LEVERAGING THE POWER OF ARTIFICIAL INTELLIGENCE TO SOLVE PRIOR AUTHORIZATION

Olive

With hundreds of millions of prior authorizations required every year, patients, providers, and payers are feeling the pain of a cost control measure that is weighing down the U.S. healthcare system.

A groundbreaking software solution from Olive that leverages artificial intelligence to create the first end-to-end prior authorization solution addresses the pain points of this much maligned healthcare system process — freeing up healthcare providers to spend more time with their patients, while increasing operating efficiencies for both providers and payers.

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01 PRIOR AUTHORIZATION TODAY

If there's one spot to which you could point that best summarizes what's wrong with America's healthcare system, it's the issue of prior authorizations.

According to a study by the Medical Group Management Association (MGMA), prior authorization ranks as the No. 1 burden among medical group practice physicians, with 83% of physicians surveyed saying it is "very or extremely burdensome."[1]

To provide context as to why prior authorizations are such a sore point for many throughout the U.S. healthcare system, the Council for Affordable Quality Healthcare (CAQH), an alliance of health plans and trade associations, estimates that more than 184 million prior authorizations for medical tests and treatments are processed each year in the U.S.[2] Include pharmacy prior authorizations, and the number balloons to hundreds of millions of prior authorizations every year. In survey after survey of physicians, the volume of prior authorizations is putting a crushing burden on providers.

Prior authorizations are part of a larger systematic approach within the U.S. healthcare system called utilization management (UM), a term coined by the National Academy of Medicine as "a set of techniques designed to manage healthcare costs by influencing patient care decision-making through case-by-case assessments of the appropriateness of care prior to its provision."[3]

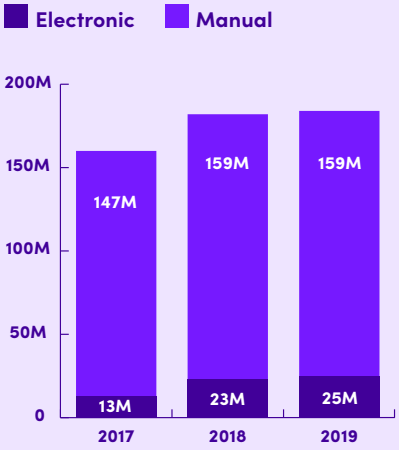
For example, if a patient needs an ultrasound or an MRI, a doctor is required to confer with the patient's health insurance company (the payer) to see if the procedure is covered under the patient's health insurance plan before delivering the medical service or prescribing a drug treatment.

While prior authorizations sound like a routine process, they can be anything but for doctors and nurses treating patients with

Prior authorization is the process by which doctors and other healthcare providers obtain permission from a patient's health insurance company prior to providing medical treatments for a patient.

Figure 1

Estimated national volume of medical prior authorizations by mode 2017–2019 CAQH index



* Data represents plans and providers

Practices spend on average $68,274 per physician per year interacting with health plans, totaling $23–$31 billion annually.

To view the number of steps involved in prior authorization, see figure 2 on page 23.

more complex conditions, such as cancer or heart disease, or patients who need major surgery. With the intent of better controlling healthcare costs, health insurance companies have created a system where doctors and nurses regularly lament they are spending an increasing amount of their time interacting with health insurance companies at the expense of time with their patients.

Indeed, the time and resources providers dedicate to prior authorizations and other insurance interactions are substantial.

In a study by Lawrence P. Casalino, et al., published in *Health Affairs*,[4] the team meticulously calculated the time each physician or staff member spent on prior authorizations and other insurance tasks. When that time is converted into dollars, practices spent an average of $68,274 per physician per year interacting with health plans. That equates to between $23 billion and $31 billion annually.[5]

Faced with rising administrative costs, delays in patient care, and burnout among healthcare professionals and administrators, healthcare leaders (providers and payers) are eager to address the growing challenges of prior authorizations. This white paper, brought to you by Olive, explores the pain points behind prior authorization and offers solutions from which both providers and payers could benefit.

1.1 Navigating prior authorizations

Every day across the United States, physicians, surgeons, nurses, and administrators navigate a process called prior authorization on behalf of their patients. Whether they work in a small group practice, for a hospital, or for a large health system, they must overcome a range of obstacles to obtain the necessary approval to treat their patients.

In navigating a process designed to keep healthcare costs under control, physicians report experiencing numerous challenges, including treatment delays, administrative hassles, and payment denials.

"They never talked about prior authorizations in medical school," said Olive Payer Market President Jeremy Friese, MD, MBA, a radiologist who left his practice at the Mayo Clinic to solve the prior authorization problem for providers and payers. "I remember the day where I had literally spent hours on the phone and sending faxes to a patient's health plan when it struck me: This isn't what I signed up for when I got into medicine. I had reached my tipping point."

