Ohio Innovative Practice Forum

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The Ohio State University College of Pharmacy

OPA Annual Conference & Trade Show

April 5-7, 2024

Disclosure Statement

Jen Rodis has no relevant financial relationship(s) with ineligible companies to disclose and

None of the planners for this activity have relevant financial relationships with ineligible companies to disclose.

Learning Objectives

At the completion of this activity, the participant will be able to:

1. describe innovative pharmacy practice models in Ohio;
2. explain how individual pharmacy practices and practitioners are expanding patient care services;
3. describe the successes and challenges of these programs including their financial viability and impact on outcome measures; and
4. apply these ideas, opportunities, and resources to enhance his/her own pharmacy practice.

Innovation

- in·no·va·tion
  - noun \ˌi-nə-ˈvā-shən\
- 1: the introduction of something new
- 2: a new idea, method, or device : novelty

- Synonyms
  - brainchild, coinage, concoction, contrivance, creation, invention, wrinkle

Ohio Innovative Practice Forum

- **Treston Warren**
  - University of Cincinnati James L. Winkle College of Pharmacy
- **T’Bony M. Jewell**
  - Ohio Northern University/Shrivers Pharmacy
- **Jordan Cloonan**
  - MetroHealth System
- **Brigid Perry**
  - Cleveland Clinic

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- **Richard Chan**
  - Northeast Ohio Medical University/University Hospitals Portage Medical Center
- **Elizabeth Nejadfard & Debra Parker**
  - The University of Findlay
- **Riley K. Carroll**
  - The Ohio State University College of Pharmacy/General Internal Medicine Clinics

Innovating an End-user Drug Donation Program Following Ohio Repository Law Expansion

Treston Warren, PharmD

University of Cincinnati Community-Based PGY1 Resident

St. Vincent de Paul Charitable Pharmacy

OPA Annual Conference & Trade Show

April 5-7, 2024

OHIO PHARMACISTS ASSOCIATION

1 VOICE VISION TEAM

Disclosure Statement

- Treston Warren has no relevant financial relationship(s) with ineligible companies to disclose.

Learning Objectives

At the completion of this activity, the participant will be able to:

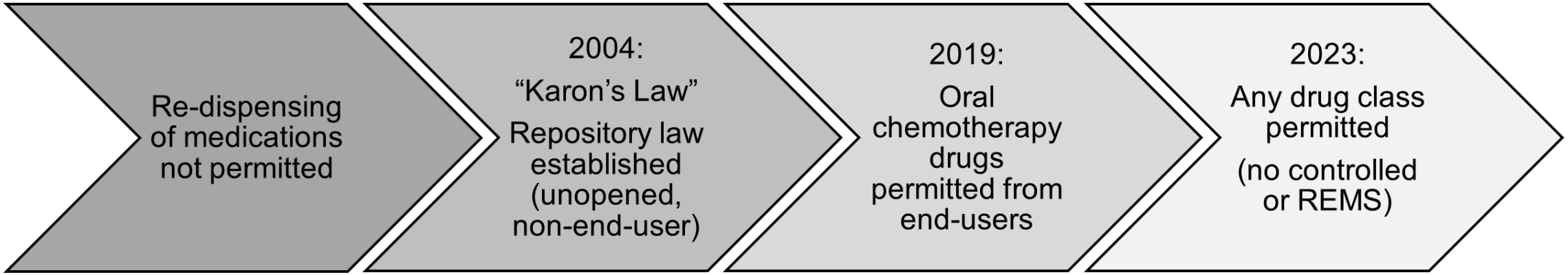
1. Define what an end-user donation is
2. List the entities that may accept end-user donations
3. Explain St. Vincent de Paul Charitable Pharmacy's workflow for accepting end-user donations
4. Propose a workflow for accepting end-user donations at your own practice site

Background

- St. Vincent de Paul Charitable Pharmacy (SVDPCP), Cincinnati OH.
  - Last resort safety net option for uninsured and underinsured individuals
  - No-cost prescription medications (>800,000 prescriptions since 2006)
  - Free clinical services (>$5 million/year cost avoidance)
  - 87% of prescriptions from drugs of donated sources
  - Costly medications remained unavailable
  - Nearly 100 people/month requested to donate medications & were rejected

Background

- Ohio House Bill 558, January 2023
  - Permits end-users to donate their unexpired, unused medications to drug repository programs across the state



Background

- Ohio House Bill 558, January 2023

Who may donate?	What can be donated?	Who may accept donations?
End-users who have taken legal custody of medications outside of a healthcare facility	Products not in their original sealed and tamper-evident unit dose packaging	A charitable pharmacy, hospital, or nonprofit clinic operating a drug repository program

Background

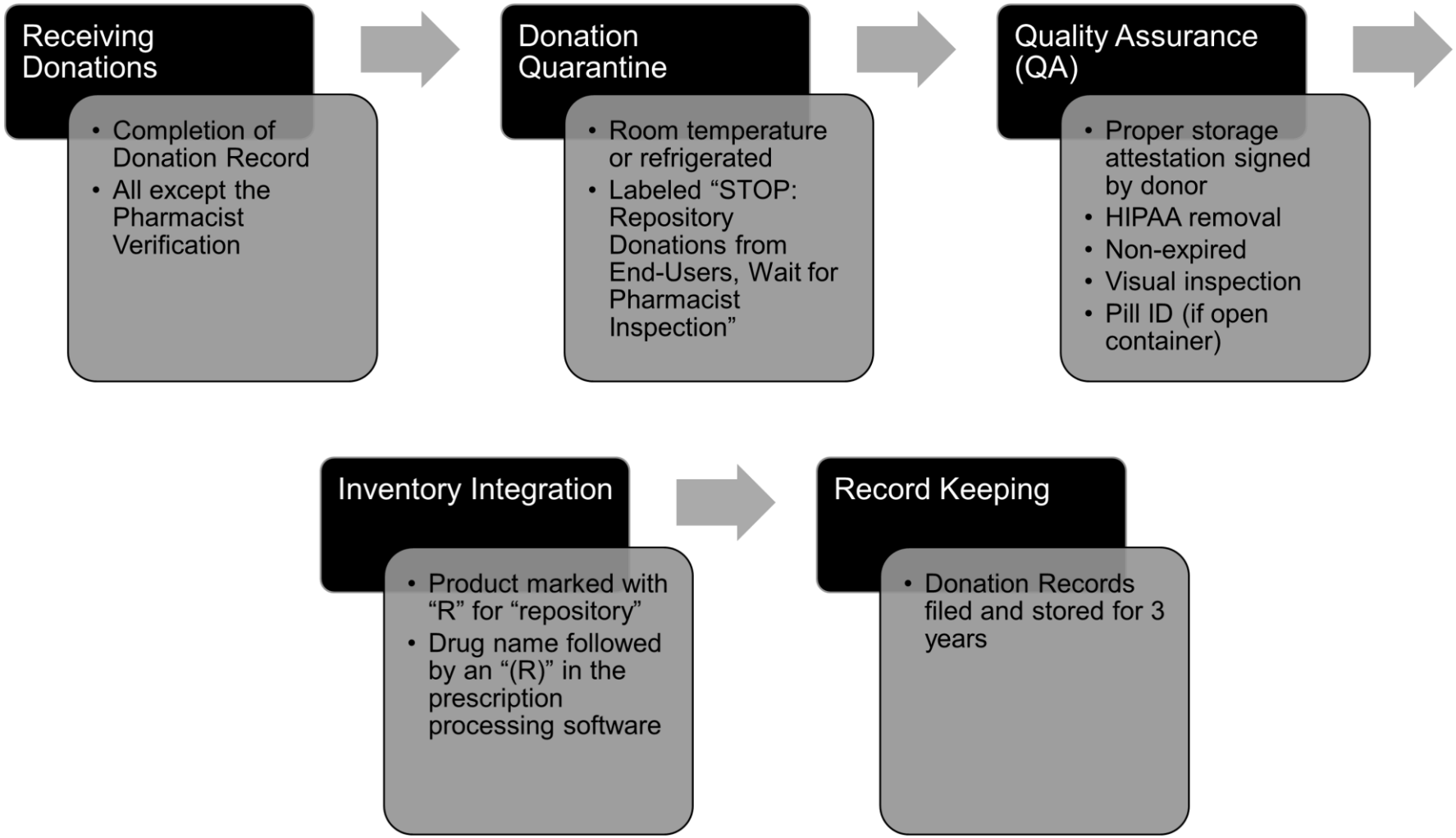
- Drug repository program
  - Allows for the donation & redistribution of prescription medications
- As of November 2023:
  - 44 states, Washington DC, and Guam have laws that permit drug repository programs
  - 28 have operational programs (OH, MI, KY)
  - 18 have laws enacted without operational programs (IN*, WV*, PA)
  - *soon, end-user donation permitted

National Conference of State Legislatures (2024)

Service Description

- First end-user donation accepted June 1st, 2023
  - First 90 days: only insulin/GLP-1's, inhalers, blood thinners
  - To limit overstock and drug destruction
- Project Objectives:
  - Establish a sustainable workflow for accepting end-user donations
  - Train all staff on accepting end-user donations
  - Reduce expenditures by SVDPCP on drug procurement

