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Access to Care:
Development of a Medication
Access Framework for
Quality Measurement

TABLE OF CONTENTS



EXECUTIVE SUMMARY.....	4
INTRODUCTION.....	5
PROJECT OVERVIEW.....	6
REVIEW SUMMARY 1: CHALLENGES AND BARRIERS TO MEDICATION ACCESS.....	7
REVIEW SUMMARY 2: ENVIRONMENTAL SCAN OF MEDICATION MEASURES.....	9
REVIEW SUMMARY 3: INTERVENTIONS IMPROVING MEDICATION ACCESS.....	10
MEDICATION ACCESS CONCEPTUAL FRAMEWORK.....	11
IMPLICATIONS FOR QUALITY MEASUREMENT.....	16
CONCLUSION.....	20
ABOUT THE PHARMACY QUALITY ALLIANCE.....	21
APPENDIX A: ACCESS TO CARE ROUNDTABLE PARTICIPANTS.....	22
APPENDIX B: BARRIER DEFINITIONS.....	23
APPENDIX C: ENVIRONMENTAL SCAN OF ACCESS TO MEDICATION MEASURES.....	27
APPENDIX D: STAKEHOLDER SURVEY.....	28
REFERENCES.....	30

EXECUTIVE SUMMARY

The United States healthcare system is continuing to shift from a volume-based to a value-based care delivery system. The ultimate goal is to provide better, more affordable care to people and communities. This includes ensuring that patients have access to high-quality healthcare, including access to needed medications. Various legislative efforts have attempted to improve access to care, including the rollout of the Medicare Part D drug benefit and expansion of Medicaid. However, despite these achievements, the US population still faces significant medication access challenges, which are further emphasized across certain social disparities and factors.

For patients that have difficulty accessing needed medications, the impact is substantial, at the patient, healthcare system, and population health levels. Improved medication access not only benefits the patient, but the healthcare system. Employer groups would see lower healthcare costs, less absenteeism, and higher productivity. Healthcare providers would benefit from better outcomes for their patients and less administrative time in assisting with medication issues. Government agencies, like the Centers for Medicare & Medicaid Services, would benefit from lower healthcare expenditures and improved patient care.

The use of quality measures plays a critical role within this evolving, value-based, healthcare landscape. Various theoretical frameworks exist that help identify and measure healthcare access. However, such frameworks have limitations when applied to medication access solely. Therefore, the Pharmacy Quality Alliance (PQA), with support from the National Pharmaceutical Council (NPC), convened a multi-stakeholder Access to Care Roundtable to develop a conceptual framework that better defines medication access and to identify priority gaps for future quality performance measurement based on commonly identified barriers.

The Access to Care initiative included two phases; Phase I consisted of a series of reviews to identify the barriers to and interventions that improve access to medications. Additionally, Phase I included an environmental scan to assess the current landscape of access to care measures. Phase II involved the Access to Care Roundtable using the findings of Phase I to inform the development of a conceptual framework on access to medications.

Building from existing healthcare utilization frameworks, the Roundtable identified a holistic approach to defining medication access. The Roundtable further mapped common barriers patients encounter using the framework. For example, patient health literacy was the predominant barrier identified, highlighting that an inadequate understanding of disease management, how to navigate the healthcare system, and/or insurance coverage, can cause multiple access issues. Other major barriers within the framework include medication-related costs and insurance.

Quality performance measurement offers an opportunity to assess and incentivize appropriate medication access. The developed conceptual framework is a unique, holistic approach to defining medication access, incorporating key focal points of and barriers to access at the patient-, provider-, and health system-level. The framework can be used to help prioritize the development of new medication access measures, including the identification of a medication access core measure set. Additionally, the Roundtable underscored the importance of patient & community engagement within measure development, and further emphasized the role of pharmacy in improving medication access. This report and conceptual framework serve as a foundation for future efforts by measure developers, researchers, and other healthcare stakeholders to advance quality measurement for medication access.

INTRODUCTION

Having access to necessary medications for both acute and chronic conditions is of keen interest and concern to patients, providers, and policy-makers, as health improvements (e.g., morbidity, mortality, functional status, quality of life) related to prescription medications are well-documented.^{1,2,3} Patients who underuse medications are significantly more likely to have complications, resulting in increased healthcare resource utilization (e.g., emergency department visits, hospitalizations).^{4,5,6} As a result, the associated costs to US healthcare system due to medication underuse is an estimated \$100 - \$290 billion annually.⁷

In 2010, the Patient Protection and Affordable Care Act (ACA) sought to increase access to healthcare for US adults by improving the affordability of health services.⁸ The law required private insurance plans to allow young adults to remain as dependents on their parents' plans and eliminated cost-sharing for evidence-based clinical preventive services. It also expanded Medicaid eligibility and provided lower income individuals with subsidies for health insurance premiums and cost-sharing for health services, including medications.

Affordability of healthcare has long been recognized as a central element of access.^{9,10,11} Despite the legislative changes enacted by the ACA, significant medication access challenges still exist in the US. In 2016, the Commonwealth Fund International Health Policy Survey found that an estimated 14% of insured Americans either did not fill a prescription or did not take all doses of medication due to cost.¹³ Estimates were even higher among uninsured Americans, with 33% reporting that

they did not fill a prescription or skipped doses.¹² Various health plan cost management strategies (e.g., prior authorizations, cost-sharing) have been implemented to better control drug spending, but these same tools can lead to challenges in accessing medications.^{13,14,15,16}

Outside of cost, other barriers exist that extend beyond the ability to pay for services or medications.¹⁷ Nonfinancial barriers to healthcare access can include a range of factors, such as transportation and geographic location,¹⁸ organizational health literacy,¹⁹ provider availability,¹⁷ health literacy,^{20,21} language barriers, and cultural differences.²² Lastly, limited access to care is particularly pronounced among non-Hispanic Blacks and Hispanics compared to non-Hispanic whites.^{17,23,24}

As the US healthcare system continues to shift from volume-to-value, making healthcare, including medications, more accessible for patients is a recognized priority within the National Quality Strategy (NQS).²⁵ To help achieve this goal, stakeholders can use various levers to align their core business or organizational functions to drive improvement on NQS aims and priorities. Several of these promote the use of quality measures to provide performance feedback to providers, to incentivize quality, and to allow patients to compare good versus poor quality of care.²⁵ The current quality measure landscape consists of a wide variety of measures that target medication-use. However, with respect to medication access, a better understanding of this multifaceted issue is needed to identify potential measure gaps and to prioritize opportunities for future development.

PROJECT OVERVIEW

The Pharmacy Quality Alliance (PQA), with support from the National Pharmaceutical Council, convened a multi-stakeholder Access to Care Roundtable (Appendix A), composed of experts and researchers in the areas of social determinants of health, healthcare quality improvement, and quality performance measurement. The goal of the Roundtable was to develop a conceptual framework to better define medication access and to identify priority gaps for future quality performance measurement targeting access to medications. The work of the Access to Care Roundtable was informed by a series of three reviews undertaken by PQA:



Review 1

Identify and describe the challenges and barriers to medication access



Review 2

Environmental scan of medication-specific access quality metrics



Review 3

Identify potential interventions that improve medication access

The Roundtable did not focus on any specific disease states or medications. Rather, the conceptual framework applies to all conditions where medication-use exists. The purpose of the literature reviews and environmental scan were to provide the Roundtable with existing evidence regarding the barriers and interventions that impact medication access and how medication access is currently measured. The Roundtable developed the framework and recommendations based on these findings. In addition, PQA surveyed a broader group of healthcare stakeholders on areas of importance within the framework and opportunities for improving medication access after presenting the framework at a social determinants of health forum in November 2018 (Appendix D).

The framework is intended to support future quality measure development and other healthcare stakeholders in efforts to improve patient access to needed medications. The framework can be applied to multiple medications, patient populations, and determinants of health. The following sections present the review summaries, the conceptual framework, and the implications for quality measurement.

