

## **Wireless and Mobility solutions for Healthcare Providers – Bringing more resources directly to the point of care**

### **Speaker names:**

Richard S. Bakalar, M.D., Chief Medical Officer, IBM Corporation

John C. Wilms, Business Development Executive, IBM Corporation

### **Richard:**

Hello my name is Dr. Richard Bakalar, Chief Medical Officer at IBM. I am going to be your moderator today and I'm talking with John Wilms, an IBM Business Development Executive, who is focusing on emerging technologies in healthcare.

Welcome John.

### **John:**

Thank you Richard, I am glad to be here. Certainly emerging technology investments is one area where healthcare providers can really address both improvements in patient care and improvements in their overall operating costs at the same time.

### **Richard:**

Let's talk about that. Aside from the futuristic science-fiction type projects what are the hot new technology areas that hospitals are using today?

### **John:**

Well we are seeing a huge interest in hospitals focusing on wireless and pervasive investments. We are seeing a lot of this in the community right now and a lot of use in other industries and things like mobile communication devices and things like RFID for the location of assets, patient tracking, and that sort of thing as well as mobile enabled clinical applications. Those are the ones that they are interested in and want to see the value from right now.

### **Richard:**

Wow, that is great. What starts a hospital or a managed care facility thinking along these lines?

### **John:**

Typically it is the same pressures that you'd see in any hospital or health care institution across the country. They are all facing environmental pressures -- whether it is epidemics, infectious disease outbreaks, patient safety, and infrastructures. There is a lot more demand for healthcare as the population ages. More and more people have the incidences of chronic diseases or core morbidities as well. Of course there is a worsening health care economic picture as well. This takes up a huge amount of the tax revenues in most states or provinces. They have a lot of challenges in respect to service pressures and even staff retention.

So when they start to feel those points, institutions need to be focused on efficiencies. A lot of the time, because clinicians or mobile workers are moving through the institution, they need access to things right away. If we can get ways to help them find people or find things or even find data more rapidly and effectively than that will really drive better patient care down the road.

**Richard:**

So where do you start a mobility project in a hospital setting? Should you start with the technology infrastructure or work with the clinical needs of the medical professionals?

**John:**

Well, that's good question. Of course you cannot address one without the other but we are working with IT and information technology organizations that are cash strapped and are really out there to serve needs of their customers who are the clinicians who are taking care of their patients and so they are very, very concerned about it. At the same time you really have to pay attention in the very beginning of any of these projects to the customers themselves, the stakeholders -- those who are delivering patient care at the front lines because they are the ones who can really make or break a project. Those are the people who will really understand what will work in their environment and what is not appropriate. We spend a lot of time up front with them and at the same time work with the IT organizations to ensure that it is effectively delivered.

So you really need to take the stakeholders into account, you need to have excellent budget management, and you need to have clear criteria for success -- established metrics, and benchmarks that everybody can agree upon. With those things in place you can have a successful project.

**Richard:**

That ROI always seems to pop up. If you can't measure a cash-based return what kind of returns can healthcare providers be looking for?

**John:**

Well we have done a number of interesting studies with academic institutions where you are looking at trying to maximally utilize their resources that are on the floor delivering direct patient care itself. It is no good Richard if you are paying a highly priced surgical or medical unit nurse to run around and to look for infusion pumps or look for crash carts or wheelchairs. You need to be able to offload that to some of the other professions like environmental aides or nursing aides who are can deliver that more cost effectively. And these examples come up all the time.

I recently met with a CIO of a hospital and he knew we were interested in this. He said, John come over and take a look at his e-mail that I had recently. Now there were 40 people who were copied on this e-mail which said please check your units for any IV infusion pumps right away. Now this is a lot of wastage. If people could have easier access to it that would be huge. Now even when you look at ROI figures it is very

important to get things like the clinical engineering departments involved because there are a lot of resources that the hospitals have bought but they really don't know where they are. So we really do not know if they've been sold on eBay, now that's not likely the case, but people cannot find them.

