



AI & Automation in Healthcare:

Transforming Care Models for a Smarter Future

Introduction

Across the country, health systems are facing an urgent challenge: **a growing demand for care and a shrinking clinical workforce.**

Traditional models of care—built on 1:1, in-person interactions—can no longer keep pace. **Health systems must adopt smarter, more scalable ways to deliver care** to maintain access, quality, and financial stability. Innovative care models powered by virtual care, AI, and automation offer a path forward.



This report is for visionary hospital and health system leaders looking to **scale innovative, tech-enabled care models** to meet the growing service demand despite physician shortages.

Key takeaways

- **The workforce crisis is accelerating**—health systems must evolve or risk worsening shortages, longer wait times, and lower revenue.
- **New care models are a scalable path forward**, leveraging modernized care models
- to expand provider capacity and generate revenue.
- **AI and automation are no longer optional**—they are essential building blocks for innovative care models that will meet the needs of tomorrow.

*We don't have
enough physicians...*

60%
of hospitals lack
coverage in key areas¹

30%
of inpatient hospitalizations
require a specialist²

8-18 months
is the average time to fill an
open specialist position³

85%
of healthcare organizations
currently rely on locums⁴

*the problem
is accelerating...*

20%
of the U.S. population
will be 65+ by 2030⁵

57%
of the population 65+
requires specialist care⁶

50%
of practicing physicians are
reaching retirement age⁷

10%
increase in hospitalizations
predicted by 2030⁸

The gap between
physician supply
and demand **costs**
the system **billions**
each year.

and the costs are growing

2-3x more
—cost of locums
vs. permanent staff⁹

\$200K
cost per patient,
from referral leakage¹⁰

\$7-9K
average cost of a physician
vacancy per day¹¹

As provider shortages persist and demand for care rises,
health systems need smarter, scalable ways to deliver high-quality services



Innovative, tech-enabled care models can solve the problem—
with big benefits for health systems, providers, and patients

Virtual care, automation, and AI are helping organizations work more efficiently, adapt more flexibly, and **extend the reach of their clinical teams.**

Delivering a **real and measurable impact:**

For health systems

- Reduced system leakage
- Improved patient throughput
- Fewer avoidable costly transfers
- Efficient specialty coverage
- Lower operational costs
- Monetized specialist networks
- Optimal provider utilization

For physicians

- Increased clinical efficiency
- Improved work-life balance
- Reduced documentation burden
- Enhanced clinical collaboration
- Practicing at the top of their license
- More time for direct patient care

For patients

- Faster access to specialized care locally
- More accurate and timely diagnoses
- Better continuity and personalization of care
- Greater satisfaction with the care received



6 ways health systems can leverage innovative, tech-enabled care to improve clinical and operational efficiencies and expand access to services



Hub-and-spoke models

Specialists at a tertiary care center or flagship program provide coverage to smaller hospitals within their network that lack specialty care, reducing unnecessary intersystem transfers, and extending expertise system-wide.



Optimizing APP utilization

Strategically integrating APPs for lower acuity cases and escalating complex cases to physicians, so everyone on the team works at the top of their license.



Flexible staffing to retain providers

Providers split their time between onsite shifts and remote shifts at the hospital—reducing burnout and improving work-life balance.



Bunkered teams covering multiple sites

A dedicated group of physicians work full-time virtually from a centralized control center or home, supporting hospitals, urgent care centers, and clinics on demand.



Monetizing specialist networks

A health system leverages its own specialist networks as a revenue-generating service, offering virtual specialty care to other hospitals needing coverage.



Blended coverage with external network

Combine in-house employed physicians with external partner specialists to create a shared coverage pool, augmenting coverage without the cost or complexity of adding additional full-time staffing.

The tech-enabled recruiting advantage:

Physicians will choose to work at health systems with the best tools and workflows

Specialists are already seeking out workplaces where technology enhances, not hinders, their ability to deliver care. Going forward, hospitals that invest in tools that make physicians' lives easier **will have a clear edge in both recruiting and retention.**

50% of physicians are experiencing burnout¹²

60% of physicians say their greatest need is **improving routine processes** in their clinical practice¹³

92% of physicians ages 30-45 prioritize **work-life balance**¹⁴

“I love working on the AmplifyMD platform. I can cover multiple hospitals quickly and easily, documentation and communication are a snap, and because of how easy it is to work with, I find I’m actually able to spend more time with each patient than I ever was before.”

