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# For better healthcare claims management, think "digital first"

Although end-to-end digital claims management is still a distant vision, much can be gained from digitizing portions of the claims process today.

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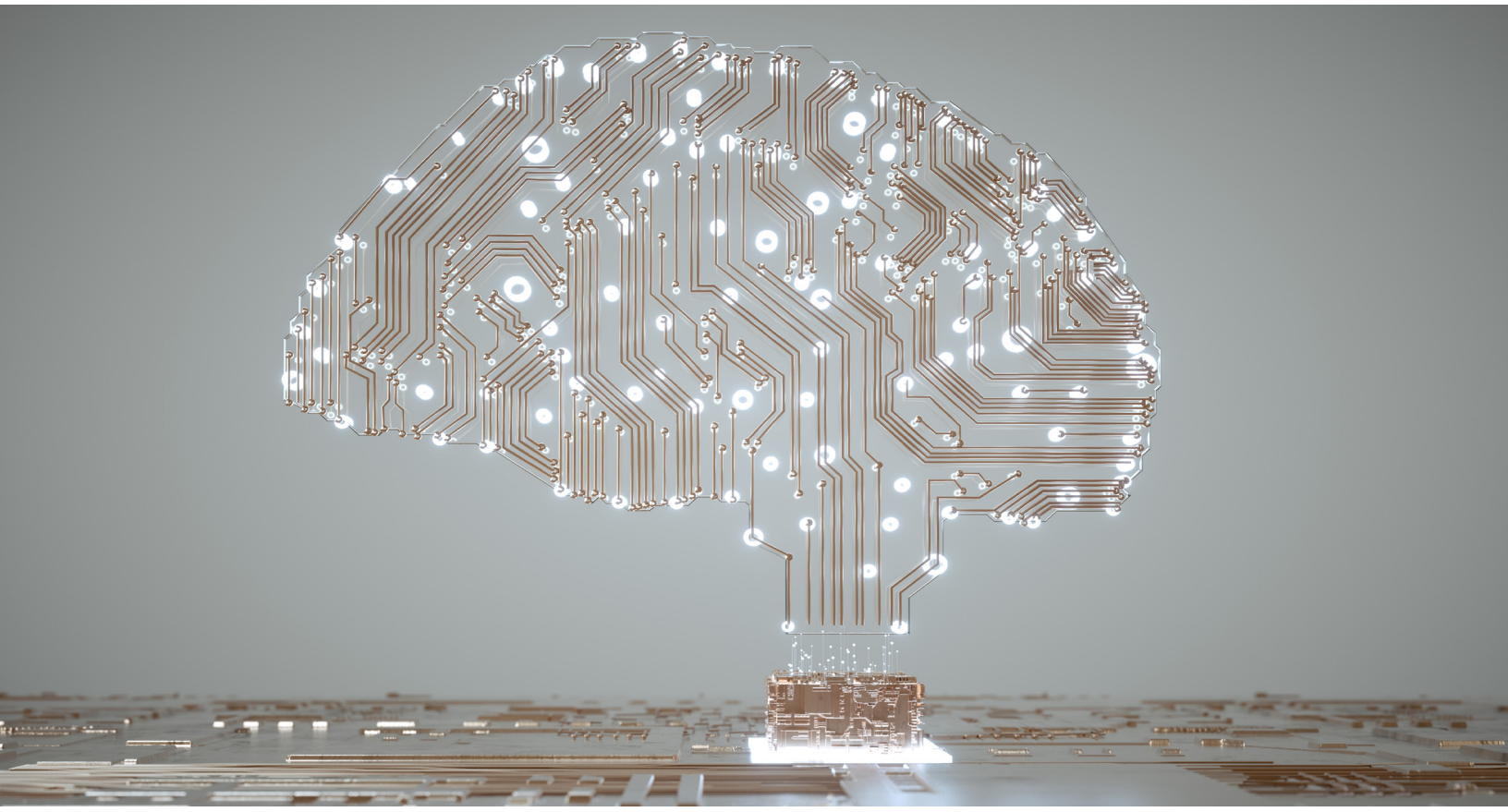



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**The rising cost of claims and the complexity of claims management** are among the most pressing challenges health insurance companies and other private payers face today. Digitizing every step of the claims process, from data input to payment, has the potential to streamline claims management, as well as boost its efficiency and accuracy. When done right, the result can be both lower costs and better customer experiences.

