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Streamlining and Reimagining Prior Authorization Under Value-Based Contracts

A Call to Action From the Value in Healthcare Initiative's Prior Authorization Learning Collaborative

ABSTRACT: Utilization management strategies, including prior authorization, are commonly used to facilitate safe and guideline-adherent provision of new, individualized, and potentially costly cardiovascular therapies. However, as currently deployed, these approaches encumber multiple stakeholders. Patients are discouraged by barriers to appropriate access; clinicians are frustrated by the time, money, and resources required for prior authorizations, the frequent rejections, and the perception of being excluded from the decision-making process; and payers are weary of the intensive effort to design and administer increasingly complex prior authorization systems to balance value and appropriate use of these treatments. These issues highlight an opportunity to collectively reimagine utilization management as a transparent and collaborative system. This would benefit the entire healthcare ecosystem, especially in light of the shift to value-based payment. This article describes the efforts and vision of the multistakeholder Prior Authorization Learning Collaborative of the Value in Healthcare Initiative, a partnership between the American Heart Association and the Robert J. Margolis, MD, Center for Health Policy at Duke University. We outline how healthcare organizations can take greater utilization management responsibility under value-based contracting, especially under different state policies and local contexts. Even with reduced payer-mandated prior authorization in these arrangements, payers and healthcare organizations will have a continued shared need for utilization management. We present options for streamlining these programs, such as gold carding and electronic and automated prior authorization processes. Throughout the article, we weave in examples from cardiovascular care when possible. Although reimagining prior authorization requires collective action by all stakeholders, it may significantly reduce administrative burden for clinicians and payers while improving outcomes for patients.

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After decades of progress, there is a renewed need to improve the quality of cardiovascular care due to slipping cardiovascular health outcomes.[1–3] Utilization management strategies such as prior authorization undertaken by payers were intended to facilitate the safe and guideline-adherent provision of new and potentially costly cardiovascular therapies, but patients, clinicians, and payers struggle with their current implementation.[4] The shared frustration around prior authorization is so widely recognized that the Centers for Medicare and Medicaid Services has specifically relaxed prior authorization requirements, and encouraged other payers to do the same, during the coronavirus disease 2019 (COVID-19) pandemic to avoid delays in care known to be associated with these processes.[4,5]

These challenges present an opportunity to broadly improve prior authorization and achieve its intended goals by shifting to a new approach. This article describes the vision and efforts of the Prior Authorization Learning Collaborative of The Value in Healthcare Initiative,[1] a partnership between the American Heart Association and the Robert J. Margolis, MD, Center for Health Policy at Duke University. This collaboration emerged in 2018 from a convening of experts hosted by the American Heart Association at the Value in Healthcare Summit, held to discuss barriers to high-quality and high-value care for patients with cardiovascular disease. Leaders at the Summit delineated areas with high potential to impact the value of cardiovascular care, which included prior authorization of cardiovascular drugs and services. The Learning Collaborative subsequently developed the project through literature review and in-person expert panel sessions to produce the presented recommendations.

The broad spectrum of stakeholders involved in this Learning Collaborative—including patients, clinicians, academia, industry, health systems, payers, pharmacists, pharmacy benefit managers, and professional association representatives—identified new strategies to make prior authorization more effective, efficient, and timely, that increase predictability for all stakeholders, and that improve outcomes for patients. The complete list of participants is included in the Appendix in the Data Supplement. This article is a guide for organizations aiming to reassess and streamline prior authorization in general and under the transition to value-based contracts. Figure presents a conceptual model of the recommendations of this article and consideration for their implementation.

GOALS AND CHALLENGES OF UTILIZATION MANAGEMENT

Almost all payers use some type of utilization management.[6] These are techniques used by or on behalf of purchasers of healthcare benefits to manage healthcare costs by influencing patient care decision-making through case-by-case assessments of the appropriateness of care before its provision.[7] The most prevalent type of utilization management is prior authorization (sometimes called prior review, prior approval, prior notification, prospective review, preauthorization, predetermination, or precertification), a process where clinicians must obtain advance payment coverage approval from a health plan before providing a medical device, medication, procedure, service, or supply to a patient.[7,8] Cardiovascular therapies often subject to prior authorization include PCSK9 (proprotein convertase subtilisin/kexin type 9) inhibitors, diagnostic catheterizations, electrophysiological device implantations, and stress echocardiograms. Medications and devices selected for utilization management tend to be those that are new, have individualized clinical guidelines, or are costly with potential for high plan expenditures. Nevertheless, all stakeholders report challenges with current prior authorization approaches.

Patient representatives in the collaborative iterated that prior authorization could lead to delays in receiving therapies,[8] which may disproportionately affect those from underserved communities.[9] According to a survey by the American Medical Association, 26% of physicians report that prior authorization delayed their ability to prescribe medication by at least 3 to 5 business days, and 28% reported a delay that led to a serious adverse event for a patient.[10] Further, a survey by the Association of Black Cardiologists in conjunction with the American College of Cardiology found that prior authorization may have the following impacts on underserved and minority patients: delays in care, increased patient confusion, discontinuation of beneficial medications, decreased adherence to therapy, and overall worse outcomes.[9] These effects can worsen already-existing inequities in cardiovascular outcomes for these populations.[9] A recent study of 139 036 patients who were prescribed PCSK9 inhibitors found that rejection of PCSK9 inhibitor coverage was associated with a 10% higher rate of cardiovascular events compared with those whose requests were approved, and rejections were more likely for women, racial minorities, and lower-income groups.[11]

Clinicians emphasized the significant time and resources spent handling prior authorization requests, which is costly and demoralizing.[8] For example, prior authorization applications for PCSK9 inhibitors resulted in nearly 80%of initial prescriptions being denied, with less than half of requests ever receiving approval.[12] Additional staff are often hired to accommodate the workload.[13] However, such staff may not always have the clinical knowledge required to successfully navigate prior authorization processes, leading to frequent miscommunications between office staff and insurance plans and further delays and denials. In all, prior autho-

