

Population Health Pharmacy: A Lesser-Known Part of the One Pharmacy Mission

Ana McLean, PharmD, PGY2 Resident Population Health Management and Data Analytics, Atrium Health Wake Forest Baptist 11/20/25

Disclosures

The planner(s) and speaker(s) have indicated that there are no relevant financial relationships with any ineligible companies to disclose.



Learning Objectives

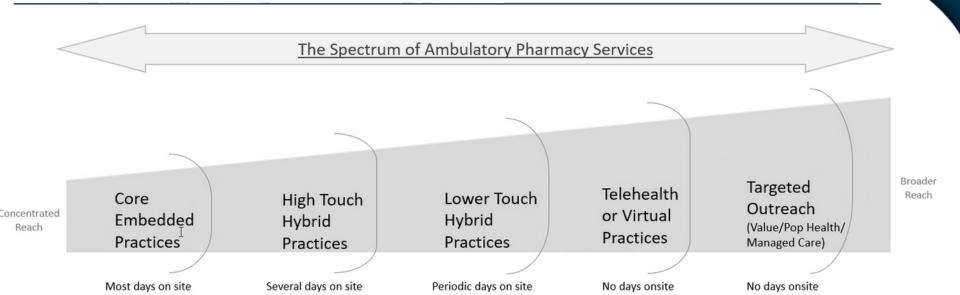
At the end of this session, learners should be able to:

- 1. Define key terms related to population health
- 2. Recognize key quality metrics and outcomes applied in pharmacy population health and value-based settings
- 3. Understand the structure of population health and value-based services in our enterprise pharmacy team
- 4. Analyze current research in population health to identify the impact of pharmacy services and opportunities for growth



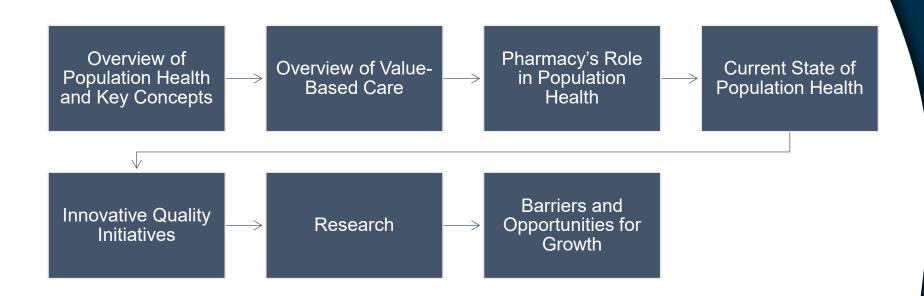
Population Health and Ambulatory Care Services

Medication Management by Clinical Pharmacy Teams





Outline





Abbreviation Key

AHWFB: Atrium Health Wake Forest Baptist

ACO: Accountable Care Organization

AVP: Area Vice President

BCBS: Blue Cross and Blue Shield

BPA: Best Practice Advisory

COB: Concurrent Use of Opioids and

Benzodiazepines

CIN: Clinically Integrated Network

CMMI: Center for Medicare & Medicaid Innovation

CMS: Centers for Medicare & Medicaid Services

COPD: Chronic Obstructive Pulmonary Disease

CVD: Cardiovascular Disease

DBP: Diastolic Blood Pressure

DMARD: Disease-modifying Antirheumatic Drugs

ED: Emergency department

ER: Extended Release

FOCUSt: Facilitated Opioid and Controlled Substance Utilization Support Team

GDMT: Guideline-Directed Medical Therapy

IM: Internal Medicine

IL: Illinois

IR: Immediate Release

HERS: Health Equity Risk Score

HTN: Hypertension

MAC: Medication Adherence for Cholesterol

Medications

MAD: Medication Adherence for Diabetes

Medications

MAH: Medication Adherence for Hypertension

Medications

MA-PD: Medicare Advantage Prescription Drug

MME: Morphine Milligram Equivalents

PCP: Primary Care Doctor

PCMH: Patient Centered Medical Home

PDP: Part D Plan

PHPs: Pre-paid Health Plans

POLY-ACH: Use of Multiple Anticholinergic

Medications in Older Adults

RAS: Renin-Angiotensin-Aldosterone System

SBP: Systolic blood pressure

SDOH: Social determinants of health

SPC: Statin Therapy for Patients with

Cardiovascular Disease

SUPD: Statin Use in Persons with Diabetes

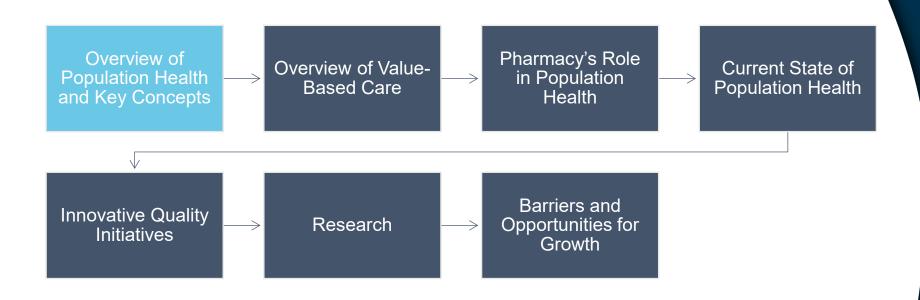
VBC: Value-Based Care

VP: Vice President

WI: Wisconsin



Outline





What is population health?