Full digitization is not yet a realistic scenario in most countries, however. Although consumers have become increasingly comfortable with digital transactions, numerous factors—including data security and privacy concerns, the complications resulting from having multiple stakeholders and, in some places, regulatory constraints—currently hinder efforts to completely digitize claims management. In the short term (at least the next several years), paper and manual methods won't vanish completely.

Nevertheless, payers can use existing technologies to digitize portions of the process now and by doing so could gain significant value and competitive advantages. The three case studies included in this article illustrate the benefits of this approach, which we call "digital first." In addition, this article describes what fully digital claims management could eventually look like and explains how payers can make the long-term vision a reality by adopting a digital-first approach.

## Why better claims management is needed

The healthcare industry is constantly evolving. For private payers today, effective claims management goes beyond merely processing and paying claims—it also encompasses strategies to better manage medical costs and improve customer interactions. Five trends are spurring digital innovation in claims management:

**Healthcare costs are increasing.** Our calculations suggest that, between 2007 and 2017, the average per capita cost of healthcare in many countries increased by a compound annual growth rate of more than 4 percent.[1] Population aging is a big reason why: in many countries, an increasing proportion of the population is over age 65, and the prevalence of chronic diseases rises as people age. Furthermore, the economics of health insurance has changed.[2] Insurance plans were originally designed to cover the cost of care for patients with severe, acute illnesses or traumatic injuries, but today they more often cover the predictable risks (and costs) associated with chronic illness. In addition, advances in the quality of care (for example, innovative treatments such as gene therapy) often lead to better outcomes but frequently raise healthcare costs.

**Consumer preferences are becoming consumer demands.** Consumers are increasingly demanding digital and user-friendly pathways that let them easily manage all aspects and stages of their healthcare journeys, and they expect these demands to be met. The high expectations are not limited to "digital natives" (millennials and those born more recently); gen-Xers and baby boomers are also adopting digital technologies.[3]

**Government policies may be putting economic pressure on payers.** In some countries, governments are taking steps to encourage payers to reduce administrative costs. In the United States, for example, the Affordable Care Act stipulates that 85 percent of all premiums paid for Individual market plans must be spent on medical services for members, leaving companies with only 15 percent to pay for administrative and overhead costs.[4]

**Payer employees' job expectations are evolving.** The expectations of payers' employees—both current and potential—are changing. Increasingly, payers are giving their employees greater flexibility, more agile organizations, and new ways to work collaboratively; frequent training is also becoming a norm. In one survey, more than 80 percent of young people aged 12 to 25 said they would like to have a job with a meaningful purpose that allows them to develop their own ideas.[5]

1 McKinsey analysis of data from the Organisation for Economic Co-operation and Development.
2 Singhal S, Jacobi N. Why understanding medical risk is the key to US health reform. April 2017. mckinsey.com.
3 Cordina J et al. Healthcare consumerism 2018: An update on the journey. July 2018. mckinsey.com.
4 Patient Protection and Affordable Care Act of 2010. US public law 111–48.
5 Klos H-P et al. *The New Generation: Values, Work Attitudes, and Entrepreneurial Requirements*. Roman Herzog Institut. 2016.