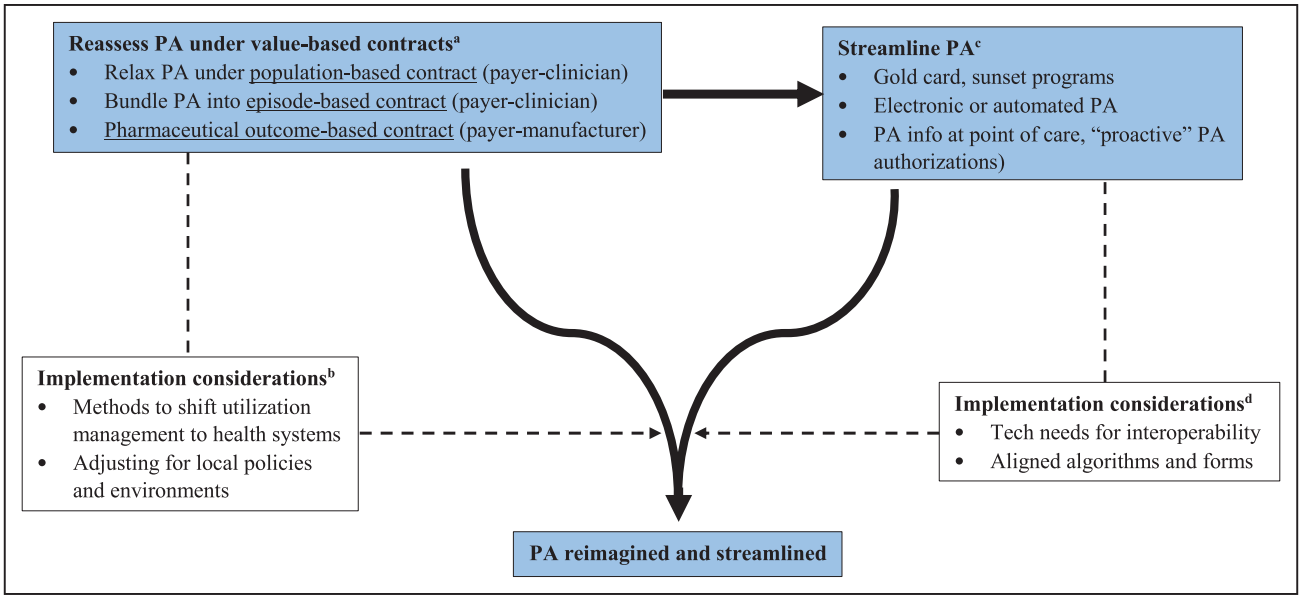

Figure. Reimagining and streamlining prior authorization.
Guiding principle of the conceptual model: The entire cardiovascular healthcare ecosystem (patients, clinicians, payers, industry, among others) stands to benefit from reassessing the current approach to prior authorization. [a]Summarized in Table 1; see full text for more detail and real-world examples. [b]Summarized in Table 2; see full text for more detail and real-world examples. [c]Summarized in Table 3; see full text for more detail and real-world examples. [d]Summarized in Table 4; see full text for more detail and real-world examples. PA indicates prior authorization.

rization can cost an estimated $2140 to $3430 annually per full time physician.[14]

Payers and pharmacy benefit managers in the collaborative highlighted how prior authorization requires significant expenditure of their time, money, and resources.[15] Payers must convene clinicians and experts to examine clinical guidelines and evidence, review their own data on variations in treatment and prescribing patterns, and identify when and how to conduct prior authorization. This last step can involve developing questions, protocols, data algorithms, or technological dashboards for approval or appeal. After implementation, each prior authorization request is generally assessed on a case-by-case basis, based on published payer medical policies and formularies, requiring continual time and personnel resources.

PRIOR AUTHORIZATION UNDER VALUE-BASED PAYMENT CONTRACTS

The increased adoption of value-based payment, which has risen substantially over the past decade,[16] provides an opportunity to reimagine utilization management and prior authorization as a more collaborative, value-increasing process. Value-based payment intends to incent appropriate and guideline-concordant use of new therapies, which are key goals of prior authorization. Although value-based payment approaches can exist in different forms, including bundled payments and population-based payments, they typically include some degree of clinician responsibility over total costs of care and quality performance. Population health-focused value-based payment reforms have been associated with improvements in cardiovascular care quality and utilization. For example, the Medicare Shared Savings Program has shown reductions in hospital admissions for patients with heart failure over time in Accountable Care Organizations (ACOs),[17] and cardiologist involvement in Medicare Shared Savings Program ACOs reduces the cost of patients with cardiovascular disease while achieving similar quality.[18] As of 2018, 36% of healthcare dollars flow through value-based payment models, a substantial increase from prior years.[16]

Several major stakeholder groups representing American clinicians, hospitals, and payers have recently proposed new prior authorization approaches under value-based care,[19,20] such as reducing or waiving prior authorization requirements for clinicians or healthcare organizations participating in value-based payment contracts.[15,21] Care model flexibility under these alternative payment models emphasizes a team-based, patient-centered, care coordination-focused, collaboration with shared responsibility. This flexibility may promote and facilitate shared decision-making, which is associated with improved patient-reported outcomes and quality measures.[22,23] However, in order for these new approaches to spread, though, payers and clinicians need practical guidance. In this section, we discuss options for embedding prior authorization into value-based payment contracts and highlight implementation examples (summarized in Table 1).

Table 1. Examples of Prior Authorization Under Value-Based Payment Contracts

Approach	Key Examples
Population-based payment models (contract between payer and clinicians)	Blue Cross and Blue Shield of Minnesota and Mayo Clinic contract includes: Waiving prior authorization for specific conditions or procedures (eg, eye tumors, pediatric cancers receiving proton beam therapy); and Creating a collaborative governing board to help streamline prior authorization rules and processes, and consider additional conditions or services not needing prior authorization under the contract.
Episode-based payment models (contract between payer and clinicians)	Proposed approach could include: Bundling the prior authorization for procedures, medications, and durable medical equipment for a cardiovascular episode of care.
Pharmaceutical-based models (contract between payer and manufacturer)	Oklahoma's Medicaid and Melinta contract regarding oritavancin includes: Listing oritavancin as a first-line treatment and waiving prior authorization for the drug. An agreement that, if the state experiences increased costs from using this drug, Melinta will have to cover those costs through rebates to the state.

