JULY 2021

AI In Focus:

TARGETING FRAUD, WASTE AND ABUSE IN HEALTHCARE

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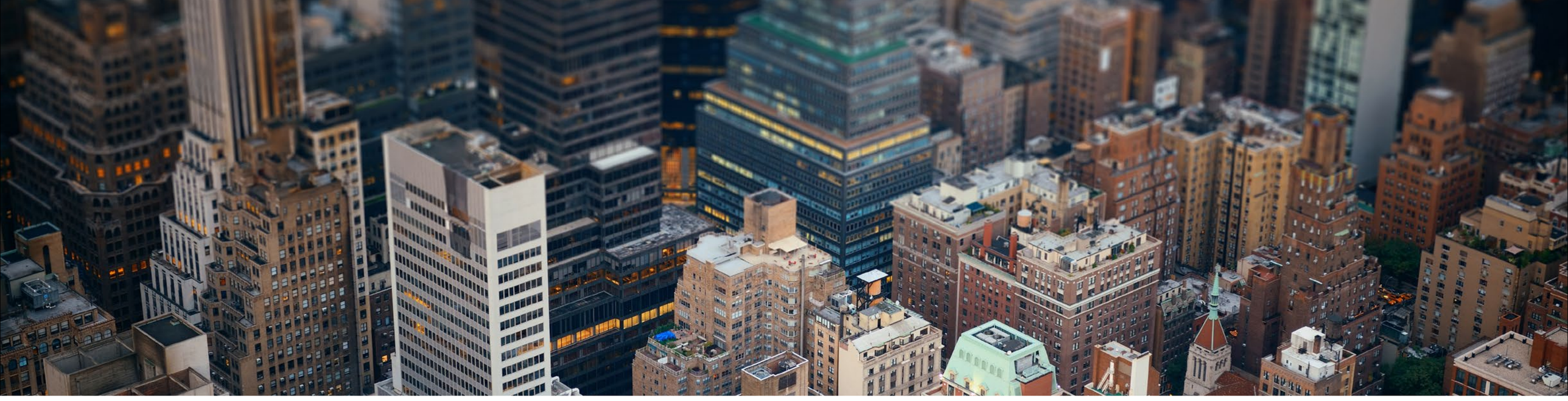
AI In Focus: Targeting Fraud, Waste And Abuse In Healthcare, a collaboration between PYMNTS and Brighterion, a Mastercard company, explores the challenges and responsibilities healthcare providers have faced over the past year and why they are bringing the fight against fraud, waste and abuse to the forefront. Our analysis is based on a survey of 100 healthcare executives who either have intimate knowledge of or hold leadership responsibilities in fraud detection and analysis, financial planning and analysis, claims payments or risk management. The survey was conducted from April 21 to May 11, 2021.



AI In Focus:

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ACKNOWLEDGMENT

AI In Focus: Targeting Fraud, Waste And Abuse In Healthcare is a collaboration with Brighterion, a Mastercard company, and PYMNTS is grateful for the company's support and insight. PYMNTS.com retains full editorial control over the following findings, methodology and data analysis.

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Introduction

In June 2021, a jury found former Orange County chiropractor Susan H. Poon guilty of defrauding health insurers out of $2.2 million by fraudulently billing for chiropractic services that were never provided, issuing bogus medical diagnoses, writing false prescriptions for medical devices and billing for office visits that never happened.[1]

Poon's case is just one of the many examples of healthcare fraud that have recently made headlines, a special concern as more consumers turn to digital channels to access healthcare services.

Problems with fraud, waste and abuse (FWA) have existed for quite some time but have become so rampant in the healthcare space that they are costing health insurers nearly 12 percent of their annual revenues, PYMNTS survey research shows. These problems are still significantly impacting how insurers manage claims and payments as well as the overall cost of accessing healthcare.

Health insurers have a responsibility to their stakeholders, including both corporate employers and their employees, to prevent sharp increases in rates and other out-of-pocket expenses. Claims departments at insurance companies can find themselves unfortunately playing whack-a-mole as new FWA schemes continue to pop up regularly.

The good news is that many insurers are cognizant of the problem and are actively turning to solutions that can help them tackle FWA. PYMNTS' research reveals that 44 percent of larger firms surveyed have already invested in AI to combat FWA, while 71 percent that are currently not using AI are looking to invest in AI in the next one to three years to improve payment integrity.

AI In Focus: Targeting Fraud, Waste And Abuse In Healthcare, a collaboration between PYMNTS and Brighterion, a Mastercard company, offers an overview of the unprecedented challenges and responsibilities healthcare providers have faced over the past year and why they are bringing the fight against fraud, waste and abuse to the forefront. Our analysis is based on a survey of 100 healthcare executives who either have intimate knowledge of or hold leadership responsibilities in fraud detection and analysis, financial planning and analysis, claims payments or risk management.

Here is what we learned.

1. Former chiropractor found guilty of health care fraud charges that she schemed to defraud health insurers out of $2.2 million. Department of Justice. 2021. https://www.justice.gov/usao-cdca/pr/former-chiropractor-found-guilty-health-care-fraud-charges-she-schemed-defraud-health. Accessed June 2021.

I: The FWA problem in the healthcare space

Fraud, waste and abuse are costing surveyed healthcare firms 12 percent of their revenue and compromising payment integrity. Twenty-two percent of claims were flagged or investigated for FWA in Q1 2021.

PYMNTS' research underscores FWA's significant impact in the healthcare industry, with FWA costing surveyed firms nearly 12 percent of their annual revenues. The problem is so rampant that insurers have flagged or investigated nearly 40 percent of provider post-payment claims and 25 percent of consumer post-payment claims for FWA during Q1 2021.