–Infectious Disease Specialist



Scaling what's next: The four pillars of innovative, tech-enabled care

Point solutions have solved specific challenges but lack the comprehensive, integrated infrastructure needed to drive meaningful efficiencies. **For tech-enabled care at scale, organizations need systems built on a strong foundation across four key pillars:**

PILLAR #1

Bi-directional integrations

to connect systems and keep information flowing

PILLAR #2

Rules-based automations

to streamline workflows and reduce manual tasks

PILLAR #3

Advanced data analytics

to surface insights and guide decision making

PILLAR #4

Embedded AI tools

to enhance efficiency and clinical precision

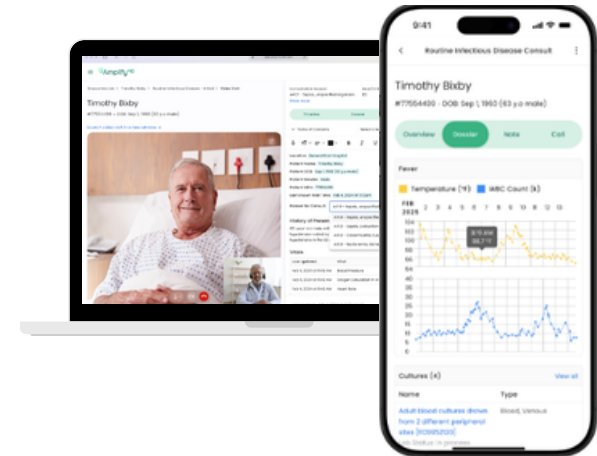


These pillars don't just support tech-enabled care models—**they power a new era of connected, intelligent, and efficient care.**

Bi-directional integrations: the backbone of tech-enabled care models

Efficient, tech-enabled care depends not just on connected systems but on **deep, intelligent integrations that actively push and pull critical patient information to the right place at the right time.**

True interoperability means remote providers don't just access a system—they access key information seamlessly, and can work through an entire encounter without context shifting or multiple logins.



Are siloed EHR and other clinical data systems holding you back?

Most EHRs don't play well with others—locking critical patient data in silos.¹⁵ Adding to the pain, most virtual care tools fail to integrate meaningfully with EHRs or other clinical databases. The result? More systems, more logins, double documentation, and extra friction for already stretched teams.

AmplifyMD's platform integrates bi-directionally with all major EHRs and clinical data systems, putting essential information at the remote provider's fingertips and automatically pushing notes back into the EHR.

Case Study: Integrating data from multiple EHRs to scale virtual specialty care

A multi-state health system needed to expand specialty access, but disparate EHRs (Epic, Meditech, CPSI) made scaling difficult. Remote providers logged into multiple systems, slowing consults and creating additional work.

By partnering with [AmplifyMD](#), the system could use one platform for all specialties, and specialists could **cover multiple locations with one login and no context shifting.**

ONE

Bi-directionally integrated virtual care platform supports all programs

6

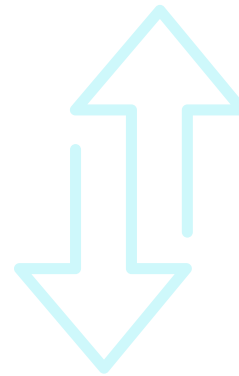
EHRs
connected

7

Service lines
launched

22

Programs,
and growing



“As new challenges arise, AmplifyMD continues to meet our virtual specialty care needs. They cover multiple specialties and their hardware-agnostic platform integrates with our EHRs, simplifying our telehealth expansion efforts.”

–Corporate Director of Telemedicine

AmplifyMD’s bi-directional integration pushes and pulls key information from multiple EHRs into a single interface, **making remote providers up to 2x more efficient.**

Rules-based automation: The quickest win for tech-enabled operational efficiency

Rules-based automation reduces manual work by handling routine, predictable tasks.