Relaxing or Waiving Prior Authorization for Population-Based Value-Based Payment Models

One approach for relaxing prior authorization requirements through value-based payment contracts is for payers to identify specific drugs, services, or procedures that could have prior authorization requirements waived or reduced under population-based models if clinicians meet agreed-upon terms. Such terms could include meeting performance benchmarks on quality measures, demonstrating adherence to evidence-based guidelines, or meeting other performance targets.

An example of this approach is the current contract between Blue Cross and Blue Shield of Minnesota and Mayo Clinic. The organizations agreed to a target for lowering total costs of care, annual rate increases for Mayo Clinic, and Mayo Clinic's assumption of downside financial risk (financial losses incurred if actual costs exceed benchmarks).[24] In addition to these financial components, the contract includes the removal of prior authorization for specific conditions and treatments, such as eye tumors and pediatric cancers receiving proton beam therapy, and creates a collaborative governing board to streamline prior authorization rules and processes and consider contractual additions to the list of services not needing prior authorization.[25] Another example is the North Carolina Department of Health and Human Services, which indicated in January 2020 that they are considering granting flexibilities

Table 2. Implementation Considerations for Prior Authorization under Value-Based Payment Contracts

	Implementation Challenge	Strategies to Overcome
Shifting prior authorization from payers to health systems	Setting up a utilization management infrastructure within a health system.	The creation of a utilization management board that reviews the use of services within the system, assures appropriate prescribing patterns, and ultimately guarantees clinicians are following evidence-based guidelines. This process will require strong leadership engagement as well as cultural change. In some cases, existent institutional resources such as pharmacy and therapeutics committees may be able to step into this role.
	Creating a collegial, transparent, peer-to-peer approach to utilization management.	Requiring clinicians to rotate through the utilization management board when a health system enters a value-based payment contract. This can promote trust and an atmosphere of peer review and guideline education instead of top-down rejection (ie, "my brother, not Big Brother" atmosphere), and helps educate clinicians on the effective use of utilization management.
Local context	Rural practices may not have the infrastructure needed to participate in value-based payment contracts or to set up utilization management programs.	CINs are more widely available in rural areas and offer a way for small groups to keep some independence while tapping into larger resources. Virtual ACOs can support small and rural clinicians in engaging in value-based care.
	State Medicaid policy can influence prior authorization use	Considering state-specific Medicaid laws that affect prior authorization will be important, especially if they facilitate waiving prior authorization under value-based contracting.

ACO indicates Accountable Care Organizations; and CIN, clinically integrated networks.

to Medicaid ACOs that take on early downside risk, including bypassing prior authorization.[26] Finally, Blue Cross and Blue Shield of North Carolina indicated it will examine how prior authorization can be incorporated into their new value-based payment program, Blue Premier.[27,28] This program involves the implementation of value-based payment contracts with primary care focused ACOs that will be accountable for costs and the quality of the care they provide to Blue Cross and Blue Shield of North Carolina beneficiaries. These arrangements could be extended to cardiovascular care.

Table 3. Strategies to Streamline Prior Authorization

Concept	Strategy	Description
Rewarding prior authorization success	Gold Card programs	Recognize clinicians who are regularly approved for prior authorization by lifting requirements for them for a time period.
	Sunset programs	Eliminate prior authorization for drugs and services that are regularly approved.
Reducing the manual burden of prior authorization	Electronic prior authorization	Prior authorization forms filled out electronically online can reduce personnel and resource burden.
	Automated prior authorization	Use an algorithm (potentially informed by machine learning) to screen the prior authorization request and match it to the payer's utilization policies. Rejected requests would be reviewed manually.
Addressing prior authorization early in the process	Increased information at point of care	Clinical Decision Support and real-time pharmacy benefit checks can be used to inform clinicians at the point of care whether prior authorization is warranted.
	Proactive authorization	Patients with certain diagnoses or medical treatments are preapproved to have downstream tests or therapies that are typically requested for their conditions.

Table 4. Implementation Considerations for Streamlining Prior Authorization

Implementation Challenge	Examples and Strategies to Overcome
Data needs and interoperability	The Smart Prior Authorization Project leverages data from the Delaware Health Information Network to identify physicians with consistent outcomes, and therefore receive prior authorization waivers.
	Participation in initiatives that facilitate the standardization of information exchange, such as HL7's FHIR Standard and the Da Vinci Project.
Limited standards and lack of adherence to standards	Physicians, patient groups, professional societies, and payers should work together to design clear treatment algorithms and criteria that apply to prior authorization. Furthermore, they should work to design a universal prior authorization form.

FHIR indicates Fast Healthcare Interoperability Resources; and HL7, Health Level Seven International.

Bundling Prior Authorization in Episode-Based Payment Models

A second potential approach involves the bundling of prior authorization for procedures, medications, and durable medical equipment that may be needed for an episode of care.[15] This could allow clinicians to submit one prior authorization request that would cover the full episode of care instead of requesting authorization for each individual procedure, medication, or other intervention. In these episode-based payment models, the contract could define the requirements clinicians would need to meet, such as quality or financial benchmarks, to qualify for the bundled prior authorization. An example of this approach was not identified in our scan. However, cardiac care may be amenable to this approach because care bundles have been commonly used for heart failure and acute myocardial infarction.[29]

Integrating Prior Authorization into Value-Based Payment Models for Pharmaceuticals

Value-based payment contracts between payers and manufacturers of pharmaceuticals and devices represent a third approach. These contracts make a payment for a drug or device dependent upon that drug or device's effectiveness or outcome. Oklahoma's Medicaid agency entered into such a contract with the pharmaceutical company Melinta regarding payment for the antibiotic oritavancin,[30] which purports to decrease the risk for hospitalization of patients during treatment. Prescription of this antibiotic to individuals on Medicaid in Oklahoma previously required prior authorization because it was more expensive than comparator drugs for the same condition. Under this value-based payment contract, oritavancin is listed as first-line for treatment and prior authorization is no longer required. Melinta financially backed their claim that use of oritavancin would reduce hospitalizations enough for Oklahoma Medicaid to offset the cost of its prescription. However, if the state does experience increased costs from using this drug, Melinta is contractually bound to cover those costs through rebates to the state (a form of downside risk). An example related to cardiovascular disease is the contract between the University of Pittsburgh Medical Center Health Plan and AstraZeneca for ticagrelor, a drug for patients following a heart attack.[31]

Regardless of the specific payment model, stakeholders emphasized that these approaches should focus first on reducing prior authorization for services with relatively simpler guidelines and of lower risk to patients in the event of overuse, and then expand to more individualized, costly services with higher risk with overuse. This stepwise approach would allow organizations to learn what works best and have the greatest chance for successful implementation.