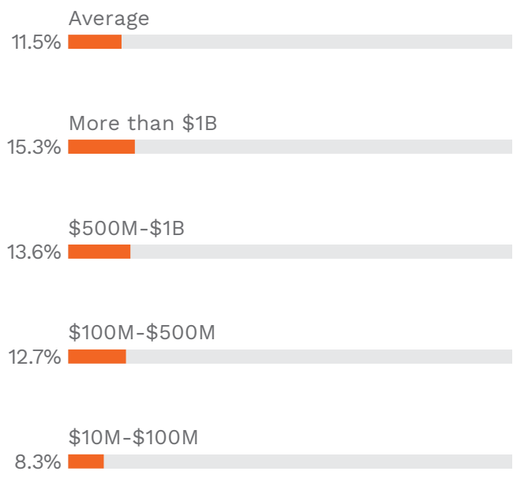
Some insurers have taken to applying payment integrity practices for accuracy checks and reducing the likelihood of errors, but this approach is not without flaws. Fifty-four percent of healthcare insurance respondents apply payment integrity practices when analyzing payments from providers but do not do so for payments from consumers.

Only 11 percent of surveyed firms are currently using AI systems for individual claim editing and waste and abuse detection, and only 1 percent to 2 percent are using them for individual claim fraud detection, despite the magnitude of the problem. Twelve percent of firms are using AI to detect and address FWA overall.

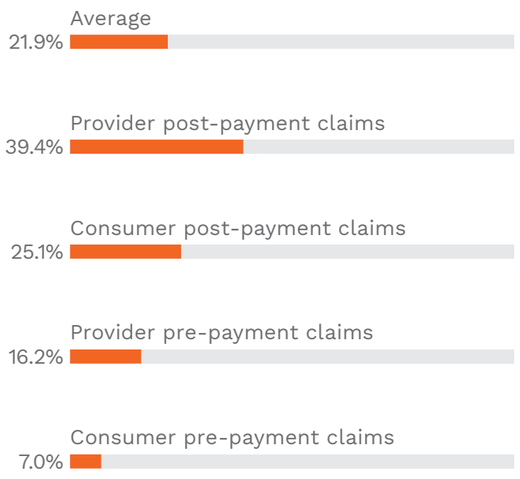
FIGURE 1:

Losses as a result of FWA in payments

1A: Share of firms that lost annual revenue as a result of FWA in payments, by annual revenue



1B: Average share of claims flagged or investigated for FWA in Q1 2021



Source: PYMNTS.com | Brighterion
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Respondents lost an average of **12% in annual revenue** as a result of FWA in payments.

II: AI has accelerated FWA detection

Healthcare payors are primarily relying on rules-based algorithms to detect FWA, but artificial intelligence (AI) use has greatly accelerated in recent years. Almost half of big healthcare insurance companies are using AI systems to detect and address FWA in payments.

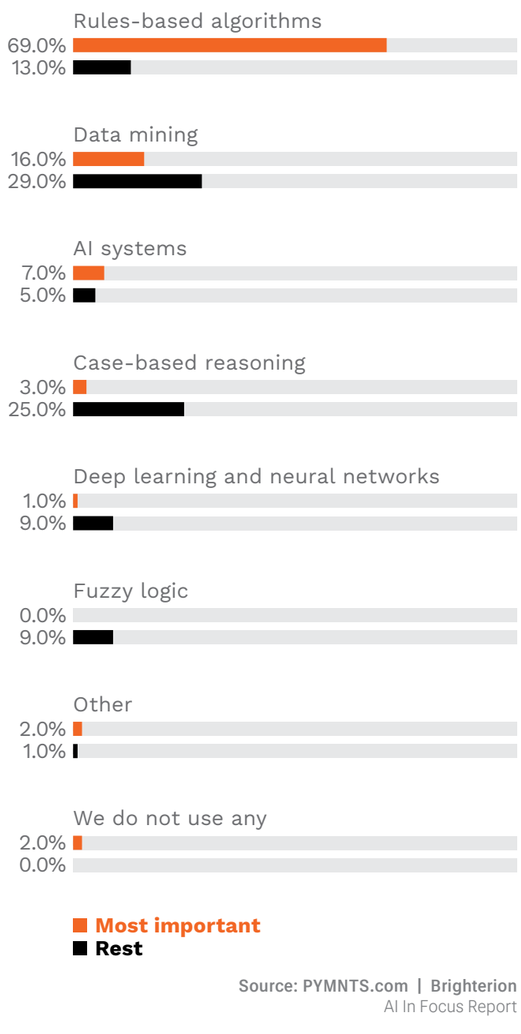
The majority (82 percent) of surveyed healthcare firms today rely on rules-based algorithms to manage FWA-related challenges. Only 12 percent of respondents are currently using AI systems to detect and address FWA, despite these systems' many benefits. That cannot be said for larger firms surveyed. Our research shows that 44 percent of respondents that generate more than $1 billion and 36 percent that generate between $500 million to $1 billion in annual revenue use AI-powered systems.

Eighty-six percent of surveyed firms that use AI to detect FWA relating to claim payments have developed their systems in-house. Larger respondents are more likely to develop systems in this way, with all firms in our sample generating $500 million or more in annual revenue doing so. Smaller firms that generate less than $500 million in annual revenue, meanwhile, more commonly seek outside help for deploying AI.

