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Medical AI: The Process of Adoption

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Abstract

Implementation and adoption of innovation, in most cases, initially confronts resistance and skepticism from end-users. For medical innovations, the impediments are redoubled with concerns about patient safety, regulation, and the therapeutic benefits. This article examines the potential hindrances by hospitals and physicians in embracing potentially transformative technologies, such as predictive artificial intelligence for cancer. The analysis formulates specific recommendations that can ease implementation against the countercurrents to innovation. The article concludes with an example of an effective strategy of a hospital's capable integration of AI into the system with the collaboration of an information technology company.

Keywords

Adoption, AI Regulation, Artificial Intelligence, Diagnostics, Healthcare, Implementation, Innovation, Predictive AI, Resistance, Technology

1. Introduction

Artificial Intelligence (AI) is awaiting pervasive adoption by the medical community (Panesar, 2019). As with many fundamental innovations that can potentially re-orient medical practices and procedures, adoption entails a tedious and prolonged evaluation of the technology and its ramifications for patients, physicians, technicians, and administrators. Regulations too will influence the timing and pace of AI adoption (Shaheen, 2021; Davenport & Kalakota, 2019).

At the crux of the adoption, decision remains patient safety as the primary consideration. With a certain level of recognised safety, other attributes ensue efficacy, financial costs, and human intelligence and judgments, essentially subjectivity.

AI systems, particularly for diagnostics, present patients with either statistical evidence of a condition now or the likelihood of developing a disease in the future.

Such seemingly resolute determinacy falters when confronted with subjective judgements, interpretations, and values. Human intelligence often displays less clinical and resolute conclusions and recommendations. Physicians may dispute the appropriate level of safety or efficacy; administrators may baulk at the financial body blow to the budget or the foreseen impact on the organisation.

The system for validating medical innovations such as AI complicates the adoption process. Differences of opinion foment debates and controversies. The approval processes in hospitals and other institutions typically undergo a Byzantine bureaucratic process. Initially, medical professionals must concur on safety and efficacy standards. Secondly, administrators and overseers must evaluate the overall cost/benefits of adopting AI. Ultimately, regulators must sanction the use of the technology while governmental healthcare agencies and insurance companies must consent to payment and reimbursement regimes (Koerkamp, 2009).

In essence, within hospitals and related organizations, politics will determine when and how to adopt AI as much as science and statistics (Kim & Chung, 2017). This paper, which recognises the subjectivity of the AI adoption process, offers three necessary factors for adoption. Far being an impossible task, two abridged case studies illustrate feasible strategies for implementing AI into hospital protocols.

2. Methods: A Heterolytic Data Survey of 15 Hospitals

A survey of medical professionals including a sampling of two regulators and three insurers in 15 hospitals in the United States, Europe, and the Middle East sketches, their impressions of attitudes toward AI from their organisations. Of the 15 hospitals, eight were designated as teaching hospitals affiliated with medical schools and seven served local communities. The information from these institutions, instead of being rigorously designed for statistical analysis, represents an incomplete vignette of attitudes and concerns about medical AI. The interviews did attempt to canvass multiple constituents who would be likely to participate in the adoption process. Besides staff physicians and surgeons, the interviews broadened the scope to department heads, interns and residents, technicians, nurses, administrators, and trustees or board members.

The two exchanges with regulators, both officials nominally endorsed medical AI conceptually, though each deferred from explicit comments and from expectations about the timing for specifying rules and procedures for enacting AI in hospitals. Representatives of private insurance companies and governmental healthcare agencies such as Medicare and Medicaid similarly baulked at defining the conditions and terms for covering patients' medical costs or reimbursement terms for covering patient expenses for AI utilisations for diagnosis. Executives from private insurance companies did acknowledge the benefits of AI diagnostics if the results would limit exposure through early diagnosis or preventive care.

Managers from three international pharmaceutical companies, however, enthusiastically endorsed implementing AI for diagnostics, particularly for identify-

ing diseases in the initial stages. Each referenced potential commercial gains. Early detection of a disease would generate sales of drugs for particular conditions. With prolonged life, the companies could profit from extended sales from lengthened life expectancy. Two pharmaceutical executives foresaw the opportunity to develop preventative drugs or to design drug regimes for early-stage detection.