Service Description



Service Description

DRUG REPOSITORY PROGRAM: DONATION RECORD

PATIENT INFORMATION

Patient Name (on original Rx label)		Patient Phone	
Patient Street Address	**City**	**State**	**Zip Code**

DONOR INFORMATION

Relationship to Patient: ☐Self ☐Individual responsible for patient's care ☐Power of Attorney ☐Guardian ☐Estate executor, administrator, or trustee

Donor Name (if not Patient)		Donor Phone	
Donor Street Address	**City**	**State**	**Zip Code**

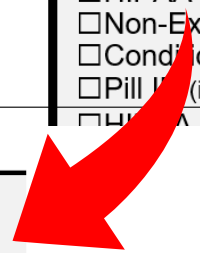
RECIPIENT INFORMATION

St. Vincent de Paul Charitable Pharmacy (TDL: 02-1609300) 1146 Bank Street, Cincinnati, OH 45214 (513)562-8841

Service Description

DRUG INFORMATION

Drug Name	Strength	NDC or Mfg	Exp Date	Quantity	Pharmacist Verification	
1.					☐HIPAA ☐Non-Exp ☐Condition ☐Pill ID (if open)	RPh
2.					☐HIPAA ☐Non-Exp ☐Condition ☐Pill ID (if open)	RPh
3.					☐HIPAA ☐Non-Exp ☐Condition ☐Pill ID (if open)	RPh



Pharmacist Verification	
☐HIPAA ☐Non-Exp ☐Condition ☐Pill ID (if open)	RPh

Service Description

Donor: I am the owner of the drugs identified in this report and voluntarily donate these drugs to St. Vincent de Paul Charitable Pharmacy. I attest that the above-named drugs were stored as recommended by the manufacturer and have not been subject to tampering.

Signature of Donor:_____ **Date Donated:**_____

SVDP Pharmacist: St. Vincent de Paul Charitable Pharmacy understands the immunity provisions of the program pursuant to division (B) of section 3715.872 of the Revised Code. I attest that the above-named drugs appear to be unadulterated, safe, and suitable for dispensing.

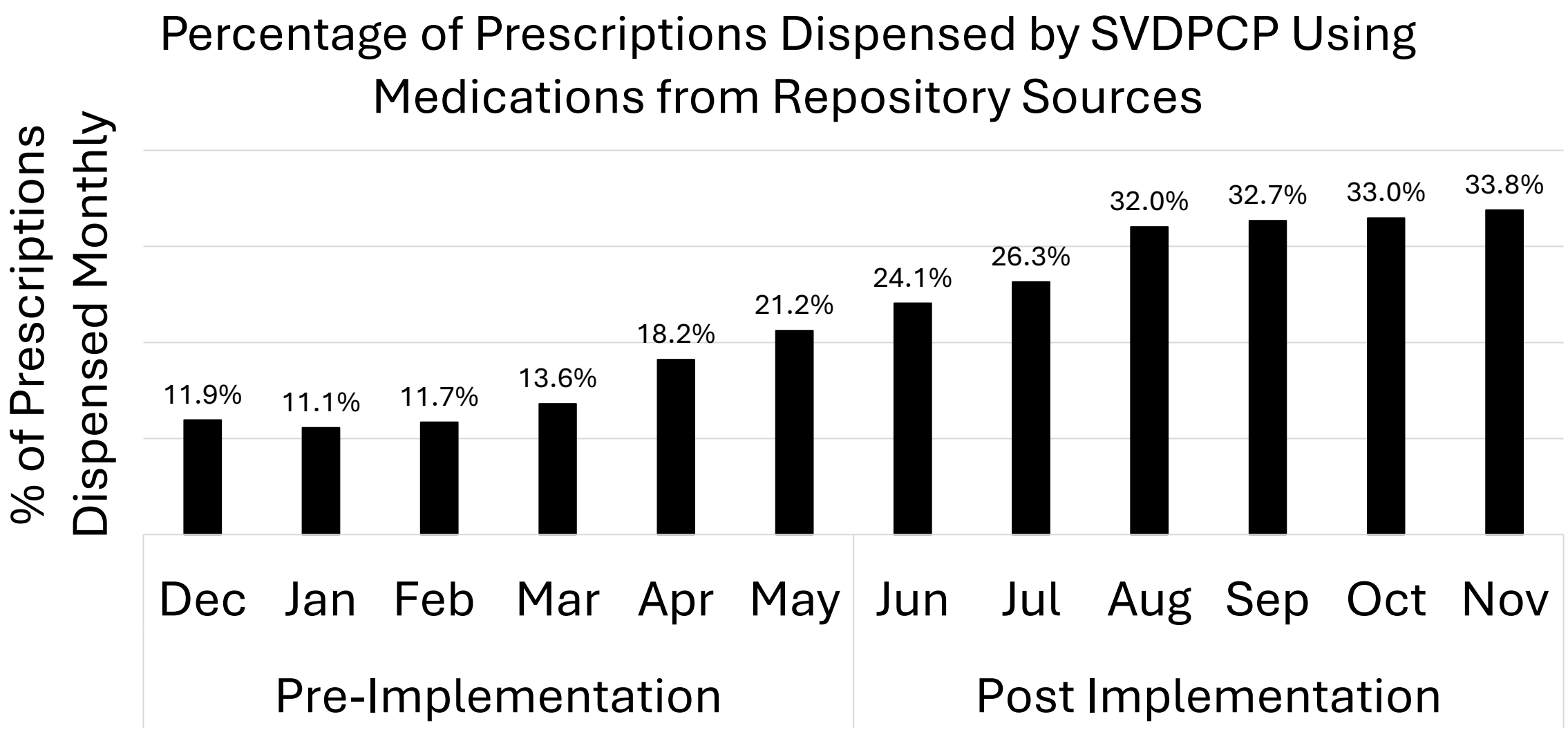
RPh Signature:_____ **Name (print):**_____ **Date:**_____

Service Description

End-user Donations in First Six Months Following Implementation, (N = 206)		
Pharmacologic Category	**Number of Donations**	**Percentage of Total Donations**
Diabetes	110	53%
Insulins	77	37%
GLP-1s	29	14%
Respiratory	44	21%
Inhalers	38	18%
Blood Thinners	30	15%
Eye Drops	13	6%
Other*	12	6%

*Includes other donations of interest received: continuous glucose monitors, lipase enzymes, anti-rejection medications, Entresto, lidocaine patches, creams/ointments, and biologics

Service Description



Program Assessment & Improvement

- Quality Improvement
  - Global aim: reduce the time between end-user medication acceptance and medication redispensing (donation processing efficiency)
  - Plan-Do-Study-Act Cycles: 3 two-week cycles
  - Measures:
    - Time spent by donors submitting (minutes)
    - Time between medication quarantine and inventory integration (days)

Program Assessment & Improvement

Cycle	Test Process	Observations
1	Pharmacist completes entire process (review at intake and QA)	• 15-20 minutes accepting donation • Average 4-6 days to integration • Limited RPh time and limited space
2	Technician intake without review, pharmacist QA	• 3-5 minutes accepting donation • Average 10-15 days to integration • Limited storage space, excess destruction, longer QA
3	Technician review at intake (expiration only), staff or volunteer pharmacist QA	• 5-10 minutes accepting donation • Average 7-10 days to integration • Improved storage space and QA time

Financial Justification

Cost Avoidance		
Pharmacologic Category	Expenditures Six Months Pre-Implementation	Expenditures Six Months Post-Implementation
Insulin	$4,686.25	$0
Inhalers	$16,742.61	$16,054.79
Total	$22,228.86	$16,054.79
TOTAL SIX-MONTH SAVINGS		**$5,374.07**

- Additionally, shift in labor from pharmacists to technicians and licensed volunteers

Future Directions

- Goals and expansion:
  - Resource for other repository programs in Ohio and beyond
  - More efficient process = expansion of accepted drug classes
- Concerns:
  - Storage space for quarantined donations
  - Time spent on QA by pharmacists
  - Developing policies for when certain medications are no longer desired due to surplus stock, patient push-back upon rejection

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1. Link to Registered Repository Programs in Ohio
2. Brief state prescription drug repository programs. National Conference of State Legislatures. (2023). https://www.ncsl.org/health/state-prescription-drug-repository-programs
3. House Bill 558. House Bill 558 | 134th General Assembly | Ohio Legislature. (2023, April 6). https://www.legislature.ohio.gov/legislation/134/hb558
4. Section 3715.87: Drug repository program for donated prescription drugs. Section 3715.87 - Ohio Revised Code | Ohio Laws. (2023, April 6). https://codes.ohio.gov/ohio-revised-code/section-3715.87

Need More Information?

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Implementing a Mental Health Screening Program in a Community Pharmacy

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OPA Annual Conference & Trade Show
April 5-7, 2024

Disclosure Statement

- None of the authors for this activity have relevant financial relationships with ineligible companies to disclose.

