

## How cloud technology is changing the healthcare system



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Today the healthcare system is being totally transformed by the use of cloud technology. Here are some of the ways this is happening:

### Cloud computing

Cloud computing is more than just uploading your files in Yahoo! Groups or Google Communities to share with a common group. Today, it speaks of large data and resources that companies use. As such, it affects many businesses and industries, including the healthcare sector. If you work in this sector, there are a few trends you'll want to pay attention to.

### Electronic records

Moving healthcare systems into the cloud enables you to begin thinking about cloud-based Electronic Medical Records (EMR) – something that's very different from simply moving or merging healthcare data to a centralised storage location. EMRs can easily bring healthcare systems together because while you continue using your invested system you'll now also have access to information across other healthcare systems because they're connected through Application Programming Interfaces (API) that lie within your cloud infrastructure. This technology gives you a new private healthcare network that's securely connected together in the cloud. The data itself will never leave its original sourced systems so people can receive emergency care regardless of their location or health system without having to provide their past medical history. Ultimately, this will improve how people participate in their healthcare while also improving provider experience. Integrated and Efficient Patient Care Information Age says managing millions of EMRs presents quite the challenge today because practitioners must also integrate social and health care information. This developing infrastructure is working hard to connect the countless trusts, hospitals, surgeries, and clinics together through the cloud. In doing so, cloud computing is changing how doctors, nurses, clinics, and hospitals deliver quality, cost-effective services to their patients.

There are two forces driving this today:

- The economic imperative to cut costs
- The need to improve the quality of patient care

The cloud could revolutionise healthcare as we know it, making it more efficient through a decentralised approach while also improving the patient experience. This is because medical practitioners would be able to use services that are comparable to those offered by internal IT organisations, but at a significantly lower cost.

### Data analytics

Seemingly simple things like making sure that data is in the right place so it can be analysed into information, at the right time, and across multiple devices, in a secure manner will greatly improve patient care. This wouldn't be possible without the cloud since it's important to deliver multiple services across one unified network infrastructure.

### Communication through the cloud

Doctors can stay connected with a cloud-based phone system. There are many reasons why this type of communication is vital today, including: When doctors don't talk to each other it can easily result in malpractice. Hospitals need to talk to one another and also communicate within their own walls so they don't waste money. Doing so only results in an increased cost to patients – most of whom can't afford medical treatment in the first place. High-quality research is necessary for progress to be made. This is dependent on collaboration – something a cloud-based phone system would make easier for them.

### Security and mobility

Unfortunately, it's in human nature to judge people and doctors are no different so we can't expect them to be nonjudgmental. This becomes an even bigger challenge when you pause for just a moment to consider the fact that each patients' information contains such confidential pieces of data that doctors must always work to protect. Herein also lies the reason why it's so important for the hospital's IT infrastructure and network to be so secure that hackers or anyone who may attempt to get the data illegally is stopped dead in their tracks and prevented from doing so. While the very beginning state of cloud computing had issues in regards to security, over the years there have been many experts who have joined in to make the system really difficult to hack into. This means that you can now rest assured that increased levels of security and privacy in the cloud do now exist. One such example of this is that hospitals who want to use cloud computing must now adhere to the guidelines that are

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outlined in the Health Insurance Portability and Accountability Act (HIPAA).

### **Saving on data storage**

It isn't unusual for businesses to spend extra money to buy an additional storage system that they can use to back their data up. This is in addition to the storage space where they have the resources they use daily. Cloud storage costs about 10 times less than this server space and the hardware materials it requires. Furthermore, training people how to maintain and support the system throughout its daily use is simplified since cloud computing storage adapts to your needs. This is why you need to choose the right package.

### **Streamlined collaboration**

The CDW says streamlined communication results in streamlined patient care. This is great news because patients don't want to be readmitted to the hospital when they could have been taken care of properly the first time. When their whole medical team is able to easily communicate and share information through the cloud technology, they won't have to worry about readmission. This communication and its resulting collaboration is easy today since you can take the cloud with you and use it anywhere, at any time.

### **Advanced clinical research**

Smart Data Collective says doctors who prescribe medication will get some help from big data analytics. Sharing data between pharmaceutical giants via the cloud will also help researchers choose the best subjects. This is something that was witnessed recently when clinical trial big data revealed desipramine can also be used in curing lung cancer. Flatiron Health's service, OncologyCloud, says that about 96% of potential data on cancer patients is yet to be analysed. This is something that big data analytics can help sort out. Big data will also help develop personalised medicine since it can recognise each person's unique genetic makeup. Doing so will help with the fight against epidemics.

Published on : Fri, 21 Sep 2018