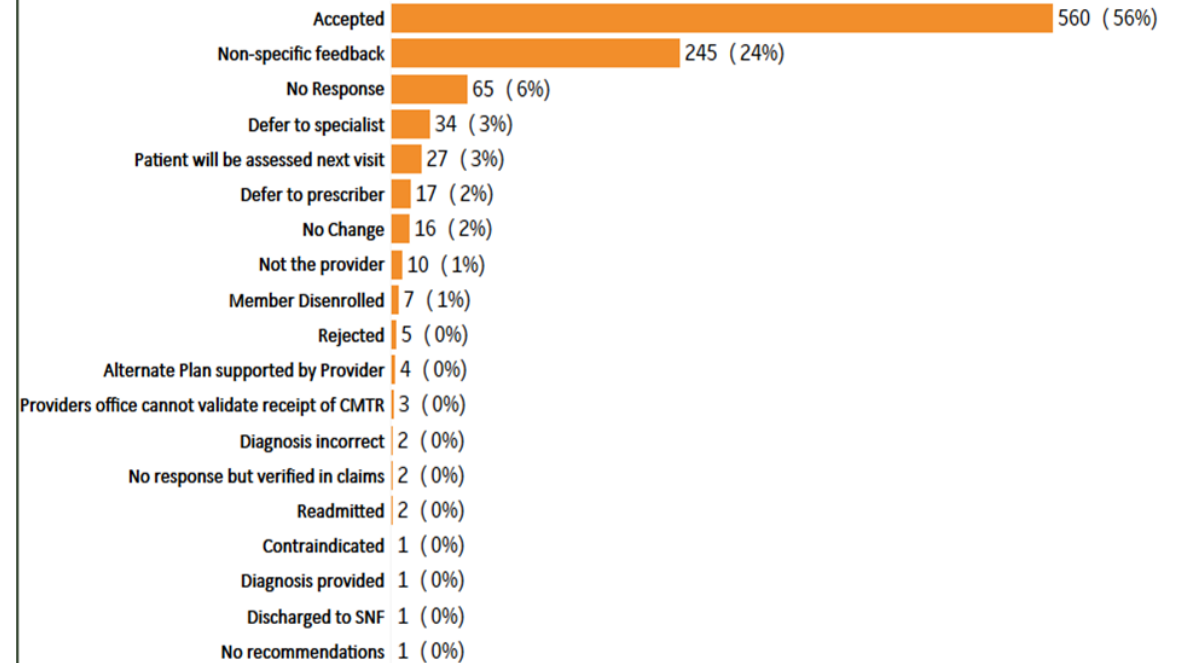
Overview of Outcomes 2022



Provider Resolution of High