3. Results: Essentials for AI Adoption

In the corporate environment, many companies have grappled with the decision to adopt innovation either as a product or as a process such as the introduction of communications that allow remote work or advanced computer software (Herzlinger, 2021). Some companies such as technology companies with a culture of rapid change fare with less resistance than heavy industry such as steel producers or automobile manufacturers. The adoption process ratches up with resistance as the level of financial investment and the perceived disruption to the organisation in integrating the technology. Research on the adoption process in corporations has identified three essential aspects of assimilating innovative technologies. These three preconditions apply equally to the medical community (Flessa & Huebner 2021).

3.1. Recognised Benefits

The innovation must yield perceived benefits for the institution and associated complementary organisations. Otherwise, hospital personnel would simply ignore the technology as irrelevant to its purpose. Benefits for the medical community, however, entail degrees of multifaceted advantages and disadvantages (Wisdom et al., 2013). The decision to assimilate an innovative technology into a medical organisation or abandon it, ultimately devolves into a composite formulation of relative weights of the advantages and disadvantages (Institute of Medicine, 2005). This consideration about adoption entails a consensual interpretation of the data and other pertinent information. As a minimum, the three types of interrelated benefits and pitfalls follow (Flessa & Huebner, 2021).

3.2. Safety

Necessary qualification for any medical innovation dictates safety for the patient. While the technology itself does not harm the patient, inadvertent, misuse of the technology through insufficient training or indirectly though neglect of other patient procedures could potentially result in harm.

3.3. Efficacy

Medical innovations broadly divide into three categories (Dutta, Lanvin, & Wunsch-Vincent, 2019):

1) Direct patient treatment such as anaesthesia,
2) Patient support such as radiology and nuclear medicine, and
3) Administrative such as control of drugs and equipment and billing.

Factors in each category could splinter the organisation into rival camps for international competition that undermines consensus. Intervention cardiologists may favour an updated imaging machine while voicing indifference to a revamped MRI scanner. The hospital administrator may argue against a $1.0 million investment for the cardiologists as being too specialised when the funds could be deployed for other improvements in patient care. Each sub-unit in the hospital could behave contentiously to other units vying for funds. Unless after the debate with an overall consensus on the net benefits, the hospital will forego the adoption of the innovation.

3.4. Financial Allocation

In many cases, budgetary limitations rule (Flessa & Huebner, 2021). Costly innovations may exceed the financial capacity of the hospital. Conversely, some hospitals conclude their survival requires the adoption of innovation; otherwise, they would sacrifice serving the local community (Aghion et al., 2001). In the final assessment, the institution computes a cost/benefit analysis. Unlike private corporations, in which gains and expenditures are expressed in financial terms, the trade-offs for hospitals compare a specific investment amount against a qualitative, subjective evaluation of the comprehensive benefits. In some instances, even the costs such as training or slacking of productivity invokes subjective, qualitative judgments.

4. Technical Titans: Advocates for Innovation

Adoption of innovations seems to be associated with vociferous, persuasive proponents (Flessa & Huebner, 2021). These champs of innovation vehemently promote the emerging technologies. Many define themselves as "techies" fascinated by technology and science. Others without a technical inclination simply can foretell the net benefits of the innovations. These champions of innovation vary in personality (Shea, 2021). Some clamour vehemently for adoption among their peers. Others expound quietly rationale and intelligent arguments for adoption. Common to all was an aura and respect among their colleagues as being preeminent in their respective fields.

5. Discussion

The inherent subjectivity in the decision-making process of innovation adoption prevents the formulation of a reliable predictive model (Scott et al., 2008). While the components for adoption are known, the vagaries and diversities in human judgement cloud the assignment of predictive probabilities of possible outcomes. In individual circumstances, perhaps, in a specific hospital, an observer, using Bayesian-type estimates, might construct a matrix of likely scenarios.

The welter of interplay among participants with coercion, coaxing, persuasion, and reasoning in the political dynamics are continually shifting over time. Eventually, the oscillations of viewpoints and dominant personalities will progress to a

consensus to accept, to reject, or to work a compromise of the proposed innovation. Nonetheless, a few observations from the interviews at 15 hospitals revealed several guidelines for achieving a consensus about innovation adoption.

6. Consensus: A Socialisation of Science

Patient safety, of course, overrides all other considerations as the dominant principle. While debates may ensue about the level of patient safety, both direct and indirect, some standards do exist as precedents. These precedents constitute a basis for anchoring the debate. Many hospitals have established a defined standard for safety. The FDA and the CDC likewise have published safety standards for approving drugs, medical devices, and contagion levels (Huttenlocher et al., 2023).

