



England

Developing the Digital Profession Within the NHS

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To transform healthcare — by shifting from analogue to digital, from treatment to prevention, and by delivering digitally connected neighbourhood care — the NHS requires a professionalised workforce of digital and data specialists. These specialists must be equipped with the right skills and available in sufficient numbers across the health and care system.

This transformation will drive productivity and improve health outcomes for both patients and healthcare professionals, underpinned by the effective use of digital technologies and data.

Digital and data literacy, together with the professionalisation of these fields, will be integral to the NHS Long Term Workforce Plan. This plan will focus on recruitment, retention, training, and reform, aligned with wider Government standards and approaches.

10 Year Plan Key Objectives: Digital based Model of Care

Analogue to Digital / Digital by Default

- Replace 2/3rds outpatient appts
- NHS App default front door
- Health Store
- Single Patient Record
- Continuous monitoring [**Prevention theme**]
- NHS Staff App
- Single Sign-on
- Staff liberated from bureaucracy
- Integration throughout clinical pathways
- Health data research service (HDRS)

Hospital to community

- Digital integration
- Digital Redbook

Deliver **half the 2% productivity improvement**

5 transformational technologies

- Data (data driven decision making)
- AI (scribes, trusted assistant, ...)
- Genomics & bioinformatics
- Wearables
- Robotics



My NHS GP
My Choices
My Consult
My Specialist
My Vaccines

My Care
My Health
My Companion
My Children
My Carer
My Medicines

Digital Profession - Why This Matters: Safety, Quality, Experience



Safety

- **3.2 million patient safety incidents** reported between April 2024 and March 2025.
- Plus, approximately **34,000 medication errors** reported in England (between April 2024 and March 2025).
- The cost of these medication errors to the NHS is estimated to be up to **£2.5 billion annually** (between April 2024 and March 2025).

[National patient safety incident reports](#)



Quality

- **6.24 million people** waiting for treatment (as of September 2025).
- **2.82 million patients** waiting for >18 weeks for treatment and **180,300 patients** who have been waiting over a year (as of September 2025).
- **434,243 people** waiting for social care assessments, care packages, direct payments or reviews (as of January 2025).

[NHS backlog data analysis](#)
[NHS England » Waiting list](#)
[Adult social care in England: Jan25](#)



Experience


- **71%** of patients prefer digital booking over phone calls for appointments ([GP Patient Survey, 2024](#)).
- Patients using digital reminders (NHS App/SMS) are **42% more likely** to take medications regularly ([University of Manchester, 2024](#)).
- **63%** of citizens say digital health tools make it easier to manage their care ([Accenture, 2023](#)).
- Digital-first GP practices **report higher patient satisfaction (83%)** vs. traditional models ([GP Patient Survey, 2024](#)).

Digital Profession - The Context & Challenge


70% of complex, large-scale change programmes, don't reach their stated goals. 70% of digital transformations fall short of their objectives.

Demand

- The current total Digital and Data workforce is estimated at **41,000** (from the DDaT Census of NHS Providers)
- There has been a reduction in 2k of WTE staff in post from 2024
- DDaT workforce forecasting predicts an annual 4.4% growth for the next 5 years, well ahead of the previous 3% annual growth that has been seen historically.

Competition

- 98% of respondents to the 2024 Digital Maturity Assessment (DMA) reported challenges recruiting in at least 1 of the Digital and Data profession roles
- The most difficult Digital and Data roles/ skills to recruit and retain are **Data & Analytics, Technical Infrastructure, and Cybersecurity**
- Nationally, the total number of **vacant roles** was reported as **3,627** across all providers for Digital and Data posts (compared to 2,721 in 2023)

Pay

- Digital professionals' median salaries at Grade 6 level varied by over £13,000 across departments, ranging from £60,400 to £73,500. [Civil Service Workforce: Recruitment, pay & performance management](#)
- NHS data professionals typically stay in post for 2 to 4 years. Over half of data and analytics teams had vacancies, particularly at Bands 6 and 7, with most Band 7 gaps in national organisations. [AnalystX Observatory State of the Nation Workforce survey key findings 2022](#)
- Black, Asian, and Minority Ethnic tech workers in the NHS earn approximately 7% less than their White counterparts in similar roles. [Ethnicity Pay Gap Report – 2023](#) ; [NHS England 2023](#)

Future Skills of the Workforce: Investment Requirement

NHS workforce-wide Core skills: Clinical & Administrative Staff

Digital literacy, confidence & competence

- Base frontline technology
- Electronic Patient Record
- AI (ambient, decision / diagnosis assistance, imagery, predictive, initial care plan)

Reducing bureaucracy

- Non-productive charting
- Dashboards & Automation
- NHS Staff app: transformation
- Computer based learning

User centred design & service design: part of a multi-disciplinary team

- Inclusion understanding (visually impaired, hard of hearing)



Patient record: linking into single record

Genomic data analysis / interpretation

Patient engagement

- Video / telephone / digital consultations / checkup / check in
- Supporting patients using digital:
- Messaging, results, sign posting, appointments, response to results
- Wearables as medical devices

IG, GDPR and authorising proxy access

- For carers, parents etc. (and inhibiting those not authorised)

- Professional body membership & accreditation expectations
- Profession leadership, close working with NHS Data Academy & AnalystX
- Digital Skills Development Network (DSDN) top up
 - esp. for networks needing to fully stabilise and make themselves self-funding
- Shuri Network
- 10 Year Workforce Plan contribution for Digital Data and Technology (DDaT)
- Spending Review planning
- Apprenticeship toolkit full publication
- Health careers update

