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Internet of Healthcare Report, Findings Summary Q4 2021

Olive

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EXECUTIVE SUMMARY

The humans in healthcare face a deluge of disjointed data for which hiring can't provide adequate relief: 64% of healthcare executives agree that there will never be enough staff to handle the volume of patient and member data at their organizations. These and other findings come from a survey of 1,700 healthcare executives, patients, clinicians, and administrative staff conducted by Wakefield Research, on behalf of Olive, in July 2021.

Administrative burden is weighing down employees—with 72% of clinicians expecting administrative burden to get worse in the coming 12 months. Processes are in desperate need of updating, not just to alleviate worker overload, but to deliver for patients: 91% of clinicians agree that improving administrative processes is the most urgent need to improve the quality of care provided to patients.

The healthcare industry lacks an internet to connect its disjointed systems. In need of innovation, healthcare executives are eyeing automation and other Al-enabled initiatives to improve: 99% agree Al will allow employees to focus on more impactful work for patients and members. Patients and employees share the goal of reducing administrative burden and improving healthcare for everyone involved.



91% of healthcare professionals agree that improving administrative processes is the most urgent need to improve quality of care.

KEY FINDINGS

92%

of clinicians agree that too much time spent on administrative tasks is a major contributor to healthcare worker burnout. 21%

Administrative staff suspect an average of 21% of patient records have at least one error.

50%

of administrative staff have seen an increase in the amount of manual data entry in the past 12 months.

64%

of executives say there will never be enough staff to handle the volume of patient and member data at their organization. 99%

of executives say AI can empower employees to focus on more impactful work for patients and members. **58%**

of clinicians predict US
healthcare will have widely
adopted Al-enabled
advancements including
fully automated data entry
(58%), patient access to
medical records from
anywhere (56%), and virtual
visits overtaking in-person
(52%).

93%

of clinicians predict that AI will be good for their career; 78% of administrative staff agree.

49%

of executives fear increased employee turnover if their organization is not able to increase its use of AI in the next 1-2 years. **40%**

of clinicians predict AI will reduce the risk of misdiagnosis.

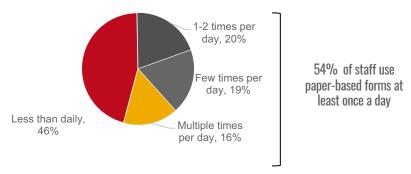


No Room For Error

Fragmented healthcare systems are frustrating and error prone—not only wasting time, but creating room for preventable mistakes that are unacceptable to patients and employees alike.

- 99% of executives admit their organization relies on multiple systems for at least one process, especially claims processing (52%) and clinical documentation (48%).
- 89% of clinicians have to consult different electronic systems at least a few times a day just to access patient information.
- Administrative staff are left managing numerous individual processes across separate systems, most notably clinical documentation (42%), eligibility and benefits management (40%), supply chain management (39%), and claims processing (38%). These hurdles frustrate administrative staff, the exact employees tasked with stewarding data from one system to another.
- A majority of administrative staff (54%) are using paper-based forms at least once a day, including 35% who do so at least a few times a day.

"In your role, how often do you consult or manually fill out paper-based forms?" (n=250 admins)



- 40% of patients have had a healthcare professional not know what medications other healthcare providers had prescribed due to a lack of access to patient information—including 23% of patients who have experienced this more than once.
- This system burdens patients: 95% have had to provide the same information more than once, including 55% who say this happens very frequently.
- Administrative staff suspect an average of 21% of patient records have at least one error.



Admins estimate an average of 21% of patient records have an error.

"What percentage of your organization's patient records do you suspect have at least one error?" (n=250 admins)



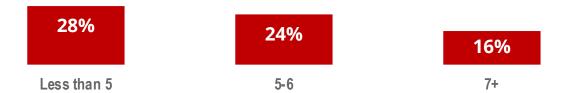
Overwhelmed

The healthcare community is overburdened with administrative work—and it's getting worse.