At Watertown Regional Medical Center, located in Watertown, Wisconsin, a one-hour drive northwest of Milwaukee, Lanette Martin, a lead nurse at Watertown's pain clinic, and Becky Shields, a clinic nurse, shared their prior authorization experience. Several years ago,

> **Patients were wondering what was taking so long. ... Our referral sources began to ask if they should refer patients to other clinics.**
>
> **— Becky Shields, nurse, Watertown Regional Medical Center**

.....

their prior authorization department was overwhelmed with requests.

"We were unable to maintain a schedule because of the delay in obtaining prior authorizations for our unit's patients," Martin said. "We literally had to stop providing our nursing services to pick up the phone to coax the health plans to provide us the prior authorizations we needed."

Unable to obtain timely prior authorizations for desperate patients seeking pain relief, Watertown Regional Medical Center had to cancel clinics and turn patients away.

"Everyone was getting frustrated," Shields said. "Patients were wondering what was taking so long. Doctors, nurses, and administrators became frustrated. Our referral sources began to ask if they should refer patients to other clinics."

"I didn't get into nursing to do prior authorizations," Martin said.

The two nurses navigated the complicated system of prior authorizations, sometimes taking days off from their regular work to get prior authorizations processed and approved. The medical center eventually turned to Olive's artificial intelligence platform, which was attached to Watertown's electronic medical records, to automatically prepare prior auths and dramatically improve efficiency.

Today Watertown Regional Medical Center typically obtains its prior authorizations within 10–15 minutes of a request, down dramatically from a week it would take for Martin and Shields to get a prior authorization before using Olive's end-to-end solution.

"We are all much happier," Martin said. "Our schedule is full, and we have a lot less stress."

1.2 An antiquated, time-consuming process

In a digital age where nearly everything moves at the speed of light, most consumers and business executives in other industries would be shocked to learn that 90% of the prior authorization communications between a provider and a payer are done by phone or fax — yes, fax! — according to the nonprofit Council for Affordable Quality Healthcare, or CAQH,[6] an industry group of providers and payers working to automate and standardize the process.

For patients and healthcare providers who seek treatments for more complex and complicated health issues, prior authorizations have become especially burdensome.

To help control costs for medically complex patients, especially those with chronic conditions, payers require doctors to use a step therapy approach (also referred to as the fail-first requirement). This policy requires doctors to prescribe lower cost treatments, procedures, and drugs before approving higher cost options. Some insurance companies require this even when a patient has unsuccessfully tried a treatment prescribed by a previous provider or through a previous healthcare plan.

Alisa Niksch, MD, a pediatric cardiac electrophysiologist at Tufts Medical Center in Boston, understands all too well the tension between providers and payers.

> **You're just days away from running out of the medicine that's been keeping your child alive, and you're hoping your doctor can win the fight with the insurance company. This is not how healthcare in the U.S. should work.**
>
> **— Dr. Alisa Niksch, pediatric cardiac, electrophysiologist, Tufts Medical Center**

"I have cared for a 4-year-old boy with a supraventricular arrhythmia — a heartbeat that suddenly goes uncontrollably fast — since he was born," Niksch said. "The condition is life-threatening and is made even more complex by a congenital heart defect. To treat it, he's been on a specific medicine since birth. It's the only medication that has been able to control his condition.

"Every year, we need to file a prior authorization to renew his medication," Niksch continued. "After his fourth birthday, we were shocked when the health insurance company suddenly denied the renewal of the prescription on the basis that he had never demonstrated 'failure' of lower cost medications."

The boy was just a week away from running out of his life-saving prescription, and his parents were frantic. Niksch, advocating for her patient and his family, insisted on a peer-to-peer review with the health insurance company.

"I found myself on the phone with a rheumatologist," Niksch said. "It was not a peer-to-peer review by any sense of the definition. I had to educate the insurance doctor about a field of medicine that he clearly did not understand.

"You can imagine the emotional anguish that the parents felt," she added. "You're just days away from running out of the medicine that's been keeping your child alive, and you're hoping your doctor can win the fight with the insurance company. This is not how healthcare in the United States should work."

Cost to maintain a manual prior authorization process

The average physician submits 29 prior authorizations per week

Each prior authorization takes 30–60 minutes to complete

Totaling almost two days per week (14.9 hours) of staff time

$20,000–$60,000 per physician per year

1.3 Rising costs

In their effort to deal with the growing complexity and number of prior authorizations required by payers, many hospitals, clinics, and physician groups have turned toward hiring administrative staff who are specially trained in navigating the prior authorization system.

