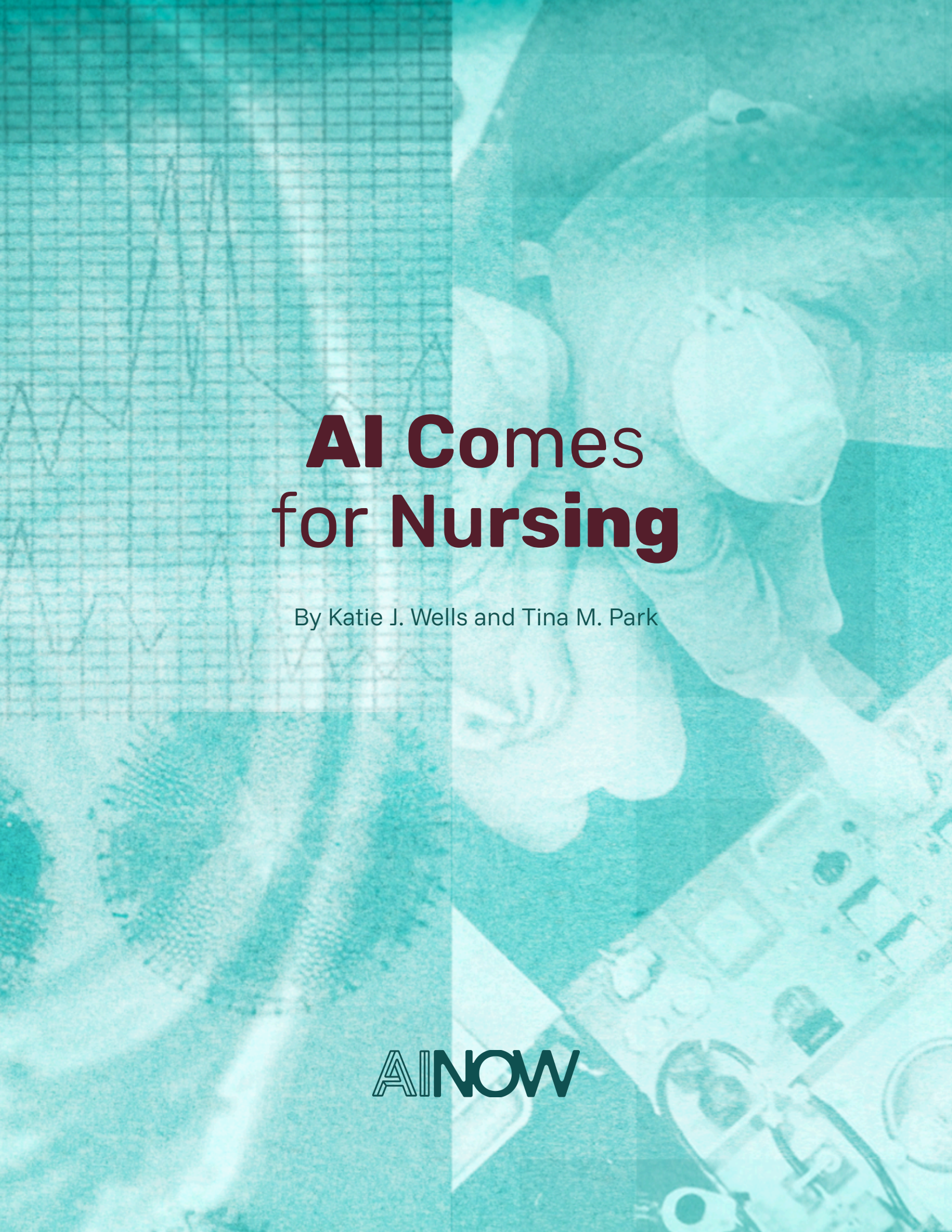


AI Comes for Nursing

By Katie J. Wells and Tina M. Park

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Executive Summary	**3**
Introduction	**4**
AI in Brief	5
Debunking the Myth: There's No Shortage of Nurses	6
Research Methodology	9
Shedding Light on the AI Tools Quietly Reorganizing Nursing: An Inventory	**11**
AI Scheduling: Timpani	**14**
The Tool	14
Corporate Power Analysis: The Google and Palantir Partnerships Powering Timpani	16
Company Claims Versus Workplace Reality: The AI Tool Promises Efficiency but Delivers Instability	19
AI Patient Monitoring: Oxevision	**24**
The Tool	24
Company Claims Versus Workplace Reality: Hedged Promises, Patient Neglect, and Diffused Authority in AI Implementation	27
AI Charting: Epic	**33**
The Tool	33
Corporate Power Analysis: Epic Systems' Data Monopoly	35
Company Claims Versus Workplace Reality: Ambient Scribes and the Shift from Patient Care to Babysitting Robots	38
Zooming Out: Nurses Absorb the Costs of Systems They Did Not Choose	41
Conclusion	**44**
Authors	**46**

Executive Summary

Artificial intelligence is reshaping healthcare as we know it. Hospital systems and healthcare technology firms are speeding up their AI adoption, despite little independent evidence that these tools improve patient care, workplace conditions, or the bottom lines of facilities. This transformation has been rapid, and, given the nature of the medical profession, the consequences can have life-or-death consequences for patients.

In this research project about the front lines of AI deployment, we examine the everyday work of nurses. Utilizing technical analysis alongside focus groups and workshops with unionized registered nurses in six states, our research maps how hospitals now use AI across nearly every part of nursing work. AI tools are used to schedule staff, admit and discharge patients, draft clinical notes, and track patients' movements. We find that AI tools are being adopted haphazardly and often without nurses' consent, with serious risks for patient care and workers' well-being. AI tools may offer cover for lean staffing models, shift responsibility onto frontline workers, and create new risks to patient safety. Moreover, despite being heralded as solutions, AI tools may do little to address the structural problems that beset healthcare systems.

Key Takeaways

- **Healthcare is a safety-critical sector, and all AI deployed in it should be treated as high risk**. There is a long-standing debate over whether policy should define high-risk AI by sector or by use case. Our research argues that healthcare applications, whether clinical or administrative, require high-risk regulatory treatment as a safety-critical sector because of the institutional context in which they are deployed. In healthcare, errors can cause immediate harm, such as patient death or rapid deterioration, as well as lasting damage to a patient's health and well-being. The healthcare sector's existing safety and accountability regimes should be strengthened to cover AI, not loosened to accommodate it.
- **Nurses carry the downstream costs of AI failures, but are shut out of the upstream decisions about procurement and deployment.** Keeping a human in the loop is increasingly positioned as a catch-all solution to the risks of integrating AI into our most sensitive systems. Our research adds to mounting evidence that human operators often get the worst of both worlds: They have little control over how systems are deployed, yet they are left to shoulder the responsibility—and even legal liability—when those systems fail. Meaningful human oversight requires independent evaluation, worker input into procurement and deployment decisions, and the ability to decide that some AI tools do not belong in healthcare at all.
- **Healthcare AI is concentrating control over patient data in dominant healthcare tech companies and Big Tech entrants, a shift that warrants greater scrutiny from competition regulators.** In the AI market more broadly, a handful of Big Tech firms control the compute, data, and market reach that the field depends on. This report adds to growing evidence that the same dynamic is taking hold in healthcare, where control over health data is cementing data monopolies and conferring enormous advantages on the companies able to exercise outsize market power to acquire patient data. Microsoft, Google, and other tech giants are acquiring clinical AI companies and partnering with large hospital systems. Meanwhile, dominant healthcare technology companies are leveraging their control over massive amounts of patient data to build AI systems, relying on health records that patients never knowingly agreed to share for that purpose. Regulators should treat healthcare data practices as a competition issue and a privacy issue at the same time, not as separate problems.

Introduction

Susan shows up on time for her 7 p.m. shift at the hospital, even though she had requested not to work this shift. All week, she couldn't find anyone on staff who had the ability to override the AI scheduling system, which decides how many and which nurses should work each shift.

She steps into Room 403 to check on a patient, but is interrupted by an alert from a virtual nurse. The virtual nurse (whose name and location she never knows) tells her to go check on the patient who is at risk of falling in room 412.

Later, Susan tries to make sense of the AI charting summaries and AI-generated orders for the patient in Room 409. She looks for errors and suggests corrections. She never wanted an office job, yet so much of her work these days is staring at a computer screen and fixing outputs.

By the time she clocks out at 7 a.m., Susan interacts with at least eight kinds of AI technologies. Her least favorite is the AI nurse, the software program that is supposed to make discharging patients easier. Today, it didn't. A patient in Room 400, an older man, threw a shoe at the screen on which the AI nurse appeared. The patient's accented diction couldn't be parsed by the looming electronic care board in the center of the wall. The man didn't understand how he was supposed to follow up with the specialists. He just wanted to talk to a human. Susan didn't blame him. Hospitals used to be a place where she got to talk to humans, too.

SUSAN IS FICTIONAL. But the pieces of her story are not. Her day reflects a composite of the experiences of real-world nurses with new AI technologies. In this report, we examine these experiences and document how nurses have unexpectedly found themselves on the frontlines of the AI industry.

AI in healthcare is often presented by industry insiders and media reporters as an unambiguous public good—and a use case that legitimizes AI's broader social value. But there is limited evidence about how AI tools are actually integrated into healthcare settings, how risks are distributed, and who bears the costs. Little is also known about how AI tools will result in actual cost savings and additional revenue for healthcare providers.

This gap is the subject of our report. Here, we explore how nursing work is shaped by the integration of new AI tools. We show how nurses are witnessing, engaging, and, in some cases, resisting an experimental push by AI firms to put an unprecedented number of AI tools into patient care. We analyze how nurses are often expected to integrate untested AI tools into their work with no guidance about who is responsible when a tool makes an error.[1]

[1] National Nurses United, "National Nurses United Survey Finds A.I. Technology Degrades and Undermines Patient Safety," press release, May 15, 2024, https://www.nationalnursesunited.org/press/national-nurses-united-survey-finds-ai-technology-undermines-patient-safety; Hilke Schellmann, "AI Is Entering Health Care, and Nurses Are Being Asked to Trust It," *Scientific American*, February 17, 2026, https://www.scientificamerican.com/article/ai-is-entering-health-care-and-nurses-are-being-asked-to-trust-it.

In the process, we build an inventory of AI tools that a nurse encounters in a typical day. Then, we examine in depth three AI technologies: a scheduling mechanism, a patient-monitoring device, and a charting application. From these analyses, we argue that the rapid, haphazard, and seemingly covert integration of AI into healthcare is reorganizing the nursing workplace with significant risks for workers and patients alike. We conclude that it is not enough to examine the impact of an AI tool through the narrow aperture of whether it works according to a set of technical benchmarks.

AI technologies—and the AI firms behind them—must be understood for **how they profoundly shift what we do**, **where power consolidates** (and over whom), and **how we care for one another.**

AI in Brief

"AI" is best understood as a marketing term rather than a coherent set of technologies, and its meaning has shape-shifted over its nearly seventy-year history. Today, "AI" generally refers to systems that use large amounts of data and computing power to identify statistical patterns, which they then use to classify, predict, or generate new content. In this report, we have built our inventory of AI from the tools that nurses identified in focus groups and from our review of industry and news sources, refined it with workshop feedback, and organized it by what the tools do in the workplace. Many of these tools rely on machine learning, including predictive systems that classify and forecast, as well as generative systems such as LLMs. We excluded long-standing scoring tools, such as the Modified Early Warning Score (MEWS) and the Braden Scale, which assign points according to fixed expert-set criteria rather than relying on statistical models that learn patterns from data and generate probabilistic predictions.

Debunking the Myth: There's No Shortage of Nurses

The healthcare sector is the leading driver of job growth in the US.[2] Nearly 15 percent of US employment is in the health- and social-assistance sector.[3] Of that sector, registered nurses and certified nursing assistants are the second- and third-largest occupations, behind home health and personal care aides.[4] The nursing profession is a huge part of the economy.

Last year, the healthcare sector was the largest source of job creation in the US. Today, it is the surest ticket to the middle class.[5] Healthcare professions, according to recent media coverage, are a safe bet for career growth amid debates about which jobs are least at risk of replacement or mass layoffs.[6]

The US currently has more than seven million licensed registered nurses and practical nurses, which is more than the country has ever had.[7] The Bureau of Labor Statistics projects about 180,800 openings for registered nurses each year through 2035, while Time magazine reports "well over 2 million licensed nurses are not working as nurses for patients."[8] In other words, there is no shortage of nurses in the US.[9]

But there is a *staffing crisis* for nurses. The International Council of Nurses suggested that this crisis should be treated as "a global health emergency."[10] And in a 2023 survey of more than eighteen

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[2] Lei Fang, "Beyond Health Care: Has Labor Market Improvement Broadened in 2026?," Federal Reserve Bank of Atlanta (blog), October 13, 2026, https://www.atlantafed.org/research-and-data/publications/policy-hub-macroblog/2026/10/13/beyond-health-care-has-labor-market-improvement-broadened-in-2026; Martha Gimbel and Ryan Nunn, *How Surprising Is the Role of Healthcare Employment Growth in Today's Labor Market?* The Budget Lab at Yale, June 2, 2026, https://budgetlab.yale.edu/research/how-surprising-role-healthcare-employment-growth-todays-labor-market.

[3] Lydia DePillis, "Health Care Has Become the Lifeblood of the Labor Market," *New York Times*, March 6, 2026, https://www.nytimes.com/2026/03/06/business/economy/health-care-hiring-labor-market.html.

[4] "Occupational Employment and Wage Statistics," U.S. Bureau of Labor Statistics, accessed October 21, 2026, https://www.bls.gov/oes/2024/may/ind_emp_chart/ind_emp_chart.htm.

[5] Jeanne Whalen, "Nursing Is the Surefire New Path to American Prosperity," *Wall Street Journal*, April 1, 2026, https://www.wsj.com/economy/jobs/nursing-jobs-pay-prosperity-b2769391.

[6] Madison Hoff, "12 Jobs That Are Set to Boom over the Next Decade," *Business Insider*, August 28, 2026, https://www.businessinsider.com/high-job-growth-over-decade-nurses-solar-photovoltaic-installers-2026-8; "Will AI Replace Registered Nurses? Risk Score: 33/100," AIExposure, accessed October 21, 2026, https://www.aiexposure.org/occupations/registered-nurses; Careery, "Jobs AI Can't Replace: AI Resistance Scoring for 30 Occupations," January 29, 2026, https://careery.pro/research/jobs-ai-cant-replace.

[7] Alana Semuels, "Stop Saying There's a Nursing Shortage," *Time*, July 30, 2026, https://time.com/article/2026/07/30/stop-saying-theres-a-nursing-shortage; K. Jane Muir et al., "Top Factors in Nurses Ending Health Care Employment Between 2018 and 2021," *JAMA Network Open* 7, no. 4 (April 2024): 1–11, https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2817317; see also Richard A. Smiley et al., "The 2022 National Nursing Workforce Survey," *Journal of Nursing Regulation* 14, no. 1 (April 2023): S1–S90, https://doi.org/10.1016/S2155-8256(23)00047-9.

[8] "Registered Nurses," U.S. Bureau of Labor Statistics, last updated October 29, 2026, https://www.bls.gov/ooh/healthcare/registered-nurses.htm#tab-6; Semuels, "Stop Saying There's a Nursing Shortage."

[9] Muir et al., "Top Factors"; see also Karen B. Lasater et al., "Alternative Models of Nurse Staffing May Be Dangerous in High-Stakes Hospital Care," *Medical Care* 62, no. 7 (July 2024): 434–40, https://pubmed.ncbi.nlm.nih.gov/38848137.

[10] James Buchan and Howard Catton, *Recover to Rebuild: Investing in the Nursing Workforce for Health System Effectiveness*, International Council of Nurses, March 2023, https://www.icn.ch/sites/default/files/2023-07/ICN_Recover-to-Rebuild_report_EN.pdf.

thousand registered nurses, 94 percent reported moderate to severe levels of understaffing.[11] During the pandemic, nursing homes particularly struggled to find and retain staff for lower-wage positions such as certified nurse aides (CNAs), dietary services staff, and housekeeping staff. Nursing homes noted that individuals could find work in the fast-food industry, at big-box stores, or with delivery services for more money and with fewer physical and emotional demands than they could working as a nurse aide.[12]

What accounts for this mismatch between the number of nurses we have in the US and the number of facilities that are understaffed? The answer likely lies in the working conditions that nurses must navigate in healthcare facilities and the maximizing profit motives of a corporatized healthcare system.[13] For too many, nursing work has become associated with unmanageable caseloads, hazardous conditions, organizational failures, and scheduling rigidity.[14] Such conditions can propel a vicious cycle, making workplaces onerous for nurses who remain and unattractive to potential candidates. In other words, it is not that there are too few qualified nurses available or that nurses are unwilling to work; they are simply unwilling to accept underpaid, unsafe, high-stress, and perpetually understaffed workplaces.[15] *Time* magazine made the point this way: "Stop saying there's a nursing shortage."[16]

The quality of working conditions for nurses often ties directly to staffing ratios, or the number of patients for whom a nurse is responsible.[17] Lower nurse-to-patient ratios correlate with higher quality of patient care, fewer safety risks for workers, and lower staff turnover rates.[18] Patient safety and staffing ratios often go hand in hand. After Queensland, Australia, mandated minimum nurse-to-patient ratios in its public hospitals, researchers estimated that the policy prevented 145 deaths and hundreds of readmissions, and that it more than paid for itself through shorter hospital stays.[19]

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[11] AMN Healthcare, *2023 AMN Healthcare Survey of Registered Nurses: The Pandemic's Consequences*, AMN Healthcare (2023), https://www.amnhealthcare.com/amn-insights/nursing/surveys/2023; see also Marissa Plescia and Kelly Gooch, "19% of US Hospitals Critically Understaffed, 21% Anticipate Shortages: Numbers by State," Becker's Hospital Review, January 10, 2022, https://www.beckershospitalreview.com/workforce/19-of-us-hospitals-critically-understaffed-21-anticipate-shortages-numbers-by-state.

