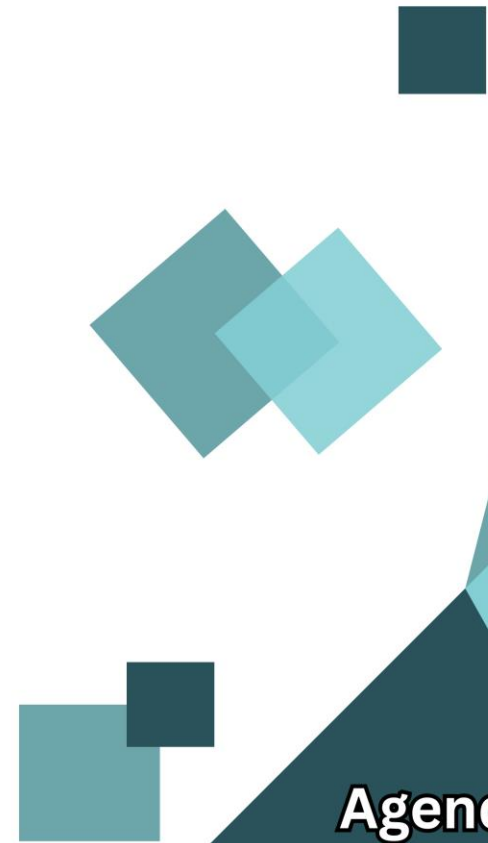




Tuesday 6th February | etc venues, Manchester



**Agenda for today:**





Welcome to The Pathology Conference!



6th February 2024  
9am – 5:30pm  
etc Venues, Manchester



# Chairs Opening Address



**Chris Sleight**

Chief Officer - Greater Manchester Imaging &  
Pathology Networks - Greater Manchester  
Provider Federation Board



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Speaking Now...



**Chris Sleight**

Chief Officer - Greater Manchester Imaging &  
Pathology Networks - Greater Manchester  
Provider Federation Board



**Greater Manchester  
Diagnostics Network**



**The Sustainable Workforce  
of the Future –  
Do Generations Z and  
Alpha have the solution?**

**Mr Chris Sleight  
Chief Officer**

**Greater Manchester Diagnostics Network**  
Email: [Chris.Sleight@nca.nhs.uk](mailto:Chris.Sleight@nca.nhs.uk)



**Pathology  
Conference North  
6<sup>th</sup> February 2024**



## Who am I am what is my role?

- I started my career as a Junior B MLSO (with degree in Physics & Mathematics!?!)
- Pathology career in Haematology at Hull, Harrogate, York, Sherwood Forest NHS FT.
- Divisional Director for Diagnostics at Pennine Acute Hospitals in 2008.
- Various Operational and Strategic Senior Roles in Greater Manchester.
- Chief Officer of Pathology Network and Incident Director for N5.
- Now Chief Officer for the Greater Manchester Diagnostics Network.
- SRO for GM Community Diagnostic Centre Programme.
- I have Programme Director responsibilities for GM Pharmacy, Digital Diagnostics programmes.....and I am a father of 4 boys



# The Sustainable Workforce of the Future - Do Generations Z and Alpha have the solution?

- *Priorities for GM Diagnostics Network; with a focus on*
  - *Reducing Health Inequalities*
  - *Digital Enablers*
  - *Workforce*
- *Why a short-, medium-, and LONG-TERM Workforce Focus is critical now to sustain future services & MANAGE INCREASING DEMAND*
  - *An Ageing & Growing Population*
  - *New Generations with different stereotypes, attitudes and aspirations*









TRAFFORD COUNCIL



# Trafford General Hospital

## Birthplace of the NHS

Commemorating the visit of  
Aneurin Bevan, Minister of Health,  
on 5th July 1948  
to launch the  
National Health Service



650





ETIHAD STADIUM

WELCOME TO  
MANCHESTER CITY

EAST STAND

MANCHESTER UNITED  
LIVERPOOL

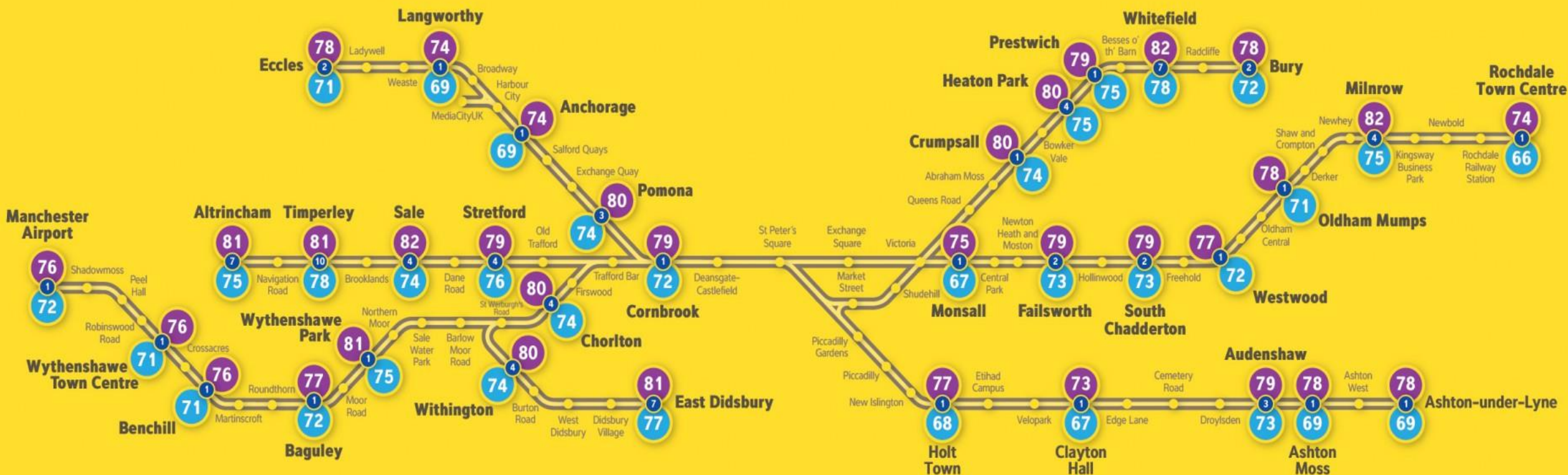
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# Life on the line? Differences in life expectancy across Greater Manchester



● Female life expectancy at birth (years)
 ● Male life expectancy at birth (years)
 ● IMD Decile (1 most deprived; 10 least deprived)



**Tram Network:** The Metrolink tram network across Greater Manchester includes nearly 100 kilometres of track and 93 stops. In 2015 there were around 33.4 million journeys (Metrolink 2015). The average journey time between tram stops is 2 minutes, but some stops are further apart.

**Data Sources:** Office for National Statistics experimental ward level life expectancy and health living life expectancy estimates (ONS 2006) linked to selected Greater Manchester Metrolink tram stops. The selection highlights some of the biggest differences between tram stops. We also include information on socio-economic deprivation at ward level from the Index of Multiple Deprivation.

The life expectancy data is based on mortality among those living in each particular ward in 1999-2003. The estimates are not the exact number of years a baby born in the ward could actually expect to live, both because the death rates of the area are likely to change in the future, as is health care provision and because many of those people born in the ward will live elsewhere for at least some part of their lives.



