FAQ: Getting started with population health management
Date of Publication: March 2021

Contact:
Melanie R. Smith, Pharm.D., BCACP, DPLA
Director, Member Relations
Ambulatory Care Practitioners & Pharmacy Student Forum
sections@ashp.org

Purpose

The purpose of this resource document is to provide a general framework for initiating or expanding population health management services. Recommendations from the ASHP 2030 Patient Advancement Initiative emphasize the need for pharmacists to utilize technology and data science to identify populations most in need of pharmacist care, monitor performance and quality indicators, and analyze trends in medication use across populations. This document provides a sequential layout of key steps to consider and is intended for organizations or practitioners that are in the early stages of considering how to engage in population health management or for those who wish to expand their current program.

Published on behalf of the ASHP Section of Ambulatory Care Practitioners
Advisory Group on Clinical Practice Advancement

Introduction

As pharmacists who practice in ambulatory care settings increasingly become involved in alternative and value-based payment models through participation in settings such as accountable care organizations (ACO) and patient-centered medical homes (PCMH), there is a greater emphasis on managing the health outcomes of populations rather than those of individual patients. Moreover, the Institute for Healthcare Improvement's "triple aim" highlights the importance of improving the health of populations while increasing quality and decreasing per capita costs. While *population health* refers to the outcomes of a defined group of individuals and the subsequent drivers and determinants of health, *population health management* refers to the infrastructure that enables programs to target defined populations and employ a variety of interventions aimed at slowing disease progression, improving health-related outcomes, and decreasing total cost of care.[1] Population health management initiatives can impact not only chronic diseases, but also the lifestyle of the patients we serve, which in turn impacts societal issues of poverty and inequality. For example, a healthy individual has the ability to work. That employee has income, and income can pay for a home and education. Moreover, an educated worker can potentially make more income. However, if the individual is in poor health, these outcomes are challenging to obtain. Identification of barriers, both clinical and non-clinical, that prevent patients from achieving better therapeutic outcomes is a key to successful and sustained care. Recommendations from the ASHP 2030 Patient Advancement Initiative further emphasize the need for pharmacists to utilize technology and data science to identify populations most in need of pharmacist care, monitor performance and quality indicators, and analyze trends in medication use across populations. There are numerous examples of pharmacists performing population health management activities. Examples include pharmacists performing comprehensive medication management, transitions of care services, wellness promotion classes, monitoring for high-risk or specialty medications, and employee health assessments.[1] The September 2017 theme issue of the American Journal of Health-System Pharmacy (AJHP) is an excellent resource for further commentary and in-depth review of these examples. Based on the specific organization/institution and pertinent state regulations, clinical pharmacists may be required to complete specific training to be eligible to participate in population health management activities. Examples of formalized training may include, but are not limited to, credentialing and privileging (formal vs. informal process), board certification (may be requirement of job position), provider status or prescriptive authority (i.e. collaborative practice agreement).

I. Identify organizational priorities, key stakeholders and predominant reimbursement models

Prioritizing the needs of the community and aligning those with the priorities of the health system is the key to getting started. One approach to improving population health is the identification of the neediest patients to lower overall healthcare costs by improving access to care. All too often, we see patients cycle through the emergency room, inpatient admission and discharge, only to end up in the emergency room again in the weeks that follow. This is a failure of care. Population health management initiatives seek to address how we can identify these patients, provide them high quality care, and prevent them from returning to the emergency room again. Consider these community issues for the patients that your organization serves:

- Are there similar patterns in the neighborhood where these patients reside?
- What are the most common diseases they present with?
- What cultural similarities exist?
- Proximity to healthcare services?
- Is there equitable access to healthy foods?
- Do individuals have easy access to medicines?

In consideration of these issues, hospitals and health systems are required to convene with local public health officials and community leaders to discuss the status of the local population of people living in the covered area. Community health assessments should drive the focus, sometimes considered "hot spots," of needy patient populations. These needs assessments and implementation plans from public health officials must be made available to community members. Hospitals must separate spending on "community building" from spending on "community benefit", which is required to justify a non-profit status. Hospitals also provide traditional "charity care" as required by law, which counts towards the "community benefit." Identifying these "hot spots" and building a plan around those community issues can provide the basis for a successful population health model.