[12] Christi A. Grimm, *Lessons Learned During the Pandemic Can Help Improve Care in Nursing Homes*, U.S. Department of Health and Human Services, Office of Inspector General (February 2024): 1, https://oig.hhs.gov/documents/evaluation/9808/OEI-02-20-00492.pdf.

[13] Karen B. Lasater and Linda H. Aiken, "Hospital Nurse Understaffing Persists with Negative Consequences," *JAMA Network Open* 9, no. 2 (February 2026): 1–3, https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2845495.

[14] Muir et al., "Top Factors."

[15] Karen B. Lasater, "Addressing the Nurse Retention Crisis—Leveraging Policies Supported by Evidence," *JAMA Network Open* 7, no. 7 (July 2024): 1–3, https://jamanetwork.com/journals/jamanetworkopen/fullarticle/2821344; see also Jean C. Whelan, *Nursing the Nation: Building the Nurse Labor Force* (Rutgers University Press, 2021).

[16] Semuels, "Stop Saying There's a Nursing Shortage."

[17] Karen B. Lasater, "Eliminating Hospital Nurse Understaffing Is a Cost-Effective Patient Safety Intervention," *BMJ Quality & Safety* 35, no. 1 (December 2025): 1–3, https://doi.org/10.1136/bmjqs-2025-018677.

[18] K. Jane Muir and Karen B. Lasater, "Nurse Retention and Patient Safety—Two Sides of the Same Coin," *JAMA Network Open* 8, no. 12 (December 2025): 1-3, https://doi.org/10.1001/jamanetworkopen.2025.51228; see also Muir et al., "Top Factors."

[19] Matthew D. McHugh et al., "Effects of Nurse-to-Patient Ratio Legislation on Nurse Staffing and Patient Mortality, Readmissions, and Length of Stay: A Prospective Study in a Panel of Hospitals," *Lancet* 397, no. 10288 (May 2021): 1905–13, https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(21)00768-6/abstract.

But "lean staffing" has become a favorite business strategy of healthcare companies.[20] Lean staffing models, also called "lean labor strategies" or "workplace optimization systems," aim to match the number of workers on the job as closely as possible to demand. [21] The approach grew out of "just-in-time" manufacturing, which Japanese automakers developed in the 1950s to keep inventories low by supplying parts only when they were needed. Decades later, scheduling software let employers apply the same logic to workers, scheduling them only when they were absolutely required.

Researchers across the social sciences and public health disciplines find that lean staffing has become chronic[22] under the contemporary model of medicine—one that is defined by corporate ownership, capital-intensive procedures, and risk-intensive working conditions.[23] One study found that hospitals acquired by private equity reduce their full-time staff by nearly twelve percent relative to comparable hospitals.[24] Another found that for-profit hospitals in Illinois had worse patient safety ratings and worse nurse-to-patient staffing ratios (i.e., "lean staffing") when compared to nonprofit hospitals in the state.[25]

The logic of a for-profit healthcare industry undergirds these conditions, especially the heavy workloads. Financialization and consolidations have given rise to new management practices such as decreased lengths of stay for patients and increased responsibilities for nurses. Medical facilities are increasingly understaffed.[26]

In this context, the rapid-fire adoption of AI tools is often presented as a salve for such stressed workplaces. For example, Microsoft now markets an AI assistant that listens to nurses' conversations with patients and drafts their charting, pitching it as a remedy for the documentation burden behind nurse burnout.[27] The adoption of AI tools by healthcare institutions has even become a rationale for Silicon Valley's unprecedented investments in AI tools in general.

The problem with these assumptions? We have little evidence that AI tools in healthcare can do what we have been promised they can do. There exists limited independent scrutiny and evaluation of how

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[20] Rick Mayes et al., "'Not What We Signed Up For': Nurse Shortages, Physician Scarcity, and Time for Collective Bargaining?" *World Medical & Health Policy* 16, no. 1 (July 2023), https://doi.org/10.1002/wmh3.581; Charlene Harrington et al., "Hidden Owners, Hidden Profits, and Poor Nursing Home Care: A Case Study," *International Journal of Health Services* 45, no. 4 (July 2015): 779–800, https://journals.sagepub.com/doi/10.1177/0020731415594772; see also Semuels, "Stop Saying There's a Nursing Shortage"; and Lasater and Aiken, "Hospital Nurse Understaffing Persists."
[21] Heather Boushey and Bridget Ansel, *Working by the Hour: The Economic Consequences of Unpredictable Scheduling Practices*, Washington Center for Equitable Growth (September 2016), https://equitablegrowth.org/working-by-the-hour-the-economic-consequences-of-unpredictable-scheduling-practices.
[22] Michaella Miller et al., "The Impact of Staffing Structures in Long-Term Care Homes on the Quality of Work-Life and Work Outcomes of Care-Workers: A Narrative Scoping Review," *International Journal of Nursing Studies* 174 (2026): 1–21, https://doi.org/10.1016/j.ijnurstu.2025.105304; see also Lasater and Aiken, "Hospital Nurse Understaffing Persists."
[23] Adam Gaffney et al., "The Only Way to Fix US Health Care," *New York Review of Books*, November 7, 2024, https://www.nybooks.com/articles/2024/11/07/the-only-way-to-fix-us-health-care-weve-got-you-covered.
[24] Sneha Kannan et al., "Hospital Staffing and Patient Outcomes after Private Equity Acquisition," *Annals of Internal Medicine* 178, no. 11 (2025): 1529–38, https://pubmed.ncbi.nlm.nih.gov/40982974.
[25] K. Jane Muir et al., "Hospital Ownership Type Correlated with Investments in Nursing Services: Evidence from Illinois," *Medical Care* 63, no. 8 (August 2025): 594–99, https://doi.org/10.1097/MLR.0000000000002148.
[26] Katie J. Wells and Funda Ustek Spilda, *Uber for Nursing: How an AI-Powered Gig Model Is Threatening Health Care*, Roosevelt Institute (December 2024), https://rooseveltinstitute.org/wp-content/uploads/2024/12/RI_Uber-for-Nursing_Brief_202412-1.pdf.
[27] Ella Jeffries, "Microsoft Expands AI Platform to Nursing," *Becker's Hospital Review*, October 16, 2025, https://www.beckershospitalreview.com/healthcare-information-technology/ai/microsoft-expands-ai-platform-to-nursing.

AI tools shape healthcare delivery generally, let alone nursing care specifically. We do not yet know whether AI tools exacerbate and/or become cover for staffing shortages. We also do not know if the future of the profession and our healthcare industry in general will be in jeopardy with AI firms at the helm.

Given the prominence of the nursing profession within the US economy, a potential restructuring of the nursing workplace (and a potential degradation of the job) through the introduction of untested and unproven AI technologies could have outsize effects, especially for households with female breadwinners. The nursing profession is disproportionately staffed by female workers. In 2022, about 88 percent of nurses were women.[28] Registered nurses are also largely white (about 77 percent in 2024), with Black and Asian nurses making up about 9 and 8 percent of the workforce, respectively.[29] In US hospitals, about one in six registered nurses are immigrants, while more than one in five nursing assistants are.[30]

Research Methodology

Our research combines desk research on the technical aspects of AI tools in healthcare with focus groups for frontline healthcare workers. The literature review, which contextualizes the findings of the focus groups, encompassed both primary sources (e.g., a software's terms of agreement and marketing materials) as well as secondary sources (e.g., news media and academic studies). Between April and June 2026, we conducted eight focus groups with sixteen registered nurses, four of whom participated in two separate focus groups. The researchers enlisted the participation of these unionized nurses through a partnership with their healthcare union.

The focus groups were conducted remotely through Zoom and were roughly an hour in length. Workers were asked questions about their workplace experiences with technology and feelings about AI tools in general. The open-ended questions we posed during the focus groups were aimed at identifying what AI tools had been introduced into each of the participants' workplaces. We asked which AI tools had been removed, what questions participants had about the AI tools they used, and how AI tools helped and/or hurt their day-to-day work lives. We also probed questions about AI tool management, such as who knows the most about AI tools in each workplace and how decisions about the adoption of new AI tools were made.

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[28] Peter Buerhaus et al., "State of the Registered Nurse Workforce as a New Era of Health Reform Emerges," *Nursing Economics* 35, no. 5 (October 2017): 229–37, https://aaacn.org/sites/default/files/documents/StateoftheRegisteredNurseWorkforce.pdf; "Nursing Assistants," Data USA, accessed October 22, 2026, https://datausa.io/profile/soc/nursing-assistants; Rachel Elana Norris, "Are America's Caregivers on the Brink of Extinction? The Pandemic Straw That Broke the Nurses' Back," *Neurologic Clinics* 41, no. 2 (February 2023): 415–23, https://pubmed.ncbi.nlm.nih.gov/37030967; see also Smiley et al., "2022 National Nursing Workforce Survey."

[29] "Nursing Workforce Fact Sheet," American Association of Colleges of Nursing, accessed October 22, 2026, https://www.aacnnursing.org/news-data/fact-sheets/nursing-workforce-fact-sheet.

[30] Drishti Pillai and Samantha Artiga, *The Role of Immigrants in the U.S. Health Care Workforce*, KFF (June 2026), https://www.kff.org/immigrant-health/the-role-of-immigrants-in-the-u-s-health-care-workforce.

In sum, we collected ten hours of recorded conversations. The data was then anonymized and coded by hand for emergent themes. We used this data to amass a basic inventory of AI tools in the nursing workplace. Then, we used our transcripts to analyze how nurses approached three specific kinds of technologies: AI scheduling, AI patient monitoring, and AI charting. Lastly, we sought feedback about our basic inventory of AI tools and the inventory tool kit from a workshop with roughly sixty registered and unionized nurses at a nursing convention in September 2026.

The nurses who participated in our focus groups and workshops were located across six states (Missouri, North Carolina, Texas, Nevada, Minnesota, and California). They brought to the conversations expertise in pediatric nursing, intensive care units, pediatric intensive care units, interventional radiology, emergency room medicine, psychiatric nursing, labor and delivery, obstetrics, cardiac telemetry, and medical-surgical nursing. Their tenure in the field ranged from five to twenty-four years.

The workers who participated in this study are not representative of all unionized registered nurses in the US, let alone registered nurses in nonunionized workplaces. But the data collected and reviewed here is evidence of the new AI tools nurses navigate and the kinds of challenges they face in a rapidly changing workplace.

Shedding Light on the AI Tools Quietly Reorganizing Nursing: An Inventory

One of the hardest parts of the job, nurses told us, is not knowing what has changed technologically from one day to the next. Willa, a cardiac telemetry nurse from California, used the word "disoriented" to describe how she feels at her hospital where the tools constantly change without any explicit announcement, let alone advance notice.[31] It's one thing to deal with an ever-evolving workplace. It's another not to be given instructions or explanations about the changes.

The nurses with whom we spoke were almost never sure **which AI tools were and weren't in their workplace**.

They did not know which tools kept data on workers and whether there were any stipulations about what could be done with such data. And they did not know if there was an evaluation plan in place to ensure new AI tools met expectations and advanced patient care (and what to do if the tools did not do so). In response to this lack of transparency about procurement, independent assessments, underlying models, and informed consent, we co-created an inventory of AI tools in nursing to shed light on quiet but dramatic changes in the healthcare industry.

We found that in today's nursing workplaces, most AI technologies fall into one of eight categories.[32]

1. **Administrative and organizational workflows.** AI tools are often tasked with scheduling and deploying staff (e.g., Timpani, Clairvia, NATE Tempo, MyTime, Assignment Wizard, and Qventus), hiring staff (e.g., reviewing résumés), and assigning patients to beds.
2. **Patient admission and discharge.** Some AI tools virtually admit or discharge patients from facilities (e.g., care.ai) while others call patients to share preoperative procedures or to collect insurance information (e.g., robocalls).

[31] Focus group with the author, April 28, 2026.
[32] A few caveats about this schema: Some tools, such as AI image-analysis systems used in radiology (e.g., RadAI) and AI medication dispensing systems (e.g., Pyxis), are excluded, since they are so purpose specific as to not readily be grouped with other technologies. Other tools cross multiple categories, such as electronic care boards (also called "digital whiteboards"), which combine AI nurses, virtual nurses, continual remote patient monitoring, virtual education sessions, and patient scribes. See Becker's Hospital Review and Hellocare.ai, "Allina Health Selects hellocare.ai for Enterprise AI Assisted Intelligent Hospital Rooms and Virtual Care Delivery," press release, April 21, 2026, https://www.beckershospitalreview.com/strategy/allina-health-selects-hellocare-ai-for-enterprise-ai-assisted-intelligent-hospital-rooms-and-virtual-care-delivery; G Hatfield, "How Allina Health Is Addressing Key Critical Care Challenges with Technology," HealthLeaders Media, September 8, 2026, https://www.healthleadersmedia.com/cno/how-allina-health-addressing-key-critical-care-challenges-technology.

3. **Information access.** Many AI tools offer quick access to information, be it summaries of existing scholarship (e.g., UpToDate Lexidrug and OpenEvidence) or general healthcare answers (e.g., VAGPT, Claude for Healthcare, and ChatGPT Health).
4. **Communication between workers and with patients.** A variety of AI tools connect nurses to other healthcare professionals (e.g., TigerConnect and MH-CURE) or seek to improve patient communication by offering translation software or creating patient handouts about treatment plans.
5. **Patient monitors.** AI patient monitors aim to facilitate remote evaluation of some aspect of a patient's wellbeing through sensors and cameras. Some of these more general remote tools can be called virtual sitters, telesitters, or virtual companions (e.g., AvaSure, hellocare). Others take vital signs (e.g., Oxevision) or continuously monitor specific outputs including infusions (e.g., Plum pumps), fluid levels (e.g., FloPatch), or fetal health (e.g., PeriWatch, PeriGen).
6. **Patient predictions.** A growing number of AI tools seek to predict a patient's vital trends, their risk of contracting a disease, or the likelihood of needing an intervention (e.g., Epic's Deterioration Index, STOPSHOCK, and Rothman). Epic's sepsis acuity tool, for instance, automatically generates a patient's risk for sepsis by reviewing a patient's chart. Violence-assessment tools also fall into this category. However, this category of tools does not include early warning scores (e.g., MEWS and Braden), which do not currently engage machine learning or other AI technologies.
7. **Transcription, visit summary, and ambient clinical charting.** A significant category of AI tools in the nursing workplace are ambient scribes, which may offer to document, summarize, and/or create clinical notes for patient visits (e.g., Nabla, Microsoft Dragon Copilot, EPIC AI Charting, Zoom AI, Abridge with Nvidia,[33] Ascribe, Doximity, and Project Nursing[34]). These tools may also automatically populate consent and discharge forms.
8. **Worker surveillance.** Some nurses experience location tracking and task monitoring through the AI-enabled badges they wear (e.g., Kontakt.io, CenTrak) or the Bluetooth-enabled tablets they carry (e.g., ObservSMART). Others report voice tone monitoring systems,[35] facial recognition cameras in their workplaces, and audits of medication dispensing patterns (e.g., ControlCheck).

Most of these tools are marketed as supports for nurses operating in high-stress environments with heavy workloads that often exceed paid work hours. The underlying logic of these tools is they lighten

[33] Belle Lin, "Nvidia Is Developing an AI Healthcare Model with Startup Abridge," *Wall Street Journal*, June 11, 2026, https://www.wsj.com/cio-journal/nvidia-is-developing-an-ai-healthcare-model-with-startup-abridge-6db38c1b.
[34] Advocate Health, "Advocate Health Collaborates with Microsoft on AI Solution to Ease Administrative Burden on Nurses," press release, October 29, 2024, https://www.advocatehealth.org/news/advocate-health-collaborates-with-microsoft-on-ai-solution-to-ease-administrative-burden-on-nurses.
[35] Khari Johnson, "Kaiser Nurses Say Technology Is Making Their Jobs—and Patient Care—Worse," *CalMatters*, July 9, 2026, https://calmatters.org/economy/technology/2026/07/kaiser-nurses-workplace-surveillance-ai.

the mental loads of nursing staff, thus improving patient care and safety by allowing nurses to focus their attention on more critical aspects of patient care. Whether that is actually true for these tools remains to be seen. And, without basic visibility into which tools exist in their workplaces, nurses will have difficulty assessing whether these tools work as intended—or if they speed up and intensify their workloads. Few nurses currently have access to information about which tools and companies are present in their workplaces. Even fewer seem to have information about what data the AI tools use, how they work, and whether they subject workers or patients to unwanted surveillance. Many nurses do not understand how these tools interact with each other. When nurses are unable to see the full scope of AI tools in their work lives, it's difficult if not impossible to ask relevant questions, offer feedback, bargain for improved protections, or protect patients.