Social Drivers of Health



Education Access and Quality



Health Care and Quality



Neighborhood and Built Environment

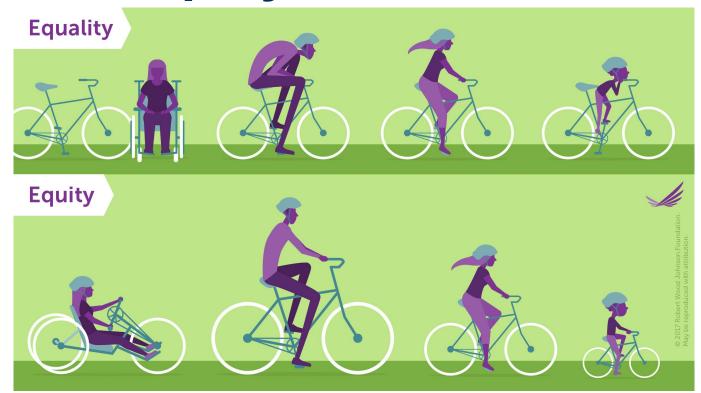


Social and Community Context



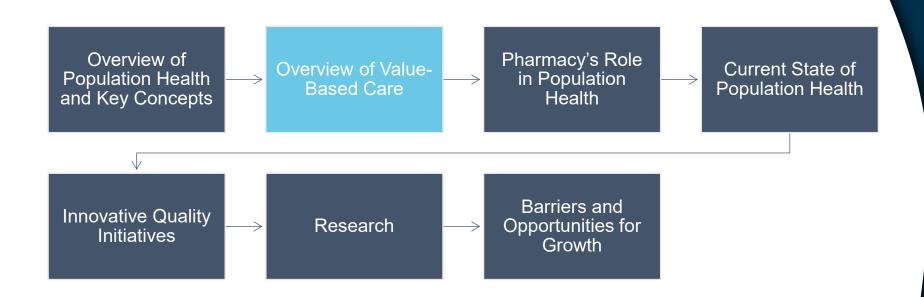
Economic Stability

Health Equity





Outline





Value-Based Care

1973

 Health Maintenance Organization (HMO) Act was a federal law that promoted the development and expansion of the modern managed care model

2006

 Michael Porter and Elizabeth Olmsted Teisberg coined the term "Value-Based Care" in redefining Healthcare

2010

- The Affordable Care Act encouraged providers to adopt new models of care that prioritize value over volume
- Introduction of Accountable Care Organizations (ACOs)



Health Expenditure and Outcomes for 2023

Health expenditure per person in the U.S. was \$13,432

Health expenditure per person in comparable countries was \$7,393



Fee-for-Service versus Value-Based Care

Fee-for-Service

Compensated based on services provided

Focus on quantity of services

Results in price inflation and redundancy of care

Lower patient satisfaction

No incentive to focus on outcomes

Value-Based Care

Focuses on improving outcomes, reducing hospital acquired conditions, and preventing chronic diseases

Quality over quantity

Preventative and longitudinal approach

Reduces cost and overall healthcare utilization

Favored by CMS and other payors

CMS: Centers for Medicare & Medicaid Services



Everyone Benefits in Value- Based Care

Patients

- Lower cost
- Better outcomes

Providers

Higher patient satisfaction rates & better care efficiencies

Payers

Stronger cost controls & reduced risks

Suppliers

 Alignment of prices with patient outcomes

Society

 Reduced healthcare spending & better overall health



Payor Types in VBC Contract

Medicare

Commercial

Managed Medicaid



Quality Measures

- Quality measures are tools that help us measure or quantify healthcare outcomes
- Help to improve patient care and hold providers and organizations accountable for care delivered
- Developed based on evidence gathered through research and clinical practice



Value-Based Care

Pay for Performance

- Incentivize quality reporting
- Paid for achieving performance thresholds

Shared Savings

 Share in a percentage of savings but will not have to pay any losses

Partial Risk

 Share in an increased amount of savings but will have to pay back a portion of any losses incurred

Full Risk

 Retain 100% of savings generated but repay 100% of expenses over allotted amount

CMS goal for 100% of plans to have Downside Risk by 2030



Data Sources and Utilization

Electronic Health Record

Health Payers and Claims Data

Accountable Care Organization (ACO)

Help identify patients to target
Utilized to assess drug spending, readmission rates, and high-cost disease states
Helps us assess performance



Assessment Question #1

MJ is a 68-year-old female African American with type 2 diabetes who recently had a visit with PCP.