It's possible your institution may already be practicing aspects of population health management through other healthcare practitioners in non-traditional roles. If so, build on this and avoid duplicative efforts. Population health management is a multidisciplinary field, and synergies can be made through a team approach. Aspects of population health management practice originated with the Affordable Care Act (ACA), which rewards value and care coordination over volume-based care. This important legislation focuses on the expansion of health insurance coverage, controlling healthcare costs, and improving healthcare delivery, all of which align with population health principles. Accountable Care Organizations (ACO) and Coordinated Care Organizations (CCO) set quality benchmarks, with a focus on prevention when managing patients with chronic diseases. Preventive health can reduce overall healthcare needs of individuals and avoid costly unexpected acute care admissions. In population health models, these may include both medical and non-medical needs such as transportation, housing and food security. Successful partnering with provider groups in a cost-sharing model to ensure quality of care can result in shared savings. The Compensation and Sustainable Business Models section of the ASHP Ambulatory Care Resource Center (https://www.ashp.org/Pharmacy-Practice/Resource-Centers/Ambulatory-Care) is an excellent repository of related resource documents, including an FAQ guide on value-based payment models.

If there is no existing template in place for the establishment of a population health management service, then engage the C-suite in a strategic planning process through a paired community and institutional analysis (such as SWOT, gap or market). Use your specific community issues as target improvement projects. Align your institutional financial incentives with improvements in population health metrics. Determine your institution's financial drivers of change: How is the institution primarily paid? What metrics are being evaluated? What is the payer mix? Aligning

services and program outcomes with predominant reimbursement models will contribute to the overall financial stability of the organization and create success for a population health management service. Specifically, targeting of high cost, high touch patients, with multiple comorbidities and polypharmacy who present with risk factors for future admissions is a common focus for population health management interventions. Examples of these markers will be explained in further detail in this document.

II. Identify key quality measure(s) of focus

After identifying and aligning with organizational priorities, it will be important to identify key quality measures that are important to your institution or meaningful for maximizing revenue and reimbursement. These could include:

- HEDIS Measures
    - Relevant Examples:
        - Pharmacotherapy Management of COPD Exacerbation
        - Persistence of Beta-Blocker Treatment After a Heart Attack
        - Comprehensive Diabetes Care
        - Statin Therapy for Patients With Cardiovascular Disease and Diabetes
        - Antidepressant Medication Management
- CMS 5 Stars Measures
    - Relevant Examples:
        - C12 Osteoporosis Management in Women who had a Fracture
        - C15 Diabetes Care - Blood Sugar Control
        - C15 Controlling Blood Pressure
        - C18 Reducing the Risk of Falling
        - C20 Medication Reconciliation Post-Discharge
        - C21 Plan All-Cause Readmissions
        - C22 Statin Therapy for Patients with Cardiovascular Disease
        - D10 Medication Adherence for Diabetes Medications
        - D11 Medication Adherence for Hypertension (RAS antagonists)
        - D12 Medication Adherence for Cholesterol (Statins)
        - D13 MTM Program Completion Rate for CMR
        - D14 Statin Use in Persons with Diabetes (SUPD)
        - DMC01 Antidepressant Medication Management
        - DMC13 Initiation of Alcohol or other Drug Treatment
- CMS Hospital Readmissions Reduction Program
    - Hospital readmission within 30 days of discharge for admission diagnoses related to acute myocardial infarction (AMI), chronic obstructive pulmonary disease (COPD), Heart Failure (HF), pneumonia, coronary artery bypass graft (CABG) surgery, elective primary total hip and/or total knee arthroplasty (THA/TKA)
- Medicare Shared Savings Program Accountable Care Organization (ACO) Quality Metrics
    - Relevant Examples:

- ○ ACO-42 Statin Therapy for the Prevention and Treatment of Cardiovascular Disease
- ○ ACO-27 Diabetes Mellitus: Hemoglobin A1c Poor Control
- ○ ACO-28 Hypertension (HTN): Controlling High Blood Pressure
- Primary Care First (PCF) Clinical Quality Measures
- HRSA Uniform Data System (UDS) Quality of Care Measures (FQHCs)

After identifying your organization's key quality indicators, it is important to perform a needs assessment to identify specific areas for improvement based on historical performance and the current state of the measure(s) prior to pharmacist intervention. Next, a consistent and systematic approach to documenting and tracking pharmacist interventions will ensure proper attribution for positive impacts on measure performance. Examples of intervention tracking could include:

- Analytics or data team reports generated within the electronic health record (EHR)
- i-Vents in Epic
- Standardized coding system for medication-related problems
    - ○ https://www.careinnovations.org/wp-content/uploads/2017/10/USC_Medication_Therapy_Intervention_and_Documentation_Manual_2012.pdf
- Custom flowsheets built within the EHR
- Use of SNOMED CT codes
    - ○ https://www.pharmacyhit.org/pdfs/workshop-documents/WG2-Post-2018-01.pdf
    - ○ http://www.pharmacyhit.org/pdfs/workshop-documents/WG2-Post-2014-03.pdf
- Manual tracking with Excel or other external software vendor (e.g. TheraDoc)

III. Identify populations of focus

The next step is to identify specific populations of focus for the service, and to define referral criteria. Examples of common target populations include:

- Commercial health plan patients
- CMS Medicare health plan patients
- Medicaid health plan patients
- HMO health plan patients
- Patients who are not at goal based on specific CMS or HEDIS quality measure(s)

After identifying the key quality metrics, it is important to consider which population to target to demonstrate meaningful improvement. A risk score (or risk stratification) is a standardized method to measure the likelihood of a patient experiencing a particular outcome[2] (e.g. hospital admission, emergency room visit, development of a certain disease state). Risk scores have become a standard tool in population health models to identify high-risk patients, and target them for inclusion in a formalized program. Organizations can develop their own risk scoring tools, or purchase a commercially developed tool when implementing programs. Identification of targeted patients through these tools is intended to prevent individuals from developing more

serious and costly diseases or complications in the future. Risk scoring tools can be familiar and validated ones, such as using the Framingham or ASCVD Risk Score to identify patients at risk for cardiovascular disease. They can also be more complex and include multiple weighted markers, such as number of outpatient and specialty visits in the past year, emergency room visits (current number and future risk), inclusion of defined diagnoses, and laboratory values that fall outside the normal range. This is sometimes referred to as a "Complexity Score". Patients can be graded into risk subcategories, such as high, medium, or low risk. Risk subcategories can determine the level of care patients are assigned to within a program. Avoidance of certain patient types can also be incorporated into the risk tool if there is a subset of population that the program cannot support. Unfortunately, there is no formalized guideline to inform the approach a program should take when developing a risk tool, so the identification and individualization of the needs of each program is encouraged.

Examples of target populations could include:
- Patients demonstrating non-adherence to specific medications (or medication overuse) based on PBM data or prescription refill history (e.g. statins, albuterol, opioids, insulin)
- Patients with disease indicators not at goal based on ICD-10 coding and laboratory values (e.g. COPD, DM, HTN, CHF, Clinical ASCVD Risk, Depression)
- Patients with osteoporosis or recent fracture who are not on guideline-recommended therapy
- Inappropriate prescribing among elderly patients (Medications meeting AGS Beers Criteria)
- Risk stratification for 30-day hospital readmission based on the LACE Tool