REVIEW 1:

CHALLENGES AND BARRIERS TO MEDICATION ACCESS

We conducted a MEDLINE search of articles published in English between January 1, 2010 and September 24, 2017 to identify peer-reviewed articles concerning medication access. We built the search strategy using major Medical Subject Headings (MeSH) and key search terms associated with each concept: 1) healthcare accessibility and availability, 2) identified barriers and challenges to accessing healthcare, 3) medication availability, and 4) disparities in access to medications. Unpublished reports were reviewed and experts in the field were contacted to identify additional literature. Inclusion criteria consisted of articles addressing the US population, articles dating from 2010 – present (ACA passed, many third-party payers began early implementation of ACA requirements), discussed barriers/challenges to access to medications and/or immunizations, and were published in English. Articles were excluded if they did not meet the inclusion criteria.

A list of 17 of the most common and relevant barriers was compiled (Table 1). Barrier definitions (Appendix B) were drawn from several sources, including two Institute of Medicine working groups (Roundtable on Health Literacy¹⁹ and Committee on Monitoring Access to Personal Health Care Services²⁶), National Healthcare Quality and Disparity Reports by the Agency for Healthcare Research and Quality,²⁷ Andersen Behavioral Model of Health Services Use,²⁸ and Deroose et. al.²⁹ These barriers were refined, prioritized, and categorized as having severe, moderate, or minimal impact on medication access based on the literature review, Roundtable input, and feedback of a PQA-convened Patient and Caregiver Advisory Panel. Drawing from previous models, we further stratified barriers by three areas: health system/organizational, environmental, and patient characteristics.

Overview of Findings:

The MEDLINE search returned 1728 articles, of which 600 went to full text relevance screening. Of those 600 articles, 181 were included for review. Although many articles discuss barriers to medication access, few contain quantifiable data assessing their impact. Of the three stratification categories, barriers that reflect patient characteristics were the most commonly identified in the literature. Patients with chronic medical conditions, especially those who are disabled, faced numerous intersecting barriers to accessing medications, often facing transportation, cost, income, and insurance challenges. Social determinates of health (race/ethnicity, education, language or limited English proficiency, and income) e.g., were major predictors of medication access based on the quantity and quality of evidence found in the review.

Barriers segmented into health system/organizational classification, were the least studied although they have a major impact on patient access to appropriate medications. Provider attitudes and beliefs regarding heavily stigmatized conditions (e.g., substance use disorders, HIV/AIDS) were identified, as well as a lack of provider competency in the management of these conditions. The most well-defined barrier in the health system/organizational category was organizational health literacy, which encompassed a larger, system-wide concept of creating a health-literate organization. Insurance also fell within this stratum, encompassing issues related to benefit design (e.g., formulary, prior authorizations, step therapy), coverage or no coverage, and type (publicly funded vs. private/commercial).

Environmental barriers, such as rural/urban residence status, had a significant impact on patient access, with patients residing in more urban or more rural areas having increased difficulty with access. Another potential issue of environmental barriers involved public support (i.e., funding) for controversial healthcare programs, such as Title X family planning,³⁰ substance use disorder treatment

centers,³¹ or the Ryan White HIV/AIDS program³² at the community and state levels. Lack of support for these programs can mean that they are geographically inaccessible to patients.

Overall, the barriers to medication access are complex and intersecting. Most articles examined a wide swath of barriers that impact specific populations.

Table 1: Barriers Identified

Barrier	Definition
Organizational Health Literacy	Organizational Health Literacy is how health literate healthcare systems are in providing patient care. This encompasses everything from management, organizational systems and interoperability, and the healthcare work force. ³³
Provider Competencies and Beliefs	Provider competencies and beliefs can impact patient access to care ²⁹ (e.g., lack of current medical knowledge, ability to provide culturally competent care, ³⁴ outlook on stigmatized conditions.)
Medical Conditions	Diseases and/or chronic conditions that can impact access to healthcare and medications. ³⁵
Health Literacy	Health literacy characterizes the capability of the public to obtain and understand health information. ³⁶ It also includes the ability to make health decisions and to navigate the healthcare system in order to obtain medical services. ³⁷
Insurance	Patient access to medical care/medications based on the type of medical insurance.
Patient Attitudes and Beliefs	Patient attitude and values towards the healthcare system and how negative attitudes can lead patients to not utilizing medical services, creating a barrier to accessing care. ⁴
Race/Ethnicity	Racial or ethnic background and how it impacts access. ³⁵
Gender	How gender impacts patient access to medical care and medications.
Provider Availability	Includes adequate medical infrastructure, facilities, and competent workforce to provide healthcare and medication after a need is identified. ⁴
Language	Examination of barriers experienced by patients whose primary language is not English in gaining access to needed medical care and medications. ⁴
Public Support	Examines if taxpayer funded healthcare programs that provide access to certain forms of medical care and medications. ⁴
Transportation	Availability of transportation to medical care and medications. ⁴ This includes car ownership ³⁸ and the adequacy of public transportation.
Rural/Urban	Examines barriers that are unique to urban and rural communities. ^{39,40}
Costs	The costs of obtaining healthcare services. This includes the indirect costs of receiving care (e.g., transportation, time off work.)
Disability Status	The unique issues that patients with disabilities can face in accessing healthcare and medications.
Income	Barriers related to the income of patients. ⁴
Education	Barriers related to patient's educational level. ⁴

REVIEW 2:

ENVIRONMENTAL SCAN OF MEDICATION MEASURES

We conducted an environmental scan to identify existing medication-specific quality measures. We searched three databases in January 2018: the CMS Measure Inventory Tool, AHRQ National Quality Measures Clearinghouse, and the NQF Quality Positioning System. We applied search terms related to medication access and use, including terms related to medication adherence (a common indicator of medication access). We included measures if they directly focused on a medication. We excluded measures if they were developed outside of the US or if

they focused on adverse drug events or inappropriate use.

Using the measure rationale, title, and measure description, we mapped the included measures to the major barriers identified in Review 1. Due to the intersecting nature of the barriers identified in Review 1, measures could address multiple barriers. For example, a quality measure that examined the enrollment processing time for an AIDS Drug Assistance Program would address both the medical conditions and insurance barriers.

Overview of Findings:

After removing duplicates and screening for relevance, we identified 270 medication-specific quality measures ([Appendix C](#)). Of the 270 measures identified, 22 focused on medication adherence.

Not surprisingly, most measures (~75%) focused on medical conditions with cardiovascular disease, behavioral health, substance use disorders, HIV, and cancer predominating. Measures commonly focused on appropriate counseling, screenings, follow-up, or monitoring.

Organizational health literacy as a barrier to medication access was targeted exclusively within relatively few measures, although it indirectly touches on over two thirds of measures. Common themes for these measures include care coordination, timeliness and wait times, social work/care support, and follow-up care. Related to organizational health literacy, approximately half of the measures also touched on provider competencies and beliefs. Many of these measures address appropriate prescribing, documentation, and patient counseling. The intersecting nature of barriers is highlighted by health literacy measures, which approximately 27% of the measures address

due to inclusion of a counseling component. A common theme for these measures was if patients felt they were provided appropriate counseling about their medications.

Very few (~4%) measures mapped to insurance. Measures generally addressed appeals for medication coverage denials and patient satisfaction/experience with their coverage. None directly targeted certain medication utilization policies, such as prior authorizations or step therapy. One measure used within the Medicare 5-Star Rating System for Part D attempts to capture the patient experience with getting needed medications. This metric is calculated based on three components: 1) the ease of getting prescribed prescriptions, 2) the ease of filling prescriptions at the local pharmacy and 3) ease of filling prescriptions by mail order.

Measures that address patient attitude and beliefs (~6%), gender (~3%), and race/ethnicity (~1%) related barriers were minimal. No measures addressed the other nine barriers identified (public support, transportation, provider availability, rural/urban, costs, language, disability status, income, and education).