However, we want to caution that one of the difficulties of identifying AI technologies in healthcare settings is that many AI technologies are being integrated into existing tools, such as the Epic electronic health records system, rather than arriving as new wholesale items. This kind of "AI creep" may not be unlike the famous boiling-frog parable. For years, nurses have rolled carts into a patient's room so that a patient may do a video call with an off-site specialist doctor. The normalization of this kind of workforce fissure may have laid important groundwork. The transition from this situation to an AI nurse, therefore, may be one of incremental change rather than a categorical break or jump.

In the following sections, we profile three tools that are representative of the types of AI technologies that nurses encounter in their day-to-day work lives: an AI scheduling tool, an AI patient monitor, and an AI charting tool.



AI Scheduling: **Timpani**

The Tool

Timpani is an automated scheduling and staffing application meant to predict staffing needs up to thirty days in advance and schedule nursing staff based on those needs, staff competencies, and staff preferences, with the ability to automatically recommend changes for changing circumstances.

In August 2024, the Chief Technology Officer for Palantir announced on social media that Timpani manages 21 percent of hospital beds in the US and is "one of our fastest growing areas."[36] By June 2025, HCA Healthcare—a US-based, for-profit operator of healthcare facilities—said it had deployed Timpani in 130 of its 190 hospitals, the vast majority of which are general acute-care facilities.[37]

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[36] Amy Feldman, "Palantir Sues Y Combinator Startup over Alleged Trade Secret Theft," *Forbes*, April 1, 2025, https://www.forbes.com/sites/amyfeldman/2025/04/01/palantir-sues-y-combinator-startup-guardian-ai-over-alleged-trade-secret-theft-health-insurance.

[37] Palantir, "It Can't Be Done…or Can It? | HCA Healthcare at Palantir AIPCon," YouTube, 15:34, June 12, 2023, https://www.youtube.com/watch?v=_P59r--r2uM; Michael Schlosser, "HCA Healthcare's Strategic Approach to Scaling Artificial Intelligence," HCA Healthcare Today, July 21, 2026, https://hcahealthcaretoday.com/2026/07/21/hca-healthcares-strategic-approach-to-scaling-artificial-intelligence; HCA Healthcare, Inc., "Proxy Statement for Annual Meeting of Stockholders," filing with the US Securities and Exchange Commission, March 13, 2026, https://www.sec.gov/Archives/edgar/data/860730/000119312526106142/d939252ddef14a.htm. Timpani's paced deployment across the HCA healthcare system entails, for each facility, onboarding a new software system and implementing a new operating procedure for staff.

These facilities, which span nineteen US states and the United Kingdom, engage a workforce of roughly 320,000.[38] (It is unclear whether Timpani is in use in HCA Healthcare's 2,500 ambulatory sites, including outpatient and urgent-care facilities.)

As a set of rules-based machine learning algorithms[39] and fine-tuned LLMs, Timpani involves the following components:

- Staff complete a **"Talent Profile,"** which includes details about their self-reported core competencies (e.g., healthcare specialties), proficiency levels (e.g., beginner, proficient, expert), length of tenure at the facility, and scheduling preferences so the application can align their skill set with a specific set of predicted patient needs.[40]
- **Volume prediction** refers to predictive analysis of historic hospital data and external trends or factors, such as local area flu trends or illness outbreaks at area schools, in order to estimate future healthcare needs of the area's predicted patient population.
- **"Intelligent Staffing"** is built on Palantir's Artificial Intelligence Platform and is constantly screening for on-demand or predicted changes, rather than relying on manual input updates, in order to make staffing and scheduling recommendations.[41] The system makes active recommendations on staffing levels, including staffing swaps to align predicted patient needs with nursing competencies, and is capable of sending text messages to staff to act on those recommendations (with or without a "human in the loop" intervention by a nurse leader to approve or select a specific recommendation).
- Other factors, such as **cost data** and **business rules**, are also applied to determine schedules.

[38] "About HCA Healthcare," HCA Healthcare, accessed October 22, 2026, https://www.hcahealthcare.com/about.
[39] As described by HCA Healthcare and Palantir staff at a publicly shared presentation of their software at a developer's conference. Technical documentation of their software is unavailable to the public.
[40] Giles Bruce, "The 'Immediate Value' of AI at HCA," Becker's Hospital Review, September 11, 2024, https://www.beckershospitalreview.com/healthcare-information-technology/innovation/the-immediate-value-of-ai-at-hca ; Schlosser, "HCA Healthcare's Strategic Approach."
[41] Palantir, "Scaling Innovation in Healthcare with AIP: HCA at AIPCon," YouTube, 18:25, September 21, 2023, https://www.youtube.com/watch?v=R-k4a__34ng.

Corporate Power Analysis: The Google and Palantir Partnerships Powering Timpani

Timpani's development emerges from two key partnerships between HCA Healthcare and large tech firms. First, HCA Healthcare established a multiyear partnership with Google in 2021.[42] The impetus for this move and the simultaneous development of a new Care Transformation & Innovation (CT&I) team was to identify, build, and roll out new technology solutions in HCA hospitals, especially in the wake of the COVID pandemic.[43] One of the first tools the CT&I team built was "Staff Scheduler," which used a machine-learning algorithm to predict staffing needs, measure the complexity of different procedures, and optimize staff scheduling according to staff competencies and preferences.

Second, HCA Healthcare formed a relationship with Palantir in 2023.[44] Timpani was built within Palantir's Foundry and Artificial Intelligence Platform (AIP) systems, and intended to be used only by staff at HCA Healthcare facilities.[45] AIP, which is the newest of Palantir's four main software operating systems,[46] supports the development and deployment of customized AI-enabled applications based on integrated data systems.

All of HCA Healthcare's data runs through Palantir's Ontology,[47] which was developed through Palantir's Foundry system (another one of its four main operating systems). Palantir's Foundry platform is where the initial "data fusion" happens. What supposedly makes Foundry useful is that, according to Palantir, it is agnostic about the architecture of the data it imports. As a result, less labor may be required to modernize or homogenize legacy databases. Through Foundry, Palantir claims that it makes HCA Healthcare's data legible to LLMs, thereby making it possible to process for analysis. Even healthcare

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[42] HCA Healthcare, "HCA Healthcare Partners with Google Cloud to Accelerate Digital Transformation," press release, May 26, 2021, https://investor.hcahealthcare.com/news/news-details/2021/HCA-Healthcare-Partners-With-Google-Cloud-to-Accelerate-Digital-Transformation/default.aspx.

[43] HCA Healthcare, "Building on a Legacy of Innovation to Deliver Healthcare of the Future," HCA Healthcare Today, July 14, 2022, https://hcahealthcaretoday.com/2022/07/14/building-on-a-legacy-of-innovation-to-deliver-healthcare-of-the-future.

[44] Palantir Developers, "Code in Production: HCA Deploying AI in Healthcare at Scale," YouTube, 17:33, July 3, 2025, https://www.youtube.com/watch?v=m3G9oKIr6Xs.

[45] "AIP Now," Palantir, accessed October 22, 2026, https://aip.palantir.com; Paresh Dave, "AI Is Making a Mess of Nurses' Schedules. They Say It's a Safety Issue," *Wired*, October 2, 2026, https://www.wired.com/story/ai-making-mess-of-nurses-schedules-they-say-its-a-safety-issue; Alex Karp, "Bending Artificial Intelligence to Our Collective Will," Palantir (blog), April 7, 2023, https://www.palantir.com/newsroom/letters/our-new-platform; Giles Bruce, "How HCA Healthcare, Palantir Use Data to Generate Nurses' Schedules," Becker's Hospital Review, July 12, 2023, https://www.beckershospitalreview.com/healthcare-information-technology/innovation/how-hca-healthcare-palantir-use-data-to-generate-nurses-schedules.

[46] The remaining systems are Foundry, Gotham, and Apollo. Gotham (released in 2008) and Foundry (developed earlier but broadly released in 2021) function similarly for defense/intelligence agencies and enterprise users (corporate / civil government clients), respectively. They each allow users to integrate and analyze user data from a myriad of sources, without needing to fix the underlying data architecture. Apollo, by contrast, supports software development and deployment.

[47] "Ontology" refers to Palantir's proprietary system of how it describes and maps a client's digital business operations and decision-making—primarily its (digital) data sources, the way those data sources are connected to one another (conceptually), and actions that are taken using those various data sources to make different business decisions. These actions may reflect on-the-ground actions taken (e.g., decisions that are taken in the physical world, like in a warehouse, rather than online). It should be noted that the company's use of the term "ontology" differs from how computer and information scientists, philosophers, or linguists typically use the term.

facilities that use both paper-based and electronic documentation can be, Palantir claims, harmonized within Foundry and then available for use within the AIP system where LLM-based AI applications are constructed.[48]

To generate Timpani's algorithmic models, HCA Healthcare—alongside Palantir—likely used some combination of its institutional, workforce, and patient data troves.[49] Such data may have included historic staff scheduling data, patient health records, and other administrative and operational hospital data. It is unclear which LLM Timpani uses for its "Intelligent Staffing" component. However, because LLMs are trained on massive datasets that are typically text-scraped from the internet, the provenance and ethics of the acquisition of the training data are unknown.[50]

Palantir Technologies

Palantir Technologies is a US-based software company that sells platforms for data integration, analytics, and AI-enabled application development, along with consulting services, for government and private corporations.[51] The company was developed in 2003 by Peter Thiel (seed funder), Alex Karp (founding CEO), Stephen Cohen (prototype engineer), Joe Lonsdale (prototype engineer), and Nathan Gettings (prototype engineer). By applying PayPal's anti-fraud algorithms, the founders sought to create a product for intelligence agencies to combat terrorism. They quickly became a prominent defense contractor startup and secured about $2 million from In-Q-Tel (IQT), a venture capital firm that invests in technologies for the CIA.[52] Palantir went public in September 2020.[53]

The company has extended its client base from intelligence and defense agencies into the private and public (civil) sectors, including the United Kingdom's National Health Service. US military, intelligence, and police forces continue to use Palantir Gotham. Other civil government agencies, like the US Centers for Disease Control and Prevention, were once

[48] Palantir, "It Can't Be Done."
[49] Because of the proprietary nature of the software, and because both HCA Healthcare and Palantir are private companies, there is limited information about Timpani itself. Most details about the software are only available through public presentations. Fortunately, because of the novel partnership between the two companies, several in-depth presentations were made at Palantir-led conventions. If not for this novelty, very limited public information would be available about the software. It is considered a violation of an employee's employment contract to share any details about the software.
[50] "Supported LLMs," Palantir Technologies, accessed October 22, 2026, https://www.palantir.com/docs/foundry/aip/supported-llms.
[51] "About Palantir," Palantir Technologies, accessed October 22, 2026, https://www.palantir.com/about.
[52] Michael Steinberger, "Does Palantir See Too Much?," *New York Times Magazine*, October 21, 2020, https://www.nytimes.com/interactive/2020/10/21/magazine/palantir-alex-karp.html.
[53] Palantir Technologies, "Palantir to Commence Trading on NYSE on September 30, 2020," press release, September 22, 2020, https://investors.palantir.com/news-details/2020/Palantir-to-Commence-Trading-on-NYSE-on-September-30-2020.

clients.[54] Palantir has made headlines for its lucrative contracts with federal government agencies,[55] but less is known about the size of its enterprise contracts.[56] Between 2023 and 2026, for instance, the New York City Health and Hospitals Corporation paid Palantir $4 million. The contract expired in October 2026 and was not renewed.[57] In 2026, a UK parliamentary committee warned that British public services were becoming overreliant on Palantir and putting its citizens' data at risk.[58]

Palantir has been linked to war and genocidal efforts, including Israel's attacks on Gaza.[59] The company has contributed to the targeting and criminalization of immigrant communities in the US through its partnership with the Trump Administration's Department of Homeland Security, particularly Immigration and Customs Enforcement.[60] While Palantir states that client data is not used outside of a client's own Ontology (and integrated into a massive Palantir-controlled database), it does generalize tools and solutions that are initially customized for a specific client to be used later by others.

[54] "Federal Health," Palantir Technologies, accessed October 22, 2026, https://www.palantir.com/offerings/federal-health.
[55] Samantha Subin, "Palantir Lands $10 Billion Army Software and Data Contract," CNBC, August 1, 2025, https://www.cnbc.com/2025/08/01/palantir-lands-10-billion-army-software-and-data-contract.html; Makena Kelly, "DHS Opens a Billion-Dollar Tab with Palantir," *Wired*, February 19, 2026, https://www.wired.com/story/department-homeland-security-ice-billion-dollar-agreement-palantir; "USDA and Palantir Sign $300 Million Software Purchase Agreement," Reuters, April 22, 2026, https://www.reuters.com/business/usda-palantir-sign-300-million-software-purchase-agreement-2026-04-22.
[56] Palantir Technologies Inc., "Form 10-Q: Quarterly Report," filing with the US Securities and Exchange Commission, March 31, 2026, https://investors.palantir.com/files/2026%20Q1%20PLTR%2010-Q.pdf.
[57] Sam Biddle, "Palantir Gets Millions of Dollars from New York City's Public Hospitals," *Intercept*, February 15, 2026, https://theintercept.com/2026/02/15/palantir-contract-new-york-city-health-hospitals; Naomi Diaz, "NYC Health + Hospitals to end $4M Palantir contract," Becker's Hospital Review, March 25, 2026, https://www.beckershospitalreview.com/healthcare-information-technology/nyc-health-hospitals-to-end-4m-palantir-contract.
[58] House of Commons Science, Innovation and Technology Committee, *Rewiring the State: Delivering Digital Government*, House of Commons Science, Innovation and Technology Committee, June 2026, https://publications.parliament.uk/pa/cm5902/cmselect/cmsctech/61/report.html.
[59] Marissa Newman, "Thiel's Palantir, Israel Agree Strategic Partnership for Battle Tech," *Bloomberg*, January 12, 2024, https://www.bloomberg.com/news/articles/2024-01-12/palantir-israel-agree-to-strategic-partnership-for-battle-tech; James Bamford, "How US Intelligence and an American Company Feed Israel's Killing Machine in Gaza," *The Nation*, April 12, 2024, https://www.thenation.com/article/world/nsa-palantir-israel-gaza-ai.
[60] Caroline Haskins, "ICE Is Paying Palantir $30 Million to Build 'ImmigrationOS' Surveillance Platform," *Wired*, April 18, 2025, https://www.wired.com/story/ice-palantir-immigrationos.

Company Claims Versus Workplace Reality: The AI Tool Promises Efficiency but Delivers Instability

The Claim

HCA Healthcare management announced that Timpani (a) reduces the amount of planning time a nurse leader needs to produce the monthly schedule and (b) builds better staff schedules that prioritize staff preference and needs.[61] If Timpani notices that "a nurse is overloaded, or a patient is behind on scheduled care, it alerts clinical coordinators to rebalance patient loads mid-shift."[62] (It remains unclear, however, what data and processes Timpani uses to make the assessment that a nurse is overloaded.)

In Timpani's model, nurse leaders function as "humans in the loop," both to provide input into the scheduling and to make any edits to the automated schedules generated by the software.[63] For now, nurse leaders are also meant to approve any staffing change recommendations proposed by Timpani's "Intelligent Staffing" AI tool before they are implemented. In the future, HCA leadership has predicted that the AI tool will be authorized to act autonomously.[64]

In Reality

For Alice, a young nurse in Texas, the rollout of Timpani has been "a nightmare."[65] She explained what happened after she downloaded the required app on her personal phone: "The Timpani constantly, like, short-staffs us, or staffs charg[e] [nurses] in as floor nurses. It has, like, very little respect for the days that you ask off. Like, it just kind of puts you wherever it wants."