- Instead of spending time with patients, 36% of clinicians spend more than half their day on administrative tasks—and 72% expect the time they spend on administrative tasks to increase over the next 12 months.
- Manual data entry is getting worse: 50% of administrative staff say the volume of manual data entry has increased over the past 12 months.
- Nearly 1 in 4 patients (24%) primarily use manual paper-based systems, despite patients' belief that
 an average of 51% of paper forms could be replaced by online submission. In fact, 43% say patient
 history forms are most in need of a digital formatting update, as do 52% of clinicians; another 63% of
 clinicians say patient registration—another paper-heavy process—is most in need of updating to a
 digital format.
- More than 2 in 3 executives (68%) say their employees logged into separate systems to monitor and track patients or members during the COVID-19 pandemic—those who did add systems say they added 5 on average, including 16% who saw 7+ implemented.

Number of Additional Data Systems that Staff Needed to Track Patient Info

"How many additional data systems, if any, did staff need to log into separately to monitor and track patient or member information due to the COVID-19 pandemic?" (n=200 executives)



Administrative reporting delays patient care and hiring is not seen as a solution.

- A majority of patients (51%) have had tests or procedures delayed by the insurance approval process, which explains why 40% say insurance eligibility verification is most in need of updating to a digital format.
- When sharing patient data with external partners, administrative staff are still relying on email (62%), phone (46%), and even fax (43%) to do so.

64% of executives agree that there will never be enough staff to handle the volume of patient and member data at their organizations.



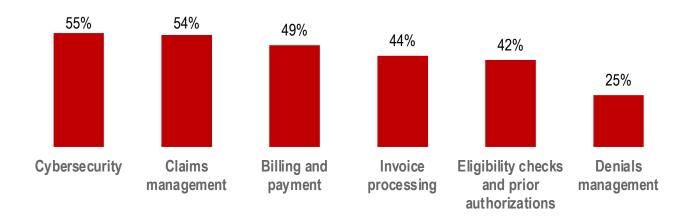
Time For Change

Healthcare executives recognize the opportunity automation and other Al-enabled advancements present to reduce administrative burden.

- Virtually all executives (99%) agree that AI and automation will allow employees to focus on more impactful work for patients and members.
- But executives are split on how confident they are in which processes AI can automate to provide the greatest ROI: 52% feel confident they know which to prioritize, but 48% are on the fence. Meanwhile, 65% of clinicians are unsure which processes AI can automate to improve patient care.
- Security concerns (57%) and data privacy concerns (53%) lead executives' top challenges to carrying out AI efforts, with lack of skilled staff not far behind (48%); clinicians are similarly worried about security (44%) and staff abilities (44%).
- Executives advise a slow-and-steady approach: 96% are concerned they'll prioritize speed over security. 75% of clinicians and 65% of administrators share that concern, as do a majority of patients (56%).
- But concerns over Al are often solved by Al itself: executives predict cybersecurity (55%) would
 most benefit from an adoption or expansion of Al, followed by claims management (54%) and
 billing/payment (49%). This might be why executives in particular feel technology companies are the
 most trustworthy party to integrate data systems for healthcare to be truly digitized (46%).

Organizational Processes that Most Benefit from Al

"Which of the following processes, if any, would your organization most benefit from if it were to adopt or expand its AI capabilities?" (n=200 executives)







Executives are turning to automation as a way to empower and invest in employees to benefit both healthcare workers and patients.

- 95% of executives plan to increase their investment in Al technology in 2022—in fact, 95% predict the Al already implemented will result in cost savings as is.
- The increased adoption of AI will also allow employees to focus on more critical areas, within the next 5 years, clinicians predict US healthcare will have widely adapted AI-led advancements, including fully automated data entry (58%), patient access to medical records from anywhere (56%), and virtual visits overtaking in-person (52%).
- Executives believe that if automated AI processes replaced manual data entry, 93 minutes could be saved per worker every day.
- Non-clinical admin staff say that 29% of their administrative tasks on average could be carried out by Al processes. This means that the replacement of manual data entry with Al will save them more than an hour a day (69 minutes).
- Those who have seen savings have passed them along as additional technology investment (49%) and benefits and compensation for current staff (47%). But no one area rises to the top, pointing to widespread reinvestment. This investment return should allay the fears of 36% of patients who worry the cost of AI will be passed on to them.