REVIEW 3:

INTERVENTIONS IMPROVING MEDICATION ACCESS

We conducted a search within MEDLINE of articles published in English between January 1, 2010 and October 2, 2018 to identify interventions impacting medication access in the peer-reviewed literature. We built the search strategy using major Medical Subject Headings (MeSH) and key search terms associated with each concept: 1) healthcare accessibility/availability; 2) assistance programs; and 3) drug/pharmaceutical. We searched citations of included studies for additional relevant articles. We excluded articles if they focused on

populations outside the US or if they did not meet the inclusion criteria. We included articles if they described interventions affecting medication access after 2010 (when the Affordable Care Act was signed into law) or if articles reported results as a change in medication access as one of the outcomes of interest. Many studies did not report a change in medication access specifically, thus intermediary (indirect) markers of medication access were also explored (e.g., medication adherence, health care utilization).

Overview of Findings:

The MEDLINE search yielded 966 articles for consideration. After removing duplicates and screening for relevance, we identified 88 articles for full text review. Only eight were deemed eligible for data extraction. The primary reason we excluded articles after the full text review was due to a lack of an intervention, in which articles focused largely on the expected impacts of legislation were commentary, or opinion.

The eight studies explored various interventions, including charity pharmacy services, prescription and patient assistance programs, and federally-qualified health center safety-net systems. These interventions addressed several medication access barriers identified in Review 1. All studies included an aspect of insurance (whether it was increasing access for uninsured or maximizing a Medicare beneficiary's access) and income. Two of the studies explored interventions that

address environmental barriers, such as specific challenges faced by patients residing in rural areas. Adherence was a common metric used to ascertain medication access, as it is an indirect measure of medication access and is a commonly used outcome to evaluate health services interventions.

Overall, there is a paucity of peer-reviewed literature assessing direct impact of various interventions on medication access. However, very few studies utilize direct measures of increase and/or decrease in medication access. This is potentially a result of the lack of measures to directly evaluate medication access. As found in Review 2, very few metrics exist to directly evaluate medication access. Instead, indirect measures, like adherence, are most common. None of the included studies used patient surveys or patient-reported outcomes to capture medication access.

MEDICATION ACCESS CONCEPTUAL FRAMEWORK

Medication Access Patient Journey

The Access to Care Roundtable comprised of stakeholders from patient advocacy organizations, public and private payers, researchers, quality organizations, and professional associations. The panel recognized that many frameworks have been developed to demonstrate healthcare utilization and access. The conceptual framework developed by the Roundtable builds on existing conceptual models, including the Institute of Medicine Model (IOM) of Monitoring Access.⁴ This model focuses on structural, financial, and personal barriers to utilization, while also incorporating the appropriateness of the healthcare received by the individual, such as the efficacy of treatment, quality of providers, and patients' adherence to prescribed treatments and medications.

The Roundtable sought to build upon this work by developing a framework that better defines the patient journey to medication access.

Subsequently named the Medication Access Patient Journey (MAPJ), this conceptual framework identifies seven nodes that patients encounter while attempting to gain access to medications (Figure 1). Consisting of Perceived Need, Help Seeking, Encounter, Prescribing, Prescription Adjudication, Prescription Dispensing, and Adherence, the framework is cyclic in nature. It begins with a patient's awareness of an illness or condition that induces a need to seek treatment (Perceived Need) and ending with adherence to treatment (Adherence). Like the IOM model, the MAPJ explores differences in access and node realization among populations that may be a result of financial or other barriers. It also integrates concepts from the five A's of access to care defined by Penchansky and Thomas: affordability, availability, accessibility, accommodation, and acceptability.⁴¹

Figure 1. Medication Access Patient Journey Conceptual Framework

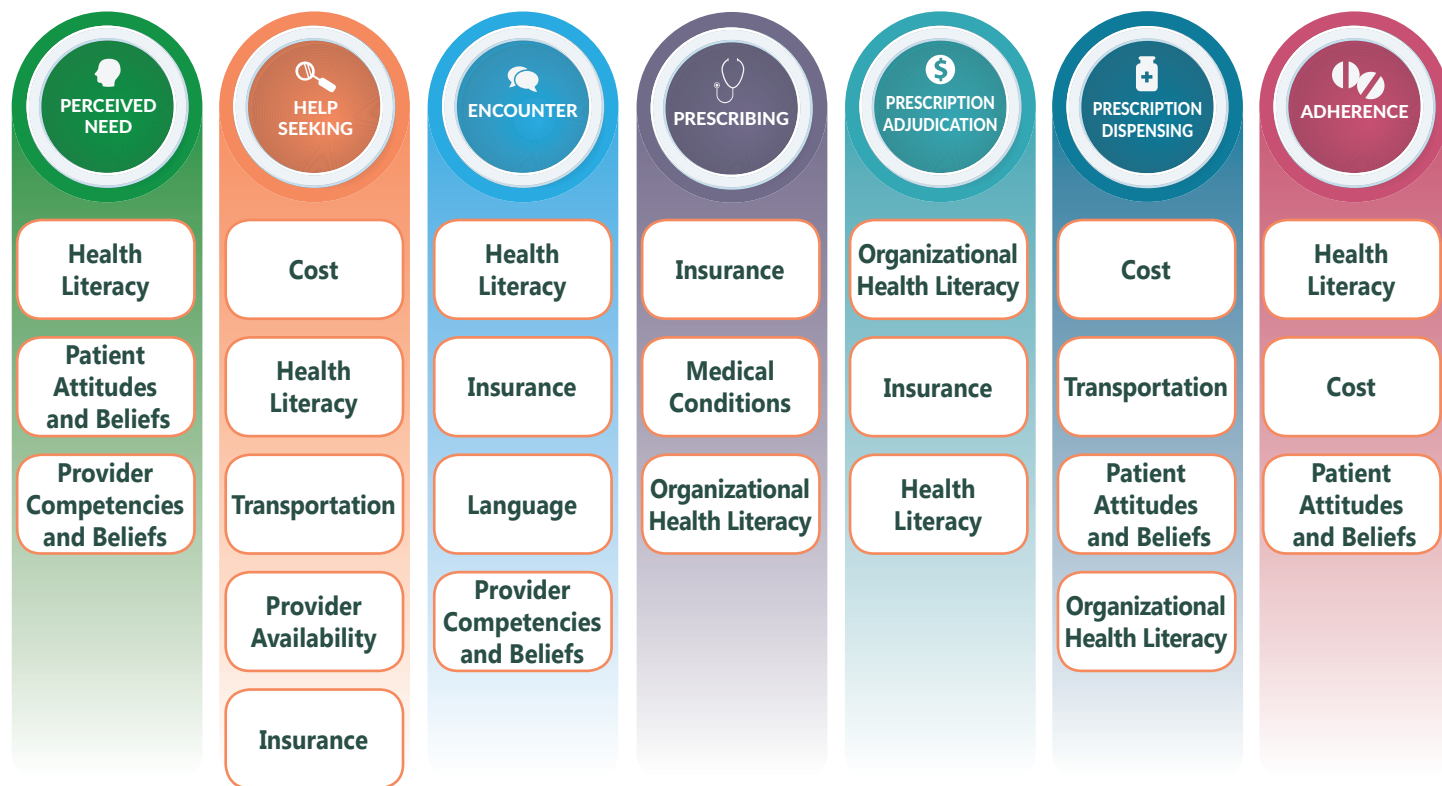


The Roundtable further identified common barriers patients encounter across the nodes of the framework (Figure 2). Patient health literacy was the predominant barrier identified, crossing five of the seven nodes, highlighting that an inadequate understanding of disease management, how to navigate the healthcare system, and/or insurance coverage, can cause multiple access issues for patients. The Roundtable further identified costs, both direct (e.g., out-of-pocket) and indirect (e.g., time off work, day care, transportation) and insurance as significant barriers, touching all nodes except Perceived Need. A patient's ability to access medications is significantly impacted by whether a patient has insurance and the type of insurance (e.g., Medicaid, Medicare, commercial). Moreover, medication placement on formulary tiers that dictate patient copays and affordability and utilization management tools, such as step-therapy and prior authorizations, can create hurdles to gaining access to medications for patients. Lastly, the group discussed the importance of

organizational health literacy, a major barrier in the Prescribing, Adjudication, and Dispensing nodes. Organizational health literacy describes how health literate systems are in providing patient care. The goal of health literate organizations is to assist patients in navigating the healthcare system by proactively working to remove barriers and ensuring that the healthcare workforce, at all levels, is health literate.

