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# HOSPITAL REVIEW

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## 7 things to know if you're considering AI solutions

By Jessica Kim Cohen

Artificial intelligence is taking on a greater role in almost all industries, healthcare included.

In a webinar presented by [Qventus](#), Pravene Nath, MD, former chief information officer of Stanford (Calif.) Health Care and Dr. Rahul Agarwal, director of customer success at Qventus, discussed how hospitals can evaluate the best way to implement AI technology.

Here are seven things CIOs should know about deploying this innovative trend, according to Dr. Nath and Dr. Agarwal.

1. When determining whether to add new technologies, CIOs must ignore hype and identify the value a new application will bring to the hospital's application portfolio, Dr. Nath said. "The CIO is overseeing the support and maintenance of an expansive portfolio of enterprise applications, usually hundreds of different pieces of software that must be managed, supported, integrated and tested," he explained. "Solutions need to be measured against

these challenges and address them by occupying a clear space with functionality that justifies adding them to the IT portfolio."

2. Dr. Nath explained his IT investment checklist, which he said provides a framework for CIOs when deciding whether implementing AI technology will improve healthcare delivery operations and lead to business value:

- Does it fit into the portfolio?
- Does it improve enterprise awareness?
- Does it employ prediction?
- Does it impact real decisions?
- Does it enable collaboration?
- Does it accelerate measurable value?
- Is it enterprise class?

3. When balancing these priorities, Dr. Nath said CIOs interested in AI are best served by evaluating the potential utility of AI across a continuum, including clinical

and operational use cases. Conducting this analysis will enable a CIO to decide where best to prioritize his or her efforts when deploying new technologies, despite increasing pressures to reduce costs, Dr. Nath suggested.

4. For Dr. Nath, the most fruitful path for hospitals to take when deploying AI services involves focusing on operational, rather than clinical, outcomes. “I don’t want to diminish the potential benefit of technology impacting how we actually care for patients,” he explained, adding prediction is more complex in clinical cases. “It’s just that it’s a harder problem.” Utility in operations is easier to achieve than utility in clinical care and applying AI to the operational side of the care path will have a faster, measurable outcome for the organization and providers, he said.

5. Dr. Nath discussed what it means to optimize operations, particularly when they involve complex logistics, as is the case in healthcare. “It means understanding what is happening now, in the moment, as well as what is likely to occur in the future, through prediction. Together, these represent situational awareness,” he said. “It also means doing something with this information to optimize the conditions for a desired, and potentially different, outcome. I call this enabling action.”

Although operations centers are becoming popular, their capabilities only go so far

to address the problem, according to Dr. Nath. The key is centralized awareness balanced with distributed control, where decisions at the front line are understood, informed, communicated and executed.

6. Dr. Agarwal noted the approach Mercy Hospital Fort Smith (Ark.) is taking to solving operational issues. They deployed the Qventus platform in its emergency room to predict bottleneck problems and relay suggestions to front-line staff.

“[The system] notices it’s Monday night, there are 16 patients in the waiting room and it’s really cold outside,” he said, explaining how the system develops surge plans. Based on a multitude of factors including environmental factors and staffing resources “the platform predicts the ER is going to run out of capacity [within] the next two hours.” The system will immediately send a “nudge” to team members, creating situational awareness and enabling collaboration to resolve the issue.

7. In 2015, the rate at which patients departed Mercy Hospital Fort Smith without being seen was 5.88 percent, while its discharge length of stay was about 188 minutes. Sixteen weeks after deploying the AI platform, the hospital experienced a 30 percent reduction in patients who left without being seen and a 14 percent reduction in length of stay, totaling 1 million minutes saved, according to Dr. Agarwal. ■