With powerful rules engines, health systems can streamline workflows from activation through billing—cutting delays, easing operational burdens, and freeing clinicians to focus on patient care. Automation replaces highly manual tasks with automated processes, **keeping providers focused on activities that provide the greatest value.**

Manual tasks across the entire workflow that can be automated:

- Provider assignments
- Clinical alerts and escalations
- Pre-filling clinical notes
- Validating documentation
- Care team communication
- Follow-up task reminders
- Patient and family updates
- Billing and compliance tasks

What if a virtual provider could get **2 hours back** during every shift?

A national physician practice switched to [AmplifyMD](#) to automate their remote workflows, resulting in up to **150 minutes of time saved per provider on every shift.**

Case Study: Automation leads to faster stroke care and lower costs

One of the nation's leading health systems replaced legacy TeleStroke programs at 30 hospitals with AmplifyMD.

AmplifyMD's technology **automated the entire stroke workflow**, eliminated the need for call center routing, and reduced operational costs by more than 50%. Most importantly, automation improved door-to-needle times.

38 SECONDS

activation to
physician
response

<45 MINUTES

activation to
completion
with notes in EHR

\$150+

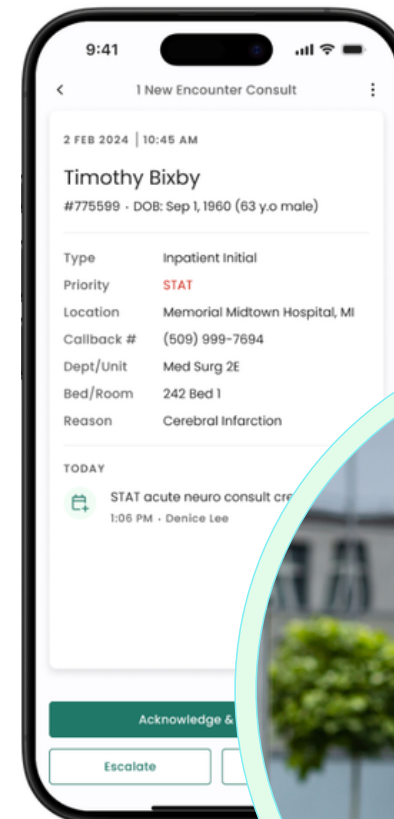
savings per
stroke
encounter

52%

Operational **cost savings**
over legacy solutions

"I have been doing TeleStroke for over a decade, and AmplifyMD is completely changing the way this care is delivered."

-National medical director



Advanced data analytics: Driving smarter decision making and continuous improvement

As hospitals and clinics expand virtual care across programs, locations, and provider teams, robust data and analytics become **essential for maintaining performance control and consistency at scale.**

A strong data infrastructure empowers organizations to monitor productivity, identify bottlenecks, and make informed decisions that reduce delays, balance workloads, and continuously improve outcomes. **With a data-driven approach, health systems can move from reactive management to proactive optimization—scaling innovative care models with confidence and precision.**

Key data examples:



Provider productivity

- Consults per shift
- Average consult duration
- Average documentation time
- Time between consults
- Consults by acuity level
- Outcome metrics by provider



Consult workflow

- Request to acknowledgement
- Time to video
- Consult time
- Documentation time
- Request to notes in EHR
- Disposition decision time



Hospital performance

- Admission rates
- Length of stay
- Transfer rates
- 30-day readmission rates
- ED throughput
- Observation times and rates

Case Study: Analytics improve coverage and costs for TeleHospitalist program spanning 11 different health systems

A national hospitalist group switched to the **AmplifyMD** platform for its TeleHospitalist programs serving 11 health systems.

Sophisticated data capture and a robust analytics dashboard shed light on provider utilization and productivity for cross-cover and admissions. Heat maps highlighted peak volume periods and underutilized physicians, **enabling leadership to adjust staffing dynamically.**