[61] HealthTrust Performance Group, "Putting Tech to the Test," *The Source* 18, no. 3 (August 2024): 56, https://healthtrustpg.com/wp-content/uploads/2024/08/The-Source-Q3-2024.pdf.
[62] Dhaval Save and Nupoor Tillu, "Artificial Intelligence (AI) Driven Patient Assignment: Optimizing Daily Redistribution among Hospitalists," *Frontiers in Medicine* 13 (February 4, 2026): 1–6, https://www.frontiersin.org/journals/medicine/articles/10.3389/fmed.2026.1767258/full; "Palantir for Hospitals," Palantir Technologies, accessed October 22, 2026, https://www.palantir.com/offerings/palantir-for-hospitals.
[63] For discussion of the limits of "human in the loop" approaches, see: Mishal Khan, "Co-opting or Centering the Human Worker in the Digital Age? An Overview of Human-in-the-Loop Legislation in the United States," *Just Tech*, August 5, 2026, https://just-tech.ssrc.org/articles/co-opting-or-centering-the-human-worker-in-the-digital-age-an-overview-of-human-in-the-loop-legislation-in-the-united-states.
[64] Palantir, "Scaling Innovation in Healthcare with AIP: HCA at AIPCon," YouTube, 18:25, September 21, 2023, https://www.youtube.com/watch?v=R-k4a__34ng.
[65] All names are pseudonyms to protect the privacy of informants. Focus group with the author, April 21, 2026.

Hailey, an experienced nurse in North Carolina, reported similar experiences.[66] She's often frustrated that there's no one who can fix errors with the scheduling system, even when the AI tool schedules people for six shifts in a row or inappropriately assigns people to positions for which they do not have the right credentials.

A psychiatric nurse in California named Karla saw the gap between what she was told Timpani could do and what Timpani could actually do almost immediately.[67] She said:

> "[Timpani] was, like, flipping nurses who were supposed to work days to nights and nights to days… There was an ICU shift that had, like, three nurses scheduled. **There's…no ICU in America that exists that only needs three nurses.** [Timpani-made schedules] also have their 'virtual nurses'[68] way more integrated into the care system."

What are virtual nurses?

A virtual nurse is a licensed, human nurse who is stationed off-site or outside of a patient room. The virtual nurse communicates with and monitors a patient through cameras, speakers, telephones, and other technologies in the room. Virtual nurses are also called "telehealth nurses" or "remote nurses."

Luke, a psychiatric nurse in Missouri, believes automated scheduling software like Timpani "could be a good thing."[69] It could, in his words, "take the burden off of management." The daily task of scheduling and rescheduling staff alongside ever-changing patient needs is a lot, he noted.[70] Still, he worries that AI tools like Timpani negatively impact patient care. For one thing, the software just

[66] Focus group with the author, April 29, 2026.
[67] Focus group with the author April 29, 2026.
[68] A virtual nurse is a licensed, human nurse who is stationed off-site or outside of a patient room. The virtual nurse communicates with and monitors a patient through cameras, speakers, telephones, and other technologies in the room. Virtual nurses are also called "telehealth nurses" or "remote nurses." See "Johns Hopkins Medicine Virtual Nursing," Johns Hopkins Medicine, accessed October 22, 2026, https://www.hopkinsmedicine.org/patient-care/virtual-nursing.
[69] Focus groups with the author on April 24, 2026 and June 15, 2026.
[70] When Timpani initially rolled out, Luke also appreciated that he could request a shift reassignment through the tool. That option, however, has been removed.

doesn't work as it's intended, he feels, adding that "[we] put in our schedule preferences and the AI 'figures out' the best way to give us all what we want, except it's continually screwing things up. And nobody's really getting what they want." Even if he tells Timpani that he can't work on a day when he has to, for instance, take his mom to an appointment, Timpani will schedule him on that day. This sort of issue didn't seem to be a problem in the past when his manager arranged the schedules. He said, "I feel like just the way that Timpani is coded or whatever—however it works to balance the schedule—it feels like a black box. Like we're not really sure what's going on inside Timpani." The scheduling instability is hard to navigate.

Perhaps more worryingly, there is no override option of Timpani at Luke's facility. He explained:

> "No one in our building, in our facility, has any control over the schedule that posts unless it's within twenty-four hours and they're allowing people to pick up or be canceled. Yeah, it's all controlled by a team in Nashville, Tennessee… **We have no way of contacting them except through the Timpani app.**"

Other nurses share this uneasiness and confusion about how feasible it is for nurse leaders to make changes to staffing schedules after Timpani has set the schedule. As a result, Luke and others expressed concerns that the software does not actually solve any of the problems—like burnout or overscheduling of staff—that it was supposed to address. There are not yet any outside independent assessments of the technology or, to our knowledge, any internal reassessments of its utility. (Michael J. Schlosser, MD, who led the HCA Healthcare team that sought to develop new technology solutions, has written favorably about Timpani.[71])

Timpani was originally introduced as a way to lessen the scheduling work for nurse leaders, but it is revealing itself as an algorithmic management tool that monitors staff. By looking around on the Timpani app, Luke recently found out that Timpani assigns him an attendance score. The best score is zero, but he will get a half-point penalty if he clocks in to work for a 7:00 a.m. shift at 6:52 a.m., just before the seven-minute grace period. After recounting these metrics, which resemble the scores that Uber drivers receive, Luke shared a fear about what this kind of scheduling technology enables and portends: "They're like, how can we spend less on labor? . . . We can just have these 'AI nurses'[72] that you can hire for $9 an hour.[73] And then you don't have to pay them a livable wage because they're not a person."

[71] Michael Schlosser, "HCA Healthcare's Strategic Approach to Scaling Artificial Intelligence," *Management in Healthcare* 10, no. 4 (2026): 330–39, https://hstalks.com/article/11690/hca-healthcares-strategic-approach-to-scaling-arti.
[72] "AI nurses" in this context refers to a software tool (which may be called a "bot" or "agent") that is designed to perform some of the functions of human nurses. An AI nurse is not a human, nor does it obtain a professional license. It is simply a technology that may or may not appear in a visual form as an avatar.
[73] Rounak Jain, "Nvidia-Powered AI Nurses at $9 per Hour Aim to Upend Humans Who Cost 10 Times as Much," *Benzinga*, March 20, 2024, https://www.benzinga.com/news/24/03/37842810/nvidia-powered-ai-nurses-at-9-per-hour-aim-to-upend-humans-who-cost-10-times-as-much.

What are AI nurses?

"AI nurses" in this context refers to a software tool (which may be called a "bot" or "agent") that is designed to perform some of the functions of human nurses. An AI nurse is not a human, nor does it obtain a professional license. It is simply a technology that may or may not appear in a visual form as an avatar.

Zooming Out: "AI Productivity" Cuts Hours and Pay

HCA Healthcare's move to automated scheduling reflects a growing trend in the healthcare industry.[74] AI technologies are increasingly adopted for human resources management in healthcare because of the idea that the technologies can "process large volumes of complex data, identify hidden patterns, and provide predictive and prescriptive recommendations."[75] Some of these scheduling and staffing programs include Clairvia (in Sutter hospitals), Teamwork (by Epic), M7 Health,[76] and the Virtual Command Center (which was built with Palantir for the Cleveland Clinic).[77] There is also evidence that gig economy companies for healthcare, or "Uber for nursing"[78] companies, are offering their algorithmic management software as a replacement for human management of traditional workforces in healthcare facilities. Whereas ShiftMed, IntelyCare,[79] and ShiftKey (through its OnShift program) first developed their AI scheduling technologies for gig workers, these companies now market their technology packages for use on in-house employees. The University of North Carolina Healthcare system seems to have gone the furthest in bringing the gig economy's algorithmic scheduling

[74] Laurel Chiaramonte, "Innovation in Nurse Scheduling: A Nurse's Foray into AI and Entrepreneurship," American Nurses Association (blog), June 17, 2024, https://www.nursingworld.org/content-hub/resources/workplace/INNO_innovation-in-nurse-scheduling; see also Tejas Athni, "Academic Medical Centers Partner with Industry for Co-Development of Clinical AI," *Journal of Medical Internet Research* 28, (2026): 1–3, https://www.jmir.org/2026/1/e108770.
[75] Yan Wang et al., "Enhancing Hospital Workforce Planning, Scheduling, and Performance Evaluation through an AI-Driven Human Resource Management System," *Scientific Reports* 16 (2026): 1–27, https://www.nature.com/articles/s41598-026-43102-w.
[76] Heather Landi, "M7 Health Nabs $10M to Modernize Nurse Staffing and Scheduling," Fierce Healthcare, July 15, 2025, https://www.fiercehealthcare.com/health-tech/m7-health-nabs-10m-improve-nurse-staffing-and-scheduling.
[77] Cleveland Clinic, "How AI Assists with Staffing, Scheduling and Once-Tedious Tasks," Consult QD, February 14, 2024, https://consultqd.clevelandclinic.org/how-ai-assists-with-staffing-scheduling-and-once-tedious-tasks.
[78] Katie J. Wells et al., *Uber for Nursing Part II*, AI Now Institute, April 2026, https://ainowinstitute.org/publications/uber-for-nursing.
[79] Heather Landi, "IntelyCare acquires CareRev to Build Out Workforce Staffing Solution for Health Systems," Fierce Healthcare, January 8, 2026, https://www.fiercehealthcare.com/health-tech/intelycare-acquires-carerev-build-out-workforce-staffing-solution-health-systems.

technologies into the fold; the healthcare system announced in August 2026 that it will soon be deploying an automated scheduling system that encourages nurses to bid against each other for shifts.[80]

On one hand, scheduling technology for workers is not new. It has long been used in the retail context to create lean staffing models. The goal with these scheduling technologies is to lower labor costs by reducing hours. Companies like Gap and Walmart use computer algorithms to figure out when store traffic is highest, and lowest, to determine when staff should be increased and decreased.[81] It is a hyper-mechanized way to shorten shifts on quiet mornings when business is slow and offer the best shifts during the lunchtime rush to the employees who make the most sales. These models happen in real time so that the onset of rain can cause stores to decrease staff on the spur of the moment. Some restaurant workers are not even given an end time for their shift, granting the company extreme flexibility—flexibility that comes at the cost of an employee's ability to schedule doctor's appointments, socialize, plan meals and bedtimes, and live a decent life.[82] AI-powered technologies turbocharge these trends and allow for new kinds of automated management practices to emerge, specifically individualized and dynamic wages.[83] The technology determines not just when workers are scheduled; it has also been built to determine how much nurses are paid.[84]

[80] Jane Winik Sartwell, "UNC Health Says New Scheduling System Won't Pay Nurses Less. Why It Has Critics," *News & Observer*, August 5, 2026, https://www.newsobserver.com/news/business/article316761233.html; Johanna F. Still, "The Gig Is Up: UNC Health Does an About-Face on BidShift," *The Assembly*, September 17, 2026, https://www.theassemblync.com/news/health/healthcare/unc-health-bidshift-nurses-tech-platform-auction.

[81] On-call scheduling originally began as a practice in the medical field and with emergency first responders, like police officers. Its emergence in the retail industry is in part due to changes at the other end of the retail experience: production speeds and processes. As inventorying became computerized and consumer demand could be tracked in real time, companies were able to order supplies "just in time" for production. Factories could thereby reduce excess purchases. This race to cut costs and streamline production processes mirrored a shift in the capacity of companies to reduce "excess" labor supply by scheduling workers "just in time" for customer demand. The advent of "on-call" scheduling and its adoption by the retail industries gave rise to the "just-in-time" worker, a majority of whom are women, immigrants, and people of color.

[82] Center for Law and Social Policy, Retail Action Project, and Women Employed, *Tackling Unstable and Unpredictable Work Schedules: A Policy Brief on Guaranteed Minimum Hours and Reporting Pay Policies* (March 2014), https://www.clasp.org/sites/default/files/public/resources-and-publications/publication-1/Tackling-Unstable-and-Unpredictable-Work-Schedules-3-7-2014-FINAL-1.pdf; Maggie Corser, *Job Quality and Economic Opportunity in Retail: Key Findings from a National Survey of the Retail Workforce*, Popular Democracy in Action and Fair Workweek Initiative (November 2017), https://populardemocracyinaction.org/wp-content/uploads/2025/06/job-quality-and-economic-opportunity-in-retail-key-findings-from-a-natoinal-survey-on-the-retail-workforce-2017-c4-1.pdf.

[83] Veena Dubal, "On Algorithmic Wage Discrimination," *Columbia Law Review* 123, no. 7 (November 2023): 1929–92, https://www.columbialawreview.org/wp-content/uploads/2023/11/Dubal-On_Algorithmic_Wage_discrimination.pdf.

[84] Veena Dubal and Katie J. Wells, "Life Under the Algorithm," *Dissent*, Fall 2026, https://dissentmagazine.org/article/algorithmic-pricing-surveillance-wage-discrimination.



AI Patient Monitoring: **Oxevision**

The Tool

Oxevision is an algorithmically driven, vision-based, ambient patient monitoring software system that tracks micromovements and color changes on the patient's body captured through infrared lights and an infrared-sensitive camera to calculate pulse and breathing rates. These two vital signs, alongside movement tracking, are supposed to make it possible for nursing staff to conduct "digital rounding" or remote spot checks of a patient's vital signs and sleep.

In 2021, Oxevision launched in the United States when the US Food and Drug Administration (FDA) granted its Oxehealth Vital Signs product a De Novo clearance[85] as a Class II medical device.[86] That same year, Oxevision was used in the United Kingdom by twenty-three National Health Service trusts

[85] For devices that do not have a precursor, if the manufacturer can explain why the device poses only a low-to-moderate risk and the safety of the device can be assured through general controls, the device can obtain De Novo clearance and be marketed by the manufacturer. It is a bypass process. (A device classified as a Class III medical device would require additional testing before it would be allowed to be marketed.)
"De Novo Classification Request," U.S. Food and Drug Administration, accessed November 3, 2026, https://www.fda.gov/medical-devices/premarket-submissions-selecting-and-preparing-correct-submission/de-novo-classification-request.

[86] Oxehealth, "FDA Grants Oxehealth Vital Signs De Novo Clearance," press release, PR Newswire, March 31, 2021, https://prnewswire.co.uk/news-releases/fda-grants-oxehealth-vital-signs-de-novo-clearance-816915709.html. With FDA clearance, LIO Health can place Oxevision on the market in all states without additional evaluations or approvals.

for their psychiatric wards.[87] While an official count is not currently available, an activist group tracking the use of Oxevision in psychiatric wards in the United Kingdom estimates that at least twenty-one mental health wards still have contracts with LIO Health, the privately held company that developed the technology.[88] In the US, LIO Health announced an increased footprint of 500 percent in 2025,[89] but we find evidence of its use in only two sites: two behavioral healthcare facilities in Colorado.[90]

Oxevision processes video and image data from infrared-sensitive cameras to estimate vital signs.[91] The technology primarily applies computer vision and signal-processing machine learning algorithms to detect "micromovements" (for breathing movement) and "microblushes," or very slight color changes in the skin in small areas (for pulse detection). Then, Oxevision analyzes the images to identify specific areas of the patient's body that contain the kind of variation in activity that would indicate a breath movement or a pulse.[92] Finally, these machine learning algorithms alert healthcare providers.[93]

As a company, LIO Health provides, installs, and maintains the hardware (infrared lights and an infrared-sensitive camera in a secure, scratch-resistant housing) required for its proprietary software.[94] While the hardware itself is "off the shelf", in other words not customized specifically by or for LIO Health, LIO Health's service agreement requires that the new hardware (ceiling/wall-mounted cameras and lights) used with its software be provided or approved by LIO Health.[95]

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[87] David Batty, "NHS Trusts Criticised over System That Films Mental Health Patients in Their Bedrooms," *Guardian*, December 13, 2021, https://www.theguardian.com/society/2021/dec/13/nhs-trusts-urged-to-ditch-oxevision-system-covert-surveillance-mental-health-patients.

[88] "Map of Use of Oxevision in Psychiatric Hospitals in England," Google Sheets, accessed October 22, 2026, https://docs.google.com/spreadsheets/d/1UILG8r06LAaaUBHTKoLxlZzni2s6BDWrVss9dVw2ANE/edit?gid=1104636600#gid=1104636600.

[89] LIO, "LIO Launches Next-Generation Inpatient Mental Health Platform with Advanced Rounding, Monitoring, and Compliance Tools," press release, August 13, 2025, https://finance.yahoo.com/news/lio-launches-next-generation-inpatient-090000682.html.

[90] In 2024, Oxevision was installed in the new acute-care Facility in Larimer County, Colorado, on SummitStone Health Partners' Longview Campus. SummitStone Health Partners, "SummitStone Health Partners Launches Contactless Patient Monitoring at New Acute Care Facility," press release, February 29, 2024, https://www.summitstone.org/2024/02/29/summitstone-health-partners-launches-contactless-patient-monitoring-at-new-acute-care-facility. The behavioral health facility, owned by Larimer County (and the only such county-owned facility in the state of Colorado) provides withdrawal management and crisis-stabilization support. Hap-Fry, "Larimer County-Owned Addiction Treatment Facility Welcomes Those Who Show Up at the Front Door," *Gazette*, February 1, 2025, https://gazette.com/2025/02/01/larimer-county-owned-addiction-treatment-facility-welcomes-those-who-show-up-at-the-front-door/. The following year, Oxevision announced its installation at Precourt Healing Center operated by Vail Health. Zoe Goldstein, "A Look inside the Precourt Healing Center as New Behavioral Health Facility Readies for May Opening," *Vail Daily*, April 3, 2025, https://www.vaildaily.com/news/inside-the-precourt-healing-center-new-behavioral-health-facility-edwards-vail.