Learning Objectives

1. Review a timeline of Ohio Pharmacist Provider Status
2. Discuss factors contributing to creation of a mental health service
3. Explain and describe the rollout of a pilot program targeting patients diagnosed with mental health conditions
4. Describe a retrospective study of a pharmacist led mental health screening service
5. Discuss next steps for implementation of a pharmacist led mental health screening program

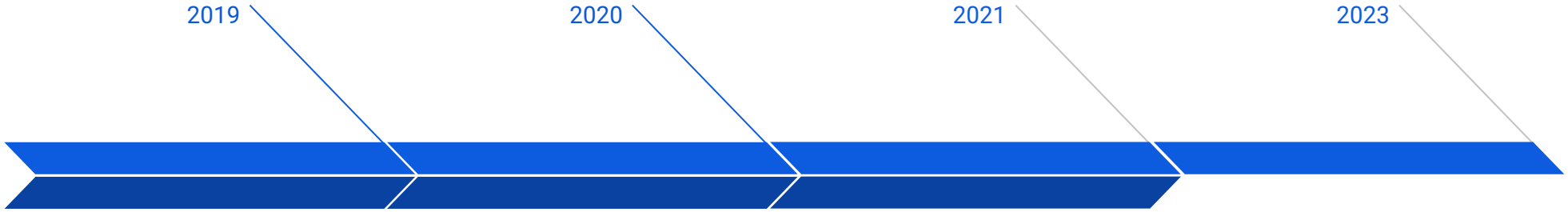
The road to Value Based Care and Provider Status

- HHS began setting value based payment goals in 2015
  - US healthcare system outranks all other countries in spending
  - Second highest household healthcare expenditures behind Switzerland
- The US ranked 11th in system performance in 2017
- $240 M overspent by Ohio Medicaid PBMs 2021

Mental Health in the US

- Patients residing in rural communities are
  - at increased risk of experiencing mental health issues
  - may reside in mental health provider shortage areas
- A 2021 report stated 7% of men and 13.8% women 18 use prescription medications for depression
- USPSTF recommends routine Depression and anxiety screenings

Timeline



January

Gov. Kasich signs pharmacists provider status into law

November

4 MCOs launch programs to reimburse pharmacist for patient care services

January

Pharmacists enroll as providers to receive reimbursement from Medicaid Programs

February

Continued implementation of provider status initiatives

Description

- Background
  - Molina picked 10 pharmacies across Ohio
    - Shrivers Pharmacy had 4 locations
    - Freedom to pick service
- Service
  - Behavioral Health Program
    - Target patients taking antidepressants or antianxiety medications
    - Scheduled phone appointments
    - Administer GAD7 or PHQ9 tests for baseline score
    - Counsel patient/reach out to prescriber
    - Schedule follow up appointment based on clinical judgement

Program Assessment

- Population
  - 318 patients identified, 61 participated in program, 1 declined
  - 24 GAD-7 tests, 37 PQH9 tests
- Results
  - Mean GAD-7 scores = 8.1 initial, 6.4 follow up (range 0-21)
    - relative 20% reduction in GAD-7 scores.
  - Mean PHQ-9 scores = 11.2 initial, 10.0 follow up (range 1-27)
    - relative 10% reduction in PHQ-9 scores.
  - 56.8% of patients showed a reduction in PHQ-9 scores
  - 33% of patients experienced a reduction in GAD-7 scores

Program Assessment

- Initial appointments
  - Nonadherence
    - 37 patients affected between both anxiety and depression.
    - nonadherence decreased to 12 patients at the follow-up appointment.
- Follow-up appointments
  - Perceived efficacy resulting in medication education.

Financial Justification

- Average appointment time: 30 mins
  - range from 20 mins- 60 mins
- Average appointment reimbursement: ~$56
  - range from $33- $74

Future Directions

- More studies needed
  - prescribed follow-up timeline
  - compare scores to patient PDC values
  - describe comorbidities contributing to condition

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5. Screening for Depression in Adults. 2016. Accessed July 10, 2023. [https://www.uspreventiveservicestaskforce.org/uspstf/document/RecommendationStatementFin al/depression-in-adults-screening#bootstrap-panel--1](https://www.uspreventiveservicestaskforce.org/uspstf/document/RecommendationStatementFi nal/depression-in-adults-screening#bootstrap-panel--1)

Need More Information?

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Impact of Pharmacist Administration of Long-Acting Injectable Antipsychotics in Community Pharmacies

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OPA Annual Conference & Trade Show

April 5-7, 2024

Disclosure Statement

- Jordan Cloonan, PharmD has no relevant financial relationship(s) with ineligible companies to disclose.

Learning Objectives

At the completion of this activity, the participant will be able to:

1. Explain the prevalence of severe mental illness
2. Describe the workflow of pharmacist administered long-acting injectable antipsychotics
3. Analyze the impact of community pharmacist administered long-acting injectable antipsychotics

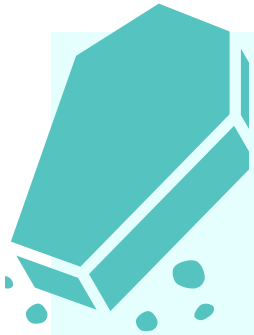
Background

Mental Health Disorders

- **Schizophrenia:** In the top 15 leading causes of disability worldwide
- **Bipolar disorder:** 6th leading cause of disability

Worldwide

- Schizophrenia affects ~ 24 million
- Bipolar disorder affects ~ 40 million



High Mortality

- Increased risk of premature mortality
- Estimated life lost for people with schizophrenia is 28.5 years

Financial Burden

- Disproportionately high financial costs relative to other chronic conditions

Schizophrenia. *U.S. Department of Health and Human Services*. 2023.

Long Acting Injectables Antipsychotics (LAIAs)

LAIAs

- Allows for gradual release of medication into the bloodstream
- Injection frequency varies

Benefits

- Reduced medication burden, improved medication adherence and symptom control
- Decreased mortality risk, hospitalizations, and rates of treatment discontinuation

Prevalence

- ~ 15-28% of eligible patients with a diagnosis of schizophrenia receive LAIA treatment

Schizophrenia Treatment Guidelines. *American Psychiatric Association*. 2020.
Sajatovic et al. *Neuropsychiatric Disease and Treatment*. 2018.

Description of Service

Description of Pharmacy LAIA Service

First dose administered by behavioral health (inpatient or outpatient)

Provider's office communicates via Epic chat to pharmacists

- Date of first injection, patient preference of subsequent injection day, any other relevant dispensing information, etc.

Appointment with pharmacist scheduled within the electronic medical record (EMR)

Patient notified

Study Purpose

The aim of this study was to assess if community pharmacist administration of LAIAs impacts adherence in an underserved patient population

To provide guidance to other institutions regarding the implementation of pharmacist administered long-acting injectable medication protocols and services in an outpatient setting

Study Design

- Retrospective chart review
  - Patients receiving LAIA from MetroHealth (MH) retail pharmacies compared to a historical, matched control group of patients receiving LAIA from non-pharmacists
  - Between January 1st 2023 – September 15th 2023

Inclusion	Exclusion
• Patients ≥18 years old • First dose of LAIA given by non-pharmacist health care provider • Received one of the following LAIAs: aripiprazole (Abilify Maintena), aripiprazole lauroxil (Aristada), paliperidone palmitate (Invega Sustenna), paliperidone palmitate (Invega Trinza, Invega Hafyera), or risperidone (Risperdal Consta, Perseris), haloperidol (Haldol decanoate), fluphenazine (Prolixin decanoate)	• Received fewer than two injections of the same LAIA medication • Patients with LAIA administration by both pharmacy and nursing

Primary Objective and Endpoints

Evaluate adherence rates of LAIAs

- Compare the proportion of days covered (PDC) for LAIAs administered at pharmacist appointments vs other clinic appointments

$$\text{PDC} = \frac{\text{the number of unique total days with medication coverage}}{\text{days in the measurement period}}$$

Outcomes: Baseline Characteristics

Baseline Characteristic	Total (n = 68)	Pharmacist (n = 34)	Non-Pharmacist (n = 34)
Median age, years [IQR]	37.5 [29-50]	38.5 [29-50]	37.0 [29-51]
Sex, male, n (%)	40 (58.8)	19 (55.9)	21 (61.8)
Race/Ethnicity, n (%)			
White	24 (35.5)	14 (41.2)	10 (29.4)
Black or African American	35 (51.5)	14 (41.2)	21 (61.8)
Hispanic or Latino	4 (5.9)	3 (8.8)	1 (2.9)
Asian	1 (1.5)	1 (2.9)	0 (0)
Not Available/Declined to Answer	4 (5.9%)	2 (5.9)	2 (5.9)
Insurance, n (%)			
Medicaid	51 (75)	28 (82.4)	23 (67.6)
Medicare	15 (22.1)	7 (20.6)	8 (23.5)
Dual Eligible (Medicare/Medicaid)	7 (10.3)	1 (2.9)	6 (17.6)
Commercial	1 (1.5)	0 (0)	1 (2.9)
MetroHealth Financial Assistance Program	2 (2.9)	2 (5.9)	0 (0)

Outcomes: Baseline Characteristics

Baseline Characteristic	Total (n = 68)	Pharmacist (n = 34)	Non-Pharmacist (n = 34)
Diagnosis, n (%)			
Schizophrenia	34 (50)	15 (44.1)	19 (55.9)
Schizoaffective disorder	26 (38.2)	13 (38.2)	13 (38.2)
Bipolar disorder	23 (33.8)	13 (38.2)	10 (29.4)
Other	5 (7.4)	3 (8.8)	2 (5.9)
Social Determinants of Health, n (%)			
Transportation needs	9 (13.2)	6 (17.6)	3 (8.8)
Financial resource strain	9 (13.2)	5 (14.7)	4 (11.8)
Housing stability	5 (7.4)	2 (5.9)	3 (8.8)
Depression	8 (11.8)	4 (11.8)	4 (11.8)
None identified	23 (33.8)	14 (41.2)	9 (26.5)
Unavailable	25 (36.8)	9 (26.5)	16 (47.1)

