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8 – 12 JULY 2023 | SYDNEY, AUSTRALIA

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# Leading digital preparedness in the NHS England: Phillip Ives Nursing & Midwifery Review


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AIDH IMIA

**Making *IT* Work: Harnessing the Power of Health Information Technology to Improve Care in England**

Report of the National Advisory Group on Health Information Technology in England

**Wachter Report 2016**

2018

NHS

**A Health and Care Digital Capabilities Framework**

The Topol Review

**Preparing the healthcare workforce to deliver the digital future**

An independent report on behalf of the Secretary of State for Health and Social Care

February 2019

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# Topol Review

## Contents

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# Recommendations

## The Review Board recommends:

### The citizen and the patient

- In a similar way to other public health education initiatives, programmes aimed at engaging and educating the public about genomics and digital healthcare technologies should be developed. (P1)
- The NHS should work with patient and carer organisations to support appropriate patient education. (P2)
- Local arrangements should be established to provide needs-based targeted education and support through existing patient support provision, where possible. (HI1)

## The Genomics Panel recommends:

### The citizen and the patient

- The NHS, in partnership with relevant regulatory bodies, should establish a clear, robust framework by which healthcare professionals use genomic data, which safeguards patient confidentiality, and inspires the support and confidence of citizens and the wider community. (G1)

### Healthcare professionals

- All healthcare professionals should receive core training in genomic literacy to help them understand the basis, benefits and ethical considerations associated with genomics. (G2)
- Lifelong training should be available to healthcare professionals with emphasis on continuing support in this rapidly evolving field, including access to dynamic 'just-in-time' digital updates and online genomic information resources. (G3)
- Accredited genomic training for healthcare professionals should be established in key clinical specialities to incorporate genomic testing and genomic counselling into their practice. (G4)
- Capacity should be built within the NHS Genomic Medicine Service through support for specialist healthcare professionals including genomic counsellors, clinical scientists and specialists in genomic medicine. (G5)

### Health system

- An attractive career pathway should be developed for bioinformaticians, including expansion of Higher Specialist Scientist Training for clinical bioinformaticians. (G6)
- A framework for genomic leadership should be developed across clinical specialities and primary care settings to encourage and disseminate best-practice and to simplify patient referral systems. (G7)
- Academic institutions should ensure genomics and data analytics are prominent in undergraduate curricula for healthcare professionals, and that there should be expansion of undergraduate capacity in genomics, bioinformatics and data science. (G8)

## The Digital Medicine Panel recommends:

### The citizen and the patient

- NHS online content should be a vital trusted source of health information and be resourced appropriately. (DM1)
- The NHS should expand research and development programmes, working closely with patients to co-create digital technologies and ensure that emerging technologies meet their needs. (DM2)

### Healthcare professionals

- NHS organisations should invest in their existing workforce to develop specialist digital skills, including the assessment and commissioning of digital technologies, through the Digital Academy, continuous professional development (CPD), sabbaticals and secondments. (DM3)

### Health system

- The NHS, working with regulators, should develop and commission courses to increase the number of specialists in the evaluation and regulation of digital technologies. (DM5)

## The Digital Medicine and AI & Robotics Panels recommend:

- The NHS should create or increase the numbers of clinician, scientist, technologist and knowledge specialist posts with dedicated, accredited time, with the opportunity of working in partnership with academia and/or the health tech industry to design, implement and use digital, AI and robotics technologies. (DM4/AIR5)

## The AI and Robotics Panel recommends:

### The citizen and the patient

- The NHS should ensure that patients are involved from the beginning in the design and implementation of AI software for healthcare, with their needs and preferences reflected in the co-design process. (AIR1)

### Healthcare professionals

- Educational resources should be developed to educate and train all healthcare professionals in: health data provenance, curation, integration and governance; the ethics of AI and autonomous systems/tools; critical appraisal and interpretation of AI and robotics technologies. (AIR2)

### Health system

- The NHS should leverage its global reputation and integrated datasets to attract skilled experts from the global community of data scientists. (AIR3)
- Given the national shortage and competition for AI specialists, there should be a national programme of 'Industry Exchange Networks' that would benefit the NHS. (AIR4)

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# Recommendations

## The Organisational Development Working Group recommends:

### The citizen and the patient

- NHS organisations must ensure that patients, citizens and staff are involved in the co-design of transformation projects, particularly in identifying how digital healthcare technologies can help to improve both patient experience and staff productivity. (OD1)

### Healthcare professionals

- Senior roles should be developed with responsibility to advise on the opportunities offered by digital healthcare technologies and identify local skills gaps. (OD2)
- Healthcare professionals will need to access training resources and educational programmes in digital healthcare technologies to assess and build their digital readiness. (OD3)

