

Innovation in Primary Care A UK Perspective

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Conditions: Sciatica Allergies: Hay fever





4 Points

1. Recent history
2. Covid response
3. Strengthening the system
4. Key initiatives



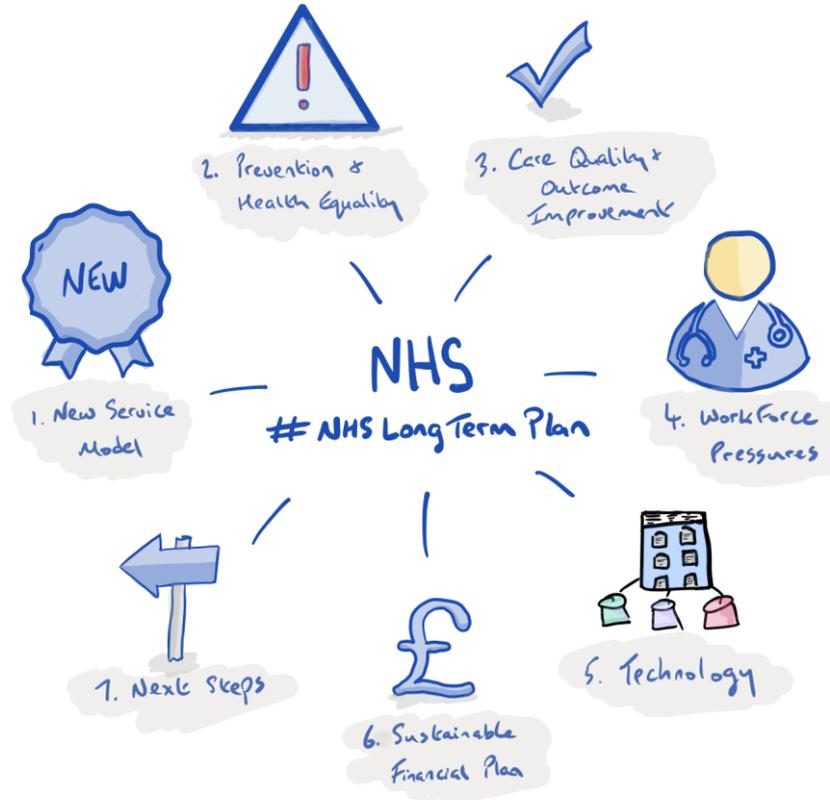
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The NHS Long Term Plan

The 10 year strategy
Focusing on integration,
prevention, empowering
citizens and supporting our
workforce to take
advantage of technology.

**No health and care
system on the planet can
cope with the rising
demand and the
shortage of staff by
simply reacting.**



4 Guiding Principles

Ask what the user need is

Every service must be designed around user needs, whether the needs of the public, clinicians or other staff.

Services designed around [users and their needs](#):

- are more likely to be used
- help more people get the right outcome for them – and so achieve their intent
- cost less to operate by reducing time and money spent on resolving problems

Interoperability and openness

Our technology landscape is varied and diverse, and interoperability is poor. This:

- increases costs because we are not taking advantage of economies of scale⁹
- has patient safety implications and increases errors¹⁰
- introduces delays in the transmission of data from one system to another¹¹
- slows the digitisation of those parts of the system still very poorly served by technology

The data and technology standards we agree to will be open so that anyone can see them and anyone writing code for use in the NHS knows what the standards are before they start. But it's not just about technology – agreeing and adhering to clinical data standards will give us much better and more granular detail with which to fight disease and prevent and treat illness.

We should be using the best off-the-shelf technology where our needs are like everyone else's, and not building bespoke solutions where they are not needed.

Privacy and security

It is critical that we maintain public trust in how we hold, share and use data. Clear and mandated standards, guidance and frameworks for this will underpin the delivery of the best services and outcomes that meet user need and are based on the General Data Protection Regulation (GDPR) and consent where appropriate.

We need to maintain a safe and secure data infrastructure that protects health and care services, patients and the public. The digital architecture of the health and care system needs to be underpinned by clear and commonly understood data and cyber security standards, mandated across the NHS, to ensure we are secure by default and that the penalties for data breaches are effective in protecting patients' privacy.