The intent of this framework is to inform high-priority medication access areas that can be targeted for potential quality measure development. In addition, several themes emerged that warrant further attention including the intricacies of insurance design (e.g., prior authorizations, step therapy, value-based insurance design), the lack of cost transparency during a prescriber encounter, and the importance of capturing the patient perceived need within measurement. Both these themes and the top barriers identified in each node are potential areas of quality measure development focus.

Figure 2. Common Barriers Across the Conceptual Framework*



*Includes only common barriers as determined by the Roundtable



Node Descriptions

Perceived Need

This node addresses the patient perspective in the perceived need for care and potentially medication.⁴² This includes patient awareness of an illness or condition that infers a need to seek treatment. To move out of this node, a patient would realize that they have a need for treatment and move into the the Help Seeking node. An example of a patient benefiting from an intervention in this node would be encountering a public health tobacco-cessation campaign that offers education materials and realizing the damage that smoking is inflicting on their health.⁴³ This could lead the patient to seek professional help in quitting.

Barriers to this node are those that make the patient or health system unable to recognize the need for care.⁴⁴ These can include patients with low health literacy. Health literacy can encompass issues such as patients not understanding the need for blood pressure medication because they do not feel ill,⁴⁵ or rheumatoid arthritis patients not understanding the role of anti-inflammatory medications in treating their disease.⁴⁶ Patient attitudes and beliefs about their health and medical science can also impact perceived need. An example would be the anti-vaccine movement, which has led to vaccine refusal in some subcultures within the US.⁴⁷

Help Seeking


Patients enter the Help Seeking node as the result of recognizing a perceived need for treatment. Help seeking involves actively seeking an encounter with the healthcare system. Help seeking includes attempting to schedule an appointment with a medical provider, contacting an insurance plan for lists of in-network providers, and checking insurance coverage for specific disease states and/or treatments.²⁰ An example of successful patient encounters with the Help Seeking node includes a patient that suspects they have strep throat locating an after-hours urgent care that is convenient for them to seek care.

Barriers within the Help Seeking node can include patient difficulty in accessing and navigating the healthcare system and inability to schedule appointments around work.⁴⁴ Social pressures can also be a barrier, especially for patients with highly stigmatized diseases/disorders, such as mental health issues, substance use disorders, or human immunodeficiency virus (HIV). Patients may be concerned about revealing their HIV status or substance use disorder issues while seeking care.²¹

Encounter

The Encounter node occurs after a patient has successfully sought help and is where a patient interacts with a healthcare provider to present their health concerns for assessment and possible treatment.⁴⁸ The goal of the encounter is for the patient to receive culturally competent and clinically appropriate care,²³ meaning a successful Encounter node is not solely concerned with a patient having a medical appointment. The goal of this node is also that the patient is part of a high-quality encounter with the healthcare system. The Encounter node can take place at multiple points during patient treatment, reinforcing the concept that the MAPJ is cyclic in nature, as patients can have multiple encounters. It also encompasses primary care physicians making appropriate referrals to specialist.⁴⁹ Inappropriate referrals can add increased access barriers for patients, including transportation and costs, while not making appropriate referrals can lead to patients not accessing specialty treatment.⁵⁰

It is not uncommon for patients to have encounters with an entire team of healthcare providers, including primary care providers and one or more specialist for chronic or life-threatening acute conditions. It can occur in a variety outpatient and inpatient settings and involves appropriate patient assessment, screening, counseling, and education. Another example of a patient encounter would be a patient with



Sickle Cell Anemia (SCA) receiving care after presenting to an emergency department with a pain crisis.⁵¹ As SCA is found predominately in patients of Mediterranean and African descent,⁵¹ many of these patients can face discrimination in pain treatment.^{52, 53} A successful encounter for this patient would be the emergency department staff correctly diagnosing the patient and quickly providing guideline based pain relief and other treatment⁵⁴ rather than speculating that the patient is “drug seeking.”⁵³

Barriers to the Encounter node can include a lack of insurance,⁵⁵ limited provider availability,⁵⁵ language barriers, issues with provider competencies and beliefs,⁵⁶ and/or transportation issues.¹⁸

Prescribing



The Prescribing node involves a medical provider selecting a clinically appropriate treatment that has the high likelihood of the patient successfully navigating future nodes to receive the medication. While the selection of a clinically appropriate medication is important, there are additional issues medical professionals would need to address. These include the acceptability of the medication by the patient, health plan utilization management tools such as prior authorizations and step therapy, and affordability of the medication. An example of this would be if a provider realized that a patient with Type II diabetes and rheumatoid arthritis may have trouble giving themselves insulin injections. Rather than prescribing vials of insulin that require manual dexterity in giving injections with a syringe,⁵⁷ the provider could have a discussion with the patient to see if an insulin pen might be a better option. The provider would then consult the patient’s insurance formulary to identify any coverage or copayment issues and resolve them.

Barriers to successfully receiving a needed prescription can include the prescriber lacking information regarding a patient’s insurance coverage (i.e., high co-pays, prior authorizations,)⁵⁸ discomfort in treating stigmatized diseases, personal attitudes and beliefs about demographic groups.^{58,59}

Prescription Adjudication



Prescription adjudication is the processing and payment of a medication claim by a third-party payer, which can include a health plan, patient assistance, and/or copay assistance programs. The goal of the Prescription Adjudication node is the timely adjudication (processing) of a medication claim.⁶⁰ The preferred outcome is that the patient receive their medication without any significant delays that negatively impact patient health outcomes or quality of life. “The Prescription Adjudication node builds on the preceding steps in MAPJ and as a result success here depends on activities in the Encounter and Prescribing nodes. An example of success in the Adjudication node would be if a patient received a prescription for a specialty drug for epilepsy that required prior authorization. The prescribing provider would need to work with the health plan and pharmacy to ensure that the adjudication process did not create a barrier to the patient accessing the medication. Ideally, the patient would be aware of and understand the process but receives the medication with a minimum of stress and/or delays.

Barriers to prescription adjudication are poor communications within the health system, including between providers coordinating care and between providers, pharmacies, and health plans.⁶¹ Low provider organizational health literacy can lead to problems if they lack knowledge of insurance structure, such as prior authorization, step therapy, and other utilization management requirements.^{58,59}



Dispensing

The Dispensing node is the culmination of actions taken at the Encounter, Prescribing, and Adjudication nodes. Dispensing encompasses the point of contact between a patient and the pharmacy that provides medication. Success within this node involves the patient receiving appropriate medication and counseling.²³ An example of a successful dispensing transaction would be a caregiver receiving an initial fill of a rescue inhaler and spacer for a young child newly diagnosed with asthma. Simply providing the caregiver with the inhaler and spacer would not constitute a successful dispensing. The pharmacy would also need to provide (or at least offer in good faith) practical counseling on how to use the inhaler and spacer together to ensure that the caregiver was competent to administer the medication.⁶²

Barriers to successful prescription dispensing include a lack of patient transportation¹⁸ or pharmacy delivery service, language barriers,⁶³ poor communication skills on the part of the pharmacy staff,⁶³ costs of medication,⁶⁴ and patient attitudes and beliefs about the need for the prescribed medication.⁶⁵