IV. Identify opportunities for financial sustainability

An important aspect of designing a successful population health management service is ensuring that it is financially sustainable. You should ask yourself: "How will we get paid for this work?" and "Are there opportunities for direct revenue generation?" This depends primarily on your payer mix (i.e. commercial, federal, state, self-pay, uninsured) and practice setting. Next, you should determine if professional fee billing mechanisms can be utilized for care provided (e.g. E&M billing through face-to-face or telemedicine visits). Are your pharmacists credentialed as recognized billing providers or will you be using "incident-to" billing (if eligible according to state practice laws)? If you work in a hospital-based clinic, then you may be able to generate direct revenue through facility fee billing. In this case, care must be provided through face-to-face visits in the clinic. Other potential sources of revenue related to population health management include Chronic Care Management (CCM) services for enrolled Medicare patients if the clinic has internal mechanisms for "credit" or payment tracking to CCM reimbursement. Additionally, pharmacists could contribute efforts towards Transitional Care Management (TCM) care and receive "credit" towards components of care necessary for reimbursement. Finally, pharmacists could provide Medication Therapy Management (MTM) services to Medicare Part D patients if a system for billing is in place. Visit the ASHP Ambulatory Care Resource Center for further guidance on pharmacist billing and reimbursement.

As mentioned in the previous sections of this document, if your institution is participating in a value-based payment model and receives revenue that is tied to performance on various quality metrics (e.g. Merit Based Incentive Payment System (MIPS), Alternative Payment Models (APM), Accountable Care Organization), then improvement in these quality indicators could be attributed to pharmacist interventions as part of the population health management service. Furthermore, there could be opportunity for the organization to renegotiate a higher contracted capitation rate (i.e. per-member-per-month payment) to include the costs associated with a clinical pharmacy service if the outcomes of this service are tied to an improvement in quality and reduction in total cost of care.

If opportunities for direct revenue are limited, then consider a cost avoidance approach by demonstrating reductions in hospital readmission rates or total cost of care. Furthermore, consider developing and marketing the service directly to commercial or Medicaid/Medicare payers. Based on your unique payer mix, these individual contracts could represent a significant financial opportunity and result in a "win-win" scenario for both the insurance payor and your institution.

V. Define team roles and responsibilities

Population health management activities may be divided among various members of the healthcare team. Per ASHP's Practice Advancement Initiative 2030[3], "The pharmacist shall partner with patients and the interprofessional care team to identify, assess, and resolve barriers to medication access, adherence, and health literacy" (PAI 2030, #A5). Additionally, "Pharmacists should lead and advocate for comprehensive medication management in all population health models" (PAI 2030 #A14). The extent to which each individual is involved and his or her specific role may vary depending on the institution and/or state regulations. Although not fully comprehensive, below is a list of multidisciplinary care team members that may play a key part in population health management and their respective roles and responsibilities.

- Physicians, PAs, APRN-NPs, Medical/APRN-NP Residents
    - Establish a Collaborative Practice Agreement which allows the pharmacist to:
        - Initiate, change, discontinue, and titrate medication therapy
        - Order labs
        - Place necessary referrals/consults
        - Order and administer vaccinations
    - Refer to pharmacists
- Pharmacists
    - Chronic disease state management (CMM)
    - Drug information resource
    - Patient and/or provider education/training
    - Comprehensive medication reviews/polypharmacy
    - Identify/close care gaps
    - Formulary management
    - Refer to other pharmacists
    - Refer to other disciplines/specialties