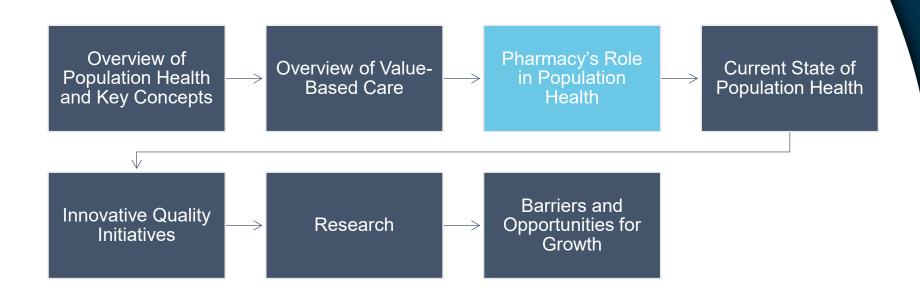
Scenario 1: PCP educated patient on diabetes and prescribed medications to help patient achieve A1c goal. Patient was identified on medication adherence report because of gaps in fill history. Pharmacist completed a medication review and notices that patient has poor adherence to metformin IR 500 mg twice a day due to diarrhea. Pharmacist after providing patient education and further discussion of different options for patient, sends provider a message to change from IR to ER. Provider accepts recommendation. Patient meets the medication adherence quality measure for the year.

Scenario 2: The PCP ordered a new A1c at the time of visit, did not make any medication changes, and scheduled the patient to return in 3 months for another A1c check.

Which scenario is an example of value-based care?



Outline





Population Health Requires an Interdisciplinary Team

Nurse Navigators/Care Manager

Pharmacy

Community
Health Workers

Social Work

Payers

Clinic and Quality Support

Information
Technology and
Data Analytics

Providers

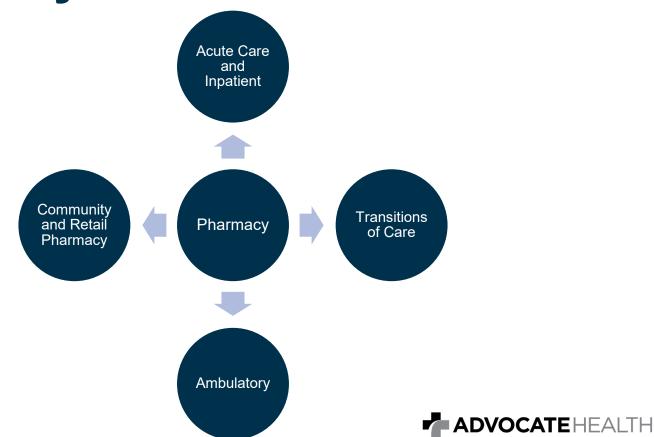


Population Health Requires an Interdisciplinary Team

Nurse
Navigators/Care
ManagerPharmacyCommunity
Health WorkersSocial WorkPayersClinic and
Quality SupportInformation
Technology and
Data AnalyticsProviders



Pharmacy Role



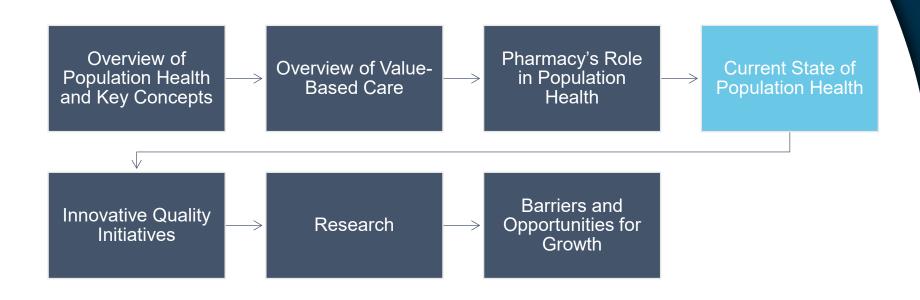
Role of Pharmacy

Teammates Involved: Pharmacists, Technicians, Learners (Students & Residents)

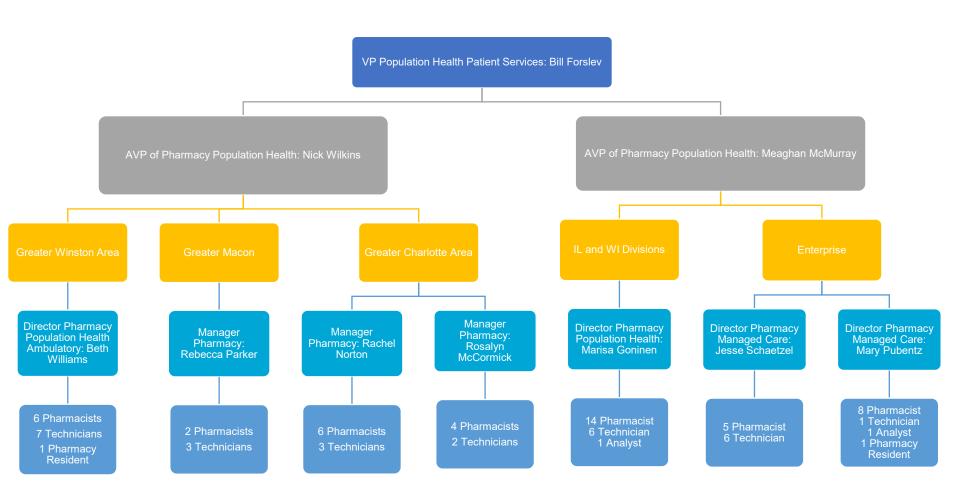
- Medication optimization practicing evidence-based medicine
- Medication adherence
- Preventive care
- Chronic disease management
- Education
- Medication access
- Home visits
- Collaboration with interdisciplinary teammates
- Transition of care
- Utilization management