Outcomes

Group	Variable	N	Mean	SD	Median	IQR	
1 (Pharmacist)	Age	34	41.6	15.6	38.5	29.0	50.0
	Change in Weight	34	1.0	11.3	0.0	-3.7	6.6
	Number of LAI Doses	34	12.6	13.4	8.5	4.0	14.0
	Number of Appointments	34	13.5	13.9	9.0	4.0	16.0
	Number of No Shows	34	0.9	2.0	0.0	0.0	1.0
	No Show Rate	34	6.2	9.7	0.0	0.0	10.0
	PDC	34	95.6	8.8	100.0	93.0	100.0
	Number of Antipsychotics	34	1.3	0.5	1.0	1.0	2.0
	Number of ED Visits	34	0.0	0.2	0.0	0.0	0.0
	Number of Admissions	34	0.0	0.0	0.0	0.0	0.0
2 (Non-Pharmacist)	Age	34	41.4	15.4	37.0	29.0	51.0
	Change in Weight	34	1.8	9.1	2.2	-1.9	6.2
	Number of LAI Doses	34	10.7	7.6	10.5	4.0	15.0
	Number of Appointments	34	12.5	8.1	11.5	5.0	16.0
	Number of No Shows	34	1.9	2.0	1.0	0.0	3.0
	No Show Rate	34	16.2	17.8	12.1	0.0	22.2
	PDC	34	92.9	9.3	98.8	84.8	100.0
	Number of Antipsychotics	34	1.2	0.4	1.0	1.0	1.0
	Number of ED Visits	34	0.1	0.2	0.0	0.0	0.0
	Number of Admissions	34	0.0	0.2	0.0	0.0	0.0

Outcomes

Paired Samples Differences

Outcome	Total Pairs (n = 34)	Pharmacist (n = 34)	Non-Pharmacist (n = 34)	P-Value
Change in weight (kg)	-2.6 [-9.6 – 7.5]	0.0 [-3.7 – 6.6]	2.2 [-1.9 – 6.2]	0.573^
Number of LAIAs Administered	1.9 ± 15.3	12.6 ± 13.4	10.7 ± 7.6	0.393**
Number of Scheduled Appointments	1.0 ± 16.4	13.5 ± 13.9	12.5 ± 8.1	0.710*
No show rate (%)	-10.0 ± 20.7	6.2 ± 9.7	16.2 ± 17.8	**0.004****
Number of Antipsychotic Medications	0.1 ± 0.6	1.3 ± 0.5	1.2 ± 0.4	0.152*
Number of Psychiatric Related ED visits	0.0 ± 0.3	0.0 ± 0.2	0.1 ± 0.2	0.577**
Number of Psychiatric Related Admissions/Hospitalizations	0.0 ± 0.2	0.0 ± 0.0	0.0 ± 0.2	0.223**
PDC (%)	1.0 [0.0 – 7.5]	100 [93 - 100]	98.8 [84.8 - 100]	0.078^

Key: mean ± SD; median [IQR]

^Wilcoxon Sign Rank Test

*Generalized Estimating Equations (GEE) methodology for matched Poisson data

**GEE methodology for matched Negative Binomial Data

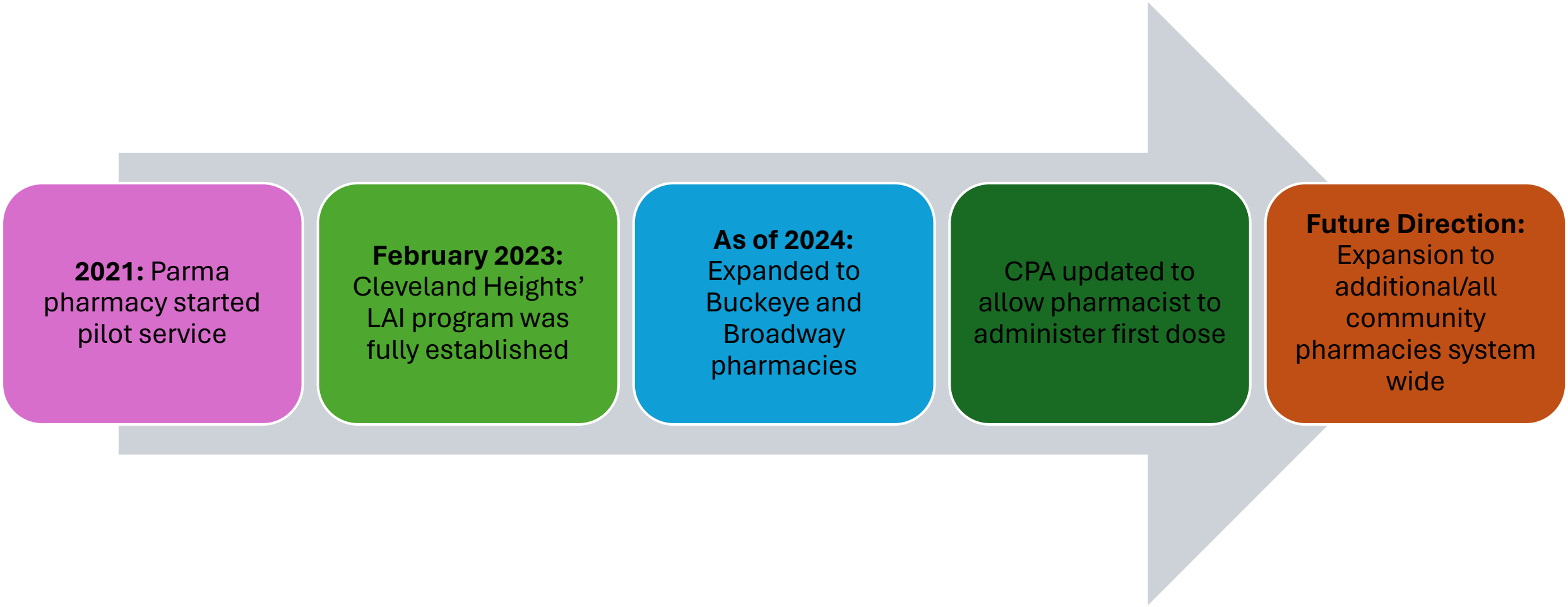
Takeaways

No difference in adherence rate was found between pharmacist and non-pharmacist groups

Community pharmacies are in a unique position to improve access to care

Additional studies are needed to further evaluate financial justifications and clinical implications

What's Next?


2021: Parma pharmacy started pilot service
February 2023: Cleveland Heights' LAI program was fully established
As of 2024: Expanded to Buckeye and Broadway pharmacies
CPA updated to allow pharmacist to administer first dose
Future Direction: Expansion to additional/all community pharmacies system wide

References

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3. Schizophrenia. National Institute of Mental Health. Accessed March 18, 2024. https://www.nimh.nih.gov/health/topics/schizophrenia.

Need More Information?

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Implementation of an Adherence Pharmacy Referral Protocol for Patients with Heart Failure Receiving Sacubitril/Valsartan

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OPA Annual Conference & Trade Show
April 5-7, 2024

OHIO PHARMACISTS ASSOCIATION

1 VOICE VISION TEAM

Disclosure Statement

- Brigid Perry has no relevant financial relationship with ineligible companies to disclose.

  and

- None of the planners for this activity have relevant financial relationships with ineligible companies to disclose.

Learning Objectives

At the completion of this activity, the participant will be able to:

1. Discuss the importance of adherence with sacubitril/valsartan and the adherence services provided at Cleveland Clinic Adherence Pharmacy and Home Delivery
2. Describe the process of a medication-specific workflow protocol
3. Evaluate the feasibility of a medication-specific workflow protocol and non-clinical benefits experienced by patients
4. Evaluate the next steps with this project