FIGURE 2:

Technology systems used to detect and address FWA

2A: Technology systems used to detect and address FWA, ranked



Source: PYMNTS.com | Brighterion
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2B: Technology systems used to detect and address FWA, by annual revenue

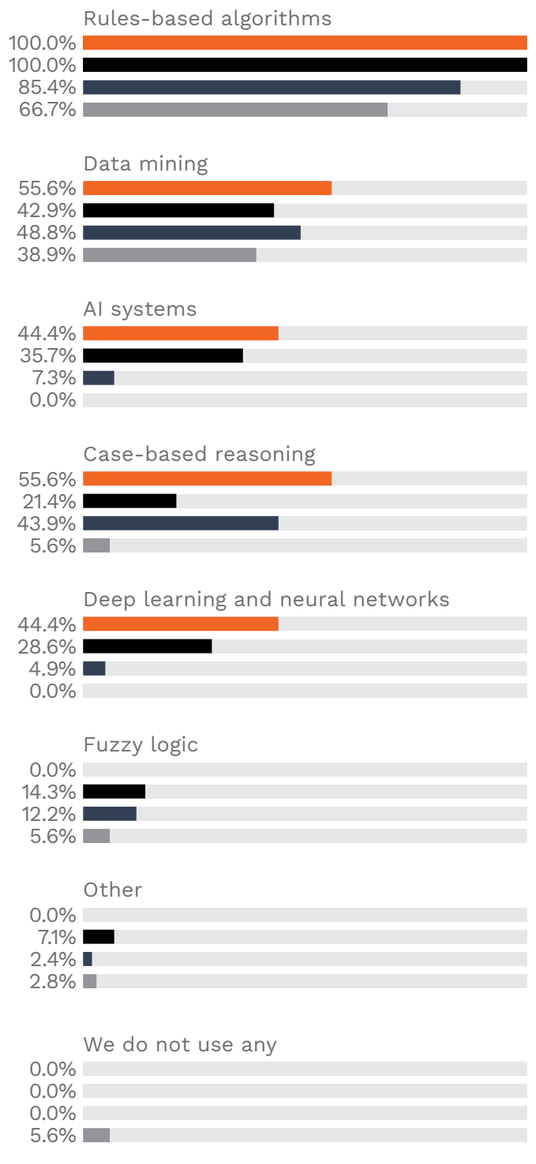
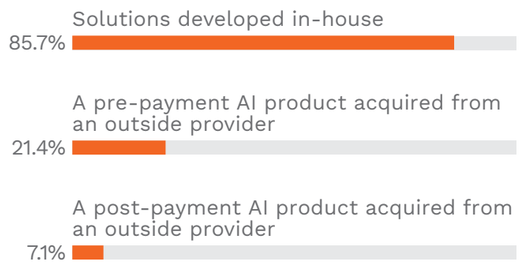


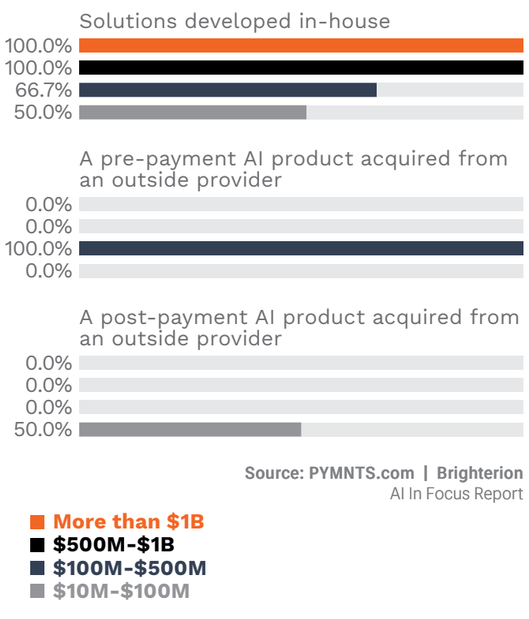
FIGURE 3:

AI systems used

3A: Type of AI system used to identify FWA related to claim payments



3B: Type of AI system used to identify FWA related to claim payments, by annual revenue



Source: PYMNTS.com | Brighterion
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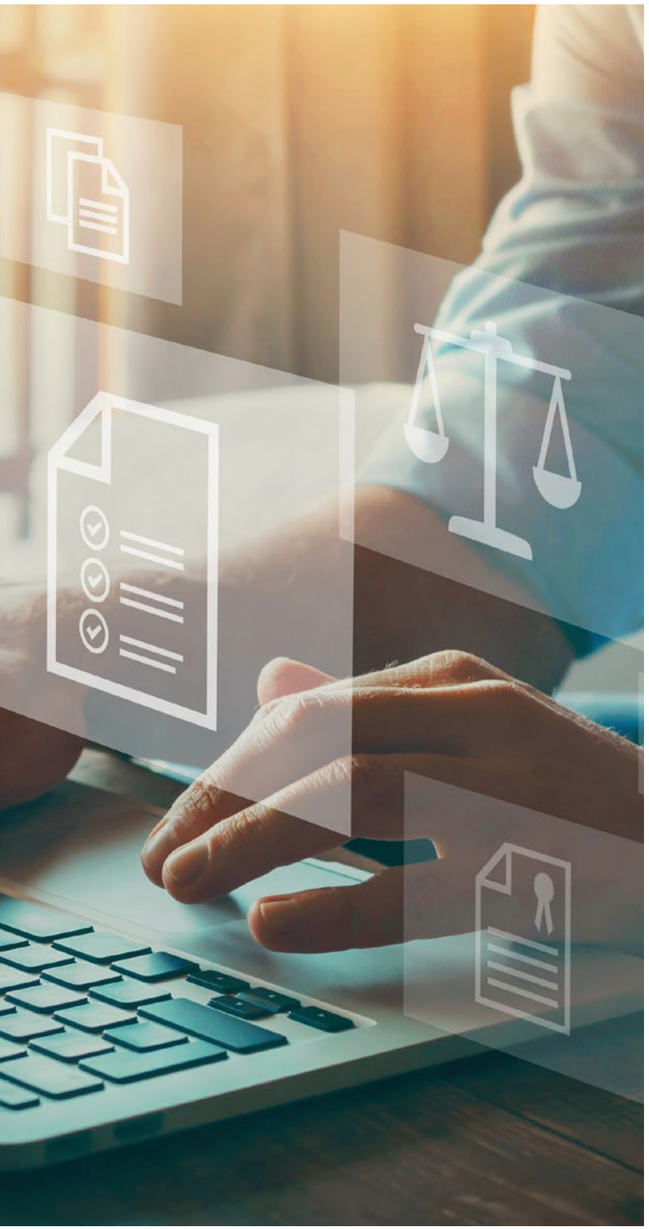

Regulatory pressures and cost savings are key factors prompting surveyed firms to utilize AI tools.