Outline







IL: Illinois WI: Wisconsin

Population Health Across Enterprise

13K+ Participating physicians

12 ACOs/CINs (4+ owned entities)

2.3 Million managed lives

108 Valued-based contracts

\$761.5 Million total CMS/CMMI taxpayer savings

\$1.4 Billion total savings paid out

73 Participating hospitals

2 of 7 CMS ACO reach health participants in the nation 2024

CIN: Clinically Integrated Network

CMMI: Center for Medicare & Medicaid Innovation



Value-Based Care Contracts

Greater Winston Area

T.

UHC MA Humana MA Aetna MA

WellCare
UnitedHealthcare
Healthy Blue
AmeriHealth Caritas

Greater Charlotte
Area

UHC MA Humana MA Aetna MA

BCBSNC Aetna AmBetter

WellCare
UnitedHealthcare
Healthy Blue
AmeriHealth Caritas
Carolina Complete Health

Greater Macon Area

UHC MA Humana MA Aetna MA Anthem MA

BCBSGA

WI & IL Divisions

MSSP (WI, IL)
MSSP REACH (WI, IL)
Aetna MA (WI, IL)
Anthem MA (WI)
BCBS MA (IL)
Cigna MA (IL)
Devoted MA (IL)
Humana MA (WI, IL)
Meridian MA (IL)
Quartz MA (IL)
UHC MA (WI, IL)
Wellcare MA (IL)

Anthem (WI) BCBS (IL) UHC (WI, IL)

Anthem (WI) Meridian (IL) Molina (WI)



BCBSNC

.

Common Across Enterprise/Medicare

Medication Adherence Measures (triple-weighted)

- Diabetes (non-insulin) (MAD)
- Hypertension (RAS) (MAH)
- Cholesterol (Statins) (MAC)

Statin Use

- Patients with diabetes (SUPD)
- Patients with cardiovascular disease (SPC)

COB and Poly-ACH

- Concurrent use of opioid and benzodiazepine
- Polypharmacy use of multiple anticholinergic medication in older adults



Common Across Enterprise/Medicare

Medication Adherence Measures (triple-weighted)

- Diabetes (non-insulin) (MAD)
- Hypertension (PAS) (MAH)
- Choles

Statin U

- Patient
- Patient

These medication measures account for >40% of overall star ratings

COB and rony Aori

- Concurrent use of opioid and benzodiazepine
- Polypharmacy use of multiple anticholinergic medication in older adults



Medicare STARS Program

- Centers of Medicare and Medicaid Service (CMS)
- Determines how well plans and providers perform across a section of quality measures
- Uses information from member satisfaction, health outcomes, and plan operations

$\star\star\star\star\star$	Excellent
$\star\star\star\star$	Above Average
$\star\star\star$	Average
$\star\star$	Below Average
\Rightarrow	Poor



Medicare STARS Program

Each Measure has an established threshold or percentage used to determine what star rating the contract will receive

Туре	1 Star	2 Stars	3 Stars	4 Stars	5 Stars	
MA-PD	<80%	80% to less than 84%	84% to less than 88%	88% to less than 90%	≥90%	
PDP	<84%	84% to less than 87%	87% to less than 89%	89% to less than 93%	≥93%	
MA-PD: Medicare Advantage Prescription Drug						

PDP: Part D Plan



Medication Adherence

Greater Winston Area

4,634
Patients
Outreached
in 2024

Greater Charlotte Area

9,078
Patients
Outreached
in 2024

Greater Macon Area

15,000
Patients
Outreached
in 2024

IL & WI Divisions

66,009
Patients
Outreached
in 2024

MAH 90.3% = 5 Stars MAD 89.7% = 4 Stars

MAC 91.1% = 5 Stars



Overview of Cipher Health Technology-Based Outreach for Medication Adherence

Medication
Adherence for
Diabetes
(Non-insulin)

Medication
Adherence for
Hypertension
(RAS Antagonists)

Medication
Adherence for
Cholesterol
(Statins)

Why: To improve medication adherence rates across Medicare Advantage contracts

How: By leveraging technology to reach large volumes of patients and screen wide variety of adherence barriers

What: Interactive Voice Recording (IVR) and SMS text messaging will be used to contact patients who are overdue for a refill of select medications. The technology allows patients to communicate their need for assistance and request a call back at their preferred time.

Where: WI and IL Divisions, Greater Charlotte, Greater Winston, and Greater Macon will be included in this outreach campaign.