According to an American Medical Association survey, approximately a third (36%) of surveyed physicians reported having dedicated staff who work exclusively on prior authorizations.[7]

Howard Rogers, MD, a dermatologist who owns a small practice in Connecticut, testified before the House Committee on Small Business about the burdens of prior authorizations on his practice. During his testimony, Rogers shared that he hired two full-time staff to handle the growing volume of prior authorizations impacting his practice. Rogers estimated that his staff spends 70 hours per week on prior auths, which cost him $120,000 in salary and benefits.[8]

Olive Chief Medical Officer YiDing Yu, MD, said Rogers' experience is not at all unusual. A Harvard physician and experienced health system executive before joining Olive, Yu saw the same challenges within her own $2 billion health system.

"According to the American Medical Association, the average physician will process 29 prior authorizations every week," Yu said. "When you factor in the physician and staff time for that administrative work, it's a cost of $20 to $50 per authorization. If the prior authorization is denied, peer-to-peer reviews and appeals can cost hundreds of dollars in additional time and effort."

Initial prior authorization reviews cost payers on average $18.4 billion annually, with peer reviews and appeals adding substantially more.

02 PAIN POINTS OF PRIOR AUTHORIZATION

It is abundantly clear that today's prior authorization process is broken. In a sea of dizzying complexity, providers, payers, and patients all suffer.

83% of respondents to a survey cited prior authorization for medical services as their No. 1 burden.

2.1 Healthcare providers

Shouldering the brunt of today's prior authorization burden, healthcare providers are, unsurprisingly, the loudest proponents of change. Prior authorizations impact providers in a number of ways, including:

The growing number of prior authorizations	• Providers complete an estimated 184 million medical prior authorizations manually each year, according to the Council for Affordable Quality Healthcare.[9] • 90% of healthcare leaders report payer prior authorization requirements increased in 2019, according to the MGMA Stat Poll.[10]
Wasted time spent on prior authorizations	• Physicians spend one hour per week on prior authorizations, while nurses spend an average of 13.1 hours per week dealing with payer approvals, according to *Health Affairs*.[11]
No. 1 burden on physicians	• 83% of respondents to a Medical Group Management Association (MGMA) Stat Poll survey "cited prior authorization for medical services as their No. 1 burden."[12] • Similarly, a 2018 survey of 1,000 physicians by the American Medical Association found "86% of practicing physicians reported prior authorization is a high burden for themselves and their staff."[13]
Unacceptable wait times and cancellations	• 91% of surveyed physicians reported that prior authorizations sometimes, often, or always delay access to care, according to the American Medical Association.[14] • As a result of prior authorization delays, patients may be forced to reschedule their appointments, cancel surgery, or abandon care completely.
Antiquated faxes and phone calls	• In today's digital age, most prior auth applications are conducted by phone or fax, according to a report by the American Medical Association. • According to the CAQH, in 2019, only 13% of all prior authorizations were fully electronic, while 80% of attachments were submitted manually (fax, mail, email).[15]

2.2 Healthcare payers

While much of the focus regarding the burden of prior authorizations centers on providers and patients, health insurance companies also feel the pain of an inefficient system that is being weighed down by increasing numbers of prior authorization requests.

Payer challenges include:

Initial prior auth reviews cost payers on average $18.4 billion annually, with P2P reviews and appeals adding substantially more.

