Halifax & Vocera: The Transformative Power of Effective and Fast Communications

HIMSS Middle East speaks with Tom Stafford, Vice President and Chief Information Officer at Halifax Health to find out more.

Can you share with us some of the indirect and direct benefits that Vocera's solutions have had on patient safety and care outcomes?

INDIRECT BENEFITS

We started implementing electronic health records (EHRs) a decade ago. The one thing I consistently hear from physicians and nurses is that the EHR doesn't tell the story anymore. The information may be in there, but it may not be available at the points of care where the physicians and nurses need it. Thus there are gaps in the patient's story.

Using Vocera as a clinical communication infrastructure allows us to fill those gaps. More importantly we can now seal those gaps in a timely way.

For example, a physician can now be looking at patient charts remotely, and if he has a question for the nurse in a particular patient room, he can use the Vocera app and immediately call or text the nurse. The nurse in turn can respond via their Vocera texting web page. Vocera's solution clearly improves the ability to communicate quickly. Our nurses wear the Vocera badge on a lanyard or it is clipped to their uniform.

That has a big impact on improving patient care because you can get information faster when you are not trying to hunt for it.

DIRECT BENEFITS

About 8 months ago, we started sending alerts directly to applicable nurses' Vocera badges. One of the first alerts we created into the Vocera badge was the discharge alert. When the physician enters the final discharge order into the healthcare information system, the nursing care team who is caring for the particular patient will, within the next 30 seconds, get an alert from their Vocera badge notifying them that the patient has been discharged.

Without this notification, it can easily take the nurse 15 minutes to see the notification in the system and only if they go to view it on their computing devices. With this alert, we have significantly reduced that time.

Another proven benefit for us is that the discharge alert we created allows nursing assistants to immediately go into the room, and talk to the patient about his or her discharge itinerary. This improves patient satisfaction greatly.

The other thing it does is improve patient safety. When some patients are discharged they go to the next level of care. This could be an impatient or outpatient rehab, or it could be a skilled nursing facility or the home. It's our daily job to bring them to the next level of care as soon as we can. So the discharge alerts actually help us make that transition easier.

HALIFAX ALERT

We started an alert committee because we want to be careful on how we start implementing these alerts. We only want them to go to the applicable clinical users. We will be piloting this initiative in three months. We want to take this alerts project cautiously and focus on the big picture. What we don't want to do is start sending alert after alert to the physicians because they are going to get fatigued which will result in them not paying attention to the alerts or turning off their smartphones altogether. By taking the time to do this, we know that we are doing it right the first time.

How has Halifax ensured that human links are strengthened in this era of cybersecurity threats while at the same time developing this integrated communications infrastructure and effectively leveraging the expertise of staff members? It looks to be a daunting task.

We really do focus on our team members and we go through a lot of end user training and awareness. We also test our team members. We send out test or fake phishing emails on a regular basis to users. Then we measure to see how vigilant our users are.

We don't only focus on Halifax or how you have to protect Halifax because every part of our training is also useful to ensure security in their personal lives, their personal email as an example. I think this becomes much more relatable to our end users, when we relate to their personal lives.

One of the things we focused on when we were deciding on our secure texting solution was, that we wanted to ensure user adoption. In order to ensure that, we had to provide some additional functionality. The Vocera Collaboration Suite really allowed that. It allows direct communication between providers and nurses while they are in their app. It also allows them to do secure texting from provider to provider or from provider to nurse. An added bonus is that this can be done even remotely. Physicians can go into their Vocera app on their smart phone and search for, say, room 1507. When they hit the search button, they get two options – they can see the name of the nurse. They also see if they are available to speak (presence) via their Vocera badge, allowing direct communication. All that additional functionality and value in the Vocera app allows us to give our team members more motivation to use secure texting instead of the default messaging app on their smart phone, which is important especially when it comes to IT security.

