
***Future of Healthcare and Artificial Intelligence (AI):
Practical Insights and Diverse Perspectives on AI in
Healthcare Project Management***¹

**Future-Ready Hospitals: The Intersection of Healthcare AI
and Project Management for CEOs and Hospital
Administrators**²

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INTRODUCTION

In the dynamic landscape of healthcare, the fusion of Artificial Intelligence (AI) and project management is not merely a trend but a strategic imperative. Hospital administrators and CEOs are walking a tightrope between embracing innovative AI solutions and ensuring compliance with stringent healthcare regulations. Orchestrating advancements in technology with patient care and operational efficiency, this stakeholder group also has responsibility for building a culture of excellence, positive employee morale, and hospital credibility. While keeping an eye on the benefits of AI, this group must be cognizant of its challenges, such as ethical considerations and data privacy. Minimizing risks, project management lends a structured approach to these multi-disciplinary projects.

Let's gain insight into experiences and perspectives on AI from a group of hospital CEOs, senior leaders, and administrators playing a pivotal role in embracing AI for commitment to better patient care experiences.

Hospital Administrators and Hospital Leadership – The Movers and Shakers!

Excerpts of interviews with the following experts:

¹ Editor's note: This series is by Dr. Deepa Bhide, a practicing pediatrician with additional experience in information technology and project management. Her 2023 series of articles introduced readers to a range of important issues related to programs, projects and PM in healthcare. In this new series, Dr. Bhide will interview experienced healthcare, IT and project professionals around the world to reflect on the impact of artificial intelligence on global healthcare. Learn more about Dr. Bhide in her author profile at the end of this article. To read previous works by Dr. Bhide, visit <https://peworldlibrary.net/authors/dr-deepa-bhide/>

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Rathinam Thyagarajan, Head-Innovation / IT&S / Biomedical Engg./BioNEST Startup Incubator at LVPEI, Hyderabad, India

Dr. Nikesh. R. Shah, CEO, National Cancer Grid-Koita Center for Digital Oncology (NCG-KCDO)

A few hospital administrators and leaders interviewed wished to contribute anonymously.

The Interviews

Q 1: What is your experience using AI in your setup (if/as relevant)?

“AI has been around for a while in the form of AI-guided surgeries via robotics at our centers, and it has been interesting to see its evolution. GenAI is the new entrant to this block, and we are exploring its use,” said Dr. Jageshwar.

“AI seems to be the fountainhead of many innovations like its preceding industrial revolutions. There appears to be a significant ‘Fear of Missing Out’ (FOMO) in the industry, so typical leaders are under stress to start something in the direction of AI. At L V Prasad Eye Hospital (<https://www.lvpei.org/>), we’re a bit different with added cautiousness. With more than 250 vision centers, we have millions of retinal images with varying quality. LVPEI was one of the first in the world to develop AI-based retinal image grading under non-mydratic conditions. With our partnerships with the global community, our Center For Technology Innovation and LVPEI BioNEST Start-up Incubator are working on multiple AI-related projects - Rathinam.

“We don’t have a full-blown AI in our hospital right now. We have it in some silos, and it’s working there. We are eager to increase its integration in other departments” – anonymous.

“We have been using modality-level AI in the radiology centers at the RHCNZ Medical Imaging Group for a few years now, and we are beginning to use it to improve image analysis, diagnosis, and reporting. I can see this becoming even more powerful and the Gen AI wave sweeping in with the potential to transform the operational processes,” said Shayne.

Summary: While there has been some form of AI in wearables, robotics, and diagnostic infrastructure, there is variation in its adoption from none to innovative projects in hospitals.

Q 2: Can you elaborate on the benefits of AI integration?

“Well, AI is a powerful tool and poised to bring benefits in efficiency and diagnostic precision. With AI-enabled report generation (in cases where the report is unremarkable and normal), we see the time taken to generate the report go from minutes to seconds, thus increasing the productivity of the radiologists.