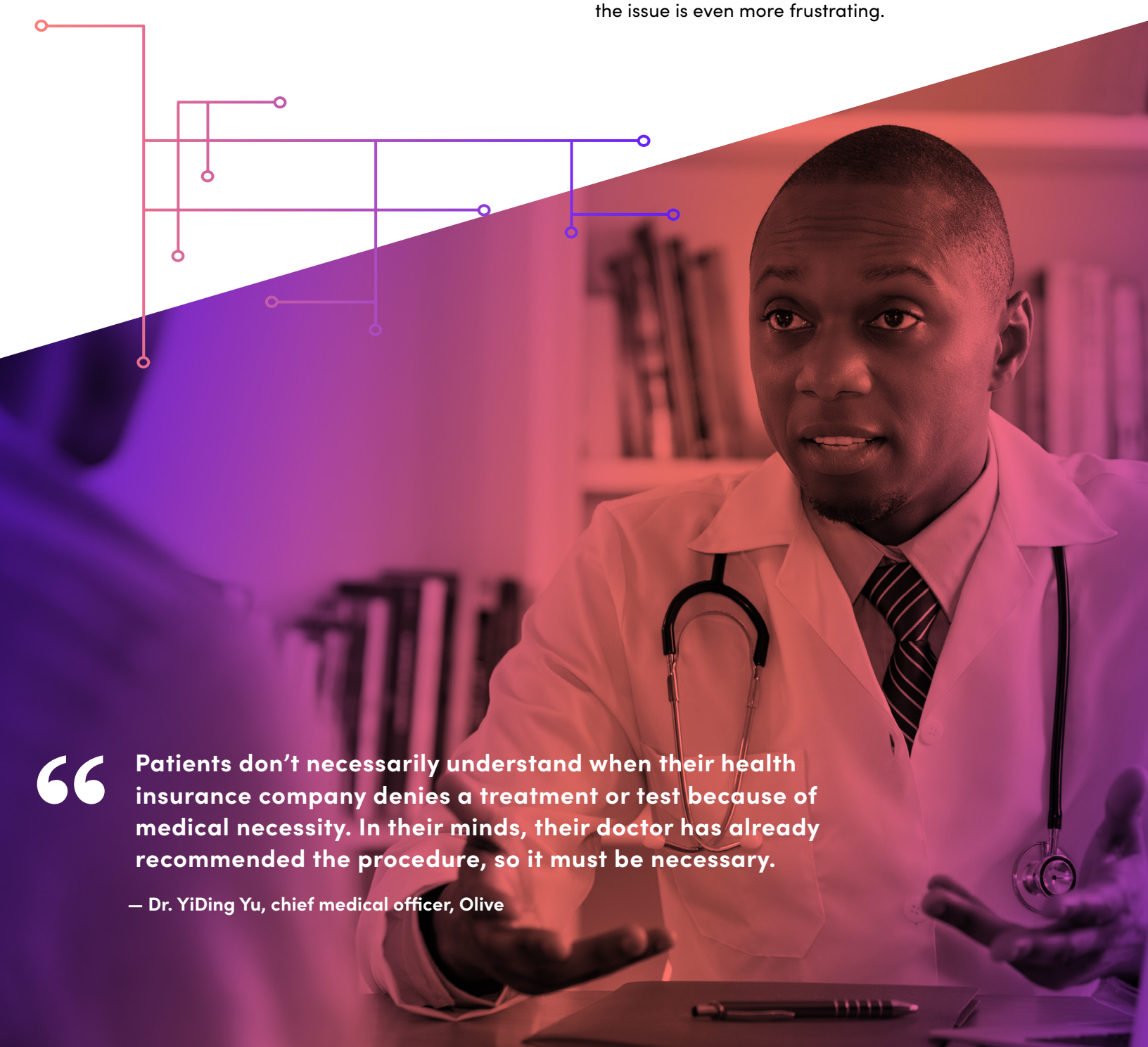
Time-consuming manual processing	• According to the CAQH, 87% of prior authorizations are submitted either partially (through a web portal) or fully manually (phone, fax, or email).[16] • Each submission has to be manually processed by layers of prior auth specialists who sort, collate, and scan faxes into the appropriate care management platforms.
Expensive personnel costs	• In addition to prior authorization specialists who process faxes, reviewing prior authorizations requires an expensive team of nurses and medical directors. • In proprietary studies with health plans, Olive found that the average nurse reviewing surgical prior authorizations completes only 8–9 reviews per day due to complex requirements and the volume of clinical documents to review. • In addition, health insurance companies employ hundreds of telephone representatives to take repeated calls from doctor's offices and patients checking on the status of prior authorizations.

Incomplete data causes delays	• Because prior authorizations require complex documentation, providers often unintentionally send incomplete medical records. Payers must then go back to busy providers to request additional information. • Chasing incomplete documentation by phone, email, and fax can extend the prior authorization process by several days, risking violation of the 14-day notification standard from the National Committee for Quality Assurance (NCQA), which accredits health plans.
Ineffective peer-to-peer reviews	• To ensure that a treatment recommendation is valid and necessary, payers hire medical directors to provide peer-to-peer consultations with the patient's doctor. • These doctors tend to be generalists, resulting in frustration on the part of providers, who voice that these reviews are not truly peer-to-peer when dealing with specialty treatments. However, having a full range of medical directors for every specialty is often cost-prohibitive for payers.
Poor patient experience	• "Patients don't necessarily understand when their health insurance company denies a treatment or test because of medical necessity," said Olive's Yu. "In their minds, their doctor has already recommended the procedure, so it must be necessary. And it's even harder for patients to understand that they may have received a denial simply because of a lack of proper documentation by their doctor." • "Payers feel that their patients unfairly blame them for these denials," Yu added. "As a result, prior authorizations are one of the most consistent drivers of patient dissatisfaction."

Clearly, if the prior authorization process — even parts of it — could be automated, the cost savings would be tremendous for payers too.