They all have choices. They can choose to use the secure app or use iMessage. By adding the extra functionalities, they then tend to use the secure app. In turn, we eliminate security risks.

Are there areas for improvement in terms of adoption levels and security?

There is always a lot room for [security] improvements, and it is really based on the threats that are out there. One of the challenges we have in terms of adoption levels is making sure the physicians will use it. We had to work with our CMO and CMIO on certain occasions to encourage some of the physicians to use it. It is now getting much easier as people understand the value of it. We constantly have training when we have new hires and we have refresher training sessions to improve security. For example, we have sessions for our nurses to educate them on using the room number when they speak about issues over the Vocera badge instead of mentioning the patient name.

In the Middle East and Asia there remains a constant need to justify the procurement of healthcare technologies. Can you share how the Halifax team initially did this back in 2009 when your partnership with Vocera first started?

Yes, that is always a challenge. The United States is now further ahead than other countries due to the emphasis on meaningful use. If I go back in time, it was difficult. You have to be able to justify it. It can be really difficult to justify any IT system because there is normally no direct ROI. In reality, you are not really reducing cost, you are adding cost to become more efficient.

When it came to Vocera, it was easier when we started and that's because we were opening up a brand new tower and we had moved our ED from where it was to the new tower. When we moved, we really did not want the chaotic nature of overhead paging in an ED. It was very loud and stressful. Most people who go to the ED are already under huge amounts of stress, and we did not want to add to that. It was our Chief Nursing Officer who noticed the Vocera solution at a conference. On a side note, if your business

leader chooses it, they are going to fight for it and they are going to justify it and make sure it's adopted by their end user teams. And so when we went live in our new tower in June 2009, we did not install overhead paging in it at all. The communication was all done through Vocera.

How is technology sourced? Do you meet different departments to look at the gaps? Or would they come to you with suggestions? Share with us briefly how it works at Halifax.

There are two paths to it. One would be our business leaders driving it. The business leaders may have needs in their respective departments, or they may learn about something that will help them improve their departments. That can come from a peer, conferences, or a trade publication. We have a governance council in the hospital called the technical advisory council who will receive these suggestions to adopt technologies. If the council approves the request, I assign a project manager to work with the business leaders on costs, product comparisons and gap analysis. We work with existing partners to see if they can provide such solutions. We will also do IT risk assessments against the products before taking them to the appropriate levels for approvals. The other route is that we have certain initiatives and objectives at the hospital that start at the CEO level, and in that case I also look for achievable solutions and some of my leaders do, too.

If it is an enterprise level solution, will the end users get involved at some point?

Yes of course. For example, when it comes to healthcare information systems, and if we implement a new upgrade, we will have 100+ super users who help us during the design stage and validate the input because in the end, they are the ones using it. The added benefits to this is that they end up owning the product more. We tend to always do that. We also will do current workflows and future workflows based on functionality of the application. We will have end users take part in workflow design since no one knows better about the real processes than the end users.

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Halifax Health and Vocera have a long-standing relationship that dates back to 2009 and at that moment that relationship has expanded into integration across system. Can you share briefly where this working relationship is headed to in the next 5 years?

Sure. As I said before we are going to integrate Vocera with other systems and provide the appropriate alerts to providers and nurses. For example, we have a care advisory product which takes about 300 data points from the patient's record in the EHR. This data goes into a decision tree engine in the cloud. The engine can tell if the patient is becoming or is septic and has functionality to alert the care team. This alert needs to get to the septic team as soon as possible. We thought the best way to get this critical information to everybody is to have the alert go right to their Vocera badge. Essentially when the systems see a patient that could be septic, it will alert our septic care team and also the care team of that patient. We are very excited about that. As soon as the system is aware of potential sepsis, the care team is getting that alert. [This happens within 30 seconds].

dietary department via the Vocera badge. The timely communication is very beneficial. Our hospital does not only use Vocera solutions for our nurses and providers. It is also used by the following departments: radiology, security and dispatch, blood bank, trauma team, lab, pharmacy, registration, respiratory, rehab, dietary, and environmental services.