[91] Hugh Lloyd-Jukes et al., "Vision-Based Patient Monitoring and Management in Mental Health Settings," *Journal of Clinical Engineering* 46, no. 1 (January 2021): 36–43, https://doi.org/10.1097/JCE.0000000000000447.

[92] David Andrew Clifton, Mauricio Christian Villarroel Montoya, and Lionel Tarassenko. Method and System for Signal Analysis. US Patent 9,659,229, filed January 28, 2014, and issued May 23, 2017. https://patents.google.com/patent/US9659229B2; Nicholas Dunkley Hutchinson, Simon Mark Chave Jones, and Muhammad Fraz. Method and Apparatus for Estimating Heart Rate. US Patent 10,806,354, filed January 23, 2017, and issued October 20, 2020. https://patents.google.com/patent/US10806354B2.

[93] Muhammad Fraz, Simon Mark Chave Jones, and Luke Marcus Biagio Testa. Method and Apparatus for Health and Safety Monitoring of a Subject in a Room. US Patent 10,796,140, filed January 19, 2017, and issued October 6, 2020. https://patents.google.com/patent/US10796140B2.

[94] Laura Cozens, *First Witness Statement of Laura Cozens*, Lampard Inquiry (February 2025), https://lampardinquiry.org.uk/wp-content/uploads/2025/10/OXHE009031-First-Witness-Statement-of-Laura-Cozens.pdf.

[95] Oxehealth Limited, *Oxehealth Terms and Conditions for G Cloud* (May 2024), https://assets.applytosupply.digitalmarketplace.service.gov.uk/g-cloud-14/documents/709402/816175912139941-terms-and-conditions-2024-05-03-1007.pdf.

According to Oxehealth's patents, Oxevision applies conventional or standard video-processing algorithms (a standard dense optical-flow algorithm), to detect and measure the optical flow in a video image sequence to track an area of interest for vital-sign signal detection.[96] In its patents and elsewhere, the company does not make claims about the performance of its AI models beyond its level of comparability to vital signs manually collected by nurses.[97] Apparently unique about its ambient patient monitoring system are its patented methods of measuring, analyzing, and estimating respiratory and pulse rates.[98]

In May 2024, LIO Health announced regulatory clearance for a new feature that monitors a patient's sleep patterns using physiological data (vital signs) and movement data.[99] The company uses what is likely a novel method of training a machine learning algorithm to determine the sleep state of a person[100] and, in response to that assessment, alert healthcare practitioners about potential sleep disturbances.[101] This feature draws on machine learning algorithms that process body-movement images taken from a video feed and, subsequently, filter out environmental changes (e.g., lighting changes) that could be mistaken for a patient's body movement.[102] To create the training dataset, LIO Health used data from its own reference subjects.

Oxevision can be integrated with electronic health record systems (EHR), which would presumably allow for Oxevision's newly collected patient data to be entered directly in a patient's medical file.[103] LIO Health has not announced any capabilities or features where existing EHR can be accessed by the Oxevision software to augment its estimations.

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[96] Nicholas Dunkley Hutchinson, Simon Mark Chave Jones, and Muhammad Fraz. Method and Apparatus for Estimating Heart Rate. US Patent 10,806,354, filed January 23, 2017, and issued October 20, 2020. https://patents.google.com/patent/US10806354B2; Simon Mark Chave Jones and Nicholas Dunkley Hutchinson. Method and Apparatus for Estimating Breathing Rate. US Patent Application Publication 2019/0029604, filed January 19, 2017, and published January 31, 2019. https://patents.google.com/patent/US20190029604A1.

[97] Adam Lewis et al., "Remote Vision-Based Digital Patient Monitoring of Pulse and Respiratory Rates in Acute Medical Wards," *Thorax* 79, no. 4 (2024): 363–65, https://thorax.bmj.com/content/thoraxjnl/79/4/363.full.pdf.

[98] David Andrew Clifton, Drew Birrenkott, Lionel Tarassenko, and Marco Pimentel. Method of Determining the Frequency of a Periodic Physiological Process of a Subject, and a Device and System for Determining the Frequency of a Periodic Physiological Process of a Subject. US Patent 11,103,155, filed November 2, 2018, and issued August 31, 2021. https://patents.google.com/patent/US11103155B2.

[99] Oxehealth, "Oxehealth Granted Regulatory Clearances for Mental Health Sleep Monitoring," press release, May 14, 2024, https://www.prnewswire.com/news-releases/oxehealth-granted-regulatory-clearances-for-mental-health-sleep-monitoring-302145051.html.

[100] Jonathan Frederick Carter, Lionel Tarassenko, Joao Goncalo Malveiro Jorge, and Oliver John Gibson. Machine Learning Classification of Sleep State. US Patent Application Publication 2024/0293078, filed March 1, 2024, and published September 5, 2024. https://patents.google.com/patent/US20240293078A1.

[101] Sophie Hutchinson and Stuart Woodward, "Grave Concerns over Patient Safety System in Mental Health Units," BBC, October 14, 2025, https://www.bbc.com/news/articles/cvgk399m70lo.

[102] Nicholas Dunkley Hutchinson and Simon Mark Chave Jones. Method and Apparatus for Monitoring of a Human or Animal Subject. US Patent 12,555,225, filed August 1, 2022, and issued February 17, 2026. https://patents.google.com/patent/US12555225B2.

[103] "How It Works," LIO, accessed October 22, 2026, https://www.liohealth.com/us/how-it-works.

LIO Health

Oxevision is a product of LIO Health, formerly known as Oxehealth, which is headquartered in Abingdon, England, and functions as a "software as a service" (SaaS) company.[104] LIO Health was founded in 2012 at the University of Oxford's Institute of Biomedical Engineering with initial funding from sources within the university, as well as from some outside of it. LIO Health's initial funders included Technikos LLP (a venture capital fund specifically established to support the commercialization of projects out of the University of Oxford's Institute of Biomedical Engineering), the Wellcome Trust Limited (a London-based charitable foundation that is an important funder of the University of Oxford's Institute of Biomedical Engineering), and the IP Group plc.[105] By the end of 2024, LIO Health had raised £38.5 million from venture capital firms since its founding in 2012.[106]

Company Claims Versus Workplace Reality: Hedged Promises, Patient Neglect, and Diffused Authority in AI Implementation

The Claim

LIO Health markets Oxevision as a way to improve the patient experience by minimizing the number of necessary disruptions by medical staff who come into a patient's room to check vital signs. Oxevision also presents itself as a tool that makes the jobs of healthcare providers easier and lighter. Nurses can, with Oxevision, reduce the number of times they perform

[104] "About," LIO, accessed October 22, 2026, https://www.liohealth.com/us/about; LIO, "Oxehealth Rebrands as LIO," LIO News and Views (blog), August 13, 2025, https://www.liohealth.com/us/news-and-views/oxehealth-rebrands-as-lio.
[105] "Oxehealth Limited: Filing History," Companies House, accessed October 22, 2026, https://find-and-update.company-information.service.gov.uk/company/08163325/filing-history; IP Group, "Completes Investment in Oxford University Spin Out, Oxehealth Ltd," press release, September 18, 2012, https://www.ipgroupplc.com/news-and-events/ip-group-news/pre-2018/2012-09-18.
[106] Oxehealth Limited, *Annual Report and Consolidated Financial Statements* (December 2024), https://find-and-update.company-information.service.gov.uk/company/08163325/filing-history/MzQ4MTEzNDU3NmFkaXF6a2N4/document?format=pdf&download=0.

manual, in-person patient checks. Instead, these workers can remotely check vital signs or discrepancies in patient movement. According to the marketing material, the contactless nature of Oxevision ensures the safety of healthcare providers who must obtain vital-sign measurements from highly agitated patients. Lastly, LIO advertises that its system offers a convenient and cost-effective[107] way for hospital administrators to track and manage the provision of care such as vital-sign checks by their workforce and put together patient-observation compliance reports.

To advance these claims about the technology's promise, the company has supported or indirectly commissioned studies that make three points: First, that its ambient monitoring system provides respiratory and pulse-rate measurements similar to those taken manually by nurses.[108] Second, that hospitals see cost savings (in labor costs, presumably) by installing vision-based monitoring systems.[109] Third, that staff members find that Oxevision makes it easier and safer to manage patients.[110]

However, LIO Health explicitly states in its materials and service agreement that the Oxehealth system is *not* a substitute for medical judgment and in-person patient checks. It should be used, instead, as part of a procedure that mandates periodic physical checks.[111] A hospital or clinic must assign a project manager to guide the implementation of the new Oxehealth Service (from installation to software onboarding), ensure that all staff members allocate sufficient time to be trained by Oxehealth staff on how to use the software, and also make staff available to provide LIO Health with feedback on the use of the system.[112] Healthcare practitioners using Oxevision are expected to monitor and respond to any alerts and notifications generated by the system, given that the system does not have any capacity itself for reacting to critical changes to a patient's health.

What all these caveats gesture toward is something quite important: This company makes ambitious promises about what their tool can automate while simultaneously suggesting that their tool isn't *actually* meant to be a substitute for medical judgment or human involvement. The result is a diffusion of accountability that can be difficult to challenge.

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[107] "How it Helps," LIO, accessed October 22, 2026, https://www.liohealth.com/us/how-it-helps.
[108] Lewis et al., "Remote Vision-Based Digital Patient Monitoring."
[109] See Robert Malcolm et al., "Economic Evaluation of a Vision-Based Patient Monitoring and Management System in an Acute Adult and an Older Adult Mental Health Hospital in England," *Journal of Medical Economics* 25, no. 1 (2022): 1207–17, https://pubmed.ncbi.nlm.nih.gov/36377376/. But one Oxehealth-funded study estimating such savings was retracted in 2026 over concerns about how its data was selected. The journal's editors found that the study's assumptions were not justified, that its authors had not been given access to all of the underlying data (which Oxehealth had analyzed), and that the risk of bias from the company's involvement had not been adequately addressed. See Ciara Buckley, Robert Malcolm, and Jo Hanlon, "Economic Impact of a Vision-Based Patient Monitoring System across Five NHS Mental Health Trusts," *PLOS Digital Health* 3, no. 9 (2024): 1-14, https://journals.plos.org/digitalhealth/article?id=10.1371/journal.pdig.0000559.
[110] Faith Ndebele et al., "Non-contact Monitoring to Support Care in Acute Inpatient Mental Health," *Journal of Mental Health* 33, no. 3 (2024): 320–25, https://doi.org/10.1080/09638237.2023.2245882.
[111] Oxehealth Limited, *Terms and Conditions for G-Cloud*.
[112] Oxehealth Limited, *Terms and Conditions for G-Cloud*.

Hospitals are expected to properly communicate the use of Oxevision to patients and provide the choice of its use at the time of admission, but this choice may be taken away at the discretion of the healthcare provider (depending on the mental state of a patient).[113] LIO Health's service agreement requires a healthcare provider to maintain a local server to process sensitive data, as well as a cloud-based server for de-identified data. Patient data contains personally identifiable information and other sensitive data. The service agreement states that the healthcare provider is the data owner and LIO Health is the data processor. But the service agreement also requires the healthcare provider to allow the Oxehealth System to send data to Oxehealth's cloud servers. (It is unclear if all, or only some, of the data collected by the healthcare provider is sent to these cloud servers.) While it is written in the service agreement that LIO Health cannot sell or otherwise share patient data with third parties, it is unknown whether LIO Health processes the data to improve its model performance and if any other secondary use of the data is permitted. It is also not evident how the company protects patient data from the risks of data theft, invasive surveillance, and other algorithmic harms.

In general, there exist few independent studies about the efficacy of vision-based or contactless patient monitoring. Most studies of this kind of ambient patient-monitoring technology are either written with LIO Health staff or written by individuals with funding support from the company. One outside study whose authors do not appear to have ties to LIO Health found limited, if any, evidence that surveillance technologies like Oxevision improve safety or reduce costs in inpatient mental health settings.[114] Moreover, Oxevision has avoided additional testing and scrutiny in the US by the US Food and Drug Administration because the agency may have viewed the technology as substantially equivalent to another product on the market. Finally, LIO Health presents Oxevision as medical software (Class II) rather than as a medical device.[115] Medical software technologies, even those that provide information about therapy decisions, don't need to provide detailed information to regulators about the underlying algorithmic models, potential for bias, or reliability.

[113] NHS England, *Principles for Using Digital Technologies in Mental Health Inpatient Treatment and Care* (February 2025), https://www.england.nhs.uk/long-read/principles-for-using-digital-technologies-in-mental-health-inpatient-treatment-and-care; for discussion on the ethics of informed consent for patients, see Jeffrey Saviano et al., "How Bioethics Can Inform Ethical AI Governance," Edmond and Lily Safra Center for Ethics (blog), March 15, 2024, https://www.ethics.harvard.edu/blog/post-9-how-bioethics-can-inform-ethical-ai-governance; and Dariush D. Farhud and Shaghayegh Zokaei, "Ethical Issues of Artificial Intelligence in Medicine and Healthcare," *Iranian Journal of Public Health* 50, no. 11 (November 2021): 1-5, https://pmc.ncbi.nlm.nih.gov/articles/PMC8826344.

[114] Jessica L. Griffiths et al., "The Use and Impact of Surveillance-Based Technology Initiatives in Inpatient and Acute Mental Health Settings: A Systematic Review," *BMC Medicine* 22 (2024): 564, https://doi.org/10.1186/s12916-024-03673-9.

[115] U.S. Food and Drug Administration, *510(k) Premarket Notification Oxevision Sleep Device* (April 2024), https://www.accessdata.fda.gov/cdrh_docs/pdf23/K233618.pdf; U.S. Food and Drug Administration, *510(k) Premarket Notification Oxehealth Vital Signs* (April 2022), https://www.accessdata.fda.gov/cdrh_docs/pdf22/K220899.pdf.

In Reality

In 2021, the United Kingdom launched a public inquiry into in-patient deaths in child and adult mental health facilities run by the National Health Service. This ongoing investigation, initially called the Essex Mental Health Independent Inquiry and later the Lampard Inquiry,[116] has brought attention to the use of Oxevision, its constant surveillance, and the resulting lack of privacy for vulnerable patients.

Through hearings and publications, the inquiry has found that many patients were unaware that Oxevision was installed in their facility or activated in their hospital rooms. Staff in facilities that used Oxevision regularly denied to patients that the facility was doing so, contributing to patient paranoia and a sense that staff were intentionally keeping patients unwell.[117] One patient only learned that they were being remotely monitored when a nurse accidentally mentioned one of Oxevision's cameras. A citizen-led campaign to remove Oxevision from hospitals in the UK, Stop Oxevision,[118] has articulated similar harms[119] and experiences of patients in hospitals with Oxevision.[120]

The inquiry also highlighted how some patients have been neglected when staff chose to reset the Oxehealth alerts without conducting an in-person check on the patient.[121] Thus far, four deaths in the UK have been connected to the use of Oxevision. We will briefly describe two of these cases.

Morgan-Rose Hart, an eighteen-year-old, was assigned a room at a mental health ward that had been fitted with the Oxevision technology. The technology was designed to send an alert to staff if Hart was in the bathroom for more than three minutes. But one day when the red alert went off for her room, nearby staff chose to reset the signal instead of conducting an in-person check, leaving Hart unobserved for another fifty minutes.[122] She was eventually found unresponsive on the bathroom floor of her room and later died.

Elise Sebastian, a sixteen-year-old patient at a different mental health facility, died under similar conditions of neglect. Oxevision was set to alert staff if Sebastian spent too long in her bathroom. But because the unit's rollout of the system had been plagued by poor Wi-Fi, the alerts were not reliably reaching staff. The red alert did arrive on the floor's main computer. However, the facility was short-staffed, and no one was monitoring the computer or its incoming alerts. In the public investigation into her death, witnesses said the alert system had been muted. Elise was left alone for twenty-eight minutes.[123]

Please note: The following section explores the experiences that nurses have had with remote patient monitors. Oxevision, described above, is one example of this category of technology. However, Oxevision was not used by any of the nurses who participated in our research.

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[116] "Homepage," The Lampard Inquiry, accessed October 22, 2026, https://lampardinquiry.org.uk.
[117] David Batty, "NHS Trusts Criticised over System That Films Mental Health Patients in Their Bedrooms," *Guardian*, December 13, 2021, https://www.theguardian.com/society/2021/dec/13/nhs-trusts-urged-to-ditch-oxevision-system-covert-surveillance-mental-health-patients.
[118] "About," Stop Oxevision, accessed October 22, 2026, https://stopoxevision.com/about-stop-oxevision.
[119] "Lampard Inquiry Statement," Stop Oxevision, accessed October 22, 2026, https://stopoxevision.com/2025/10/15/lampard-inquiry-statement.
[120] "Lived Experience," Stop Oxevision, accessed October 22, 2026, https://stopoxevision.com/category/lived-experience.
[121] Batty, "NHS Trusts Criticised."
[122] Jon Ungoed-Thomas et al., "Is It Safe? Is It Spying? Disquiet over NHS 'Magic Eye' Surveillance Camera in Mental Health Units," *Guardian*, March 30, 2025, https://www.theguardian.com/society/2025/mar/30/mental-health-surveillance-camera-oxevision-nhs.
[123] Nikki Fox and Shivani Chaudhari, "Neglect at Unit Led to Teenager's Death–Inquest," BBC News, May 28, 2025, https://www.bbc.com/news/articles/czr811rj7jmo.

