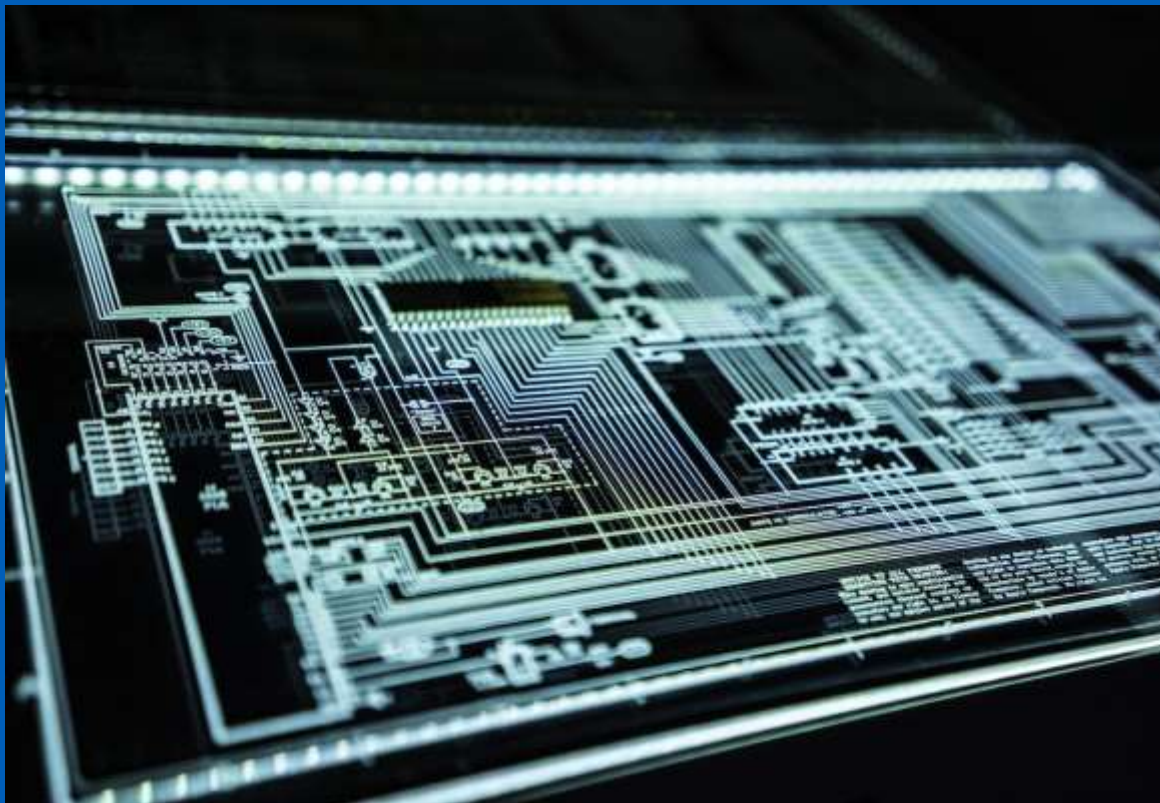


Technology Update 10/02/2023

Update from Health Education England's Knowledge Management Team. Contact us at KnowledgeManagement@hee.nhs.uk



Your weekly bulletin of healthcare technology news, covering items relating to the [HEE Topol Review](#) on preparing the healthcare workforce for the digital future.

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Genomics

How should communities be meaningfully engaged (if at all) when setting priorities for biomedical research? Perspectives from the biomedical research community

BMC Medical Ethics February 6th

Some of the challenges identified in this study are unique to engagement in genomics research: identifying the community and genomic literacy. This result is supported by the findings of Manafó et al. and Stauton et al., who affirm that “defining ‘community’ is challenging and can depend on the particular social, cultural and geographical context in which the [genomics] research takes place.”

How is genomics transforming cancer research and treatment? Seven lessons learned from the Festival of Genomics & Biodata 2023

ICR February 6th

Scientists from around the world, including many ICR researchers, gathered last month at the Festival of Genomics & Biodata in London. Julia Bakker and Diana Cano attended the conference and report back on some of the key take-home messages.