- Pharmacy Technicians or Interns (IPPE, APPE and non-rotational students)
    - Patient outreach calls (e.g. late INR, clinic visit reminder, no-show clinic rescheduling, adherence, scheduling, collect home vitals, medication reconciliation, etc.)
    - Send and respond to patient related secure messages
    - Send letters to assist with population management
    - Answer phone calls and respond to voicemails
    - Research/justification of services (i.e. compiling data/metrics)
        - IT/Data Analysts may also help with this role
- Nurses - RNs, LPNs, Nurse Care Coordinators
    - Assist with the referral process by working with physician dashboards/registries. Notify physician if quality measures/metrics are not being met (e.g. A1c >9%, to determine if referral should be placed to pharmacist)
    - Advocate for and provide education to patients regarding pharmacy services
    - Nurses and/or lab techs may assist with POCT INR testing at some facilities
    - Engage in telehealth services to obtain vitals and monitor patient disease control (i.e. congestive heart failure, hypertension, diabetes, etc.)
- Behavioral Health Provider, Social Worker, Dietician, Community Health Worker
    - Pharmacist is able to refer to different disciplines/specialties to address non-pharmacological barriers to achieving targeted outcomes (e.g. socioeconomic, nutrition, social determinants of health)
    - Refer to pharmacy services
- Medical Receptionists/Scheduling Staff
    - Assist with scheduling of pharmacist visits
    - Automated reminders for visits via calls, text messaging, etc.
    - Check patients in when they arrive for in person visits
- Medical Assistants
    - Assist with rooming of patients for pharmacist visits
    - Help patients with setting up telehealth functionality for virtual visits
    - Pre-visit planning
- Language/Interpreter Services
    - Assist with language interpretation in person, telephonically, or via video

VI. Design processes and workflows

As stated previously, the development of a risk stratification tool is an ideal way to design a population health management program and recruit eligible enrollees. The tool should incorporate clinical markers by which the program (and patients) will be benchmarked as achieved. Once a potential patient is identified through a risk stratification tool, consider a vetting process where healthcare providers review the chart to assure appropriateness. As an example, the analytics team will run the risk tool to identify the top 1-2% of top healthcare users within the health system. This list is provided to a medical assistant who uses a preset algorithm to assess initial acceptance into the program. A finalized approval for program acceptance is completed by a medical director, who oversees the population health clinical team. The medical assistant provides the initial outreach phone call to the identified patient as an introduction to the

program. Depending upon the patient's complexity score determined by the risk-stratification tool, the patient is assigned to an initial evaluation with either a nurse case manager (if high-risk), or a health coach (if medium-risk). At any point, a pharmacist referral can be made to enhance the care being done by the nurse or health coach, at their discretion.

Tasks such as scheduling, phone calls, outside chart or laboratory requests can be designated to an administrative assistant if available. Consideration for a medical assistant or pharmacy technician is helpful due to the medical administrative training knowledge.

When a risk-stratification tool may not be available, alternative approaches for the identification of patients and initiating care may include:
- Physician-driven referral
- Nurse reviews physician dashboard/patient lists based on set criteria. Nurse notifies the physician to determine if a referral should be placed.
- Pharmacist-identified
  - Using physician dashboards or patient lists based on set criteria
  - Reviewing ("scrubbing") daily/weekly clinic schedule

Reasons for referral to a pharmacist may include: chronic disease state management, cost, interactions, non-compliance, questions/education, reconciliation, side effects, medication titration, polypharmacy, or others. Common reasons for referral to program is based on quality metrics (i.e. A1c >9%, BP >140/90) and a pharmacist is well poised to approach these goals with the right training and clinical tools.

Optional vs. required participation
Once a patient is enrolled in a Population Health program, a policy should be developed to address whether or not participation in the program for patients is mandatory. If it is mandatory, then it should be decided how patients will remain motivated to participate.

In one example, there are separate criteria for optional vs required. This hospital system has identified two broad groups for potential inclusion into their population health program: patients who are covered by the hospital's self-insured plan, and commercially insured patients from all other contracted plans for value-based care. For the former group (employees and dependents), the program encourages participants to interact in the program by offering an enhanced benefits program, including 90% coverage (vs 80% for the standard plan), free diabetic supplies, and $5 copays for those medications directly related to the "top 5" chronic disease states being included in the Population Health program. However, if the employee or dependent chooses not to participate, then benefits are drastically reduced to 30% coverage. This motivation for maximum benefit coverage tends to influence patients to participate. By contrast, the latter group (commercially insured patients from all other contracted plans for value-based care) have an optional participation into the Population Health program. Although there is no enticement for keeping these patients engaged in the program, the vast number from all plans overwhelmingly and enthusiastically do participate in the program. This is attributed to enhanced resources to

which patients gain access, such as interacting with a health coach, pharmacist or nurse for no additional out-of-pocket fee.