Exhibit 1

## Private payers need to innovate in the three primary dimensions of claims management

**1 Medical spending**

- Growing imperative for improved risk allocation
- Low medical costs, fewer manually checked claims
- Paradigm shift to more efficient chronic disease management, stronger focus on patients' long-term needs
- Provider support and encouragement to control costs, improve quality of care

**2 Customer interactions**

- Need for improved customer experience, given industry's historically low customer focus
- Increased demand for data transparency, protection, 24/7 data availability
- Strategies and product portfolios adaptable to newly available technology
- Deeper customer relationships
- More customer interaction, customer self-care

**3 Claims operations**

- Competitive pressure to use technology advances in data processing to lower operating costs
- Growing pressure to reduce traditional paper-based processes
- Pressure to eliminate siloed functions and duplicative infrastructure
- Emerging need to develop contemporary working norms

**Health data availability presents both opportunities and challenges.** Health data from a variety of sources—from claims records to wearable devices—is now increasingly accessible in digital form; artificial intelligence and cognitive systems have made it possible to mine this data to develop new cross-functionalities and customer insights. The quantity of healthcare data is expected to be 15 times greater in 2020 than in 2013,[6] as health technologies and mobile health products continue to generate additional information.[7] Merging data from multiple sources remains a challenge, however, and in some countries, data security and privacy concerns still restrict how much of the data can be analyzed. Nevertheless, the growing wealth of data is increasingly being used to provide customers with more personalized offerings and care.

Combined, these five trends are pushing payers toward greater digitization in claims management. Using a digital-first approach to make this transition can allow payers to address numerous current challenges (Exhibit 1). In addition, it can help them more easily achieve their long-term vision of full digitalization, which would better position them to defend themselves if new technology players seek to disrupt the value chain.

## The vision: Fully digital claims management

For payers, the key challenge in healthcare claims management is to reduce medical and operating costs while also improving customer experience. Rigorously applying "digital first" as a guiding principle for building a digital claims process will help payers achieve these aims and put them on a path toward full digitization. At its core, the digital-first approach considers digital technology to be more than just a tool to help organizations perform certain tasks better—instead, digital technology is viewed as a comprehensive solution that will affect every aspect of the value chain. Digitization therefore needs to be thought of not only as it applies to technical tasks such as claims auditing but also as a means to improve customer experience and patient outcomes, enable greater customer engagement in their health and care, and lower costs.

In the long-term vision, digital solutions would cover all steps within claims management (Exhibit 2). Because the process would be fully digital, very little human intervention would be needed. In this scenario, claims would be transferred in real time from a provider to a cloud solution containing all electronic health documents (as permissible by

6 Stanford Medicine 2017 health trends report: Harnessing the power of data in health. Stanford University. June 2017.
7 European Commission. Communication on enabling the digital transformation of health and care in the Digital Single Market; empowering citizens and building a healthier society. April 25, 2018.

local data-protection regulations). Once a claim is transferred to the cloud, self-learning algorithms would automatically access it and perform real-time auditing using technical reference points, such as the claimant's insurance status and benefits package, as well as medical reference points. Once robust self-learning algorithms have been established and trained using both existing data and expert knowledge, their efficiency will continue to improve over time. (At present, self-learning algorithms can be used to identify "leakage," such as improper payments and inefficient claims processing. The algorithms are also starting to be used to predict how an individual's health condition might progress or change, which would make them useful in prevention and early treatment.)

Ultimately, it would become possible to automate payers' communications with providers and customers. For example, if further information was required to reach a decision about a specific claim, providers would be contacted automatically via a digital request form that would include an integrated first check for basic information (for example, age, sex, diagnosis). When the auditing process is complete, approval or denial decisions would be communicated directly and automatically to the customer, possibly through an app solution. Payment would be transferred digitally and directly to the patient or provider (Exhibit 3).

It is important to note that the data used in all of the processes described in this section would be transferred and stored securely and would be accessible only to authorized entities, such as the insured customer, the treating provider, and the insurance company itself—and only after all appropriate permissions (as specified in local data-protection regulations) were obtained.

