

Training doctors in informatics

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24th January 2018

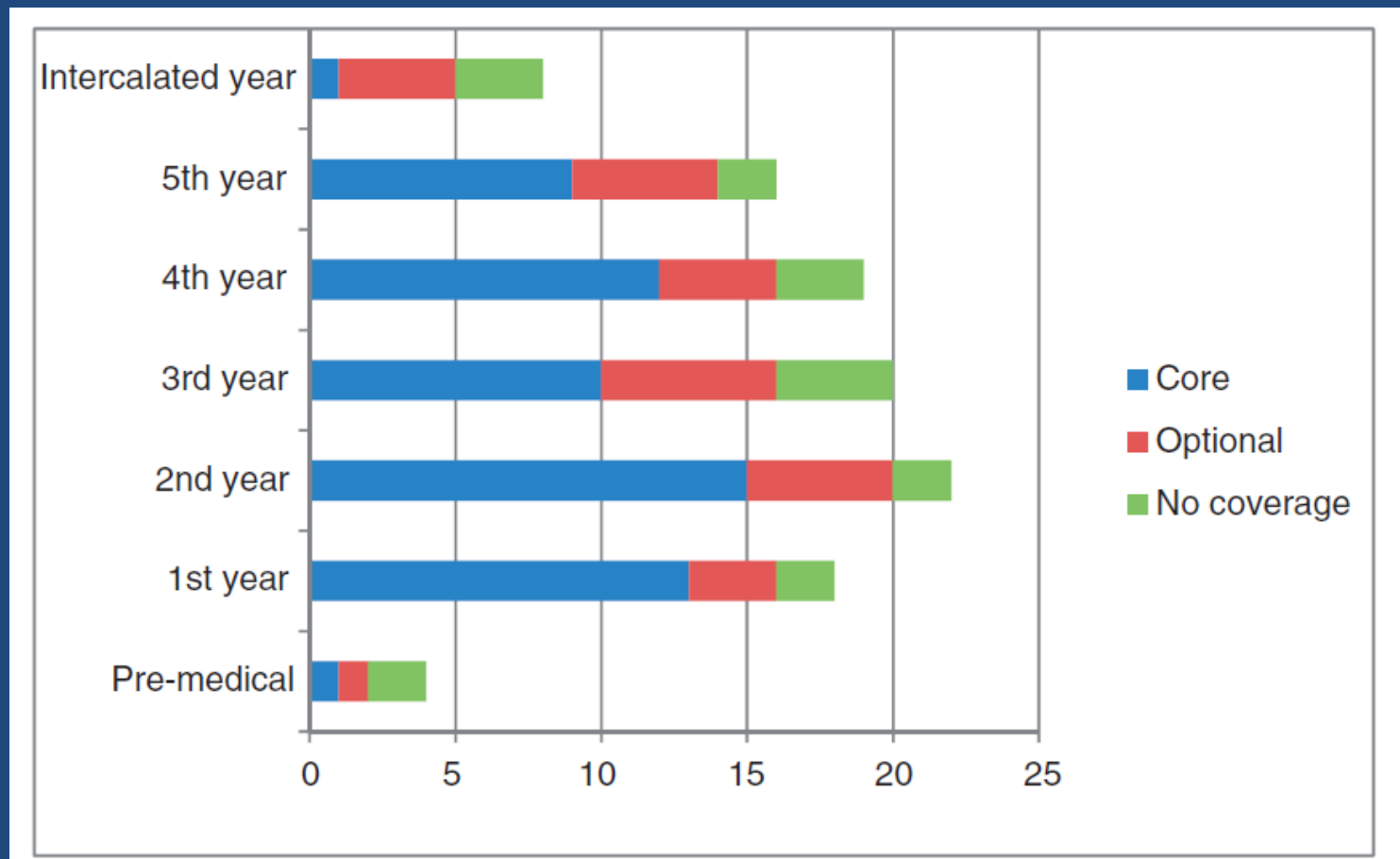
Conflicts of interest

- 30% clinical, 70% academic