VII. Measure your success

It is important to measure your success, and to determine when a particular initiative may not be as successful as hoped. In accordance with PAI 2030, organizations should collect, aggregate, measure, visualize and disseminate data related to financial and clinical performance of population health outcomes. For example, evaluate patients one year pre- and post-engagement for participating members of a population health program. Markers for success can include per-member-per-month dollars, inpatient admits, ED visits, PCP visits, and specialty visits. Comparing the number of these visit types to the general population may also show lower health utilization overall for the engaged population.

Start by defining key process, outcome, and balancing measures. Process measures indicate how frequently a process is adhered to or how often something is completed, such as the percentage of patients with diabetes who are prescribed a statin. An outcome measure indicates improvement in a clinical parameter, such as average percentage improvement in HbA1c. A balancing measure ensures that driving success on a process or outcome measure does not have any negative effects on a related aspect of that process. For example, if you were looking to improve the number of mediation reconciliations completed (your process measure), you might want to look at the number of patient outreaches as your balancing measure to ensure that the focus on improving medication reconciliation completion doesn't negatively impact the number of patient outreaches your pharmacists are able to complete.

Surveys collected post-program completion can assess patient satisfaction, confidence in positively affecting their own health, and their ability to set defined goals to improve their own health. Surveys can also assess physicians' experience with the population health program and multidisciplinary team interactions. Perceptions of the value to the physicians' patients and their practices can also be measured.

Ideas for metrics can be based on gap reporting from various payers or based on the organization's goals, or a combination of both. This will also depend on your audience. If you are presenting this data to the C-suite to try to expand services, identify where their key focus is and highlight those related metrics. Some examples are:

- Medication adherence rates
- Patients with diabetes prescribed statins or ACEI/ARB
- Patients with CAD on a statin
- Medication reconciliation post-discharge
- Osteoporotic fracture without bisphosphonate
- COPD/CHF/AMI readmission rates
- Smoking cessation success rates
- Time to first available provider appointment (improved provider access)
- Appointment/clinic utilization

- Panel size
- Patient or provider satisfaction scores
- Revenue (can be based on charges or reimbursement rates)

Once you've defined your metrics, you will need to determine how to track and present the data on a regular basis to your stakeholders. One of the best ways to do this is in a dashboard.

VIII. Utilize health IT resources to develop a population dashboard
Dashboards are extremely helpful in demonstrating the value pharmacists are bringing to the organization and how they are improving the care of their patients. They can also be used to monitor workload/productivity and revenue. Ideally, the dashboard is populated with data automatically and updated on a regular basis. See examples at the end of this resource document.
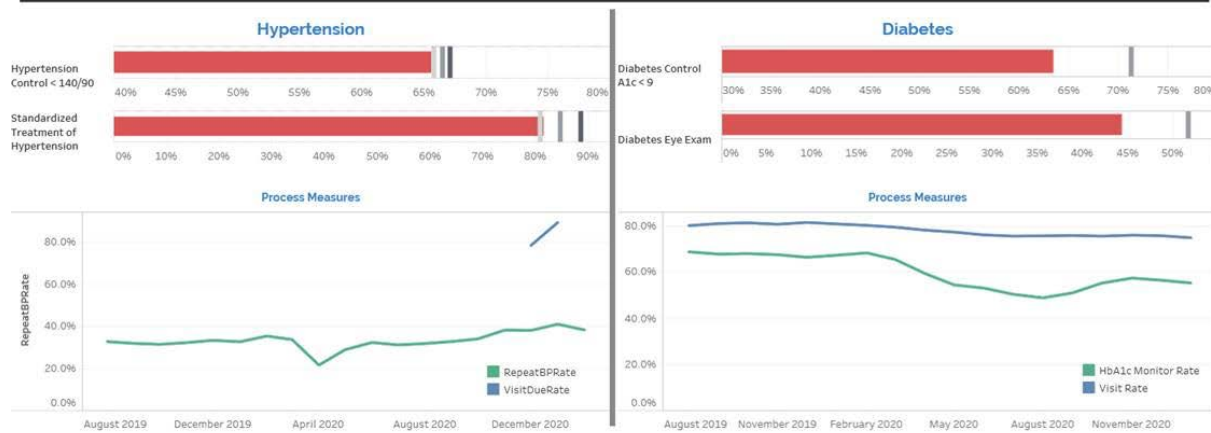
Think about how you will identify which patients to include, which to exclude, and the look-back period. Then determine the data points you want to track and how you can capture them from the EMR. These should be data points that are easy to pull automatically and are discrete (i.e. no free-text fields). Also consider if the data would be more meaningful if it is normalized, such as average percentage decrease in HbA1c rather than just a numerical decrease in HbA1c.