IMPLEMENTATION OF PRIOR AUTHORIZATION UNDER VALUE-BASED PAYMENT CONTRACTS

Value-based contracting between payers, clinicians, and manufacturers require extending utilization

management responsibilities to clinicians and health systems; they will need to ensure appropriate and evidence-based use of testing and therapies by clinicians. Health systems and healthcare organizations without effective systems in place may have to stand up for their own utilization management programs. Setting up this type of infrastructure requires time, effort, resources, and new capabilities, although some organizations may not feel comfortable in their new role providing constraints on their own clinicians. This section synthesizes these and other implementation challenges, and it identifies solutions to help mitigate them (summarized in Table 2).

Setting Up Utilization Management Within a Health System

Although some organizations may have established models of review that can be adapted for greater utilization management, such as pharmacy and therapeutics committees or institutional pharmacy benefit managers,[32–34] other organizations may need to build a new infrastructure. If new systems are needed, an organization will first need to convene clinicians to examine clinical evidence guidelines and review their utilization data to identify areas of high variation in treatment and prescribing patterns and deviation from evidence-based care. For these areas, they will need to decide which utilization management approach best guides appropriate care, which may include requiring clinical pathways for specific conditions, internal approval processes for certain interventions or therapies, or mandating clinician responses, such as into a clinical decision support system, before allowing prescription of a given intervention or therapy.

Ensuring Utilization Management Is Collegial and Transparent

Clinicians are more likely to participate and invest energy in a transparent utilization management experience motivated by clinical safety, quality, and value, than a process governed by finances. Healthcare organizations should ensure transparency in their utilization management approaches and collaborate with clinicians. This can effectively change the atmosphere from a historically top-down setup to one of collegial decision support tied to high-value outcomes, clinician education, and constructive peer review.

A real-world example produced by our Learning Collaborative is from Intermountain Healthcare, an integrated, nonprofit health system in Utah. Intermountain assumed responsibility for utilization management when it moved to value-based care and reduced the number of drugs and services that required prior authorization. When clinicians became accountable for costs, they invested energy into shaping their institutional utilization management systems. The atmosphere of prior authorization evolved to focus on clinician education and participation, and clinicians were required to rotate on the utilization management board. This added specialty-specific insights to the board decision-making, and board members disseminated their experiences to their colleagues and service lines, raising the overall quality and safety of care. Intermountain framed a bottom-up approach to utilization management that emphasized patient safety and guideline adherence, and in some cases, clinicians requested reinstatement of utilization management where it had been initially removed to help block frequent patient requests for unwarranted tests or treatments. The Intermountain experience exemplifies how health systems can effectively engage clinicians in newly assumed prior authorization responsibilities.

Contextual Issues Affecting Utilization Management Adaptation

Some specific contexts may make adapting utilization management and prior authorization easier or more difficult; the following concepts were raised by our stakeholders. Although large healthcare organizations can establish utilization management programs for clinicians that practice within their organization, they cannot control the practice patterns for clinicians outside of their system. This may pose a challenge for some value-based payment models, such as ACOs, where patients have free choice of clinicians. In this case, the organization may either need to negotiate with the insurer about how to waive prior authorization or identify benefit designs that encourage seeking care within a value-based care network.

Practices in rural areas may be less likely to have the infrastructure needed to participate in value-based payment contracts or to set up their own utilization management programs.[35] This limits their ability to adapt or internalize prior authorization procedures and could magnify existing inequities in healthcare provision in these communities. However, clinically integrated networks are available in rural areas and offer a way for small, rural groups to keep some independence while tapping into larger resources. Additionally, virtual ACOs created from multiple practices across large or discontinuous areas can achieve economies of scale and risk dispersion and may support rural clinician engagement in value-based care.

State Medicaid policy can also influence prior authorization use, in some instances encouraging its integration. For example, North Carolina is considering bypassing prior authorization for its Medicaid ACOs that agree to take on downside financial risk at an earlier stage.[26]

This would facilitate the adoption more efficient prior authorization strategies.

STRATEGIES FOR STREAMLINING PRIOR AUTHORIZATION

Although prior authorization could be waived or integrated by health systems under value-based payment programs, payers may keep prior authorization intact in some situations because of concerns about patient safety, guideline adherence, or healthcare expenditures. In this section, we discuss additional strategies to streamline prior authorization in these settings (summarized in Table 3).

Audit-Based Systems: Gold Carding Physicians

One approach to streamlining prior authorization is an audit-based system where prospective prior authorization is waived for clinicians deemed high-performing. This gold carding recognizes clinicians who regularly have prior authorizations approved and lifts requirements for them for a time period. Blue Cross and Blue Shield of Nebraska have allowed clinicians who reached gold card status to use a special fax sheet for automatic approval since 2018.[36,37] Under this program, a clinician must have a low denial rate of (≤6%) for 9 to 12 months, and is awarded gold card status for 12 months. Similarly, Vermont's gold carding system for radiology procedures[38] required a denial rate of ≤3% on at least 100 imaging requests in 18 months, and Alabama[39] required a ≤5% denial rate in the same time period.

Audit based systems, however, could potentially exacerbate existing inequities in cardiovascular care. Larger integrated health systems often have more time and resources to successfully obtain prior authorization approvals and appeals, especially compared with smaller practices. In contrast, some Medicaid and lower-cost managed care plans may have lower prior authorization approval rates than more expensive plans. Therefore, it is possible for audit-based systems to worsen inequities, as patients served by larger health systems would have increased access to drugs and services compared with lower resource settings. Payers must consider supporting resource-constrained practices when implementing such solutions.