- Love the NHS

Political agendas

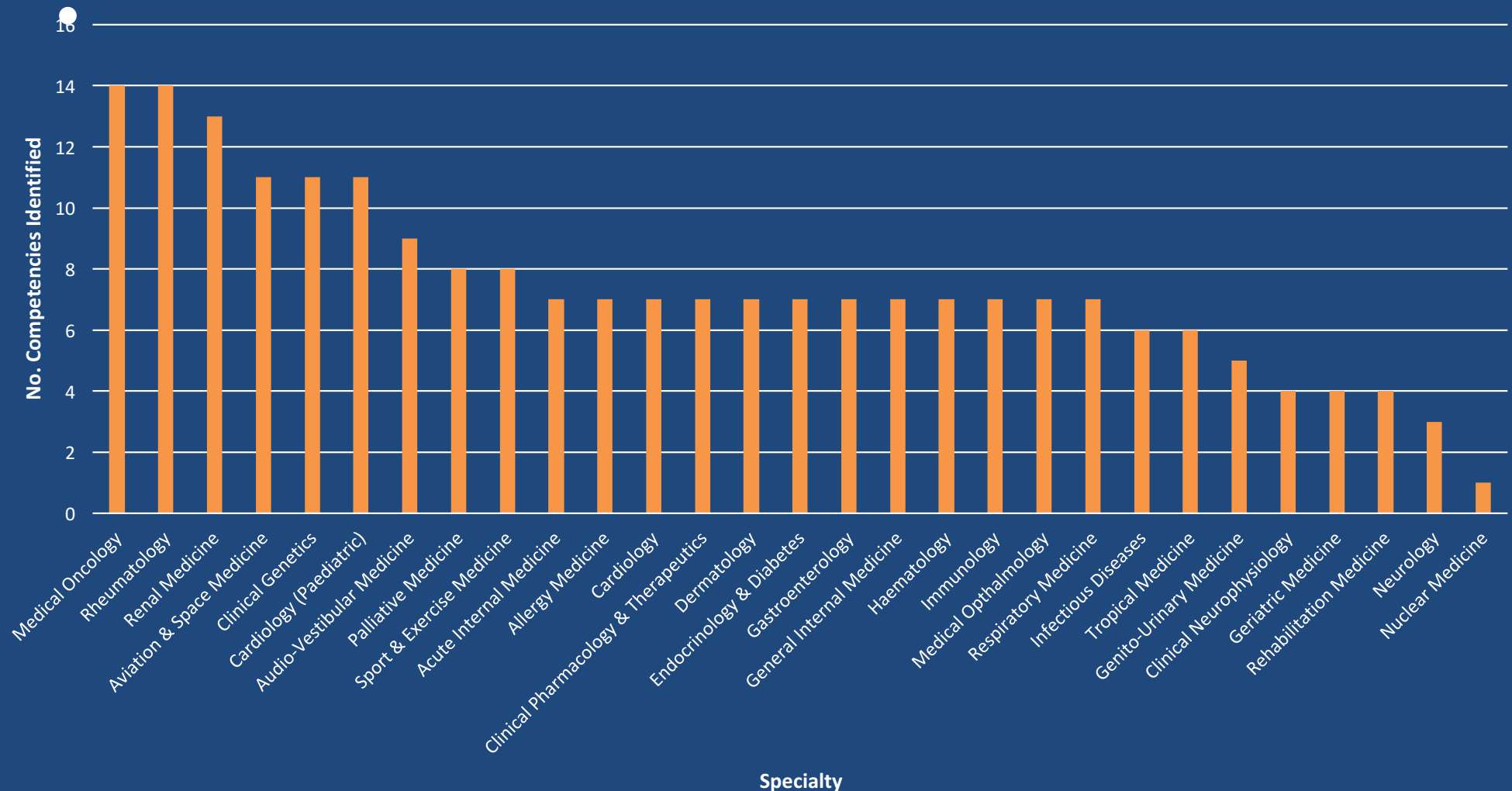
- *“information fit workforce”*
- *“paperless NHS by 2020”*
- *“high degree of digital maturity by 2023”*