With its ability to look at the clinical insights of the cases, AI is also expected to improve our radiology team's overall experience and ability to personalize reporting further” - Shayne.

“We run three facilities in the city, and it’s a huge administrative burden for our team. The front office staff is perpetually burned out due to the heavy load of patients. I see AI supporting the administrative teams and easing out shortages, thus improving our employee morale and experience.”

By analyzing claims data, clinical notes, and coding reviews, I see their value in determining fraud waste and abuse (FWA) at multiple places in hospital setups.” - Dr. Jageshwar.

“In a nutshell, if rightly used, AI can help scale businesses and invent new portfolios for monetary opportunities. One example is community care diversification, where AI supports our rural health programs that feed the main centers. Telemedicine is another example where AI can be beneficial. It’s a win-win for all as both the parties (patients in rural areas and the hospitals in the city) benefit. Using AI in rural health is also a good example of our commitment to social and environmental responsibility” anonymous.

“AI will not solve all our problems, but it can improve effectiveness and/ or efficiency in selective areas. Resistance to change and fear of job loss could be risks of accepting AI in the workflow. I am of the firm opinion that the industry reacts to any change with such hype and later on settles down with an optimal level of use. Excited people do the pushing of technology, and alarmed ones push regulations. Both are essential for any such breakthroughs.” Rathinam mentioned.

Summary: While clear improvements or changes in hospital operations are yet to be known, the AI project revolution has initiated a good and curious dialogue between multi-disciplinary teams.

Q 3: Can you talk about the goals of the healthcare AI project for your setup? What project management methodology did you use for these projects?

“We had the following broad project goals as we set out with this initiative of integrating AI into our hospital setup,” the CEO of a leading hospital mentioned. Other than early disease detection and improving operational efficiency, he was quick to elaborate on the other goals of the AI integration project.

1. Ensure patient safety and risk reduction by identifying at-risk patients and reducing medication errors.
2. Reducing costs by predictive maintenance, streamlining workflows, and automating administrative tasks

3. Support community health programs by integrating AI with wearable devices and telehealth platforms to enhance remote patient monitoring and early disease detection
4. Promote research and innovation via data analysis, predicting disease trends, facilitating interdisciplinary collaboration, and creating interactive training programs

We noted that iterative development, collaboration, and continuous improvement would be needed for the AI projects, and hence, we adopted a hybrid (primarily agile) approach. We planned smaller implementation cycles with feedback loops,” he added.

“Our immediate goal is to use AI for early diagnosis and treatment, bring process efficiency in our peripheral vision centers, and make vision care accessible in the resource-poor settings for early referrals. With doctors concentrated more in urban areas compared to the rural or tribal area, we’re trying applications such as AI/ML to reduce the digital divide,” Rathinam added.

“We wanted to increase our diagnostic precision and operational efficiency. The preference to avoid unnecessary surgical interventions and the costs of doing so have increased the demand for radiology. We want to be affordable for patients, funders, and insurers. AI can help, but it needs to be implemented well. Applying good project management methodology and disciplines was key to a successful project,” said Shayne.

“Our goal was to free time from our over-burdened employees and improve their work-life balance. We had not planned a specific project management approach,” said Dr. Jageshwar.

Summary: AI integration project goals include patient safety, cost reduction, community health support, and research promotion. Project management methodology is primarily agile, emphasizing iterative development and continuous improvement.

Q 4: What are the critical considerations of AI integration in a healthcare setting?

“We need to start reimagining how the traditional healthcare delivery model will be redefined in the presence of AI. This will require changes to the operational and clinical workflows, and clinicians will need to adapt to a different way of practicing medicine than what they are used to until the new models get established as a habit and integrated within the academic training. There will also be failures along the way, and the system needs to be prepared to correct course and learn rather than abandon it altogether. Training clinicians on how they can become a more integral part of such innovation and providing feedback to help improve the technology in a way that can eventually be helpful for them will be key,” Dr. Nikesh said.