Although conceptually appealing, implementation of audit-based systems is also challenged by difficulties identifying high-performing clinicians with available data. Although this data challenge could be overcome by health information exchanges or similar data aggregation or exchange systems, it can also be difficult to differentiate clinicians who attempt to practice in accordance with guidelines but need assistance, from those who may dishonestly provide services. Additionally, it is unclear whether a small percentage of clinicians have difficulty making prior authorization requests all the time, or whether most clinicians make honest mistakes a small percentage of the time, which would make identifying clinicians for gold carding less feasible.

Sunset Programs

Prior authorization and utilization management programs need to be regularly monitored to identify therapeutics and services that are regularly approved across the board and can be sunset. This approach reduces the burden of prior authorization by pruning those that do not affect clinical practice. One Learning Collaborative member found it was useful to monitor prior authorization approval, appeal, and rejection rates on a quarterly basis.

Electronic and Automated Prior Authorization

The work required for prior authorization is substantial, leading 36% of physicians to employ a staff member to handle it exclusively.[10] This can be onerous or infeasible for smaller clinical practices or clinicians caring for underserved populations. One way to reduce the burden is through digital solutions, such as electronic prior authorization, which can reduce the time per transaction from 20 to 6 minutes and the cost from $7.50 to $1.89 per transaction.[40]

In practice, physicians have shown great willingness to adopt electronic prior authorization. A real-world example produced by our Learning Collaborative is from Humana. Cardiology prior authorization for Humana's members is provided by HealthHelp, which offers both Web-based and telephonic systems. In 2018, 74% of the Humana HealthHelp orders were submitted over the internet. Similar digital services include CoverMyMeds[41] and Surescripts,[42] but a lack of vendor support remains an important impediment. Only 12% of prior authorization transactions are currently completely electronic end-to-end,[43] however, with many prior authorizations still incorporating fax and telephone in addition to electronic transactions, secure email, and portals.

Automated prior authorization is a further step into a streamlined electronic prior authorization system. It aims to make the process quicker, by using an algorithm to initially screen the request and match it to the payer's utilization policies. Initial approval (or disapproval) can occur within 60 seconds, though appeals will continue to need human review, especially for some complex conditions. America's Health Insurance Plans launched the Fast Prior Authorization Technology Highway Initiative in January 2020, aiming to effectively employ electronic and automated technologies in participating payers across the country, including Anthem,

Cigna, Blue Shield of California, and others.[44] Fast Prior Authorization Technology Highway hopes to improve prior authorization processes for both prescription medications and medical and surgical procedures by committing to using Surescripts and Availity (a multipayer portal that extends information immediately to clinicians on prior authorization requirements).[44]

Proactive Authorization

One strategy that builds off automated prior authorization is proactive authorization. This strategy uses automation to flag certain diagnoses, events, or usage of certain drugs, devices, or procedures that are likely to identify the need for a guideline-indicated therapy requiring prior authorization further downstream. The flag will trigger the system to automatically authorize that therapy when it is requested later. This strategy has been successfully used and recommended by some payers in the Learning Collaborative.

Increased Information at the Point of Care

Clinical decision support can be leveraged to provide prior authorization-related information at the moment of care documentation in the electronic health record. These systems could let clinicians know in real-time whether prior authorization is warranted, such as through real-time pharmacy benefit checks.

Use of clinical decision support may reduce or eliminate prior authorization by keeping clinicians up to date with guidelines and clinical evidence. Some clinical decision support systems ask specific questions clinicians should consider before prescribing a therapy, or the systems may provide guidance based on a patient's condition, history, and prior treatments. As of January 2020, The Protecting Access to Medicare Act of 2014 now requires physicians to consult a Centers for Medicare and Medicaid Services-approved clinical decision support mechanism using appropriate use criteria before ordering imaging services in order for claims to be paid.[15] Though the tool must only be consulted (not adhered to) under Protecting Access to Medicare Act, such procedures can encourage evidence-based use of drugs and services.

General Strategies to Improve Payer-Clinician Interactions

Payers can also provide feedback in a collegial, transparent, peer-to-peer way during prior utilization. One real-world example produced by our Learning Collaborative is from Humana, which has a nondenial model for prior authorization. In this system, a prior authorization denial triggers a physician to physician peer-to-peer conversation about the request through Humana's HealthHelp platform. This discussion with the ordering physician determines appropriateness. For instance, a catheterization may be approved even if the case does not qualify by Humana guidelines if the cardiologist feels strongly that the cardiac catheterization is right for the patient. Humana believes this nondenial approach enables an educative conversation to occur between the ordering physician and the peer physician, without the defensiveness that might transpire under the threat of denial. Humana analyzed the effect of this approach on cardiac catheterization and found that, in 2015, 86.6% of diagnostic catheterization orders that were deemed potentially nonindicated, and 72.8% of diagnostic catheterization orders that were deemed to have inadequate initial justification, were considered appropriate by the peer physician after peer-to-peer discussion. The remaining 13.4% and 27.2% of orders, respectively, resulted in no consensus, and the ordering physician ultimately controlled whether the procedure occurred.[45] Additionally, there is evidence that this approach does not necessarily lead to higher levels of utilization.[46]

IMPLEMENTATION CONSIDERATIONS FOR STREAMLINING PRIOR AUTHORIZATION

Organizations may face multiple barriers when attempting to streamline prior authorization in clinical practice, and many clinicians need support to manage these changes. Some professional organizations, such as Association of Black Cardiologists, provide valuable resource kits to members to help navigate prior authorization, but further issues remain.[47] Some additional challenges and potential solutions are summarized in Table 4.