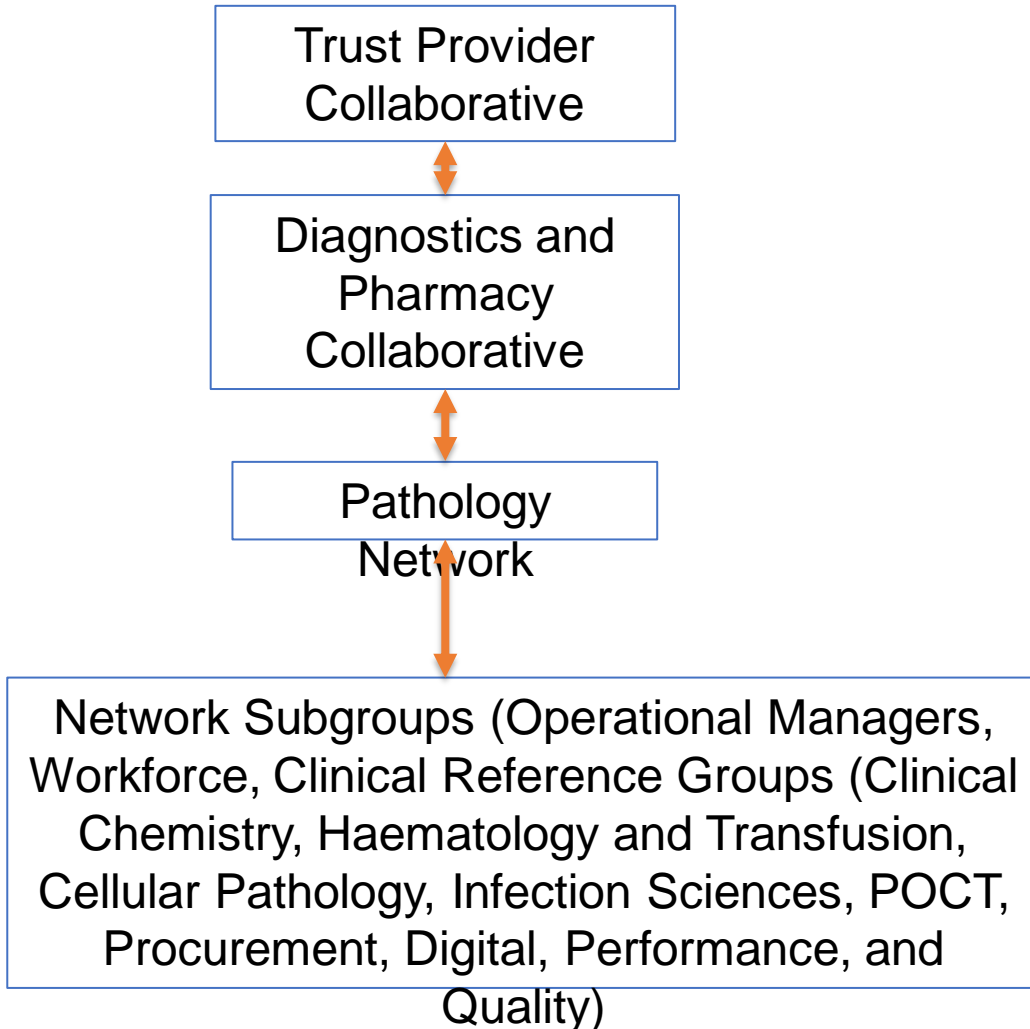
# THE GM PATHOLOGY NETWORK



- Bolton NHS Foundation Trust
  - Northern Care Alliance Foundation Trust
  - Manchester University Foundation Trust
  - Tameside and Glossop Integrated Care NHS Foundation Trust
  - Stockport NHS Foundation Trust
  - Wrightington, Wigan and Leigh NHS Foundation Trust
  - The Christie
- 
- 14 sites have Pathology Services locally
  - Almost 2000 staff
  - Circa 80 million Pathology Diagnostics p.a.



**Current Pathology Governance and network structure**



**Current major project/programmes of work**

Project/Programmes	Impact on service users
Digital Pathology	Introduction of digital pathology in Histopathology, reduce health inequalities across the network.
LIMS	New LIMS provider for labs in GM, increase sharing patient results and interoperability of new LIMS systems. Standardisation across all providers.
CDC	Increase diagnostic capacity, reduce wait time for diagnosis
Pathology Network Maturity	Collaboration between pathology services, reduce patient (and staff) inequality and increase efficiencies and robustness of pathology services in GM

# Priority Themes for GM Pathology Network



**Greater Manchester  
Diagnostics Network**

- Workforce,
- Workforce,
- Workforce!
- Increasing Capacity
- Improving Efficiency and Productivity
- Pathway Improvement
- Ensuring Demand is Appropriate
- Levelling Up (working as a GM system by sharing and **implementing** best practice & Reducing Health Inequalities)
- Communication