Ninety-two percent of surveyed healthcare executives say that regulatory or compliance pressures are “very” or “extremely” important factors in their firms’ decisions to adopt AI. An equal share cite cost savings as a “very” or “extremely” important factor that influences their decisions.

Respondents cite a wide variety of reasons for choosing specific AI tools or selecting a solution provider. A majority of surveyed firms choose AI tools that are not only easy to integrate but that are also highly accurate in detecting FWA and can also adapt to changing behaviors in claims data.

Firms gravitate toward AI providers that can help them reduce their false positives (cited by 96 percent of surveyed firms) and help them improve on their existing FWA detection capabilities (78 percent). Sixty-three percent also prefer providers that offer AI tools that can scale with the size of their operations.

FIGURE 4:

Factors that are "very" or "extremely" important in firms’ decisions to adopt AI tools

4A: Factors that are "very" or "extremely" important in firms’ decisions to adopt AI tools to improve payment integrity

4B: Factors that are "very" or "extremely" important in choosing a specific AI tool to detect FWA in claims payments

Source: PYMNTS.com | Brighterion
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FIGURE 5:

Factors that are "extremely" important in choosing an AI provider

Share of executives who regard select factors as "extremely" important in choosing an AI provider, by degree of importance

Source: PYMNTS.com | Brighterion
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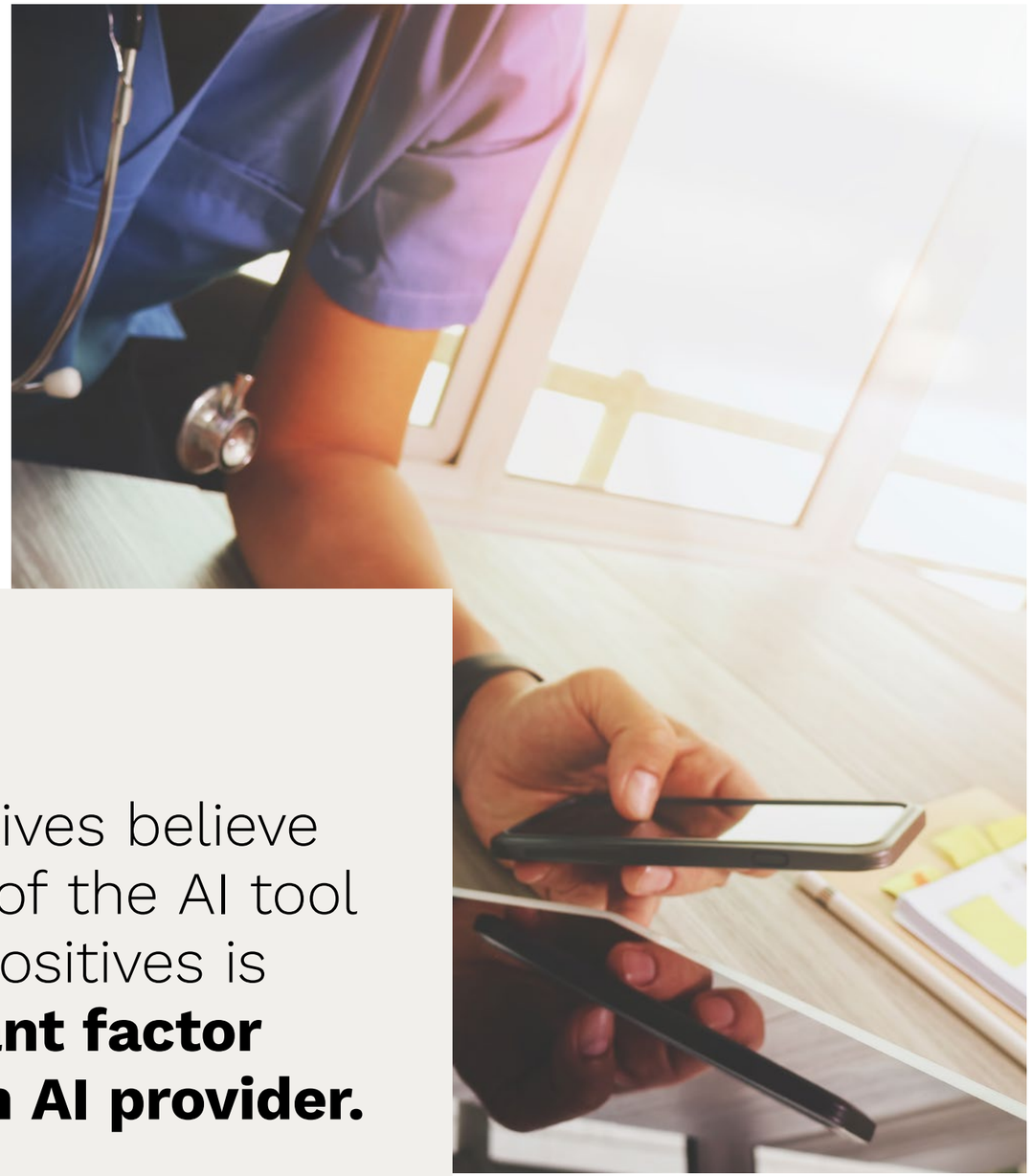


66% of executives believe that the accuracy of the AI tool in reducing false positives is **the most important factor when choosing an AI provider.**

III: Reducing false positives

More than 90 percent of insurers expect to reduce false positives when using AI in their payments operations.