“Some of the international standards mandate the sensitivity and specificity of AI/ML tools to be between 90% confidence interval or better for using them in the real world scenario.

We also adhere to such norms apart from the requirements of CDSCO. Apart from them the bottleneck internationally to develop such tools is the volume of samples required to train the models, which is not supposed to be a major bottleneck in India. However, lack of digitization of patient data and/ or sharing of such data across the organization slows down such development,” adds Rathinam

Q 5: What were the project risks? Can you elaborate on one risk that was concerning?

AI is a complementary tool for clinicians and administrators, including hospital leadership, who are in a race and wishing for instant benefits. The hospital administrator group will likely find themselves in a challenging position to balance one-upmanship (hospital CEOs and other sponsors) and practical use (healthcare providers, administration, medical insurance, and other teams). It is interesting to see the mushrooming of companies and varieties of AI algorithms. It's important to firm up the needs first before calling for proposals.

“There were two types of risks. Technology level risks and project level risks. Technology-level risks include bias, hallucinations, ethical use, and so on. Project-level risks include adoption failure/delays, loss of reputation and trust, reduction in number of patients, employee dissatisfaction, etc.

The adoption of any new technology involves change management. Any change requires a clear understanding of the transition from their current state to a desired future state. My goal was to minimize resistance and ensure the successful adoption of AI in their workflow. Interestingly, communicating change to the identified stakeholders is challenging as each stakeholder has different needs and perceptions. We followed multiple modalities such as group discussion, floating surveys, AI demos by the vendor, and simulations of the to-be state to come to a consensus and build commitment. This was an interesting phase of the project.” - anonymous.

“Adoption of any new tool is a function of trustworthiness in clinical decisions, positive revenue, user-friendliness, and work efficiency as a value addition. Otherwise, there is no reason to change and disturb the existing fabric. The adoption of new technology is also a function of the generation gap. Gen X and Y healthcare providers are more comfortable with the new technology. The training time required for this generation is also less than their older counterparts,” said Dr. Jageshwar.

“The biggest challenge has been ensuring data quality and including the new tool in our teams' day-to-day workflow. Another challenge is integrating with the hospital's existing healthcare information technology applications with varied software platforms,” Shayne added.

“Improper use-case & technical expertise or churning of the technical hands are the serious risks for such a project right now. Fear of losing the job risks the speed of adoption similar to those early days of computers,” says Rathinam.

Summary: The group faced differing challenges and risks with the project. Integration into the existing workflow for the day-to-day work of the hospital, lack of accuracy and trustworthiness, increase in the budget needed to accommodate the cost of the technology and skilled workforce, constant upgrades and changes of the software

platforms, and managing expectations of various groups of stakeholders seemed to be worrying.

Q 6: What specific risk mitigation strategies did you consider to address potential AI risks proactively?

“Besides our standard safety protocols, encryption, and access controls, we have regular audits, training, and derbies algorithms. We also have a dedicated ethics committee that reviews all AI initiatives, ensuring transparency and accountability. We have also tightened our patient data privacy protocols. We are carefully examining the AI recommendations to flag bias and hallucinations. However, that is a work in progress. - anonymous

“Data and model are chicken and egg situation. What comes first, or what should come first? In my opinion, data should come first. We need to check the data, massage it well, and prepare it for the model, not vice versa. Insights into feature importance, decision rules, or visualizations are important. This majorly takes care of the risk around explainability and transparency” – Dr. Jageshwar.

“We have already talked about change management to mitigate risks around adoption and adaptation. Stakeholder collaboration and communication to get their buy-in is key for a successful project. Prioritizing clinical judgment and experience, including its significance in training, has been our strategy for mitigating risk around overreliance on AI. I look at Gen AI like a calculator moment. You still need to have some idea what the answer will be” – Shayne.

“Losing a job to AI is the elephant in the room. We need to acknowledge and deal with it by improving awareness and assurance on a case-by-case basis. There is no one size fits all.” - Rathinam.