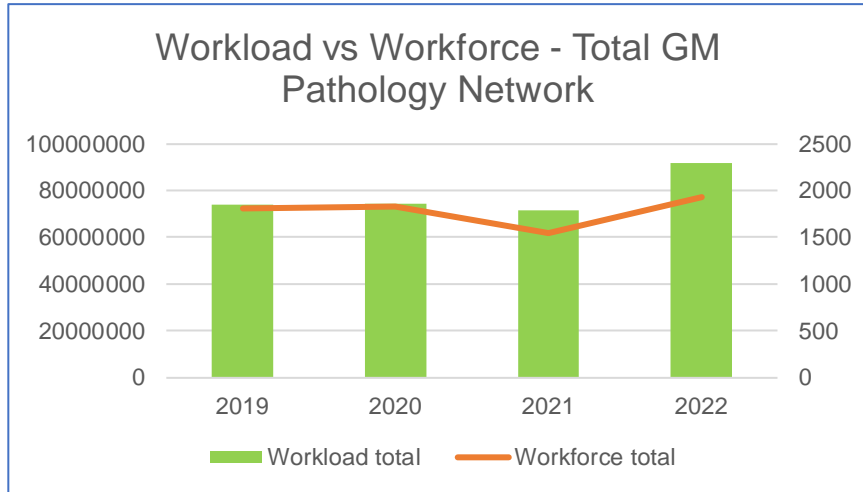


**Greater Manchester  
Diagnostics Network**

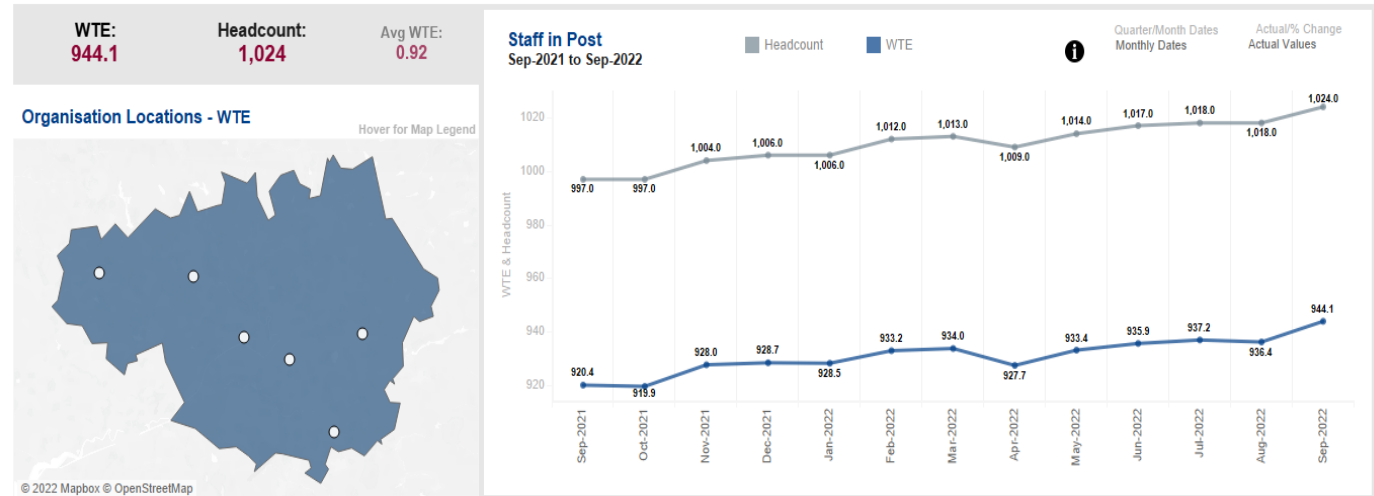


**WORKFORCE  
WORKFORCE  
WORKFORCE**

# Background and Current workforce position



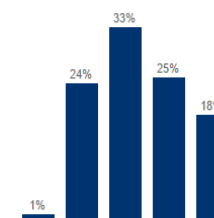
- National occupation shortage in Biomedical Scientist, consultant microbiologist and histopathologists
- Increased demand on both imaging and pathology diagnostic services – especially post COVID recovery
- More staff taking early retirement
- Graduate entry reducing
- Training capacity reducing – focus on service, no time to train
- Burn out of staff – most departments carrying significant vacancies



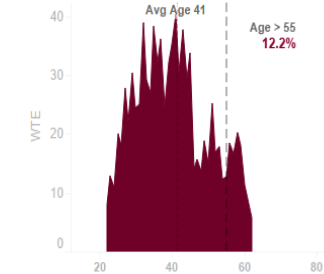
### Staff Group

Qualified HCS Blood Sciences	61%
Qualified HCS Cellular Sciences	24%
Qualified HCS Infection Sciences	16%

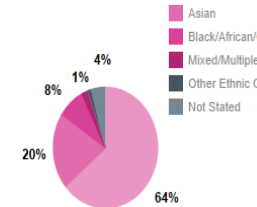
### Grade Band



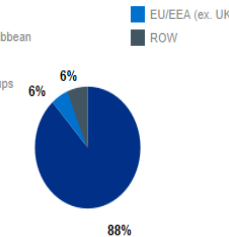
### Age Distribution



### Ethnicity



### Nationality



ESR snapshot of registered Biomedical Scientist in GM



# GM Pathology workforce strategy

NHS  
in Greater Manchester

**Greater Manchester NHS Provider Federation Board**  
Part of Greater Manchester Health and Social Care Partnership

GM Pathology Network Workforce Strategy

<b>Report to:</b>	GM Pathology Board / GM Pathology Network Operational Managers group	
<b>Report of:</b>	Gareth Richardson, GM Pathology Network Workforce Development Lead	
<b>Paper prepared by:</b>	Gareth Richardson, GM Pathology Network Workforce Development Lead	
<b>Date of paper:</b>	01/03/22	
<b>Subject:</b>	GM Pathology Network Workforce Strategy	
<b>Purpose of Report:</b> <i>Please tick ✓</i>	Information to note	<input checked="" type="checkbox"/>
	Support	<input type="checkbox"/>
	Accept	<input type="checkbox"/>
	Resolution	<input type="checkbox"/>
	Approval	<input type="checkbox"/>
	Ratify	<input type="checkbox"/>

Purpose:

The purpose of this paper is to provide overview of the strategic achievements and aims of the Greater Manchester Pathology workforce in 2021/22 and going forward into 2022/23.

[GM Pathology Workforce Achievements 2021/22](#)

Pathology workforce group

Pathology workforce sub group has been created and now well established to tackle to ongoing workforce issues experienced in the network. Key deliverables have been identified by the group by completing a mini gap analysis to find the areas of focus. Group has started to work collaboratively together, and become platform for sharing of best practice and ideas. Group has also created a network for distribution of information from NHSEI, HEE, IBMS and other professional bodies so pathology workforce is getting equal opportunities across the network.

NHSEI & HEE engagement

Good working relationships established with NHSEI and HEE colleagues, workforce lead and group now single point of contact for engagement around workforce. This has allowed for quicker decision making and rapid deployment of information and funding opportunities. Also created better equality across the network, all trusts are now being given the same opportunities. NW Pathology workforce task and finish group now established to drive forward workforce agenda across the region.

Funding

Successful in receiving funding to support upskilling of support staff to create future Biomedical scientist, total funding received for network was £68k from NHSE&I and £80k

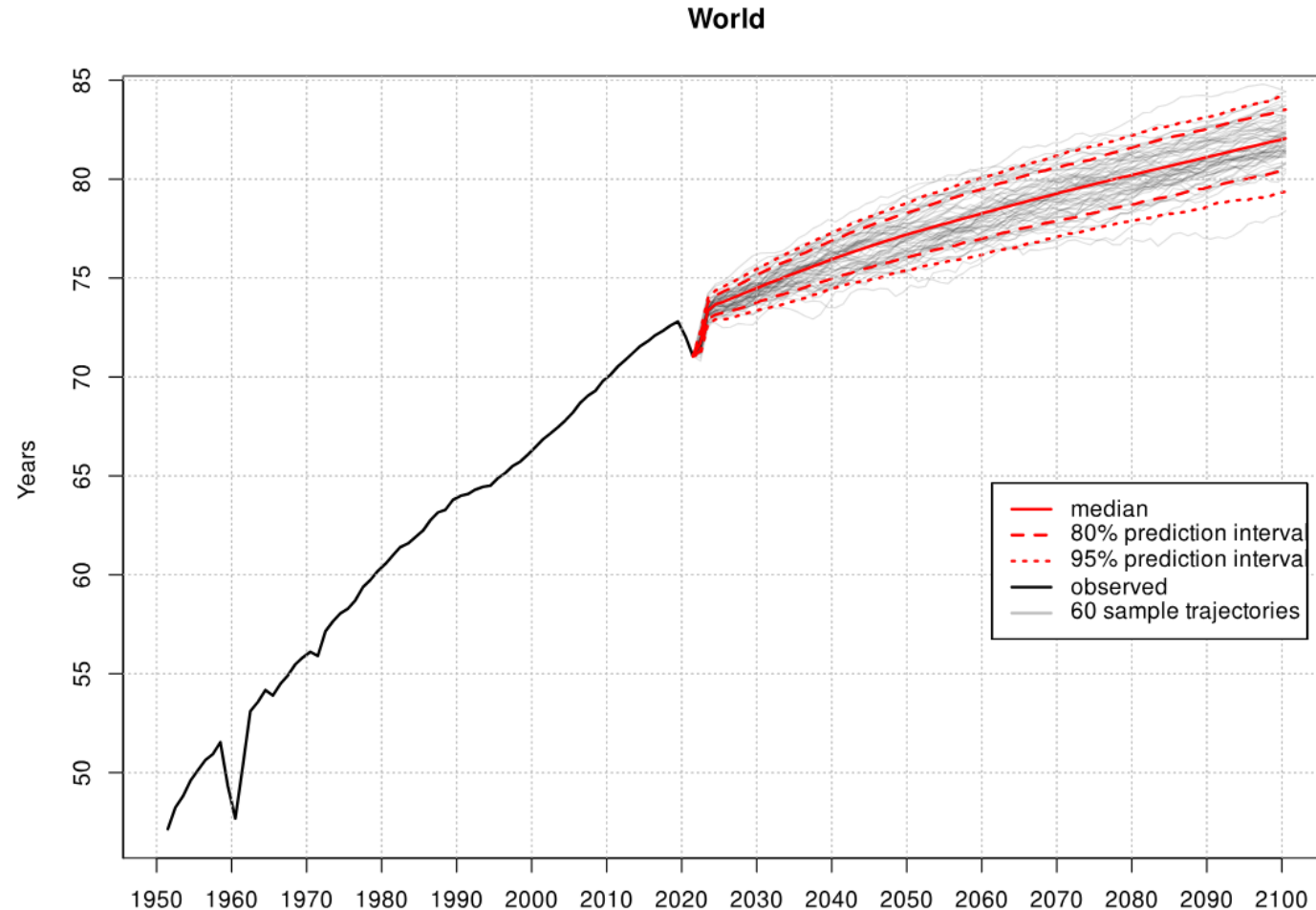
Objective 1 – to attract and retain talent in the network, to decrease vacancy and turnover rates.