Inclusion

Health and care services are for everyone. We need to design for, and with, people with different physical, mental health, social, cultural and learning needs, and for people with low digital literacy or those less able to access technology. Different people may need different services and some people will never use digital services themselves directly but will benefit from others using digital services and freeing resources to help them. We must acknowledge that those with the greatest health needs are also the most at risk of being left behind and build digital services with this in mind, ensuring the highest levels of accessibility wherever possible.



NHS

NHSX: new joint organisation for digital, data and technology

NHS

Digital



**ACCELERATED
ACCESS
COLLABORATIVE**

NHS
National Institute for
Health Research

NICE National Institute for
Health and Care Excellence

tech^{UK}

ABHI
HealthTech **for Life**



NHSX: new joint organisation for digital, data and technology

Five missions

•Reduce the burden on our workforce, so they can focus on delivering care;



Give people the tools to access information and services directly, so they can best take charge of their own health and care;



•Ensure information about people's health and care can be safely accessed, wherever it is needed;



Aid the improvement of safety across health and care systems; and



Improve health and care productivity with digital technology

Clinical Communications Procurement Framework

The Procurement Framework aims to support NHS organisations with dedicated clinical facing communication and tasks management tools, to accelerate the adoption of proven technologies and to phase out pagers by the end of 2021.

The Framework Agreement has been designed to provide a compliant and convenient route to market for the NHS commissioners within England.

Spark Dynamic Purchasing System (DPS) for remote monitoring

The Spark DPS, run by the Crown Commercial Services (CCS), aims to support organisations with the procurement of remote monitoring solutions.

Remote monitoring, supported by local expertise, will allow citizens to receive safe, convenient and compassionate COVID care, or care for a long term condition, outside of traditional clinical settings. The Spark Dynamic Purchasing System (DPS) offers the NHS and social care organisations a fast, easy and secure way to access the technologies and services needed to provide more care to citizens, closer to, or within their

Artificial Intelligence in Health and Care Award 2020 - Guidance for Phase 4

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ACCELERATED
ACCESS
COLLABORATIVE

NIHR | National Institute
for Health Research

NHS^x

About the Accelerated Access Collaborative (AAC)

The Accelerated Access Collaborative (AAC) was formed in response to the independently-chaired [Accelerated Access Review](#). The remit of the AAC is to bring industry, government and the NHS together to remove barriers to uptake of innovations, so that NHS patients have faster access to innovations that can transform care. The AAC supports innovation at all stages across the development pipeline: from research and horizon scanning for innovations that address the population's needs, to support for adoption and spread of proven innovations.

The AAC aims to establish a globally leading testing infrastructure that provides the necessary opportunities for innovators to develop and improve their products, collaborate with the NHS, and establish the high-quality evidence that clinicians need for adoption and spread. The AAC Delivery Team at NHS England and NHS Improvement delivers practical innovation support funding in line with Her Majesty's Government's health innovation funding strategy.

About NHSX and the Artificial Intelligence Lab

NHSX is the digital, data and technology organisation for the NHS, bringing together teams from the Department of Health and Social Care and NHS England and NHS Improvement. As noted in the [Artificial Intelligence: How to get it right](#) report by NHSX, as the use of Artificial Intelligence (AI) technology for health and social care is at an early stage of development, there is considerable uncertainty around the likely benefits and the best way of integrating AI into existing pathways into care.

In August 2019 the Health Secretary announced [funding of £250m over three years](#) for the formation of an NHS Artificial Intelligence (AI) Lab to develop and adopt the technologies that are most promising for health and social care.

AI, including models based on statistical analysis, expert systems that rely on if-then statements and 'locked' or 'adaptive' machine learning, has the potential to make a significant difference to health and care. The AI Lab has been established to ensure the NHS is harnessing these benefits in a safe and ethical fashion that is supported by patients, the public and clinicians. As stated in the AI report, securing clinical understanding that AI will be used to supplement, and not replace human clinical decision-making is essential, as is realistic expectations of what AI technologies have to offer.

Given the ethical and safety concerns associated with the use of AI in health and care, the AI Lab will align to the principles of the NHS Constitution, addressing transparency, safety and privacy by building on the foundations already laid out, for example in the NHS [Code of Conduct for Data-Driven Health and Care Technologies](#). The AI Lab will address barriers to adoption and development of AI, including an AI SWAT team, Skunkworks, Regulation Incubator, the Accelerating of Diseases programme, the Disease Clusters AI programme and an AI in Health and Care Award (AI Award). The AAC Delivery Team will lead delivery of the AI Award, working with NHSX and relevant AAC partners.