Exhibit 2

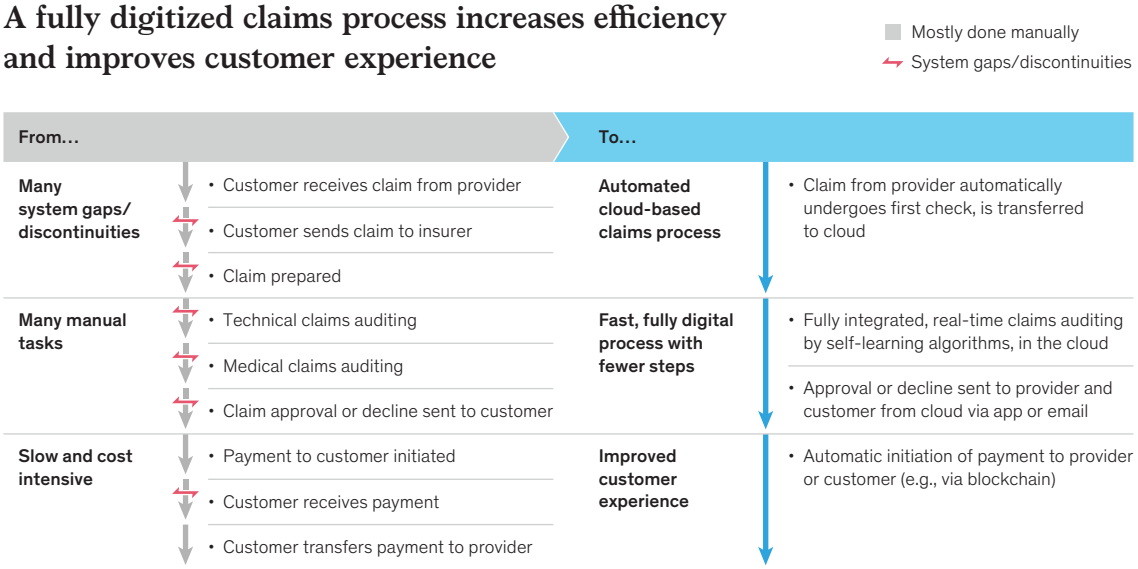
## The key dimensions that influence the specific goals of digitization at each step of claims management

| | Data input | Data provision | Technical claims auditing | Medical claims auditing | Claims payment |
|---|---|---|---|---|---|
| **Description of activity** | • Data input through different channels | • Creation of usable data<br>• Assignment of data to customer<br>• Provision of electronic file | • Insurance status<br>• Benefits package review<br>• Provider contracts review | • Medical parameters review<br>• Claim review: Is the patient's condition suitable for case or disease management? | • Payment to customer and care provider |
| **Goals in:** | | | | | |
| Medical spending | | • Data quantity<br>• Data reliability | • Leakage prevention<br>• Fraud prevention | • Best possible patients targeted<br>• Cases with high ROI targeted | |
| Operations | • Accuracy<br>• Ability to be automated<br>• No FTE | | | • Efficiency<br>• Ability to be replicated | • Accuracy<br>• Ability to be automated<br>• No FTE |
| Customer interaction | • Flexibility<br>• Multichannel<br>• Transparency<br>• User friendly | • Transparency<br>• Speed<br>• Reliability | | | |

FTE, full-time equivalent; ROI, return on investment.

Exhibit 3

## A fully digitized claims process increases efficiency and improves customer experience




Example 1

## Using a cognitive system to accelerate and raise the quality of claims management

A cognitive system (software architecture that emulates human cognition) can help payers screen cases more efficiently, evaluate them with greater precision, and make more informed decisions. The conventional approach to claims management, based on long-standing, inflexible rule books, has been made obsolete by intelligent algorithms that learn from historical cases and continuously evolve. Cognitive systems that use these algorithms can methodically identify and correct errors while avoiding unnecessary or ineffective interventions.

