

STATE OF HEALTHCARE

HIMSS **21**

DISCLAIMER: The views and opinions expressed in this presentation are those of the author and do not necessarily represent official policy or position of HIMSS.

Health System Insights

Thomas Kiesau

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STATE OF HEALTHCARE

HIMSS **21**

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Respondent Profile

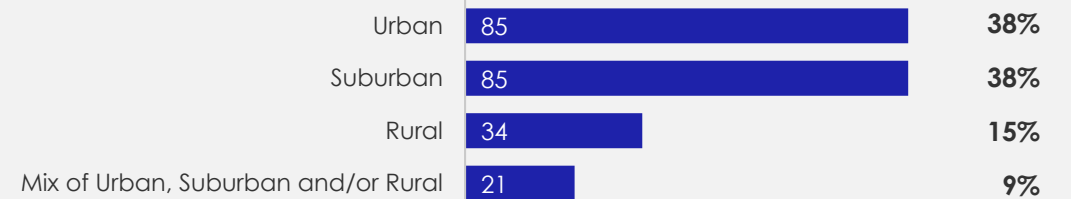
Respondents represented a mix of geographies, with the smallest cohort from the Southwest. Most were from urban and suburban areas, stand-alone community hospitals, or regional health systems, with \$500 million to \$5 billion in revenue.

Geographic Region



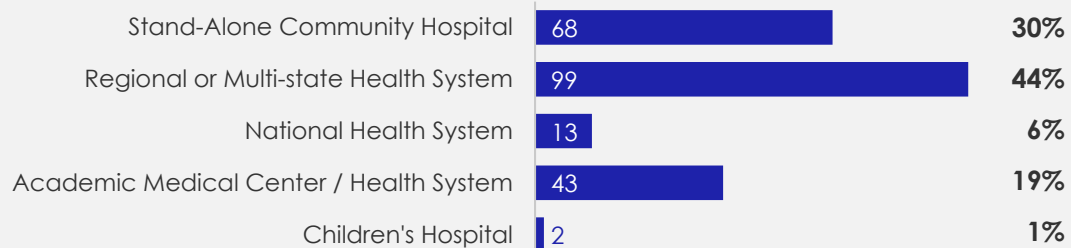
“In which region of the country are you personally located?”
 [“Personally” was used in case the health system was national]

Geographic Position



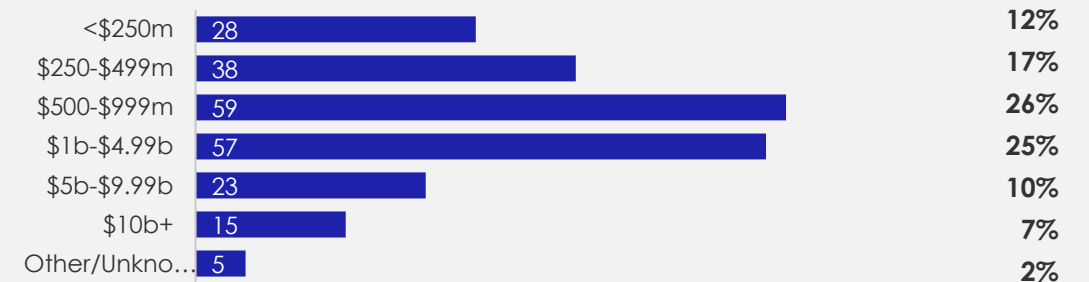
“How is your health system's geographic position best described?”

Health System Type



“How would you characterize your health system?”

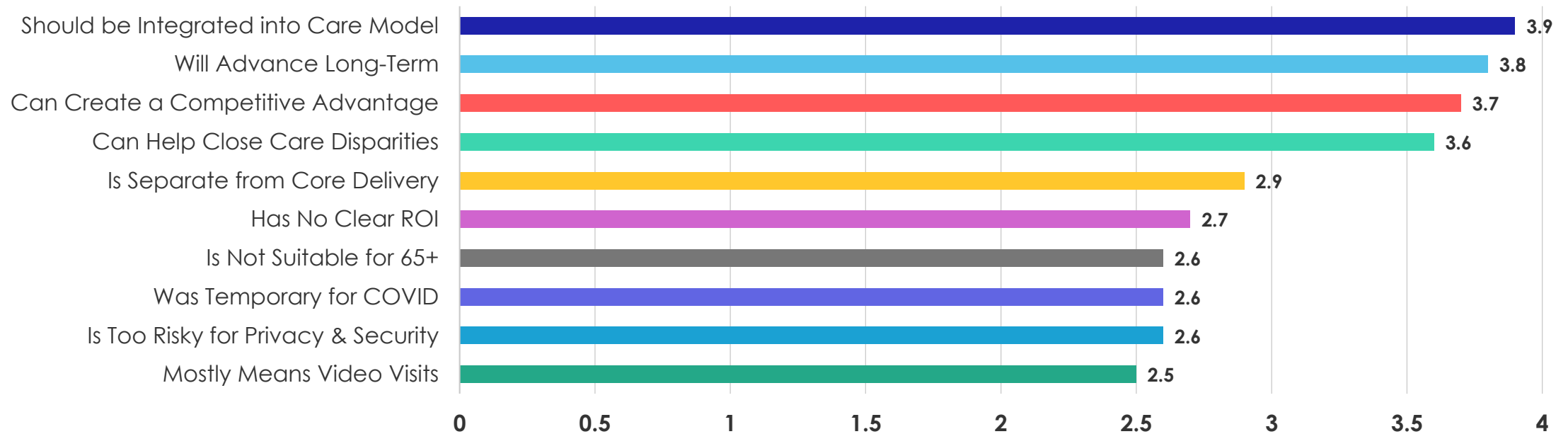
Health System Revenue



“What best represents your health system's revenue range, pre-COVID?”

Overall, Digital Health Is Perceived to be Integral and Beneficial to Health Systems

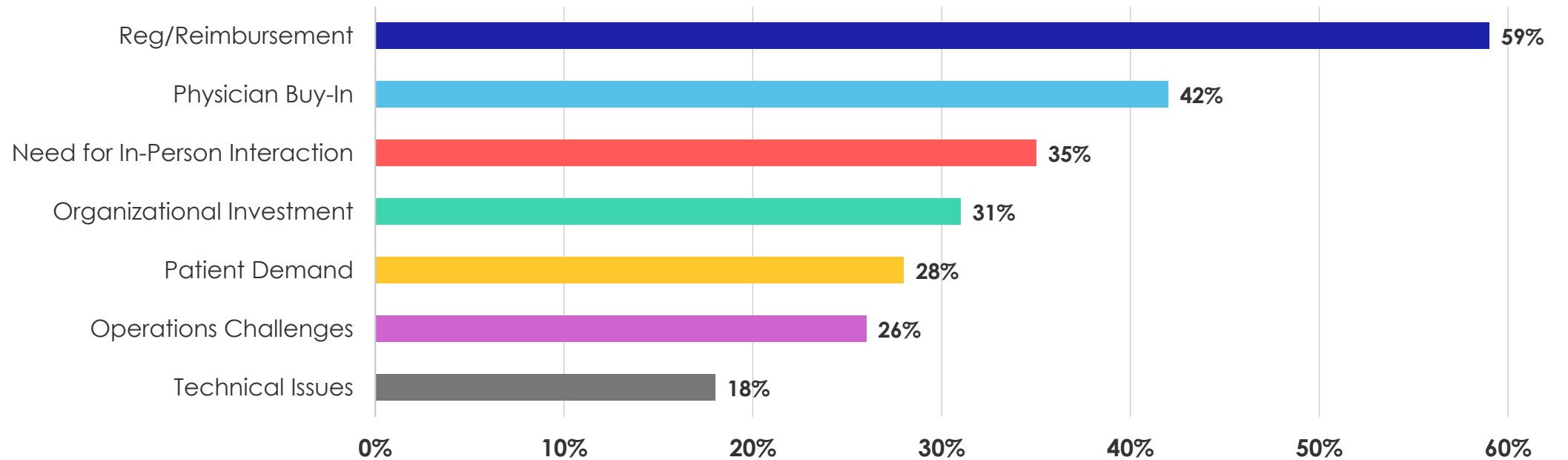
On a scale from 1-5, to what extent do you generally believe the following about digital health:



Bars represent averages for each response, on a scale of 1-5.

Regulatory Environment—Not Technology—Greatest Digital Health Barrier

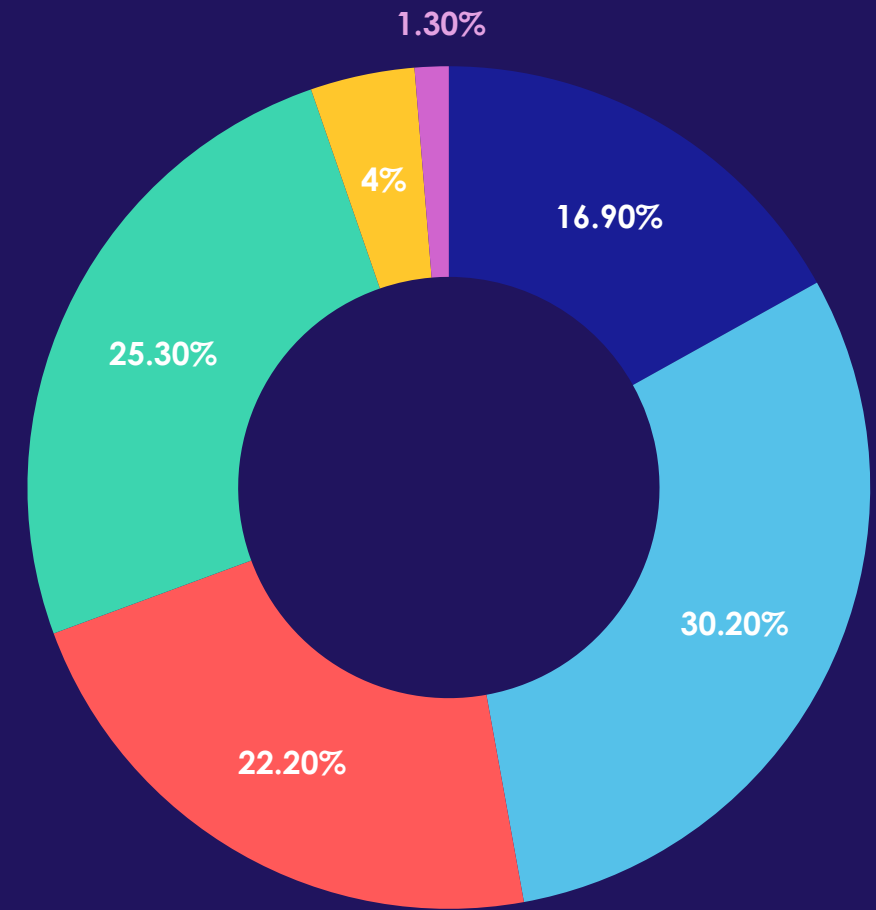
What do you see as the biggest barriers to digital health adoption?



Most Health Systems Have Digital Programs— Opportunities Exist to Accelerate & Expand

Which best describes your digital health efforts to date?

- System-wide coordination of efforts, with clear growth plans and roll-outs
- Targeted high-impact efforts with KPIs/outcomes being tracked
- Numerous pilots, with broader rollout TBD
- Select initiatives at early stages
- We haven't really started
- I don't know



52% Have not progressed digital health beyond pilot stages

N = 225

Access & Cost Reduction Lead Digital Priorities List

As it relates to digital health, what are your organization's top 3 priorities? Please rank order your top 3, where 1 is your top priority, 2 is your second priority, and 3 is your third priority.

Priority	Expand Patient Reach	Improve Patient Access	Improve Physician Access	New Business Models/Revenue	Manage Populations/Risk	Differentiate Programs/Services	Reduce Costs
1	9.8%	34.7%	8.9%	13.8%	5.8%	4.9%	16.9%
2	14.7%	17.3%	10.7%	9.8%	10.7%	8.4%	23.1%
3	14.7%	15.6%	8.9%	13.8%	15.6%	8.0%	18.2%

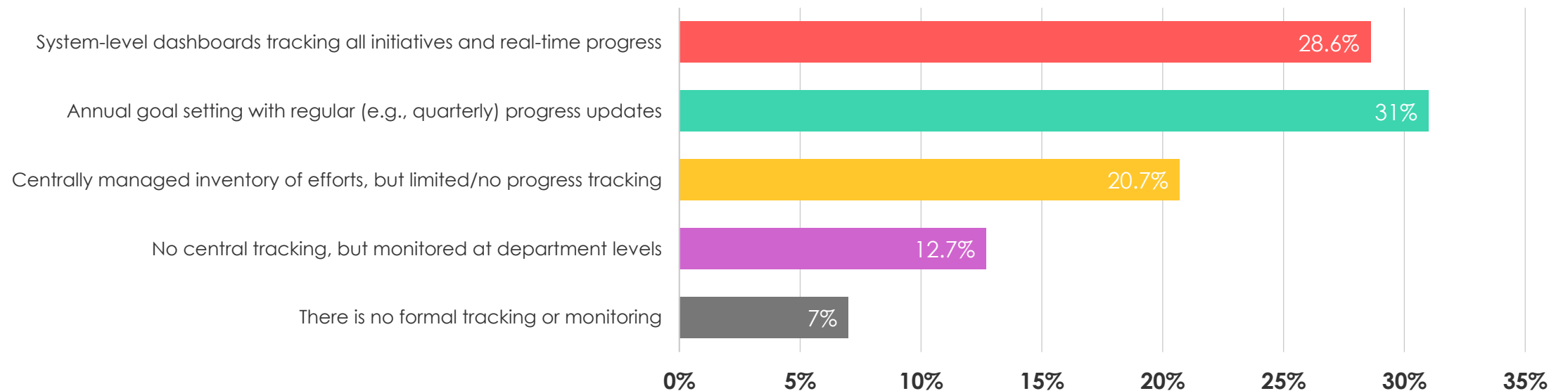
This heatmap uses green to represent the responses with the highest numbers and red for the lowest, with gradients in between.

N = 213 (excludes those answering "I don't know" or "We haven't really started" on Question DH4)

Those Not Measuring Digital Progress Are Behind

How are digital health initiatives currently tracked and monitored?