Objective 2 – to create clear development opportunities for all pathology staff to maximize staff potential and create equality in training across the network

Objective 3 – to better understand the workforce needs in Pathology and create a workforce sustainable for the future.

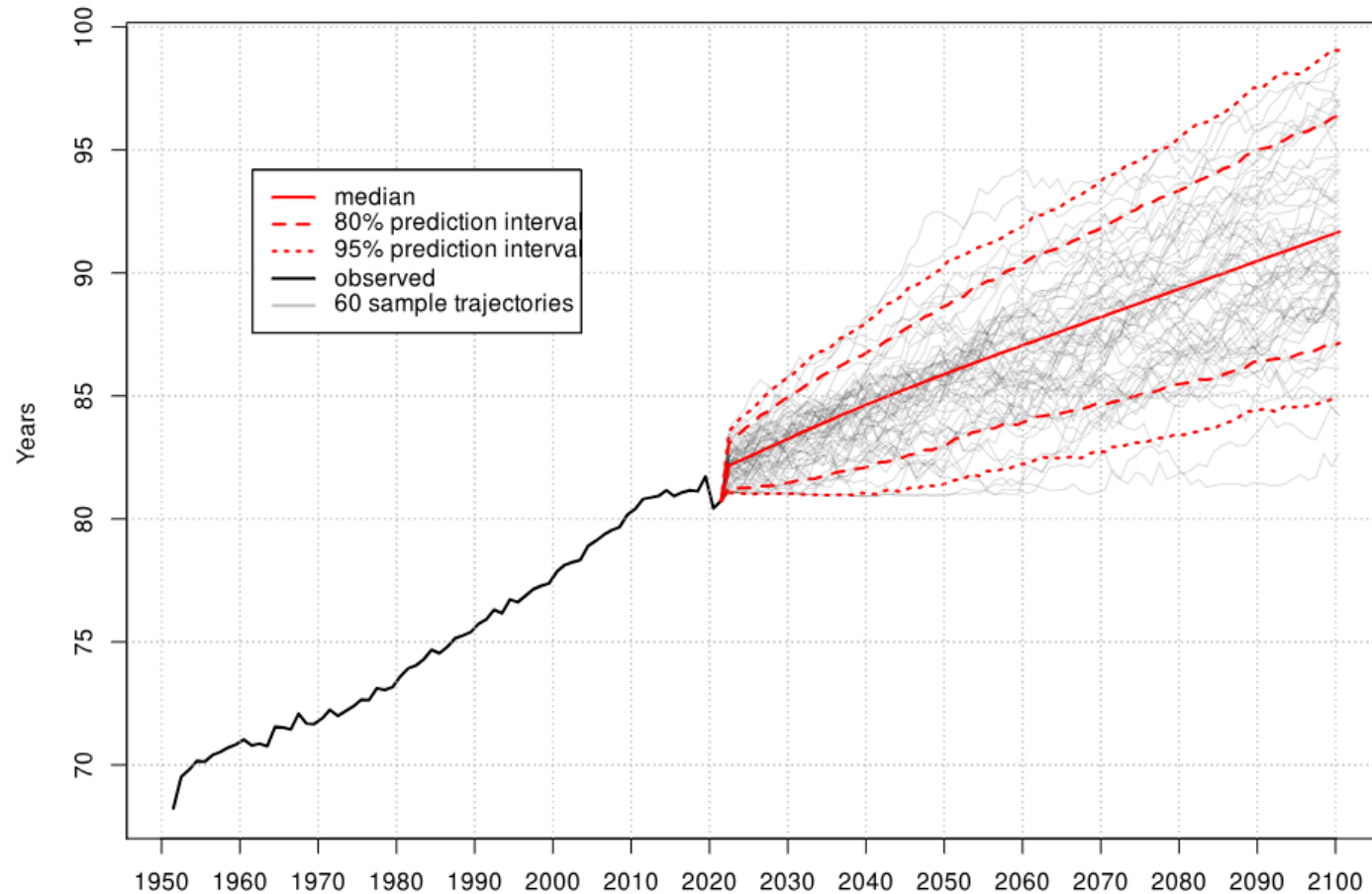
<https://greatermanchesterdiagnostics.nhs.uk/about-networks/strategies>

# SOME GOOD NEWS! World Probabilistic Projections in Life Expectancy (Both Sexes)



# UK Probabilistic Projections in Life Expectancy (Both Sexes)

United Kingdom





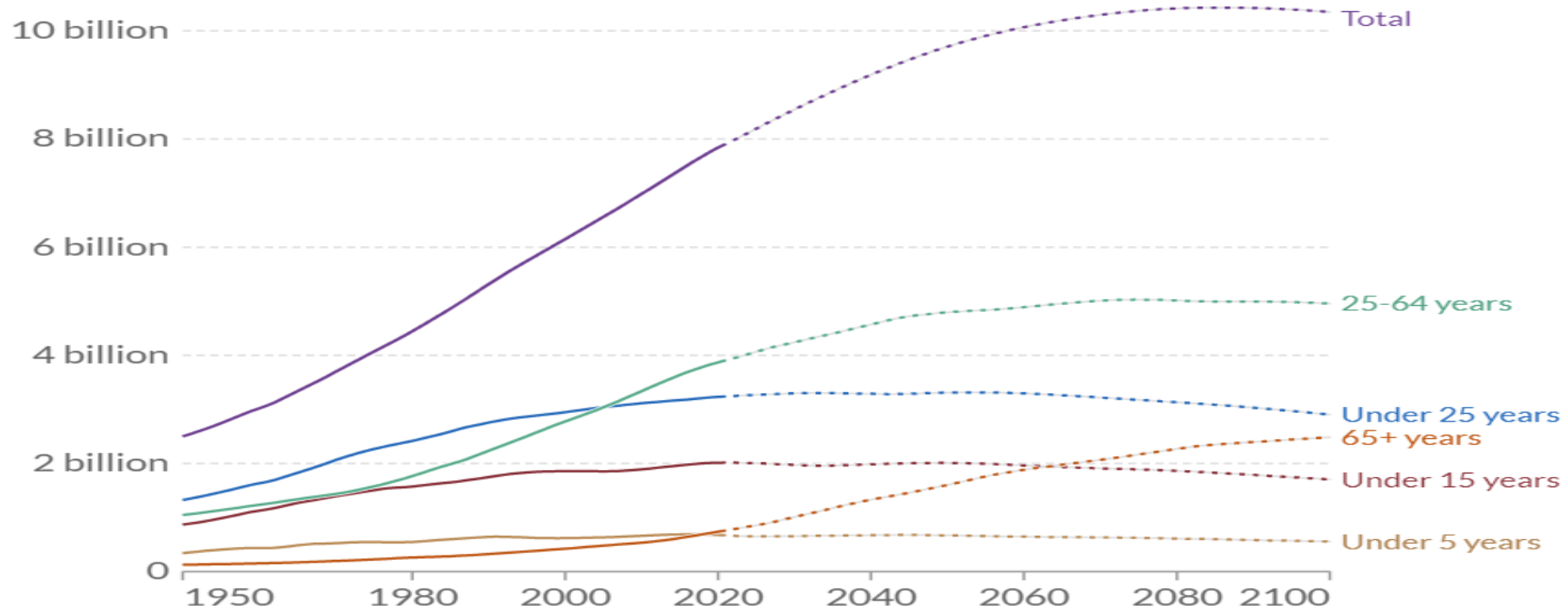
# So is it all great news?