Undergraduate coverage of HI



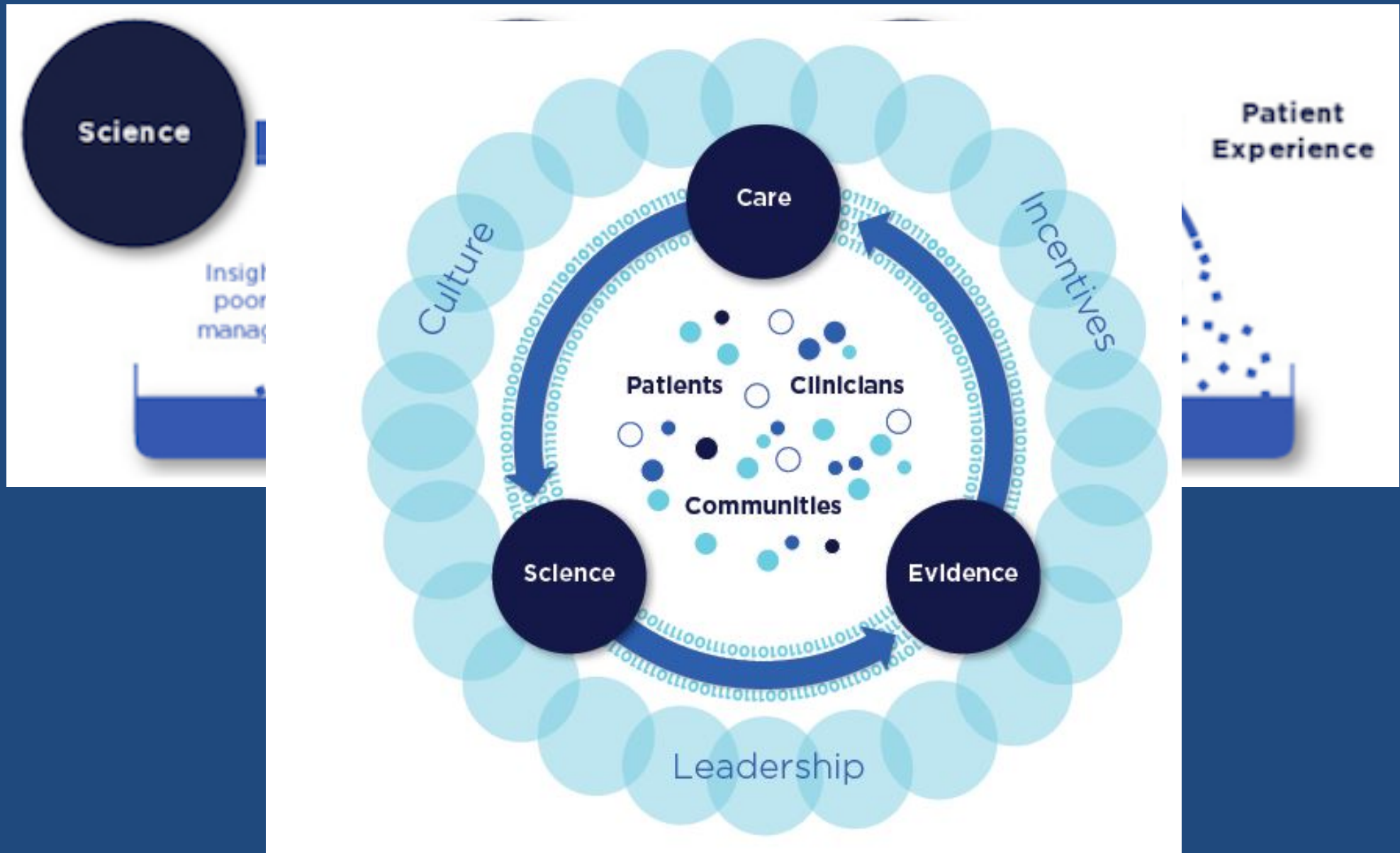
Walpole et al. JRSM Open 2016.

