DELAYED CARE DURING COVID-19:

How AI can reduce the consequences for both members and payers

Few saw COVID-19 coming, and most health care organizations never expected the kind of major disruption to the health system that the pandemic has created.

This is particularly evident in the standard techniques that payers use for risk stratification. Until recently, they could pinpoint risk using historical data to spot patterns, flag at-risk patients and populations, and predict future trends. This no longer is possible, because predictive analytics require a steady state, and there is nothing steady about the state of the health care system in 2020.

However, these techniques already were becoming outdated and less useful even before the pandemic. Consider the case of a woman we will call Eleanor, a 45-year-old with diagnosed type 2 diabetes who continuously struggled with weight gain and an inability to get her diabetes under control.

Eleanor's provider and health plan appeared to be managing her condition: Her physician saw her four times a year; urged her to eat a balanced diet and perform at least 30 minutes of exercise most days; and put her on a metformin regimen of 500 mg twice per day.

Predictive analytics showed that these measures should have brought Eleanor's diabetes under control. Yet, her condition appeared to be worsening, to the point that she was admitted to the hospital twice in six months to treat dangerously high blood sugar levels.

Fortunately for Eleanor, her health plan recognized that classic predictive solutions miss patients who are at risk but fall outside the narrow high-risk band. Eleanor fell into this category with a missed diagnosis for depression. Once the payer installed a prescriptive analytics tool, Eleanor's full risk profile emerged, along with a road map for her journey to good health.

Eleanor started seeing a behavioral health specialist and was placed on a mild antidepressant. As she began to feel better, she became more empowered to manage her diabetes and lose weight. Today, she no longer is at risk for hospital admission, thanks to the power of prescriptive analytics.

Eleanor's situation is not unique but these types of problems are hard to catch with traditional analytics. Earlier, we introduced the concept of predictive vs. prescriptive analytics. There is a very clear and important distinction between the two. Predictive analytics, which have been around for decades, are mostly mathematical-based models that use historical information to predict future risk. That's where they stop. Often their output is limited in terms of actionability because they produce known risk targets and overwhelm already taxed resources with little direction as to how to mitigate the risk.

Prescriptive analytics enabled by validated AI identifies individuals with risks and vulnerabilities by understanding the interactions of millions of data points specific to the individual as well as other cohorts containing similar individuals from a clinical and behavioral standpoint. It then evaluates evidence-based guidelines to provide specific interventions that, deployed in a personalized manner, will change an individual's risk trajectory. Historic claims data is leveraged, but in the absence of it, the analytics do not lose integrity.

This type of analytics is essential now, in light of the pandemic, as all bets are off in terms of the true number of patients with chronic conditions who have been sheltering at home with their illnesses undiagnosed or spiraling out of control.

FALLOUT FROM COVID-19

The health system has seen unprecedented delays in needed care during the pandemic as it sought to conserve resources and governments imposed stay-at-home mandates.

The result has been a dramatic drop in services that began early on. There was a 60% decline in preventive services in February and March, compared with the same period a year earlier.[1] CPT

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codes for new and established patients, emergency department, emergency services and pneumococcal vaccinations have also dropped significantly year over year.[1] Similarly, high-volume inpatient surgeries and procedures have declined dramatically.

According to the May 2020 Kaiser Family Foundation Health Tracking Poll, nearly half of respondents reported that they or someone in their household had postponed or skipped medical care because of the pandemic.[2]

Among the most potentially worrisome drops are:

- Diagnostic catheterization (down 65% during the last two weeks of March, compared with the same period in 2019).
- General diagnostics (down 60%).
- Percutaneous coronary intervention (down 44%).