Based on Olive's proprietary survey of more than a dozen health plans, the cost of an initial prior authorization review averages $80 to $120, with the cost of a peer-to-peer review averaging $600. With more than 184 million prior authorization submissions every year, initial reviews cost payers $18.4 billion on average, with peer-to-peer reviews and appeals adding substantially more.

Unable to handle the volume of prior auths in-house, many payers turn to third-party vendors to handle the process for them at an even greater expense. This array of third-party vendors for different services further complicates the process for providers, who now must remember which payers use which vendors for which services. For patients who hear that their prior authorization was denied by a third party, the issue is even more frustrating.



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>
> **— Dr. YiDing Yu, chief medical officer, Olive**

2.3 Patients

Prior authorizations don't just impact providers and payers. Patients, too, are affected by prior authorizations — from feeling minor irritation over a procedural delay to being put at serious medical risk because of a conflict between what their physician is recommending and what the health plan is willing to cover.

Keith Loria, writing in *Medical Economics*,[17] reported that "91% of U.S. physicians surveyed by the AMA said prior authorizations have a negative effect on patient care, either by delaying care or causing patients to abandon treatment."

Even more concerning, according to *HealthPayerIntelligence*, for 28% of physicians surveyed in a 2019 survey by the American Medical Association, "prior authorization delays have led to a serious adverse event for a patient, such as a death, disability or permanent damage, hospitalization, or other life-threatening emergency."[18]

28% of physicians said prior auth delays have led to death, disability, hospitalization, or life-threatening emergency for a patient.

How exactly do prior authorizations affect patients? Consider this:

Care delays and abandoning treatments	• When treatment is delayed due to prior authorization, it can cause dangerous delays in care and abandoned treatments. Sara Heath, writing in *PatientEngagementHIT*, reports that "75% of providers say prior authorization delays can cause patients to abandon a certain treatment path at least some of the time."[19]
Amplifying stress, anxiety, and dissatisfaction	• For patients with serious and complex health issues, waiting to hear if the treatment prescribed by a physician is approved by their payer only amplifies their stress and anxiety. • In a survey of 700 radiation oncologists by the American Society for Radiation Oncology (ASTRO), more than 7 in 10 radiation oncologists (73%) said their patients regularly express concern to them about the delay caused by prior authorization. • This alarm is well justified. Research has linked each week of delay in starting cancer therapy with a 1.2% to 3.2% increased risk of death.[20]

91%

of physicians report care delays due to prior authorizations

75%

of physicians report prior authorizations led to abandoned tests or procedures

Patient harm	• At its worst, delays and denials in prior authorization can result in real harm for patients with limited time or awaiting potentially life-saving treatments. • Linda L., a patient from Texas, shared her story publicly with the AMA: "My health insurance kept denying me authorizations for scans that would help my doctor perform surgery on a known spinal cord compression. I have metastatic breast cancer. I finally got a PET scan the insurance was stalling on. By the time I had surgery, the tumor involved was not just C-4 but C-3 and C-5 as well."[21]
Surprise medical bills	• Nearly every prior authorization from a payer includes the caveat that an authorization is not a guarantee of payment. As patients assume a greater share of their health costs and routinely sign paperwork agreeing to pay any uncovered costs from their insurance, a prior authorization error or billing dispute between the provider and insurer can easily result in tens of thousands of dollars in medical bills for the patient. Patients being told their procedure was "approved," only to receive a massive bill and being told they have little recourse, has spurred legislative action at the state level to curb surprise medical bills and shield patients. • According to a JAMA study, 1 in 5 patients got a surprise bill after their procedure for out-of-network services, with an average potential balance of $2,011.[22]

“

My health insurance kept denying me authorizations for scans that would help my doctor perform surgery on a known spinal cord compression. ...

By the time I had surgery, the tumor was not just C-4 but C-3 and C-5.

— Linda L., patient

03 PRIOR AUTHORIZATIONS: A GROWING PROBLEM

As Boomers, Gen Xers, and Millennials age and experience more frequent medical issues and more complicated medical problems, the volume of prior authorizations is expected to increase dramatically over the coming decade.

Prior auth requests are increasing 14% every year.

As reported by *Medical Economics* magazine, "According to a study from the American Medical Association, 86% of physicians report that prior authorizations have increased during the prior five years, and 51% report that they have increased significantly."[23] Indeed, data from the CAQH show that prior authorization requests have increased by 14% year over year and are expected to continue to rise globally.[24]

"If providers and payers could increase the speed of prior authorizations to the point that treatment could be authorized in a matter of minutes, not hours or even days or weeks, both the provider and payer would benefit dramatically — not to mention the patient, who would receive more timely treatment that could eliminate future complications," said Olive's Friese.