The AI in Health and Care Award

The AI Award will deploy £140m over three years to accelerate the testing and evaluation of the most promising AI technologies that meet the strategic aims set out in the [NHS Long Term Plan](#). The Award will support technologies across the spectrum of development: from initial feasibility to evaluation within clinical pathways in the NHS.



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NHS Digital COVID-19 Gold Report – 29 July, 2020

Overview of initiatives in Phase 1 of NHS Digital's COVID-19 program

■ Major milestone reported in this update Work ongoing
■ Significant milestone reported in this update Work complete

COVID-19 Strategic focus areas

Provide digital channels for citizen guidance and triage (p.3)

Enable remote and collaborative care with systems and data (p.4)

Deliver digital services for NHS Test and Trace (p.5-6)

Identify and protect vulnerable citizens (p.7)

Support planning with data, analysis and dashboards (p.8)

Get data and insights to research communities (p.9)

Support clinical trials (p.9)

Provide secure infrastructure and support additional capacity (p.10)

Plan for recovery, restarting services and new needs

Initiatives NHS Digital is delivering

111 Online: eTriage and routing of patients to most appropriate care	NHS App: mobile access to eTriage and GP bookings, tests & prescriptions	NHS.UK: up-to-date health information and various digital services for citizens	NHS Login: secure identity verification for access to App and other NHS services	NHS Pathways: triage algorithms underpinning 111 online & call centres	Self-Isolation Notes: digital service to self-certify for COVID-19 if evidence required	
Summary Care Record: augmentation for COVID-response	GP Connect: information sharing across primary and urgent care	Electronic Prescription Service (EPS): pharmacy flex and add drugs	Video-consultations for Primary Care: assurance and rollout to >90% of practices	Video Consultations for Outpatients: rollout/implementation support to NHSE	Remote COVID Wards: monitoring high risk patients in their homes	VDI environment for Primary Care: enabling GPs to work remotely
Digital platform for booking tests at new COVID-19 labs	Testing data capture, analysis and dissemination	Cyber Defence Operations Centre: security services for Test, Trace & Contain	Service Design: targeted reviews to ensure coherence across Test & Trace	Service Operations: ensuring performant & secure operation of testing infrastructure	Trace: digital infrastructure for contact tracing	Contain: public and private access to COVID-19 Dashboards
Shielded Patient List (SPL): developed & maintaining list of vulnerable patients	SPL Open Data: providing open data / visualisation of aggregated data	Vulnerable children: support safeguarding by sharing data with nurses, health visitors	SPL Data for Public Health: private dashboards to facilitate planning	Mental Health Survey: impact of COVID-19 on children and young people	Risk Stratification: platform to determine COVID-19 risk profiles	
ICU Capacity Planning Tool: new predictive models for beds & ventilators	Ethnicity Outcomes Analysis: analysis to investigate high BAME fatalities	Diabetic risk factors: linking data from national audit to support analysis	Social Care Data Collection from Care Management Systems	Situation Reports: collecting data on COVID-19 patients and staff impacts	REACT1: data for community prevalence testing (antigen testing)	Secondary Care Medicines Data: collection of medicines data
Trusted Research Environment for SAGE: with NIHR/HDR UK	Central Disseminator of GP Data for research and planning	NICOR: analysis for cardiovascular status / outcomes and COVID-19	Data Access Environment for PHE: accelerating epidemiology		Cancer: linking data and performing analysis to support planning & research	HOSTED: monitoring of anonymised household transmission
Plasma Trial: identification of eligible (recovered COVID-19) patients	RECOVERY Trial: Hospital and testing data for evaluating treatments	PRINCIPLE Trial: primary outcome data for trial focused on older people	Permission to Contact: collecting data for recruitment into clinical trials			
Connectivity: network upgrades and extensions within NHS and social care	Nightingale Hospitals: connectivity, technical / cyber	Fast and secure authentication: smartcards/readers, virtual smartcards	Returning Staff: advice and technical support for onboarding	NHS Mail for health and social care: rollout to social care and other new users	Other infrastructure and cyber support: e.g. Laptops, cyber plans	Microsoft Teams Deployment: deployment to 1.2m NHS Mail users
"Healthcare debt" analysing activity, referrals & outcomes						