### Health system

- Each organisation should assign Board-level responsibility for the safe and effective adoption of digital healthcare technologies at scale, with a focus on clinical outcomes and on promoting effective and consistent staff engagement. (OD4)
- NHS Boards should take responsibility for effective knowledge management to enable staff to learn from experience (both successes and failures) and accelerate the adoption of proven innovations. (OD5)
- The NHS should strengthen systems to disseminate lessons from early adoption and share examples of effective, evidence-based technological change programmes. (OD6)
- NHS organisations should use validated frameworks to implement technological solutions and ensure staff are trained to use these. (OD7)
- The NHS should support collaborations between the NHS and industry aimed at improving the skills and talent of healthcare staff. (OD8)
- The NHS should work with stakeholders across sectors to review the regulation and compliance requirements for new digital healthcare technologies, including the provision of guidance and training on cyber security, data privacy and data anonymisation, learning from the experience of other international healthcare systems. (OD9)

## Educational recommendations to support a digitally enabled health system

### Culture of learning

NHS organisations will need to develop an expansive learning environment and flexible ways of working that encourage a culture of innovation and learning. To do this:

- NHS organisations will need to: have a strong workplace learning infrastructure; cultivate a reputation for training and support; develop learning activities which are proactive rather than reactive; allow staff dedicated time for development and reflection on their learning outside of clinical duties. (E1)
- Each NHS organisation should adopt a multi-professional learning collaborative approach supporting staff to learn about genomics and digital technologies. (E2)

### Supporting the educators

Delivering the education and requirements of the NHS workforce over the next five years will be challenging. In order to achieve this:

- The NHS and local organisations should support the development of a cadre of educators and trainers who can lead the educational programme to ensure timely upskilling of the NHS workforce. (E3)
- These organisations also need to put in place systems to identify and develop talented, inspiring new educators within the workforce. (E4)

### Education and development of the whole workforce

Staff should have the opportunity to access information about genomics and digital technologies adopted by the NHS and develop the necessary skills. To achieve this, within five years:

- HEE should establish a new NHS Digital Education Programme to oversee the implementation of a national digital education strategy. The programme will complement the Genomics Education Programme. (E5)
- Employers must ensure that support for staff to develop and enhance digital literacy is built into training programmes, career pathways and placements. (E6)
- Professional, Statutory and Regulatory Bodies (PSRBs) and practitioners need to identify the knowledge, skills, professional attributes and behaviours needed for healthcare graduates to work in a technologically enabled service, and then work with educators to redesign the curricula for this purpose. (E7)
- Organisations responsible for employing and training must ensure that current and new staff are supported to reach an appropriate level of digital literacy for their career stage. (E8)

**Specialist workforce and specialist teams** will be working at the very forefront of their disciplines, often being early adopters of new technologies. Supporting these individuals and teams will be important for continued innovation. To support specialists and specialist teams in genomics, digital medicine, AI and robotics:

- For both existing and new roles addressing skills gaps in clinical bioinformatics, digital technologies, AI and robotics, the NHS should develop or expand both educational programmes (for example, the Higher Specialist Scientist Training) and attractive career pathways. (E9)
- The NHS should commission flexible and responsive training for specialist roles. This may include engaging with industrial learning organisations and developing placements, exchanges and secondments. (E10)
- The NHS should work with PSRBs and other bodies to introduce and strengthen accreditation of newer specialist groups. (E11)

### Educating the future workforce

Within five years, we need to make sure that the education and training for future employees equips them to achieve their full potential as staff in the technology-enhanced NHS. To equip the future workforce:

- Education providers should ensure genomics, data analytics and AI are prominent in undergraduate curricula for healthcare professionals. Future healthcare professionals also need to understand the possibilities of digital healthcare technologies and the ethical and patient safety considerations. (E12)
- Education providers must ensure that students gain an appropriate level of digital literacy at the outset of their study for their prospective career pathway. (E13)
- Education providers should both offer opportunities for healthcare students to intercalate in areas such as engineering or computer science, and equally attract graduates in these areas to begin a career in health, to create and implement technological solutions that improve care and productivity in the NHS. (E14)