Q 7: What is the (if any) financial impact of AI implementations in your hospital regarding cost savings and revenue generation?

“Our contact center staff take 2 to 3 months to be productive. We want to bring down that time to weeks. That will impact our profits positively. Not just our sponsors but the insurance, patients and the clinicians would like to see cost savings and revenue generation” - Shayne.

“Initial investments in AI infrastructure and talent are significant. We're addressing this by adopting phased implementations, starting with smaller, proven initiatives to demonstrate a return on investment (ROI). Going by “consumer is the king,” I suspect the growing competition will reduce the costs of these applications. Right now, there is hype around AI”- Dr. Jageshwar.

“Initially, we had to think of ways to convince our sponsors of the project benefits. A few sponsors were wary of the investment due to past failures in digitization initiatives. Today, we've seen some cost savings from reduced hospital stays and administrative workflows.

We now see the creation of personalized care plans that avoid unnecessary procedures, and that will add to cost savings.” - anonymous.

“LVPEI’s focus on such technologies is to extend equitable and efficient eye care to underserved populations in the developing world. AI-based tools will improve efficiency in eyecare by better triaging at primary levels and prompt referrals to our secondary and tertiary centers, resulting in better eyecare and, therefore, better quality of life for rural patients. The impact could also be in terms of saving crores of rupees for patients & several tonnes of carbon emissions over a couple of years that are already proved with similar (teleophthalmology) initiatives,” Rathinam added.

Summary: AI's potential goes beyond immediate savings. Its use in predictive analytics to anticipate future patient needs and optimize resource allocation, maximizing efficiency and preventing unnecessary expenses must be explored. Additionally, AI's ability to personalize care can lead to better long-term patient outcomes, potentially reducing readmissions and lowering overall healthcare costs in the long run.

Q 8: Do you think AI will contribute to the positive staff morale of your hospital?

“I am quite excited about AI and its impact on the human resource. I think AI will bring down the burden of mundane tasks. That will be a big relief. Specialists can focus on the work they are good at. They will also find the much-needed time for continuing medical education (CME) and other research activities” – anonymous.

“A lot of news is going around AI and job displacements. Healthcare is a perpetually short-staffed industry, and we always need more and better-skilled workers. With our minimal AI, I don’t see a risk of job loss, although there might be some changes like the job. Reskilling and upskilling oneself, a good human-AI collaboration, and having the right learning attitude and service orientation will be helpful” – anonymous.

“Yes, if AI can ease the workload in areas like our telemedicine command center and help doctors to focus on improvising their expertise in a shorter period.” - Rathinam

Q 9: What are you most excited about for AI in your setup?

“I am excited about AI and see it being integrated further into healthcare. I can see AI being used to directly engage patients and guide them in their healthcare experience. Patient safety, patient-centered care, and patient satisfaction are important.

Secondly, building and maintaining a positive reputation within the community is essential. We want to create trust and demonstrate our commitment to social responsibility.”

Thirdly, human and AI collaboration excites me. That delicate balance between man and machine with a seamless and intuitive interaction can enhance productivity and quality and improve the overall user experience. “- Shayne.

“We believe in equity in healthcare. AI-driven community healthcare that includes screening programs, monitoring disease conditions, medication reminders, optimizing healthcare equipment and supplies including ambulance facilities is our nerve to bridge the gap for underserved communities and ensure accessible, high-quality care for all?” – anonymous.

“Bolder AI-enabled initiatives can potentially disrupt traditional healthcare models and workflows. For example, I would like to see AI-powered robots doing automatic surgeries, at least the simpler ones that can be done. This will give surgeons like me a good work-life balance,” said Dr. Jageshwar.

“Why can we not think of AI replacing a patient? Accuracy and trust in any system depend on the cases on the edge. That’s where the experience matters in precision. This will help improve the expertise and confidence of those HCPs who are yet inexperienced. Virtual Reality is a reality, and let’s research how AI-enabled patients can help HCPs in multiple ways. The medical students will benefit from this.