Frequency of Competencies by Postgraduate Specialty



Abou-Nader et al. Unpublished 2017.

Learning health systems



Science

- Analysis of risk factors
- Improve disease definition
- Risk prediction models
- Inform future discovery science and trials
- Understanding of disease mechanism and drug targets

Evidence

- Automation/machine learning built into EHR for evidence/guidelines
- Real world EHR trials
- Comparative effectiveness research
- Surveillance
- Personalised recommendation

Care

- Prospective not retrospective
- Decision support
- Real-time linkage
- Interoperability
- Include patient experience, wearable and –omic data
- Patients see and use their own data

NEW UK OPPORTUNITIES

Science

- HDR-UK

https://www.mrc.ac.uk/about/institutes-units-centres/uk-institute-for-health-and-biomedical-informatics-research/ Health Data Research UK (H... x

UCL

HOME FUNDING RESEARCH OUR SUCCESSES INNOVATION SKILLS & CAREERS NEWS PUBLICATIONS ABOUT US

Home > About us > Institutes, Units & Centres > Health Data Research UK (HDR UK)

ABOUT US

What we do >

Contact us >

Our structure >

Institutes, Units & Centres ▾

- What are Institutes, Units and Centres?
- List of Institutes, Units & Centres
- MRC London Institute of Medical Sciences
- MRC Laboratory of Molecular Biology
- The Francis Crick Institute
- > UK Dementia Research



Health Data Research UK (HDR UK)

The MRC is leading on the establishment of a multi-funder UK institute for health and biomedical informatics research to transform the UK medical informatics research landscape. It will be a national, interdisciplinary research institute that will capitalise on the UK's renowned data resources and research strengths.

Informatics provides a powerful approach to improving the monitoring of population health and prevention, providing novel insights into disease pathways and patient care, and increasing the efficiency and effectiveness of health and biomedical research.