Standards for safety are at times relative. Hospitals with the approval of the FDA will allow experimental drugs and other forms of treatment for terminally ill patients (U.S. Food and Drug Administration, 2023). While AI can contribute significantly to all medical disciplines, some diseases are deemed more pernicious than other maladies. Screening for breast cancer might rank higher in importance than say for, allergies.

The capability of AI to detect microscopic lesions in the breast, which even the most observant radiologist might overlook, only augments the level of patient safety. Should the AI programme err in noting a minuscule lesion, the radiologist will still be examining physically each of the mammograms. The relative safety standards could provide an opportunity to initiate a trial programme for AI in a unit that specialises in treating consumptive diseases to demonstrate the technology's safety ("FDA Regulation of Medical Devices", 2026). The combination of AI and physicians' scrutiny delimits the scope of risks.

Like safety, efficacy succumbs to similar disagreements from subjective interpretations (Piryani & Piryani, 2019). Despite evidence from clinical trials for FDA approval, the metrics that delineate efficacy still calculate statistical probabilities. A cardiac intervention that extends life by three months on average relative to patients without similar procedures may to some cardiologists constitute a piffling degree of efficacy. Other cardiologists may interpret as lengthening of life span as a significant boost in efficacy, especially if further improvements in the technology could defer mortality rates to six months or a year. When safety data are factored in, the subjectivity in the cost/benefit analysis with a significant fraction of the assessment derived from qualitative inputs even further blurs the parameters of the debate (Casarett, 2006).

Yet, in hospitals, the adoption of innovation has occurred and continues to thrive in the medical community (Dutta, Lanvin, & Wunsch-Vincent, 2019). Insights from the interviews with hospital staff revealed several heuristic precepts for advancing innovation adoption. The commonality of comments delineates characteristics associated with innovation adoption.

The number of participants in the decision process, in general, regulates the timing of a decision (Osmani, 2020). In small departments with few physicians

and technicians with a common understanding of the medical speciality and the experience with patients, conditions happen relatively quickly. For departmental decisions, physicians and surgeons are considering innovations related to their respective specialities, which converge on common concerns with minimum conflicts. For overarching decisions for the entire organizational strategy, decision-making slows with organisational-wide participants with clashing values and interests (Hashimi, Shankaranarayanan, & Malone, 2023).

Timing for adoption is compressed further, particularly if the investment for the technology is apportioned in the unit's budget. The ethics committee and other oversight committees must nonetheless endorse (Thijssen et al., 2021).

Such straightforward adoption processes stumble with hospital-wide innovations that infiltrate all departments and units (Herzlinger, 2014). As the number of affected participants increases, the rate of decision-making slows inversely. The convoluted process wrings out opponents. Some register sincere concerns about safety and efficacy. Others perhaps are defending their units against budgetary reallocations that penalise their units for investments in innovations.

Three combined factors seem to counteract the resistance within departments and hospital units. Some innovations with overwhelming scientific and clinical support as the MRI machine and the minimal invasive heart valve replacement aroused opponents who refuted the benefit and safety. The other responds to the prevalence of the technology deployed by other hospitals, especially premier teaching hospitals with published clinical results. Opposition wanes with accelerated adoption by other hospitals whose AI usage demystifies the perceptions of risk and efficacy. Finally, some hospitals affiliated with universities and medical schools have cultivated environments with the intellectual curiosity among the staff to welcome innovations with a proclivity to trial innovative technologies deemed vital.

As one might expect, the greater the investment in adopting innovation, the opposition or, at least the intensity of debate, heats up proportionally. Relatively inexpensive technologies that purport to yield benefits to patients both in safety and efficacy incite minimum contentiousness. The backlash springs up when the investment amount could potentially reduce departmental budgets. In part, objections reflect sincere and earnest issues about safety and efficacy. Some motives for opposition, according to interviewees, flourish with feudal-type rivalries among departments vying to maintain or increase budget allocations. An informal, autoschediastic alliance of contrarians can stymie or even block the adoption process.