Adherence

The most common definition of medication adherence is a patient agreeing with and following a healthcare provider's recommendations, in this case obtaining and taking medications as prescribed.⁶⁶ In the case of chronic conditions, patients may need to complete multiple cycles of the MAPJ throughout their lifetime. The Adherence node, a culmination of all prior nodes, has additional layers of complexity. Issues with all prior nodes can disrupt medication adherence. An example of a successful intervention to improve adherence would be if a health care professional treating a patient with psoriasis evaluated a patient for satisfaction and clinical response to medication treatment.⁶⁷ By assuring that the patient was satisfied with their response to medication, this could be an effective intervention to keep them adherent. Studies have also highlighted the impact pharmacists can have on adherence, especially in hard-to-reach patients.⁶⁸

Barriers to adherence can include side effects, such as gastrointestinal upset with Type II diabetes patients prescribed metformin.⁶⁶ Low patient health literacy can also be a considerable barrier, as patients may not understand the long term health effects of hypertension and the need to take medication due to a lack of symptoms.⁶⁹ Other barriers to adherence can include transportation¹⁸ or insurance issues, such as gaps in coverage⁷⁰ and formulary changes that can lead to patients switching medications that may be more costly or have more side effects.⁷¹

IMPLICATIONS FOR QUALITY MEASUREMENT

Quality performance measurement offers an opportunity to assess and incentivize appropriate medication access. The MAPJ framework is unique in that it identifies a holistic view of medication access, incorporating key focal points and barriers to medication access at the patient-, provider-, and health system-level.

The Roundtable was tasked with identifying key areas of importance within the framework and providing recommendations for quality improvement and performance measurement. The identified recommendations support the framework by highlighting opportunities for measure developers, researchers, and other healthcare stakeholders to improve medication access.

The Roundtable concluded that the nodes and common identified barriers support the prioritization and development of new measures, the harmonization of measures through the creation of core measure sets, and the importance of patient and community engagement within measure development. Furthermore, the group determined that this framework underscores the importance of the pharmacist and pharmacy technicians and their role in improving medication access. Therefore, the group's recommendations were categorized into four key areas: (1) Measure Gap Identification/Prioritization; (2) Quality Measure Core Set; (3) Patient & Community Engagement within Measurement; and (4) the Role of Pharmacy.

Measure Gap Identification/Prioritization

The Roundtable identified seven nodes of medication access (Figure 1), each of which have opportunities for measure development that can further be prioritized by common barriers across each node. Current medication-specific quality measures are concentrated within the Prescribing and Encounter nodes, which focus on physician- and health system-level accountability. There is a paucity of measures that target barriers within the Adjudication, Dispensing, Perceived Need, and Help Seeking nodes.


The Roundtable recognized health literacy, both at the patient and organizational level, to be a consistent barrier to accessing medications. Patients must be able to understand the healthcare information they receive, including insurance and cost of treatment. In a recent report on measures for rural populations, the National Quality Forum (NQF) Workgroup further recognized the importance of health literacy, recommending a two-fold approach to increase health literacy: education for both patients and clinicians on the importance of patient engagement in healthcare, along with improvements in clinician-patient communication overall.⁷² Several drug-specific quality measures have a counseling component, largely focusing on disease

management. However, the degree of communication around other major access barriers, such as cost and insurance coverage options, is lacking within current quality metrics.

Recommendation: Cost(s) should be viewed as the culmination of both direct and indirect costs

The Roundtable felt that cost should include both the direct out-of-pocket cost of the medication, and the indirect costs related to engaging with the healthcare system to obtain a medication, including, but not limited to day care services, time off work, use of public transportation, etc. The group further stressed that cost and insurance were major factors that can contribute to delayed care. For example, a lack of cost transparency or discussion about cost when a patient receives a prescription may cause a refusal to pay for a dispensed prescription due to high out-of-pocket costs.

As noted previously, current medication-specific quality measures do not assess the cost of medications to the patient, nor do scientifically acceptable performance metrics exist that attempt to assess whether a shared-decision regarding medication choice incorporated an element of cost



transparency between provider and patient. This is largely a result of poor availability and transparency of prescription cost data. However, improvements in health technology interoperability, communication, and cloud-based systems are increasingly offering more transparency of health information, including the cost of medications.

Recommendation: Use of telehealth services may help overcome transportation and provider availability barriers

Other commonly identified barriers, such as transportation and provider availability also lack medication-specific quality measures. One potential strategy to overcome these challenges is to use telehealth services to address transportation and provider availability issues. This was further emphasized by an NQF-convened Committee, recommending that measurement should be used to determine if the use of telehealth led to the correct diagnosis and appropriate follow-up care, thus mitigating the need for further travel.⁷² Additionally, for language and cultural barriers, healthcare providers may use interpreter services that are available via phone or web-based platforms when in-person interpreters are not available on-site.

Recommendation: Perceived Need and Help Seeking have the most impact on medication access; however, measuring patient-reported outcomes requires the use of a validated tool

The barriers previously discussed, including patient health literacy, culture beliefs and attitudes, cost, and transportation, impact the earlier nodes of the MAPJ (i.e., Perceived Need and Help Seeking). The Roundtable determined that these nodes have the most impact on medication access and the most opportunity for improvement. This underscores the importance to which a person's awareness and understanding of a condition or illness and their ability to adequately navigate the healthcare system have on medication access.

Yet, despite the degree of importance placed on earlier MAPJ nodes, the group felt that the Perceived Need and Help Seeking nodes have less measure development opportunity. This is likely due to the complexities in developing and


implementing measures that capture the patient experience and patient-reported outcomes. Good quality measurement of patient-reported outcomes requires considerable experience and expertise.⁷³ Choosing the correct tool to measure patient-reported outcomes and the right data to be collected are critical. The tool must be validated for the data collected to have any meaning. For example, tools that have been originally developed for use within research may provoke inaccurate data interpretations when extrapolated to clinical practice.⁷⁴ This is further emphasized by NQF, which identified that patient-reported outcome measures for use within performance measurement adhere to the following principles: psychometric soundness, person-centered, meaningful, amenable to change, and implementable.⁷⁵

Recommendation: Develop and implement a screening tool for medication access challenges

The Roundtable recommended that the development and implementation of a screening tool to identify medication access issues may reveal health literacy challenges or other real-world limitations, such as not filling a prescription due to a lack of a reliable source of transportation to the pharmacy or due to a patient's inability to pay for out-of-pocket prescription drug costs. Furthermore, such information may have the highest utility during the receipt of a prescription from a provider, in which a more affordable medication may be selected and/or necessary referrals to patient assistance programs can be made. Additionally, since adherence is a common indicator of medication access, a prompt for screening may occur when a patient becomes nonadherent to a prescribed medication, which is applicable for both primary and secondary nonadherence.

Recommendation: Increased focus on nodes other than Adherence for measure development

The Roundtable identified the Adherence node as having the most measure development opportunity due to acceptance and use of validated methodologies (e.g., proportion of days covered, medication possession ratio) and standardized data sources (e.g., administrative pharmacy claims) that paved the way for a myriad of medication adherence measures for use within value-based



models. Most notable are the three PQA adherence metrics for non-insulin diabetes medications, anti-hyperlipidemia medications, and antihypertensive medication of the renin-angiotensin antagonist class that are used within the Medicare 5-Star Rating System for Medicare Part D.⁷⁶

Although Adherence is an important node in the MAPJ, the Roundtable recommended that future measure development begin by targeting other nodes within the framework due to the significant amount of research and medication adherence measures that currently exist.

The group felt that the areas of immediate measure development opportunity include the Adjudication and Dispensing nodes. Prescription adjudication is the processing of a medication claim. Once approved for coverage, the medication can be dispensed to the patient. Overcoming delays in the receipt of a medication due to potential issues with drug utilization management policies (e.g., prior authorizations, step therapy) and turnaround time from when the pharmacy receives a prescription to when it is dispensed to the patient are ripe for measure development. PQA recently launched a Specialty Pharmacy Turnaround Time Task Force to develop quality measures within the specialty pharmacy arena that are designed to improve turnaround time.⁷⁷

Recommendation: Assess the capacity of organizations to promote an environment that supports health literacy best practices

Emerging across the Prescribing, Adjudication, and Dispensing nodes is the barrier of organizational health literacy. This concept focuses on how health literate healthcare systems are in providing patient care by proactively working to remove patient health literacy barriers and ensuring that the healthcare workforce operates with high health literacy at all levels within the organization.