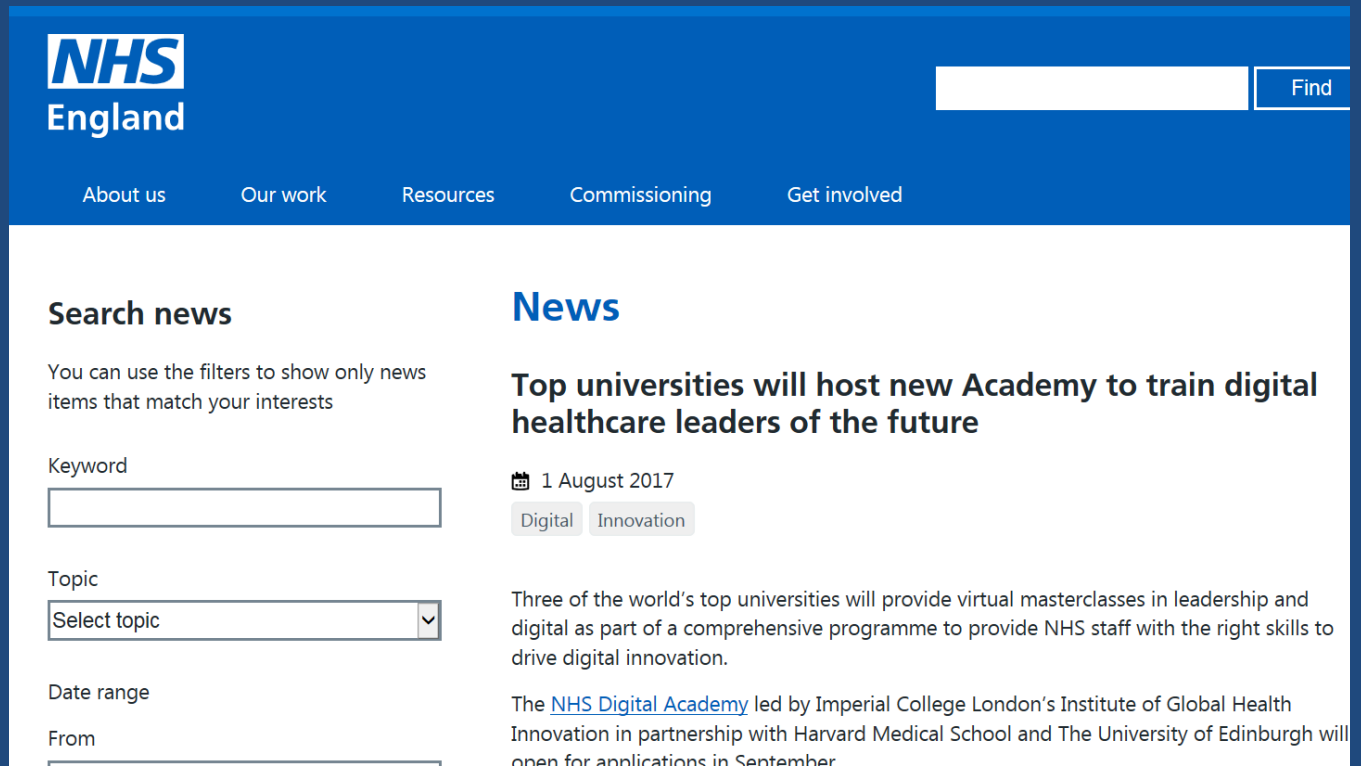
Related content

- > Director appointed for new UK health and biomedical informatics research institute [↗](#)
- > Spotlight on: Informatics [↗](#)
- > Informatics vision and strategy [↗](#)
- > Initiatives in informatics research [↗](#)
- > MRC Regulatory Support Centre: Supporting informatics research [↗](#)

Document downloads

Evidence

- Digital Academy
- Faculty of Clinical Informatics (FCI)
- Federation of Informatics Professionals (Fed-IP)



The screenshot shows the NHS England website. At the top is the NHS England logo and a search bar with a 'Find' button. Below the logo is a navigation menu with links: 'About us', 'Our work', 'Resources', 'Commissioning', and 'Get involved'. The main content area is divided into two columns. The left column is titled 'Search news' and contains instructions on how to use filters to show news items. It includes input fields for 'Keyword', 'Topic' (with a dropdown menu), and 'Date range' (with 'From' and 'To' fields). The right column is titled 'News' and features a headline: 'Top universities will host new Academy to train digital healthcare leaders of the future'. Below the headline is the date '1 August 2017' and two tags: 'Digital' and 'Innovation'. The article text states: 'Three of the world's top universities will provide virtual masterclasses in leadership and digital as part of a comprehensive programme to provide NHS staff with the right skills to drive digital innovation.' It also mentions: 'The [NHS Digital Academy](#) led by Imperial College London's Institute of Global Health Innovation in partnership with Harvard Medical School and The University of Edinburgh will open for applications in September.'

NHS England

Find

About us Our work Resources Commissioning Get involved

Search news

You can use the filters to show only news items that match your interests

Keyword

Topic

Select topic

Date range

From

News

Top universities will host new Academy to train digital healthcare leaders of the future

1 August 2017

Digital Innovation


Three of the world's top universities will provide virtual masterclasses in leadership and digital as part of a comprehensive programme to provide NHS staff with the right skills to drive digital innovation.

The [NHS Digital Academy](#) led by Imperial College London's Institute of Global Health Innovation in partnership with Harvard Medical School and The University of Edinburgh will open for applications in September.