Heart Failure

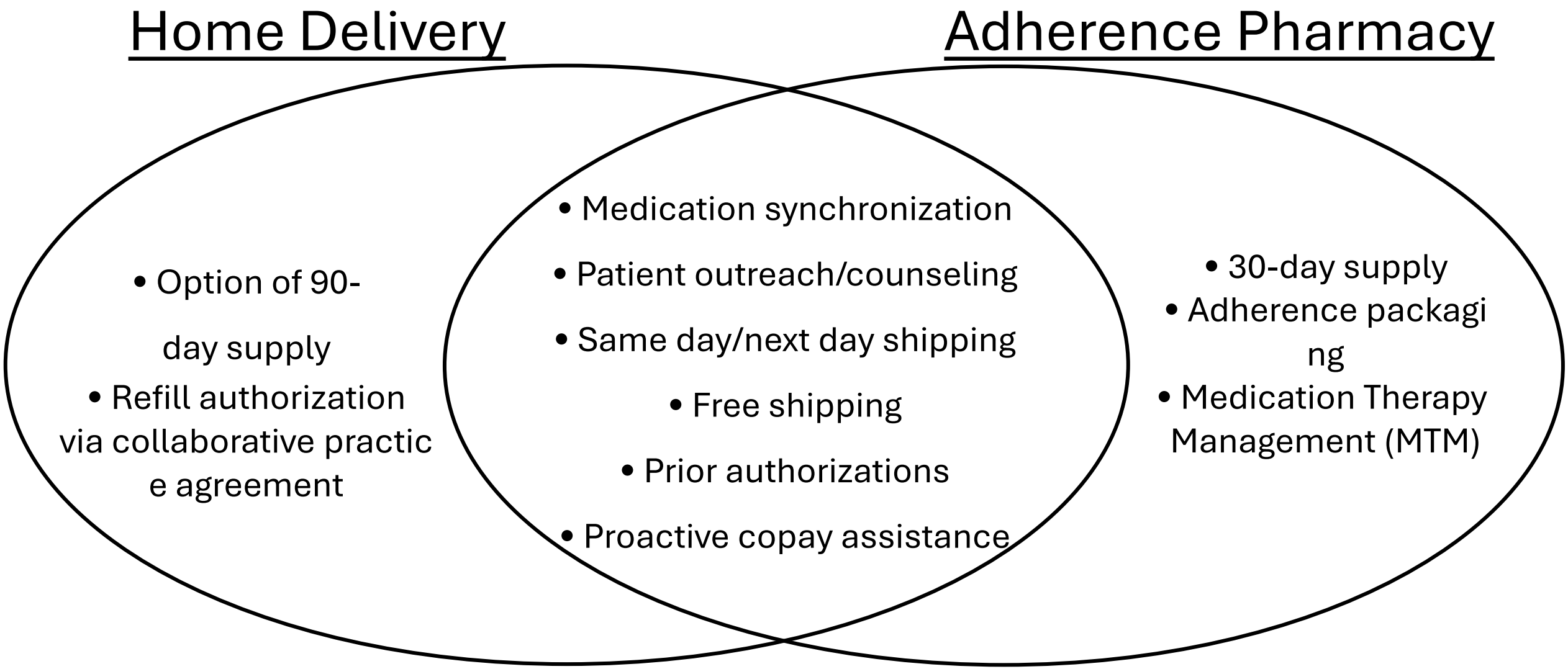
6.7 million Americans diagnosed with heart failure

AHA/ACC 2022 Guidelines: beta blocker, **ARNi**, SGLT2i, MRA

function

ARNi: angiotensin receptor neprilysin inhibitor
SGLT2i: sodium-glucose cotransporter-2 inhibitor
MRA: mineralocorticoid receptor antagonist

Cleveland Clinic Mail-Order Pharmacies



Project Goal: Determine the feasibility of a medication-specific workflow for new sacubitril/valsartan prescriptions at Cleveland Clinic Adherence Pharmacy and Home Delivery.

Secondary Goals: Evaluate non-clinical benefits experienced by patients.

Protocol Methods

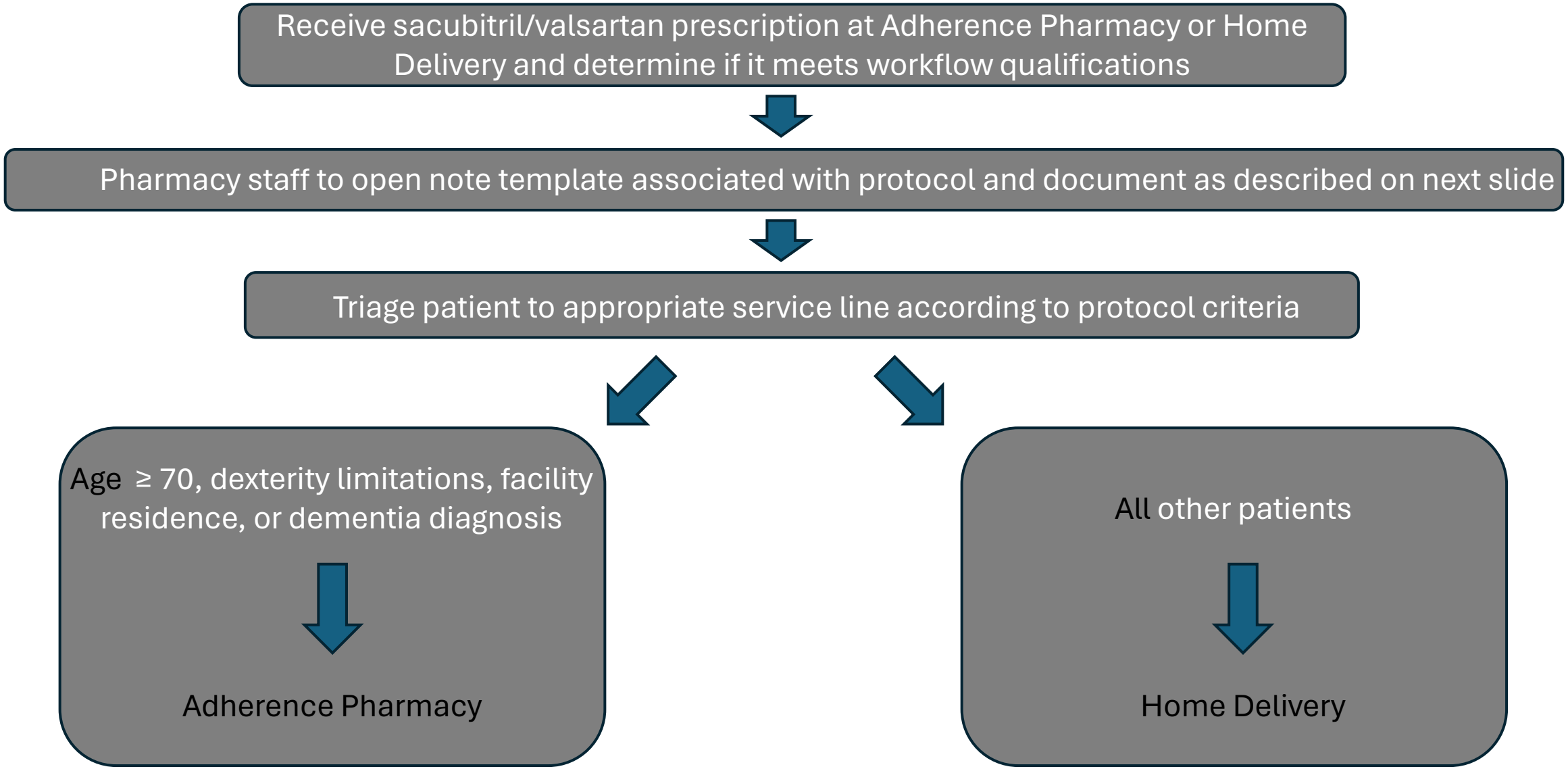
Inclusion Criteria

- New sacubitril/valsartan prescriptions received by Adherence Pharmacy or Home Delivery
- Patient meets criteria of closed-door pharmacy policy
- Prescription written 9/29/23 - 12/21/23

Exclusion Criteria

- Patients with a primary residence in a state that the Cleveland Clinic mail-order pharmacies are not licensed in
- Patients that have insurances not contracted with Cleveland Clinic pharmacies

Proposed Workflow



Inclusion criteria
Triage criteria
Adherence Pharmacy criteria
QI/QA Assessment

Workflow Note Template

Service line the patient initially was referred to: Adherence Pharmacy or Home Delivery

Is the prescription from a CCF provider: YES/NO

Is the patient insured with an in-network plan: YES/NO

Is the patient a resident in a state that the Cleveland Clinic mail-order pharmacy can ship to: YES/NO