- **General practice has moved to remotely triaging all patient contacts ('total triage') enabled by telephone and online consultation systems.**
- **We have rapidly implemented online* and video consultation solutions to help reduce unnecessary footfall and protect both patients and staff.**
- **There has been greater use of digitally supported patient communication pathways supporting the remote monitoring and assessment of patients.**
- **General practice have innovated, developing collaborative models of care delivery, working at scale such as through virtual hubs.**
- **Digital platforms have been used to maintain communication within teams, support staff and facilitate collaborative working.**

There is growing confidence from clinicians in the use of remote consultations. 88% of GPs say they would like to keep greater use of remote consultations (BMA survey, June 2020).

*By "online consultations" we mean a system that enables patients to contact their general practice online in a structured way, regarding the wide range of queries, requests and issues that patients usually need support with from their practice, eg administrative requests, clinical queries or condition management.



Health at home

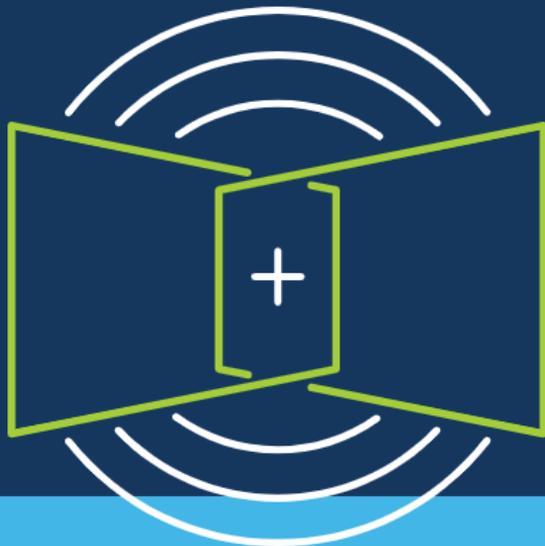
Health at home

How to access NHS services online

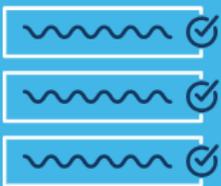
Get NHS help online

How-to guide: non face-to-face clinics

This website includes a range of resources aimed at supporting colleagues / partners in the planning and implementation of non face-to-face models of care.

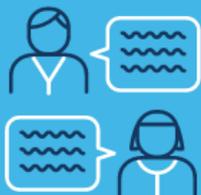


This resource will include:



Practical issues to consider

What are Nf2f clinics and the key elements of setting up these new models of care.



Real-world examples

Hear from partners with experience of setting up non face-to-face solutions, sharing lessons learnt and top tips.



Develop your business case

Work gradually through the resource using the workbook to develop key aspects of your business case.

What are the different types of Nf2f clinics?

Nf2f models can be categorised as either Synchronous or Asynchronous.



Synchronous



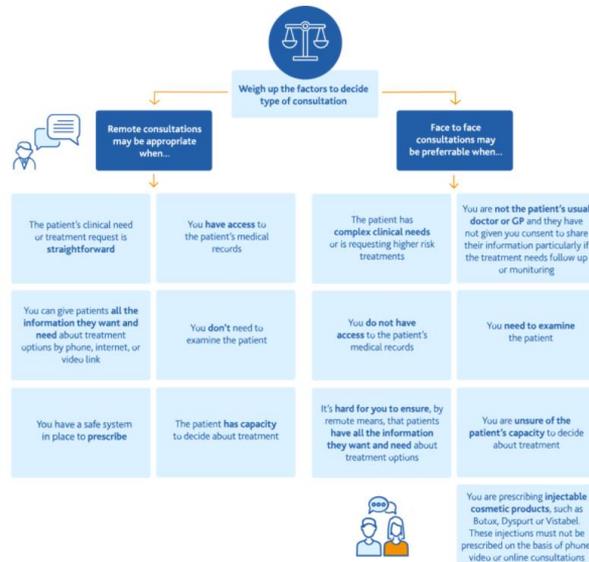
Asynchronous

In a synchronous model, the patient and clinician interact in real time. (Royal College of Ophthalmologists, 2016)

For example, via a webcam or phone call.