60% Are measuring/tracking digital health program performance

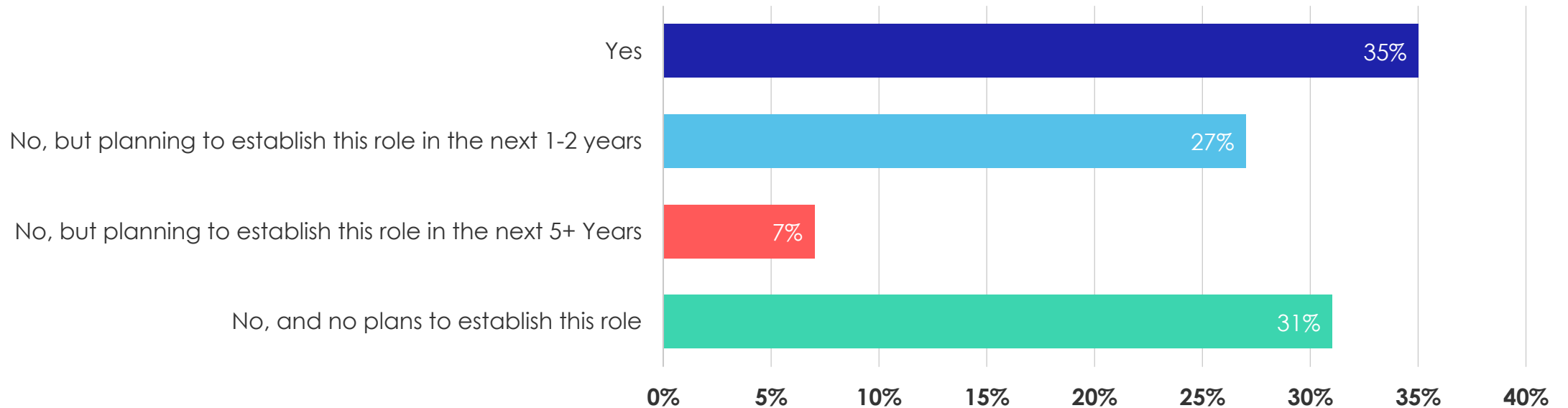


N = 213 (excludes those answering "I don't know" or "We haven't really started" on Question DH4)

Most Health Systems Have or Will Have a Chief Digital Officer

Our health system has a Chief Digital Officer.

70% Have or are planning to establish a CDO

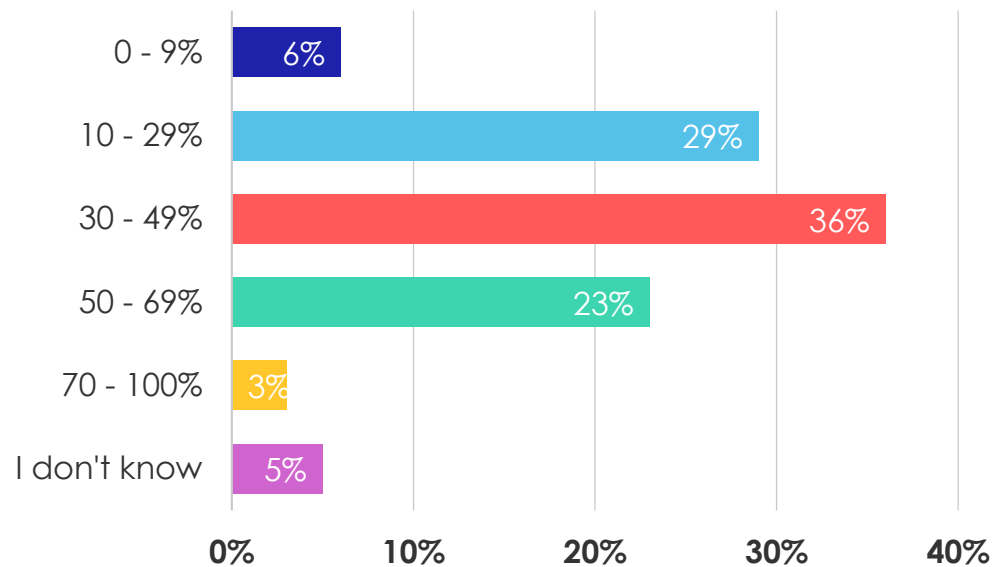


N = 213 (excludes those answering "I don't know" or "We haven't really started" on Question DH4)

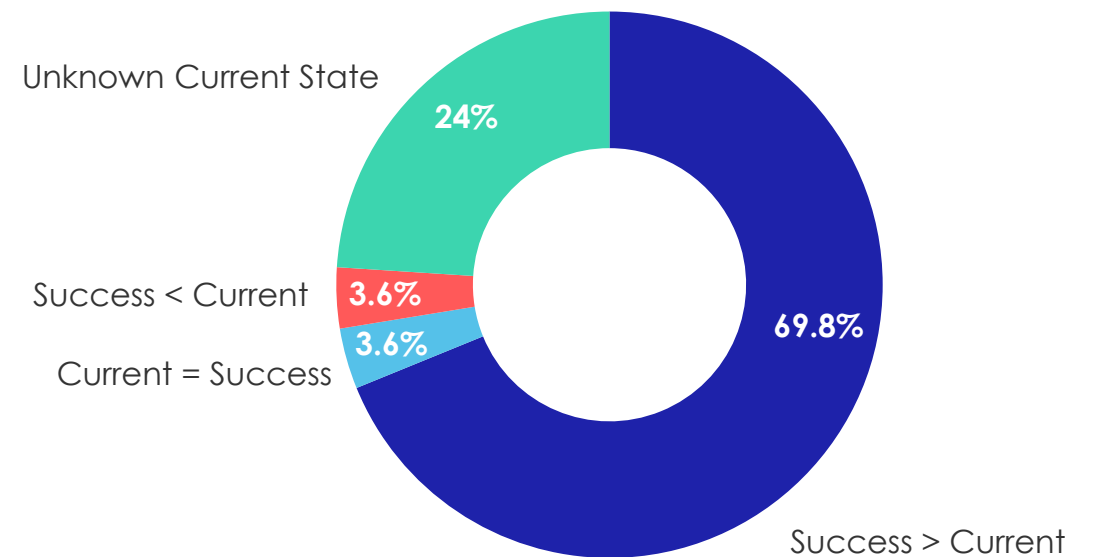
Most Want to See More Patients Using Their Portal

What percent of your patients are currently using your patient portal (e.g., activated or registered), and what percentage do you need to get to be considered successful?

Patient Portal: Current Use



Patient Portal: Success Goal

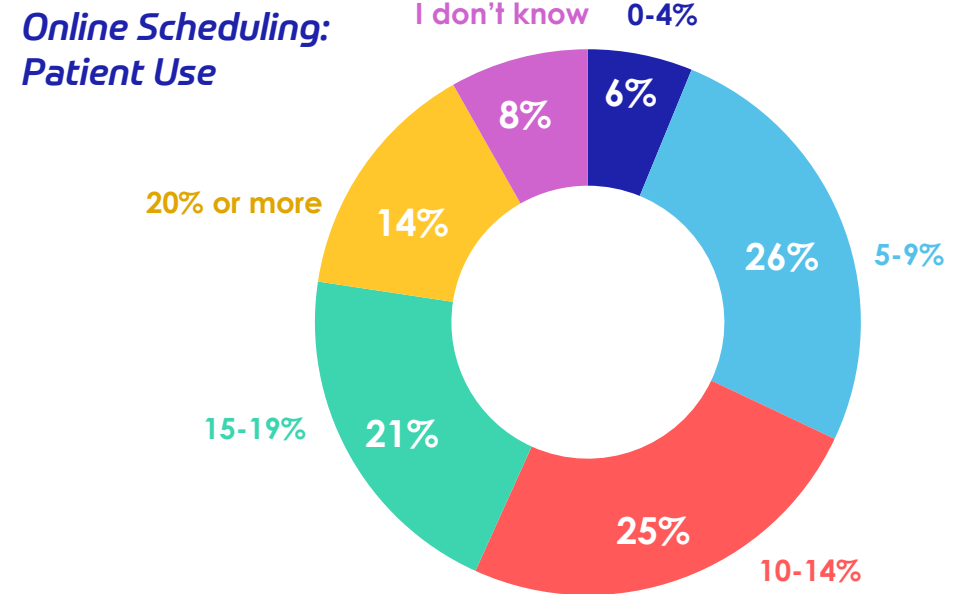
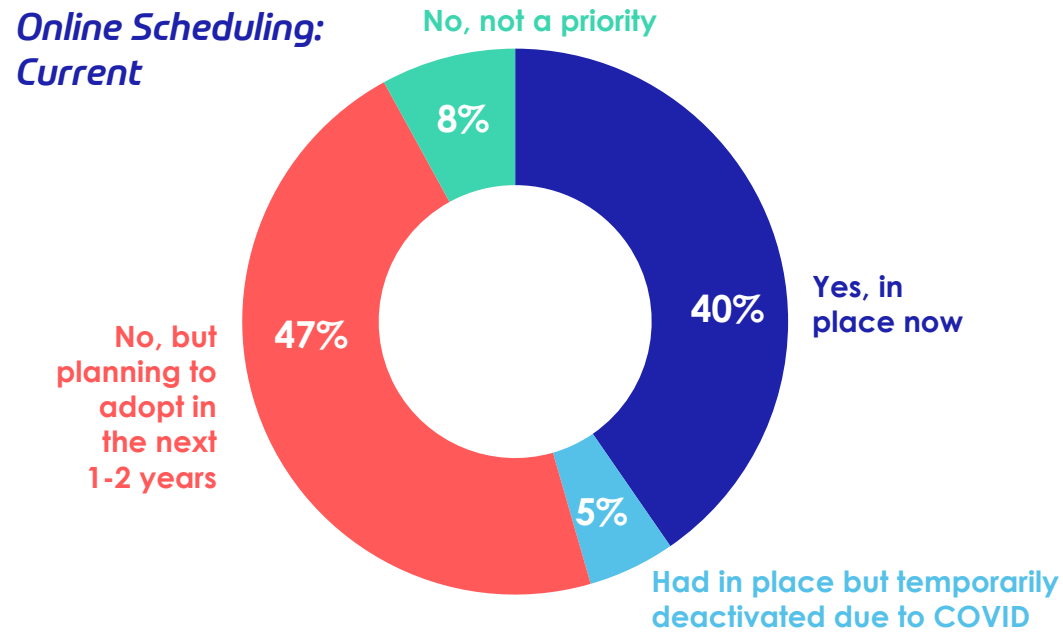


N = 179 (excludes those answering "No" to currently having a patient portal in place)

N = 225

Most Already Have Online Scheduling or Plan to Soon, But Need Strategy for Patient Adoption

1. My organization currently has online self-scheduling in place.
2. What percent of your appointments are currently self-scheduled online by your patients (new and established patients, all specialties)?



N = 213 (excludes those answering "I don't know" or "we haven't really started" on question DH4)

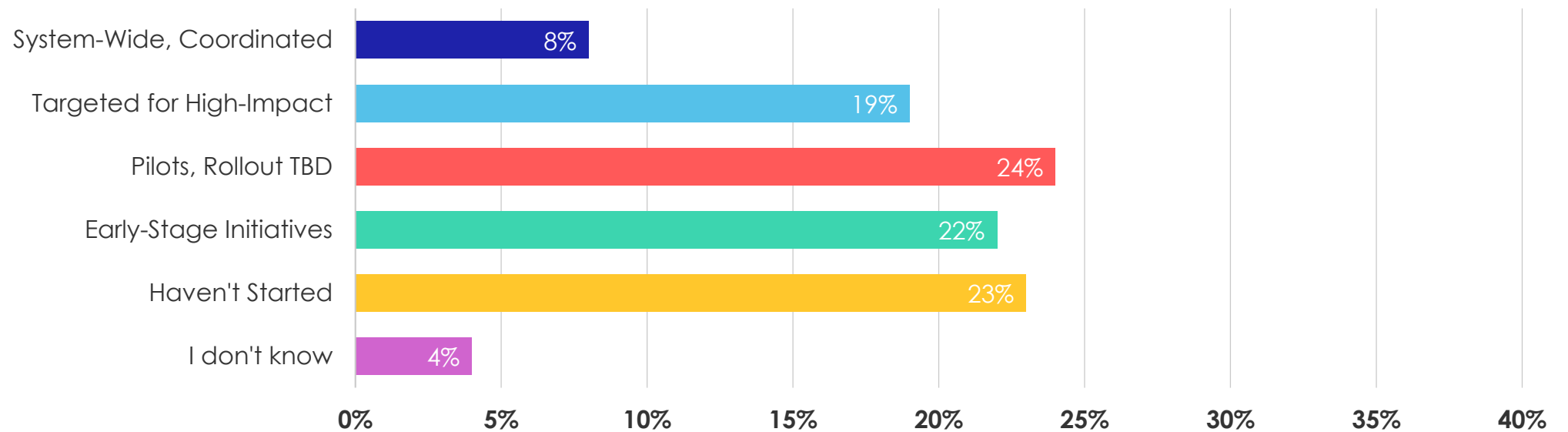
N = 96 (only those who answered "yes")

AI/ML Efforts Are Relatively Nascent

Which best describes your hospital or health system's AI/ML efforts to date?

70% Have yet to establish strategic AI/ML programs

AI/ML Efforts: Current



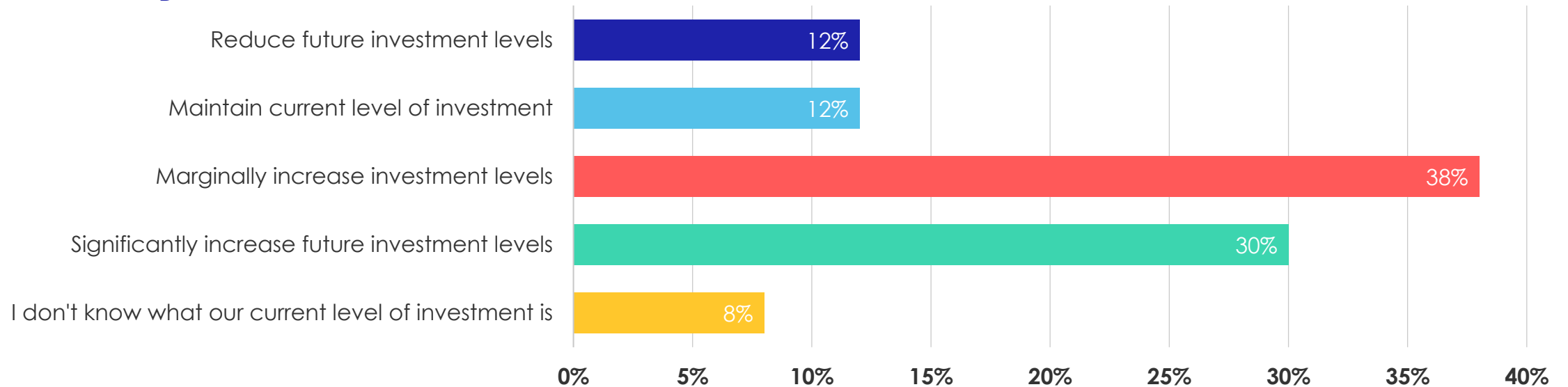
N = 225

Most Health Systems Think They Should Increase AI/ML Investment

How will the system's level of investment in AI/ML solutions need to change to achieve future enterprise goals?