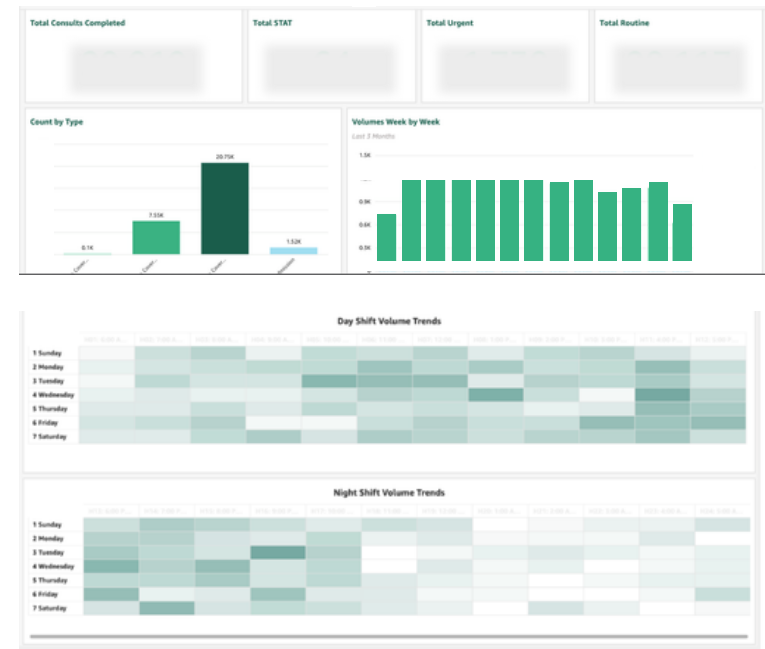
The result?

22%

REDUCTION in physician hours required per shift to support all programs

“With our previous telehealth platform, we had access to minimal data. Now, we can see minute-by-minute data at the provider level across all programs. Their forecasting tools gave us insights to restructure our coverage model which has reduced labor costs significantly.”

–National program director



Embedded AI tools: The new force multiplier in healthcare

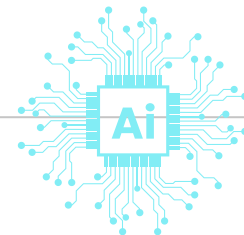
Artificial Intelligence (AI) is a powerful branch of computer science designed to replicate—and in some cases, surpass—human intelligence. It can learn from data, identify complex patterns, make informed decisions, and solve problems at scale.

In healthcare, AI is transforming care delivery. From diagnosis to treatment to ongoing patient monitoring, it's enabling faster, more accurate, and more personalized care. **When embedded into tech-enabled systems and clinical workflows, AI helps hospitals boost efficiency, reduce clinician burden, and optimize patient outcomes.**

A few of the tools showing great promise when integrated into tech-enabled workflows include:

- **AI-powered clinical decision support (CDS)** Providing real-time insights to help physicians make faster, more informed decisions.
- **Natural language processing (NLP)** Reducing documentation time by extracting key details from clinical conversations.
- **AI for remote patient monitoring (RPM)** Enhancing acute and chronic disease management by detecting changes and trends before they become crises.

Ambient AI scribes have already been proven to **save physicians ONE HOUR** of documenting at the keyboard per day¹⁶



The Case for AI: Enhancing care through new efficiencies

Artificial intelligence is poised to help physicians maximize their time, expertise, and impact. Over **\$150B of savings is anticipated as AI streamlines and offloads administrative and clinical workloads.**¹⁷

A recent survey by the AMA¹⁸ (American Medical Association) found that the majority of physicians strongly believe that AI will be most helpful in:

Work efficiency

69%

Diagnostic ability

72%

Clinical outcomes

61%

At [AmplifyMD](#), we're finding success with AI in supporting both clinical and operational workflows including:

- **Smart call summaries:** to turn transcripts into billable notes
- **Intelligent prompts:** to capture accurate coding
- **Clinical decision tools** to surface relevant protocols based on reason for consult