The respondents in the 15 hospitals in the survey managed to implement hospital-wide innovations through a fusion of two factors. Combined these two mustered enough supports to forge a consensus to proceed with adopting the technology either universally within the hospital or a compromise with a pilot project to demonstrate the benefits of AI. The two factors for success were in presenting convincing arguments with as much data as possible on the merits of the technology and the equivocal backing of preeminent respected physicians in the hospital

to champion the proposed technology.

7. Heavy-Weight Champions

Interviews among respondents in the 15 hospitals about implementing AI as a diagnostic aid elicited an antinomy of perspectives. Many communicated scepticism that AI's effectiveness could equal that of a physician. Others, particularly physicians who had been practising medicine for 25 years or longer, perceived their diagnostic skills to be more of an art than purely a science. Others feared being replaced by AI. A moiety of respondents, upon questioning, misunderstood the benefits of AI with false impressions derived from news media and non-scientific publications. (Some with knowledge of AI cited potential biases in the data, which could discriminate against certain populations with bogus responses.)

Two inferences from responders collectively did delineate two seemingly worthwhile insights for adopting innovations. For AI to be accepted without undue delays, these two observations, if deployed, could accelerate the adoption process. The observations related to two significantly correlated variables: age and experience.

In the case of AI implementations, virtually, all responders agreed that the technology would at some point be assimilated into the hospitals. The dissention centred on the timing and the applications. Achieving continuity about AI utilisation, based on prior experiences with technology adoption, requires a proponent such as a respected, pre-eminent physician, as an innovation champion.

In commercial corporations, innovative champions commonly herald innovations (Drechsler et al., 2021). Hospitals too foster technology champions, with a notable difference. Innovation champions in hospitals, unlike a young technical wizard or a venerated senior executive in a corporation, tend to be esteemed physicians at the mid-point of his or her careers. The champion tended to act as a mentor to interns and residents and to be admired by senior physicians who may have served as the advocate's mentors.

The positioning of the champion tends to be specific to the medical community (Santos et al., 2022). In general, senior physicians exhibit less technological savvy than their younger colleagues. Innovative technologies intrigue and fascinate senior physicians and surgeons less so than their colleagues, many of whom are still in residency programmes.

Yet, the venerated physicians still recognise the indisputable importance of technological advancements (Morena, Gaias, & Larkin, 2022). As a facilitator, senior staff implicitly support one of their younger, technologically knowledgeable physicians whom they respect to guide the hospital into the future. For the most part, the senior staff with 25 years or more experience who endorse the adoption of innovation manoeuvre quietly in the background to rally colleagues to back adoption or at least not to hinder approval of the technology.

While senior staff may rely on younger colleagues to advance technical change, younger physicians, particularly those in training as interns or residents, bolster

the champion with their encouragement. One interventional cardiologist commented that residents and younger physicians tended to be more enthusiastically intrigued with technical innovations than senior staff.

The cardiologist attributed the inclination toward technology as a means of accelerating their skills and techniques as physicians and surgeons. Indeed, nine different interviewees from the 15 hospitals reported that residents proposed consideration of innovations as pilot projects to their mentors. In two instances, residents had arranged a demonstration of two surgical innovations independently of their respective instructors. In all the hospitals, the mentors or instructors of the resident training programmes bridged the generational difference between the residents and senior staff. Respondents noted that the instructors, who gained the respect of the senior staff to be appointed to train residents, only a few years older than the residents, were considered more or less contemporaries with similar technological biases as the younger trainees.

8. Technical Support: Before, During, and After Adoption

The MRI machine, the pacemaker, and the surgical simulation models, all required technical training and support from the technologies' developers. Scientific institutions and corporations sponsored ongoing training programmes in hospitals and at in-house facilities for staff and technicians. Even during surgeries, representatives from the developer attended to ensure proper application. For AI technology, developers must address adoption with the same extensive support as medical device and software companies.

In the survey, virtually every respondent stated a level of anxiety about AI as a diagnostic. The doubts loomed not as much about the capability of the technology but the possibility of inadvertent misuse through over-reliance on the technology. Two factors of concern stemmed from the survey. Firstly, physicians worried that AI technology might generate a false diagnosis. Even if the physician, might correct the diagnosis by questioning the results, uncertainty about the effectiveness of the technology might ensue. Secondly, the consequences of misdiagnosis could jeopardize patient safety, which could incur legal liability for malpractice. Intensive and extensive technical support is likely to be required for AI's adoption.