It's like *Minority Report*, said Alex, a nurse in Nevada.[124] He was describing the virtual sitter (also called a "telesitter" or "virtual companion") that his facility used to remotely monitor patients with a risk of falling or self-harm, like pulling out an IV. The hospital used to have one-to-one supervision (i.e., a nursing assistant or patient-care assistant who gives the patient continuous attention) for these kinds of patients. Clinically trained staff would determine if a patient was at risk of any activity, whether consciously or not, that would pose immediate harm to themselves or interfere with their medical care.

Now, thanks to the AvaSure technology, a single healthcare worker somewhere in Oregon watches multiple patients across five different facilities. Is it twelve patients? Or sixty? Alex isn't sure and he hasn't figured out what kind of licensure these workers have, either. He uses the word "dystopian" to describe the situation. The cameras for the virtual sitter are motion-activated and use facial recognition technology to track the patient. He said, "drone technology comes to mind. . . . [It] finds the patient in the bed and it stares at them."

If a patient's movement starts to suggest that the patient is going to get out of bed, a visual of the room becomes a priority for the remote healthcare worker in Oregon who can speak into the room. "They can go, 'Hey. Excuse me, sir. You need to lie back down,'" Alex explained. "And then they can hit some alert." But Alex worries about what happens if there are two patient incidents at the same time.

Another nurse named Kerry shared how remote patient monitoring increases and complicates her own workload.[125] What happens if she is with a patient and gets a call that a different patient with the remote sitter needs assistance? "Can you even get there quick enough to make sure the person doesn't fall?" she asked.

Karla, whom we quoted earlier, agreed: "What if you're in the middle of a skill? Like what if you're putting in a Foley [catheter]?"[126] She recounted an experience when she had received a bunch of phone calls from a remote patient monitoring system while she was doing a dressing change for a burn of a different patient. There was nothing she could do, she said.

Marketing materials try to persuade healthcare practitioners that it is safe, and perhaps even better, to rely on AI systems so that they may focus on other aspects of healthcare provision. At the same time, though, the AI developers stipulate that staff should not rely on the AI tools *too much*. Nurses should not accept system outputs too much without applying their own medical judgment and expertise, in part because these tools are still in development and have notable issues (such as generating false information in clinical note summaries or underestimating respiratory rates and heart rates). The scholar Madeleine Clare Elish calls this a "moral crumple zone": When an automated system fails, responsibility can fall on the human operator nearest to it, even if that person had limited control over how the system behaved.[127] The software developer displaces their own liability and accountability by directing any patient harm toward the healthcare practitioner. In this context, healthcare staff may be trapped in a contradiction of being told both to use and rely on the new tool and, simultaneously, not to rely on it too much. A worker can be provided with a tool that is designed to help them do fewer routine tasks while also being told that they are responsible for how the AI tool appears to complete those same tasks.

[124] Focus group with the author, April 21, 2026; *Time m*agazine interviewed a nurse who had a similar experience as Kerry. Virtual sitters made his work harder, not better. When patients are assigned in-person sitters or companions, his work with other patients was interrupted fewer times. See Semuels, "Stop Saying There's a Nursing Shortage."
[125] Focus group with the authors, June 17, 2026.
[126] Focus group with the authors, June 17, 2026.
[127] Madeleine Clare Elish, "Moral Crumple Zones: Cautionary Tales in Human-Robot Interaction," *Engaging Science, Technology, and Society* 5 (2019): 40–60, https://estsjournal.org/index.php/ests/article/view/260.

For Kerry, there is only one place this dangerous contradiction leads: "It's putting the blame on the nurse because now they can say, 'I saw your patient getting out of bed and I called you and you didn't go.' So then they can blame the nurse rather than the system, right?" She continued, "My job will be me monitoring the systems that can't do what we've been trained to do."

These patient-monitoring systems may help medical facilities rationalize understaffed or lean workforces. The reduction in certain tasks, like having to do fewer in-person patient rounds, may even justify lowering wages for nurses. At worst, an overreliance of ambient patient-monitoring tools can lead to neglect, where healthcare staff fail to do in-person checks because they prefer using the remote system or they have become desensitized and nonreactive to various alarms. Technologies that trigger alerts for minor inconsistencies or that do not require any action contribute to "alarm fatigue."[128]

Dina, who has been a nurse for eighteen years in California, states that the remote sitters raise concerns about patient privacy and dignity, especially during hygiene care.[129] Some patients, she said, don't know that the cameras are on, since there is no light or other signal to indicate as much. When she raised the issue of privacy with her administrator, she was told that there is a virtual curtain option. She can contact the remote sitter's call center and request that the software system temporarily "close the curtain." But such an act takes time, which she doesn't always have. The curtain also does nothing to stop the audio recording of the room. She expressed her frustration with the technology:

> "Why at a time when the patient's in their most vulnerable state, would we allow for cameras in a hospital room?... That is someone's mom, someone's dad. That could be your mom and dad. **Would you be okay with a camera just in their face, staring at them?** Can that camera hold their hand when they're having a vulnerable moment, or help them when they're, you know, you know, trying to deal with pain? Like, no. Like, **you cannot replace the human touch, the human care of a registered nurse**."

For Hailey, who has been a nurse for thirteen years in North Carolina, the problem with AI patient monitors is that they sometimes don't connect properly to the remote monitoring software system.[130] Other nurses complain that there is tension between the interest of the patient monitoring system, which requires the lights in a room to be on, and the interest of the patient, who wants to sleep in the dark.[131] There is pressure to leave the lights on at night so that the patient monitor can continuously track the patient.

[128] National Association of Clinical Nurse Specialists, *Alarm Fatigue: Strategies to Safely Manage Clinical Alarms and Prevent Alarm Fatigue*, National Association of Clinical Nurse Specialists (2014), https://nacns.org/wp-content/uploads/2016/11/AF-Introduction.pdf.
[129] Focus group with the author, April 24, 2026.
[130] Focus group with the author, April 29, 2026.
[131] For discussion of the health deficits of sleeping with the lights on, see Sandee LaMotte, "The Hidden Risk to Your Heart from Sleeping in Low Light," CNN, September 9, 2026, https://www.cnn.com/2026/09/09/health/sleep-light-exposure-heart-study-wellness.



AI Charting: **Epic**

The Tool

Epic Systems' AI Charting tool was launched in February 2026 in the US.[132] It is capable of ambient scribing in real time, generating clinical notes (including directly accessing the patient's full historical patient record for "context-aware" notes), structuring notes based on a nurse's voice commands, and suggesting orders based on what is said during the patient encounter. The tool operates within the Epic interface, which means it is embedded directly into the company's EHR platform.

Epic's AI Charting tool is a generative AI-based tool that utilizes ambient listening during patient visits for real-time note generation. Ambient listening systems or "ambient scribes" engage automatic speech recognition or natural-language processing mechanisms to record, transcribe, and analyze spoken dialogue. To activate AI Charting through the Epic interface, nurses can use built-in microphones on mobile devices, tablets, or desktop or laptop computers. The AI tool has a voice assistant component that allows nurses to give it voice commands to determine the patient note structure ("format History of Present Illness as a bulleted list," for example).[133]

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[132] Epic, "Epic AI Charting Rolls Out Alongside an Expanding Set of Built-In AI Capabilities," Epic (blog), February 4, 2026, https://www.epic.com/epic/post/epic-ai-charting-rolls-out-alongside-an-expanding-set-of-built-in-ai-capabilities.
[133] Microsoft Learn, "Use Cases White Paper for Dragon Copilot (Physicians and Nurses)," Microsoft Learn (blog), last updated October 13, 2026, https://learn.microsoft.com/en-us/industry/healthcare/dragon-copilot/whitepapers/use-cases.

An important feature of the AI Charting tool is its integration with Epic's electronic health record platform. With access to a patient's full historical record, the tool can generate "context-aware" notes, or pull additional details from previous health records to add to the current visit notes. The tool can also draft suggested orders based on what is discussed during the visit, which the clinician can then accept or dismiss.[134]

AI Charting is powered by Microsoft's Dragon Ambient eXperience (DAX) Copilot,[135] a generative AI system customized for clinical workflows and the documentation of patient data. Microsoft's DAX Copilot combines voice-dictating and ambient listening AI systems built by Nuance (acquired by Microsoft in 2021)[136] and Microsoft's traditional Copilot software, which blends OpenAI and Microsoft models.[137]

When AI Charting captures audio data, the recordings on the (local) device microphones (e.g., on a mobile device or tablet) are immediately sent to the cloud for processing before being sent to a potentially different (local) device for viewing (e.g., a tablet or a laptop or desktop computer). Epic says that it ensures HIPAA-compliant data storage[138] and has partnered with cloud storage providers like Google[139] and Microsoft[140] to run their high-volume EHR workloads and algorithmic processing.

In 2026, Epic launched a number of other AI initiatives, one of which it calls "Agent Factory." One tool, built with Microsoft Dragon Copilot, creates "intelligent diagnoses." According to Microsoft:

> Dragon Copilot and DAX Copilot generate diagnoses for the Assessment and Plan section of the clinical note, based on the ambient recording. The system retrieves diagnoses directly from Epic and compares them with Dragon Copilot's AI-generated diagnoses. Diagnoses can be retrieved only for checked-in patients whose records are not restricted or controlled under enhanced

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[134] "Art for Clinicians," Epic, accessed October 23, 2026, https://www.epic.com/software/ai-clinicians; Khowaja Saad, "What Is Epic AI Scribe: Features, Benefits & How It Works," Folio3 Digital Health (blog), accessed October 23, 2026, https://digitalhealth.folio3.com/blog/what-is-epic-ai-scribe-features-benefits; Brittany Trang, "Epic Launches AI Charting, Potentially Scrambling the Ambient Scribe Market," *STAT*, February 4, 2026, https://www.statnews.com/2026/02/04/epic-ai-charting-ambient-scribe-abridge-microsoft.

[135] Seth Hain, "Microsoft Ignite '25 Keynote: Seth Hain, Senior VP of Research & Development at Epic Systems," Techusiness, YouTube, 6:04, November 18, 2025, https://www.youtube.com/watch?v=5hwmup-B0T8.

[136] Wes Davis, "Microsoft's New Dragon Copilot Is an AI Assistant for Healthcare," *Verge*, March 3, 2025, https://www.theverge.com/news/622528/microsoft-dragon-copilot-ai-healthcare-assistant.

[137] The large language models are from OpenAI; the natural language processing and Prometheus framework to merge search data with the GPT model used were from Microsoft. See Michael Muchmore, "What Is Copilot? Microsoft's AI Assistant Explained," *PCMag*, updated July 30, 2025, https://www.pcmag.com/explainers/what-is-microsoft-copilot.

[138] As a long-time electronic health record software vendor, Epic Systems is HIPAA-compliant and has no known data security breaches. It does face other issues regarding inappropriate data access issues, however. For example, Epic Systems recently filed suit against Health Gorilla, claiming that the company was negligent in its onboarding process and that it allowed entities posing as health providers to gain access to patient health records in violation of HIPAA. Compl., Epic Sys. Corp. v. Health Gorilla, Inc., No. 2:26-cv-00321 (C.D. Cal. Jan. 13, 2026), https://storage.courtlistener.com/recap/gov.uscourts.cacd.1002323/gov.uscourts.cacd.1002323.1.0.pdf; and Brittany Trang, "Epic Says It Has Uncovered Rot in Patient Record Sharing: Will HHS Act?," *STAT*, March 23, 2026, https://www.statnews.com/2026/03/23/epic-systems-lawsuit-fraud-in-health-information-exchanges.

[139] Aashima Gupta, "Healthy Collaboration: Why Partnerships Are the Heart of Healthcare Innovation," Google Cloud Blog, November 15, 2022, https://cloud.google.com/transform/healthcare-interoperability-collaboration-partnerships-hlth-conference-2022.

[140] Heather Landi, "Microsoft Partners with Epic to Roll Out EHR Cloud Database Solution, Starting with Mount Sinai," Fierce Healthcare, August 11, 2023, https://www.fiercehealthcare.com/health-tech/microsoft-partners-epic-roll-out-ehr-cloud-database-solution-starting-mount-sinai.

> privacy access controls. When the diagnoses align, the note uses the Epic diagnoses. If there's no alignment, the note retains the diagnoses generated by Dragon Copilot or returns the Epic diagnoses without an Assessment and Plan section.[141]

At its annual conference, Epic announced a different tool for outpatient settings called Ergo Visit, which can "ambiently surfac[e] relevant chart data, draf[t] orders and generat[e] after-visit summaries in real time during patient encounters."[142] Epic also reported that its generative AI tool called Art delivers fifty million inpatient and outpatient summaries a month for the health systems using the feature.[143] Epic's AI Charting tool is not, by any means, a standalone product.

Corporate Power Analysis: Epic Systems' Data Monopoly

Epic Systems was founded in 1979 as a database software company focused on healthcare.[144] Headquartered in Verona, Wisconsin, it has grown into the leading developer of electronic health record software, with over 43 percent of the acute-care electronic health record market in 2025.[145] It maintains an estimated 325 million electronic patient medical records in its systems.[146] Epic's primary competitor is Oracle Health, which holds only a 21.9 percent share of the acute-care hospital EHR market.[147] The Federal Trade Commission announced an antitrust investigation of Epic in August 2026.[148]

Epic's software is used by outpatient clinics, urgent care clinics, and major acute-care hospitals such as Kaiser Permanente, Johns Hopkins Hospital, the Mayo Clinic, Mass General Brigham, and Emory Healthcare.[149] Epic's MyChart feature, the patient-oriented portal, had more than 195 million users as of 2025.[150]

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[141] Microsoft Learn, "Intelligent Diagnoses Retrieval from Epic," Microsoft Learn (blog), last updated August 3, 2026, https://learn.microsoft.com/en-us/industry/healthcare/dragon-copilot/specialty-models/intelligent-diagnoses-retrieval.
[142] Giles Bruce, "A 'Blistering' Pace: CIOs React to Epic's AI Rollout Speed," Becker's Hospital Review, August 19, 2026, https://www.beckershospitalreview.com/healthcare-information-technology/innovation/a-blistering-pace-cios-react-to-epics-ai-rollout-speed.
[143] Katie Palmer, "How Health Systems Are Embracing Chatbots to Query and Summarize Patient Records," *STAT*, August 20, 2026, https://www.statnews.com/2026/08/20/health-systems-embrace-ai-chatbots-query-patient-records-ehr.
[144] "About," Epic, accessed October 23, 2026, https://www.epic.com/about.
[145] Giles Bruce, "Epic's Market Share over the Last 5 Years," Becker's Hospital Review, May 14, 2026, https://www.beckershospitalreview.com/healthcare-information-technology/ehrs/epics-market-share-over-the-last-5-years.
[146] "About," Epic, accessed October 23, 2026, https://www.epic.com/about.
[147] Oracle acquired a peer market leader, Cerner, in 2022, but it has not dislodged Epic's dominant position. See Naomi Diaz, "7 Hospitals, Health Systems Moving to Oracle Health," Becker's Hospital Review, August 28, 2026, https://www.beckershospitalreview.com/healthcare-information-technology/ehrs/7-hospitals-health-systems-moving-to-oracle-health.
[148] Naomi Diaz, "Epic Faces FTC Antitrust Probe: Report," Becker's Hospital Review, August 17, 2026, https://www.beckershospitalreview.com/healthcare-information-technology/ehrs/epic-faces-ftc-antitrust-probe-report. The health tech company Particle also alleged that Epic violates antitrust laws given its market control, and makes it difficult for patients and institutions to share EHRs between different systems. See Katie Jennings, "Healthcare Software Company Epic Faces First Antitrust Suit for Alleged Monopoly Activity," *Forbes*, September 27, 2024, https://www.forbes.com/sites/katiejennings/2024/09/27/healthcare-software-company-epic-faces-first-antitrust-suit-for-alleged-monopoly-activity.
[149] "Care Everywhere," Epic, accessed October 23, 2026, https://www.epic.com/careeverywhere.
[150] Andy Oram, "An Update on Epic MyChart with Taylor Seale During Epic UGM," *Healthcare IT Today*, September 4, 2025, https://www.healthcareittoday.com/2025/09/04/an-update-on-epic-mychart-with-taylor-seale-during-epic-ugm.