Executives believe 93

minutes could be saved per worker every day if manual data entry were replaced by Al.*



And admins agree: They say 69 minutes could be saved per day.*

* "How much time per day would you estimate could be saved per person/in your role if you replace manual data entry with an automated AI process that could do this work for your staff/you?" (n=200 Executives; 250 Non-Clinical Admin Staff)

Where Cost Savings From Al Would Be Reinvested*







47%
Benefits & compensation



46% Staff training & development



45% Marketing & advertising



42% Expanding business opportunities



38% Hiring new employees



^{* &}quot;If your organization experienced cost savings from implementing AI technology, how would it use those cost savings?" (asked among those whose AI technology implemented at organization has resulted in cost savings, could select multiple responses; n=191 executives)



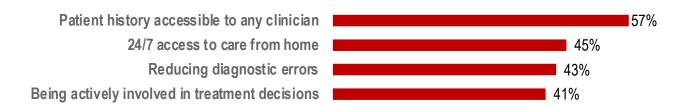
What Matters Most

It's not just administrative burden: Automation can improve patient outcomes, the most important part of every healthcare interaction.

- Clinicians also see critical benefits of AI to patient care, with many (40%) predicting that AI will decrease the risk of patient misdiagnosis.
- The vast majority of clinicians (91%) agree that improving administrative processes is the most urgent need to improve the quality of care provided to patients.
- Patients have a clear vision of how to improve patient outcomes, with significant numbers citing items
 that can be powered by AI, specifically: having their patient history be accessible to any medical
 professional they see (57%), 24/7 access to care services from home (45%), reducing errors in
 misdiagnosis (43%), and being actively involved in treatment decisions (41%).
- 95% of executives are optimistic that AI will connect data systems to provide better insights and patient outcomes—94% of clinicians and 88% of admins agree.

Patients View Multiple Benefits that AI Can Empower

"If you could define 'improved patient outcomes,' which of the following, if any, would you select?" (n=1,000 patients)





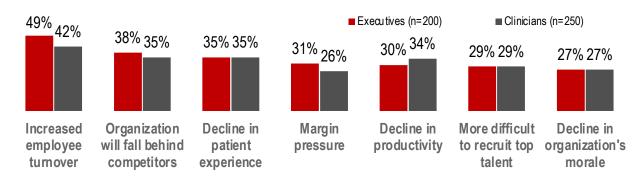
When Automation Is An HR Asset

Al can make a difference for healthcare workers day to day, as well as their long-term future.

- 92% of clinicians agree that too much time spent on administrative tasks is a major contributor to healthcare worker burnout.
- Clinicians share a positive view of AI, with the vast majority (93%) believing that AI will be good for their career. 78% of administrative staff agree.
- Nearly half of executives (49%) fear increased employee turnover if their organization is not able to increase its use of AI in the next 1-2 years. Likewise, clinicians' biggest concern is increased employee turnover (42%).

Concerns Over Lack of Al Implementation in the Next 1-2 Years

"What concerns, if any, do you have if your organization is not able to increase its use of Al automation technology in the next 1-2 years?"





Big Data, Big Picture

Automation is a key differentiator already, but the healthcare community thinks more needs to be done to become an industry leader rather than a laggard.

- Executives have an upbeat view of their industry, with 78% viewing healthcare as the leader at implementing AI to optimize processes.
- Clinicians have a somewhat less upbeat view, with 58% viewing healthcare as the leader. Even fewer administrative staff (40%) agree, and patients are especially skeptical: just 25% say healthcare is the leader, just ahead of telecommunications (21%).
- Executives' optimism may stem from their experience with AI: 98% have implemented the technology to some extent. In contrast, 20% of clinicians have not yet seen their organization implement AI.
- But employees agree automation will be crucial for their futures: 86% of administrative staff and 93% of clinicians say best-in-class providers prioritize automation.
- 38% of executives fear the organization will fall behind competitors and that the patient experience will decline (35%) if their organization is not able to increase its use of Al in the next 1-2 years. Likewise, clinicians are also worried their organization will fall behind competitors (35%) and that the patient experience will decline (35%).
- Only 37% of executives believe that their organization is on a good path toward meeting their Al goals. In fact, 24% say Al is a major concern that keeps them up at night, 22% are worried about being able to execute on their goals, and 38% are not making enough progress to be competitive.