Care

- Global Digital Exemplar programme

Global Digital Exemplars: “Ivy League”



NHS England

Salford Royal NHS
NHS Foundation Trust

Warral University NHS
Teaching Hospital
NHS Foundation Trust

The Royal Liverpool and Broadgreen University Hospitals NHS
NHS Trust

Oxford University Hospitals NHS
NHS Foundation Trust

University Hospitals Bristol NHS
NHS Foundation Trust

Taunton and Somerset NHS
NHS Foundation Trust

City Hospitals Sunderland NHS
NHS Foundation Trust

University Hospitals Birmingham NHS
NHS Foundation Trust

West Suffolk NHS
NHS Foundation Trust

Luton and Dunstable Hospital NHS
NHS Foundation Trust

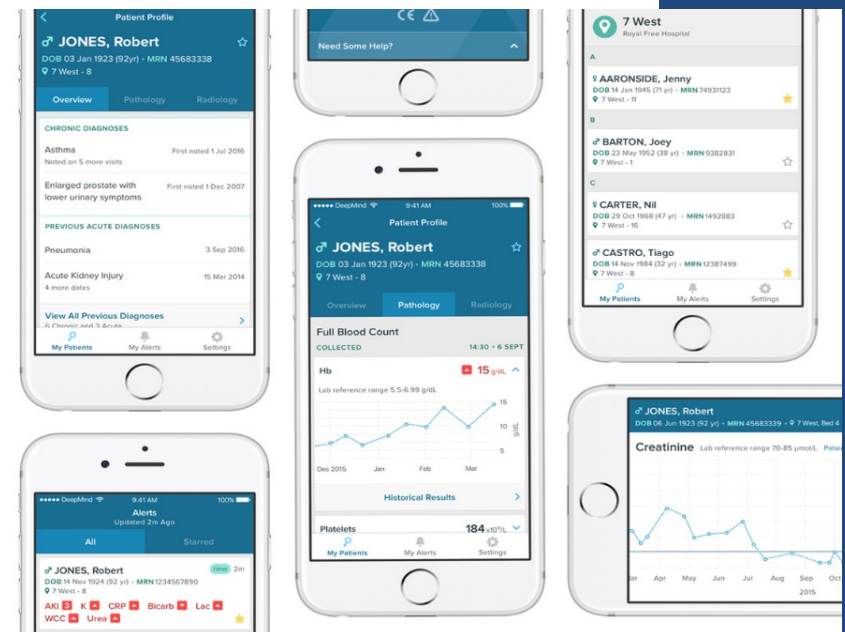
Royal Free London NHS
NHS Foundation Trust

University Hospital Southampton NHS
NHS Foundation Trust

@DrAndrewHarper
#rsmrdh17

Conflict resolution

Clinical vs research



EBM vs QI vs Informatics

Original Article

Effect of a Computer-Guided, Quality Improvement Program for Cardiovascular Disease Risk Management in Primary Health Care The Treatment of Cardiovascular Risk Using Electronic Decision Support Cluster-Randomized Trial

David Peiris, MBBS, MIPH, PhD; Tim Usherwood, MBBS, MD;
Kathryn Panaretto, MBBS, MPH; Mark Harris, MD; Jennifer Hunt, MBBS, PhD;
Julie Redfern, PhD; Nicholas Zwar, MBBS, PhD; Stephen Colagiuri, MD;
Noel Hayman, MBBS, MPH; Serigne Lo, PhD; Bindu Patel, MPH; Marilyn Lyford, BHSc;
Stephen MacMahon, DSc; Bruce Neal, MBChB, PhD; David Sullivan, MBBS;
Alan Cass, MBBS, PhD; Rod Jackson, PhD; Anushka Patel, MBBS, SM, PhD

Background—Despite effective treatments to reduce cardiovascular disease risk, their translation into practice is limited.

Methods and Results—Using a parallel arm cluster-randomized controlled trial in 60 Australian primary healthcare centers, we tested whether a multifaceted quality improvement intervention comprising computerized decision support, audit/

Hype vs reality

JUN 1, 2016 @ 06:00 AM 141,582 VIEWS

From \$4.5 Billion To Nothing: Forbes Revises Estimated Net Worth Of Theranos Founder Elizabeth Holmes



Matthew Herper

FORBES STAFF

I cover science and medicine, and believe this is biology's century.