Cipher Health

Cipher Med Adherence General Program

Are you still taking your [medication]?

Are there days you typically do not take or forget to take the medication?

Have you been experiencing side effects with this medication or are you worried about the side effects you may have?

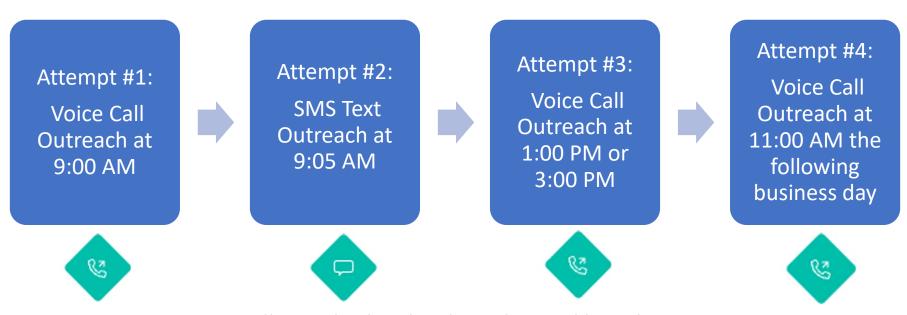
Is the cost of the medication hard to afford, or is it difficult to get to the pharmacy to refill it?

Do you have any questions about how to take this medication or are you unsure about the importance of taking it?

Would you like assistance with getting a refill started on your medication?

Is there another concern that I missed that you have about your medication?

Cipher Medication Adherence Outreach Series



Caller ID displays local number and branding

Able to provide messaging in English, Spanish, Vietnamese, and Polish depending on location If the patient does not engage, they will receive the next outreach attempt

Statin Use

Across Enterprise

~3,000 Total outreached in 2024

SPC 87.7% SUPD 88.6%

- Only needs 1 time fill for the year to be included in measure
- Exclusion Criteria ICD-10 codes:
 - Myopathy
 - Myositis
 - Rhabdomyolysis
 - Pregnancy
 - Cirrhosis
 - Lactating
 - Prediabetes or PCOS (specific to SUPD)
 - ESRD
 - Frailty and advance age



COB and Poly-ACH

IL & WI Divisions

- FOCUSt team: 2 dedicated pharmacist that develop opioid/benzodiazepine taper plans and support patients plus a pain management physician
- BPA for co-prescribed opioid/benzodiazepine
 - Includes education on risk, Narcan order, and referral order to FOCUSt team

Greater Charlotte

- Medication alerts
- Educational material created for quality team, providers, and pharmacist

Greater Winston Area

- Medication alerts
- Educational material created for quality team, providers, and pharmacist

Greater Macon

- Education for providers
- Patients identified for poly-ACH providers are called

COB: Concurrent Use of Opioids and Benzodiazepines
POLY-ACH: Use of Multiple Anticholinergic Medications in Older Adults
FOCUSt: Facilitated Opioid and Controlled Substance Utilization Support Team
BPA: Best Practice Advisory



Assessment Question #2

CJ is a 65-year-old male with type 2 diabetes and a history of coronary artery disease. He is prescribed metformin, atorvastatin, and hydrochlorothiazide. His most recent blood pressure reading was 128/78, and his A1c was 6.9%.

Fill History		
Metformin	Atorvastatin	Hydrochlorothiazide
08/01/2025 – 30-day supply	08/01/2025 – 30-day supply	08/01/2025 – 30-day supply
09/10/2025 – 30-day supply	08/31/2025 – 30-day supply	08/31/2025 – 30-day supply
	09/30/2025 – 30-day supply	09/30/2025 – 30-day supply
	10/30/2025 – 30-day supply	10/30/2025 – 30-day supply

Which measure might CJ be at risk of failing?



Assessment Question #2

Which measure might CJ be at risk of failing?

- A. Statin use in patients with diabetes
- B. Medication adherence for statins
- C. Medication adherence for all hypertension medications
- D. Medication adherence for diabetes medications



Outline





Greater Winston Area



AHWFB Statements

Mission: To improve health by partnering with patients to optimize medication use, experience, and outcomes.

Vision: To improve the health of communities and future generations through compassionate care and innovative strategies, we will strive for:

Excellence in medication management and affordability

Passion for health equity

Commitment to learn and discover



Using data to identify at risk patients





Pharmacy Risk Score

Health Equity Risk Score



Pharmacy Risk Score

Categories

1 point if patient has it

Discharged past 30 days

High Utilizer (more than 1 admission)

Taking more than 4 medications

Uncontrolled hypertension

A1c ≥8%

High risk CVD and no statin

Uses any kind of tobacco

Has COPD

Osteoporosis and no osteoporosis medication and no DEXA scan

Rheumatoid Arthritis and no DMARD

Health Equity Risk Score (HERS)