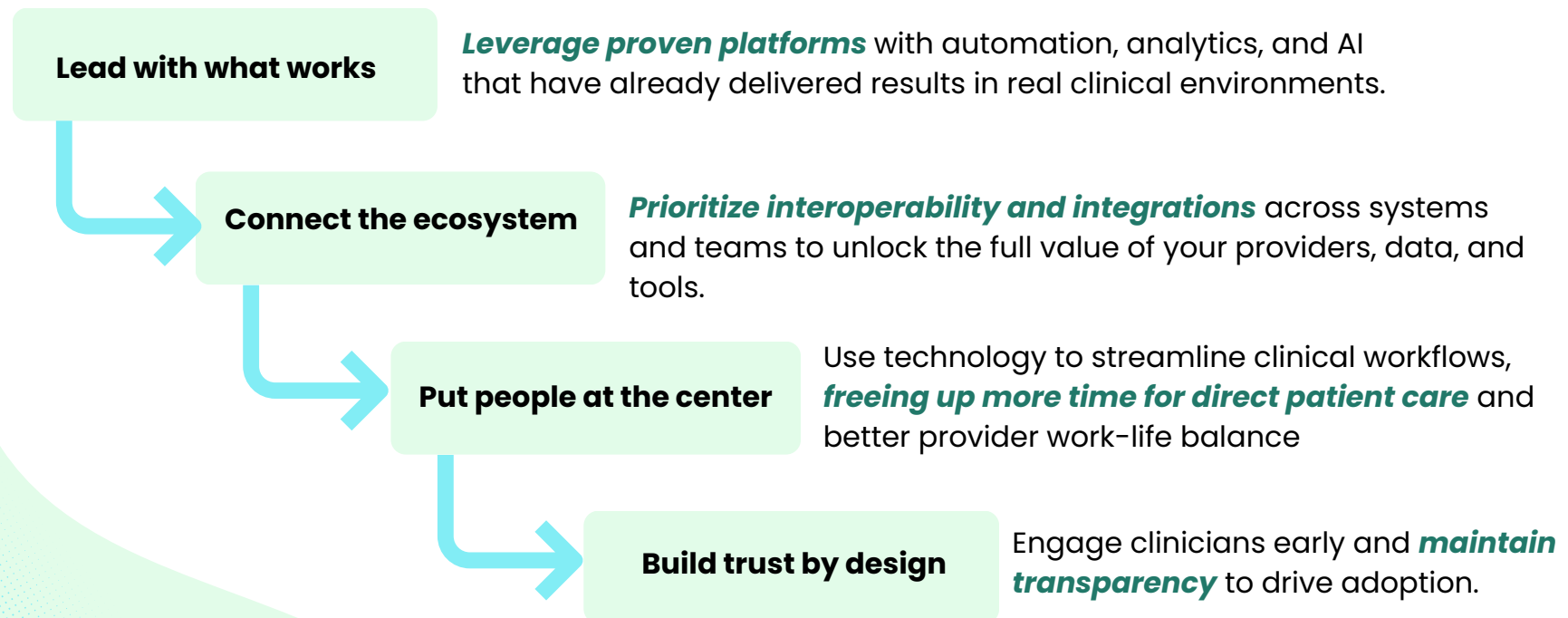
“Organizations most often find success when they focus on the problems they want to solve, not the shiny, new solutions that they want to use. We expect organizations will become even more thoughtful in their approach to AI as time goes on and as they evaluate what outcomes they want to achieve.”

—Klas Research, 2024

The challenge isn't just about adopting AI—it's making sure it benefits providers, not hinders them. **Hospitals should focus on solutions that embed intelligence into daily practice, not layer it on top.**

Taking action: Moving forward with innovative, tech-enabled clinical care models.

As health systems look to redesign care delivery for a more sustainable future, technology offers powerful tools to drive transformation. But success won't come from layering in isolated solutions—it requires a thoughtful, integrated approach. **By leveraging virtual care, AI, and automation in a coordinated way, health systems can move toward more efficient, scalable, and sustainable models of care.** These four foundational steps can help guide that shift.



Why AmplifyMD

AmplifyMD is the trusted partner for health systems ready to scale tech-enabled care.

We provide a fully integrated, AI-enhanced virtual care platform built to support virtual, hybrid, and team based care—**across all settings and specialties.**



- + **AI-enhanced efficiency:** Automate workflows and enhance clinical decision making
- + **Specialty access, solved:** 15+ specialties available to fill critical coverage gaps
- + **Seamless integration:** Bi-directional EHR connections, out-of-the-box

Proven ROI for health systems:

\$2M recouped from just a 1% drop in referral leakage

\$10K in revenue retained for every avoided transfer

\$1.2M in annual savings from reduced call center volumes

\$1.6M saved with hardware agnostic deployment

With over **225 active programs, 100,000+ annual consults,**
and a 50-state footprint, AmplifyMD is redefining how health
systems deliver high-quality, efficient care, everywhere it's needed.