68% Believe investments in AI/ML will need to grow to meet enterprise goals

AI/ML Change Needed

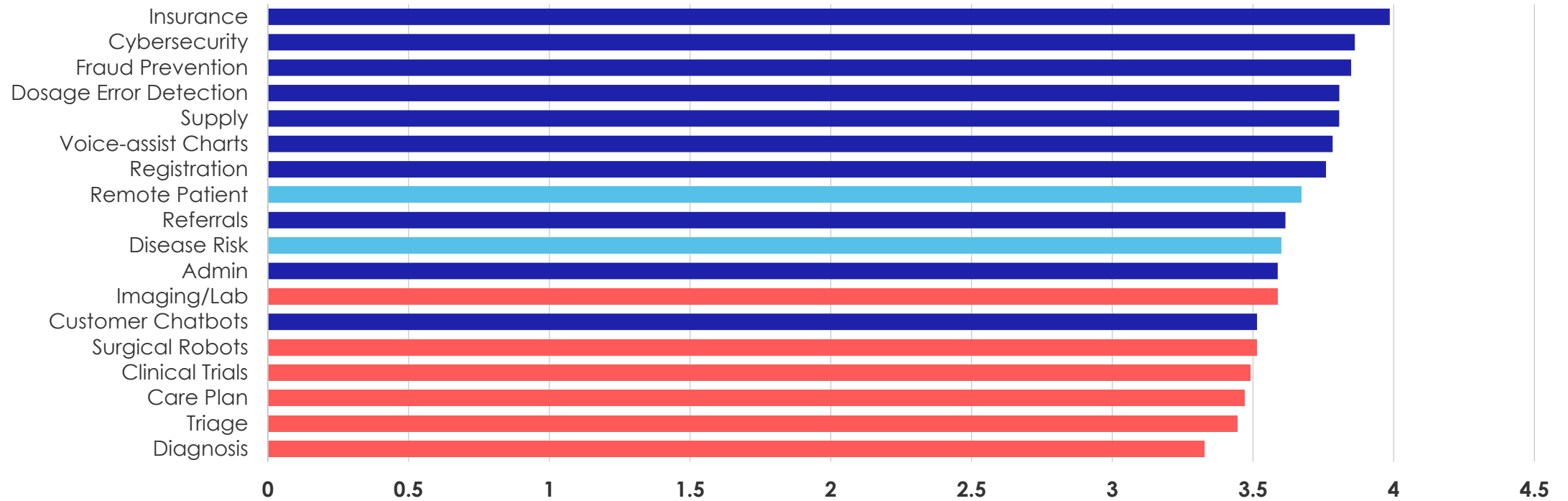


N = 225

No Consensus on AI/ML Applications, but Operations Leads the Way



On a scale from 1-5, how would you rank the following scenarios as viable candidates for utilizing AI/ML in your organization?



Bars represent averages for each response, on a scale of 1-5.

N = 225

There's a General Belief in AI/ML Benefits but also a Need for Greater Understanding

On a scale from 1-5, how much do you agree with the following statements about AI/ML now?

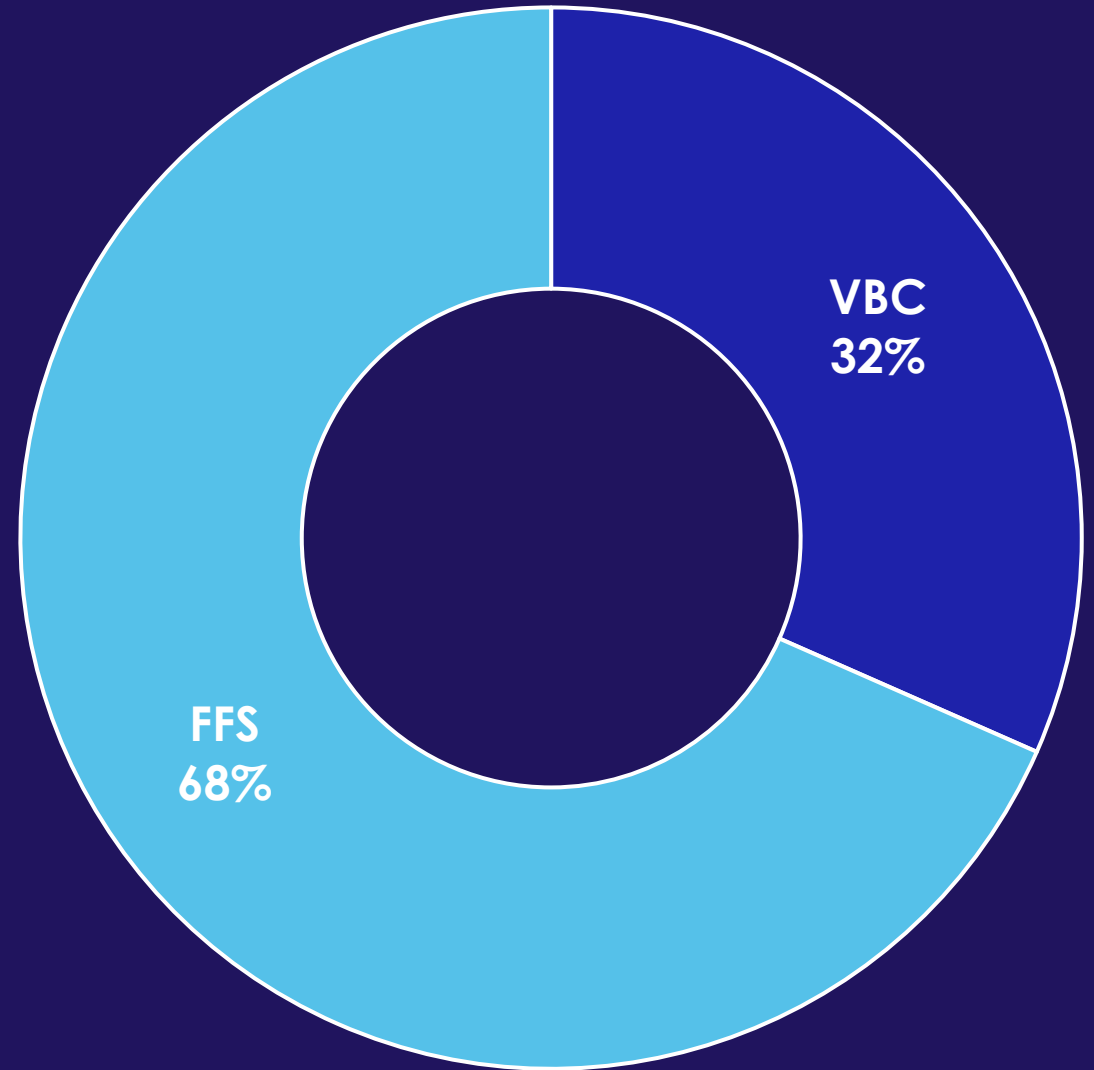


Bars represent averages for each response, on a scale of 1-5.

N = 225

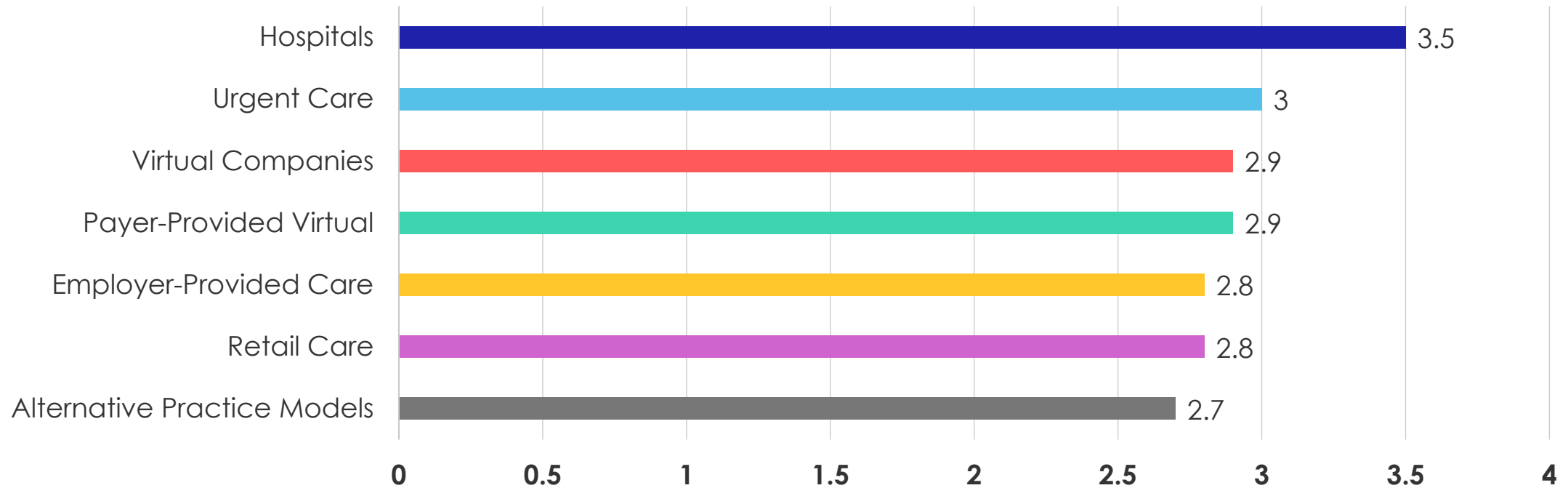
Fee for Service Still Dominant Revenue Source

What is your current revenue between fee for service and value-based care arrangements?



Other Hospitals Are Perceived as the Primary Competitive Threat

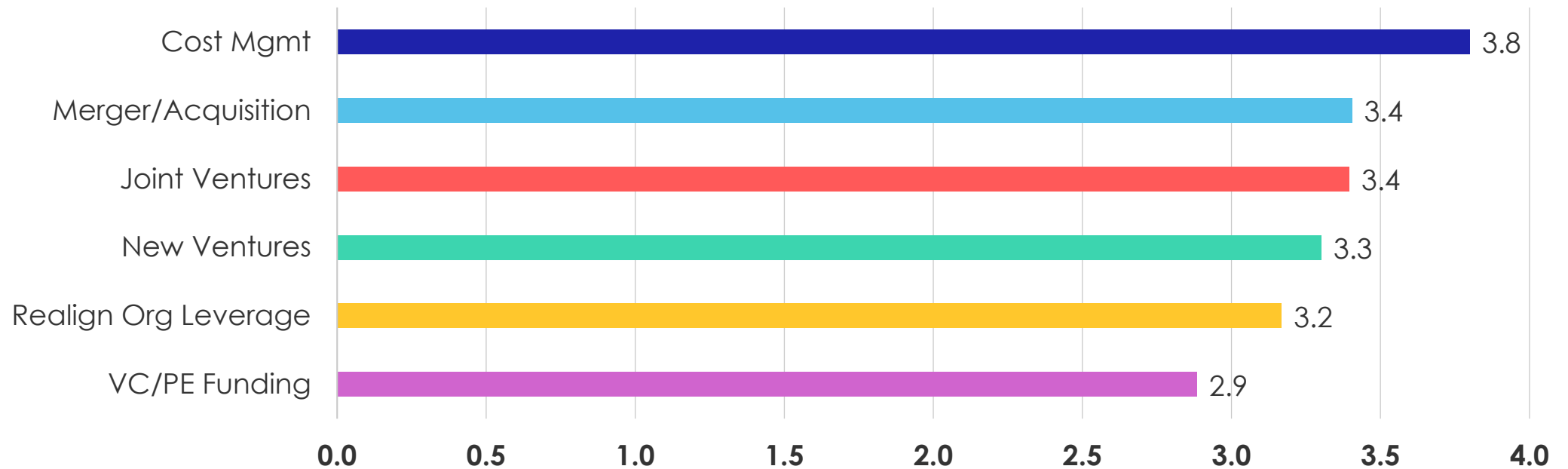
Today, what impact are the following having on your organization's revenue?



Bars represent averages for each response, on a scale of 1-5.

Cost Efficiencies and Partnerships Are Expected to Help Improve Financial Health

How much of a priority are each of the following tactics to improving your financial position?
(1-5, 5=essential priority)



Bars represent averages for each response, on a scale of 1-5.

N = 225

Key Takeaways

- Digital Health programs have significantly accelerated in their impact, sophistication, and strategic importance. The **greatest barriers to adoption are not technology or patient demand, but uncertainty in regulatory/reimbursement and internal change management.**
- **Most providers already offer virtual visits and are now shifting focus to other digital use cases** to gain a competitive advantage in this more digitally advanced post-pandemic landscape.
- Across provider organizations, **Chief Digital Officer is becoming a more common role.**
- **Most providers have set up a patient portal**, but not all are achieving the level of patient engagement that they desire. Some are not yet tracking its utilization.
- There's a **general awareness of AI/ML but not understanding of its value proposition.** Strategic AI/ML programs are relatively nascent, but investment is expected to increase. Operational use cases are likely to drive the first wave of adoption.
- As investment needs increase, **provider organizations are still squarely in a FFS world**, but value-based care now comprises a more significant share of reimbursement dollars than ever before.
- While competitive focus remains on traditional provider rivals, **a significant awareness has already emerged regarding new entrants and potential market disruptors.**