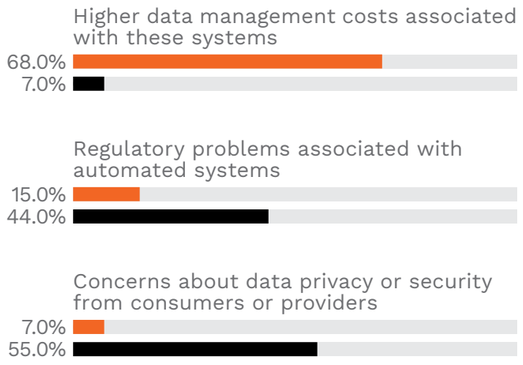
Surveyed firms cite a variety of reasons for implementing AI, yet those of all shapes and sizes unanimously agree that reducing false positives is a key benefit. Eighty-three percent of surveyed firms that have or will invest in AI to detect FWA consider reducing false positives as the most important expected benefit. That portion is 100 percent for firms that generate more than $1 billion in annual revenue. More than three-quarters of respondents in other revenue brackets cite it as the most important expected benefit.

There are still several barriers impeding the adoption of AI tools that can help healthcare payors improve payment integrity. Chief among these barriers is the high data management cost that is associated with implementation of AI tools: 68 percent of surveyed firms cite it as the most important challenge. This is notably the case for the 83 percent of firms that generate less than $100 million in annual revenue. That share is almost twice as much as the corresponding share of surveyed firms that generate more than $1 billion in annual revenue.

FIGURE 6:

Challenges faced when implementing AI tools to improve payment integrity

6A: Challenges faced when implementing AI tools to improve payment integrity, ranked



Source: PYMNTS.com | Brighterion
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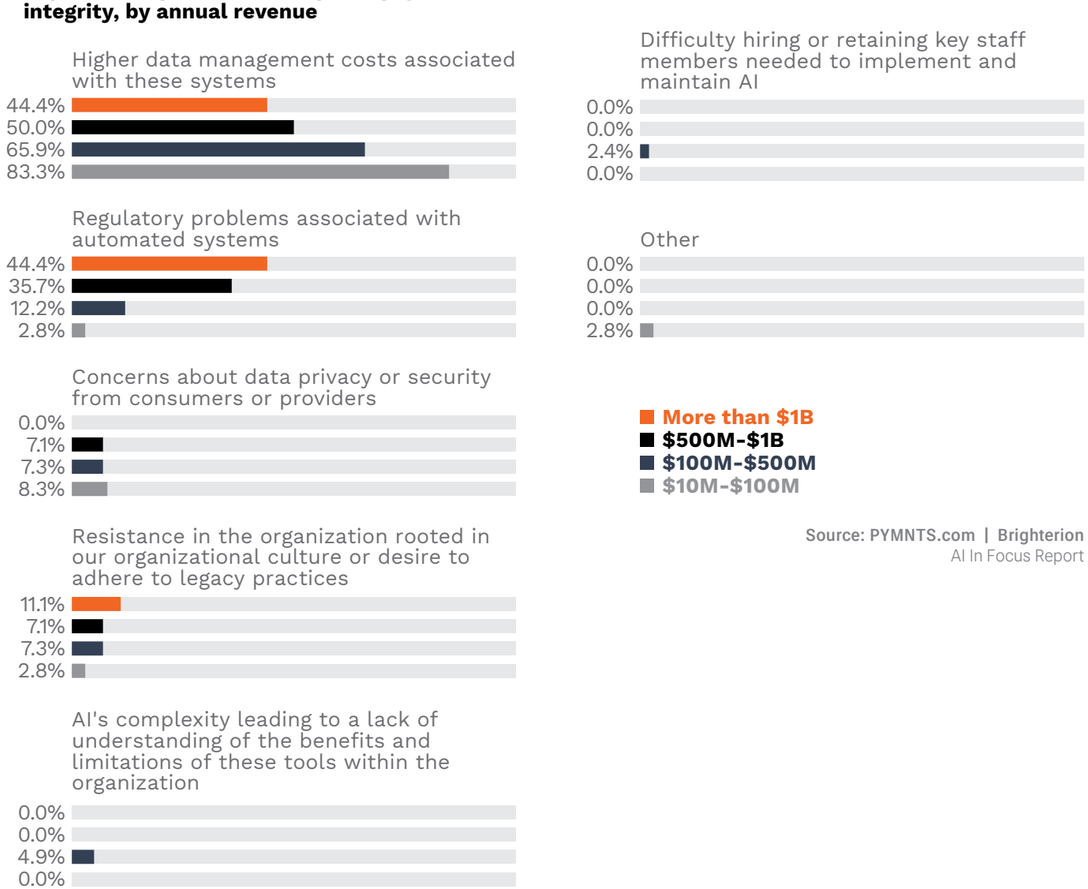
74% of firms that have or will invest in AI to detect FWA **expect AI will help them achieve detectable improvement** in stopping fraud before it happens.