Many hospitals, whose medical staff and administrators affirmed the importance and relevance of the technology, were contemplating if, how, and when to implement AI. Findings from the survey, along with the research on innovations within corporations, provide some direction for administrators, board members, and physicians. Initially, integrating AI into hospital workflow will encounter scepticism and resistance.

The level of aversion will differ from hospital to hospital. Some, particularly teaching hospitals, have cultivated a receptive culture toward the acceptance of innovations. For those hospitals, acceptance of AI is likely to encounter less recoil than for other hospitals, particularly as AI technologies are introduced incrementally through pilot projects with predetermined measurement standards.

Resistance to AI among hospitals will decline as the technology's utilisation expands. As a number of hospitals adopt AI surgeons, the technology will prevail as a standard for medical practice as the benefits become increasingly indisputable. If for no other reason, hospitals will eventually conclude that to sustain standards relative to other hospitals in the service area AI will become a necessity. Even within a hospital that undertakes one or more AI pilot projects, opposition is likely to soften with positive results.

One developer of AI technologies noted the success of adoption-intensive interfacing with hospital staff. The companies devoted resources to nurture the adoption process from conception to continued training after implementation. Long before the decision to adopt AI, the developer nursed the concept to physicians and administrators by highlighting the benefits and acknowledging the risks. During the initial installation, AI technicians partnered with users to explain and train staff. After adoption, the company established ongoing training sessions to improve efficiency and to address problems or questions from staff.

9. Medical Data: Variegated Implications

Medical data, in itself, can exacerbate differences of opinion among healthcare professionals (Elliott et al., 2019). In the electronics or consumer goods industries, corporate executives can ascertain the performance of an innovation by achieving pre-determined standards. Companies in these industries can freely experiment with developing products or processes. If an innovation falters, R + D department engineers and scientists can scrap the technology altogether or attempt to revamp or modify the product or process to attain intended specifications or consumer preferences.

Medical data, in aggregate, often must forego such precision from trial and error. With emphasis on safety, data collection initially accrues in relatively small sample sizes with inherently larger variances than, say, a sample of 1000 observations (Masic, 2021). Measuring efficacy likewise provokes scepticism in the reliability of effectiveness. With mortality rate as a measure of prolonged life, many factors besides the medicine or treatment methods may contribute to the outcome that skews the statistical analysis. Even gauging financial costs and legal liability as a result of patient injury from a flaw in the technology or its misapplication devolves into forecast from prior experience or informed "guesswork" (Helou et al., 2020).

The adoption of AI in the medical community inevitably elicits subjectivity among decision-makers. Participants in the AI debates may legitimately question "what is safe enough?" and "Do the data adequately confirm safety and efficacy." Indeed, two or more physicians may sincerely interpret the safety and efficacy data with contradictory conclusions. Regulators, insurers, and health care agencies will opine on safety, efficacy, and cost components as external influences on the process. Though the process of adopting AI, despite being grounded in data, past experience, prior knowledge, and personal values may sway the process (Trimble &

Hamilton, 2016).

10. Martin Luther King Hospital (MLK) and Wise Healthcare (WH)

Martin Luther King Hospital (MLK) in Los Angeles, a community hospital established for the underprivileged and minority communities in east LA, has exploited Al for the benefit of patients. At the hospital, approximately 60 percent of incoming patients require attention from specialists. In particular, maternity patients from low-income or minority communities require evaluation by specialists. For a variety of socio-economic conditions and cultural norms, these patients defer medical advice until a crisis is materializing.

Because the governance of MLK has experienced the need for advanced care before a critical event, they collaborated with Wise Healthcare to facilitate access for patients to healthcare through Al with a program named eConsult. The Al program remotely connects patients with personal care physicians (PCP). Because it is in the starting stages, these systems are present in medical facilities but in the later stages, the system is expected to be accessible to people from anywhere. For the current stages of the system though, in a designated medical waiting room, the patient is directed to an AI chatbot that begins a conversation with the patient. From this dialogue, the Al program, through a series of questions based off physicians' in-person queries, evaluates the patient's responses. From the responses, the program recommends either non-prescriptive therapies or a session with an appropriate specialist. This would send a message to the appropriate specialist, and the conversation is transferred to that the patient's care is now in the hands of the provider. So, if the specialist determines the patient requires an in-person visit, the specialist can easily arrange an appointment or prescribe a battery of tests.