Is the patient 70 years of age or older: YES/NO

Does the patient live in a facility: YES/NO

Does the patient have a diagnosis of dementia: YES/NO

Does the patient have dexterity limitations: YES/NO

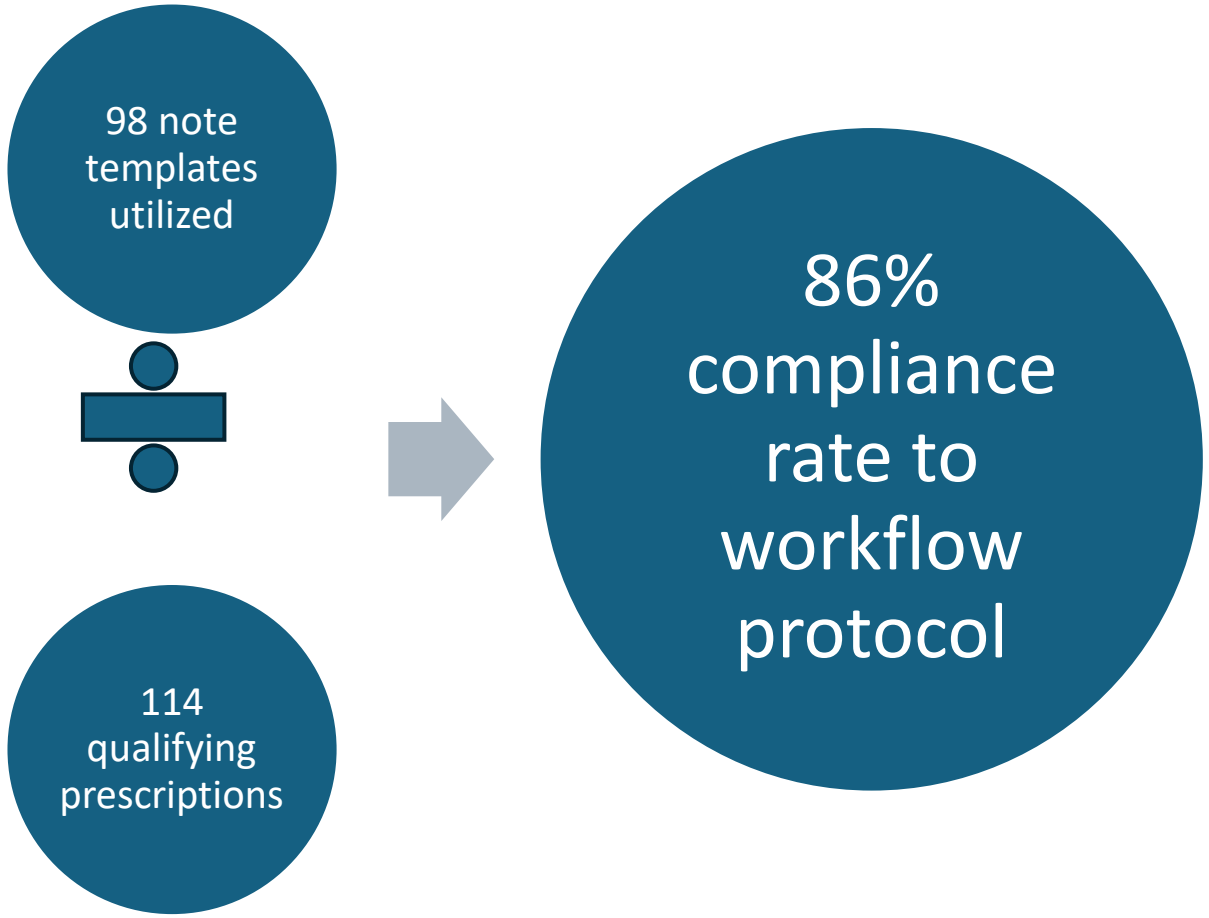
Does the patient wish to receive adherence packaging: YES/NO

Does the patient wish to receive MTM services: YES/NO

Based on the criteria above, the patient should be referred to: Adherence Pharmacy or Home Delivery

Duration of time spent triaging this patient: < 10 minutes, 10 – 20 minutes, > 20 minutes

Primary Objective: Workflow Compliance Rate



Secondary Objectives: Non-Clinical Patient Benefit

Co-Pay Card Utilization	Grant Funding Utilization
13 (13.3%) patients	17 (17.3%) patients
Maximum $4,100 per patient per year	Average $332.58 per patient per fill

Prior Authorizations	Patient Assistance Program Enrollment
41 (41.8%) completed	9 (9.2%) applications initiated

Financial Considerations

- Average time to complete triage per patient: <10 minutes
- No additional staff or resources were required to perform this protocol

Potential Next Steps

Implementing other medication-specific workflow protocols

Clinical impact study

Acknowledgements

Kristel Geyer, PharmD, BCOP, BCPS

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Julianne Fallon, PharmD, BCCP

Marcie Parker, PharmD, BCACP

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Need More Information?

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Expanding Interprofessional Collaborative Practice and Advanced Pharmacy Practice Experience

Richard Chan, PharmD, RPh, BCPS

Assistant Professor of Pharmacy Practice and
Clinical Pharmacy Specialist in Internal Medicine

Northeast Ohio Medical University and
University Hospitals Portage Medical Center

OPA Annual Conference & Trade Show
April 5-7, 2024

OHIO PHARMACISTS ASSOCIATION

1 VOICE VISION TEAM

Northeast Ohio Medical University and University Hospitals Portage Medical Center

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Ashley Conger, PharmD, RPh

Assistant Professor of Pharmacy Practice and Clinical Pharmacy Specialist in Internal Medicine

Disclosure Statement

- Dr. Chan has no relevant financial relationship(s) with ineligible companies to disclose.

Learning Objectives

At the completion of this activity, the participant will be able to:

1. Describe the Acute Care Advanced Pharmacy Practice Experience (APPE) model at University Hospitals Portage Medical Center
2. Identify the assessment tools utilized to evaluate student perception and growth
3. Understand the impact of the new Acute Care APPE model on the students who have completed the rotation

Background

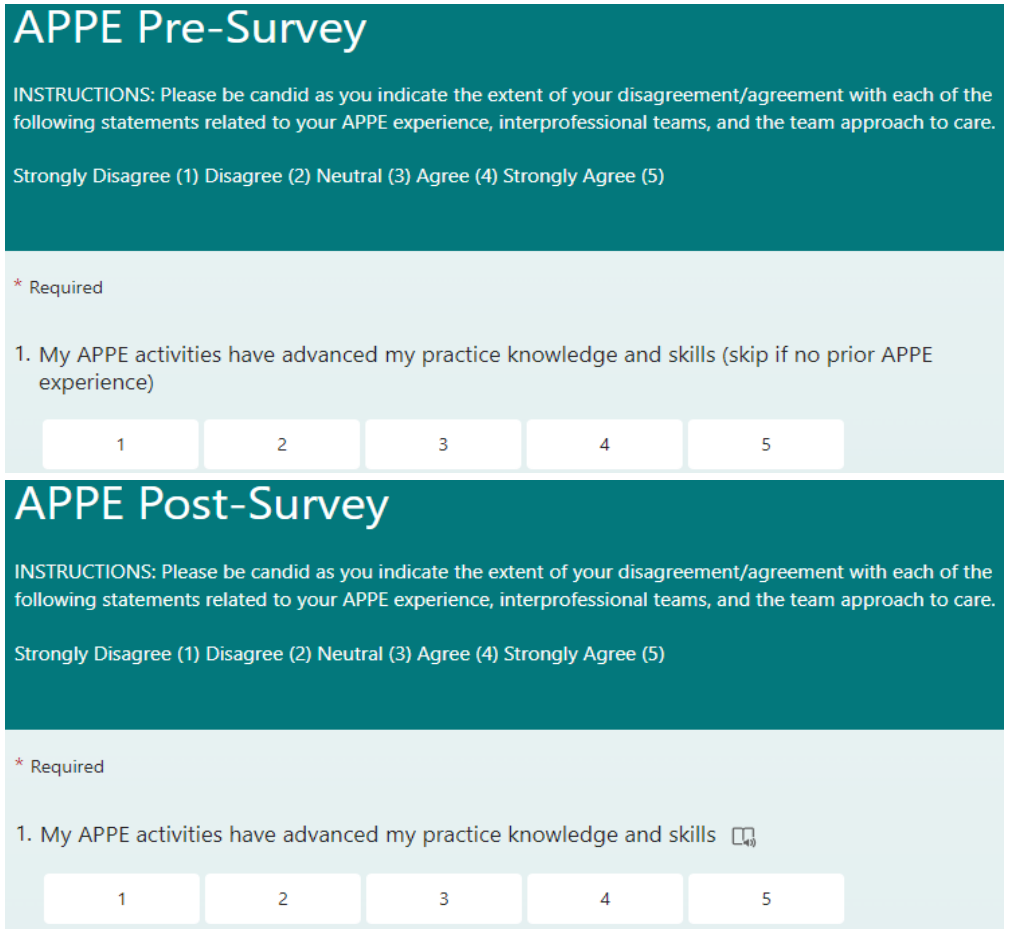
- Practice site: University Hospitals Portage Medical Center
  - Rural hospital in Northeast Ohio
  - 99 beds
  - Three shared faculty clinical pharmacists
  - One full-time clinical pharmacist
- Recent expansion of pharmacy services
- Precept Acute Care APPEs
  - 24 students per academic year
  - Two-month rotations

APPE Rotation Schedule

- Learners round with each pharmacist and their teams
- Learners experience the continuum of acute care
  - Two-week blocks
  - Exposed to critical care, step-down, general medical, palliative and end-of-life care
  - Interact with physicians and midlevel prescribers
  - Learn with physician associate and medical students

Program Assessment

Student Perception Survey



APPE Pre-Survey

INSTRUCTIONS: Please be candid as you indicate the extent of your disagreement/agreement with each of the following statements related to your APPE experience, interprofessional teams, and the team approach to care.

Strongly Disagree (1) Disagree (2) Neutral (3) Agree (4) Strongly Agree (5)

* Required

1. My APPE activities have advanced my practice knowledge and skills (skip if no prior APPE experience)

1 2 3 4 5

APPE Post-Survey

INSTRUCTIONS: Please be candid as you indicate the extent of your disagreement/agreement with each of the following statements related to your APPE experience, interprofessional teams, and the team approach to care.