Patient needs may be better met if healthcare organizations and systems promote an environment that supports health literacy best practices. The Roundtable recommended that it is therefore important to assess the capacity of organizations to provide such support and to use the assessments for organizational change. The IOM has identified ten attributes that exemplify a health-literate healthcare

organization.^{33, 78} The attributes are most relevant to organizations that provide healthcare directly, such as accountable care organizations, group practices, community health centers, pharmacy practices, and integrated delivery networks. Several measures exist that attempt to assess whether some or all of the ten attributes are achieved from the organizational-, provider-, and patient-perspective.⁷⁹ However, the Roundtable noted that future work should focus on advancing the validity of these measures within accountability programs.

Quality Measure Core Set

Recommendation: Identify a core medication access quality measure set


The Roundtable noted that due to its cyclic nature, a major disruption within any of the MAPJ nodes could potentially lead to a patient not gaining access to a medication. For example, if a patient is unable to adequately seek care due to transportation, if there is a lack of provider availability, and/or if health literacy issues exist, the patient will not advance to the Encounter node and thus, not receive a prescription during the Prescribing node. Furthermore, the identified barriers exist across multiple nodes. Therefore, measure development targeting these common barriers should be aligned across the healthcare system (e.g., system-level, provider-level, patient-level).

The MAPJ can be used to help identify and develop a core measure set targeting medication access. This aligns with national efforts, including the Core Quality Measure Collaborative, which attempts to develop core measure sets that are meaningful to patients, consumers, and providers, while reducing variability in measure selection, collection burden, and cost.⁸⁰ The goal is to establish broadly agreed upon core measure sets that could be harmonized across providers (e.g., payors, physicians, health systems).

Patient and Community Engagement within Measurement

Recommendation: Increased patient and community engagement within quality measure development

A patient's health is influenced by factors outside the healthcare system (i.e., social determinants of



health). Very few measures within the environmental scan evaluated the extent to which healthcare organizations are collaborating with the patients, communities, public health programs, and other sectors outside of healthcare (e.g., transportation services). Thus, the Roundtable stressed the importance of collaborating with the patients and communities to address social determinants of health, which have a major impact on healthcare access and quality. Moreover, to have true utility, quality measurement must meaningfully incorporate patient and community input. Efforts to engage the patient and general communities are seen within other facets of healthcare, including research, drug development, and value assessment. As noted in the CMS Measures Management System Blueprint (the Blueprint), involving persons and family representatives in the measure development process further strengthens their engagement as partners in their care.⁸¹ This includes measure prioritization and conceptualization, development of specifications, validity and reliability testing, implementation and use, and evaluation and update. To achieve this, quality measure developers and agencies must have a robust process in place to incorporate the patient community voice.

In 2018, PQA, in partnership with the National Health Council and the National Quality Forum, launched an initiative to develop and disseminate a patient-centered engagement rubric for quality measurement.⁸² This tool will provide a means of assessing meaningful patient engagement for measure developers, endorsement entities, and implementers and will result in the increased capacity of the patient community to engage in more meaningful ways throughout the quality measurement lifecycle.

Role of Pharmacy

Recommendation: Increased utility of pharmacy and medication management

Both the Adherence and Dispensing nodes are highly impacted by pharmacy (e.g., pharmacist, pharmacy technician, medication management). Therefore, the Roundtable underscored the importance of increased utilization of pharmacists and pharmacy technicians to improve medication access.

Pharmacists are the medication experts, providing medication management services (e.g., medication therapy management, counseling) that can improve the safety and effectiveness of medication treatment, and ultimately the quality of care. Pharmacist-administered medication management services have been shown to improve medication adherence, reduce healthcare resource utilization and associated costs.^{83, 84, 85} In addition, due to their penetration within the community and the high degree of accessibility relative to primary care practitioners, pharmacists offer a significant opportunity to achieve quality goals, including access. Finally, pharmacies within the community also provide a unique opportunity to collaborate with healthcare providers and other relevant stakeholders (e.g., public health departments, community centers) to implement programs within the community to address the social determinants of health.

Several innovative programs in the US are exploring the untapped resource that exists in community pharmacies. For example, the Wisconsin Pharmacy Quality Collaborative⁸⁵ and the Community Care of North Carolina⁸⁶ piloted programs that enlisted pharmacies and pharmacists to broaden capacity for care management and medication optimization services, especially to the sub-populations in greatest need of these services. The services provided focused on improving various barriers identified within the MAPJ, including coordination of care, costs of medications, patient attitudes and beliefs, and patient health literacy.

Quality measurement at the pharmacy-level is an area evolving into mainstream for development. Rather than using administrative pharmacy claims, pharmacy-level measures can incorporate other pharmacy data, such as dispensing data. Recently, PQA launched a Task Force to develop pharmacy-level metrics. The group's first foray into this space will be PQA's three health plan-level adherence measures used within the Medicare 5-Star Rating System for Part D.⁷⁷ Pharmacy-level metrics may provide a reliable and valid mechanism for determining pharmacy performance within preferred pharmacy networks that are often implemented by health plans and pharmacy benefit managers. Moreover, these measures attempt to further align incentives across providers, including health plans, that are being held accountable within federal programs.

CONCLUSION



Having access to quality healthcare, including needed medications, continues to be a challenge for certain populations in the US. A growing body of evidence suggests that barriers to medication access are both financial (i.e., direct and indirect costs) and nonfinancial (i.e., social determinants of health). Adherence continues to serve as the primary indicator of medication access. Yet, there are upstream factors that, if not addressed, may disrupt the patient's ability to receive needed medication. Situations where a patient may not know how to navigate the healthcare system can lead to an inability to see a prescriber or if a prescription cannot be dispensed due to drug utilization mechanisms (e.g., prior authorizations, step therapy), a patient may receive delayed treatment.

With the continued shift of the US healthcare system from volume to value, quality measures are increasingly used as tools to evaluate the care patients receive. Numerous measures have been developed and implemented to capture medication adherence. However, significant measure gaps exist that target the upstream issues and barriers that can impede a patient's ability to receive a medication. Therefore, quality measurement offers a unique opportunity to influence positive change and help to improve medication access.

The Medication Access Patient Journey (MAPJ) conceptual framework was designed to provide a more holistic view of medication access, including the major barriers and challenges that exist throughout. The seven nodes within the framework represent the various stages that a patient encounters when receiving a medication. Its cyclic nature conveys that barriers and challenges occurring upstream of adherence can have a significant impact on medication access. Furthermore, the MAPJ calls attention to measurement gap areas, highlights key facets of medication access, and points to opportunities to address access challenges.

Looking forward, measure developers, researchers, and other healthcare stakeholders can use the MAPJ and Roundtable recommendations for measure development and quality improvement initiatives designed to improve medication access. The common, major barriers identified across the framework are key targets for such efforts. It should be noted that while there was a consensus on the importance of leveraging quality measurement to improve medication access, the Roundtable cautioned that measuring access should be done with careful consideration for potential unintended consequences.

The MAPJ framework can be used for the identification and development of a medication access core measure set. This will require a clear understanding of the criteria used to select measures for a core set, agreement on the importance and potential impact of a core set, and a distinction on who the stakeholders would be for which such measures would be used. However, for any measure development efforts targeting medication access, partnerships with patients, caregivers, and communities will be imperative to help achieve more meaningful measures for patients.

ABOUT

PHARMACY QUALITY ALLIANCE

Established in 2006, the Pharmacy Quality Alliance (PQA) is a 501(c)3 designated non-profit alliance with over 240-member organizations. PQA is a multi-stakeholder, consensus-based membership organization committed to promoting appropriate medication use and developing strategies for measuring and reporting performance related to medications.