3.1 Revolutionizing a manual process

Solving prior authorizations for providers, payers, and patients will be revolutionary if it ensures timely, cost-effective care for patients with minimal burden on providers and payers.

But to do so means unwinding today's complex prior authorization process, which requires numerous steps, multiple iterations, and various individuals to complete the task. While many providers have resorted to hiring employees dedicated to just prior authorizations,

Olive's research reveals about one-third of a provider's employees will touch a typical request — doctors, nurses, physician extenders, medical assistants, schedulers, front desk staff, and billing or other staff. In other words, the problem and burden are widespread.

Why? Because the long and complex process currently involves clinicians, clinical support staff, schedulers, and clerical workers, often repeating iterative tasks until approval for an authorization is received. As outlined by the American Medical Association, the current prior authorization process can involve as many as 14 steps (Figure 2).

The average prior authorization requires multiple touchpoints and often requires 30–45 minutes to submit to the payer. From ordering a procedure to completing the authorization and scheduling a patient, many hospitals average 11–18 days, according to Olive. "When payers, providers, and regulators take a close look at this process, they clearly see how time-consuming and inefficient it is," Yu said.

Olive isn't the first company to recognize this problem, she added. Many other companies recognize the frustration that is built into the present-day system and have developed products to address some of these challenges. A practicing physician herself, Dr. Yu has investigated many solutions firsthand, looking for ways to address the pain points experienced by her patients and staff.

"At best, companies are solving bits and pieces of this complex process," Yu said, "for example, by offering a workflow solution that helps organize your work or software that helps you copy and paste data into an insurance portal."

"But when you take a close look at all of the steps within a request for prior authorization and all of the people who are involved in the process, it's clear that a more powerful solution is needed to revolutionize prior authorizations — the entire process, not just bits and pieces."

3.2 Developing a better mousetrap

According to HIT Consultant, an industry source of healthcare technology news and analysis, the concept of requiring prior authorization isn't disputed by the healthcare industry. What is in dispute, though, is whether the "arduous manual processes that must be undertaken in order to receive them" can be eliminated.[25]

Richard Stewart, a managing director with the consulting firm Accenture, argues in a company blog post,[26] "Intelligent Payer: Health Management Reimagined," that artificial intelligence can play a game-changing role in healthcare. "AI can take on many administrative tasks that nurses do now, allowing them to focus more time on functions that truly leverage their clinical expertise."

According to Stewart, analysis by Accenture confirms that "accelerating prior authorization and clinical review of claims is one of the top three areas that U.S. health insurers can target and use AI-driven solutions to unlock up to $7 billion in total value in 18 months."

"Technologies such as artificial intelligence can revolutionize the prior authorization process," Yu said. "AI can automatically initiate prior authorizations, curate clinical documents, and automatically approve prior authorizations through AI-powered clinical reviews."

"Here's the real key," she added. "AI can learn over time, allowing for faster and more accurate responses to prior authorization requests. That's where Olive really shines. At Olive, we've built an artificial intelligence platform with a central repository of payer rules and requirements — so when we learn something new at one provider location, that knowledge is shared with others."

As Olive continues to build the first Internet of Healthcare, we are connecting previously siloed hospitals, health systems, and providers like never before. Indeed, leaders in healthcare have been keen to embrace automation and artificial intelligence; but, as buzz around AI has grown, it can be hard to evaluate marketing claims

Figure 2: Should any process involve this many steps?

Order

Physician orders the test or procedure, patient is sent to scheduling.

Scheduling

Nurse or medical assistant determines if the patient can be scheduled in advance. Do they need to wait?

- Yes — schedule patient 2–3 weeks out to allow time to obtain prior authorization.
- No — staff will have to follow up with patient once prior authorization is obtained.

Prior authorization

Is a prior authorization even required? Prior authorization specialist checks with the patient's health plan (payer).

- Yes — a prior authorization is required, and paperwork will need to be submitted.
- If the order is routine, the specialist can refer to a cheat sheet of medical necessity rules.
- If the order is complex, the specialist will call the health plan to confirm rules and instructions.

Paperwork

The specialist toggles between the payer's web portal for specific rules and the EHR to find and print appropriate patient records for approval. If the documents needed are not available, the case is escalated to the nurse, physician, or physician extender, who must provide them.

Submission

After the clinical documents are gathered and the forms are filled out, they will send it to the payer — usually by fax. It's not uncommon for health plans to receive faxes of 50+ pages.

Payer review

The health plan conducts an initial review of all paperwork sent by the provider. According to Olive's research, a typical nurse reviews about eight to nine prior authorization requests a day at a cost of $80–$120 per initial review. NCQA standards dictate that health plans must notify the provider within 14 days.

