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University Hospital Southampton's path to a clinical EPR – department by department

Interview with Adrian Byrne, Director of Informatics at University Hospital Southampton NHS Foundation Trust

We spoke with Adrian Byrne, Director of Informatics at University Hospital Southampton NHS Foundation Trust (UHS), about their clinical EPR implementation. UHS has chosen a clinical EPR solution that combines the MetaVision systems for ICU, HDU, theatres and ward observations, providing one hospital-wide clinical record across the patient journey.

1 **Some hospitals have opted for a single, comprehensive EPR system, rather than combining a number of systems to achieve the same result. Why did you choose the latter option for UHS?**

We satisfied the functionality we needed to do at different points in time. At each juncture we looked at our options and decided not to throw out what we already have and buy something huge.
The larger systems have been around for long time - if we went that route we'd be waiting for the next generation of technology. The agility of smaller vendors was compelling for us, as they adopt more advanced technologies faster.

It's quite clear that you sometimes achieve a higher level of functionality in certain areas when using niche products rather than a big EPR, and critical care is definitely one of those areas. I was talking to someone at another hospital using a big EPR. They are still using printed charts in the critical care unit so it seems you do not automatically get the high level of monitor integration and paperless operation. Our staff have managed to achieve electronic charts in those areas with MetaVision.

2 **For clinicians, these systems represent a big change in their day-to-day work – and change is hard. How were they involved in the planning process? And how do they feel now about these systems now?**

With a system that is customisable like MetaVision, the more you put in, the more you get out. Our clinicians are some of the cleverest people you will find anywhere and they are absolutely focused and dedicated. They know what they want with an IT system and they worked extremely hard to achieve it. Our staff took part in the procurement process and invested a lot of effort in adapting MetaVision to suit their needs. They are quite pleased with their decision and are proud of the system - they enjoy showing it off. It supports the unit really well.

3 **In terms of the implementation process, what are the benefits of a slower roll out over a period of time verses a big bang approach?**

We just couldn't have gone with a big bang approach for safety reasons. For example, we have two paediatric units that require completely different pharmacy builds, and we couldn't have achieved that. We don't have the kind of resources to build everything at once and go live with it, as some others have, and we would worry about safety.

4 Based on your experiences with the MetaVision systems to date, what advice would you offer to a hospital that is planning to follow a similar route to a clinical EPR?

Sort out your interfacing strategy! It's essential to make sure all systems, old and new, can work well together. You also can't do much unless you have a strong patient number or patient index throughout the organisation. You need to able to hang systems off a central spine. It's also important to have some kind of strategy around data warehousing so that you can bring information together for reporting purposes.

When it comes to exploring new solutions, I would look for systems that are web-based, cloud-based and mobile. Within that, I have an appreciation of systems that are modular, like MetaVision, and that have an open data platform that supports interoperability. I would look for vendors that have bought into the INTEROPen work and FHIR standards.

5 How connected to other organisations and satellite hospitals should these systems be in the future?

Relationships with your partners and patients is critical. Patient safety should drive all. The more manual transcription you can eliminate, the better. Systems and coding should be standardised so that information can flow between different organisations. Ideally, satellite sites could use the same IT as the primary site. As we increase specialisation, it makes small units less viable. One way to cope with that reality is to have more sharing of digital infrastructure.

6 What changes do you envision in the role of clinical systems in the future for clinicians, patients and hospital performance at large?

There is a huge financial gap in health services worldwide. Larger older populations mean that we will not be able to cope unless we change how we do things, and digital will be a huge part of this. We need to do much more automation. We need decision support tools that implement the rules rather than just advise.

The nature of clinical systems will become more mobile. There will be more home monitoring. Patients will need to send monitor data into IT systems from home but this will have to happen in such a way that it is automated, and does not involve extra work either for patients or clinicians. People will only come to the hospital if they actually need to be there.

7 What are the next challenges facing UHS that clinical EPRs will need to flex to meet?

We are moving to a situation where people will need to use small mobile apps to feed data into larger platforms. This requires a new level of openness of data and implementation of standards, and a way of allowing a healthy mix of vendors. We need an extension of the vendor neutral approach that is prevalent in PACS systems. Medical and healthcare IT systems have largely avoided web-based and cloud-based approaches, because their architecture is more difficult to build. I think this has to change.

A major challenge will be how we merge and manage old data with new IT going forward, as we never have the luxury of just working with a green field. It is the classic changing the design with the aircraft in flight scenario.

If you are interested in learning how MetaVision can work with your trust, contact our UK office at: **uksales@imd-soft.com**.

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