FIGURE 6 (continued):

Challenges faced when implementing AI tools to improve payment integrity

6B: Most important challenge faced when implementing AI tools to improve payment integrity, by annual revenue



Source: PYMNTS.com | Brighterion
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FIGURE 7:

Expected benefits from AI systems

Expected benefits if AI systems are incorporated into payment operations, ranked

Source: PYMNTS.com | Brighterion
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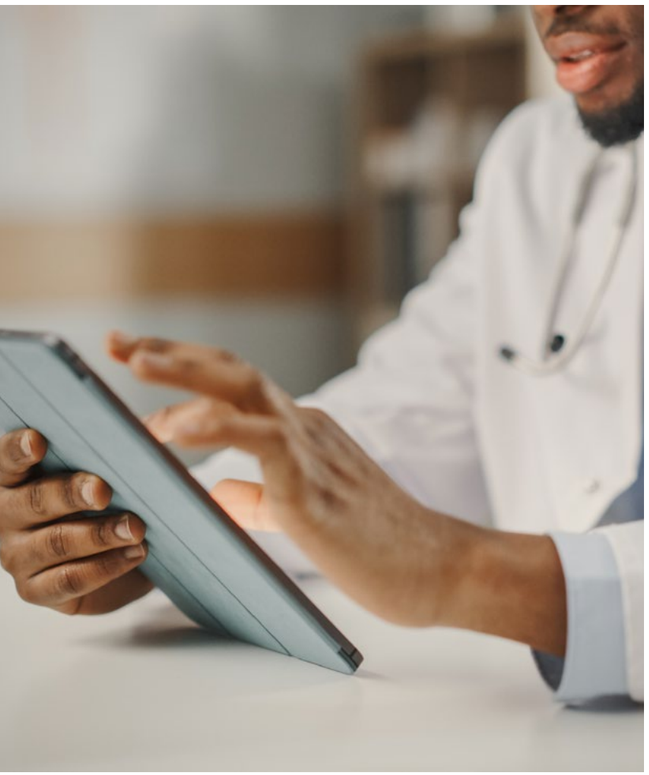
Healthcare payors and insurers view technology as the primary route to improving payment integrity.

The majority of healthcare firms in our survey plan to focus their resources on technology in order to get a better handle on FWA, far outweighing investments in internal human resources. These strategies vary depending on company size, however.



Sixty percent of firms in our sample plan to invest in technology to improve payment integrity, yet all firms that generate more than $500 million in annual revenue plan to do so.

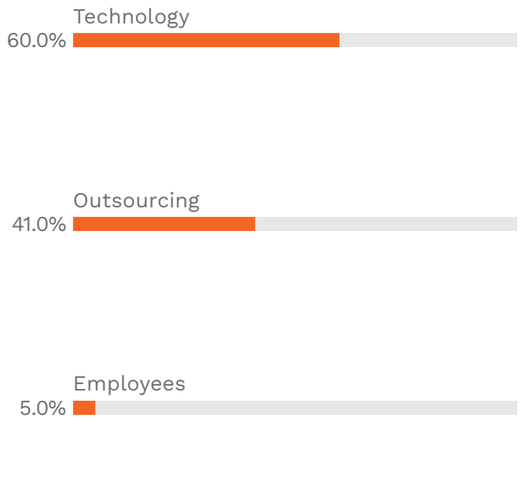
Forty-one percent, meanwhile, plan to focus on outsourcing to third-party providers to improve payment integrity. Interest in outsourcing is particularly high among small firms, those with less than $100 million in annual revenue. They are twice as likely to invest in outsourcing than other firms in our sample — an understandable strategy, given that their in-house IT resources are likely to be more limited.

Regardless of whether firms choose to invest in technology or outsourcing, a key motivation that drives the decision-making process is a firm's interest in boosting its bottom line. Our data shows that 56 percent and 30 percent of firms that are looking to focus resources on outsourcing and technology, respectively, said profitability is the most important factor in making the decision to innovate in these areas.

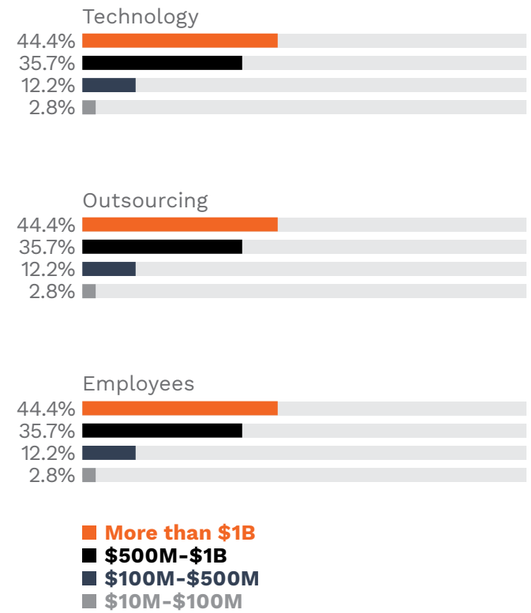
FIGURE 8:

Areas in which firms will focus resources to improve payment integrity

8A: Areas in which firms will focus resources to improve payment integrity



8B: Areas, by annual revenue



Source: PYMNTS.com | Brighterion
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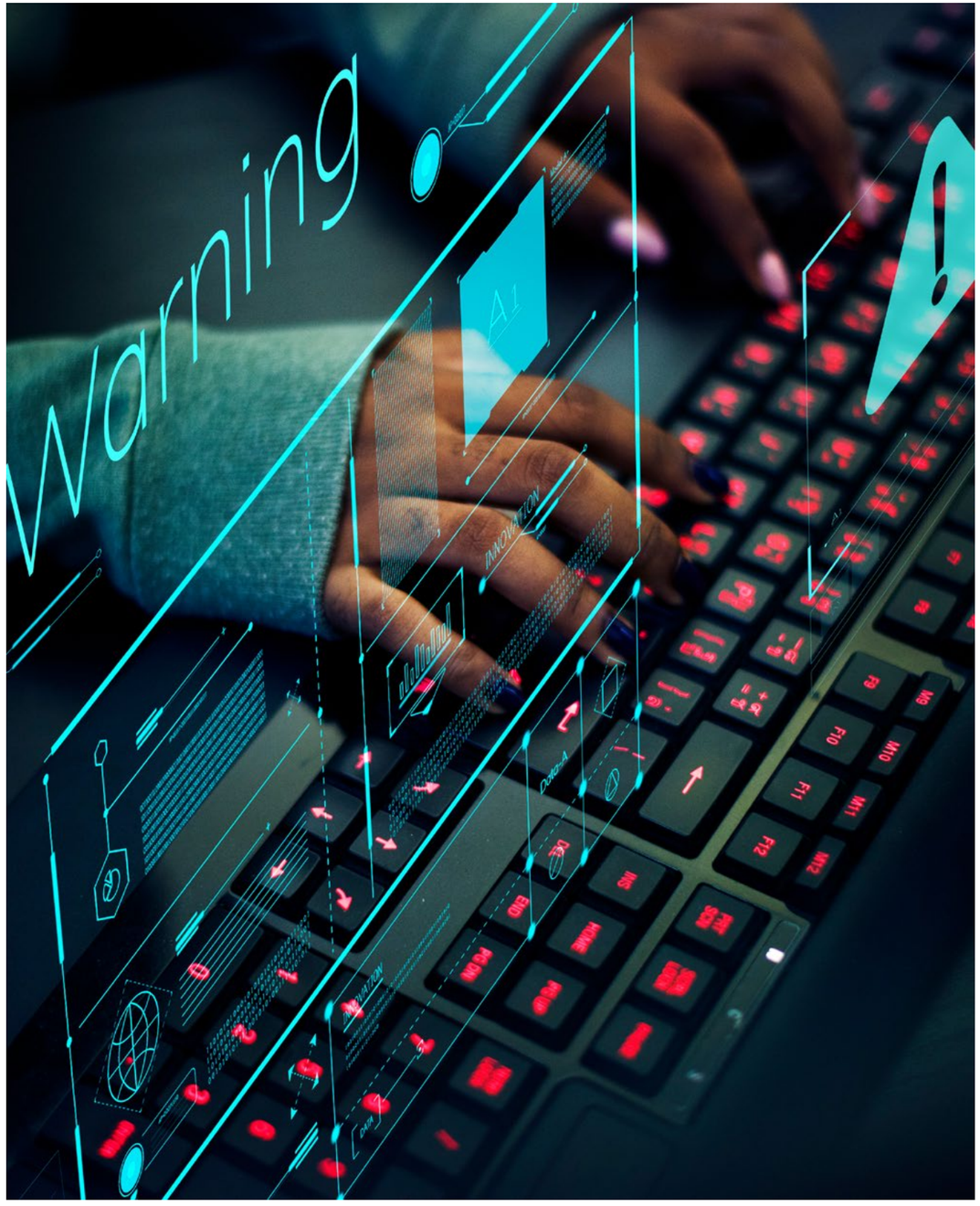
Putting AI to work in claims administration:

How insurers are managing claim editing and fraud detection

PYMNTS' research shows that rules-based algorithms are currently widely used by insurers to manage aspects of FWA detection. Nearly half use them for individual claim editing and waste and abuse detection, and 41 percent use them for individual claim fraud detection. Insurance firms are more likely to use rules-based algorithms for providers' pre-payment and post-payment operations regarding individual claim editing and FWA detection. Surveyed firms are more likely to use the technology for individual fraud claim detection regarding pre-payment and post-payment consumer payments, however.

Only 11 percent of firms surveyed are using AI for individual claims editing and FWA detection, and less than 2 percent are using it for individual claim fraud detection, in comparison. It is worth noting, however, that healthcare insurers have a growing appetite for AI-powered tools. Seventy-one percent of respondents are planning to invest in AI over the course of the next three years to improve their payment integrity. All of the firms we surveyed that generate more than $1 billion in annual revenue plan to invest in AI, and 89 percent of those in the $100 million to $1 billion revenue bracket plan to do so.



Case Study:

HOW AI HELPED MILLIMAN CURB HEALTHCARE FWA AND IDENTIFY $239 MILLION IN POTENTIAL SAVINGS

FWA in the healthcare space today is a significant problem, costing firms nearly 12 percent of their annual revenues. It is a problem that healthcare risk management firm Milliman is seeking to solve with its multifactor, rules-based solution called Milliman Payment Integrity (MPI) — a tool that audits health claims according to customized rules and algorithms.

The MPI tool specifically uses artificial intelligence (AI) to identify incremental FWA savings for clients through non-discreet testing methods that do not use a test to look at a specific issue. It also utilizes the technology to assess illegitimate healthcare claims and provider patterns that have been historically difficult to see using legacy tools and technologies.

Milliman worked with Mastercard® Healthcare Solutions to build an AI model, which is used in the Mastercard payment network to identify card fraud on a real-time basis. The model was built by Mastercard's team of data scientists, who have experience in both payments and healthcare fraud schemes along with healthcare claims investigation expertise.