The Vocera Care Call solution will allow nurses to manage patient calls after they have been discharged from the hospital. One of the great things about the care call app is you have all the data from the rounding when you call the patient. The nurse uses this data when calling the patient after a hospital stay to make the conversation more personal. They are able to form better connections to the patient. This helps the nurse greatly in communicating with the patient.

We are very excited about this as well and we are starting to implement it in November.

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Outside of that, we are still rolling out the Vocera app and also the Vocera secure texting solution. This will allow us to roll out secure texting to our entire enterprise.

Recently, we purchased two more products from Vocera. One of them is called Vocera Care Calls and Vocera Rounds. Vocera Rounds has pre-designed questions that a nurse can ask patients and family members while rounding. Depending on what's going on with the patient during rounding, the solution allows the nurse to escalate the appropriate information to the applicable department. For example, when nurses are doing their care rounding, and the patient's meal has been delayed for some reason, we can instantly send a message to

On a similar note, vendors provide me with a product that works well. But we may or may not have a great relationship with the vendor. When it comes to partners, it's all different. Partners really understand why Halifax succeeds and that our mission is for the community. They listen to us, and we can see that they listen to us because our suggestions end up in their product. They have a roadmap and they show us their roadmap. We can easily see how we can align with their roadmap. It makes our ability to work with them easier. It is also a more efficient way to success, and I prefer my partners actually much more than my vendors – and Vocera is one of my partners.

Offer three pieces of advice for Middle East care providers who are now embarking on their HIT transformation journey.

VALUE OF YOUR PRODUCT

You have to work with your C-suites and your end users to show the value of the product and why they should adopt that product. Especially for enterprise wide solutions. Vocera has something that no one has. They have a hands-free communication device that the nurse can wear on their uniform.

ADOPTION IS KEY

At Halifax, we always do a small. beta go live before we do an enterprise go live. We will test the product out on one unit. Then we will refine and make changes before the enterprise go live. Working with a manageable group of team members before we roll up in the enterprise always makes the enterprise go-live more successful. What the enterprise ends up seeing and using is a system that has already been vetted and improved in the beta implementation.

KEEP SECURITY IN MIND

Ensure that any system you look at and plan on implementing does not have any vulnerabilities. This is accomplished in the risk assessment. In addition to the system, you also need to assess how the user will utilize the system. Again, you have to look at the end user to make sure that however they are using the systems, they will not accidentally cause a breach or allow vulnerability to do harm to your system. Halifax Health has 4000 employees, each of whom have different levels of experience using technology in their delivery of healthcare services. We appreciated the intuitive nature of the Vocera applications because they were easily understood by all of our employees and users.

How can Middle East healthcare facilities phase out their digital maturity strategy? Share with us the essential ingredients to get from zero to enterprise level integration.

I came from engineering and manufacturing. In that industry, you have to change to survive. You change overnight just to make improvements because at the end of the day you have to be profitable. I changed careers about 10 years ago. When I started in healthcare, I could not believe how the entire industry was so resistant to change. And so in the case of change in healthcare, you have to take infinitely small baby steps and have persistence to get to the end. The resistance to change in healthcare makes sense because physicians practice precision medicine. If a patient presents a certain diagnosis, the physician knows that if he or she follows a known protocol that patient should have a good outcome. They don't change these protocols since they know they work. Healthcare IT forces change so you must work closely with physicians and implement small steps to get to where you want it to be. You must have the persistence not to give up because in the end what you are doing is the right thing, it just takes longer in healthcare.

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UAE eHealth week

Tom spoke at the UAE eHealth Week on **Innovation in Hospital Communication** (2 November at 10.30am, Cleveland Clinic Abu Dhabi). Visit www.uaeehealthweek.org for more information and to download his presentation materials (attending delegates only).