Data Needs and Interoperability

The digital approaches to improve prior authorization processes rely on access to and sharing of valid and timely data. These data help payers identify clinicians and therapies that may be candidates for reduced, waived, or bundled prior authorization approaches. One approach to providing such data is the Smart Prior Authorization Project from the Medical Society of Delaware and Medscient, a healthcare tech company. This project leverages data from the Delaware Health Information Network to identify clinicians who have consistently strong outcomes from a procedure and provides those clinicians with prior authorization waivers. The project also uses data on patients who have recurring medical events that may be good candidates for waiving prior authorization requirements.[48,49]

Data interoperability is also crucial for the electronic prior authorization process, especially for those that seek to use electronic health record data for understanding a patient's health conditions and course of treatment. Although there is no current universal standard, the Office of the National Coordinator for Health Information Technology has continued its work on improving interoperability, with a task force to increase the use of an HL7's Fast Healthcare Interoperability Resources Standard.[50] Similarly, the Da Vinci Project[51] is creating pilots to provide standards for the exchange of information using Fast Healthcare Interoperability Resources. Specifically, the Da Vinci Project has developed use cases utilizing Fast Healthcare Interoperability Resources constructs including Coverage Requirements Discovery, which provides coverage details to clinicians in real-time, and the Documentation Templates and Coverage Rules, which incorporates benefit information into clinical decision support modules. The Centers for Medicare and Medicaid Services Documentation Requirement Lookup Service is also working with these projects to streamline coverage benefit information in Medicare workflows.[52]

Limited Standards and Lack of Adherence to Standards

Despite the need for uniformity, there is no clear guidance and standards on the required data or components for prior authorization. The standards organization Council for Affordable Quality Healthcare, Inc has a Committee on Operating Rules for Information Exchange focused on reducing manual claims management and processes.[53] The committee has implemented standards to create common infrastructure and data content for prior authorization, addressing real-time processing and response times, as well as identify necessary data for successful prior authorization requests and approvals. Further work must be done, however, to simplify this process if there is to be a universal prior authorization form. Alternatively, the Accredited Standards Committee X12 278 Health Care Services Request for Review and Response is the mandated standard electronic transaction under the Health Insurance Portability and Accountability Act but has not been implemented widely.[8] One reason is that many physicians find that even after using the electronic transaction, they still must complete the process manually. Additionally, many health plans still require manual review. Similarly, the National Council for Prescription Drug Programs issued the SCRIPT standard for electronic prior authorization in 2013 (which provides a standard for electronically exchanging information between clinicians and payers), but it also has not been adopted widely.[8]

CONCLUSIONS

There is opportunity to reimagine the existing prior authorization system to benefit patients, clinicians, payers, and other healthcare stakeholders. This article highlights ways to use value-based payment contracting to rethink prior authorization as well as mechanisms to streamline existing prior authorization. However, to move the field of cardiovascular disease from concept to implementation, the American Heart Association Prior Authorization Learning Collaborative calls for collective action across the healthcare ecosystem:

- Payers should reconsider the role of prior authorization within value-based payment contracting, especially opportunities related to cardiovascular therapies;
- Payers should further implement strategies aimed at reducing prior authorization for clinicians who have consistently received prior authorization approvals; restructuring prior authorization processes to be more transparent, collegial, and peer-to-peer in nature; and making prior authorization electronic and automated (including addressing prior authorization upstream and at the point of care);
- Health systems that newly assume utilization management responsibilities under value-based payment contracting should design utilization management processes that are transparent, collegial, and peer-to-peer in nature (including rotating physicians through the utilization management board) and integrate prior authorization with their electronic health record (including with clinical decision support systems);
- Payers and other stakeholders should work together to develop and consistently implement universal prior authorization forms and common prior authorization data standards, especially as they relate to cardiovascular therapies; and
- A multistakeholder group should design clear treatment algorithms and criteria that apply to prior authorization of cardiovascular therapies.

With the implementation of these strategies, the healthcare system may increase appropriate use of healthcare therapies while reducing administrative burden on clinicians and improving patient care.

ARTICLE INFORMATION

*A list of all American Heart Association Prior Authorization Learning Collaborative members is given in the Data Supplement.