Federation of Informatics Professionals (FEDIP)

Occupational Architecture

Existing GDaD families

Architecture	Data	IT Operations	Product and Delivery	Quality Assurance Testing	Software Development	User Centred Design
Job Family Description	Job Family Description	Job Family Description	Job Family Description	Job Family Description	Job Family Description	Job Family Description
Data Architect	Data Analyst	Application Operations Engineer	Business Analyst	QAT Analyst	Development Operations Engineer	Accessibility Specialist
Enterprise Architect	Data Engineer	Business Relationship Manager	Delivery Manager	Test Engineer	Frontend Developer	Content Designer
Network Architect	Data Ethicist	Change and Release Manager	Digital Portfolio Manager	Test Manager	Software Developer	Content Strategist
Security Architect	Data Governance Manager	Command and Control Centre Manager	Product Manager			Interaction Designer
Solution Architect	Data Scientist	End User Computing Engineer	Programme Delivery Manager			Service Designer
Technical Architect	Performance Analyst	Incident Manager	Service Owner			Technical Writer
Business Architect		Infrastructure Operations Engineer	Project Manager			User Researcher
		IT Service Manager	Project Support			Graphic Designer
		Problem Manager				
		Service Desk Manager				
		Service Transition Manager				

FEDIP Job Role Profiles

- 80% complete
- 100% by end Mar 2026

GDaD - Government Digital and Data Profession Capability Framework

National Competency Framework for Data Professionals

Additional Families

Patient Services*	Information Governance	Cyber Security	Clinical Informatics	Digital Leadership Roles **	Learning, Training and Development	Knowledge Management
Job Family Description	Job Family Description	Job Family Description	Job Family Description	Job Family Description	Job Family Description	Job Family Description
Clinical Coder	Data Protection Officer	Cyber Security Analyst	Clinical Informatician	CXIO	Digital Training Manager	Information Management
Digital Clerk (Receptionist, Booking Clerk, Health Records Clerk, Ward Clerk)	Information Governance Manager	Cyber Security - Operational	Clinical Safety Officer	Chief Information Officer / Chief Digital Information Officer	Digital Trainer	Librarian
Data Quality Officer	Information Governance Officers	Cyber Security - Governance		Chief Data Officer		Knowledge Manager
Patient Access Manager				Chief Information Security Officer		Data Scientist
Records and Information Manager				Chief Analytical Officer		
				Chief Technology Officer		
				Caldicott Guardian		

- Ensure value for money for the NHS, patients, and taxpayers
- Build a sustainable, self-reliant workforce – reduce reliance on contractors
- Address pay disparities:
 - Median salaries vary by £13,000 across departments
 - Ethnic minority tech workers earn ~7% less
- Set consistent national job descriptions (Bands 5–8c)
- Align with Federation of Informatics Professionals (FEDIP) Occupational Architecture & Government Digital and Data (GDaD) Capability Framework
- Support recruitment, retention, and morale through fair recognition and reward

Regional Activities Nationally Funded

Region	Activity
North West	Future skills profile Recruitment & Retention Premium (RRP) evaluation on data analyst roles Clinical Coding roles
North East & Yorkshire	Electronic Patient Record pathway optimization
East of England	Clinical informaticians & Senior Digital Literacy
South East	Shared services for Data Scientists
London	Artificial Intelligence
South West	Current state mapping of whole Digital Tech Architecture

Digital Profession - Apprenticeships Progress & Priorities



Aims	Increase the uptake of digital apprenticeships across NHS trusts by building a pipeline of digital and data specialists by 2030
Current Focus	Key Milestone
<p>Supporting NHS organisations in creating and implementing digital apprenticeship programmes. Expecting to prioritise for existing staff due to recruitment constraints.</p> <p>Short-Term:</p> <ul style="list-style-type: none">• Roll out the Digital Profession Apprenticeships Toolkit nationally.• Conduct regional workshops to promote the toolkit and share best practices.• Undertake Campaign work to promote NHS Digital Apprenticeships• Work with educational institutes and training providers to create a pipeline of talent for the NHS.	<p>Publication of the Digital Profession Apprenticeships Toolkit guiding providers with utilising apprenticeships to build a digital workforce.</p> <p>Long-Term (2025-2030):</p> <ul style="list-style-type: none">• Increase the number of digital apprenticeships annually.• Ensure 100% of NHS trusts are aware of and utilising the apprenticeship levy for digital and data roles.



Mission statement

To empower all NHS staff to develop the digital and data skills needed to enable the best possible healthcare services

Strategic Outcomes

All NHS staff have the confidence & competence to use digital technologies and data as they need to perform their roles

Digital technologies and data are available and usable and designed to meet the needs of both users and the organisation

Enable all NHS organisations to develop their workforce to effectively use digital technologies and data

Support all NHS leaders to make the right digital decisions and lead a modern culture

Support all Digital, Data and Technology professionals to develop the specialist skills they need to do their job well

- Digital transformation is more than just technology, it is about people
- Professionalise roles, invest in skills, embed inclusion
- Culture and leadership are critical for success
- Communities like Shuri Network, AnalystX, Digital Skills Network drive innovation
- Innovation must be human by design, digital by default
- Digital Data and Technology (DDaT) in the 10 Year Workforce Plan
- Publication 2026



Thank You



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[NHS England Digital Profession](#)



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