Strongly Disagree (1) Disagree (2) Neutral (3) Agree (4) Strongly Agree (5)

* Required

1. My APPE activities have advanced my practice knowledge and skills

1 2 3 4 5

- Pre-survey: 13 questions related to interdisciplinary experience, pharmacist role, and patient care
- Post-survey: same questions from pre-survey and three additional questions related to preceptor and APPE rotation

Program Assessment

Drug and Disease State Exam

Internal Medicine Exam

NAME: _____ Date: _____

1. A patient requires a cardioselective Beta Blocker for outpatient use after hospital discharge. The resident turns to you and asks which drug he should choose.
   Name 4 cardioselective Beta Blockers:

2. Which of the following does not cause increased potassium? Captopril, amiloride, irbesartan, doxazosin, spironolactone

3. Your 67yo patient has a PMH of HTN, DM, and BPH. He presents to the hospital with a headache and blurry vision. His blood pressure is 169/93, HgA1c = 11, Wt = 245 lbs, Ht = 5'9". He takes no medications and hasn't seen a doctor in "years."
   a. What is his goal blood pressure?
   b. What guidelines will you use to establish his HTN goal?
   c. What pharmacologic treatment would you recommend for this patient?
   d. What is his goal HbA1c?
   e. What are the goal values for this patient's fasting and post-prandial blood glucose?

4. A patient was just started on digoxin a week ago for heart failure. All of the following adverse effects could be expected except: nausea, anorexia, confusion, arrhythmias, acute renal failure.

5. Cough is associated with which of the following medications: Carvedilol, valsartan, enalapril, torsemide, eplerenone

- Administered on the first and last day of rotation
- 82 items, 334 possible points
- Wide variety of acute care related questions
- Scored based on a tally system

Results

- Student perception survey
  - Improvement in all 13 survey questions from pre to post test
  - Positive trend on the additional questions on overall experience
  - Adjustments to program based on narrative comments

- Drug and disease state exam
  - Positive trends overall between baseline and new structure

Financial Justification

- Three shared faculty clinical pharmacists
  - 60% - pharmacy practice
  - 40% - academia

Future Directions

- Optimize the transition between preceptors
  - Monitor progression to achieving student goals
  - Ensure continuity of student feedback and preceptor expectations
- Maximize time allotted for topic discussions
- Increase student impact in patient care activities

Need More Information?

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Pharmacist-Led Deprescribing Initiative in a Family Medicine Residency Clinic

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Dean, University of Findlay College of Pharmacy

Elizabeth Nejadfard, BSPS Candidate, 2024
University of Findlay College of Pharmacy

Christina Wilder, PharmD
PGY2 Ambulatory Care Resident, Mercy Health St. Rita's Medical Center, Lima, OH

OPA Annual Conference & Trade Show
April 5-7, 2024

Disclosure Statement

- Debra Parker, Elizabeth Nejadfard, and Christina Wilder have no relevant financial relationship(s) with ineligible companies to disclose.

  and

- None of the planners for this activity have relevant financial relationships with ineligible companies to disclose.

Learning Objectives

At the completion of this activity, the participant will be able to:

1. Define polypharmacy and its associated risks of adverse drug events and drug-related costs

2. Define deprescribing and list several tools available to screen for deprescribing opportunities in geriatric patients

3. Recognize the pharmacist's role on care teams in deprescribing

Polypharmacy

- Polypharmacy
  - Simultaneous use of multiple (defined as ≥ 5 in this project) medications by an individual
  - Positively correlated with increasing age of population
  - Often necessary to address multiple simultaneous chronic diseases
  - Presents increased risk for drug interactions, adverse effects, and medication non-adherence
  - Has become a common and complex aspect of healthcare

- Striking a balance between optimizing therapeutic outcomes and minimizing potential risks is *crucial* in the management of polypharmacy, highlighting the importance of comprehensive medication reviews, patient education, and coordinated health care efforts.

- Strategies to identify potential medications to be deprescribed in geriatric patients:
  - STOPP (Screening tool of older people's prescriptions)
  - START (Screening tool to alert to right treatment) and the
  - American Geriatrics Society Beers Criteria

- While each is useful, no single tool is superior to another, and their use must be *ingrained* in the prescription writing habits of providers.

Pharmacist-Led Deprescribing Initiative Background

- Deprescribing:
  - Planned and supervised process of dose reduction or stopping medications that may be causing harm or are no longer providing benefit

- PGY2 Ambulatory Care Residency Project
  - Christina Wilder, PharmD
    - Supervising pharmacists: Debra Parker, PharmD & Staci Dotson, PharmD
    - Pharmacy student: Elizabeth Nejadfard, University of Findlay Class of 2024
- Setting:
  - Mercy Health St. Rita's Medical Center Family Medicine Residency Clinic, Lima, OH
  - Clinic is staffed by medical residents, attending physicians, clinical pharmacist, PGY1 & PGY2 pharmacists, APPE students

Purpose, Primary & Secondary Outcomes

- Purpose:
  - assess the impact of a novel pharmacist developed deprescribing initiative in a geriatric population from a primary care setting

- Primary Outcome:
  - number of medications deprescribed

- Secondary Outcomes
  - cost savings
  - pharmacist intervention time, and
  - 30-day hospital admission and emergency department visits post-intervention

- Deprescribing data from the primary and secondary outcomes was to be compared with previous year data.

Methods

- Single center, prospective chart review of outpatient medical records

- Inclusion Criteria:
  - Established patients in the Family Medicine Residency Clinic
  - ≥ 65 years old
  - ≥ 5 or more medications on their home medication list
  - Scheduled appointment in January or February 2024

- Prior to patient appointment:
  - A pharmacist reviewed the patient's medication list
  - Recommendations for deprescribing were documented for the medical residents and/or attending physicians
  - Pharmacist interventions and number of medications deprescribed were tracked along with previously listed secondary outcomes

- January and February 2024 data were collected and compared to corresponding data points from January and February 2023.

Results

- **2023 Patient Sample**: n=2
  - 2 (100%) male
  - 3 pharmacist recommendations to discontinue medication(s)
  - Acceptance rate: 1/3 (33.3%) recommendations accepted
  - Estimated total medication cost savings /month: **$2,068**
    - **$1,034/month/patient, or >$12K annually/pt**
  - Time spent/chart: ~15 minutes

- **2024 Patient Sample**: n=28
  - Ages: 65-90 yo
  - 12 (43%) male
  - 59 pharmacist recommendations
  - Acceptance rate: 37/59 (59%)
  - Discontinuation rationale documented:
    - Unnecessary (50%)
    - ADR or non-adherence (26%)
  - Dose adjustment rationale documented:
    - De-escalation of dose (50%)
  - Estimated total medication cost savings /month: $4,619.67
    - **$165/month/patient, or > $1980 annually/pt**
  - Time spent/chart: ~18 minutes

- Acknowledgement to Padmini Sekar for statistical analysis

Limitations

- Small sample size (n=30 total from both groups)
  - 2024 (28 patients)
  - 2023 (2 patients)
    - Contributing factors: changes in EMR documentation expectations between 2023 and 2024; report utilized to pull eligible patients did not function appropriately for the historic control.
  - Data was not normally distributed.
  - Statistic analysis was therefore limited.
- Time estimates were not reported for all charts reviewed
  - Pharmacists collecting data did not report time spent reviewing charts in which no recommendations were made.
- No standardized training of pharmacists for deprescribing recommendations
- Multiple pharmacists participated in chart review, resulting in possible subjective differences in number and type of recommendations made

Conclusion/Discussion

- With this project, the expectation was evaluate the impact of pharmacist interventions on (de)prescribing patterns.
- Prescriber awareness of this project/initiative may have increased recommendation acceptance rates.
- This study suggests that with pharmacist involvement
  - polypharmacy (and pill burden) can be reduced
  - healthcare spending may be reduced
  - commitment of time of the part of the pharmacist and prescriber may be minimal

- This research may provide a *starting point* for future healthcare systems to enhance their quality of healthcare delivery through pharmacist-led deprescribing.

Recommendations

- Future similar research include:
    - Standardized training of all data collectors
    - Deliberate inclusion of time spent on all charts in order to provide a more accurate estimation of cost-effectiveness of this clinical activity
    - Mock report generated to ensure it pulls a more robust comparison group
    - Extended study period, which may yield numbers more amenable to statistical analysis

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Implementation of a Collaborative Practice Agreement for Behavioral Health in the Primary Care Setting

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OPA Annual Conference & Trade Show
April 5-7, 2024

OHIO PHARMACISTS ASSOCIATION

1 VOICE VISION TEAM

Disclosure Statement

- Riley Carroll has no relevant financial relationship(s) with ineligible companies to disclose.