The disadvantages are telling. The first interaction occurs with a computer or virtual chat, that probes with questions and seeks symptoms. A computerized robot cannot see the pain, misery, and suffering in the face of the individual. Because of the subjectivity of pain and discomfort, any direct answer from the initial physical assessment is lacking. Not only that but the unspoken interactions and mannerisms of patients are one of the first things evaluated by a real doctor, which are unbeknownst to the system. Therefore, the computer could misdiagnose in some instances. To combat the most serious consequences and misdiagnoses, the conservative bias of the program will direct a patient with any potential serious symptom to a specialist or for a personal consultation.

The advantages of eConsult seem to outweigh the potential drawbacks of the system. The eConsult program provides immediate access to medical care, a significant advantage for medically underserved communities such as low-income areas or minority populations with cultural or economic inhibitions about office visits. The system effectively compresses the time between diagnosis and treatment. The promptness in diagnosis to treatment, perhaps by referring patients to

specialists, enhances patient experience through lowering anxiety and instigating timely treatment to reduce the chance of the disease advancing.

Other than the quality of healthcare, eConsult provides other bonuses in the long run. The dividends accrue through lowering overall costs and productivity gains for hospitals as well as for public welfare. Reducing the number of visits to primary care centres for unnecessary visits lowers patients' out-of-pocket costs or the expense for the insurer or the government agency absorbing the expense. The reduction in non-essential physician visits frees doctors and their staff from traditionally long but routine visits. This allows them to utilize their time more efficiently by tending to those patients in need of vital medical care. Overall, the concept of eConsult enriches the public welfare with prompt treatment, which prunes costs. By employing early diagnoses and care before the diseases that require hospitalization or surgery, healthcare professionals can greatly elevate the quality of care.

The benefits of eConsult may seem obvious. Yet, the concept sparred opposition prior to implementation. Much of the resistance originated from entrenched habits. The clinic or medical practice had ingrained processes with workflows and procedures. Practitioners and their staff, usually under time pressure and work demands, often lacked the incentives and initiative to modify embedded habits. Many practitioners questioned the viability of the concept, especially if adoption required both practice and experimentation whose failure would disrupt the practice. Others disputed the economic justification for adoption, because of how curtailing office visits could crimp the revenue stream.

11. Persuasion Triumphed Believing in The Concept, Advocated for eConsult

Dr. Stanley Frencher's advocacy overcame the resistance. Martin Luther King Community Hospital (MLKH) in Los Angeles opted to implement the eConsult system. The investment in the Al technology did impose some costs and organizational disruptions. However, according to the participating physicians and staff members, the issues were overshadowed by the merits of the system.

The time for implementation of the Al program at MLKH and other California hospitals and medical facilities correlates to several institutional factors. Re-orienting work habits and procedures influences the rate of adoption. Typically, hospitals have installed large-scale electronic technologies such as electronic retrieval of health records and electronic monitoring systems for patients, have been shown to take longer times to adopt these newer systems.

One significant insight from eConsults experience dispels one intuitive assumption. Instead of the technology's determining the speed of adoption, two related factors contribute significantly—workflow and change management. Design of the workflow to wean the organization from the existing technology to the competency and familiarity with the innovation. To accomplish the transition with minimal organizational hardships, eConsult facilitated changed management by in-

troducing workflow engineers for pre- and post-implementation. This attention to change management mitigated the inherent intransigence to change and opposition to Al while accelerating the adoption process with the least amount of financial costs in training physicians, technicians, and administrative staff on the technology.

12. Conclusion

The adoption of AI into the medical field brings a complex interplay of factors that potentially barricade its widespread acceptance. The immense complications of adoption of the innovation, due to the governmental system that validates them and the intra-hospital politics of the patient safety, efficacy, and financial allocation of these systems, are the chokehold that severely decelerates the AI's adoption, despite its potential benefits. However, it requires a complete reconstruction of the current workflow to ensure a smooth transition into its widespread use.

Despite these challenges, adoption remains feasible and is steadily progressing in select institutions. These institutions serve as the driving force in pushing other institutions to adopt AI through their methods of successful implementation before, during, and after the process. These models provide insight not only on the process of adoption, but the value the adoption brings to Physicians. As more hospitals validate these benefits, resistance to them is likely to diminish, positioning AI to become an increasingly sought after and integral part of modern medicine.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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