There is also a troubling decline in patient encounters for both life-threatening illnesses, such as congestive heart failure (down 55%), and chronic diseases such as hypertension (down 37%).[3] It is estimated that patient encounters for diabetes are down 67% this year, compared with a similar period in 2019.[4]

Even as restrictions are relaxed and hospitals resume routine care, other contributing factors remain, including unemployment, closures in rural areas and fear. In fact, one-third of respondents to a Sage Growth/Black Book Research survey conducted in April reported feeling unsafe going to their physician's office, and possible second and third waves of infection could perpetuate these worries.[3]

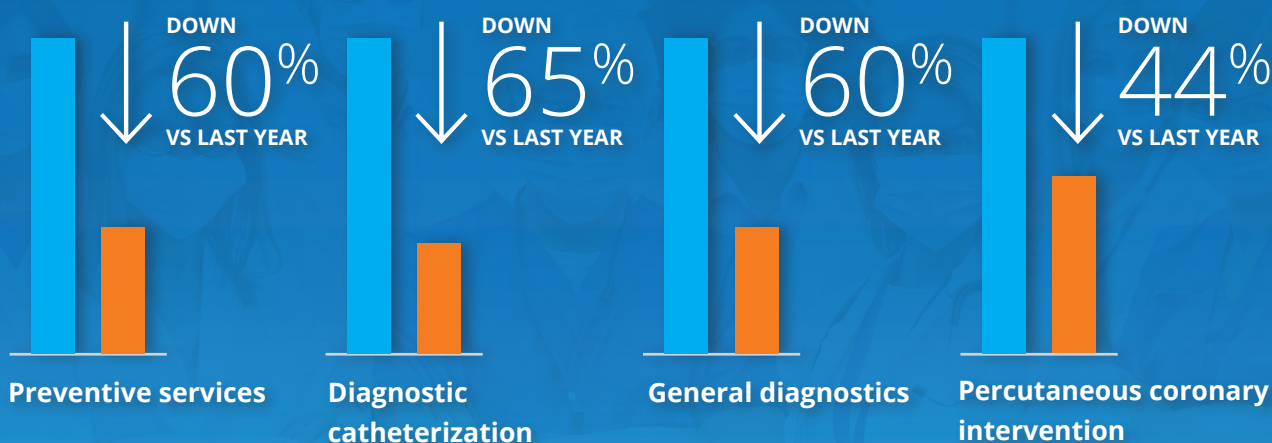## CONSEQUENCES ON THE HORIZON

The fallout from this unprecedented health crisis will be the equivalent of a one-two punch to the gut of the US health system. The first blow comes in the form of unintended health consequences, and the second is taking shape in financial cracks that are about to expand rapidly.

No one is sure how delayed care for sick individuals or overdue preventive care such as vaccinations will affect the health system. It is possible some missed care will turn out to have been unnecessary. Missed care that could have stopped the progression of disease, however, will carry a cost, and it could be serious. Also unknown, but potentially serious, is the effect of social isolation on behavioral and physical health.

While providers are experiencing a significant negative financial impact in the aftermath of the novel coronavirus outbreak, the financial picture for payers is a bit more complex. Deferred care is leaving them flush with cash for now, but that will likely be short-lived, as a wave of expensive care is on the horizon.

One survey showed 8 in 10 payers anticipate an increase in claims after stay-at-home orders are eased and fears about seeking medical care subside.[5] Procedures are expected to increase in late 2020 or 2021, and insurance executives are warning that costs will be driven higher by more-intensive care for patients whose conditions worsened during the pandemic.[6]

THE FALLOUT IN NUMBERS

DOWN 60% VS LAST YEAR

DOWN 65% VS LAST YEAR

DOWN 60% VS LAST YEAR

DOWN 44% VS LAST YEAR

Preventive services

Diagnostic catheterization

General diagnostics

Percutaneous coronary intervention

80%

of payers anticipate an increase in claims after stay-at-home orders are eased and fears about seeking medical care subside.

Using classic predictive analytics solutions to prepare for the coming wave is problematic because these tools stratify patients across risk bands and place emphasis primarily on those at high risk. This approach understates the effect of undiagnosed disease on patients at moderate risk, who will now face more severe consequences because of delayed care.

In a crisis where stakeholders must perform the equivalent of a high-wire act requiring precision and quick decisions without the safety net of the historical steady-state, smarter data analysis and AI are essential.

THE JVION CLINICAL-AI CORE™

In this environment, payers need a prescriptive solution that goes beyond assessing risk. For example, the Jvion CORE is a clinically validated AI asset that helps payers understand underlying vulnerabilities — which are often not in plain sight — in individuals who are at risk but outside the narrow high-risk band.

While other tools focus on detection and screening, the AI CORE emphasizes prevention and vulnerability. It makes connections across millions of disparate data sources and identifies clinically relevant risk factors.