In the asynchronous model, the patient and clinician interaction occurs at different times. (Royal College of Ophthalmologists, 2016)

For example, secondary care specialists make decisions about a patient's management based on quantifiable data gathered in primary care. Normally, patients are notified of the outcome from this clinic via an agreed communication channel.



The consultation

9



Look at your doctor or nurse's face on screen whilst you're talking, there is no need to look directly at your camera

10



If all goes well, the call will feel like a face to face appointment



DFOCVC

[Coronavirus](#)[Services](#)[Data](#)[Cyber](#)[Developer](#)[News](#)[About](#)

[NHS Digital](#) > [Services](#) > [Digital Care Services catalogue](#) > **Digital First online consultation and video consultation framework**

Digital First online consultation and video consultation framework

The new Digital First Online Consultation and Video Consultation (DFOCVC) framework will provide a streamlined route for supplying and purchasing assured online consultation and video consultation systems and will also be open to other care settings beyond primary care. It is the second framework to launch under the [Digital Care Services framework Catalogue agreement](#).



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NICE Evidence Standards Framework for Digital Health Technologies

A hand wearing a blue nitrile glove holds a silver pen over a tablet. The tablet displays a DNA sequencing chromatogram with multiple colored peaks (green, red, blue, black) and corresponding nucleotide sequences (A, C, G, T) and coordinates (e.g., 200, 230, 340, 400, 420, 430, 440). The background is a blurred laboratory setting with a person in a white lab coat and blue gloves.

NICE National Institute for Health and Care Excellence





Guidance

Code of conduct for data-driven health and care technology

Updated 18 July 2019

Contents

Introduction

The principles

Principle 1: Understand users, their needs and the context

Principle 2: Define the outcome and how the technology will contribute to it

Principle 3: Use data that is in line with appropriate guidelines for the purpose for which it is being used

Principle 4: Be fair, transparent and accountable about what data is being used

Principle 5: Make use of open standards

Introduction

Today we have some truly remarkable data-driven innovations, apps, clinical decision support tools supported by intelligent algorithms, and the widespread adoption of electronic health records. In parallel, we are seeing advancements in technology and, in particular, [artificial intelligence \(AI\) techniques](#).

Combining these developments with data-sharing across the NHS has the potential to improve diagnosis, treatment, experience of care, efficiency of the system and overall outcomes for the people at the heart of the NHS, public health and the wider health and care system.

Innovators in this field come from sectors that are not necessarily familiar with medical ethics and research regulation, and who may utilise data sets and processing methods that sit outside existing NHS safeguards.



Guidance

A guide to good practice for digital and data-driven health technologies

Updated 19 January 2021

Contents

Introduction

1. [How to operate ethically](#)
2. [Have a clear value proposition](#)
3. [Usability and accessibility](#)
4. [Technical assurance](#)
5. [Clinical safety](#)
6. [Data protection](#)

Introduction

Across the country and around the globe, digital innovators are helping us deliver our commitment to the digital transformation of health and social care, to bring benefits to patients, the workforce and the system as a whole. NHS England's Long Term Plan sets the direction towards widespread digitally-enabled care. The Secretary of State's *Technology Vision* goes on to articulate a clear ambition for the generation of more digital services designed around user need and adhering to key principles of privacy, security, interoperability and inclusion.

Digital Technology Assessment Criteria (DTAC)

For health and social care

The Digital Technology Assessment Criteria for health and social care (DTAC) gives staff, patients and citizens confidence that the digital health tools they use meet our clinical safety, data protection, technical security, interoperability and usability and accessibility standards.