Schedule a discovery call
or request a platform demo



info@amplifymd.com



AmplifyMD.com

References

- 1 – CMS DRG data 2021; CMS IPPS claims data 2021; AmplifyMD Analysis
- 2 – CMS DRG data 2021; CMS IPPS claims data 2021; AmplifyMD Analysis
- 3 – How to Control the Physician Recruitment Timeline, Jackson Physician Search (2023, December 7) <https://www.jacksonphysiciansearch.com/insights/how-to-control-the-physician-recruitment-timeline/>
- 4 – Cross, J., Lolla, Y., Fichman, C., Weingarten, M., & Howley, M. (2024). The Cost of a Locum: A Simulation to Determine When You Are Paying Too Much for Your Anesthesia Locum Tenens Coverage. *Cureus*, 16(4), e58853. <https://pmc.ncbi.nlm.nih.gov/articles/PMC11115997/>
- 5 – Vespa, Jonathan, Medina, Lauren, Armstrong, David M., Demographic Turning Points for the United States: Population Projections for 2020 to 2060. Office of U.S. Census, <https://www.census.gov/content/dam/Census/library/publications/2020/demo/p25-1144.pdf>
- 6 – Liddy C, Drosinis P, Joschko J, Keely E. Improving Access to Specialist Care for an Aging Population. *Gerontol Geriatr Med*. 2016 Nov 7;2:2333721416677195. doi: 10.1177/2333721416677195. PMID: 28680942; PMCID: PMC5486481. <https://pmc.ncbi.nlm.nih.gov/articles/PMC5486481/>
- 7 – American Medical Association; AMA president sounds alarm on national physician shortage: <https://www.ama-assn.org/press-center/press-releases/ama-president-sounds-alarm-national-physician-shortage>
- 8 – Leuchter RK, Delarmente BA, Vangala S, Tsugawa Y, Sarkisian CA. Health Care Staffing Shortages and Potential National Hospital Bed Shortage. *JAMA Netw Open*. 2025;8(2):e2460645. doi:10.1001/jamanetworkopen.2024.60645 <https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2830387>
- 9 – Cross, J., Lolla, Y., Fichman, C., Weingarten, M., & Howley, M. (2024). The Cost of a Locum: A Simulation to Determine When You Are Paying Too Much for Your Anesthesia Locum Tenens Coverage. *Cureus*, 16(4), e58853. <https://pmc.ncbi.nlm.nih.gov/articles/PMC11115997/>
- 10 – Kuhn, E. N., Warmus, B. A., Davis, M. C., Oster, R. A., & Guthrie, B. L. (2016). Identification and cost of potentially avoidable transfers to a tertiary care neurosurgery service: a pilot study. *Neurosurgery*, 79(4), 541-548.
- 11 – Intelliworks, (2023, November 11). 21 Statistics that Summarize the Cost of Healthcare Recruiting and Retention <https://intelliworx.com/blog/healthcare-recruiting-retention/>
- 12 – American Medical Association. (2024, July 2). Physician burnout rate drops below 50% for first time in 4 years. AMA.
- 13 – Five Ways Automation in Healthcare Saves Clinicians' Time; <https://www.docwirenews.com/post/five-ways-automation-in-healthcare-saves-clinicians-time>
- 14 – Miller, Robert, American Medical Association (2017, March 27) Millennial Physicians Sound Off on the State of Medicine Today, <https://www.ama-assn.org/practice-management/physician-health/millennial-physicians-sound-state-medicine-today>
- 15 – Zhang X, Saltman R. Impact of Electronic Health Record Interoperability on Telehealth Service Outcomes. *JMIR Med Inform*. 2022 Jan 11;10(1):e31837. doi: 10.2196/31837. PMID: 34890347; PMCID: PMC8790688.
- 16 – Andis Robeznieks, American Medical Association. (2024, March 15) AI scribe saves doctors an hour at the keyboard every day. <https://www.deepscribe.ai/resources/3-ways-artificial-intelligence-can-streamline-physician-workflows-for-faster-care-delivery>
- 17 – Collier, Mathew, AI: Healthcare's new nervous system (2020, July 30), Accenture <https://www.accenture.com/au-en/insights/health/artificial-intelligence-healthcare>
- 18 – AMA: Physician enthusiasm grows for health care AI (2025, February 12) <https://www.ama-assn.org/press-center/press-releases/ama-physician-enthusiasm-grows-health-care-ai>