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REFERENCES

1. McClellan M, Brown N, Califf RM, Warner JJ. Call to action: urgent challenges in cardiovascular disease: a presidential advisory from the American heart association. *Circulation*. 2019;139:e44–e54. doi: 10.1161/CIR.0000000000000652
2. The American Heart Association. Heart Disease and Stroke Statistics - 2019: At-a-Glance. 2019. Available at: https://healthmetrics.heart.org/wp-content/uploads/2019/02/At-A-Glance-Heart-Disease-and-Stroke-Statistics-%E2%80%93-2019.pdf. Accessed June 28, 2019.
3. Murphy SL, Xu J, Kochanek KD, Arias E. Mortality in the United States, 2017. *NCHS Data Brief*. 2018:1–8.
4. Centers for Medicare & Medicaid Services. FAQs on Issuer Flexibilities for Utilization Management and Prior Authorization. 2020. Available at: https://www.cms.gov/CCIIO/Programs-and-Initiatives/Health-Insurance-Marketplaces/Downloads/FAQs-Issuer-Flex-UM-PA.pdf. Accessed May 11, 2020.
5. Centers for Medicare & Medicaid Services. Information Related to Coronavirus Disease 2019 - COVID-19. 2020. Available at: https://www.cms.gov/files/document/updated-guidance-ma-and-part-d-plan-sponsors-42120.pdf. Accessed May 11, 2020.
6. Pharmacy Benefit Management Institute. *Trends in Drug Benefit Design*. Plano, TX: Pharmacy Benefit Management Institute; 2018.
7. Institute of Medicine. *Controlling costs and changing patient care? The role of utilization management*. Washington, DC: National Acad. Press; 1989.
8. American Medical Association. Prior authorization: The current landscape. Chicago, IL: American Medical Association; 2015. Available at: https://www.ama-assn.org/media/7406/download. Accessed September 26, 2019.
9. The ABC Access to Care Initiative Prior Authorization Work Group. Identifying How Prior Authorization Impacts Treatment of Underserved and Minority Patients. Association of Black Cardiologists. 2019. Available from: http://abcardio.org/wp-content/uploads/2019/03/AB-20190227-PA-White-Paper-Survey-Results-final.pdf. Accessed June 12, 2020.
10. American Medical Association. 2018 AMA Prior Authorization (PA) Physician Survey. 2019. Available at: https://www.ama-assn.org/system/files/2019-02/prior-auth-2018.pdf. Accessed September 25, 2019.
11. Myers KD, Farboodi N, Mwamburi M, Howard W, Staszak D, Gidding S, Baum SJ, Wilemon K, Rader DJ. Effect of access to prescribed PCSK9 inhibitors on cardiovascular outcomes. *Circ Cardiovasc Qual Outcomes*. 2019;12:e005404. doi: 10.1161/CIRCOUTCOMES.118.005404
12. Navar AM, Taylor B, Mulder H, Fievitz E, Monda KL, Fievitz A, Maya JF, López JAG, Peterson ED. Association of prior authorization and out-of-pocket costs with patient access to PCSK9 inhibitor therapy. *JAMA Cardiol*. 2017;2:1217–1225. doi: 10.1001/jamacardio.2017.3451
13. Casalino LP, Nicholson S, Gans DN, Hammons T, Morra D, Karrison T, Levinson W. What does it cost physician practices to interact with health insurance plans? *Health Aff (Millwood)*. 2009;28:w533–w543. doi: 10.1377/hlthaff.28.4.w533
14. Morley CP, Badolato DJ, Hickner J, Epling JW. The impact of prior authorization requirements on primary care physicians' offices: report of two parallel network studies. *J Am Board Fam Med*. 2013;26:93–95. doi: 10.3122/jabfm.2013.01.120062
15. eHealth Initiative (eHI). Prior Authorization: Current State, Challenges, and Potential Solutions. 2019. Available at: https://www.ehidc.org/sites/default/files/resources/files/Prior%20Auth%20Comprehensive%20Report%20Feb%202019.pdf. Accessed September 25, 2019.
16. Health Care Payment Learning & Action Network. APM Measurement Progress of Alternative Payment Models: 2019 Methodology and Results Report. 2019. Available at: http://hcp-lan.org/workproducts/apm-methodology-2019.pdf. Accessed November 19, 2019.
17. Bleser W, Saunders R, Muhlestein D, Morrison S, Pham HH, McClellan MB. ACO Quality Over Time: The MSSP Experience and Opportunities for System-Wide Improvement. *AJMC*. 2018. Available at: https://www.ajmc.com/journals/ajac/2018/2018-vol6-n1/aco-quality-over-time-the-mssp-experience-and-opportunities-for-systemwide-improvement. Accessed July 17, 2019.
18. Sukul D, Ryan AM, Yan P, Markovitz A, Nallamothu BK, Lewis VA, Hollingsworth JM. Cardiologist participation in accountable care organizations and changes in spending and quality for medicare patients with cardiovascular disease. *Circ Cardiovasc Qual Outcomes*. 2019;12:e005438. doi: 10.1161/CIRCOUTCOMES.118.005438
19. eHealth Initiative. Considerations for Improving Prior Authorization in Healthcare. 2019. Available at: https://www.ehidc.org/sites/default/files/resources/files/Considerations%20for%20PA%202.26.19.pdf. Accessed September 12, 2019.
20. American Hospital Association, America's Health Insurance Plans, American Medical Association, American Pharmacists Association, BlueCross BlueShield Association, Medical Group Management Association. Consensus Statement on Improving the Prior Authorization Process. 2018. Available at: https://www.ama-assn.org/sites/ama-assn.org/files/corp/media-browser/public/arc-public/prior-authorization-consensus-statement.pdf. Accessed September 12, 2019.
21. Nasir K, Angraal S, Virani SS. PCSK9 inhibitors prior authorization. *Circ Cardiovasc Qual Outcomes*. 2019;12:e005910. doi: 10.1161/CIRCOUTCOMES.119.005910
22. Balch A. How Pathways can support reimbursement for personalized decision making and care planning. *J Clin Pathways*. 2019;5:20–22.
23. Hughes TM, Merath K, Chen Q, Sun S, Palmer E, Idrees JJ, Okunrintemi V, Squires M, Beal EW, Pawlik TM. Association of shared decision-making on patient-reported health outcomes and healthcare utilization. *Am J Surg*. 2018;216:7–12. doi: 10.1016/j.amjsurg.2018.01.011