Created by our team in 2023 to identify patients of greatest need and risk

Diabetes HERS Weighted Scoring System

Race	1	Readmission Score	1
Ethnicity	1	Med Adherence	1
Zip Code	2	Food Insecurity	1
Payer	Stratified	Social Connections	Stratified
Pharmacy Risk Score	1	Alcohol Risk	1
HbA1c	Stratified	Tobacco Risk	1
SBP	2	Financial Strain	Stratified
DBP	1	Transport Needs	Stratified
Frailty Index Score	1	Housing Insecurity	1
Score			

Hypertension HERS Weighted Scoring System

Race	1	Readmission Score	1
Ethnicity	1	Med Adherence	1
Zip Code	2	Food Insecurity	1
Payer	Stratified	Social Connections	Stratified
Pharmacy Risk Score	1	Alcohol Risk	1
HbA1c	2	Tobacco Risk	1
SBP	Stratified	Financial Strain	Stratified
DBP	Stratified	Transport Needs	Stratified
Frailty Index Score	1	Housing Insecurity	1



Pediatric Asthma HERS Weighted Scoring System

Race	1	Patient on Systemic Corticosteroid	1
Ethnicity	1	ED or Hospital Admission for Behavioral Health	1
Zip Code	2	ED Visits in the Last Year	1
Payer	2	SDOH Food Insecurity	1
	1	SDOH Social Connections	1
	1		2
Pharmacy Risk Score	1	SDOH Alcohol Risk	1
Peak Flow	1	SDOH Tobacco Risk	1
	2	SDOH Financial Strain	1
	3	SDOH Transport Needs	1
Patient on Systemic Corticosteroid	1	SDOH Housing Insecurity	1



Managed Medicaid

Focus Areas

- Health Equity Risk Score (HERS)
 Patient Review
- Blood Pressure Patient Review
- A1C Patient Review
- Medication Access
- Emphasis on Social Drivers of Health
- Behavioral Health
- Pediatric Patient Care workflow
- Contribute to Tier 3 PCMH care management penetration rates for PHPs

Innovative Opportunities

- Pharmacist embedded in largest family medicine practice
- 1 Pharmacist plus IM PGY2 embedded in 4th largest adult Medicaid clinic in NC
 - Completes home visits
- 1 Hybrid (acute/clinic) pharmacist in the largest pediatric Medicaid clinic in NC
- Enhanced collaboration with community health care workers



Commercial

Focus Areas

- 24-hour blood pressure daily report
- HERS patient review
- Emphasis on prescription utilization and cost of care considerations
- Heart failure reports
- Medication Access
 - Identifying patients dual-enrolled with commercial Marketplace and expanded Medicaid plans

Innovative Opportunities

- Pharmacist technicians can close BP gaps
- PGY2 Cardiology resident has previously been involved with HF report



Greater Charlotte Area



Managed Medicaid

Focus Areas

- 23% Penetration rate goal for each health plan contract
- Biometric screenings and care gap closures
 - HTN, DM, CA screens
- Social drivers of health
- Behavioral health
- Medication access
- Contribution to penetration rates for local health departments services
 - Care management for at-risk children
 - Care management for high-risk pregnancies

2024 Metrics

- Total of ~ 258,196 members (ACNC, HB, CCH, UHC, WCNC, MedicaidDirect)
- 86,727 total care management interactions
- 43,656 members with a unique successful care management interaction
- 13,019 Care plan updates
- 5,701 Care plans created
- 4,869 Comprehensive assessments
- 361 Face to face encounters



Heart Failure Initiatives

Population Health Heart Failure Reports Care Transition
Program (CTP)
pharmacy referrals

Inpatient Referrals

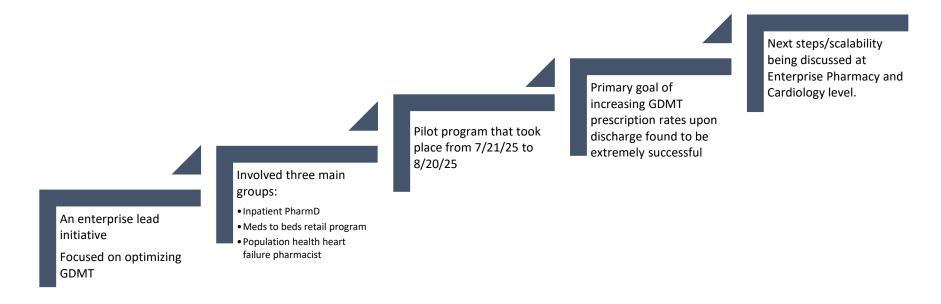
- CMC HF Pilot
- HF Huddles
- Cabarrus Pharmacy Inpatient Referrals

Payor Quality Reports (as available)

Heart Failure Education



Inpatient Referrals – CMC Heart failure pilot





Greater Macon Area



Mission Statement

Mission Statement: to deliver the best patient care experiences, while enhancing care quality and lowering costs.