Learning Objectives

At the completion of this activity, the participant will be able to:

1. Identify the need for increased access to behavioral health care within a primary care setting
2. Describe the growth of a pharmacist-led behavioral health service
3. Recognize the impact of the pharmacist in providing behavioral health medication management

Background

- More than 1 in 5 adults in the United States live with a mental health disorder[1]
- In a 2021 study, 42% of U.S. adults reported symptoms of anxiety and depression in the previous year and 10% of respondents felt their mental health needs were not being met[2]

Background

- Limited studies evaluating the impact of pharmacist-led behavioral health services in the primary care setting exist outside of the VA health system[3-6]
- This service aims to increase patient access to behavioral health care within a primary care setting

Background: Study Setting

- The Ohio State University Division of General Internal Medicine
  - 7 National Committee for Quality Assurance (NCQA) patient-centered medical homes
  - >80 attending physicians and >100 medical residents
  - Serving >70,000 patients
  - 9 clinical pharmacists (7.8 full-time equivalents)
  - 3 pharmacy residents

Background: Study Setting

- Collaborative practice agreements at OSU General Internal Medicine Clinics
  - Hypertension
  - Diabetes
  - Nicotine dependence
  - HIV PrEP
  - Behavioral health
  - Weight management

Description of Service: CPA Development

Description of Service: CPA Workflow

- Through the CPA, pharmacists can:
  - Assess depression and anxiety symptoms using PHQ-9 and GAD-7
  - Evaluate for adverse effects to drug therapy
  - Order and interpret laboratory monitoring
  - Order and adjust antidepressant and anxiolytic medications
  - Provide patient education

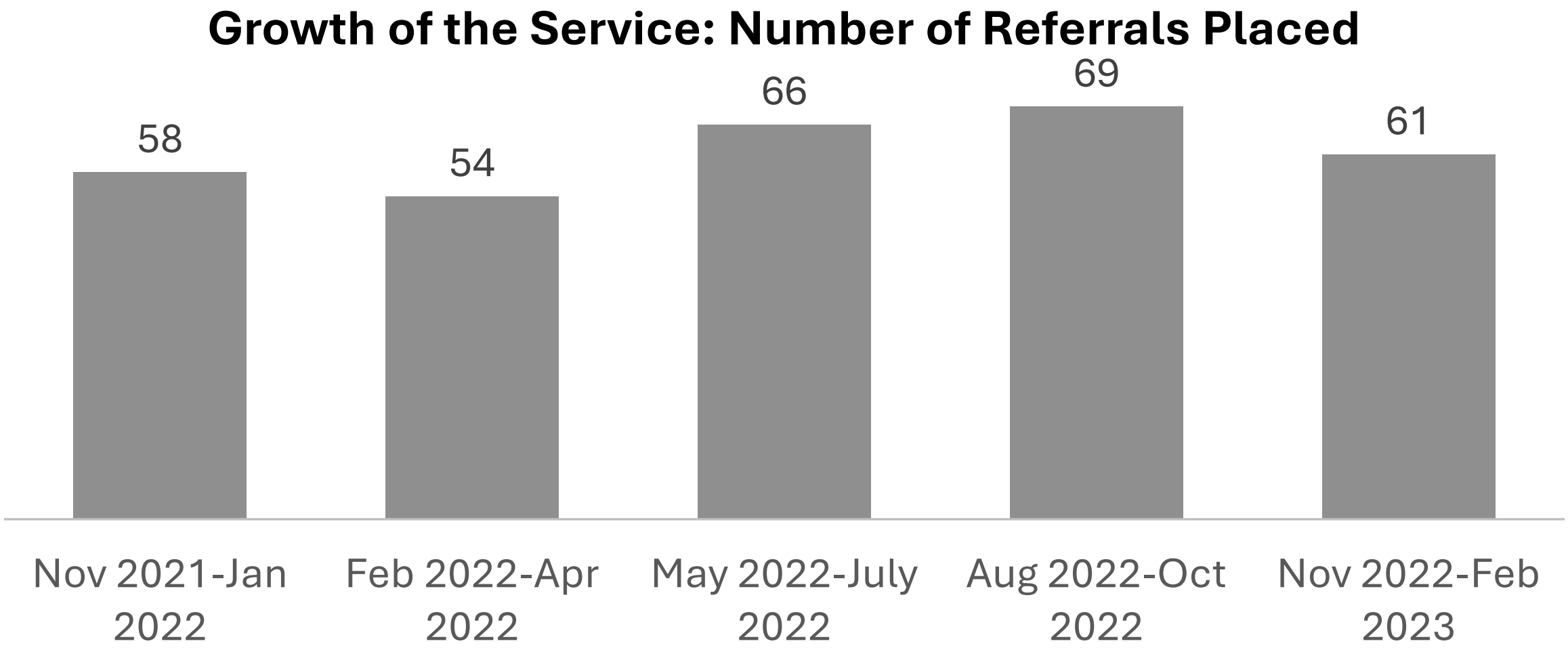
Program Assessment: Objectives

- Describe the growth of a pharmacist-led behavioral health service within outpatient primary care clinics
- Quantify the number of referrals placed and successfully scheduled with the pharmacist
- Describe the average number of visits with the pharmacist and the average number of medication changes made

Program Assessment: Methods

- An electronic health record generated report was run to identify the number of patients referred between November 1, 2021 and March 1, 2023
- Retrospective chart review was utilized to identify:
  - Number of patients referred to pharmacist for behavioral health CPA
  - Number of visits completed with pharmacist
  - Number of medication changes made by pharmacist
  - Reason for completion of behavioral health management with pharmacist

Program Assessment: Results



Program Assessment: Results

Program Assessment: Results

2

- Average # of visits with pharmacist

1.3

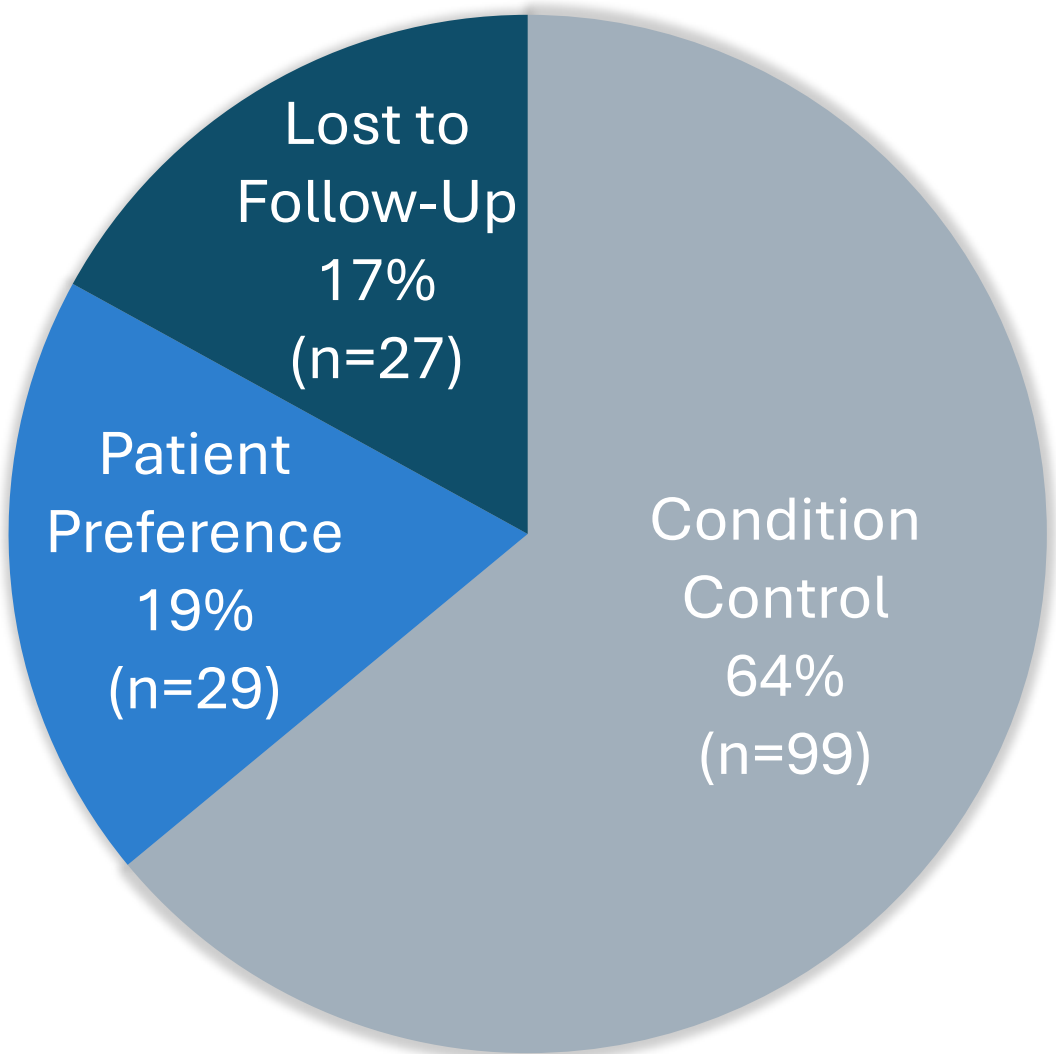
- Average # of medication changes

155

- Total # of patients that received care

Program Assessment: Results

Reason for Discharge from Service (N=155)



Program Assessment: Conclusions

- Pharmacists are well-positioned to provide behavioral health pharmacotherapy management as well as patient education
- Collaborative practice agreements can be used to increase patient access to behavioral health care in the primary care setting

Financial Justification

Direct

- Incident-to billing
- Billing higher CPT codes when pharmacists are recognized as providers

Indirect

- Improvement in metrics (PHQ9 and GAD7)
- Increased mental health control → decreased health system expenditures

Future Directions

- Expansion of CPA
  - CPA updated October 2023
    - Diagnosis codes added
      - Insomnia due to mental health disorder
      - Refractory depression
      - Post-partum depression
    - Agents added
      - Atypical antipsychotics
      - Vortioxetine and vilazodone
- Exploring opportunities existing in opioid sparing therapies given the correlation of uncontrolled pain and poor mental health

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