Clinician Insights

Darryl Gibbings-Isaac, MD

Senior Manager–Strategy, Clinical Subject Matter Expert, Accenture

STATE OF HEALTHCARE

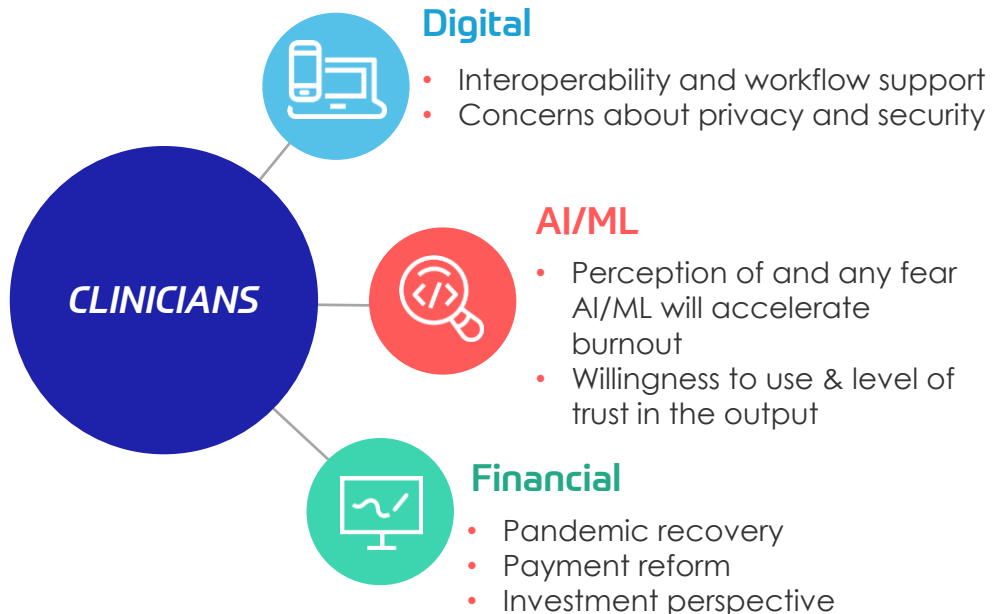
HIMSS 

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Methodology

About the research

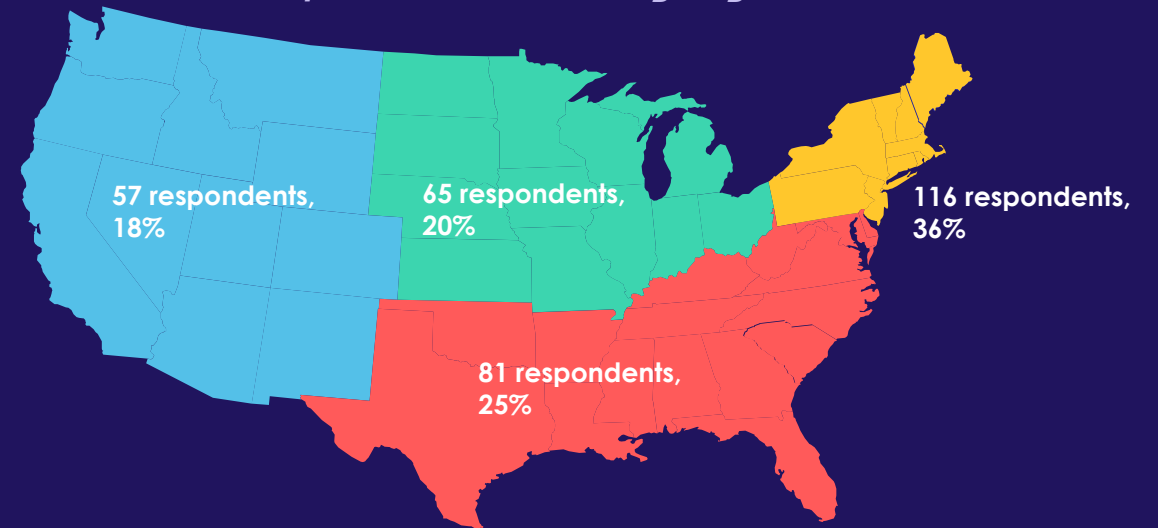
In March 2021, Accenture surveyed **309 clinicians in the U.S.** to understand their perspectives on the current state of industry changes and identify what is shaping the path ahead.



Respondents had to meet the following selection criteria to participate in the survey:

- Currently practicing medicine
- Directly responsible for making diagnoses and treatment decisions
- Hold a clinical degree: MD; DO; PsyD; PhD; Master of Science in Nursing (MSN); Doctor of Nursing Practice (DNP); other clinical degree (PA)

Respondents' Practice By Region

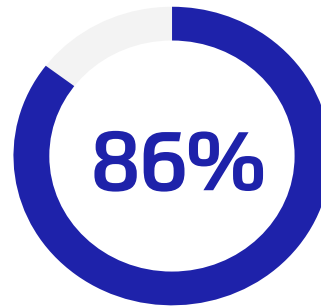


Note: Six respondents selected two or more states and three of which the states are not in the same region

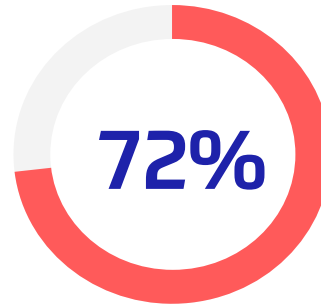
Despite the pandemic, clinicians emerged optimistic about their careers.

Question

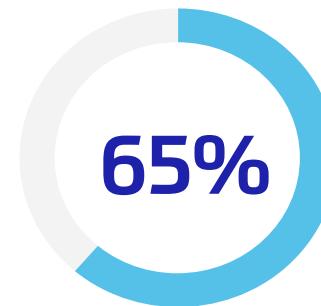
To what extent do you agree with the following statements regarding your profession and recent pandemic impacts?



Strongly agree and agree with the statement "I'm generally **satisfied with my career**"



Did **not consider leaving medicine** during the past 12 months



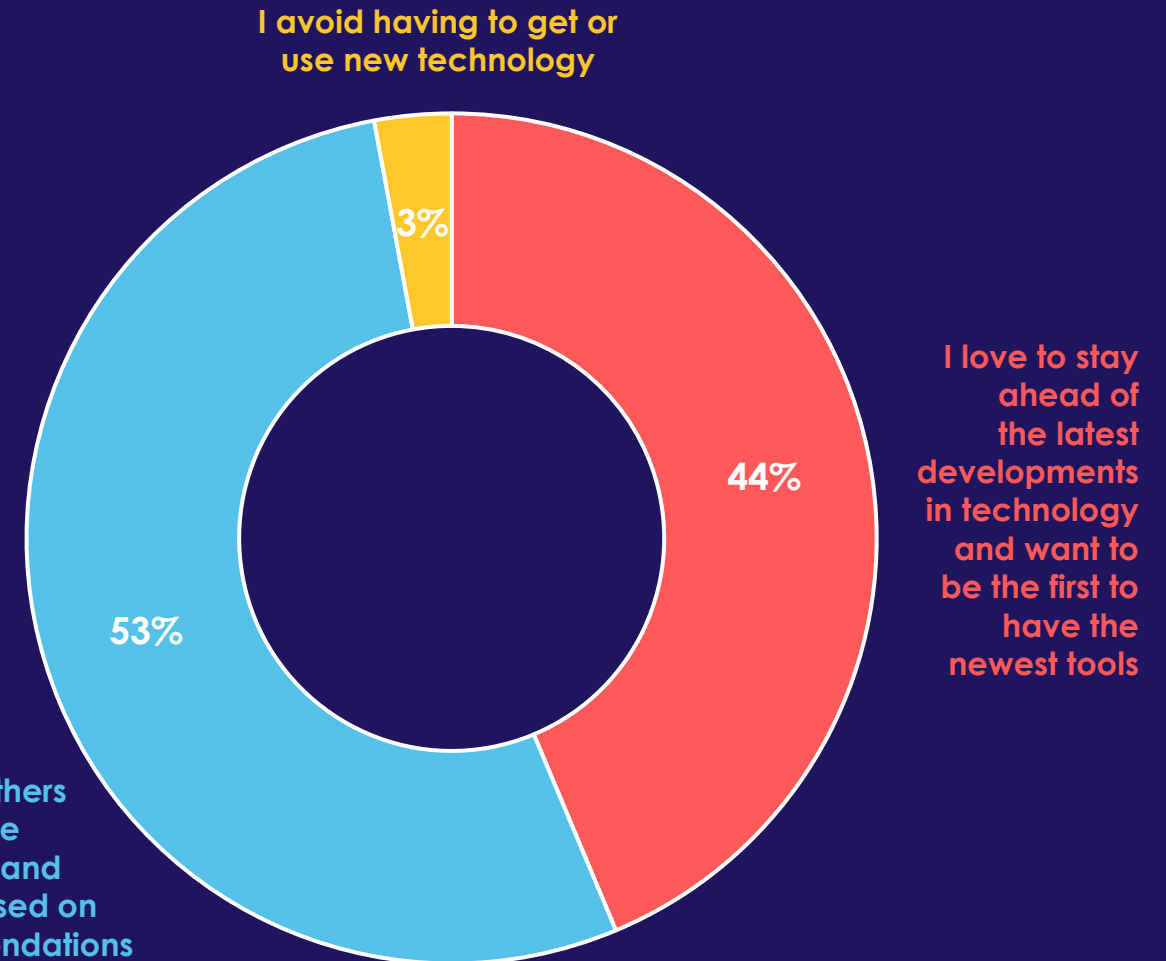
Would **recommend practicing medicine** as a career to the next generation

N=309

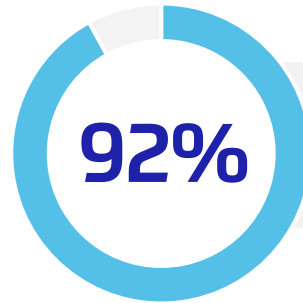
Nearly half of clinicians are early adopters of tech for their personal lives.

Question

How would you describe the role of technology in your daily life outside of the clinical setting?



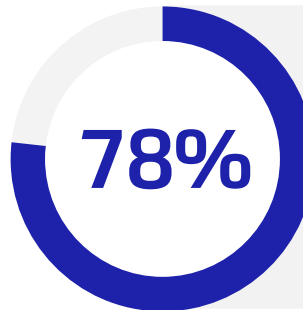
Clinicians appreciate digital health tools and recommend use...



Have **recommended digital health** tools to patients

Question

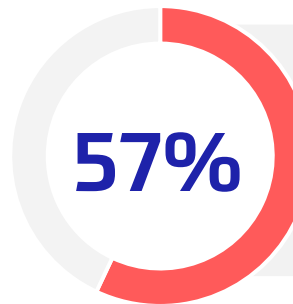
Have you recommended the use of any of the following digital health tools to your patients?



Strongly agreed and agreed that the pandemic resulted in **helpful changes** like adoption of virtual care, telehealth, etc.

Question

To what extent do you agree with the following statements regarding digital health tools that were introduced to you during the pandemic?



Strongly agreed and agreed that digital health tools were **user-friendly and easy** to learn

Question

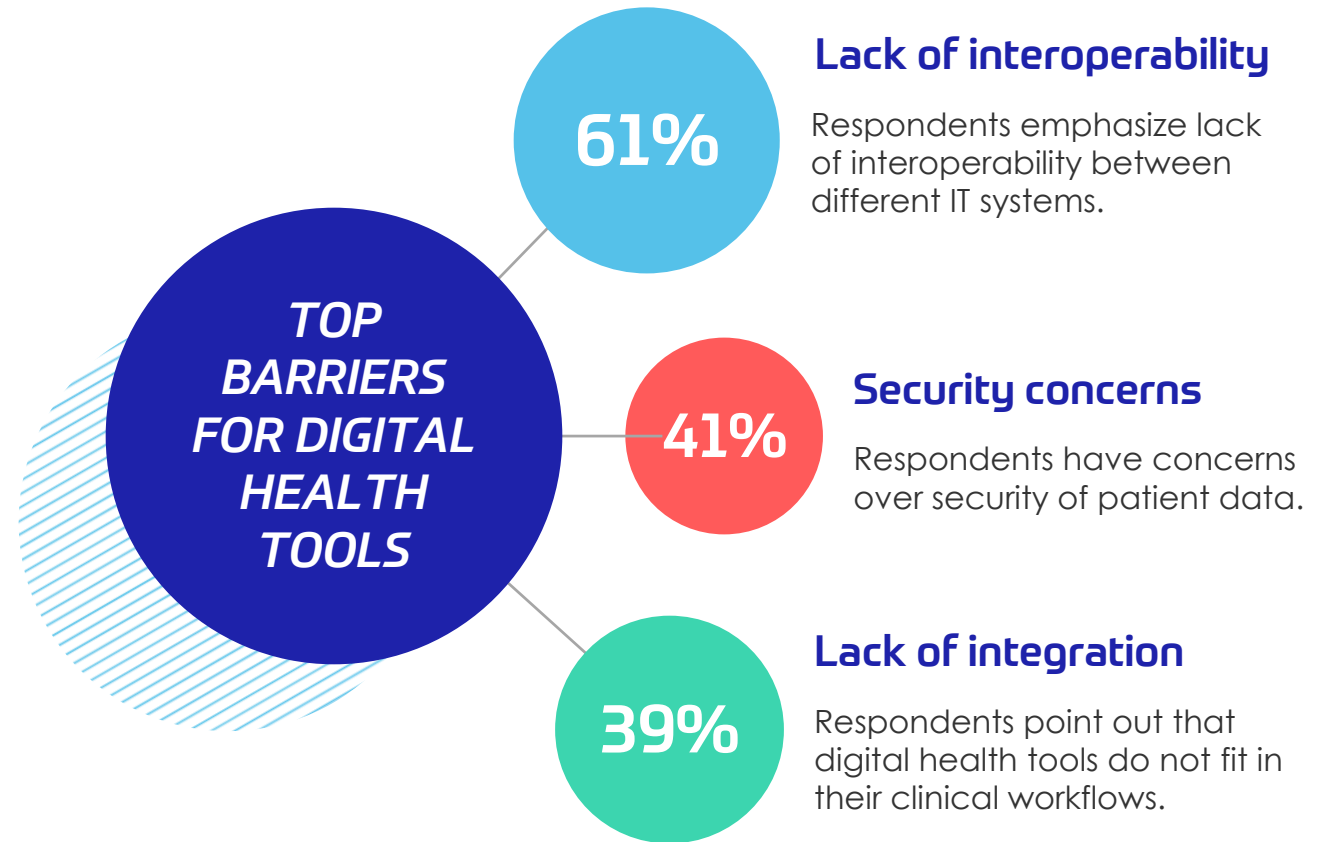
To what extent do you agree with the following statements regarding your profession and recent pandemic impacts?

N=309

...but adoption barriers exist.

Question

What hinders you from adopting new digital health tools in general?

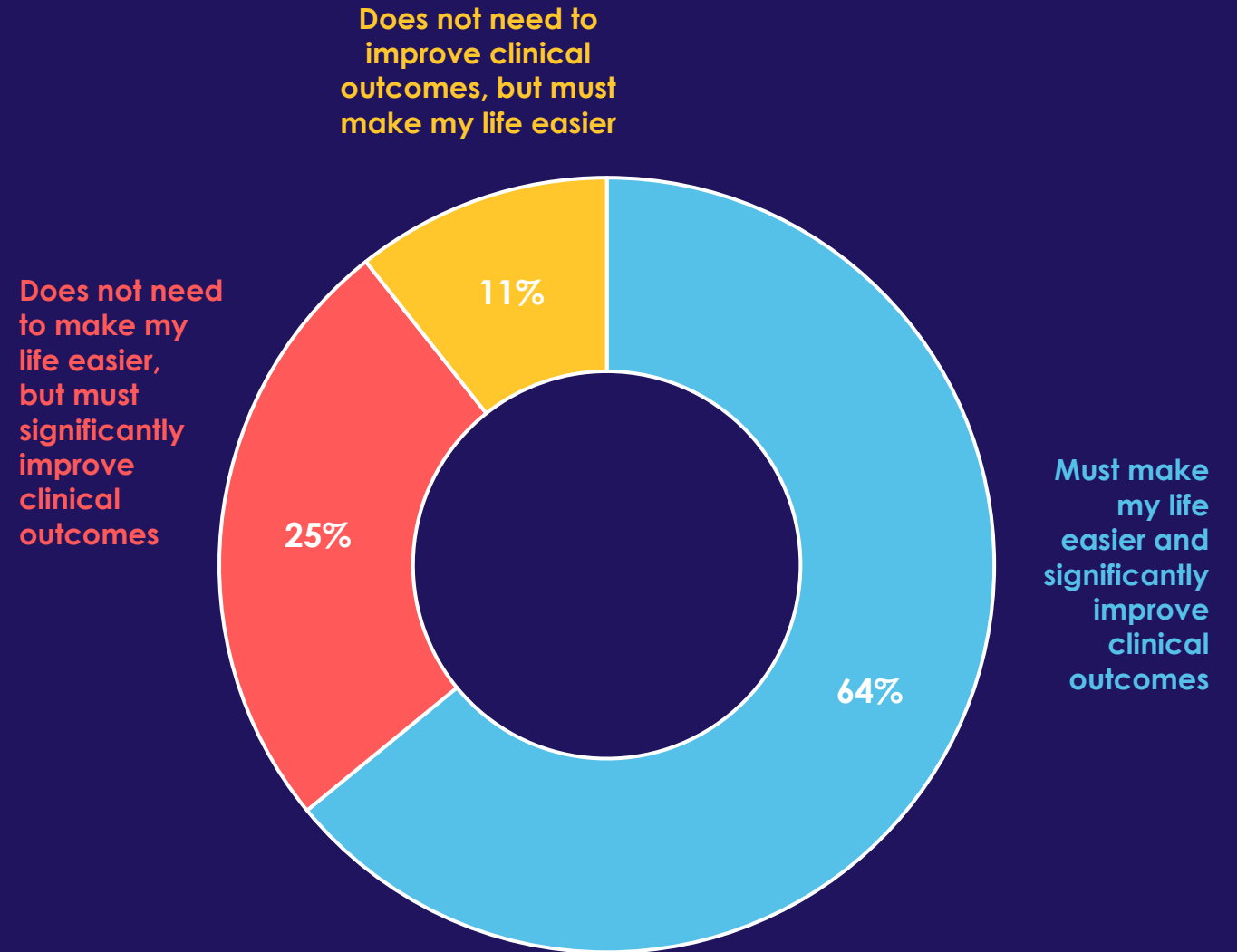


N=309

Digital tools must make life easier for clinicians and outcomes better.