Priority Findings

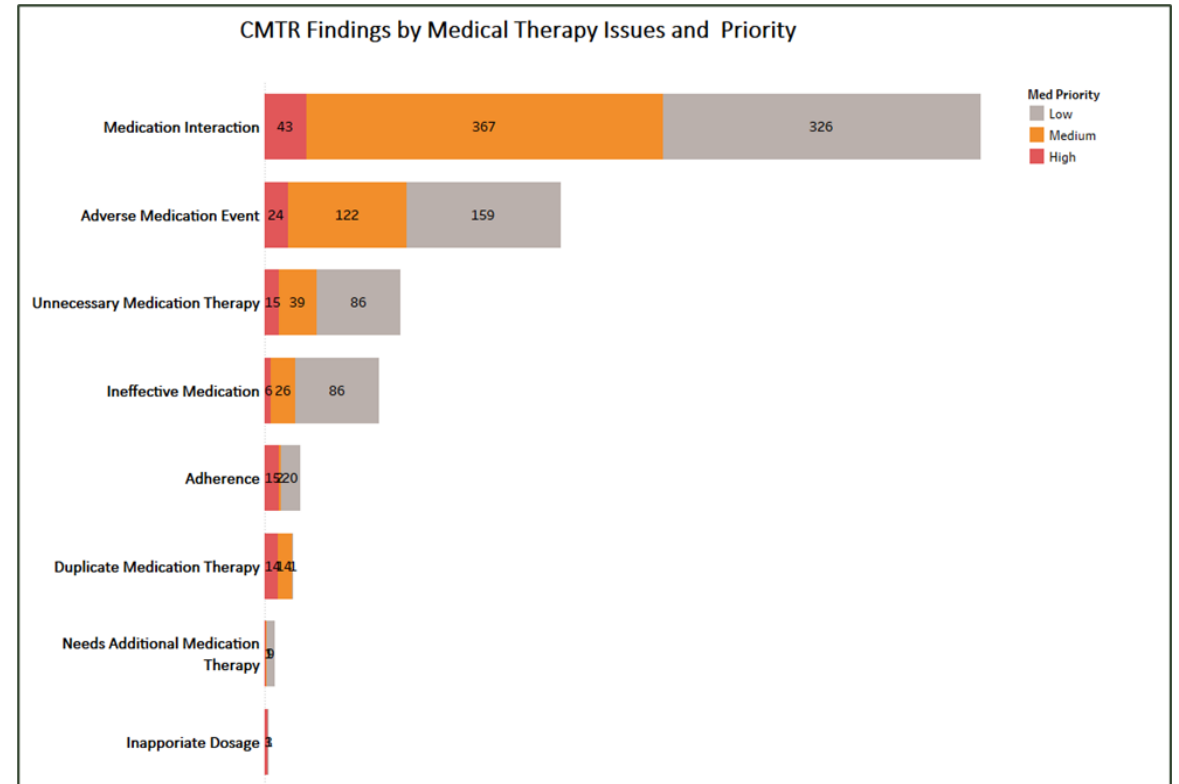
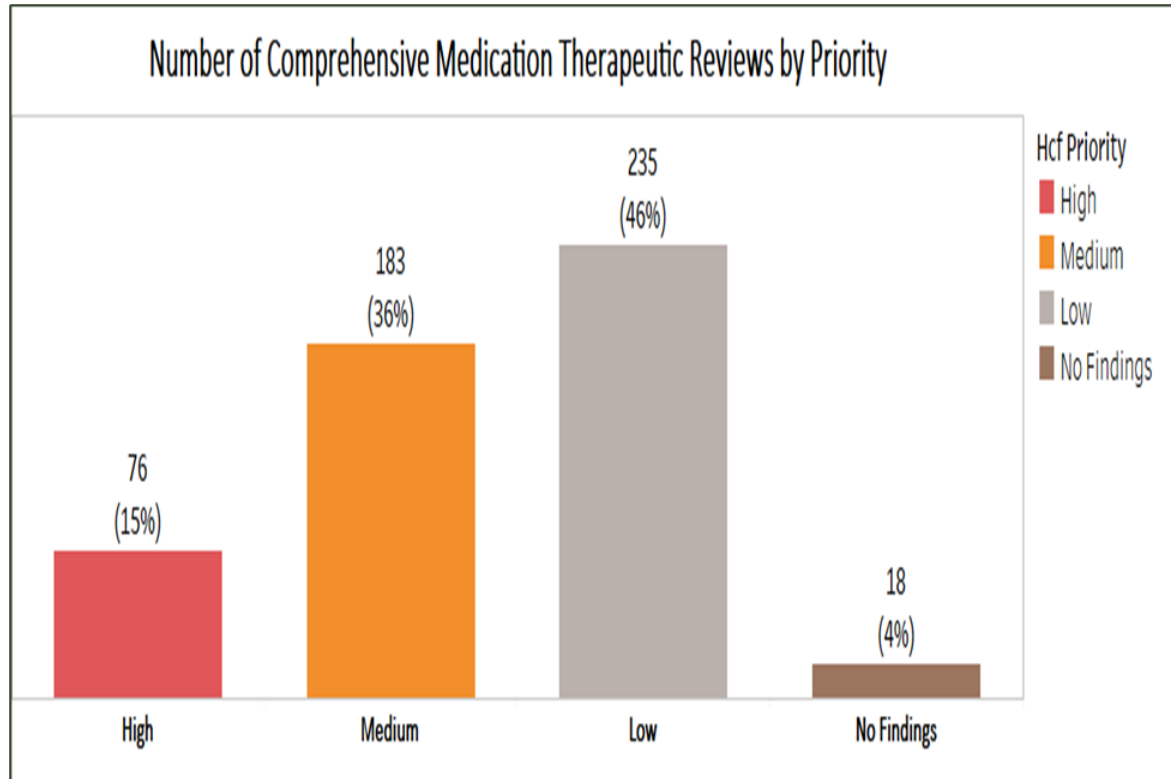