### The digital-first approach

In the first step, the cognitive system checks all claims received to see whether they are correct; any unusual claims are filtered out for further investigation. Artificial intelligence is then used to identify correlations among the unusual claims, which helps payers determine whether a challenge to the claim will be successful. Normal claims are marked for payment. Claims deemed unusual are automatically prioritized for the auditors, based on the likelihood and size of a potential reduction in the claim amount. As a result, the cognitive system reduces the number of time-sensitive intervention decisions the auditors need to make. The system also provides the auditors with guidance on how to approach the intervention—for instance, by suggesting grounds for rejecting the claim. The result is a simpler, less labor-intensive, and faster claims management process.

### The digital-first impact

The cognitive system not only simplifies and accelerates the overall claims management procedure but also enhances its quality: additional costs for redundant audit and rejection processes are eliminated, and thus available resources can be focused on the cases most important for auditing. As a result, the system frees up the capacity of administrative staff and auditors so that they can more precisely predict the reduction potential and properly prepare intervention cases, which increases the likelihood of success.[1]

[1] For more detailed insights on the use of artificial intelligence in health insurance, see Hehner S et al. Artificial intelligence in health insurance: Smart claims management with self-learning software. September 2017. mckinsey.com.

## The impact: Cost savings, business building

Although full digitization of claims management is a highly attractive goal, no health insurance company or other payer has implemented it as yet. As discussed, full digitization is not a realistic short-term goal.[8] As the examples on pp. 4, 5, and 6 show, however, some payers have already taken several steps toward this long-term goal and, as a result, have achieved significant improvements in efficiency, usability, and customer satisfaction.

Even partial digitization can lower overall claims costs. We have found that some

8 Freisdorf F et al. Digital document processing: a payer perspective. To be published 2019. mckinsey.com.

Example 2

## Using data analytics to identify and prevent medication errors

Medication errors occur for a variety of reasons. Two or more medications taken at the same time, for example, can sometimes produce dangerous interactions. A medication might be prescribed at too high or too low a dosage, or even be contraindicated, given a patient's medical condition or age. A patient may neglect to take a medication as prescribed. The result, all too often, can be serious harm to the patient's health.

### The digital-first approach

Digitization of claims makes it possible to track medication data easily and store it safely. Data analytics can then be used to apply algorithms that screen a patient's prescriptions, check for inappropriate use, and identify potential adverse interactions. These problems can then be displayed (prioritized by seriousness), along with the potential costs the payer could incur if a complication requiring treatment were to develop. Data analytics also makes it easy to cross-check for interactions whenever a new medication is prescribed. In addition, artificial intelligence can be used to identify previously unknown medication errors by finding correlations between a certain medication and new or worsened disease.

### The digital-first impact

Data analytics improves clinicians' ability to provide safe and high-quality pharmaceutical therapy to their patients. The identification and prevention of medication errors can lessen the need for hospitalization, which lowers healthcare costs; ultimately, it can also decrease morbidity and mortality.

Exhibit A

## Analysis of treatment data can help prevent medication errors

Example 3

## Using artificial intelligence to analyze patient pathways and episodes of care

The greater analytic capabilities artificial intelligence (AI) enables makes it easier to carry out large-scale healthcare studies. For example, AI can be used to compare quality of care, outcomes achieved, and costs among a large group of providers and to assess the impact of different interventions on various patient groups. AI is capable of analyzing an entire patient journey, including all relevant aspects of care. Thus, it can help design payment models based on episodes of care[1] and then evaluate the results achieved by those models. In addition, AI can incorporate data from other sources when it is performing claims-based analytics; the results can then be used to inform a payer's operational and financial decisions (network design, for example) or influence clinician or consumer behavior.