Question

Which statement best describes "must be true" for you to adopt a digital health tool?

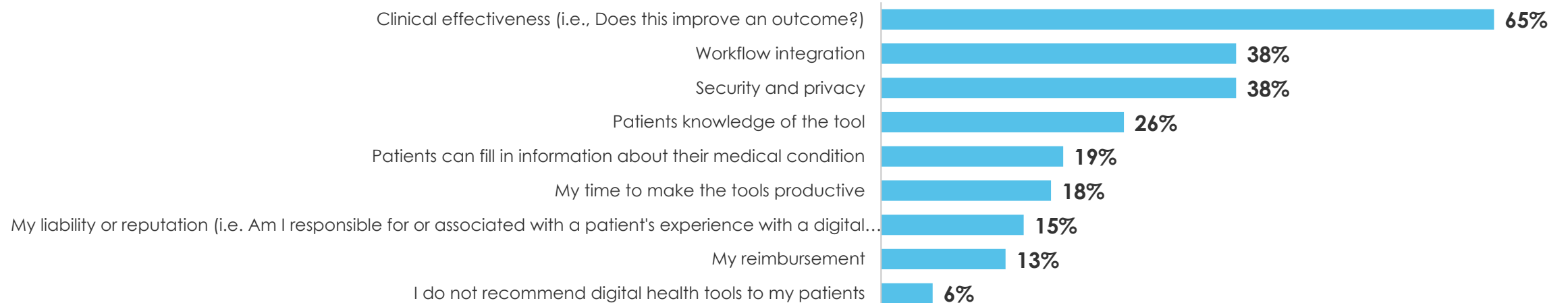


N=309

Clinical effectiveness of digital tools is pivotal for patient recommendation.

Question

If recommending digital health tools to patients, what are the most important factors?

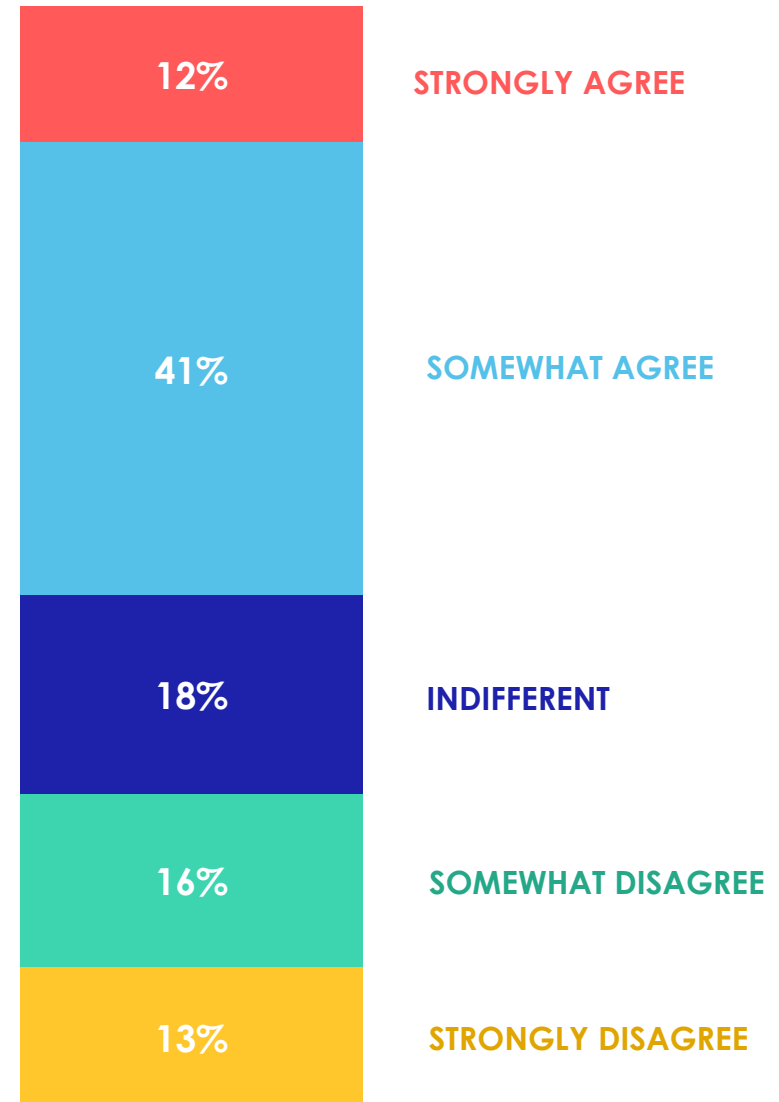


N=309

More than half of clinicians feel responsible for patients' data issues.

Question

"I feel personally responsible for any privacy issue or misuse of my patient's personal health information that might arise from the use of a digital health tool that I prescribe."

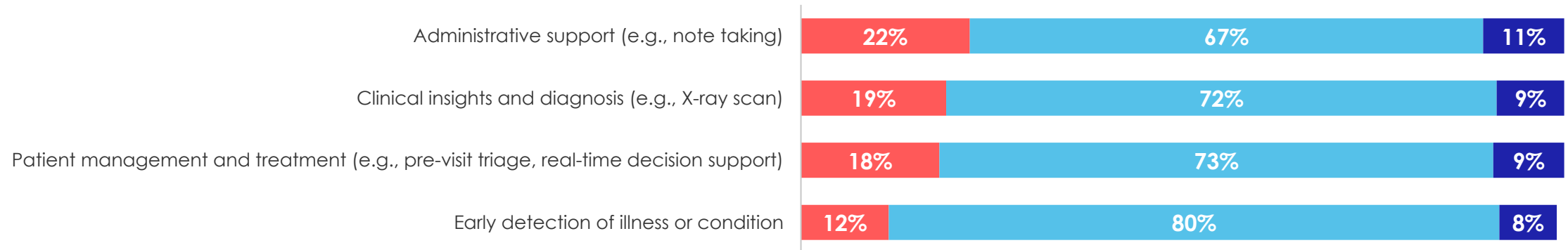


N=309

There is equal use of and interest in AI for clinical and admin support.

Question

Are you using or interested in using artificial intelligence tools in any of the following areas?



■ Use Now

■ Not using now, but interested in using the future

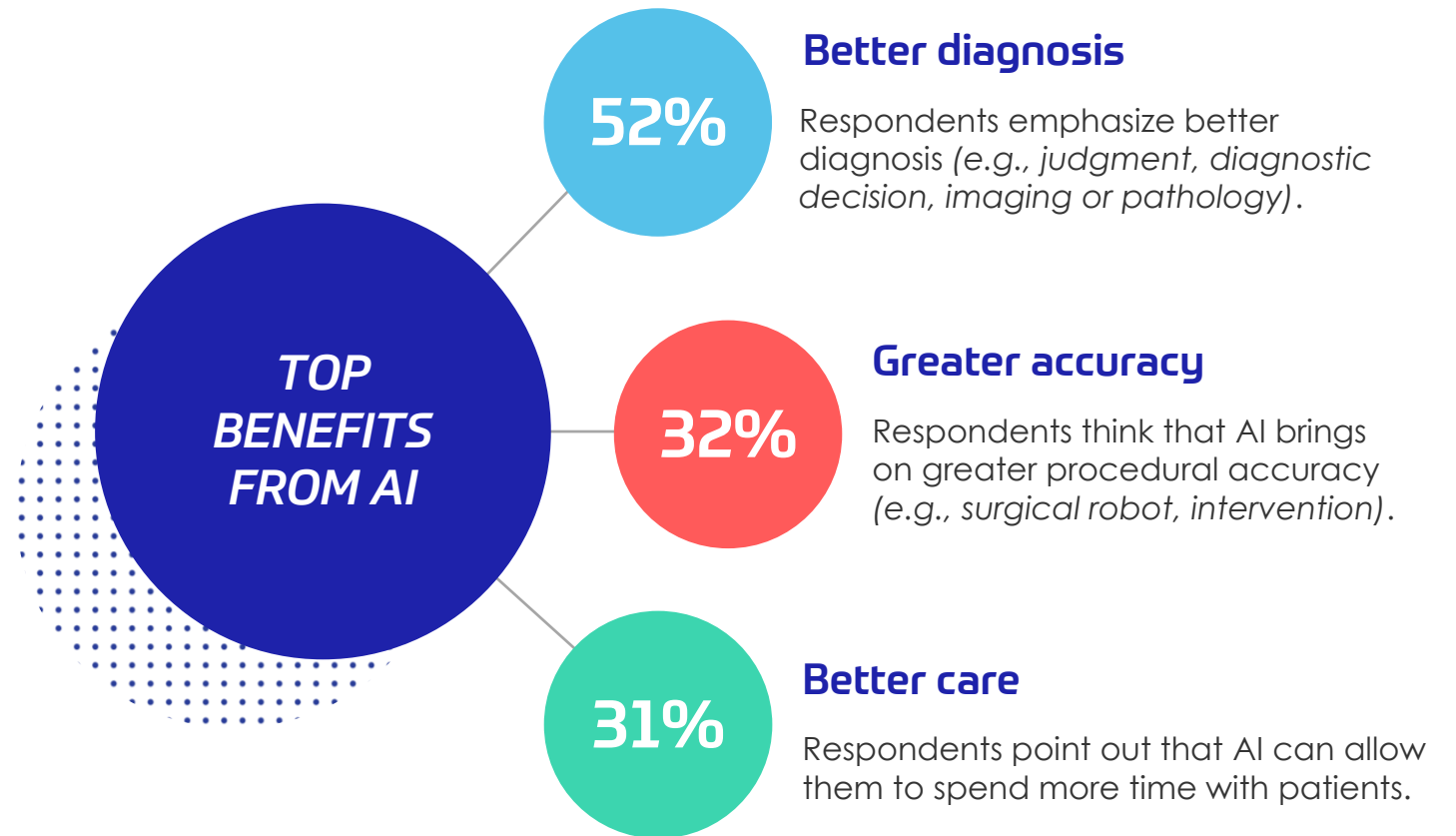
■ Not using now and not interested in using in the future

N=226

Clinicians See the Clinical Benefits of AI.

Question

Considering tools and software with artificial intelligence, what benefits do you see?

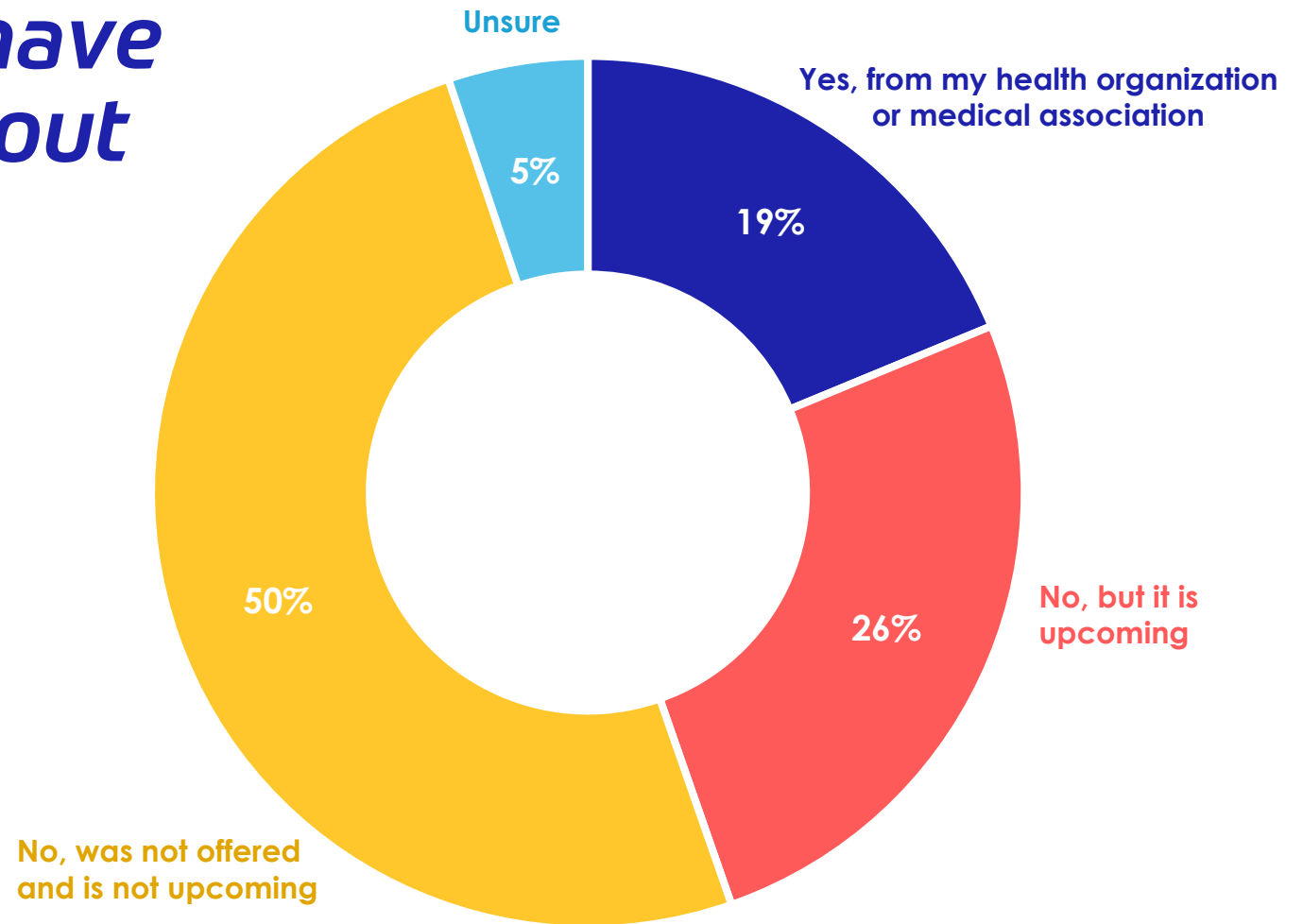


N=309

1 out of 5 clinicians have received training about AI and digital tools.