## Population by age group, including UN projections, World

Historic estimates from 1950 to 2021, and projected to 2100 based on the UN medium-fertility scenario. This is shown for various age brackets and the total population.

Our World  
in Data

[↔ Change country](#)



Source: United Nations, World Population Prospects (2022)

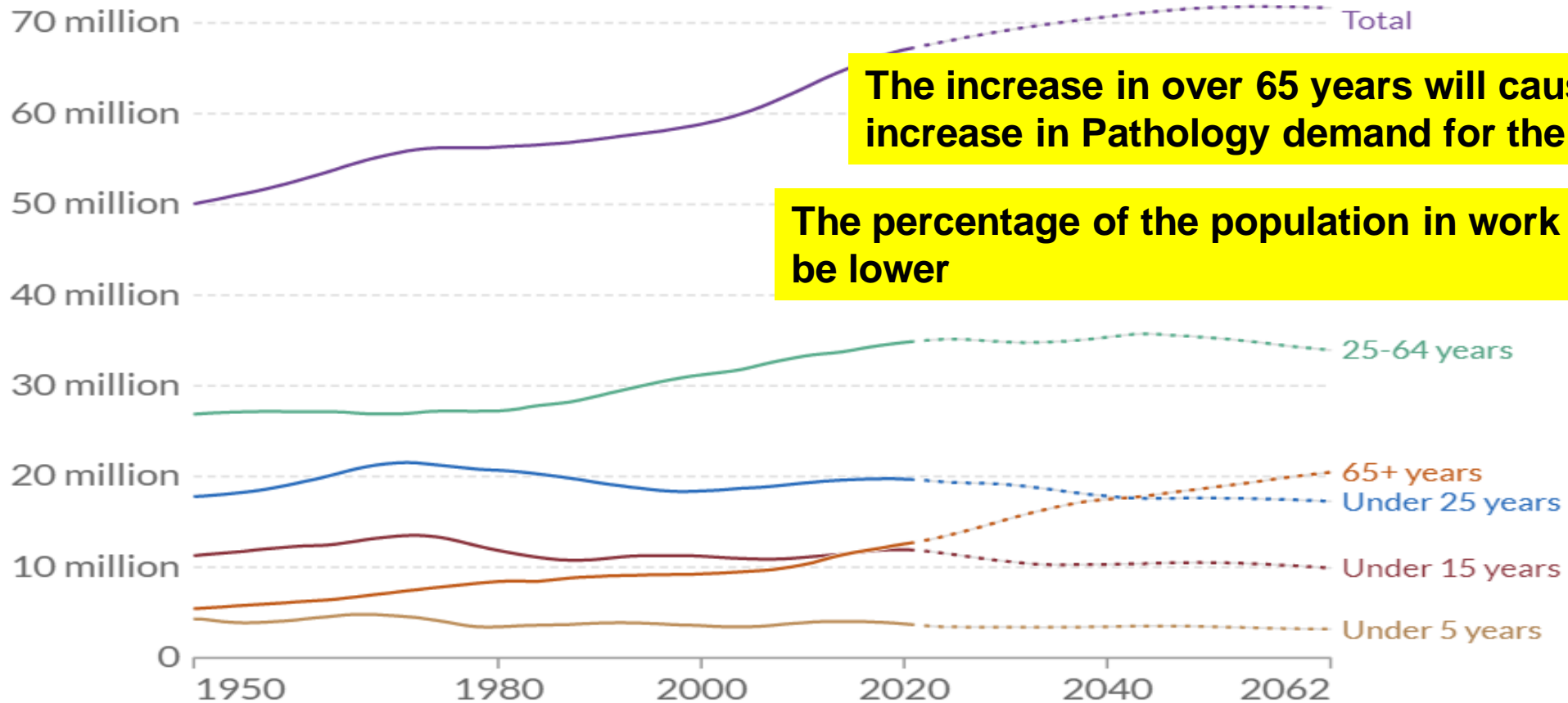
OurWorldInData.org/world-population-growth • CC BY

▶ 1950  2100

# Population by age group, including UN projections, United Kingdom

Historic estimates from 1950 to 2021, and projected to 2100 based on the UN medium-fertility scenario. This is shown for various age brackets and the total population.

[↔ Change country](#)



The increase in over 65 years will cause a huge increase in Pathology demand for the next 40 years

The percentage of the population in work will be lower

	Generation Alpha	Generation Z	Millennials	Generation X	Baby Boomers	Silent Generation
Born	2012 - 2024	1997-2012	1981-1996	1965-1980	1946-1964	1926-1945
Age	Up to 13	14-26	27-42	43-58	59-77	78+
Stereotype	Very short attention span. All information needed instantly available. Allergies, obesity and health problems related to screen time. Family Oriented. 80% dictate family activities such as holidays! Exceptional learning abilities and opportunities.	More racially and ethnically diverse than any previous generation. No memory of life before the internet. Give more voice to social causes than previous generations. Ambitious. Confident. Higher Diagnosis of mental health. Prone to anxiety. Puberty onset earlier.	Most educated generation of humans to ever exist, with around 40 percent having a university degree or higher. Ambitious, Confident, Curious, but often labelled as "Spoilt and Lazy" the "Me, Me, Me" generation.	"Latch Key" Generation - left at home alone whilst parents worked. Resourceful. Logical. Problem-Solvers.	So called because of huge increase in birth rates following end of the second World War. Committed. Self sufficient. Competitive.	Grew up during and after World War II; taught to be "seen and not heard". Disciplined. Loyal.
Communication	Social networks, and streaming services; low interest in TV. Create on line communities.	Hand held or integrated in clothing comms device / Facetime	Text / social media / on line real time text messaging /face to face	e-mail / text	Face to Face / Telephone Landlines	Speaking Face to Face / Formal letters
Major events	Covid 19	Global financial crisis 2008	Nine Eleven (2001)	Fall of Berlin wall (Nov 89)	Moon landing	World War Two
Iconic Toys	Fidget Spinners PlayStation 4 X Box 360	Nintendo DS Scooters Fashion Dolls (BRATZ)	Cabbage Patch Kids BMX Bike Little Tykes (Log Cabin/Cozy Coupe)	Lego Rubix Cube Chopper Bikes	Etch A Sketch Spacehopper Frisbee	Bubble Solution Roller Skates Toy Soldiers
Music	Smart Speakers	Spotify	iPod	Walkman /CDs	Audio Cassette	Record Player
Major Influences on	Internet. Tik Tok. Pandemic.	Youtubers. Internet. Parents.	Peers. Television. Internet. Parents.	Parents. Television. Books.	Parents. Newspapers. Music (e.g. Beatles). World events. Books.	World War Two. Parents /Grandparents/

# Unsure Which Generation You Are?

## **Generation Alpha**

Samsung Galaxy Z Flip 5G

(other suppliers are available!)