Approval or denial

The health plan contacts the provider with the determination that the prior authorization has been approved or not approved. If not:

- The provider, as requested by the health plan, usually tries to locate and submit additional documentation.
- The provider may request a peer-to-peer review to appeal the decision.

Patient's next steps

The provider consults with the patient about next steps: moving forward with treatment, appealing the denial, or pursuing other treatment options.

In five seamless steps, Olive helps you take control of prior authorizations so you can focus on what you do best — patient care. Olive:

01 **Checks if prior authorization is needed.**

02 **Initiates prior authorizations from your EHR.**

03 **Retrieves payer medical necessity rules.**

04 **Recommends clinical documents to submit.**

05 **Retrieves prior authorization statuses automatically.**

and understand whether the technology will truly meet provider and payer needs.

Rather than contemplate bots that can only do a single fixed task and must be reprogrammed any time your computer or EHR changes, Yu suggests testing technology vendors on whether they can take on substantially complex tasks that nurses manually process today.

The largest and most time-consuming part of the prior authorization process involves comparing a patient's medical records and treatments proposed by a healthcare provider with the specific requirements of a patient's health plan. That's where Olive can play a game-changing role. "Our goal is to make prior authorizations frictionless," said Olive Payer Market President Friese.

Core to Olive's approach, which distinguishes it from other technology companies trying to tackle the same problem, is leveraging artificial intelligence to automate the entire prior authorization process. We're building the first healthcare "AI workforce" to automate workflows, streamline manual tasks, and provide a touchless prior authorization process through our AI-as-a-service model.

The solution starts with determining if an authorization is required, includes touchless submission of the prior authorization request, and ends with automating claim appeals — all while giving providers and payers a 360-degree view of their authorization performance.

Using artificial intelligence, Olive's software continuously scans the medical necessity rules of tens of thousands of existing health plans across the country. At the same time, the software gathers information from the patient's medical records within EHR. In matching data points, Olive can tell providers automatically if a prior authorization will be approved or if additional information is needed to complete the process. The software alerts providers if there is missing or inaccurate information and reduces the number of people touching the prior authorization during the process. The result is faster prior authorization submissions and decisions while rapidly reducing the turnaround time for patient care.

When partnered with payers, Olive can provide decisions at the point of care, creating a seamless experience for providers and patients while dramatically accelerating access to care. Leveraging AI to remove manual processing and human reviews, Olive's platform helps providers and payers deliver faster, better care.

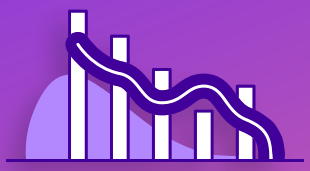
3.3 Delivering results

Without Olive's end-to-end prior authorization software, doctors, nurses, or prior authorization specialists spend hours scanning and sending massive amounts of medical records to payers. "We want to eliminate all of these time-wasting phone calls and faxes," Yu said.

In their *Harvard Business Review* article "Can AI Address Healthcare's Red-Tape Problem?" authors Minoo Javanmardian and Aditya Lingampally,

> **Olive's vision is to unleash a trillion dollars of hidden potential within healthcare by connecting providers and payers through an Internet of Healthcare.**
>
> **— Sean Lane, CEO, Olive**

The Olive impact



35%
fewer write-offs

8-day
faster decisions

4X
return on investment

principals with Oliver Wyman, a New York-based healthcare consulting firm, note: "AI solutions dealing with cost-cutting and reducing bureaucracy — where AI could have the biggest impact on productivity — are already producing the kind of internal gains that suggest much more is possible in healthcare players' back offices."[27]

Javanmardian and Lingampally estimate that administrative and operational inefficiencies account for nearly one-third of the U.S. healthcare system's $3 trillion in annual costs. Using AI in the rapid collection, analysis, and validation of health records offers the opportunity to obtain significant cost savings.[28]

Having worked with thousands of physicians at hospitals across the United States, Olive has consistently delivered faster prior authorization decisions and reduced the amount of bad debt written off by hospitals. For example, at a regional medical center, Olive reduced turnaround time for prior authorizations by 60%, generated a 25% improvement in clinic utilization, and reduced prior authorization-related write-offs by 32%.

In another example, a hospital using Olive's artificial intelligence software across nearly every service line achieved a 78% faster turnaround time on prior authorizations, reduced staff requirements by 23%, and reduced write-offs by 35%. A few specialties, such as pain management, at this same hospital reduced write-offs by over 50%.

"By applying artificial intelligence to this process, we are clearly demonstrating the ability to increase productivity and reduce waste with real financial impact," Friese said. "Our healthcare system is demanding disruptive technology like Olive to make a difference."