I was recently in a large metro hospital and they did an inventory about two years ago. They had about 940 infusion pumps at that time. Now when they did the most recently inventory they had just a little over 700 so if you think about it that's 200 infusion pumps that they now can not find. These fusion pumps are about \$5,000 apiece. So this really is a million-dollar problem for the organization and if you just think about how that million dollars could be better spent like plowing it back into direct patient care activities. They either really did not need those pumps or if they could utilize these missing pumps then they wouldn't have to buy so many in the future.

There are a lot of things that you could improve upon like more efficient nursing, more efficient use of the resources that you have rather than spending time calling and waiting for messages. There are a lot of mobile solutions that can address that as well. That is really where the return on investment comes from Richard.

**Richard:**

One of things that we talked about the other day was one of the examples that you had for one of the hospitals which we are working with. Can you share that with the group?

**John:**

Absolutely. I think that it is a good link between a cash-focused return on investment and something you might see in a clinical setting affecting patients themselves. One institution that we were working with was concerned with implementing a hands-free mobile communication badge. As they started the project they were actually hit with a VRE infection, which is a drug resistant infection. It was causing a lot of patients to be placed in isolation rooms. Of course this is difficult for the staff because they have a much lower patient to staff ratio. Nurses have to stay with just a handful, one or two, patients.

Now as this was going on the nurses realized that they could keep their hands-free mobile badge underneath their scrubs and keep them in conference mode so that when they needed something they could immediately call out and get a nursing aide to bring them whatever they need whether it was changing a dressing or that they needed a catheter. Then they could just ask for it and have it brought to them without having to scrub in or scrub out.

One particular nurse was saying that she was amazed in terms of this feature because it saved her so much time. She counted 11 times of having to scrub in and scrub out of that room that she would have to do normally when they had this isolation situation. Afterwards they told us that this hands-free mobile badge made all the difference in the world in terms of their ability to manage that infection with the current staff that they had. They were just overjoyed. That is really the point that makes the difference in terms of

these deployments. It is not only the dollar saved at the end of the day but it is actually helping patients.

**Richard:**

Absolutely. That all sounds great John but these types of next-generation projects frequently are at risk for running out of steam after a quick trial. How do you adjust to that?

**John:**

Well I think it really gets back to doing your homework up front. A lot of these projects require a tremendous amount of time spent doing an effective network design. There is a lot of time that needs to be spent on defining the criteria for a successful pilot and deployment. What are the things that are going to make a difference in an organization that are really going to deliver true business value?

These are not “sandbox” type technology projects that you are just happy to gather some data and then move on. These are affecting people's lives and if we can tie together a technology project and a way to make workflows and healthcare processes more effective in institutions, that is what turns it into a successful project that is going to have long-term value for both the hospital and the community.

**Richard:**

Okay, let me summarize your key points.

First, wireless communication and staff mobility projects do help healthcare providers significantly improve the quality of patient care. They reduce the frequency of medical errors and they make physicians, nurses, and health care administrators much more efficient.

Second, the benefits of wireless projects can show an immediate return on investment.

Third, and very important, is that IT departments and professional staffs do need to share in the design and establishment of benchmarks for these wireless projects.

And finally, early assessments are key to projects that are built out of manageable modules and subsequent components. Does that make sense?

**John:**

Yes, I think that summarizes it nicely. This is a technology project that requires a strong foundation infrastructure to support a number of different applications like mobile voice, like mobile enabled clinical applications, and also things like location tracking services. As I mentioned before, you need to have very strong management to pull it off and I think this is really a key. Early stakeholder involvement is also very important.

**Richard:**

Thank you very much for listening to this IBM podcast entitled “*Wireless and Mobility solutions for Healthcare Providers – Bringing more resources directly to the point of care*”.

Thank you and have a good day.