**The digital-first approach**

AI-enabled pathway tracking allows a payer to compile a claims, medication, and payment history for each member. Information is collected from different sources and systems throughout the continuum of care, including new or filed customer forms and claims submitted by all providers. Seamless communication across all data channels is critical, as is the ability to fully integrate the gathered information into a single framework. (Achieving these goals requires not only sophisticated technology capabilities but also a deep understanding of patient journeys from both the customer's and payer's perspective.) AI can then be applied to the gathered data to identify correlations between times and types of treatments and help predict likely outcomes. This approach makes it possible to identify interventions that may appear to be expensive at the start of a patient's journey but turn out to be cost-saving at the end. The result is a better and less costly journey and therefore more effective claims management.

**The digital-first impact**

Having an overview of an entire journey, with a pathway from the first treatment to the medical cure, can help reduce costs and improve patient care. Episode-of-care analytics helps ensure that payment decisions are made based not on which treatments are less expensive at a given stage of a journey but on which ones achieve the best overall results (which also often saves overall costs). This approach also improves customer experience because patients receive well-defined treatments and know what to expect throughout the journey.

[1] An episode of care is the set of services used to treat a clinical condition, including all in-hospital, ambulatory, and other forms of care.

Exhibit B

## Episode-of-care analytics enhanced with artificial intelligences helps identify actionable interventions

| Episode | EGD | Breast biopsy | Gastrointestinal bleed |
|---|---|---|---|
| **Illustrative source of value** | Physicians perform varying percentages of EGDs in offices, ASCs, and other settings | Differences in surgical pathology spending by provider | Large variability in admission rates, with no correlation to length of stay |
| **Actionable interventions** | Exclude providers with high share of procedures in the most expensive settings from list of preferred providers | Medical policy limiting number of samples reimbursable without prior authorization | Review of authorization rules for admission vs observation |

ASC, ambulatory surgery center; EGD, esophagogastroduodenoscopy.

payers can save as much as 10 to 20 percent of medical costs if they use a digital solution such as advanced analytics to prioritize invoices for auditing or identify patients likely to have future high-cost claims. In addition, payers can reduce their operating expenses for claims processing by up to 30 percent if robotic and automation solutions are employed to automate most of the steps.[9] (We have found that 60 to 70 percent of those steps can be automated today.)

Furthermore, partial digitization may enable a payer to differentiate itself—and even give it a first-mover advantage—if the result is an extremely intuitive claims model.

## The way forward: Do you have what it takes?

Led by the retail sector, other industries already use digital technology extensively to mine opportunities to engage with consumers, improve the customer experience, and increase operating efficiency. In comparison, private payers have only just started to capture the potential such opportunities present.

If private payers are to seize that potential, they must do far more than simply put the right IT architecture in place. Digitizing parts—and eventually all—of the claims process will affect all parts of the organization. Thus, an effective approach to change management that includes a strong focus on culture and mind-sets is crucial. Organizations are constructs based on people, not just processes; for that reason, investments in talent need to be as rigorous as investments in IT.

It is also important that a dedicated team focused on the claims process be created. This co-located and cross-functional team should include medical professionals and representatives of the claims, IT, and customer-contact functions. Team members need to operate in an agile manner—in fact, in start-up mode—to jointly solve problems and rapidly deliver potential solutions that can then be tested with customers and providers. Such fast-learning teams continually check the value that the developed solutions add, respond to users' experiences, and iteratively modify the software.

The specific ways in which claims management is digitized should be tailored to each payer's situation and environment. For example, local requirements may govern how data can be shared, and different payers may use different approaches to processes and payouts. These factors influence both the opportunities and risks each payer faces.

The digitization effort itself will require IT infrastructure that is flexible enough to adapt to rapid advances in technology. In addition, the payer will need the digital tools that make digitization of various steps possible. (Examples of the tools are given in the examples on pp. 4, 5, and 6.) It is not necessary for the payer to develop or acquire all of the digital tools at once; rather, different tools can be added as new steps are digitized. A number of vendor and partnership opportunities covering all areas within claims management are available to payers that do not want to develop the tools in-house.

9 Plattfaut R et al. How payers can benefit from automation at scale. To be published 2019. mckinsey.com.

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