Kanteron Systems

Clinical Data Workflow Management

Agreement gives NHS access to Kanteron Systems' imaging and genomic data integration platform

According to recent studies published by the World Health Organisation, Cancer Research UK and other health institutions, precise diagnosis and personalised treatments is no longer a promise, but a reality.

Using advanced and full genome sequencing, for both biomarker-based diagnosis and for prevention screening, enables health organisations to discover new pathways, new uses for existing drugs, cures for rare diseases and much more.

And now the UK health system is set to reap some of the benefits.

NHS organisations and trusts will be able to access healthcare information systems leader Kanteron Systems' medical imaging and genomic data integration platform: the Translational Medical Information Server or TMIS.

This can be used for adverse medication event prevention, pre-operative genomic screening, and establishing telemedicine networks among other things – and is expected to provide millions of pounds in financial savings yearly.

Kanteron Systems, in collaboration with the NHS England's Open Source and Code4Health Programmes, has agreed to allow the entire NHS unrestricted access to the platform under the custodianship of an NHS clinically led OpenPACS Code4Health community.

What is the Translational Medical Information Server (TMIS)?

The Translational Medical Information Server (TMIS) enables researchers and clinicians to reach precise diagnostics with unparalleled ease and speed.

By integrating genomics, pharmacogenomics, digital pathology, radiology, biosensors, and analytics into a single unified workflow, the platform is able to produce a complete visualisation with deep integration.

For example, the platform allows oncologists to access radiologists' images and studies, pathologists' biopsies and reports, labs' genomics sequences, pharmacogenomics databases, and biosensors' readings and combines all that information to enable analytics and single-sign on, single interface, single point of access.

How will it benefit the NHS?
Health Benefits:

As well as helping NHS organisations to save millions of pounds, independent research suggests that provision of the Kanteron platform could help improve patient outcomes through improvements in the diagnosis of a large number of conditions.

From obesity to hepatitis C, diabetes or schizophrenia, the benefits of personalised medicine are applicable to multiple diseases and conditions in virtually all areas of healthcare.

Here are just a few!

CARDIOMYOPATHY

With well over 100,000 people affected by Cardiomyopathy in the UK, analysis of incidental findings means savings of more than £ 1 billion, and an increase in life expectancy (QALY) of 20 years.

BOWEL CANCER

With more than 30,000 people affected by Bowel Cancer in the UK, a new case every 10 seconds, and a chance of 1 in 20, analysis of incidental findings would save over £800 million, and increased life expectancy (QALY) by 25 years.

HIV/AIDS

With well over 100,000 people affected by HIV / AIDS in the UK, the possibility of predetermining the sensitivity to Abacavir treatment would mean savings of over £100 million.

WARFARIN

With an estimated 1% of the UK population taking Warfarin in the UK, the possibility of pre-determining the sensitivity to treatment would save over £1 billion.

LUNG CANCER (NSC)

With over 44,000 advanced NSC lung cancer patients in the UK, the possibility of pre-determining the sensitivity to treatment would save over £ 10 million.

How will it benefit the NHS?
Health Benefits:

Furthermore, the agreement will not only allow NHS trusts to access imaging and genomic data at the point of care, but will also allow the NHS and higher education institutions in the UK to leverage Kanteron's platform to develop new software components ("plug-ins"), through a single code repository, to enhance functionality.

The NHS OpenPACS community, in conjunction with Kanteron Systems, will then be responsible for repository access, quality control, CE medical device certification and ISO certified quality management for the updated versions.

Kanteron, working with selected technology partners Microsoft, Hitachi and IBM, will then offer additional services, such as consulting, implementation, integration, data migration and tech support, to ensure the adoption of new clinical workflows.

The TMIS and The Cloud

High data growth is one of the biggest challenges for IT departments in healthcare. Indeed, in medical imaging alone techniques such as X-ray radiography, magnetic resonance imaging (MRI) and computed tomography (CT) result in extensive use of storage for the data generated from these imaging systems.

The demand for cloud solutions is clear. Today's health organisations are looking for more agility, easier management, and access to more capacity to enable them to handle increased demands without increasing costs.

Health organisations can benefit from Microsoft's industry-leading approach to security, privacy, and compliance while minimising cost and complexity.

However, organisations can drive efficiencies with data storage in the Cloud and impact front line services by improving the quality and accessibility of information.
Cloud computing was the second fastest-growing IT budget item in 2015 behind security, according to the 2015 Computerworld CIO study. Cloud projects also topped the list of the most important IT priorities chief information officers identified for this year.

Why? One reason is you can provide secure, compliant, independently-verified cloud services that offer practical cost-effective storage alternatives to help you scale quickly while avoiding capital expenses.

Health organisations around the world have entrusted Microsoft to help protect their data. One of the greatest benefits of moving to the Cloud is data analysis.

Hospitals can begin to aggregate, anonymise and analyse patient data – for example data gathered through the TMIS – so that treatments might be better understood as they are being administered, leading to potentially life-saving changes being made in real time.

Other key benefits of moving to Azure, Microsoft's Cloud, include:

1. **The ability to deliver better patient care by using the physical space available in the hospital for doctors, nurses and patients with less square footage of the hospital being used for IT (servers, storage)**

2. **Reducing total cost of ownership (TCO) by lowering the investment in capital expenses**

3. **Maximising data protection by automating backup of primary data**

4. **Improving disaster recovery function by downloading only active data sets from the cloud thereby leading to lower recovery time objectives (RTO).**

What Next?

To find out more about the Cloud in the Health Sector, **click here**.

To find out more about how to benefit from access to Kanteron's platform, **click here**.