How public health authorities can use pathogen genomics in health protection practice: a consensus-building Delphi study conducted in the United Kingdom

Microbial Genomics February 6th

Pathogen genomics capability has been greatly enhanced by the investment and focus that resulted from the COVID-19 pandemic. The expert consensus statements from the PRAGMATIC Delphi

study participants will help public health authorities and policymakers plan for the longer-term applications and integration of pathogen genomics in health protection practice.

Human-specific genetics: new tools to explore the molecular and cellular basis of human evolution

Nature reviews Genetics February 3rd

In this Review, we describe how the sequencing of genomes from modern and archaic hominins, great apes and other primates is revealing human-specific genetic changes and how new molecular and cellular approaches — including cell atlases and organoids — are enabling exploration of the candidate causal factors that underlie human-specific traits.

Could Africa be the future for genomics research?

Nature January 31st

In 2020, an analysis of 426 African genomes, involving researchers from 15 African countries, uncovered 3 million new variants in the human genome. The discovery contributed to the development of a tool that enables researchers to identify genetic associations specifically in African populations — the Infinium H3Africa Consortium genotyping array, produced by the US biotechnology firm Illumina.

Etiology of the Broad Avoidant Restrictive Food Intake Disorder Phenotype in Swedish Twins Aged 6 to 12 Years

JAMA Psychiatry February 1st

Researchers from the Karolinska Institutet and the University of North Carolina School of Medicine have found that the eating disorder ARFID (avoidant restrictive food intake disorder) is highly

heritable. The paper could improve our understanding of the underlying causes of the disorder and aid the development of better treatment options.

Digital Medicine

[University College London Hospitals NFT outlines digital role in Net Zero Strategy](#)

HTN February 9th

University College London Hospitals (UCLH) NHS Foundation Trust has released a new strategy entitled 'Critical Care For Our Climate: UCLH's Net Zero Strategy', including a focus on digital and technology. The strategy covers key areas including: clinical activity; procurement and supply chain activities; estates, facilities, technology and transport; education and engagement; and additional factors.

[Three NHS trusts trial smart tech to enable cardiac rehab in patients' homes](#)

AT Today February 8th

Northumbria Healthcare NHS Foundation Trust, Sheffield Teaching Hospitals NHS Foundation Trust, and Imperial College Healthcare NHS Trust are taking part in a major new study that is trialling digital technologies to support the recovery of heart attack patients. This initiative is expected to free up vital hospital space and ease pressure on healthcare professionals by facilitating remote monitoring. It can also address barriers to face-to-face programmes. The three NHS trusts are participating in the

trial of the Digitally Enhanced Rehabilitation in Cardiac Patients (DERIC) care platform.

[Water, soap, IT...](#)

BCS February 8th

Criticism of health IT is easy to find. However, healthcare is reliant upon and much improved by IT in its many guises. BCS is very involved with this area. Philip Scott CITP FBCS, the BCS Health and Care Executive Chair, spoke to Brian Runciman MBCS about why he takes an optimistic approach.

[NHSE must 'demonstrate it is trustworthy' on data, says watchdog](#)

HSJ February 8th

The independent data watchdog has called for greater clarity from **NHS England** on how it will ensure there are “as strong... if not stronger” safeguards on health and care data following its takeover of NHS Digital.

[Why user needs should be at the heart of healthtech](#)

Digital Health February 7th

Digital solutions should never be imposed on patients or NHS staff. To be successful, learn from the people who will be using the system – and make sure their first experience of it is positive, explains Matt Harrington, Director at Public Digital.

[The Christie becomes first specialist cancer trust to deploy CardMedic](#)

Digital Health February 6th

The Christie NHS Foundation Trust has deployed CardMedic to help reduce health inequalities for patients, making it the first specialist cancer trust to use the healthcare communications app.