Medication Adherence Workflow





Other Services

Focus Areas

- AMR (Asthma Medication Ratio)
 Adults and pediatrics
- 34,000 lives on Commercial BCBS

2024 Metrics

- Had 100% participation rate from individual providers to enroll in pharmacy patient outreach
- An average 60 patients per month outreached for AMR



IL & WI Divisions



Other Services

MTM Referrals

Medication therapy management services

536 Referrals in 2024

58% Medication Change Recommendations Accepted Disease Management

PCP signature activates standing order for dose optimization using evidence-based protocols

2.5% A1c improvement

100% Reached BP Goal

Facilitated Opioid and Controlled Substance Utilization Support Team

Pharmacist provides taper recommendations and patient support

8,414 total MME decrease in 2020-2024

Average 68% MME Reduction per patient



Facilitated Opioid and Controlled Substance Utilization Support Team

Leveraging pharmacy expertise

- Created educational materials on opioid-use disorder, appropriate patient screening and assessments, opioid agreements, co-prescribing of naloxone, and interpretation of urine drug screens
- Facilitated the Opioid and Controlled Substance Utilization Support Team (FOCUSt), which includes pain management physicians and clinical pharmacists
- Pharmacists help create personalized tapering plans, provide education, and ensure understanding among primary care providers (PCPs) and patients

Prioritizing physician engagement

• Patients identified by data mining and PCP referrals

Embracing a patient centered approach

- Patients needs are in the center, each plan is unique to each patient
- Use motivational interviewing to create weaning plans
- Each plan considers social determinants of health



Pharmacy Ambulatory Care Services (PACS)

Medication Management

Referral Centric
Collaborative Practice
Medication Optimization
Comprehensive Med Review
Chronic Disease Management

Population Health

Value Based Contracts
Proactive Outreach
Adherence/MA Stars
Targeted Intervention
Medication Therapy Mgt

Medication Access

Patient Assistance Programs
Prior Authorizations
340b Medication Access
Coverage and Affordability
Transitions of Care

Our Patients
Our Pharmacy Teams
Our Provider Partners
Medication Safety
Equitable Care



Assessment Question #3

TJ is a 69-year-old male with chronic back pain secondary to degenerative disc disease. He has been on opioid medications for many years following an unsuccessful surgery. He reports increased fatigue and drowsiness. His most recent A1c and blood pressure readings were well controlled.

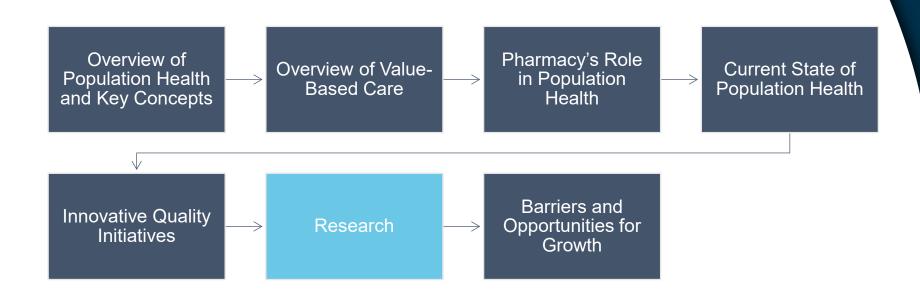
Current medications: Atorvastatin (Lipitor®)40 mg daily, Lisinopril (Zesteril®)10 mg daily, Morphine SR (MS Contin®) 30 mg every 8 hours, semaglutide (Ozempic®) 0.5 mg weekly, Metformin (Glucophage XR) ER 500 mg twice a day

Which of the services discussed today would the patient be a good candidate for?

- A. Medication adherence for lisinopril
- B. Facilitated Opioid and Controlled Substance Utilization Support Team
- C. Diabetes management
- D. Medication access



Outline





Research

<u> 11000 ar orr</u>				
	Methods	Primary Outcome	Population	Result
Pharmacist-Led Population Health Initiative to Address Statin Care Gaps: A Quality Improvement Project	Retrospective review Enrolled in Medicare advantage VBC	Percentage of patients identified with statin care gaps who met the criteria for statin treatment and the percentage of patients who accepted pharmacist-led recommendations to initiate statin therapy	949 patients	42% met criteria for statin initiation 22% accepted
Pharmacist-led hypertension management in a minority patient population	Prospective, cohort study Included: ≥18 years of age, sustained uncontrolled HTN, minority race or ethnicity	Proportion of patients achieving a BP of < 140/90 mm Hg in the intervention group compared with a control group	110 patients	70.9% of the patients in the intervention group achieved a BP of < 140/90 mm Hg compared with 32.7% of the patients in the control group (P < 0.001)

Raymer D, Everhart A, Baker D. Pharmacist-Led Population Health Initiative to Address Statin Care Gaps: A Quality Improvement Project. *J Healthc Qual*. 2025;47(1):e0465.