## **Generation Z**

Smartphone

## **Millennials**

Phone

## **Generation X**

Mobile Phone

**Baby Boomers** .....







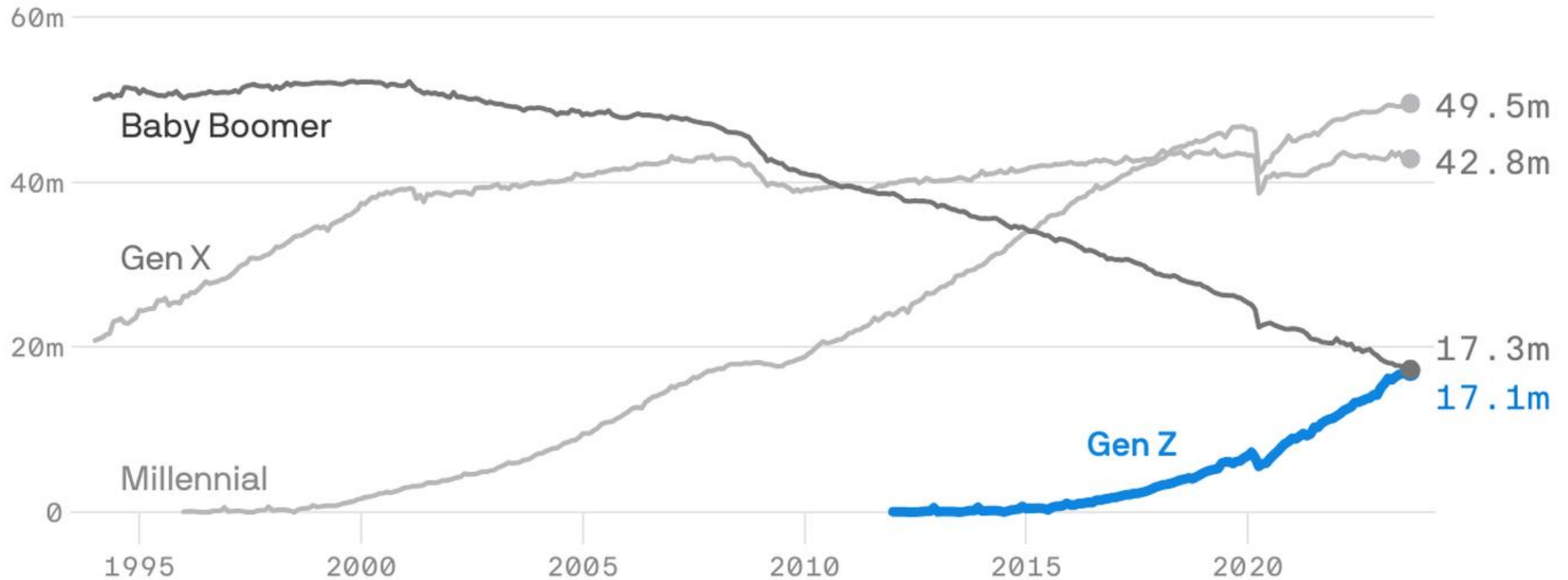
	Generation Alpha	Generation Z	Millennials	Generation X	Baby Boomers	Silent Generation
Attitude to Technology	<p>They don't just use technology; they intuitively understand it. Navigating digital spaces, for them, is as natural as breathing. "Technoholics".</p> <p>Totally dependent on IT - have no grasp of alternatives. More digitally savvy than any previous generation. Will not understand and will become quickly irritated by previous generations "lack of understanding" of modern technology.</p>	Totally dependent on IT - (born with a smartphone and a tablet) - very limited grasp of alternatives.	<p>Digital natives - technology is part of their everyday lives. Activities mediated by a screen. Don't need to be problem solvers as internet does it for them.</p>	Digital immigrants. Technology was growing fast but in its infancy. Understand the importance of digital and non-digital.	Early adopters. Extremely cautious and sceptical. Seen as a luxury.	Largely disengaged. Lack of understanding or interest.
Attitude to Work	<p>No constraints on geography; massively influenced on climate change and saving the planet. Like Generation Z, but moreso, they will have jobs that do not exist in today's world. Extremely curious – will want to learn new things. As yet unknown when they will want to retire – theories on this are diverse.</p>	<p>Career "multitaskers" - will move between employers and job roles. Very low limitation on geography. Want to retire early.</p>	<p>Digitally driven. Work "with" an employer rather than "for". Diminished geography constraint. Want to retire early.</p>	<p>Professionally loyal (not necessarily to employer). Geography constrained. Expect to retire at 65 or earlier. "Workaholics"</p>	<p>Organisational loyalty. High dependence on geography. Expect to retire at 65 or return to work.</p>	<p>Jobs are for Life. Totally dependant on geography.</p>
Aspiration	Predicted to be the wealthiest generation ever, financial savvy and will demand financial stability.	Security and Stability (due to global economic turbulence in formative years)	Freedom and Flexibility	Work Life Balance	Job Security	Home Ownership



- To build sustainable health services to meet the needs of our growing, ageing population we need a workforce that meets not only the needs of our patients, but the needs of our future workforce... Generations Z and Alpha have very different career aspirations to previous generations. And there are less of them to look after a growing and ageing population.
- We have to adapt now!!



# % of the generations in work - Decline of the Baby Boomers and the rise of Gen Z...



Gen Z are expected to overtake Baby Boomers by early 2024

By 2030 Generation Alpha predicted to be 13% of the workforce; by 2040 could be 50%.



This means asking ourselves some very difficult questions; for example -

- Do we need develop new roles perhaps even working across “traditional professional boundaries?”
- Are we as “attractive” as we can be to meet the needs and aspirations of our future workforce? (Opportunities for Career Change, Cutting Edge Technology, Financial Reward?)
- Do we need to take more control of ensuring demand on services is appropriate and making a difference to patient care?
- Is “Generation X” able to design a strategy to meet the aspirations of “Generations Z and Alpha”?



IN SUMMARY - We need to do things differently, and we need to act now to tackle the long-term workforce challenges.

“State of the Art” digital systems and AI in healthcare have never been so important, not just for our patients, managing increasing demand and improving productivity and quality, but because our workforce will expect it – they will only be attracted by high performance technology.

We must create new roles that are attractive to new generations, well remunerated, and which allow for their curiosity and need to learn.