Provider Resolution of Medium Priority Findings



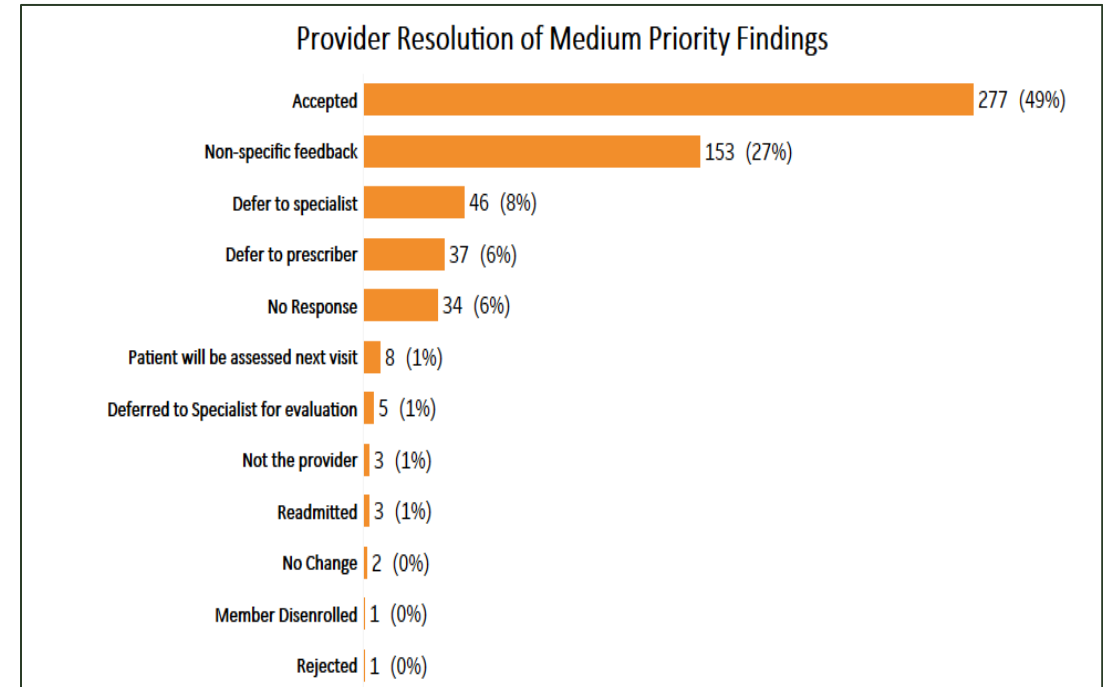
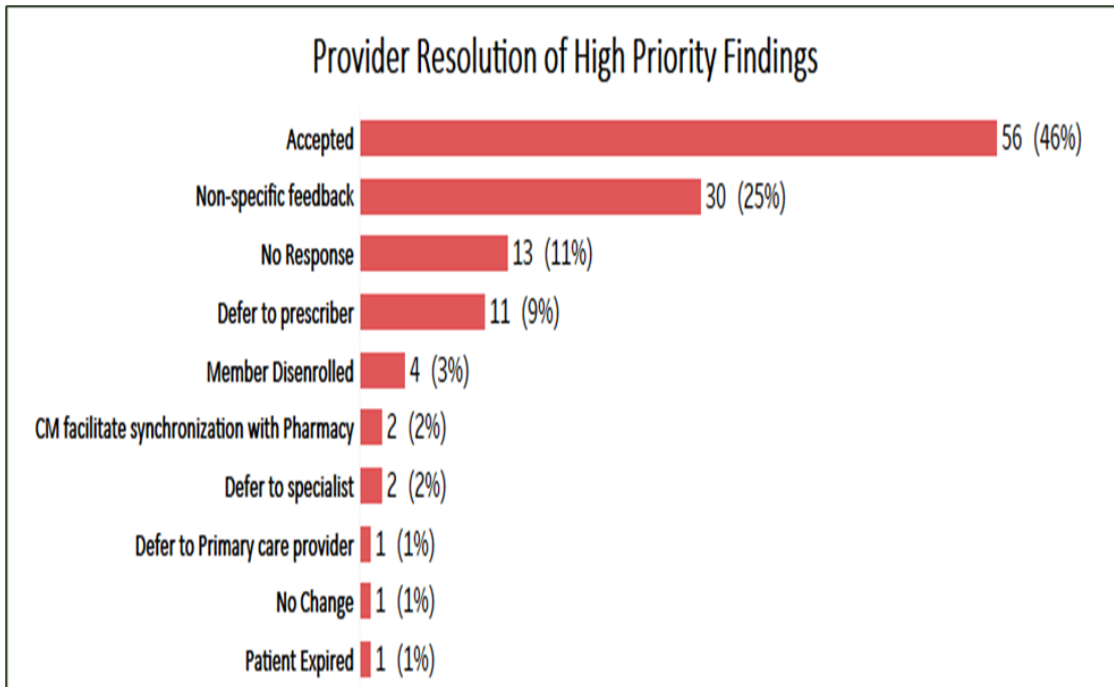
The provider response rate for high priority reviews was 93% and for medium priority reviews was 94 %

CMTR Polypharmacy Reviews 2022



* 512 CMTRs done for polypharmacy. 51% high or medium priority, most common issue medication interaction

Overview of Outcomes for Polypharmacy 2022



*The provider response rate for high priority reviews was 89% and for medium priority reviews was 94 %