Epic remains a privately held company. The founder, Judith Faulkner, still leads the company as the CEO. Faulkner owns an estimated 43 percent of Epic, but controls all of its voting shares; most of the rest is owned by employees.[151] One core business principle for the company is that it does not make acquisitions and it has never accepted investment from venture capitalists. The CEO has made explicit her preference that the company never go public.[152]

While Epic Systems has always been a software development company, its pivot to AI systems is relatively recent. In the early 2020s, the company came under public scrutiny for its self-developed proprietary predictive algorithms, in particular its predictive sepsis tool. Investigators documented how Epic paid some health systems large cash incentives, up to $1 million, through its "honor roll" program, to adopt the predictive algorithms.[153] Investigators also found that the company exaggerated the accuracy of the AI tool in its published claims.[154] And they had difficulty accessing any documentation or white papers about the sepsis model itself. They noted that examining model performance (accuracy, error rates, etc.) and potential impacts on healthcare practitioners and patients is nearly impossible because of the black-box way Epic develops its AI tools. With little regulatory oversight of such algorithms, Epic has not been required to disclose information about how its algorithms are configured. Even its user manuals are not publicly available, and researchers need Epic's permission to publish screenshots. [155]

After this foray, Epic shifted strategies to partner with third-party AI tool developers. In 2023, Microsoft and Epic announced plans to work together. The goal was to integrate Epic's EHR software with Microsoft's large-scale cloud computing capacity and OpenAI's ChatGPT generative AI technologies (which themselves were built on Microsoft's Azure OpenAI Service and Nuance DAX Express solutions).[156] Almost in lockstep, Epic also announced that the ambient scribe company Abridge would be Epic's first "Pal" in a new "Partners and Pals" program.[157] The collaboration—though nonexclusive—allowed clinicians to use Abridge's tools directly inside of Epic's workflows, instead of

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[151] Naomi Diaz, "Judy Faulkner Drops 1 Spot on Forbes' Richest Self-Made Women List," Becker's Hospital Review, June 5, 2026, https://www.beckershospitalreview.com/healthcare-information-technology/ehrs/judy-faulkner-lands-on-forbes-richest-self-made-women-list; Giles Bruce, "Epic's Dominance in 14 Numbers," Becker's Hospital Review, May 27, 2026, https://www.beckershospitalreview.com/healthcare-information-technology/ehrs/epics-dominance-in-14-numbers; "About," Epic, accessed October 23, 2026, https://www.epic.com/about.

[152] Ashley Capoot, "A Journey Inside Epic Systems' Mythical and Sprawling Campus, a World Away from Wall Street," CNBC, September 1, 2024, https://www.cnbc.com/2024/09/01/inside-epic-systems-mythical-campus-a-world-away-from-wall-street-.htm.

[153] Casey Ross, "Epic's AI Algorithms, Shielded from Scrutiny by a Corporate Firewall, Are Delivering Inaccurate Information on Seriously Ill Patients," *STAT*, July 26, 2021, https://www.statnews.com/2021/07/26/epic-hospital-algorithms-sepsis-investigation.

[154] This is not uncommon, as a recent *STAT News* investigation found for other companies with AI scribes. See Casey Ross and Brittany Trang, "Inside a $7 Billion Silicon Valley Startup's Mad Dash to Automate the Business of Health Care," *STAT*, August 12, 2026, https://www.statnews.com/2026/08/12/inside-commure-athelas-mad-dash-automate-health-care.

[155] Ross, "Epic's AI Algorithms."

[156] Eric Boyd, "Microsoft and Epic Expand AI Collaboration to Accelerate Generative AI's Impact in Healthcare, Addressing the Industry's Most Pressing Needs," Official Microsoft Blog, August 22, 2023, https://blogs.microsoft.com/blog/2023/08/22/microsoft-and-epic-expand-ai-collaboration-to-accelerate-generative-ais-impact-in-healthcare-addressing-the-industrys-most-pressing-needs.

[157] Abridge, "Abridge Becomes Epic's First Pal, Bringing Generative AI to More Providers and Patients," press release, August 16, 2023, https://www.abridge.com/press-release/abridge-becomes-epics-first-pal-bringing-generative-ai-to-more-providers-and-patients.

them having to switch applications.[158] These efforts can be understood as precursors and practice runs for the AI Charting tool, which Epic CEO Judith Faulkner announced in August 2025.[159] The AI Charting tool went live six months later.[160]

Around the same time, Epic deployed a patient-facing AI tool called "Emmie." Emmie has conversational chat capabilities and seeks to provide support with appointment scheduling and bill payments. The tool is integrated into the patient-facing MyChart component of Epic, which contains a patient's electronic medical records.[161]

Epic recently announced plans to release a suite of "Curiosity" AI tools, which they plan to integrate as a feature in their EHR software platforms in March 2027.[162] These tools apparently consist of a set of generative models trained on Epic's prized Cosmos dataset "to simulate patient trajectories and predict patients' future health risks," and have been available to researchers at Cosmos-participating organizations since February 2026.[163]

Cosmos contains comprehensive, longitudinal medical record data, from both inpatient and outpatient charts, for 310 million patients across 22.6 billion encounters with clinicians. It is considered one of the largest single clinical databases of EHR information.[164] As such, it is a massive (and perhaps unprecedented) corpus of de-identified medical data. Alongside the national move to electronic health records, Epic sought to create new datasets to advance biomedical research. Participating healthcare systems opted in to Cosmos and served as the mediating entity to gain consent from the patients whose data would be included in the dataset. Ultimately, the idea was that the dataset would be available to scientists working toward the greater good and the overall health and well-being of society. Participating healthcare institutions must agree to the Cosmos guidelines (which are not public).

It is unclear if or how Epic's AI Charting tool was trained on this dataset or any active patient data. It is also unclear how patients can opt out of having their data entered into the Cosmos database if their facility has a data-sharing agreement with Epic. Patients have reported finding other Epic-related data-sharing opt-outs "maddening."[165] Most patients at facilities that use Epic's AI Charting are likely

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[158] Rebecca Torrence, "Inside the Messy Relationship Between a Medical Records Giant and Healthcare's Hottest AI Startup," *Business Insider*, September 25, 2025, https://www.businessinsider.com/inside-messiest-relationship-in-healthcare-ai-abridge-epic-2025-9.
[159] Heather Landi, "Epic Unveils AI Solutions for Clinicians, Patients and RCM, Gives Sneak Peek at Cosmos AI for Risk Prediction," Fierce Healthcare, August 19, 2025, https://www.fiercehealthcare.com/health-tech/epic-unveils-major-ai-features-ai-charting-microsoft-cosmos-ai-risk-prediction-and-rcm.
[160] Epic, "Epic AI Charting Rolls Out Alongside an Expanding Set of Built-In AI Capabilities," Epic (blog), February 4, 2026, https://www.epic.com/epic/post/epic-ai-charting-rolls-out-alongside-an-expanding-set-of-built-in-ai-capabilities.
[161] Epic, "Epic AI Charting Rolls Out."
[162] Heather Landi, "Epic Expands AI Ambitions with Agent Platform, Cosmos-Powered Predictions and Workflow Automation," Fierce Healthcare, August 19, 2026, https://www.fiercehealthcare.com/health-tech/epic-expands-ai-ambitions-agent-platform-cosmos-powered-predictions-and-deeper-workflow.
[163] Epic, "A Discussion About Curiosity—and the Future of Healthcare AI," Epic (blog), February 25, 2026, https://www.epic.com/epic/post/a-discussion-about-curiosity-and-the-future-of-healthcare-ai. See Landi, "Epic Unveils AI Solutions."
[164] "About Cosmos," Epic Cosmos, accessed October 23, 2026, https://cosmos.epic.com/about.
[165] Alex Rosenblat, "MyChart Said I Could Opt Out of Sharing My Health Data. Figuring Out How Was Maddening," *STAT,* October 15, 2026, https://www.statnews.com/2026/10/15/health-data-privacy-medical-record-opt-out-barriers-investigated.

unaware that their de-identified electronic health record data is being collected, held, and used by Epic for its Cosmos database.[166]

Epic is not currently explicitly monetizing the Cosmos database, which is primarily available for research purposes. Healthcare systems can only gain access to Cosmos by contributing their own data. However, Epic's use of Cosmos to develop proprietary predictive AI models may give the company a market advantage over its competitors. Other healthcare AI tool developers are unlikely to have an equivalent dataset, or may not be granted access to the Cosmos dataset as a potential competitor in the future.

Company Claims Versus Workplace Reality: Ambient Scribes and the Shift from Patient Care to Babysitting Robots

The Claim

Epic claims that the AI Charting tool reduces the "pajama time" for clinicians, or the time spent completing health records outside of scheduled work hours when healthcare providers are typically at home.[167] Epic claims that at one of their sites, Mercy, the "average end-of-shift documentation time fell from 3.5 minutes per note to about 32 seconds—an 85% reduction."[168] Additionally, by providing ambient scribing, Epic claims that patient-clinician interactions are improved, as the clinician will be freer to focus on the patient, with more eye contact and more engaging hand movements, rather than being focused on the screen while typing notes.[169]

[166] Because the data has been de-identified, it may be difficult to take any private right of action against Epic to remove one's data from the dataset (i.e., disgorgement).
[167] Caleb Scott, "A Smarter Way to Chart: How AI Charting Is Reshaping the Clinician and Patient Experience," EpicShare (blog), May 19, 2025, https://www.epicshare.org/share-and-learn/john-muir-upmc-ai-charting.
[168] Epic, "Nurses Write Notes 85% Faster with Epic AI," Epic (blog), February 26, 2026, https://www.epic.com/epic/post/nurses-write-notes-85-faster-with-epic-ai.
[169] Microsoft, "Generative AI in Healthcare with Nuance and Epic at Microsoft Inspire 2023," YouTube, 4:20, July 18, 2023, https://www.youtube.com/watch?v=R8YR243hbNA.

In Reality

Nurses who use AI scribing and clinical note-taking tools report a host of concerns. For some, like Alex, the problem is one of accuracy. Microsoft Dragon Copilot made a mistake where it mistranscribed the gender and diagnosis of a patient, who was a fifteen-year-old male. Alex recounted:

> "It's really hard to know how this happened. But… patient was getting ready to go to the [operating room]…to have his appendix out. And clinically he looked like he had appendicitis. But the [AI generated notes] suddenly said that he had… a prominent, inflamed, ovarian cyst… **The radiologist said he had no idea [how the notes came to that conclusion]**…He was like, 'I was not talking about ovarian cysts or ovaries or anything of the sort,' but it went down in his dictation." [170]

Other nurses agreed that AI scribes make routine mistakes. One nurse named Kerry said, "It gets the gender wrong all the time." But she also warned that some clinicians don't notice the errors.[171] Another nurse shared that it puts her in a tough position when she has to regularly point out these problems to her supervisors or attending physicians. Karla didn't understand why the medical director of her facility casually recommended that clinicians download the free program Doximity, an AI scribe that can generate notes and populate charts. She wasn't sure what kind of data protections are in place with Doximity, or whether the hospital where she works does a thorough evaluation process before adopting new tools.

The regular presence of these "hallucinations" gives Sally pause about the tool itself and how it shapes patient care. She said, "I feel like the AI in the charts . . . has just, like, allowed them to expedite making people [into] numbers even faster." Willa agreed and suspected that she would never "rely on AI for clinical decisions."[172]

Sally and Willa had similar impressions about how AI scribes and charting tools affect the quality of their jobs. For many, the AI summaries and generative diagnosis tools undermine the clinical judgments of nurses and place them under a constant state of surveillance. Epic's AI tools in particular, Sally said, make "it easier for them to audit our charts."

[170] Focus group with the author, April 21, 2026.
[171] Focus group with the author, June 17, 2026.
[172] Focus group with the author, April 28, 2026.

AI charting tools slow down her work. She repeatedly asks herself, "What did I not do that got changed or [is] new in there?" She has to verify what AI charting got correct and what it didn't. Sally recounted what it's like to be checking the AI charts:

> "Oh yes, that was real. Oh yes, that happened. Oh no, that was like not real or whatever. Like you have to just go through all of that fricking…communication that it did with itself all day long. You have to check your, like, robot all day and be like, 'Okay, my robot behaved. Okay, my robot didn't behave. Okay, my robot was fine. Okay, it wasn't.' So there'll probably be more and more and more of that. **But it's just, like, really hard work for the human. And it's so terrible that it's, like, the nurse who has to do this…You're not with your patient…You're managing the robot…** So it just feels a little more taxing, basically, to do the job."

Administrative responsibilities are significant drivers of clinician burnout,[173] especially as they often require uncompensated work after hours. AI tools often propose to ease these burdensome aspects of patient care by automating the majority of these tasks, requiring practitioners only to review and confirm AI-generated outputs. But, as Willa suggests, AI tools may lead to healthcare providers having to do more.

She is not alone in this concern. Journalist Sarah Kessler writes that AI is "creating a new type of work that may be sucking up much of the time the technology itself is saving."[174] As one researcher told Kessler, "the only AI that's useful is the AI that is verified."[175] This new kind of work, called the "verification tax" or "botsitting,"[176] is what worries Sally and Willa. It's the task of checking that the output of an AI tool is decent, which requires a different mental focus than the kind of care work for which they trained.

Nurses also shared concerns about how useful the smooth prose of the AI-generated summaries will be for future visits. Sometimes it's hard to quickly scan the notes, which are rarely succinct, to get a sense of what the previous clinician actually thought. The prose can be overly dense and excessively long, burying important details in long strings of text.[177]

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[173] Elizabeth A. Sloss et al., "Toward Alleviating Clinician Documentation Burden: A Scoping Review of Burden Reduction Efforts," *Applied Clinical Informatics* 15, no. 3 (2024): 446–55, https://pmc.ncbi.nlm.nih.gov/articles/PMC11152769.
[174] Sarah Kessler, "What's Dragging Down A.I. Efficiency? The 'Verification Tax,'" *New York Times*, October 10, 2026, https://www.nytimes.com/2026/10/10/business/dealbook/ai-verification-tax-rework.html.
[175] Kessler, "What's Dragging Down A.I. Efficiency?"
[176] Kessler, "What's Dragging Down A.I. Efficiency?"
[177] See for discussion Erin Palm et al., "Assessing the Quality of AI-Generated Clinical Notes: Validated Evaluation of a Large Language Model Ambient Scribe," *Frontiers in Artificial Intelligence* 8 (2025): 1-8, https://www.frontiersin.org/journals/artificial-intelligence/articles/10.3389/frai.2025.1691499/full.

Rather than addressing challenges in the healthcare workplace—such as the number of patients nurses are required to see in a single shift due to budgetary constraints (e.g., understaffing, quotas)[178] or the amount of documentation required by insurers[179]—AI charting tools may unintentionally worsen the quality of jobs. Increasing the adoption of AI at a facility "often means that nurses are on the hook to constantly respond to continuous monitors and automated alerts,"[180] writes journalist Katie Palmer. Some describe this experience as "pilot fatigue."[181] Their workload increases and "often exceeds human capacity," according to Rae Walker, a professor of nursing at the University of Massachusetts, Amherst.[182]

The introduction of ambient listening tools into healthcare settings may also subject nurses to unprecedented amounts of surveillance. Though patients are sometimes given the option to decline the use of scribes or other note-taking software, nurses are not. Nurses must often reorient themselves to environments that are saturated with surveillance.

Zooming Out: Nurses Absorb the Costs of Systems They Did Not Choose

Little is known about the accuracy of Epic's AI Charting's ambient transcription text as well as the accuracy of the recommendations made by the tool as part of its "intelligent diagnoses notes," "context-aware" notes, or suggested orders. Epic claims it actively monitors efficacy metrics, including the number of changes made to draft notes, and seeks to understand whether the AI tool produces too many errors or inaccurate results ("hallucinations").[183] But limited public information exists concerning to what extent, and in what contexts, the tool works as intended. Epic does not specify whether it monitors the severity of changes made to draft notes, for instance.

The impact of AI Charting on the work life of healthcare providers is largely unknown. It is unclear whether the AI Charting tool leads to work intensification, how many providers are opting out of its use, and what happens when a nurse disagrees with an output. The "human-in-the-loop" model may not serve as a sufficient guardrail to protect professional standards and safeguard the ability of workers to override automated systems without penalty. Epic's AI Charting may unintentionally compel healthcare workers to cede professional autonomy and expertise, since the tool can be presented as "more objective" or "more data-driven" than human practitioners.

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[178] National Academies of Sciences, Engineering, and Medicine et al., *Taking Action Against Clinician Burnout* (National Academies Press, 2019), https://www.ncbi.nlm.nih.gov/books/NBK552615.
[179] Robert Kuttner, "An Epic Dystopia," *American Prospect*, October 1, 2024, https://prospect.org/2024/10/01/2024-10-01-epic-dystopia; Larry Ozeran and Richard Schreiber, "Reduce Burnout by Eliminating Billing Documentation Rules to Let Clinicians Be Clinicians: A Clarion Call to Informaticists," *Applied Clinical Informatics* 12, no. 1 (2021): 73–75, https://pmc.ncbi.nlm.nih.gov/articles/PMC7857966.
[180] Katie Palmer, "Nurses Seek a Seat at the Table as They Fight Expanding Clinical AI," *STAT*, August 11, 2026, https://www.statnews.com/2026/08/11/nurses-seek-involvement-clinical-ai-decisions.
[181] Bruce, "A 'Blistering' Pace."
[182] Palmer, "Nurses Seek a Seat."
[183] Emily Olsen, "Epic Rolls Out AI Charting Tool as Scribe Market Heats Up," *Healthcare Dive*, February 5, 2026, https://www.healthcaredive.com/news/epic-rolls-out-ai-charting-art-notetaking-documentation-scribe/811462.