Research

	Methods	Primary Outcome	Population	Result
Impact of pharmac involvement on car gap closure in Managed Medicaid patients	retrospective study of managed	Closure of at least one care gap by the end of 2022	80 patients	74% patients in intervention group 50% patients in control group (odds ratio, 2.85; P = 0.032)



Assessment Question #4

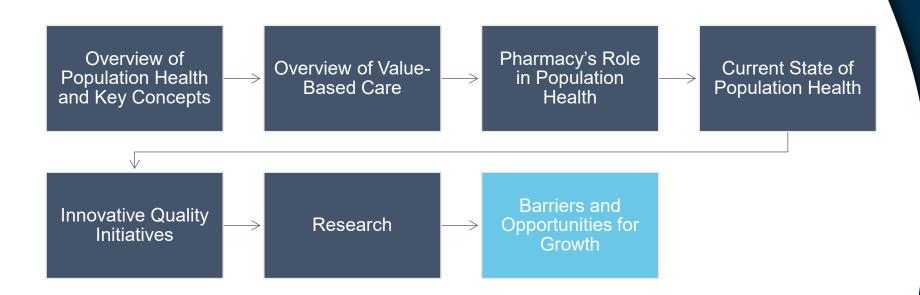
KW is a 70-year-old African American female scheduled for a follow-up PCP visit on 12/1. Cipher contacted the patient due to concerns about medication adherence with semaglutide (Ozempic®). The patient indicated a call back was necessary. Upon follow-up, the pharmacist noted that recent blood pressure readings reported in patient messages were elevated. Additionally, the patient stated that the cost of semaglutide (Ozempic®) has become a barrier. The last recorded BP was 145/96.

Which of the following would the patient be a good candidate for?

- A. Medication Adherence
- B. Medication access
- C. Enrollment in hypertension management study
- D. All of the above



Outline





Barriers

- Patient engagement
- Individual barriers due to telephonic outreach
 - Language
 - Health literacy
- Provider communication/collaboration
- Data limitations
- Lack of resources/capacity of team
- Demonstrating true impact and clinical outcomes



Opportunities for Growth

- Cipher New to NC and GA regions
 - Automated telephonic outreach
- Expansion of transitions of care services and preventing readmissions
- HTN and DM program in the IL & WI Divisions
 - HTN focus on reducing disparities in BP control → started at provider specific locations → expanded to include Medicaid patients in WI
 - Patients identified by nurse care managers due to uncontrolled disease states



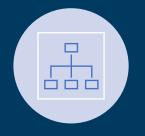
Conclusion



IDENTIFYING BARRIERS
AND CONNECTING
PATIENTS TO
RESOURCES IS
ESSENTIAL FOR
SUPPORTING A
DIVERSE POPULATION
AND ADVANCING
POPULATION HEALTH



PHARMACY PLAYS A
KEY ROLE IN DRIVING
VALUE-BASED CARE
THROUGH QUALITY
METRICS AND
TARGETED
INTERVENTIONS



UNDERSTANDING
ENTERPRISE
STRUCTURE HELPS US
ALIGN EFFORTS AND
MAXIMIZE IMPACT



CURRENT RESEARCH
HIGHLIGHTS BOTH
EFFECTIVENESS OF
PHARMACY SERVICES
AND OPPORTUNITIES
FOR GROWTH



References

- 2025 Medicare Advantage and Part D Star Ratings | CMS. Cms.gov. Published October 9, 2024. https://www.cms.gov/newsroom/fact-sheets/2025-medicare-advantage-and-part-d-star-ratings
- CDC. What is Population Health? | Population Health Training | CDC. archive.cdc.gov. Published July 14, 2023. https://archive.cdc.gov/www_cdc_gov/pophealthtraining/whatis.html
- Centers for Disease Control and Prevention. Social Determinants of Health. Public Health Professionals Gateway. Published May 15, 2024. https://www.cdc.gov/public-health-gateway/php/about/social-determinants-of-health.html
- How Advocate Aurora Health created a supportive opioid wean program. advisory. Published 2022. Accessed September 12, 2025. https://www.advisory.com/topics/pharmacy/2022/09/opioid-wean-program
- Kindig D, Stoddart G. What is population health?. *Am J Public Health*. 2003;93(3):380-383. doi:10.2105/ajph.93.3.380
- Novikov D, Cizmic Z, Feng JE, Iorio R, Meftah M. The Historical Development of Value-Based Care: How We Got Here. J Bone Joint Surg Am. 2018;100(22):e144. doi:10.2106/JBJS.18.00571
- Visualizing Health Equity: Diverse People, Challenges, and Solutions Infographic. www.rwjf.org. https://www.rwjf.org/en/insights/our-research/infographics/visualizing-health-equity.html
- Wager E, McGough M, Rakshit S, Amin K, Cox C. How does health spending in the U.S. compare to other countries? Peterson-KFF Health System Tracker. Published April 9, 2025. https://www.healthsystemtracker.org/chart-collection/health-spending-u-s-compare-countries/#Health%20expenditures%20per%20capita
- What Is Value-Based Healthcare? Catalyst.nejm.org. 2017.
- Yu, Zejia A, and Michelle B Gorgone. "Pay-For-Performance and Value-Based Care." *Nih.gov*, StatPearls Publishing, 2024, www.ncbi.nlm.nih.gov/books/NBK607995/.



Questions?

Ana McLeanAna.mclean@advocatehealth.org