Some NHS bodies still in process of 'reconnecting' six months on from cyberattack on IT systems supplier

Public Technology/.Net February 6th

Six months on from a major cyberattack on a key software supplier, some NHS organisations are still yet to reconnect to impacted systems, a minister has revealed.

UK health minister confirms data platform worth £480m will replicate Palantir dashboards

The Register February 6th

The company got a foothold in the National Health Service (NHS) during the pandemic, when it was one of a number of suppliers to build a "data store" to detail information about the spread of COVID-19 and its impact on the NHS, one of the world's largest healthcare providers.

New strategy to boost NHS access to innovative medical technology

GOV.UK February 3rd

Patients across the UK are set to benefit from access to safe, effective and innovative equipment and medical devices as part of the first ever medical technology (medtech) strategy.

Revealed: two out of five ICSs lack a digital strategy

HSJ February 6th

Over 40 per cent of integrated care systems are yet to establish digital strategies, HSJ research has discovered.

Artificial Intelligence

[University Hospitals Dorset uses AI in building new Royal Bournemouth Hospital](#)

HTN February 7th

University Hospitals Dorset (UHD) is using artificial intelligence technology to build facilities at the new **Royal Bournemouth Hospital**. The Buildots technology analyses data that has been captured at the site through helmet-mounted 360-degree cameras. It then creates progress reports that are supported by visuals, which the trust says are designed to provide “accurate, objective data and in-depth analysis” to managers and stakeholders.

[Smartphone App Can Support Stroke Symptom Detection](#)

MHealth Intelligence February 7th

Research presented at the American Stroke Association's International Stroke Conference 2023 in early February described a smartphone application called FAST.AI that uses machine-learning algorithms to identify stroke symptoms in real time, leading to timely treatment and higher chances of recovery.

[Towards artificial intelligence-based learning health system for population-level mortality prediction using electrocardiograms](#)

npj Digital Medicine February 6th

The feasibility and value of linking electrocardiogram (ECG) data to longitudinal population-level administrative health data to facilitate the development of a learning healthcare system has not been fully explored. We developed ECG-based machine learning models to predict risk of mortality among patients presenting to an emergency department or hospital for any reason.

[Oxford University scientists' AI diagnostic test accurately identifies known respiratory viruses in minutes](#)

PharmiWeb.com February 6th

Breakthrough in diagnostics testing enables 'facial recognition for germs'. Collaboration with **John Radcliffe Hospital** used AI to identify respiratory viruses and different strains with an accuracy of >97% in under five minutes.

[Safety and efficacy of an artificial intelligence-enabled decision tool for treatment decisions in neovascular age-related macular degeneration and an exploration of clinical pathway integration and implementation: protocol for a multi-methods validation study](#)

BMJ Open February 1st

This multi-methods study aims to establish the safety and efficacy of an AI-enabled decision tool for nAMD treatment decisions and understand where on the clinical pathway it could sit and what factors are likely to influence its implementation.

[Workforce and Education](#)

[University Alliance calls for simulation in nursing training](#)

Digital Health February 8th

University Alliance, a collection of universities responsible for training 30% of the nursing workforce in England, has called for nurse training to incorporate simulation to help tackle the NHS workforce crisis.

Learners' characteristics and the mastery of digital education during the COVID-19 pandemic in students of a medical faculty in Germany

BMC Medical Education February 2nd

In response to the spread of the coronavirus, educational institutions have been closed and digital education has become a new teaching method to ensure the continuity of medical education. Since this format was a new form of learning for students at medical faculties in Germany, little is known about the perception of it and the factors that contribute to successful mastery. The current study aimed to analyze students' learning experiences during the first online semester and to identify associations between learners' characteristics and enjoyment, mastery experiences, as well as the perceived stress level.

Evaluation of a digital game for teaching behavioral aspects of clinical communication in dentistry.

BMC Medical Education February 1st

The current evidence suggests that gamification of learning helps preclinical students to understand the context of clinical dentist-patient interaction and increase their motivation and self-efficacy to learn behavioral issues of clinical communication.

*For help accessing articles contact the Knowledge Management team KnowledgeManagement@hee.nhs.uk



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