Question

Have you received training or information about new digital health tools and artificial intelligence?



N=309

Most Clinicians Feel Financially Stable Despite Past Pandemic Impacts.



Question

Did your financial situation change in the past 12 months?



Question

How would you describe your practice's current financial position?

N=309

Key Takeaways

Healthcare State: Resiliency in the New Normal

- Coming out of the peak of the pandemic, **clinicians were showing greater optimism and generally satisfied** with their career (86%). The pandemic was certainly challenging with nearly 30% of clinicians considering leaving medicine.
- However, clinicians still have a promising outlook for the future with **65% saying they would recommend the profession** to the next generation.

Digital Health Tools: Continued Acceleration

- Adoption of **digital health tools accelerated during the pandemic**. However, over 60% of clinicians still cite lack of interoperability between different systems as a hurdle to adopting new digital health tools.
- Security is a key consideration of adoption, but 82% of clinicians trust in their organization's ability to protect patient health information.
- Clinicians are highly likely to **recommend digital tools** to patients (92% recommend tools, with the top three recommendations being: 60% electronic health records, 57% remote and virtual care with a healthcare professional, 52% mobile/tablet applications).

Key Takeaways *(continued)*

AI/ML: Openness and a Growing Need for Training

- There is an **opportunity to share information and provide training around AI/ML** as only one in five clinicians have received training to date. For those who are not using and not interested, **lack of trust in the AI/ML developers** was the greatest reason for hesitation.

Financial Impact: Less Stability, But Not Devastation

- The financial impact of the pandemic seemed manageable with **70% of clinicians describing their current financial position as stable** and only 12% of practices being somewhat or highly financially unstable.
- **Improving clinical outcomes** far outweighed financial incentives in encouraging clinicians to recommend digital tools to patients (clinical effectiveness was the most important factor with 65%; and reimbursement was the least important factor with only 13%).

Payer Insights

Shreesh Tiwari

Principal, Leader of Health Plan & Provider Digital, Analytics & Technology Practice, ZS

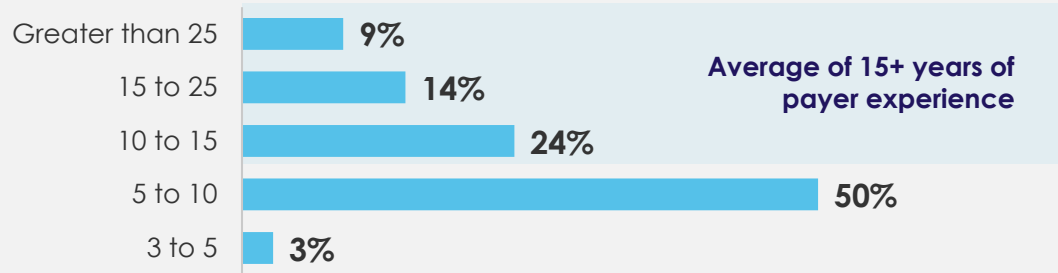
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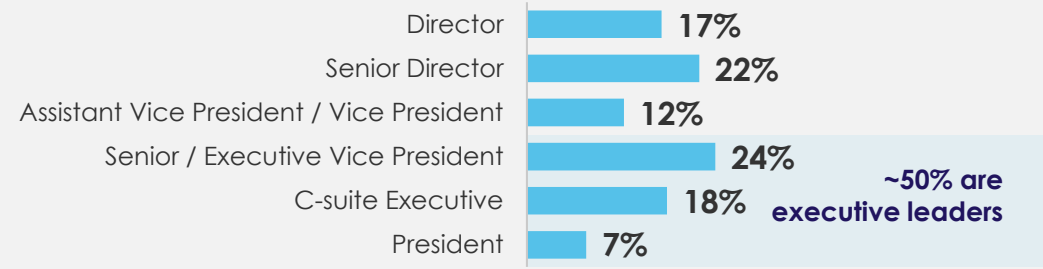
Payer Research Focus

Digital health implementations, artificial intelligence/machine learning (AI/ML) operations, and financial health / regulations

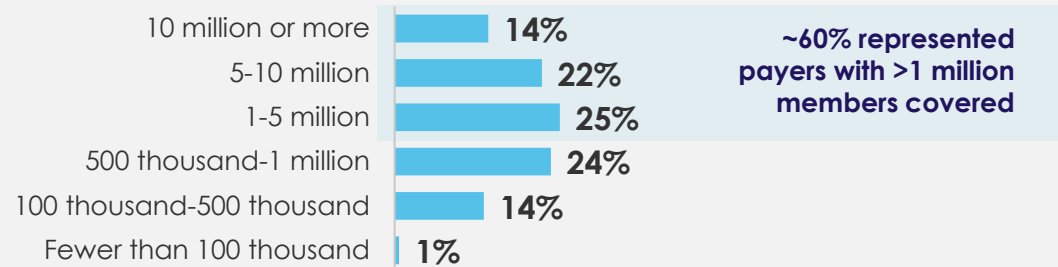
Years of experience in health insurance industry



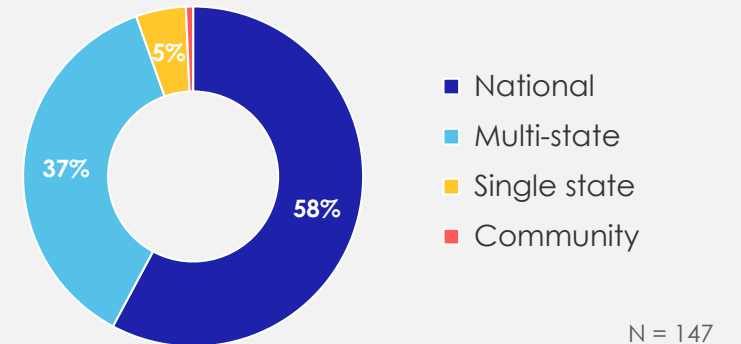
Most recent position in health insurance industry



Number of members covered across all lines of business



Payers by membership coverage

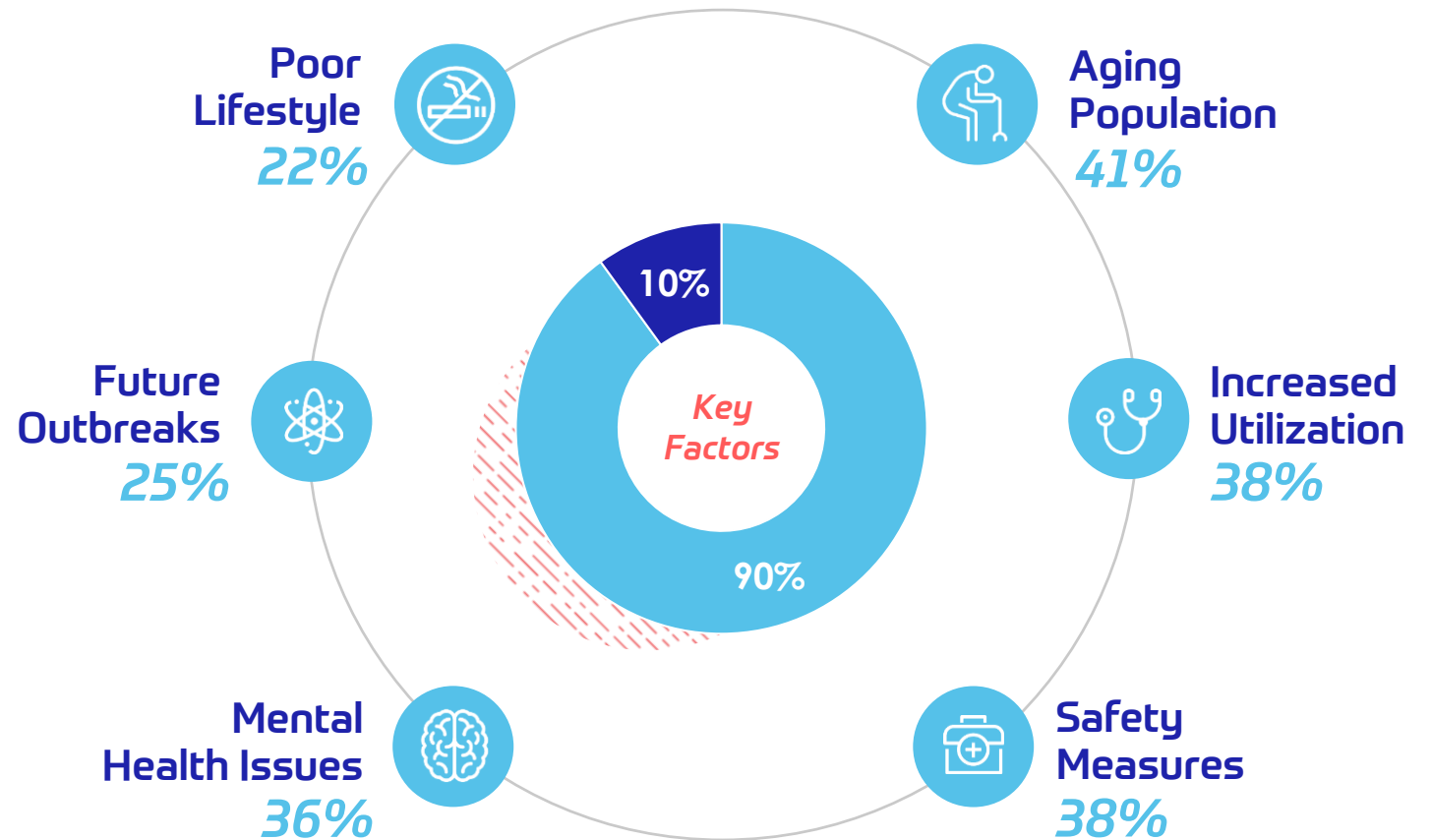


Data labels <3% are not displayed in the charts. How long have you been working in the health insurance industry? Which of the following titles best describes your "most recent position" in the health insurance industry? Please select the approximate number of members covered by your company across all lines of business. At what level does your company operate?

Healthcare Costs Continue to Rise

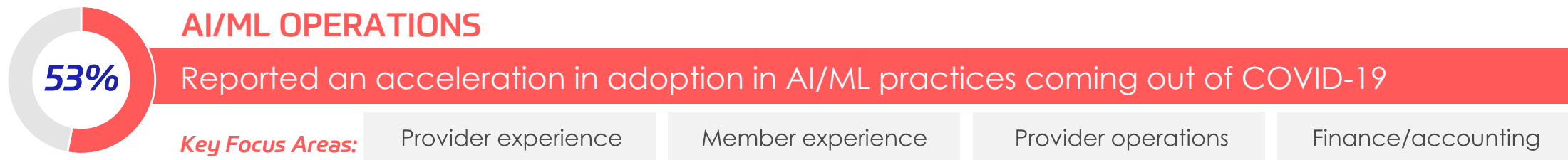
Expected change in healthcare costs and spend:

- **Aging population** is the top reason for an increase in costs
- **Increased utilization** and **safety measures** follow closely, likely as a result of an aging population



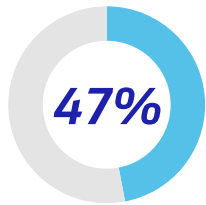
N = 134
What are your expectations with regards to trends in healthcare costs and spend over the next few years? (Rank 1 vs Rank 2&3). Which of these do you expect to be the drivers influencing an increase in healthcare costs over the next few years? (Rank 1&2)

COVID-19 Led to an Increase in Technological Adoption and Innovation Throughout Healthcare, Spanning Across Multiple Functional Areas

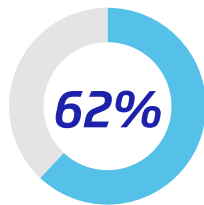


What was the overall impact of digital health initiatives on healthcare delivery during COVID-19? (Rank 1) (N=126). Which digital health initiatives are/will be a strategic focus for your organization, both coming out of COVID-19 and looking ahead to 2025? (N=126). How much impact did COVID-19 have in adoption of AI/ML practices? (Rank 1) (N=116). Which of the following operations in your organization have the highest level of AI/ML involvement, both coming out of COVID-19 and looking ahead to 2025? (N=116). Did the COVID-19 pandemic have an impact on adoption of value-based care arrangements for payments to providers? (Rank 1) (N=134). What are the biggest drivers influencing providers to adopt value-based care arrangements, both coming out of COVID-19 and looking ahead to 2025? (N=134)

INSIGHT 1: Operational maturity is taking hold, and continued improvement is a priority for those driven by AI/ML and automation

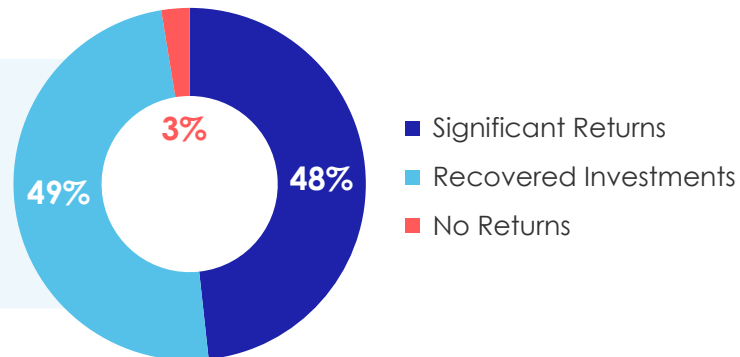


Have a dedicated innovation lab for AI/ML and enterprise-wide adoption



Consider improving AI/ML capabilities and driving adoption as extremely high priorities

Payers are realizing ROI with AI/ML: Half saw significant return, and almost everyone else broke even or better



- Significant Returns
- Recovered Investments
- No Returns

Plans have AI/ML operations almost equally spread across all functions/operations

Payers are most focused in these top two areas

Member experience	42%
Provider operations	41%
Provider experience	40%
Finance and accounting	39%
Sales and marketing	35%
Member operations	34%
Claims operations	34%
Clinical operations	34%

N = 116

How would you rate your organization's current maturity level in AI/ML? (Rank 1). How much of an organizational priority is it to improve AI/ML capabilities and drive adoption? (Rank 1).