Willa, whom we quoted earlier, spoke with us about the difficulty of her job when the outputs from the AI tools do not seem correct to her. She explained:

> "There's, like, a ton of algorithms that operate in Epic… And it's hard to kind of override the algorithms, is what I find… **It's like making your decisions for you, the algorithm does**… And I've tried on different times to, like, override it and be like, 'No, actually that patient is not a high fall risk' or 'No, that patient is not a… moderate fall risk; they're high fall risk.' And it's very, very difficult. **And I feel like I just go in circles, trying to, like, circumvent and get out of the algorithm**."[184]

It is unclear what kind of liability AI Charting places on individual providers and whether nurses become "liability sponges."[185] The AI Charting tool prompts providers to review and edit recommendations and outputs from the system.[186] If the nurse accepts the AI-generated text and any associated recommendations, the system will log her response. If she manually edits the recommendation or output, the system tracks her action.[187] What is unknown is whether, and to what extent, a nurse might be liable for any errors in the resulting documentation or entry to a medical record, even if the error originated with the AI tool. Nurses and other healthcare workers at the lower end of professional hierarchies may take the blame for mistakes made by AI systems.[188]

Lastly, there is a general concern of deskilling associated with AI Charting. An important aspect of the healthcare provider-patient relationship, as well as the ability to provide great patient care, is communication and summarization.[189] Being attentive to different cues from the patient, both what the patient is directly and indirectly communicating through verbal cues and body language, helps to build rapport, develop clinical judgment, and make a diagnosis.[190] Nursing skills may be degraded, or entirely

[184] Focus group with the author, April 28, 2026.
[185] Thanks to Alexandrea Mateescu for this phrase and suggestion.
[186] Epic, "Nurses Write Notes 85% Faster with Epic AI," Epic (blog), February 26, 2026, https://www.epic.com/epic/post/nurses-write-notes-85-faster-with-epic-ai; "Art for Clinicians," Epic, accessed October 23, 2026, https://www.epic.com/software/ai-clinicians.
[187] Saad, "What Is Epic AI Scribe."
[188] This result may be similar to the way in which an Uber driver was held legally responsible for monitoring a self-driving vehicle that killed a pedestrian. See Jacques Billeaud and Anita Snow, "The Backup Driver in the 1st Death by a Fully Autonomous Car Pleads Guilty to Endangerment," Associated Press, July 28, 2023, https://apnews.com/article/autonomous-vehicle-death-uber-charge-backup-driver-1c711426a9cf020d3662c47c0dd64e35.
[189] Dean-David Schillinger, "Optimizing the Clinical Encounter: The Science of Listening," UCSF Department of Medicine Chair's Corner (blog), October 10, 2024, https://medicine.ucsf.edu/chairs-corner/science-of-listening; Joy Scharfman and Valeria Esposito Kubanick, "Listening and Presence Guiding Nursing Practice," *Nursing Science Quarterly* 38, no. 4 (2025): 374–77, https://journals.sagepub.com/doi/abs/10.1177/08943184251358355.
[190] Sally Quilligan and Jonathan Silverman, "The Skill of Summary in Clinician-Patient Communication: A Case Study," *Patient Education and Counseling* 86, no. 3 (March 2012): 354–59, https://doi.org/10.1016/j.pec.2011.07.009.

lost, with an overreliance on AI Charting technology. More worrying is what happens when healthcare providers cannot execute their duties under ideal conditions. Cyberattacks,[191] climate-related power outages, threats to electrical and data infrastructure,[192] and even mundane issues like patchy Wi-Fi access are likely to periodically threaten the availability of AI tools in healthcare settings.

For patients, the granularity of Epic's AI Charting data and the longitudinal nature of the data (particularly the length of time for which data is collected about them over the course of their lives) can be concerning. The kind of causal inferences that can be made from the data analysis and the predictive models Epic is developing could have significant impacts on a person's life. Given the scope and scale of the data collected through medical records and clinician notes, Epic's AI Charting tool may put patients at risk of increased and nefarious surveillance. Errors and inequality in underlying data may compound these risks over time. In addition, historical biases in years-old charts (out-of-date language, for example) may be reinforced by a tool that is encouraged to reproduce similar language.

Systems that track movement, spending patterns, and other consumer information could integrate health details, which could then be used to further track movement, spending, and other aspects of social life.[193] Data integration companies like Palantir and Epic Systems make it possible for other companies to take all of their different data systems and merge them into one functional system, connecting different bits of information to create a fuller picture about anyone or anything. More details also make it possible to build data monopolies and create predictive models that have a higher likelihood of providing an output that more fully captures people as data subjects.

Our health data, which ten or fifteen years ago may have just stayed within our doctor's office or hospital system, is now accessible by consumer technology companies like Microsoft and Google, and even defense contractors like Palantir. Service agreements between the hospital system that collects patient data and the technology company that processes it may protect patient data from being sold to a third party. But vague legal language leaves the option open for the data to be used to train other models for the hospital system, or for the technology developer to apply insights from patient data to other systems they are building.

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[191] Susan Li et al., "Cyber-Attacks on Hospital Systems: A Narrative Review," *American Journal of Geriatric Psychiatry: Open Science, Education, and Practice* 7 (2025): 30–39, https://www.sciencedirect.com/science/article/pii/S2950386825000103; Andy Greenberg, "At Least 750 US Hospitals Faced Disruptions During Last Year's CrowdStrike Outage, Study Finds," *Wired*, July 19, 2025, https://www.wired.com/story/at-least-750-us-hospitals-faced-disruptions-during-last-years-crowdstrike-outage-study-finds.

[192] Stephanie Dutchen, "Creating Climate-Resilient Hospitals," *Harvard Medicine*, May 2025, https://magazine.hms.harvard.edu/articles/creating-climate-resilient-hospitals; Seth Blumsack et al., "The Growing Threat of Extreme Weather to the U.S. Power Grid," Penn State Institute of Energy and the Environment (blog), August 15, 2025, https://iee.psu.edu/news/blog/growing-threat-extreme-weather-us-power-grid; Dave Muoio, "Backup Generators Fail at Northern California Hospital During Record-Breaking Heat Wave," Fierce Healthcare, September 8, 2022, https://www.fiercehealthcare.com/providers/backup-generators-fail-northern-california-hospital-during-record-breaking-heatwave.

[193] Kashmir Hill, "How Target Figured Out a Teen Girl Was Pregnant Before Her Father Did," *Forbes*, February 16, 2012, https://www.forbes.com/sites/kashmirhill/2012/02/16/how-target-figured-out-a-teen-girl-was-pregnant-before-her-father-did.

Conclusion

A dean of a nursing school recently told the *Wall Street Journal* that nursing is "AI proof."[194] But this brief suggests otherwise. The rapid, haphazard, and seemingly covert integration of AI into healthcare is reorganizing the nursing workplace with significant ramifications for workers and patients alike. One nurse who participated in this study and its inventorying of AI technologies told us, "We're going to watch nursing crumble and no longer be a space for empathy or clinical judgment because it will all be automated."[195] Another nurse said, "We cannot meet the needs and demands of our patients. Instead we are using AI like we are a factory and just move the patients along."[196]

For patient care, the risks of using AI tools in place of human expertise and in-person nursing are mounting. As one nurse explained:

> They are no longer requiring ACLS [Advanced Cardiac Life Support certification] for our telemetry services. . . . If a patient is requiring telemetry, which is, like, cardiac monitoring, you would want the nurse taking care of that patient to be ACLS-certified because the presence of the monitor means that that patient is at high risk of having, like, a cardiac event. And in that case, you would want your nurse to be able to run the code for that patient.
>
> But essentially . . . AI is actually managing, monitoring those cardiac rhythms. . . . [The nurses] just exist to turn the patient, to do hygiene, to do the activities of daily living. . . . I take my patient to the [cardiac] floor and hand them off to a nurse who I expect to be ACLS-certified because, based on the procedure we just completed, I really need to know that that nurse can run a code if my patient codes. And now they're not.
>
> You know, some nurses are like, "We could never be replaced by AI. . . We do all this physical work…" This [ACLS change] has been a really important way to talk to nurses about, like, how AI will actually kind of start to replace us. And it is in these, like, very technical ways, where they just sort of reduce our job…and they take away those critical thinking responsibilities.[197]

A different nurse called this trend "dangerous" and pointed out that hospitals are degrading the work of telemetry nurses and reclassifying them as "med surge" nurses, which costs less for the hospitals but provides a lower quality of care for patients.[198] The largest union and professional association of registered nurses in the US, National Nurses United makes a similar point: "Nurses know that A.I. technology and algorithms are owned by corporations that are driven by profit—not a desire to improve patient care conditions or advance the nursing profession."[199]

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[194] Jeanne Whalen, "Nursing Is the Surefire New Path to American Prosperity," *Wall Street Journal*, April 1, 2026, https://www.wsj.com/economy/jobs/nursing-jobs-pay-prosperity-b2769391.
[195] Focus group with the author, April 23, 2026.
[196] Focus group with the author, April 24, 2026.
[197] Focus group with the author, April 24, 2026.
[198] Focus group with the author, June 15, 2026.
[199] "A.I.'s impact on nursing and health care," National Nurses United, accessed October 22, 2026, https://www.nationalnursesunited.org/artificial-intelligence.

Workers find that AI tools pose risks to their job quality and security. AI tools in healthcare facilities are often described by tech optimists as autonomous, but they depend on large amounts of ongoing and hidden human work,[200] much of it performed by nurses. Timpani claims to know how many nurses a specific shift needs, but nurses still fill the gaps when its staffing predictions fall short. Oxevision promises continuous patient monitoring; but nurses must still respond to its alerts and sort real risks from false ones. Epic's AI charting tools promise to lift the burden of documentation, but nurses spend their shifts checking and correcting what the software produces. Nurses' expertise is thus extracted twice—once to build the systems, and, again, when nurses are asked to train, supervise, or refine those systems.

The push to adopt AI in healthcare often rests on a widely shared assumption that healthcare work is naturally hard, stressful, and overwhelming. Popular culture reinforces this premise at every turn, as any episode of the Emmy Award-winning drama *The Pitt* makes clear. But it doesn't have to be this way. Our current conjuncture is the product of decisions made by an increasingly corporatized healthcare system. In this political economy, healthcare tech companies present their AI tools as the *only* intervention powerful enough to solve the difficulties we face. Yes, there are innumerable problems in the American healthcare system. And many of the AI tools are focused on problems that have real purchase. Yet many AI tools do little to address structural problems in the healthcare industry. AI tools do not raise wages, give nurses a meaningful voice in how their work is organized, or make the profession sustainable over a career. The tools we have—and the risks they foster—are not the tools we must have. Indeed, as historian Peter Norton suggests, "When we rescue innovation from the technofuturists and recover the tools they have dismissed, we will find that we can do today, at far less cost, what they have promised to deliver for unlimited dollars at an ever-receding future date."[201]

We must see the AI tools that are reshaping the nursing workplace for what they are: short-term solutions to deeply ingrained structural problems. And we must raise the question of what needs to be done so that AI tools are not the only solutions available to the American healthcare system. If we do not want AI tools to be so quickly, haphazardly, and uncritically integrated into nursing workplaces, it will not be enough to ask whether an AI tool works according to a set of technical benchmarks. We must ask *for whom* it works.

[200] See TechEquity, "The Hidden Workforce Behind Every AI Tool You Use: Announcing the Data Work Landscape 2.0," TechEquity (blog), May 21, 2026, https://techequity.us/2026/05/21/data-work-landscape-2.
[201] Peter Norton, *Autonorama: The Illusory Promise of High-Tech Driving* (Washington, DC: Island Press, 2021), 21.

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A Toolkit: Build Your Own Inventory of AI

Step A: Read over the following categories of AI tools that may exist in your workplace. Ask yourself: Do these categories seem right?* What tools are missing? What tools should be excluded?

1. **Administrative and organizational workflows.** AI tools are often tasked with scheduling and deploying staff (i.e., Timpani, Clairvia, NATE Tempo, MyTime, Assignment Wizard, and Qventus), hiring staff (i.e., reviewing resumes), and assigning patients to beds.	2. **Patient admission and discharge.** Some AI tools virtually admit or discharge patients from facilities (e.g., care.ai) while others call patients to share preoperative procedures or to collect insurance information (e.g., robocalls).
3. **Information access.** Many AI tools offer quick access to information, be it summaries of existing scholarship (e.g., UpToDate Lexidrug and OpenEvidence) or general healthcare answers (e.g., VAGPT, Claude for Healthcare, and ChatGPT Health).	4. **Communication between workers and with patients.** A variety of AI tools connect nurses to other healthcare professionals (e.g., TigerConnect and MHCure) or seek to improve patient communication by offering translation software or creating patient handouts about treatment plans.
5. **Patient monitors.** AI patient monitors aim to facilitate remote evaluation of some aspect of a patient's wellbeing through sensors and cameras. Some of these more general remote tools can be called "virtual sitters" or "virtual companions" (e.g., AvaSure, HelloCare). Others take vital signs (e.g., Oxevision) or continuously monitor specific outputs including infusions (e.g., Plum pumps), fluid levels (e.g., FloPatch), or fetal health (e.g., PeriWatch, PeriGen).	6. **Patient predictions.** A growing number of AI tools seek to predict a patient's vital trends, their risk of contracting a disease, or the likelihood of needing an intervention (e.g., Epic's Deterioration Index, StopShock, Rothman, and Index). Epic's sepsis acuity tool, for instance, automatically generates a patient's risk for sepsis by reviewing a patient's chart. Violence assessment tools also fall into this category. However, this category of tools does not include early warning scores (e.g., MEWS and Braden), which do not currently engage machine learning or other AI technologies.
7. **Transcription, visit summary, and ambient clinical charting.** A significant category of AI tools in the nursing workplace are ambient scribes, which may offer to document, summarize, and/or create clinical notes for patient visits (e.g., Nabla, Microsoft's Dragon Copilot, EPIC AI Charting, Zoom AI, Abridge with Nvidia, Ascribe, Doximity, and Project Nursing). These tools may also automatically populate consent and discharge forms.	8. **Worker surveillance.** Some nurses experience location tracking and task monitoring through the AI-enabled badges they wear (e.g., Kontakt.io, CenTrak) or the Bluetooth-enabled tablets they carry (e.g., ObservSMART). Others report voice tone monitoring systems, facial recognition cameras in their workplaces, and audits of medication-dispensing patterns (e.g., ControlCheck).

* **A few caveats about this schema:** Some tools cross multiple categories. Others, such as AI image analysis systems used in radiology (e.g., RadAI) and AI medication-dispensing systems (e.g., Pyxis), are excluded because they are so purpose-specific as to not readily be grouped with other technologies.

Step B: Write your own inventory of AI in the workplace (or edit the one we provided above).

AI Tools at _____ (facility)			
	Specific tool	Category of tool	Notes (e.g., date of adoption)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			

Step C: Write a list of questions you'd like answered about AI technologies in your workplace. Focus on questions that begin with "who," "what," "where," and "when." For instance, you may want to know who makes decisions about these tools in your workplace, what data protections exist for these tools, and when there are planned evaluations of these tools. Below we offer frequent questions we heard from nurses that may be useful as you research your own workplace.

Sample Questions

Procurement

- What are the qualifications of AI procurement personnel at my facility?
- Is ethics considered for each AI tool in use?
- When, if ever, are bedside nurses involved in decisions about AI tool procurement?

Efficacy

- How much will AI tools cost and where will the money come from?
- How does the cost of the technology compare to the cost of human work?
- What will my facility not be funding when it spends its funds on AI tools?

Liability

- How do we, as nurses, override an algorithm successfully?
- Who is responsible for the mistakes an AI tool makes? Am I liable?
- Who is responsible for fixing errors with AI tools?

Equity

- How do AI tools work for patients with physical disabilities?
- What is the efficacy of AI tools in mental health and chemical dependent populations?

Informed consent

- How does my facility plan on safeguarding my data? Do they plan to sell the data that an AI tool gathers on me or on my patients?
- Where are the pilots for new technologies in my facility?
- Is consent required from patients for ambient scribes or AI charting tools?
- How can a patient be informed about the AI tools in my facility?

Efficacy

- How, if at all, does an AI tool improve patient outcomes?
- Will these systems generate alarm fatigue?
- How will we ever know if there are errors with AI translations?
- When, if ever, does my facility evaluate AI tools that we've already bought?
- How can we get rid of a tool if it's not working?