04 RECOMMENDATIONS FOR THE INDUSTRY

Beyond technology, what else could be done to reduce the burden of prior authorizations on both providers and payers?

The MGMA, American Hospital Association, American Medical Association, and numerous other healthcare associations** are coming together to advocate for a number of changes to reform prior authorizations.[29]

Olive's Yu and Friese applaud the efforts of providers and payers collaborating to find a better solution to the prior authorization problem that hinders the effectiveness of the entire U.S. healthcare system.

For example, the Centers for Medicare & Medicaid Services (CMS) now requires payers in certain federal programs to build application programming interfaces (APIs) to support data exchange and prior authorization. Olive is already facilitating that process through its custom APIs.

Coming from a unique vantage point, where they can clearly see the pain points of all three stakeholders mentioned in this paper — providers, payers, and patients — Yu and Friese recommend the following changes:

- Support healthcare providers in adopting fully electronic administrative transactions.
- Adopt industry-wide electronic standards and operating rules for prior authorization, particularly for transmission of clinical documents.

The MGMA, American Hospital Association, American Medical Association, and other healthcare associations are advocating for change.

**Additional coalition members include: American Academy of Dermatology, American College of Cardiology, American College of Rheumatology, American Pharmacists Association, American Society of Clinical Oncology, Arthritis Foundation, Colorado Medical Society, Medical Society of the State of New York, Minnesota Medical Association, North Carolina Medical Society, Ohio State Medical Society, and Washington State Medical Society.

By connecting providers, patients, and payers like never before, Olive is shining a light on our disconnected processes, unleashing wisdom and insight to power life-changing outcomes.

- Provide clarity around which services require prior authorization and enable standard electronic protocols to verify prior authorization requirements, site-of-service requirements, and network requirements.
- Commitment from all national payers to more timely reviews.
- Require payer prior authorization policy transparency.
- Centralize the prior authorization process at all hospitals and medical clinics. According to a white paper by TripleTree, a leading healthcare advisory firm: "There are organizations at the forefront of addressing the problem through a centralized approach, but only 10–20% of hospitals have a Head of Authorizations in place who oversees all of this activity."[30]

If the healthcare industry is unable to find solutions that make the system better, it's likely that relief will be sought at the federal and state level as voters put pressure on legislators to fix the nation's healthcare system. Under this broader umbrella, there have been numerous proposed resolutions to specifically address prior authorizations.

While it's unclear if healthcare reform will occur any time soon, TripleTree believes the healthcare industry ultimately will come together to find a solution: "The provider and payer industries have launched a number of initiatives to help alleviate the burden brought on by the acceleration of prior authorizations. Our view is that a tighter collaboration among the payers and providers will eventually occur due to the establishment of aligned risk-taking arrangements and greater use of point-of-care clinical decision support capabilities leveraging evidence-based standards."[31]

4.1 The bottom line: patients first

At the end of the day, what matters are better outcomes for patients. Prior authorizations have become one of the most expensive and frustrating hurdles in delivering on that promise. The answer comes down to choices:

- Invest in new technology so providers and payers can create a new dynamic where patients win — prior authorizations are approved faster, complete data is available to all parties, and patients receive faster, better care.
- Intentionally cut out unnecessarily burdensome processes that demoralize doctors and nurses, and enable point-of-care approvals to accelerate patient care.
- Automate transactions to reduce waste, cut administrative burdens, and reinvest human effort into more meaningful care.

Without shared knowledge, health systems are essentially working in the dark, which is why Olive's AI network is creating the Internet of Healthcare. By connecting providers, patients, and payers like never before, Olive is shining a light on our disconnected processes, unleashing wisdom and insight to power life-changing outcomes.

We believe that the future of prior authorizations is now.

Ready to learn more about how Olive can transform your prior authorization experience?

→ Visit oliveai.com to learn more about Olive's transformative end-to-end solution, powered by artificial intelligence. Take the next step: contact us for a free consultation and demonstration of the Olive platform.

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05 ENDNOTES

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ABOUT OLIVE

Olive's AI workforce is built to fix our broken healthcare system by addressing healthcare's most burdensome issues — delivering hospitals and health systems and payers increased revenue, reduced costs, and increased capacity. People feel lost in the system today, and healthcare employees are essentially working in the dark due to outdated technology that creates a lack of shared knowledge and siloed data. Olive is designed to drive connections, shining a new light on the broken healthcare processes that stand between providers delivering patient care and payers. She uses AI to reveal life-changing insights that make healthcare more efficient, affordable, and effective. Olive's vision is to unleash a trillion dollars by connecting healthcare. Olive is improving healthcare operations today, so everyone can benefit from a healthier industry tomorrow.

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