PQA's commitment to improving patient outcomes includes extensive involvement in education, research and demonstration projects. PQA's metrics add definition and meaning to interventions, further demonstrating their impact in the marketplace.

PQA's performance metrics for safe and appropriate medication use have been implemented broadly including, but not limited to:

- Centers for Medicare & Medicaid Services' Medicare Part C and Part D Star Ratings Program;
- Medicaid Adult Core Set of Health Care Quality Measures;
- Health Insurance Marketplace Quality Reporting System;
- Accreditation programs; and
- Commercial health plans.

Additionally, several of PQA's metrics have received endorsement by the National Quality Forum. For more information, visit www.pqaalliance.org and follow PQA on Twitter @pqaalliance.

NATIONAL PHARMACEUTICAL COUNCIL

The National Pharmaceutical Council (NPC) is a health policy research organization dedicated to the advancement of good evidence and science, and to fostering an environment in the United States that supports medical innovation. Founded in 1953 and supported by the nation's major research-based biopharmaceutical companies, NPC focuses on research development, information dissemination and education on the critical issues of evidence, innovation and the value of medicines for patients. For more information, visit www.npcnow.org and follow NPC on Twitter @npcnow.

APPENDIX A:

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APPENDIX B:

BARRIER DEFINITIONS

Organizational Health Literacy

Organizational Health Literacy (OHL) is the concept of how health literate healthcare systems are in providing patient care. This encompasses everything from management, organizational systems and interoperability, and the entire healthcare work force. The goal of health literate organizations is to assist patients in navigating the healthcare system. This is done by healthcare organizations in proactively working to remove patient health literacy barriers,⁸⁷ and ensuring that the healthcare workforce at all levels are health literate.¹⁹ Examples of good OHL include the management of transition of care issues among various healthcare providers,^{19,22} availability of case managers to assist patients in navigating the healthcare system,¹⁹ availability of culturally competent care, provider knowledge of patient insurance plans, utilization management tools, and out of pocket costs.¹⁹

OHL issues can cause serious barriers to patients accessing care due to a broad variety of issues. These can include a lack of patient referrals to specialist or healthcare resources, medical record availability, interoperability within health systems issues, loss of vital medical information during transitions of care, and concerns with order sets and other protocols that ensure adherence to clinical guidelines and appropriate patient counseling.

Provider Competencies and Beliefs

Providers are medical professionals with prescribing authority, pharmacists, social workers, mental health and substance abuse counselors, and other healthcare professionals. Provider competencies, beliefs, attitudes, and/or perceptions can have an impact on patient access to care. This may be due to a lack of current medical knowledge and/or the ability to provide culturally competent care.³⁴ Also included in this barrier is a provider's outlook on stigmatized conditions, such as mental health, substance use disorder, and family planning.

An example of Provider Competencies and Beliefs would include a primary care physician encountering a patient during an annual physical who confides that they are experiencing depression. If the physician takes the time to listen to the patient and takes their concerns seriously by either starting treatment or referring them to a specialist, then the physician has exhibited competent care. In this same scenario, if the physician discounted patient reported symptoms of depression, either from a lack of competency or personal beliefs about mental illness, then this would be a barrier to the patient receiving appropriate treatment.

Medical Conditions

The Medical Conditions barrier examines diseases and/or chronic conditions that can impact access to healthcare. Examples of specific conditions that can create challenges include epilepsy,⁸⁸ HVC,⁵⁹ and substance use disorder (SUD).⁸⁹ For instance, many epileptic patients have transportation issues,⁸⁸ and HVC and SUD patients may experience barriers related to fears of social pressure, availability of services, and stigma from healthcare providers.^{50,89} Also considered in this barrier are funding for specific disease states, such as the Ryan White HIV/AIDS Program,⁹⁰ medical research, and availability of treatments.



Health Literacy



Health literacy characterizes the capability of the lay public to obtain and understand basic health information.³⁶ It also includes patient ability to make health decisions and to navigate the healthcare system.^{37,91} A lack of health literacy can cause multiple access issues for patients, including not understanding their medical diagnosis and self-management plans for chronic conditions, how to take medications (e.g., correct inhaler technique), or who their pharmacy benefits are with if they are carved out from their medical plan.

Insurance



The Insurance barrier examines the impact of type (funding) of insurance on patient access to medical care or medications.²⁶ Insurance funding type (Medicare, Medicaid, or commercial) can have an impact on what medications are included on the plan formulary. Various plans can also have tier placement on formularies that dictate patient copays and affordability. Utilization management tools, such as step-therapy and prior authorizations, can also create hurdles in patient access. An example of a subtle barrier that Insurance can place in the way of access is adverse formulary tiering. Adverse tiering is when medications for chronic, expensive to treat diseases are placed in formulary tiers with prohibitive patient copays.⁵⁵ HIV medications are commonly the subject of adverse tiering,⁹² leading to situations where patients may have “coverage without access.”⁹³ This is an example where simply having insurance is not a surrogate for access to care.

Patient Attitudes and Beliefs



Patient attitudes and beliefs encompass a wide range of potential personal and cultural barriers to accessing healthcare. It includes the overall patient attitude and values towards the healthcare system in general and if a medical treatment or medication is acceptable to patients.⁹⁴ It also captures the extent to which the patient is comfortable with the care provided.⁹⁴ For example, a treatment or medication may not be acceptable to a patient due to cultural beliefs or religion.^{1,41} Fear of stigma related to disease may also be a barrier to a patient seeking/receiving care. An example is patients that are struggling with substance use disorders fearing the stigma of being seen receiving treatment in their community.⁹⁵

Race/Ethnicity



Racial or ethnic background can have an impact access to medication. This barrier often intersects with other barriers, especially income,⁹⁶ transportation,⁹⁷ and provider availability issues.⁹⁸ However, racial and ethnic minorities receive poorer quality of care than Whites, even when socioeconomic factors are considered.⁹⁹ An example of this is diabetes outcomes in Black patients. Even while hospitalized, Black patients had worse glycemic control and were more likely to have complications than White patients.¹⁰⁰

Gender



This barrier examined how Gender impacts access to healthcare and medications. Like many of the other barriers examined, this is a nuanced issue, with different genders facing various issues. Gender disparities in access to medications can include limited contraceptive access for women due to provider beliefs,¹⁰¹ and men are less likely to receive mental health care and medications.¹⁰²



Provider Availability



The Provider Availability barrier examines the organization and availability of healthcare services. Examples include geographic distribution of healthcare services, medically underserved areas/populations,¹⁰³ and various medical provider shortages.¹⁰⁴ An example of the a Provider Availability barrier is that although it is estimated approximately 20% of American have a mental illness,¹⁰⁵ there is an ongoing shortage of mental health providers in the US.¹⁰⁶

Language



Language barriers in this context indicated limited English proficiency and can be a significant barrier experienced by patients when trying to gain access to medical care and medications.¹⁰⁷

Public Support



Public support barriers examines issues with taxpayer funded healthcare programs that provides access to certain forms of medical care and medications.¹ Examples include the Ryan White HIV/AIDS program⁴⁰ and Title X Family Planning.³⁰ An example is that the Title X federal program awarded \$286.5 million in grants to 47 state and local health departments that provided 6.6 million family planning visits in 2017. Approximately 67% of patients seen in Title X funded programs live at or below the federal poverty level.³⁰

Transportation



Availability of transportation to medical care can be a significant barrier to patients accessing healthcare and medication.¹ Considerations impacting this patient barrier can include vehicle ownership, public transportation infrastructure, and medical transportation resources.¹⁸ As an example, one study found that cancer patients with transportation issues are less likely to receive first line treatment than those without. Travel distance to treatment facilities was not found to be a factor for these patients.¹⁸

Rural/Urban



The Rural/Urban barrier examines the unique challenges patients in the entire range of metropolitan statistical areas classifications, including rural communities face in accessing medications.⁴⁰

Costs



The Cost barrier addressed the global costs of seeking and/or obtaining healthcare services. This includes not only the direct costs with receiving care (e.g., out-of-pocket costs) but other expenses a patient might encounter. These indirect expenses can include transportation, unpaid time off from work, childcare services, etc. The combined direct and indirect costs should not be viewed simply as a dollar amount, but also as a percentage of patient/family income.