24. Bannow T. Mayo Clinic, Blue Cross of Minnesota add downside risk, cut some prior authorizations in new contract. Modern Healthcare. 2018. Available at: https://www.modernhealthcare.com/article/20180626/NEWS/180629930/mayo-clinic-blue-cross-of-minnesota-add-downside-risk-cut-some-prior-authorizations-in-new-contract. Accessed September 26, 2019.
25. Snowbeck C. Blue Cross, Mayo Clinic agree to new contract. *StarTribune*. 2018. Available at: http://www.startribune.com/blue-cross-mayo-clinic-agree-to-new-contract/485832202/?refresh=true. Accessed September 26, 2019.
26. North Carolina Department of Health and Human Services. North Carolina's Medicaid Accountable Care Organizations (ACOs) for Standard Plans and Providers: Building on the Advanced Medical Home Program to Drive Value-Based Payment. 2020. Available at: https://files.nc.gov/ncdhhs/ACO_White_Paper_Final_20200108.pdf. Accessed January 14, 2020.
27. Rajkumar R. Introducing Blue Premier: Redefining What is Possible in Health Care. 2019. Available at: https://blog.bcbsnc.com/2019/01/blue-premier/. Accessed September 26, 2019.
28. Sharp J, Conway PH, Rajkumar R. Engineering a Rapid Shift to Value-Based Payment in North Carolina: Goals and Challenges for a Commercial ACO Program. *NEJM Catalyst*. 2019. Available at: https://catalyst.nejm.org/blue-premier-nc-value-based-payment/. Accessed September 26, 2019.
29. Joynt Maddox KE, Orav EJ, Zheng J, Epstein AM. Evaluation of medicare's bundled payments initiative for medical conditions. *N Engl J Med*. 2018;379:260–269. doi: 10.1056/NEJMsa1801569
30. Reck J. Oklahoma Signs the Nation's First State Medicaid Value-Based Contracts for Rx Drugs. *NASHP State Health Policy Blog*. 2018. Available at: https://nashp.org/oklahoma-signs-first-medicaid-value-based-contracts-for-rx-drugs/. Accessed September 26, 2019.
31. Bresnick J. UPMC, AstraZeneca Enter Value-Based Pharmaceutical Contract. *Health Payer Intelligence*. 2019. Available at: https://healthpayerintelligence.com/news/upmc-astrazeneca-enter-value-based-pharmaceutical-contract. Accessed September 26, 2019.
32. Tyler LS, Cole SW, May JR, Millares M, Valentino MA, Vermeulen LC Jr, Wilson AL; ASHP Expert Panel on Formulary Management. ASHP guidelines on the pharmacy and therapeutics committee and the formulary system. *Am J Health Syst Pharm*. 2008;65:1272–1283. doi: 10.2146/ajhp080086
33. Pharmaceutical Care Management Association. What tools do PBMs use? Available at: https://www.pcmanet.org/pcma-cardstack/what-tools-do-pbms-use/. Accessed May 11, 2020.
34. Pharmaceutical Care Management Association. PBMs Provide Clinical Value to Patients, Doctors and Other Healthcare Providers. 2017. Available at: https://www.pcmanet.org/wp-content/uploads/2017/04/PBMs-Provide-Clinical-Value-to-Patients-Doctors-and-Other-Healthcare-Providers_white-paper_final.pdf. Accessed May 11, 2020.
35. Harrington RA, Califf RM, Balamurugan A, Brown N, Benjamin RM, Braund WE, Hipp J, Konig M, Sanchez E, Joynt Maddox KE. Call to action: rural health: a presidential advisory from the American Heart Association and American Stroke Association. *Circulation*. 2020;141:e615–e644. doi: 10.1161/CIR.0000000000000753
36. BCBS Nebraska. Prior Authorization FAQ's. Available at: https://www.nebraskablue.com/-/media/Files/NebraskaBlueDotCom/Providers/Prior-Authorization/Prior_Authorization_FAQs_37-082.ashx?la=en&hash=FB8E467F618A1BF3C15BC7DBD51BD27112B7F785. Accessed September 26, 2019.
37. BCBS Nebraska. BCBS Nebraska Update. 2018. Available at: https://www.nebraskablue.com/-/media/Files/NebraskaBlueDotCom/Providers/Newsletters/Provider-Newsletter/Provider_Update_201811.ashx?la=en&hash=04D9D692C5596C9CF61F5DDD4B464CFF76CCF8D. Accessed September 26, 2019.
38. Department of Vermont Health Access. Operating Procedure - Gold Card Process. 2012. Available at: https://dvha.vermont.gov/advisory-boards/goldcardradiologyprocedures.pdf. Accessed September 26, 2019.
39. Alabama Medicaid. Radiology Management Program "Gold Card Changes." 2010. Available at: https://dvha.vermont.gov/advisory-boards/goldcardradiologyprocedures.pdf. Accessed September 26, 2019.
40. CAQH. Reducing Manual Business Transactions Could Save Healthcare $9.4 Billion. 2017. Available at: https://www.caqh.org/about/press-release/reducing-manual-business-transactions-could-save-healthcare-94-billion. Accessed September 26, 2019.
41. CoverMyMeds. CoverMyMeds, The Leader In Electronic Prior Authorization. 2020. Available at: https://www.covermymeds.com/main/. Accessed January 13, 2020.
42. Surescripts. 2020. Available at: https://surescripts.com/. Accessed January 13, 2020.
43. CAQH. Moving Forward: Building Momentum for End-to-End Automation of the Prior Authorization Process. 2019. Available at: https://www.caqh.org/sites/default/files/core/white-paper/CAQH-CORE-Automating-Prior-Authorization.pdf. Accessed January 13, 2020.
44. America's Health Insurance Plans. New Fast PATH Initiative Aims to Improve Prior Authorization for Patients and Doctors. 2020. Available at: https://www.ahip.org/new-fast-path-initiative-aims-to-improve-prior-authorization-for-patients-and-doctors/. Accessed January 14, 2020.
45. Powell AC, Price SE, Nguyen K, Smith GL, Long JW, Deshmukh UU. Prior authorization for elective diagnostic catheterization: the value of reviewers in cases with clinical ambiguity. *Am Health Drug Benefits*. 2018;11:168–176.
46. Robinson JD, Hippe DS, Hiatt MD. The effect of a no-denial policy on imaging utilization. *J Am Coll Radiol*. 2013;10:501–506. doi: 10.1016/j.jacr.2013.01.022
47. Association of Black Cardiologists. Prior Authorization Resource Kits. *Association of Black Cardiologists*. 2018. Available at: http://abcardio.org/resource-kits/. Accessed January 14, 2020.
48. Ciolino N. Medical Society of Delaware working to streamline prior authorization. *Delaware Public Media*. 2018. Available at: https://www.delawarepublic.org/post/medical-society-delaware-working-streamline-prior-authorization. Accessed September 26, 2019.
49. Medical Society of Delaware, Medscient. The Medical Society of Delaware forms partnership to improve health car pre-authorization processes using distributed ledger technology. 2017. Available at: http://files.constantcontact.com/01c210be101/13b319b6-0d4f-4b7e-9142-e26e5d4f4ad9.pdf. Accessed September 26, 2019.
50. HL7 FHIR. FHIR Overview. 2019. Available at: https://www.hl7.org/fhir/overview.html. Accessed January 13, 2020.
51. HL7 International. Da Vinci Project. 2020. Available at: http://www.hl7.org/about/davinci/. Accessed January 13, 2020.
52. Centers for Medicare & Medicaid Services. Documentation Requirement Lookup Service Initiative. 2020. Available at: https://www.cms.gov/Research-Statistics-Data-and-Systems/Monitoring-Programs/Medicare-FFS-Compliance-Programs/LookupServiceInitiative. Accessed January 13, 2020.
53. CAHQ. Operating Rules. *CAQH*. 2015. Available at: https://www.caqh.org/core/operating-rules. Accessed September 26, 2019.