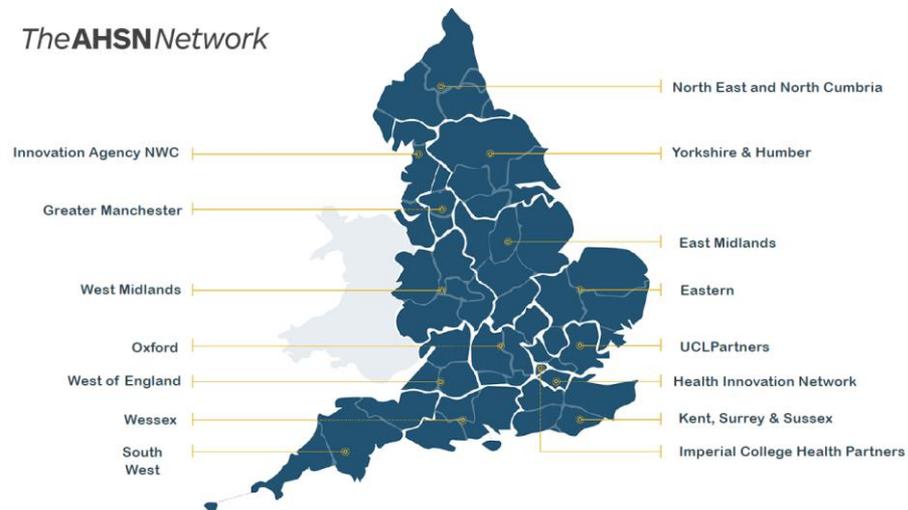
It is the new national baseline criteria for digital health technologies into the NHS and social care. It is designed to be used by suppliers to build technology and healthcare organisations to build and to buy technologies that meet our minimum baseline standards.

AHSNs mobilise expertise and knowledge across health and care, academia and industry to identify and pull transformative innovation into the NHS quickly.



TheAHSNNetwork

TheAHSNNetwork



The NHS 'Reset'

Supporting
the Health
and Care
Reset

#NHSReset

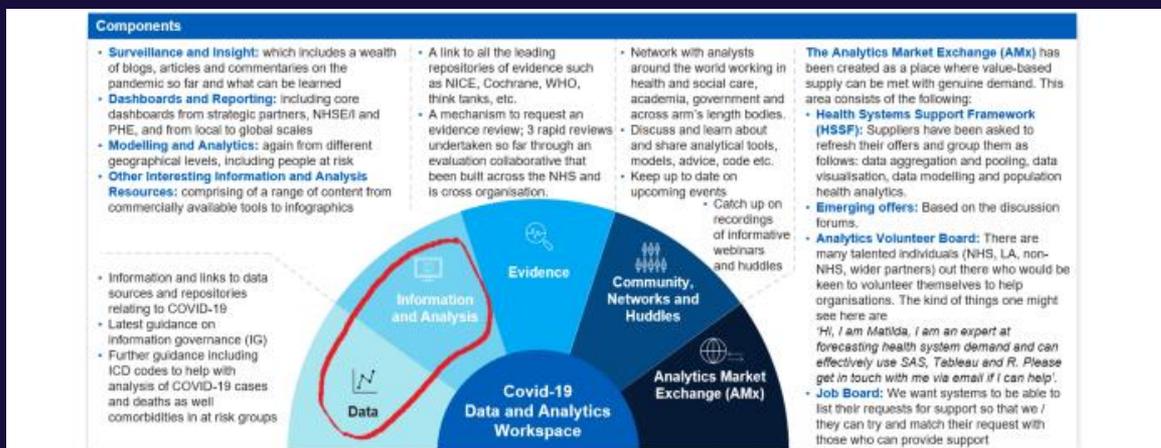
ahsnetwork.com/reset

*The***AHSN***Network*
Supporting the Health and Care **Reset**



#FutureNHS

- Virtual collaboration across organisational boundaries
- An unprecedented global first. Over 100,000 working together right now
- Contains the world's largest community of practice in data and analytics with over 16,000 analysts alone on the 'Covid-19 Data and Analytics Workspace'



To request access or if you have any questions, please email: england.covid19dataanalytics@nhs.net

What Good Looks Like





4 Points

1. Recent history
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Key initiatives

- | | |
|---------------------------------|--|
| 1. Integrated Care | 1. Integrated Care Systems (ICS) |
| 2. Primary Care at Scale | 2. Primary Care Networks (PCN) |
| 3. Health Inequalities and WDOH | 3. Population Health Management (PHM) |
| 4. Shared Care Records | 4. Local Health and Care Records (LHCREs) |
| 5. Upskilling workforce | 5. Building a Digital Ready Workforce (BDRW) |



Local

Sustainability and transformation partnerships/integrated care systems (STPs/ICSSs)

Sustainability and transformation partnerships (STPs) bring organisations together to plan services around the long-term needs of local communities.

Commissioners

Clinical commissioning groups (CCGs)

Local authorities (non NHS)

In some areas, **integrated care systems (ICSSs)** have evolved from STPs, taking on greater responsibility for managing local resources and improving health and care for their populations.