Proportion Who View Healthcare as a Leader in Al*



78% Executives



58% Clinicians



40% Administrative Staff



25% Patients (n=1,000)

*Which of the following industries do you view as the leader at implementing AI to optimize processes?"



Conclusion

As the healthcare industry considers its future, automation can ease immediate burdens and deliver career benefits for clinicians and administrative staff, transforming their organizations into industry leaders. Investing in automation is also seen as having the potential to improve patient outcomes.

- Automation offers healthcare a chance to become leaders in a new technology: 86% of administrative staff and 93% of clinicians say best-in-class providers prioritize automation, and 78% of executives see their industry as the leader at implementing AI to optimize processes.
- The drive to lead their industry may be why 95% of executives plan to increase their investment in Al technology in 2022, an investment that has huge implications for their bottom line: 95% predict the Al already implemented will result in cost savings as is, savings that executives have already passed along to additional technology investment (49%) and benefits and compensation for current staff (47%).
- Administrative staff predict an average of 29% of their administrative tasks could be carried out by AI processes, resulting in savings of 69 minutes a day. These daily savings spell career benefits: 78% of administrative staff and even more clinicians (93%) believe that AI will be good for their career.
- Most importantly, automation offers improvements for the patient experience: Patients want their patient history to be accessible to any medical professional they see (57%), 24/7 access to care services from home (45%), reduced errors in misdiagnosis (43%), and active involvement in treatment decisions (41%)—all of which can be powered by smart investments in automation.

95% of payer and provider executives plan to increase their Al investment in 2022.

ABOUT WAKEFIELD RESEARCH

Wakefield Research is a leading, independent provider of quantitative, qualitative, and hybrid market research and market intelligence. Wakefield Research supports the world's most prominent brands and agencies, including 50 of the Fortune 100, in 90 countries. Wakefield Research's work is regularly featured in media.

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ABOUT OLIVE

Olive is the automation company creating the Internet of Healthcare. The company is addressing healthcare's most burdensome issues through automation—delivering hospitals, health systems, and payers increased revenue, reduced costs, and improved efficiency. 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 driving connections to shine new light on healthcare processes, improving operations today so everyone can benefit from a healthier industry tomorrow. To learn more about Olive, visit oliveai.com.

METHODOLOGICAL NOTES

The Olive survey was conducted between July 2nd and July 14th, 2021, using an email invitation and an online survey among:

- 200 Healthcare Provider/Payer C-Level Executives, with a 50/50 quota for Provider/Payer
- 250 Healthcare Professionals, with qualifying roles of physicians, specialists, registered nurses (RNs), nurse practitioners (NPs), and physician assistants (PAs)
- 250 Non-Clinical Administrative Staff who are working in patient care environments such as hospitals, clinics, and medical practices
- 1,000 Nationally Representative US Adults Ages 18+

Results of any sample are subject to sampling variation. The magnitude of the variation is measurable and is affected by the number of interviews and the level of the percentages expressing the results. For Healthcare Provider/Payer C-Level Executives, the chances are 95 in 100 that a survey result does not vary, plus or minus, by more than 6.9 percentage points from the result that would be obtained if interviews had been conducted with all persons in the universe represented by the sample. For Healthcare Professionals, the chances are 95 in 100 that a survey result does not vary, plus or minus, by more than 6.2 percentage points from the result that would be obtained if interviews had been conducted with all persons in the universe represented by the sample. For Non-Clinical Administrative Staff, the chances are 95 in 100 that a survey result does not vary, plus or minus, by more than 6.2 percentage points from the result that would be obtained if interviews had been conducted with all persons in the universe represented by the sample. For Nationally Representative US Adults the chances are 95 in 100 that a survey result does not vary, plus or minus, by more than 3.1 percentage points from the result that would be obtained if interviews had been conducted with all persons in the universe represented by the sample.

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