Emerging from the COVID-19 pandemic, how significant were the returns on AI/ML investments for the work you drive within your organization?

Which of the following operations in your organization have the highest level of AI/ML involvement, both coming out of COVID-19 and looking ahead to 2025? (Rank 1,2&3)

INSIGHT 2: Today's challenges to innovation are more technological than cultural in nature



DIGITAL HEALTH IMPLEMENTATION

Key Barriers

- Privacy/security concerns (40%)
- Steep learning curve for patients (39%)
- Data unavailability/reliability (33%)

Drivers to enhance adoption

- Interoperability (63%)
- Technology enablers:
 - Cloud computing (55%)
 - Internet of Things (50%)



AI/ML OPERATIONS

Key Barriers

- Performance/scalability issues (41%)
- Data availability/reliability (32%)
- Keeping pace with rapidly evolving technology (32%)

Drivers to enhance adoption

- Evolving data landscape and quality (71%)
- Increased ability to process and compute data (66%)
- Shift in consumer behavior in favor of AI/ML (64%)

Technical limitations dominate the barriers hindering technological adoption

What are the biggest barriers to patient/member adoption of digital health initiatives over the next 5 years? (Rank 1,2&3) (N=126). To what extent do you agree that data interoperability will be a driving force for digital health adoption? (Rank 1) (N=126). Over the next 5 years, what innovations in cybersecurity technologies do you believe will be the biggest enablers to protecting your organization? (Rank 1&2) (N=126). What are the biggest challenges your organization is facing with adoption of prescriptive/predictive analytics, both coming out COVID-19 and looking ahead to 2025? (Rank 1,2 &3) (N=116). Looking ahead to 2025, which of the following will drive adoption of predictive and prescriptive analytics using AI/ML? (Rank 1) (N=116)

INSIGHT 3: Payers rely on healthcare IT startups and big tech to drive technology innovations



TECHNOLOGICAL INNOVATION

Stakeholder involvement

- Health/IT startups (53%)
- Big tech companies (47%)

The government plays a key role: ~46% think current policies and regulations keep up with industry evolutions and facilitate innovation



ECOSYSTEM INTEGRATION

Stakeholder involvement

- Government (41%)
- Big tech companies (37%)
- Health/IT startups (34%)
- Social activists (33%)

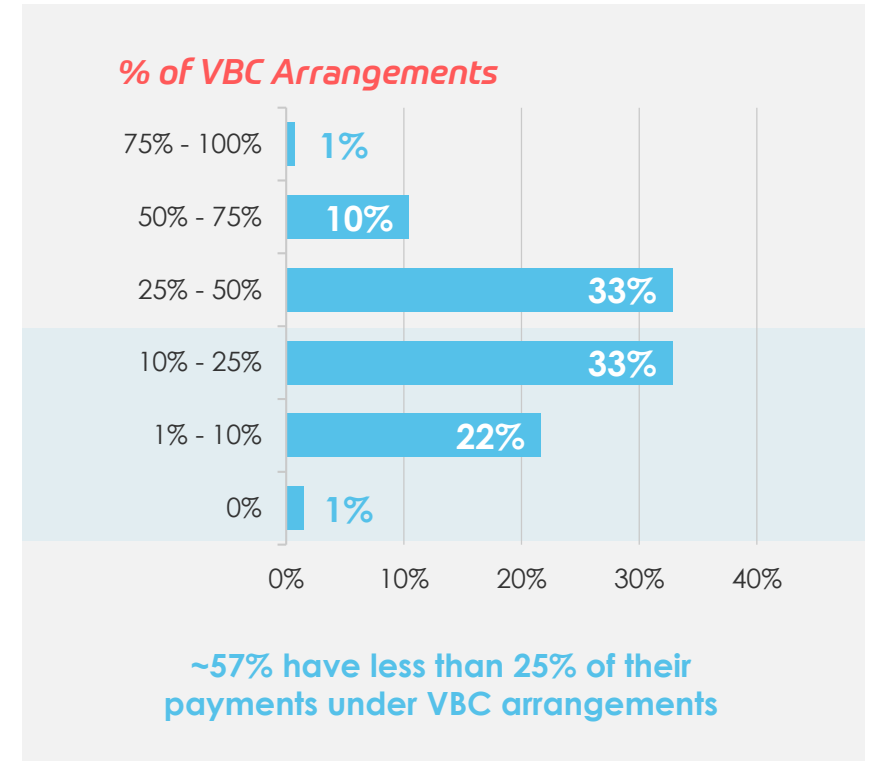
53% think emerging health/IT startups are one of the primary drivers helping facilitate payers – provider integration, and incentive alignment

What stakeholder groups do you see driving innovation in digital health, both coming out of COVID-19 and looking ahead to 2025? (Rank 1,2&3) (n=126). Emerging from the COVID-19 pandemic, do you think government policies and regulations are keeping up with healthcare innovation? (Rank 1) (n=134) In your opinion, which of the following stakeholder groups will be driving the major healthcare payment reforms? (Rank 1,2&3) (n=76). Looking ahead to 2025, what do you see as the future of value-based care? (Rank 1,2&3) (N=134)

INSIGHT 4: There's an increase in provider adoption of VBC arrangements, which has recently been a focus area for regulatory and payment reforms

Current adoption of VBC arrangements

- Providers' willingness to adopt VBC arrangements is driven by increased consolidations and varied differences in cost/quality
- During the pandemic, providers who operated under VBC arrangements have fared relatively better
- Reforms are primarily focused on provider reimbursements, payment transparency and increased payment for VBC



N = 134

How likely are major healthcare payment reforms to occur? What areas do you think the healthcare payment reforms will impact the most? (Rank 1&2). What percentage of your organization's payments to providers are done through/ expected to be done through value-based care arrangements, both coming out of COVID-19 and looking ahead to 2025?

Key Takeaways

- **Operational maturity** is taking hold, and continued improvement is a priority for those driven by **AI/ML and automation**
- Today's **challenges to innovation** are more **technological than cultural** in nature
- Payers rely on **healthcare IT startups** and **big tech** to **drive technology innovations**
- There's an **increase in provider adoption of value-based care** arrangements, which has recently been a focus area for regulatory and payment reforms

Patient Insights

Lauren Goodman

Director Market Intelligence, HIMSS

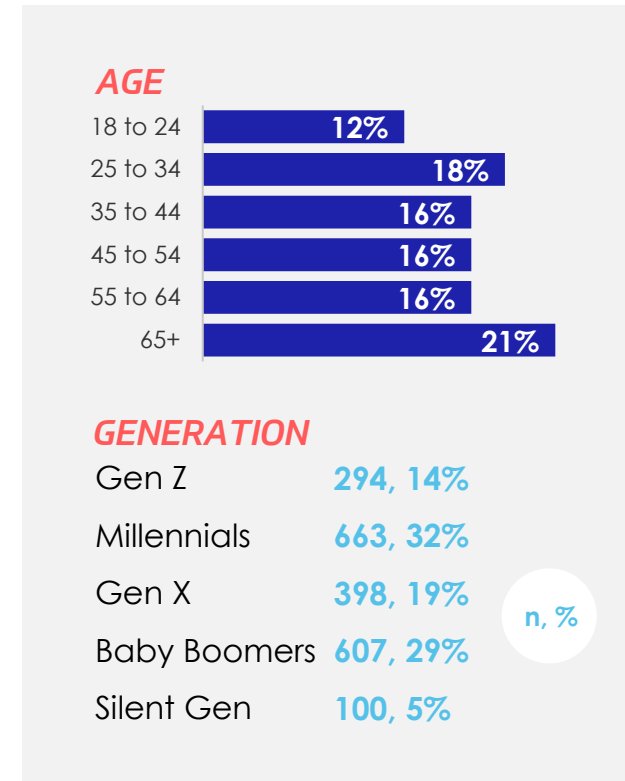
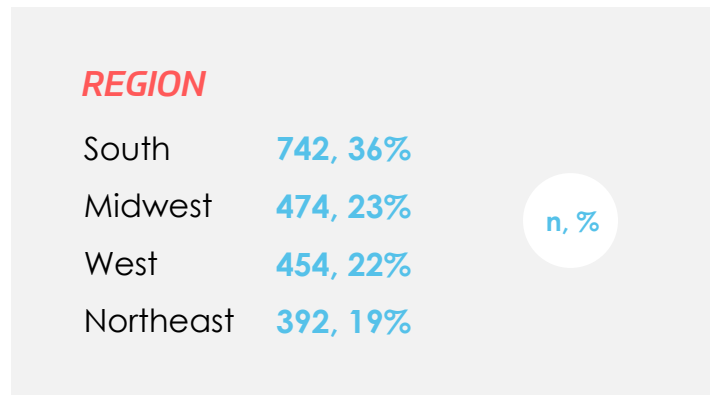
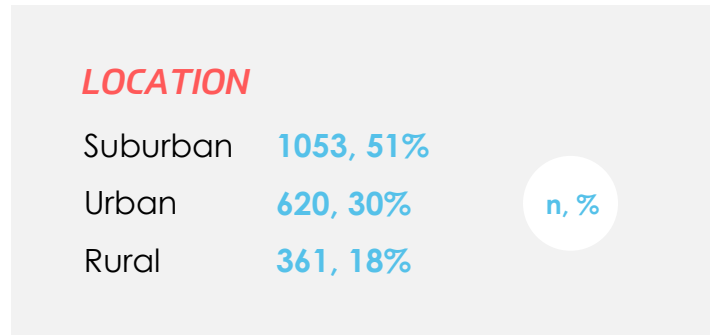
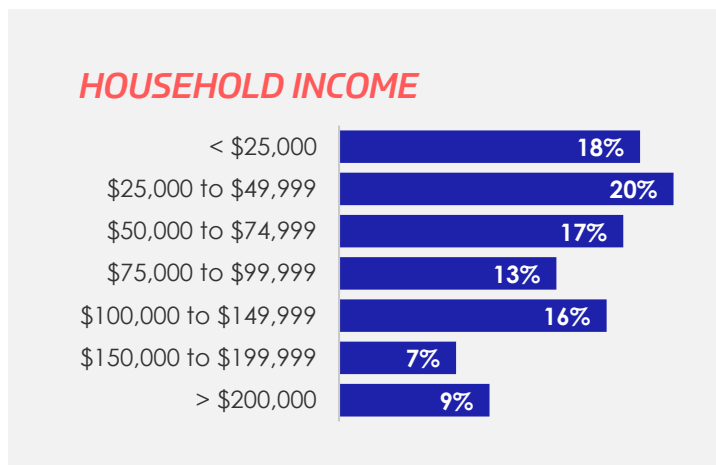
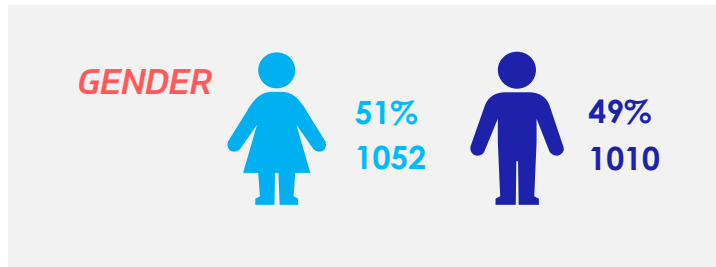
STATE OF HEALTHCARE

HIMSS **21**

DISCLAIMER: The views and opinions expressed in this presentation are those of the author and do not necessarily represent official policy or position of HIMSS.

Demographics

Respondents (100%*=2062)



*Note: % may not sum up to 100% due to round-ups

Demographics

Respondents (100%*=2062)

MARITAL STATUS

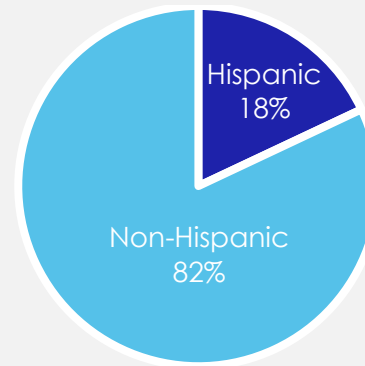
Has Partner	1147, 56%	n, %
Never Married	606, 29%	
Other**	310, 15%	

EDUCATION

*Other: 1%

HS diploma or less	16%
Some college / Associates	32%
4 year degree	32%
Masters or higher	21%

HISPANIC



ETHNICITY

White	1485, 72%	n, %
Black	247, 12%	
Asian	118, 6%	
Other	212, 10%	

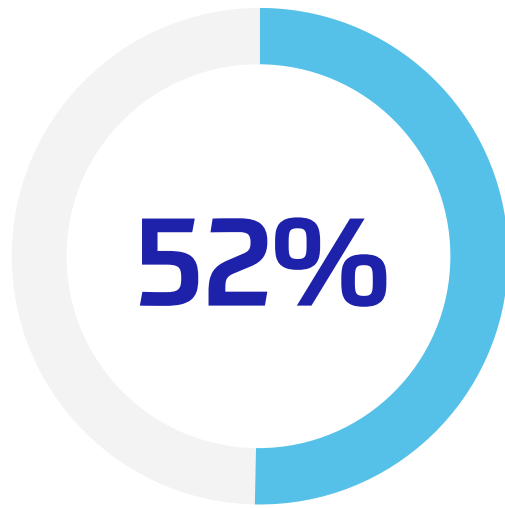
EMPLOYMENT

Full Time	875, 42%	n, %
Retired	452, 22%	
Part Time / Self Employed	295, 14%	
Out of Work	207, 10%	
Unable to Work	119, 6%	
Student	114, 6%	

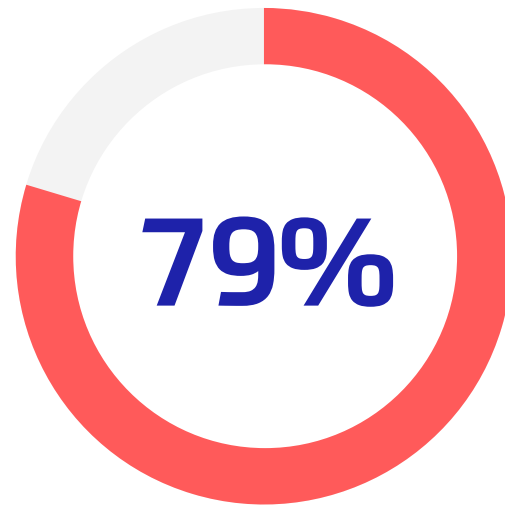
*Note: % may not sum up to 100% due to round-ups

**Other = Divorced, Widow/Widower, Separated

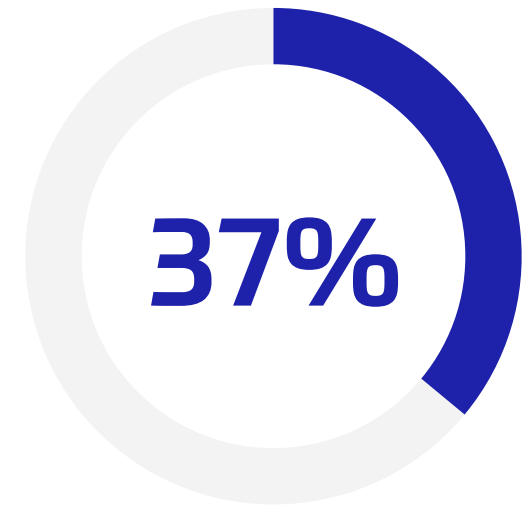
State of Healthcare: Patients' Perspective