Integrated care partnerships (ICPs)

Providers

NHS trusts

- Acute
- Community
- Mental health

Other providers of NHS-funded care

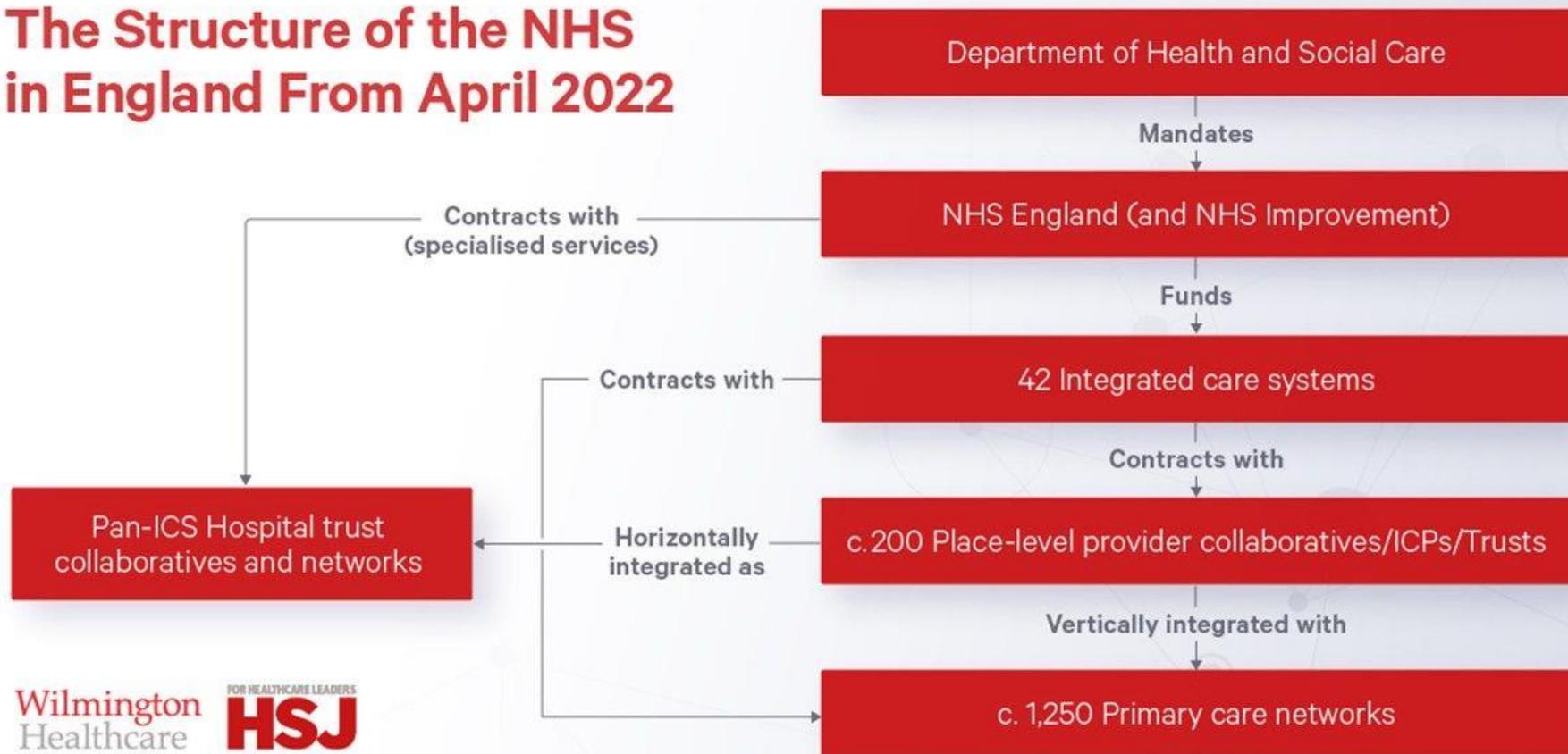
- GPs
- Voluntary sector
- Social enterprises
- Private

Integrated care partnerships (ICPs) are alliances of providers that work together to deliver care by agreeing to collaborate rather than compete.

Primary care networks (PCNs)

Primary care networks (PCNs) bring general practices together who may also collaborate with a range of other local providers to provide primary care at scale by using a wide range of professional skills and community services.

The Structure of the NHS in England From April 2022





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