# Future predictions

## Technological advances impacting healthcare and the magnitude of disruption.

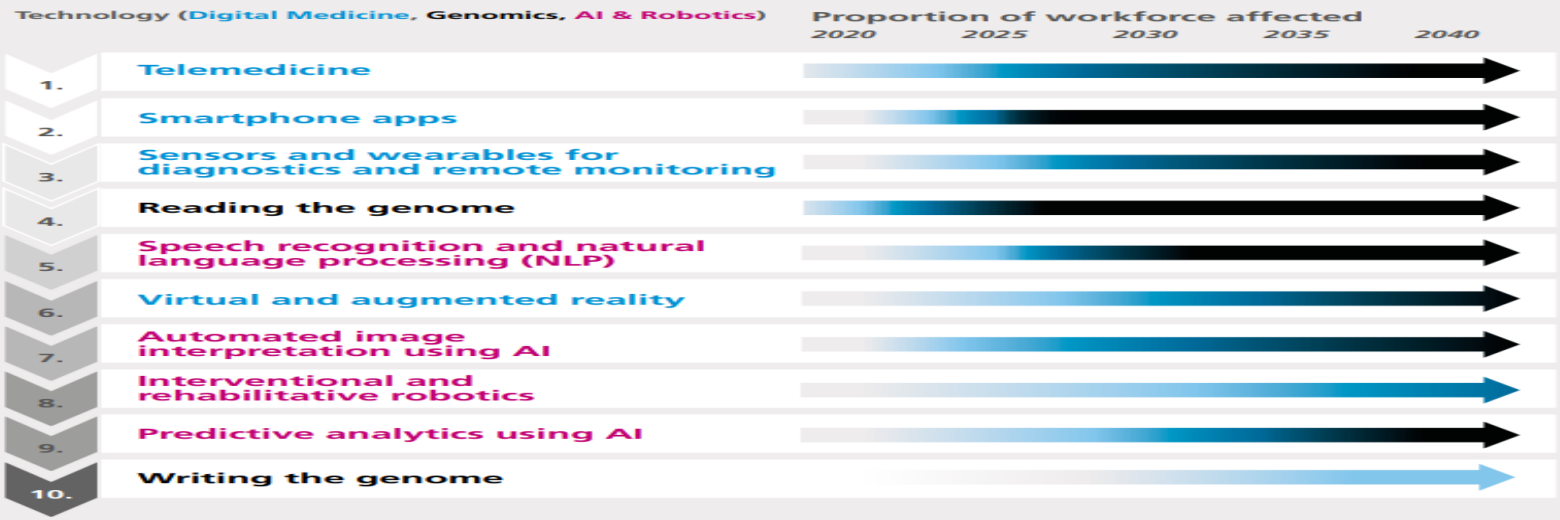


Figure 1: Top 10 digital healthcare technologies and their projected impact on the NHS workforce from 2020 to 2040

# What Good Looks Like (WGLL) framework

'It builds on established good practice to provide clear guidance for health and care leaders to digitise, connect and transform services safely and securely. This will improve the outcomes, experience and safety of our citizens.' 2021

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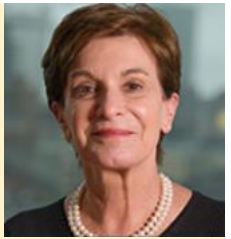
# The beginning

- May 2022 - June 2023
- Chair Dr Natasha Phillips (CNIO NHSE)
- Vice-Chair Dr Jeanette Ives Erickson – US



1. To ensure nurses and midwives [788K] are empowered to practise and lead in a digitally-enabled health and social care system, now and in the future

2. To ensure nursing and midwifery practice is fully supported by the use of digital technology and data science

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# Themes

## 1 Exploiting data and science

- genomics
- artificial intelligence, data science and research

## 2 Person centred

- nursing in a place-based health and social care system
- emerging technologies and opportunities (including remote care)

## 3 Practice and development

- professionalisation of specialist digital N.M workforce
- workforce planning
- preparation for practice

# Focus and key questions

- Examine impact of technological advances now and next 5, 10, 20 years

1. How are technological and other developments likely to change the roles and functions of the nursing and midwifery workforce?
2. What are the implications for the size, shape and skills of this workforce?
3. What does this mean for selection, curricula, education, training, development and lifelong learning of the current and future N.M workforce?
4. What are the considerations for inclusion, equality and diversity?

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# Panels

- 2 Co-chairs (England + International)
- Educationalist
- Additional SME
- Phillips Ives Nursing Fellow
- Health Education England People's Advisory Forum representative
- Access to an ethicist and health economist

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# Panels

- Gather evidence from diverse sources [round tables/1:1 interviews/virtual visits]
- Systematically explore predictions and possibilities
- Reaching conclusions on the implications
- Supporting a period of engagement and refinement of the Final Report prior to publication in 2023

**1 Exploiting data and science**
- Professor Ruth Endacott | Professor Kaija Saranto [FIN]

**2 Person centred**
- Professor Gemma Stacey | Molly McCarthy [US]

**3 Practice and development**
- Professor Laura Serrant OBE | Dr Jen Bichel-Findlay [AUS]

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# Results to come

## The Ives Nursing and Midwifery Review

The Ives Review will provide evidence and inform strategy to ensure that nurses and midwives are given access to the education and skills required for safe, effective digitally-enabled practice.

**About The Ives Review**

Find out how the review will prepare the nursing and midwifery workforce to deliver the digital future

**How will The Ives Review be conducted**

Find out more about the methodology used in the Ives Review

**Panel members**

Find out who is on the panel for the Ives Review

**How we've engaged throughout the Ives Review**

Find out about the engagement activities which have taken place

**Why is the Ives Review necessary**

Hear from digital health experts about how the Ives Review will support staff

**Resources**

Access resources relating to the Ives Nursing and Midwifery Review

# Questions

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