Have had **at least one telehealth visit** in the last 12 months



Believe healthcare costs in America are **too expensive**

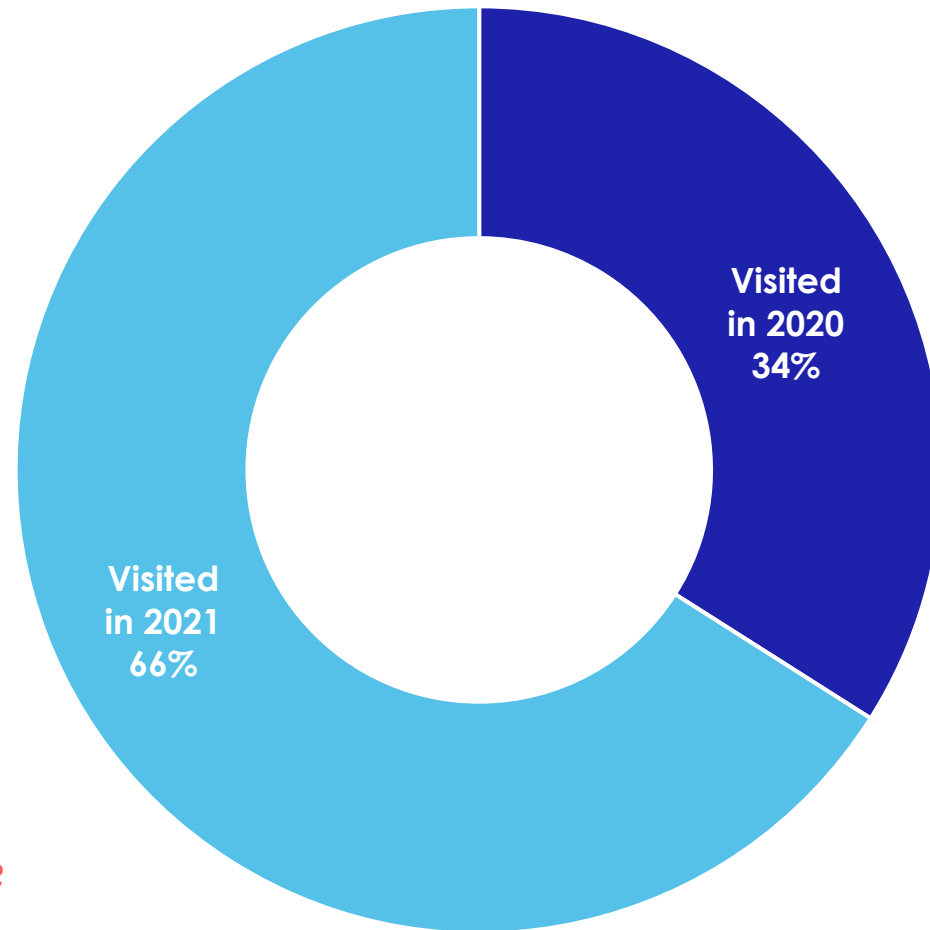


Use **wearable tech** to track their health

N=2062
For all of your visits with your healthcare provider(s) in the past 12 months, how did you interact with them? Healthcare costs in America are...?
Do you currently use a wearable technology device to track any of the below? A device may be an Apple Watch, Fitbit, etc.

Two-Thirds Have Visited a Provider in First Three Months of 2021

And when did you see that healthcare provider?
Either in person or telehealth



70%

of Black patients and 67% of white patients visited a healthcare provider in 2021 v. 57% of Asian patients

71%

of baby boomers visited a healthcare provider in 2021 v. 63% of Gen Z and Millennials

50%

of uninsured patients visited a healthcare provider in 2021 v. 67% of all others

N=2062

Most Recent Provider Visit Specialty Or PCP

What type of healthcare provider did you see most recently?

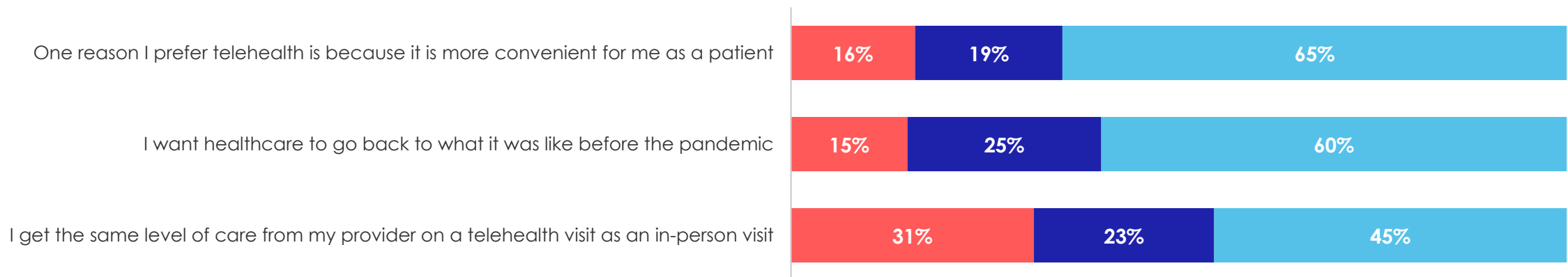


N=2062

Primary Value of Telehealth is Patient Convenience

When thinking of your telehealth visits in the past 12 months, please tell us your level of agreement with the below statements.

■ Disagree/Completely disagree ■ Neutral ■ Agree/Completely agree



N=1074
Only asked of respondents who indicated having at least one telehealth appointment in last 12 months

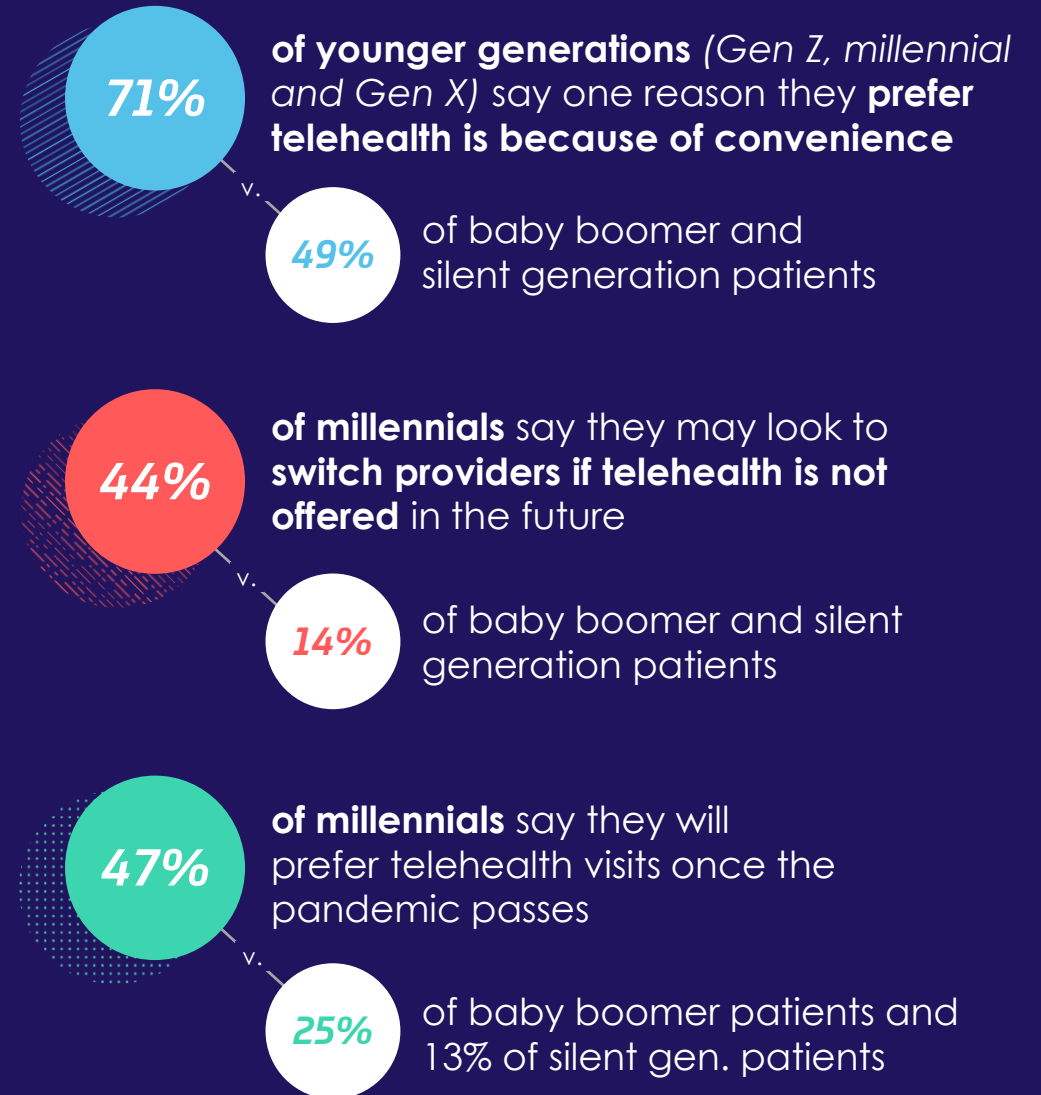
Younger Patients View Telehealth More Favorably

When thinking of your telehealth visits in the past 12 months, please tell us your level of agreement with the below statements.

N=1074

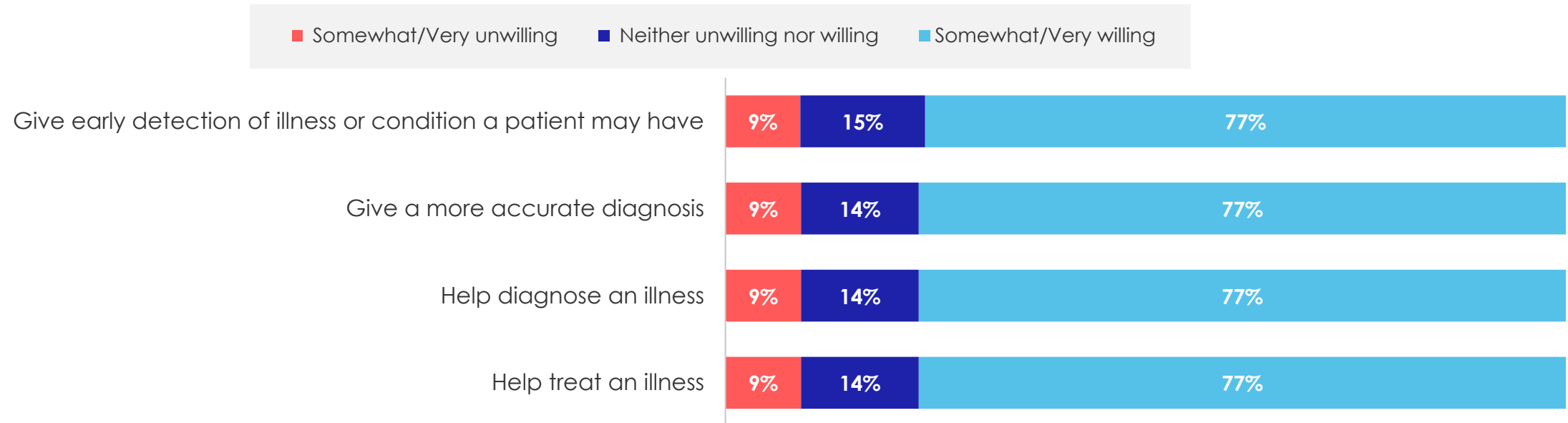
Only asked of respondents who indicated having at least one telehealth appointment in last 12 months

% Shown represent net of "Completely Agree" and "Agree"



Patients Willing to Share Their Health Data for Treatment Benefits

How willing or unwilling are you to share your personal health data with healthcare organizations if they can do the following for you?

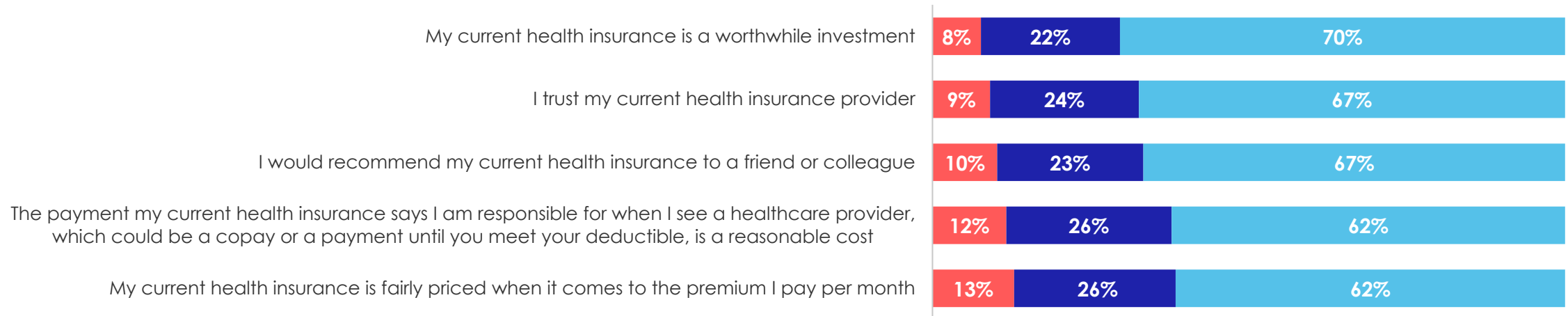


N=2062

Patients are Generally Satisfied with Their Health Insurance

When thinking of your current health insurance, please tell us your level of agreement with the below statements.

■ Somewhat/Completely disagree ■ Neutral ■ Somewhat/Completely agree



N=1944
Those who are uninsured or not sure of their insurance type did not see this set of questions (n=118 respondents)

Key Takeaways

- **Two-thirds** of patients **have visited a healthcare provider in early 2021** despite the pandemic
- **Convenience is a major benefit to telehealth**, with 65% of patients indicating they prefer telehealth due to the convenience compared with in-office appointments
- Unsurprisingly, younger generations are more favorable toward telehealth—**nearly half of millennials say they will prefer telehealth after the pandemic** compared with less than a quarter of older generations
- When considering the use of digital health services, patients are concerned level of care may decline—but **many are willing to share healthcare data with providers** to improve the care they receive
- **Patients are generally satisfied with their health insurance**, particularly amongst older generations—likely due to differences in plan types between various age groups and/or pandemic impact, the perceived value, including free telehealth and COVID-19 tests