***Pathology will remain increasingly critical to the health of our population. Demand is set to rise at unprecedented rates due to the increasing ageing population.***

***We all have a responsibility to ensure our great profession continues to provide an inspirational and rewarding career for our current and future workforce.***



**Greater Manchester  
Diagnostics Network**



**Thank you for listening, any  
questions?**

**Diagnostics Network X (Twitter):**

[@GM\\_pathology](https://twitter.com/GM_pathology)

**Diagnostics Network LinkedIn:**

[@GMImagingandPathologyNetworks](https://www.linkedin.com/company/gm-imaging-and-pathology-networks)

**Visit our Website**

<https://greatermanchestardiagnosics.nhs.uk/>

**Or you can even send me a  
written letter 😊**

# Managing Demand and Capacity in NHS Pathology Services Panel Discussion



**Saghar  
Missaghian-Cully**  
Managing Director  
North West London  
Pathology



**Katie Moss**  
Programme Director  
Greater Manchester  
Imaging Network



**Joanna Andrew**  
IBMS President  
IBMS



**Prof. Sarah E. Coupland**  
George Holt Chair of  
Pathology/Diagnostic  
Cellular Histopathologist  
Registrar of Royal  
College of Pathologists  
(RCPath) - University of  
Liverpool/Liverpool  
Clinical Laboratories



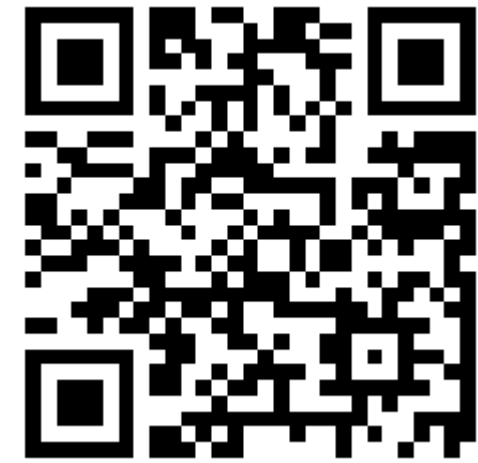
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## Speaking Now...



**Sanj Lallie**  
Digital Integrations  
Director - Source  
LDPATH



**Klaudyna  
Johnstone**  
Commercial Director  
- Source LDPATH





# Refreshments & Networking



# Chairs Morning Reflection



**Chris Sleight**

Chief Officer - Greater Manchester Imaging &  
Pathology Networks - Greater Manchester  
Provider Federation Board



Up Next...

**SECTRA**

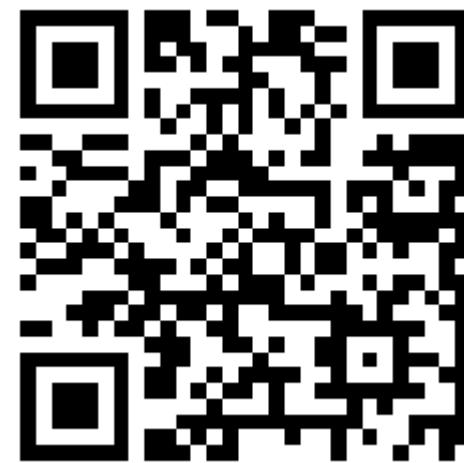
*Knowledge and passion*





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## Speaking Now...



**Laura Molloy**  
Senior Project Manager -  
Business Services  
Organisation, ITS, HSCNI



**Stephen Hillocks**  
Senior Project Manager -  
Business Services  
Organisation, ITS, HSCNI

# Digital Pathology – From Concept to Reality in Northern Ireland



Laura Molloy, BSO ITS, Senior Project Manager

Stephen Hillocks, BSO ITS, Senior Project Manager

## HSCNI Trusts and Laboratories

5 HSC Trusts provide integrated health and social care services across the region

- Belfast Trust
- Northern Trust
- Southern Trust
- South Eastern Trust
- Western Trust
  
- Existing Imaging Provider (Sectra)
  
- Pathology Network since 2009



# Digital Pathology – Ready, Set

- Strategic drivers
  - The ‘Modernising HSC Pathology Services – Proposals for Change’ (November 2016) and the ‘National Pathology Assurance Quality Review ‘(2014) both advocated the benefits of adopting a Digitised Pathology service.
- Pilot deployed in Altnagelvin with Dr Michael McKenna 2017
- Decision of Network Board early 2018 to initiate an addendum to the current NIPACS contract for Digital Pathology

***‘We want to report off the screen because this makes It more efficient and productive’***

(Michael McKenna. Is this the end for the microscope? Cancerworld. 2016)





**KEEP  
CALM**

**AND**

**CALL THE  
DREAM TEAM**

## Digital Pathology - Go .....

### Project Team set up -Core team structure

- Project manager (from NIPACS +)
  - Senior responsible officer
  - Pathologist or BMS representative from the four Trusts
  - Representative from the Laboratory Managers forum of the Pathology Network.
- 
- Extended team with digital pathology champions from each trust
  - Formation of Project Plan underpinned by PRINCE

# Digital Pathology - Business Case and Procurement

- Development of an addendum for Digital Pathology
- Development began May/June 2018
- Full costings for capital & Revenue
  - New Hardware – Workstations, Monitors, Scanners
- Benefits identified
  - Workshops with stakeholders
- DoH & DoF Approval January 2019
- Procurement completed March 2019

# Digital Pathology - Engagement and Design

- Digital Pathology Roadshows
  - Continued workshops to provide continued awareness of the project
  - Engagement with Trusts and impacted users
- Digital Pathology Symposium June 2019
  - SRO hosted Bethany Williams and Darren Treanor for open forum with Digital Pathology Team and stakeholders
  - Q&A hosted
- Digital Pathology Workflows
  - Intensive Workflow document completed of existing processes and future state
  - Regional Agreement and sign-off

# Digital Pathology - Integrations and Approach

## Integrations

- Additional integration required for 2 additional Tissue Tracking instances within Labs.
- Scanner Integration
- Reporting Interface between PACS & LIMS System

## Phased Go-Live Approach

- Due to complexity of PACS & LIMS reporting go-live was split
  - Phase 1 LIMS Reporting
  - Phase 2 PACS Reporting

# Digital Pathology - Testing & Phased Go-Live

## Testing

- End to end Phase 1 Testing began January 2020 at WHSCT.
- March 2020 – Covid 19 halts all DP testing work
- Phase 1 Go-Live WHSCT October 2020

## Phased 2 Go-Live

- PACS Reporting
  - WHSCT-Dec 2020
  - NHSCT-May 2021
  - BHSCT –June 2021
  - SHSCT –October 2021

## Digital Pathology - Out With The Old....



- Regionally agreed standardised workflow
- 270+ New Users trained
- 60 Reporting Workstations installed across 4 Labs
- 16 Scanners installed across 4 Labs
- 2.4 Petabytes of additional storage
- Roll out of Web Based application Software

# Digital Pathology Team Challenges

- Project interdependencies
  - Replacement of LIMS reporting with PACS based reporting
- Requirement for specimen tracking in all labs
- Implementation of Digital Pathology using RIS workflow (Snomed)
- Lack of dedicated time for team members
  - Both Clinical and Project
- Covid 19
  - Reduced access to SME's for LIMS
  - Virtual training, testing and go live



# The Good

## MDT review is more efficient

- Great to have radiology images on the same system
- Great to have request forms, reports and images on the one system
- Complete Clinical record available
- Easy to view cases from other (HSC) labs for MDT review
- Efficiency of getting second opinion intra- and interdepartmentally
- Benefit of rapid access to past samples e.g. Barrett's dysplasia follow-up.
- Training
  - DP facilitates trainee sign out and “multihead” review
- Home reporting
- Modernised approach to pathology interpretation and reporting, with assistance from image analysis tools e.g. Ki67. Potential for integration of more AI/diagnostic support tools