Disability Status



This barrier examines the unique issues that disabled patients can face in accessing healthcare and medications. Having a disability can be a major barrier for patients in accessing care, with one study on the topic noting that patients with disabilities have an OR 1.85 ($p < 0.001$) greater than non-disabled patients in not receiving needed prescription medications.¹⁰⁸ A specific example is patients with epilepsy, who have higher odds of being disabled, not being able to afford prescription medications, and having transportation barriers.¹⁰⁹

Income



A patients' income status can create several barriers to medication access. These intersecting barriers can include costs,⁷⁰ transportation,¹⁸ and reliance on public programs³⁰ for healthcare and medication. Also considered is not just socioeconomic status, but the percentage of patient income that is dedicated to healthcare within their household.

Education



The Education barrier focuses on the role of patient education levels in accessing needed care and medications. Issues that are related to Education barriers include functional illiteracy,¹¹⁰ and the link between educational and socioeconomic status.¹¹¹

APPENDIX C:

MEDICATION MEASURES AND ASSOCIATED BARRIERS

Download Appendix C [directly](#) or access it at: pqaalliance.org/completed-research

APPENDIX D:

STAKEHOLDER SURVEY

PQA socialized the MAPJ framework during a public, multi-stakeholder forum in November 2018, focusing on social determinants of health. Attendees were surveyed and asked to rank the nodes within the MAPJ that have the highest impact on medication access (Figure 3), the most opportunity for improvement (Figure 4), and the most opportunity for quality measure development (Figure 5).* The findings are presented below and show alignment with several recommendations made by the Roundtable.

Figure 3. Node-Ranking Survey Results – Impact on Medication Access (N=36 Respondents)

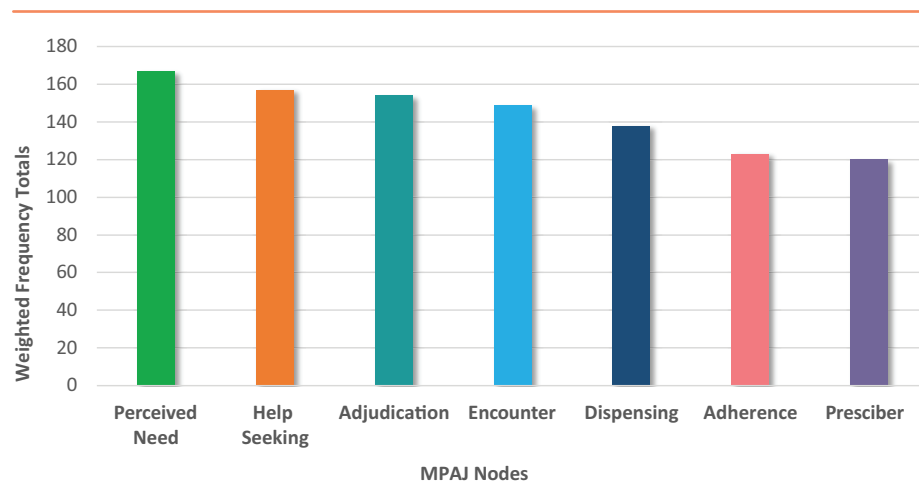
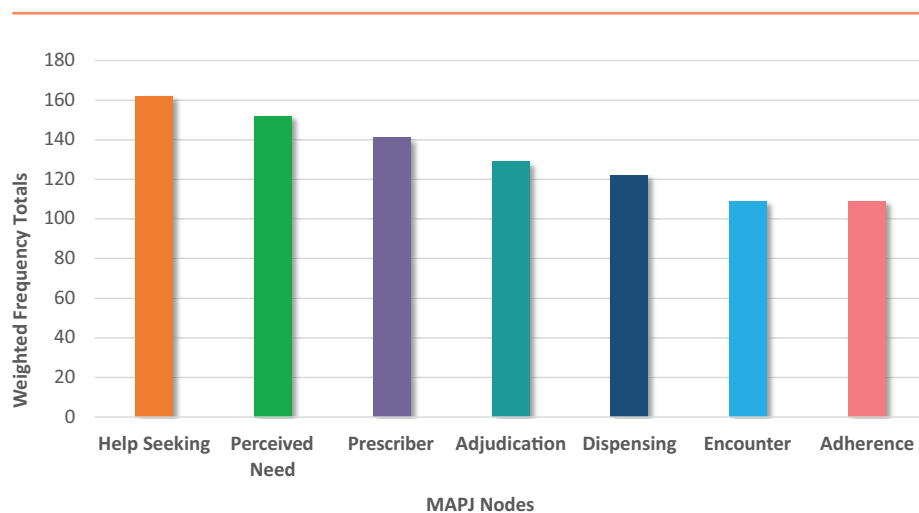


Figure 4. Node-Ranking Survey Results – Opportunity for Improvement (N=33 Respondents)



*The decrease in respondents from Figure 3 – Figure 5 is due to respondents answering the first question completely, but then not answering the second (Figure 4) and third (Figure 5). This may be a result of how the survey was designed, since attendees of the SDOH Forum were not required to answer all questions.

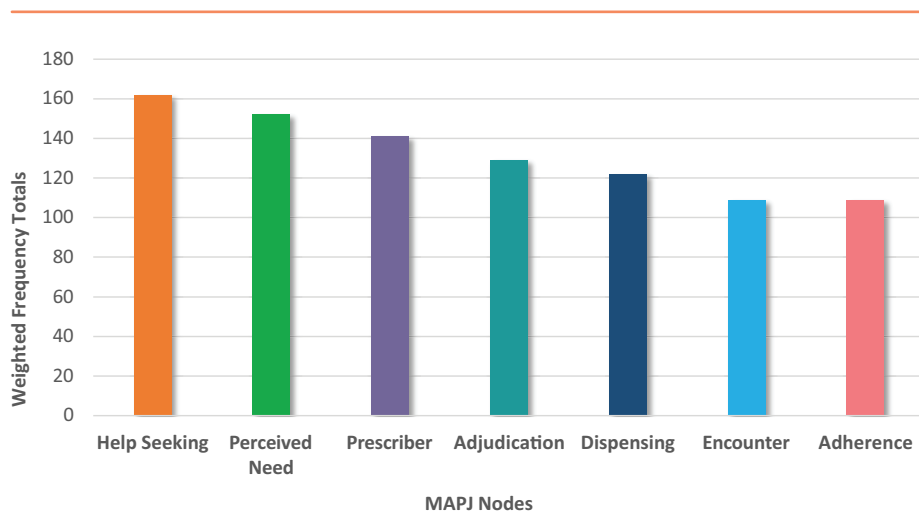
APPENDIX D:

STAKEHOLDER SURVEY

Stakeholders ranked the Perceived Need and Help Seeking nodes as having the most impact on medication access and the most opportunity for improvement (Figure 3 and Figure 4). However, these ranked the lowest for measure development opportunities (Figure 5). This aligns with the Roundtable’s assessment, underscoring the importance of these nodes, but challenges in developing and implementing patient-reported outcome/ experience measures.

The Adherence node ranked the highest for measure development opportunity. This also aligns with the Roundtable’s sentiment in that this is likely due to acceptance and use of validated and standardized data sources. As for the Adjudication and Dispensing nodes, these ranked third through fifth, along with the Prescribing and Encounter nodes, on impact and opportunity for change.


Figure 5. Node-Ranking Survey Results – Opportunity for Quality Measure Development (N=36 Respondents)





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