Make sure the data is actionable - you don't want to waste time tracking data that will not be used. If the metric has a goal or comparator, this should also be included for a quick comparison. If you are displaying different types of data, such as operational and financial metrics, it is best to display these on separate pages. Data should be presented in graphs and charts, rather than rows of a spreadsheet, so that it is easy to interpret. You can also add multiple layers so that users can drill down to their desired level of detail.

Dashboards can be formal, in a program such as Tableau, or more informal, such as an Excel spreadsheet. Whichever method you choose, be sure all stakeholders have access. When designing the dashboard, it is a good idea to engage resources from other departments within the organization such as quality, Value Institute, medical leadership, nursing leadership, and data analysts. This will help ensure a more robust tool.

For additional information, refer to the AJHP article titled "Leveraging electronic medical record data for population health management in the VHA: Successes and lessons learned."[4]

Figure 1 - Example Population Dashboards

CSR Program Performance

Characteristics of all patients considered for CSR

Current payor product
- AETNA Commercial
- CAREOREGON SUPERPAYOR Dual ...
- CAREOREGON SUPERPAYOR Medic...

Engagement

Primary staff

Note: Engagement rate is the percentage of patients who were contacted who chose to participate.

Total Patients: **1045**
Engagement Rate: **82%**
Average Number of Episodes per Patient: **1.81**

Patients with Condition — Asthma, CHF, COPD, CVD, Diabetes
- 451, 65, 38, 137, 482

Episode Count per Status
- Closed-Externally managed
- Closed-Not appropriate
- Closed-Well-managed
- Misc. closure
- Participant
- Patient opt out
- Unknown
- 157, 386, 862, 29, 346, 77, 38

Complex or Condition Care Episode Count — Complex Care, Condition Care, Unknown
- 1136, 742

Stratification Score Distribution

Age Distribution

Hypertension

Hypertension Control < 140/90

Standardized Treatment of Hypertension

Process Measures — RepeatBPRate, VisitDueRate

Diabetes

Diabetes Control A1c < 9

Diabetes Eye Exam

Process Measures — HbA1c Monitor Rate, Visit Rate

Panel Profile

Primary Care Panel Size	1 year:	35,182	18 mo:	39,903		Total Diabetics (DM)	2849
Ideal Primary Care Panel Size		33.5	FTE	39,530		Total Hypertensives (HTN)	4177
ESL		55%				Dual DM+HTN patients	1539
Sex	M:	14,545	F:	20,614		Asthmatics <18 yrs	1366
Age	<19	19-44	45-64	>64		Asthmatics 18+ yrs	2841
	12,691	13,045	7,458	1,988			