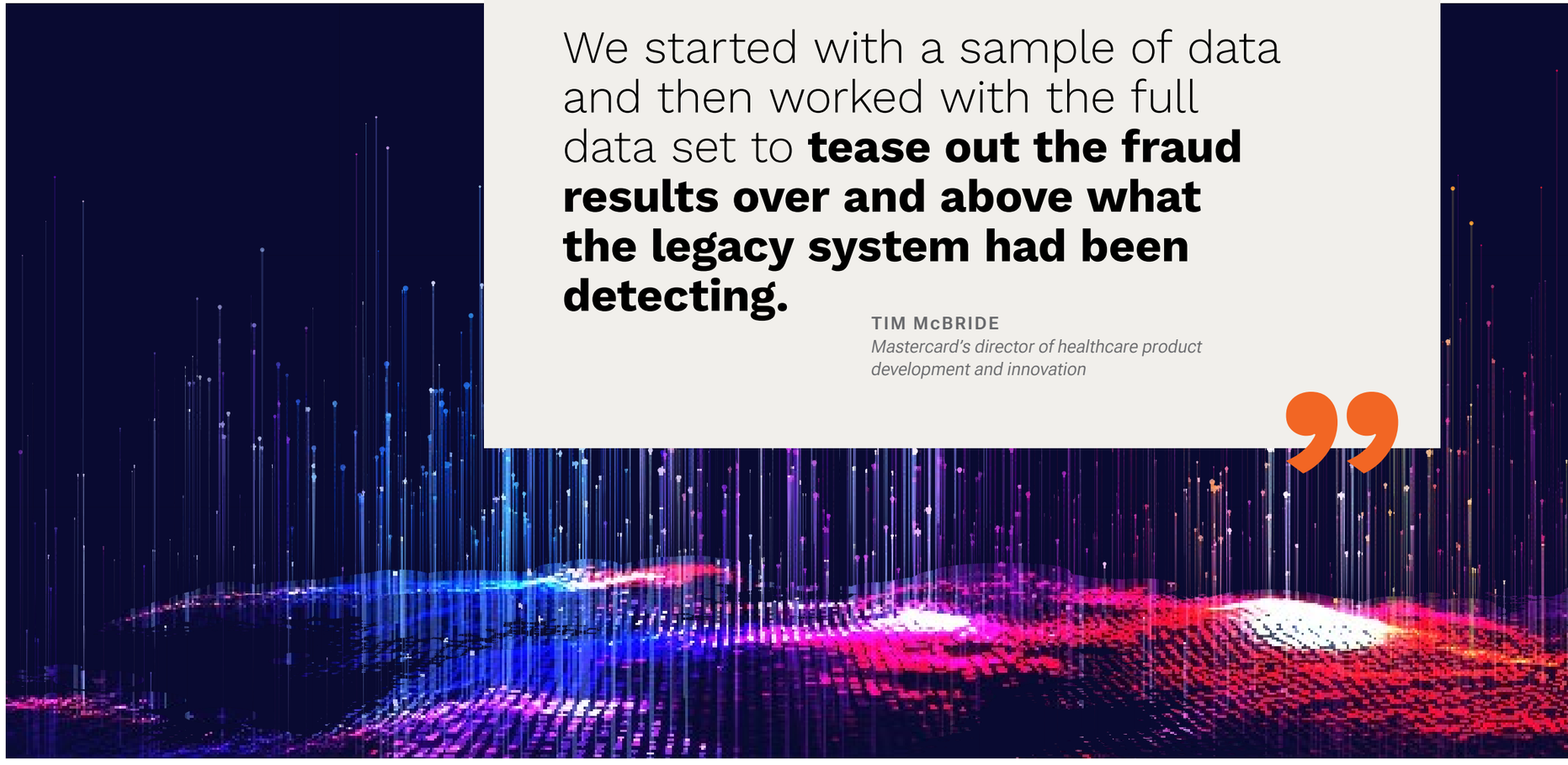
"We worked in heavy collaboration with Milliman's team to formulate our list of questions and hypotheses," said Tim McBride, Mastercard's director of healthcare product development and innovation and an accredited healthcare fraud investigator (AHFI). "We started with a sample of data and then worked with the full data set to tease out the fraud results over and above what the legacy system had been detecting."

The results were everything both companies had hoped for, as the final proof of concept showed that 70 percent to 80 percent of claims paid to the flagged providers raised concerns about risk. The new model unlocked more than $239 million in potential savings from 2,700 high-risk providers (those with scores of 800 or above on a scale of 1 to 1000) for fraudulent claims for just one mid-sized Milliman payor client. Milliman's client was pleased with such strong results and is now reviewing cases based on the findings.

The accepted proof of concept was ready for full production and deployment for Milliman's other clients.

"We looked at the top 10 provider specialties using scores above 800 (out of 1000, which is the highest risk score)," McBride said. "We then took the top two of each of those 10 specialties and reviewed the data, creating a summary of those results. Among those were laboratories, family practice and oncology."

After reviewing the results, Mastercard helped prepare a high-level deployment plan as a blueprint for Milliman as they move forward.



> We started with a sample of data and then worked with the full data set to **tease out the fraud results over and above what the legacy system had been detecting.**
>
> **TIM McBRIDE**
> *Mastercard's director of healthcare product development and innovation*

Conclusion

Fraud, waste and abuse continue to proliferate in the healthcare industry and negatively impact both how healthcare payors manage claims and payments and their customer service. These problems also cost healthcare firms money, as PYMNTS' research indicates that these entities lose nearly 12 percent of their annual revenues as a result of FWA. Because these issues are likely to get worse, claims and payment integrity managers must do their part to ensure that they are able to extend quality-of-care options while keeping operations and customer costs down. This reality is why smart firms are increasing their focus and investments on AI capabilities that can help identify false claims and errors. Healthcare firms would be wise to identify AI solutions that can help them combat FWA.

Methodology

AI In Focus: Targeting Fraud, Waste And Abuse In Healthcare, a collaboration between PYMNTS and Brighterion, a Mastercard company, surveyed 100 healthcare executives who have intimate knowledge of or held leadership responsibilities in at least one of the following four areas: fraud detection and analysis, financial planning and analysis, claims payments or risk management. We gathered data from executives who work at 100 organizations that had at least $10 million in annual revenue in 2020 and conducted the survey from April 21 to May 11, 2021.

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Brighterion

mastercard

Brighterion, a Mastercard company, was founded in 2000 and acquired by Mastercard in 2017. We deliver a leading artificial intelligence and machine learning platform that provides real-time mission critical intelligence from any data source, regardless of type, complexity or volume. Our AI solutions fight financial crime and fraud, reduce credit risk, prevent healthcare fraud, waste and abuse, and more. Currently we serve 74 of the 100 largest U.S. banks and more than 2,000 customers worldwide, processing more than 100 billion transactions annually. For more information, please visit us on the web, our blog, LinkedIn, Twitter or Facebook.

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