“Voice analysis AI has shown the potential to detect type 2 diabetes. We are excited to explore how such an AI-enabled tool can serve in eyecare and its associated conditions. That will be immensely helpful to spread effective eyecare across the remotest pockets of the country and even across the world,” Rathinam said.

Summary: Turning a challenge into a benefit is motivating and benefiting and a need of the hour to sustain and scale. There’s always a space for creativity, even with the infinite use cases in healthcare for AI.

Q 10: Would you like to add additional thoughts on this topic?

“As they say, listening patiently to a patient cures half of his problems. I look at AI-enabled chatbots to be that patient’s patient listener. This will increase our patient engagement and stickiness,” said Dr. Jageshwar.

“I would like to know what and where I can get the appropriate project management skillsets to drive this project in our hospital network” – anonymous.

“AI is making good strides from mechanical tasks such as cleaning up images, enhancing image quality, positioning the patients for scanning, to more complex tasks such as clinical precision. That’s a significant technology change. There are no AI-specific laws in NZ so far. There is an AI-specific Algorithm Charter, which several parties have signed up to. More work is needed as newer technologies, such as the LLMs, become more prevalent and powerful. I believe the role of the prompt engineer will be hugely in demand” - Shayne.

“Knowledge of associated laws and data problems needs to be an integral part of the PM approach that will lay a foundation for ethical, responsible, and explainable AI” - anonymous

Key Takeaways

AI is augmenting human expertise to provide real-time insights and decision-support tools, revolutionizing healthcare delivery and transforming how medical professionals diagnose, treat, and interact with patients. Hospital administrators and CEOs recognize the potential of AI in enhancing patient care, reducing costs, and improving operational efficiency and play a crucial role in integrating AI into clinical ecosystems.

1. Healthcare demands tailored project management methodologies with a blended project management approach that suits the dynamic environment.
2. Prioritizing patient-centricity, clinical relevance, and ethical considerations optimizes AI adoption.
3. Thorough change management plans, transparent communication, and stakeholder buy-in are crucial for successful AI integration.
4. Phased implementations and ongoing learning ensure successful integration and financial sustainability.
5. Interpretable models help identify potential biases, understand model behavior, and ensure regulatory and ethical compliance.

Disclaimer: The views and opinions expressed in this interview series are those of the speakers and do not necessarily reflect the views of any entities or associated parties. Proprietary names of AI applications have been avoided unless explicitly mentioned by the interviewees.

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Dr. Deepa Bhide, MBBS, DCH, PMP, has over 20 years of professional experience where she has blended medical practice and research with IT and Project Management. She juggles consulting, training, and operations and is proficient in clinical medicine, project management, and healthcare information technology. Starting her career as a medical practitioner, she has worked with varied organizations before her current stint as director and clinical expert for Inventurus Knowledge Solutions.

Deepa's growing interest and work in these areas, born from her day-to-day patient interactions, helped her view Project Management as a backbone of progressive healthcare. Her paper on "Patient Care - A Project Management Perspective" has received global recognition and acclaim. With a physician background as a solid foundation to leverage IT/PM skills and knowledge, Deepa has blended her broad-based experience and learnings to present a unified, holistic, and wholesome view of Project Management and Healthcare, a cross-domain confluence. Through various webinars, events, talks, and writings across platforms, Deepa has been an evangelist in championing global project management during the COVID-19 pandemic.

A Gold medalist from Osmania University for standing First in the MBBS course, she pursued her DCH in Pediatrics and Child health. Deepa has served various roles in local and global Project Management Institute (PMI) regions. She remains actively engaged with PMI and has been a participant and speaker for various national and global meetings and online events.

Deepa lives in Hyderabad, India, and loves traveling, singing, and experimenting with global cuisine. She can be contacted at deepa.bhide@gmail.com.