[FULL BIO >](#)

This story appears in the June 21, 2016 issue of Forbes. [Subscribe](#)



Elizabeth Holmes speaking at the Forbes Healthcare Summit last December. Credit: Glen Davis

Last year, [Elizabeth Holmes](#) topped the [FORBES list of America's Richest Self-Made Women](#) with a net worth of \$4.5 billion. Today, FORBES is lowering our estimate of her net worth to nothing. Theranos had no comment.

Patient-centred vs Researcher/Data/Tech-centred

SCIENCE TRANSLATIONAL MEDICINE | EDITORIAL

POLICY

The study is open: Participants are now recruiting investigators

Recent events inspire optimism that a new age is dawning, one in which lay people have an active role in advancing biomedical research and health care delivery. Two ongoing experiments will deeply involve the public in these endeavors: the U.S. Precision Medicine Initiative (PMI) and the National Patient-Centered Clinical Research Network (PCORnet). PCORnet has already launched 20 patient-powered research networks designed to be led and animated by people who have an affinity with one another because of either shared disease, geography, experience, or identity (1). When U.S. President Barack Obama announced the PMI, he stated emphatically that people would be, not patients or even participants, but rather, partners in clinical research (2, 3). In the hours and days that followed, Francis Collins, director of the U.S. National Institutes of Health (NIH), reiterated this view, using words such as “participant” and “partner” when referring to people involved in clinical research (1). As a veteran citizen scientist and patient advocate (4), I was moved to tears to hear such proclamations from people other than my passionate fellow advocates. However, PCORnet’s efforts and PMI’s endeavor to enroll a million people—called All of US—will spur the advancements we seek only if we, the people, take advantage of these unprecedented opportunities and act with boldness to overcome myriad misaligned incentives, business interests, and general inertia against change.

BUILDING THE WE: TRUE PARTICIPATION

Thousands of individuals affected by common and rare

the investigators and not by all stakeholders. Participants want not only to be invited to the table but also to design and host the meal with other stakeholders. There is a great deal of “us and them” language in biomedical research. Investigators point to “those patients,” and activists complain about “those investigators.” Clinicians are often left out of the process completely. When these roles are considered dichotomous and separate instead of part of a continuum, it is difficult to create authentic partnerships.

Participants have a place throughout the research continuum, including the proposal and prioritization of research questions, study design, engagement of study participants and their recruitment and retention, conduct of research and data analysis, and implementation and dissemination of results and, often, individuals’ own data. However, if we intend to engage a large and diverse array of people in clinical research, participation has to be made as frictionless as possible by creating mechanisms in communities where people live, work, and play, with community representatives leading the way. In addition, the research conducted must have relevance to the engaged parties by addressing questions that arise from communities of participants. If a study is built on the needs of individuals, families, and communities, then the results of research must be transparent and tangible—traits that run counter to the current culture. Researchers often do not return even the published results to the participants, let alone a lay summary or other accessible communication. If an effective intervention results from a clinical study, the process can take more than 10 years for the new intervention to be integrated into clinical practice (5). The new U.S. national efforts, particularly



Sharon F. Terry, President and CEO of Genetic Alliance, Washington, DC 20008, USA, and serves as a member of the PCORnet leadership and the Cohort Advisory Panel of the U.S. Precision Medicine Initiative. Email: sterry@geneticalliance.org

High tech vs low tech



Dabbawala-Indian big data

Training doctors in HI:

Conclusions and recommendations

- Variation
- Generally poor representation of HI
- Capacity
- Need for special programmes, e.g. HEE/RCP, but also universal grounding
- Need to integrate HI in training
- Stay focused on patients, not data or tech

People not data

“He who studies medicine without books sails an uncharted sea, but he who studies medicine without patients does not go to sea at all.”

William Osler

“It’s important to remember that behind every data point is a daughter, a mother, a sister – a person with hopes and dreams.”

Melinda Gates

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