The CORE is applicable to many use cases, including population health, behavioral health, cost and utilization management, chronic care management and member activation and engagement. It delivers insights over and above what traditional predictive algorithms produce — relying on prescriptive analytics to:

- Decrease preventable adverse health outcomes by identifying affected patients and the individualized interventions that

can change a member's health trajectory. This, in turn, reduces poor clinical outcomes, clinician burnout, alarm fatigue and overtaxed care management resources.

- Reduce avoidable cost and utilization by driving efficiency and better care quality. This decreases demand on clinical resources, lowers cost and avoids financial penalties related to pay-for-performance measures.

- Increase member participation by pinpointing the best channel and time to engage members in their health.

Once the Jvion CORE identifies vulnerable individuals outside the narrow high-risk band, AI can make sense of large sets of socioeconomic data, including purchasing preferences and behavioral insights, to identify the ideal channel of communication and the right time to communicate health-driven messaging.

This differs from traditional analytics, which are epidemiologically based and population-focused. In contrast, the CORE allows stakeholders to focus on individual members. Even when key patient information is missing, Jvion's AI approach taps into data from millions of other individuals to make accurate inferences.

SUCCESS IN ACTION

While deferred care has left payers with flush coffers, it will not last indefinitely.

For example, the cost of care for patients hospitalized for pneumonia averages nearly $11,000.[1] The pneumococcal vaccine reduces related hospital admissions by nearly 24%, but the pandemic has

led to a 55% decline in the proportion of the eligible population that actually received the vaccine.

The financial consequences will likely be significant for payers; the cost of 25 pneumonia-related hospital admissions totals about $275,000.

Extrapolating this out to the full population, this fall and winter, payers could be on the hook for more than 10,000 potentially avoidable hospitalizations, at a cost of more than $110 million.[1] These costs can be avoided if payers act now by adopting a prescriptive analytics approach that will also allow payers to provide better, more timely guidance and care for members that need it. The deciding factor will be the tools they use and measures they take now to identify those most at risk.

In addition, in the face of an almost certain new wave of COVID-19 cases, the use of Jvion's CORE enabled solutions will help:

- Identify patients who are at most imminent risk before complications occur.

- Recognize and manage the most vulnerable as the new wave hits in the fall.

- Detect and mitigate longer-term risk six to 12 months out.

The US health system already was moving in the direction of better AI and analytics to flag and predict member risk, and payers no longer have the luxury of taking their time to make this switch. COVID-19 has shined a harsh light on the shortfalls of the current system, underscoring an urgent need to move beyond traditional analytics immediately.

With updated AI technology that correctly predicts and classifies risk, payers can be assured they are providing the best care on the fastest possible timeline for members who need it. ■

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1. Jvion data

2. Hamel L, Kearney A, Kirzinger A, Lopes L, Manana C, Brodie M. KFF Health Tracking Poll - May 2020. Kaiser Family Foundation website https://www.kff.org/report-section/kff-health-tracking-poll-may-2020-health-and-economic-impacts/. May 27, 2020.

3. As the country reopens, safety concerns rise. Sage Growth Partners website http://go.sage-growth.com/covid-19-market-report.

4. Mehlman E, Lefar S. Elective surgery does not mean optional surgery: How to recover from the impact of canceled procedures. HFMA website. https://www.hfma.org/topics/financial-sustainability/article/elective-surgery-does-not-mean-optional-surgery--how-to-recover-.html. June 4,2020.

5. Waddill K. Payers expect claims spike after COVID-19, no 2021 premium hike. Healthpayer Intelligence website. https://healthpayerintelligence.com/news/payers-expect-claims-spike-after-covid-19-no-2021-premium-hike. April 15, 2020

6. Livingston S. Large health insurers appear immune to COVID-19. Modern Healthcare website. https://www.modernhealthcare.com/insurance/large-health-insurers-appear-immune-covid-19 . May 9, 2020

ABOUT JVION

Jvion enables healthcare organizations to prevent avoidable patient harm and lower costs through its clinical AI solution. An industry first, the Jvion CORE goes beyond simple predictive analytics and machine learning to identify patients on a trajectory to becoming high risk and for whom intervention will likely be successful. Jvion determines the interventions that will more effectively reduce risk and enable clinical action.

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