Clinical Measures / # of Patients

	Mar '15	Apr '15	May '15	Jun '15	Jul '15	Aug '15	Sep '15	Oct '15	Nov '15	Dec '15	Jan '16	Feb '16	Trend	GOAL ≥	DEN	NUM	Target to Goal
% DM Pts with A1C < 8	62%	62%	63%	62%	63%	64%	64%	64%	64%	62%	60%	60%		64.0%	2849	1703	-121
HTN pts with BP < 140/90	66%	66%	65%	66%	67%	66%	67%	68%	67%	66%	66%	66%		69.0%	4177	2750	-133
Pt ≥ 12yo screen annually for depression and follow-up **	68%	68%	68%	69%	69%	70%	71%	71%	71%	70%	71%	70%		80.0%	22728	15893	-2291
Adult weight screening and follow-up	57%	57%	57%	58%	58%	58%	58%	58%	58%	58%	59%	58%		60.0%	22555	13031	-502
Tobacco Use Screening and Cessation *	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%	97%		98.0%	21192	20482	-287
Colorectal cancer screening	42%	49%	49%	50%	50%	51%	50%	50%	51%	49%	50%	53%		55.0%	6097	3216	-138
Narcotics contracts	96%	#N/A	#N/A	97%	95%	95%	95%	95%	95%	95%	95%	#N/A		90.0%	0	0	N/A
Med Recon % ***	57%	59%	60%	61%	63%	65%	69%	71%	74%	74%	74%	75%		87.0%	1748	1315	-206
Active MyChart %	7%	7%	7%	7%	8%	8%	8%	9%	9%	9%	9%	9%		50.0%	37209	3522	-15083
Asthma pharmacologic therapy	90%	90%	90%	90%	90%	89%	89%	89%	89%	90%	90%	91%		91.0%	589	536	0
Coronary Artery Disease	77%	76%	78%	76%	77%	78%	77%	78%	77%	77%	78%	79%		78.0%	332	263	4
Ischemic Vascular Disease	84%	84%	84%	84%	83%	81%	80%	79%	79%	77%	76%	76%		83.0%	881	673	-59

References

1. Swarthout M, Bishop MA. Population health management: Review of concepts and definitions, *Am J Health-Syst Pharm.* 2017; 74:1405-11. https://doi.org/10.2146/ajhp170025
2. Bresnick J. Using risk score, stratification for population health management. *Health IT Analytics.* December 16, 2016. https://healthitanalytics.com/features/using-risk-scores-stratification-for-population-health-management. Accessed May 1, 2020.
3. ASHP Practice Advancement Initiative 2030 Recommendations. https://www.ashp.org/Pharmacy-Practice/PAI/PAI-Recommendations Carmichael JM, Meier J, Robinson A, et al. Leveraging electronic medical record data for population health management in the Veterans Health Administration: Successes and lessons learned, *Am J Health-Syst Pharm.* 2017; 74:1447-59. https://doi.org/10.2146/ajhp161048

*Figure 1 images shared with permission from Legacy Health (Oregon), Virginia Garcia Memorial Health Center (Oregon), and ChristianaCare (Delaware)

Contributing Authors

Edward Saito, Pharm.D., BCACP
Assistant Professor
Pacific University School of Pharmacy
Hillsboro, OR

Canice Coan, Pharm.D., BCACP
Nebraska Medicine
Omaha, NE

Yvette Grando Holman, Pharm.D., BPharm, BCPS, FOSHP
Clinical Pharmacist, Population Health
Legacy Health
Portland, OR

Kong Wong, Pharm.D., BCACP
Clinical Pharmacy Specilist
Patient Aligned Care Team
Department of Veterans Affairs
Washington, DC

Rachel Drury, Pharm.D., BCACP
Ambulatory Pharmacy Coordinator
Froedtert & The Medical College of Wisconsin
Menomonee Falls, WI

Samantha Landolfa, Pharm.D., BCPS
Clinical Pharmacy Supervisor
ChristianaCare
Newark, DE

Jeff Olson, Pharm.D., M.B.A., BCPS, BCACP
Community Care Pharmacy Director
Intermountain Healthcare
Salt Lake City, UT

Mariel Shull, Pharm.D., MHA
Pharmacy Utilization Management
NYU Langone Health
New York, NY

Betsy Shilliday, Pharm.D., CDE, CPP, BCACP, FASHP
Director, Advanced Practice Provider Center
UNC School of Medicine
Chapel Hill, NC