# The Good

- PACS based reporting more efficient relative to LIMS (may not be applicable to all centres if a good LIMS is in use)
- Accurate measurements in cases
- Use of annotations in cases as aide memoire, but also rapid review for/during MDMs or second opinions
- Tracking heat map in case to highlight all tissue reviewed. Major safety bonus although not universally popular (Big Brother paranoia)
- Ability to synchronise images from various stains
- >95% of images in focus immediately and no need to refocus as magnification increases cf moving through objectives using light microscope
- No need to move slides on and off microscope, and place back in trays
- No longer have glass slides cluttering office
- Efficiency of getting second opinion intra- and interdepartmentally
- Benefit of rapid access to past samples from patients in real-time reporting assists case turnaround. Importantly this archive can build within 6 months for some diagnoses e.g. Barrett's dysplasia follow-up. A good PACS and long-term image solution required for this.
- MDM preparation time reduced, especially useful in context of regional MDMs with reduced need to transfer slides between sites
- May help with recruitment to pathology as some medical students/junior doctors will see a modernised version of pathology
- Potential for paperless working
- Posture benefits

# Recommendations



Include sceptics in the Project team



Have dedicated people to build and maintain the system



Fully understand the workflow in each lab



Manage expectations



Prepare, prepare, prepare



Test, test, test

# QUESTIONS?

---

***“The ease of use of the Digital Pathology solution has open the discussion of regional sharing of cases and second opinions which can now be completed in minutes where before it took days with the physical transfer of the glass slides from site to site”. (Manager RVH)***

***“DP really facilitates trainee sign out (especially as it is socially distanced) & multiheaded review. In addition to this MDT review is now much more efficient.” (Pathologist, Antrim)***

***“Digital pathology allows for new ways of working that will lead to a more sustainable pathology service and enable further transformation. Through this project, all four cellular pathology laboratories in Northern Ireland are now united by a single digital pathology solution which makes case review and preparation for multidisciplinary meetings much more efficient, ultimately improving the quality of patient care.” (SRO, Craigavon)***



***“The move to Digital Pathology is the most significant change in Cellular Pathology for over 150 years”. (Lead BMS, Belfast)***



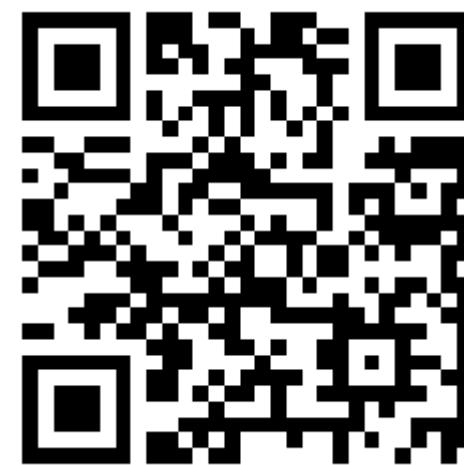
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## Speaking Now...



**Richard Oswald**  
Public Sector, Account  
Director - Exponential-e



**Simon Staveley**  
Cloud Sales Specialist -  
Exponential-e



Speaking Now...



**Joanna Andrew**  
IBMS President - IBMS





**Joanna Andrew**

**President of the Institute of Biomedical Science**

**SHYPS Network Lead for Blood Sciences**



# Long Term Biomedical Scientist Workforce Plan

Ensuring the NHS has the biomedical  
scientist workforce it needs for the future



- NHS England Published the first ever workforce plan in its history.
- The plan is ambitious, but does not lay out how it will be deployed or funded.
- Absolutely no mention of Biomedical Scientist
- Data excludes Biomedical Science workforce
- Although, the base commitment of 20% - 34% more trainees by 2034 is very welcomed.

# NHS Long Term Workforce Plan

June 2023



## Healthcare scientists' training

37. Healthcare scientists provide the scientific backbone of the NHS; their work underpins 80% of all diagnoses, supports high quality research and is important for technological innovation. **To meet the needs of the NHS, the Plan assesses that education and training places for healthcare scientists need to increase by 20–34%, reaching 930–1,039 by 2033/34.** The ambition set out in this Plan is to increase training places for healthcare scientists by 32% to over 1,000 places by 2031/32. We will work towards achieving this ambition by increasing training places by 13% to over 850 by 2028/29. Apprenticeship routes for healthcare scientists are also being made available, with 20% of training places delivered via an apprenticeship route by 2028/29 (supporting an ambition to have 40% of healthcare scientists starting their training via an apprenticeship by 2031/32).

# NHS Long Term Workforce Plan

June 2023



- In 2017, Health Education England (HEE) launched a draft workforce strategy Facing the Facts, Shaping the Future for consultation. It predicted that if demand-led growth for healthcare remained constant, 190,000 new posts would be needed by 2027. Fast forward to 2023 and the new NHS England (NHSE) Long Term Workforce Plan<sup>1</sup> predicts a shortfall of between 260,000 and 360,000 staff by 2036/37.
- It also identifies “the lack of a sufficient workforce, in number and mix of skills, is already impacting patient experience, service capacity and productivity, and constrains our ability to transform the way we look after our patients”.

# NHS Long Term Workforce Plan

June 2023



- In the same year, the Royal College of Pathologists (RCPATH) surveyed its histopathology workforce and the responding departments showed:
  - Only 3% had enough staff to meet clinical demand, and this demand continues to grow.
  - A quarter of all histopathologists are aged 55 or over and there are insufficient trainee doctors in post to fill the gaps in the workforce.
  - Of the departments who responded to questions on costs, around £9.8m a year is spent on locums, covering 77 posts at an annual average of £127,000 each. If this figure was extrapolated to cover the UK, it equates to around £17m.

Year	Population in millions	0–15 yrs %	16–64 yrs %	65+ %
2005	60.4	19.3	64.7	15.9
2015	65.0	18.1	63.3	17.8
2025	69.5	18.9	60.9	20.2
2035	73.0	18.1	58.3	23.6
2045	76.1	17.7	57.8	24.6

- Cancer Research UK’s document Testing Times to come? An evaluation of pathology capacity in England, published in November 2016, identified that while cancer survival is at its highest ever level, the health services are under increasing pressure from increasing cancer incidence. It estimated that, with a growing and ageing population, the projected increase in the number of cancer cases would be more than 40% above current levels to about 514,000 new cases per year in 2035.

# The challenges

- **Workforce**

- Insufficient numbers historically
- Time to train, time to develop new roles and capabilities.
- Supernumerary roles not available so delivery is alongside an already constrained workforce.

- **Patients**

- More patients, with more complex diseases
- Shift to an aging population – so smaller workforce
- More treatment options requiring more tests.

- **Funding**

- No clear plan on how to fund the LTWP
- Historically Biomedical Scientists have not been nationally funded.



- The IBMS has launched its own Long term Biomedical Scientist Workforce Plan.
- This will be used as a credible plan for the NHS, but also for the devolved nations for training future Biomedical Scientists
- We will be holding government to account for the commitment of 20% - 34% more trainees by 2034.



## **Long Term Biomedical Scientist Workforce Plan**

Ensuring the NHS has the biomedical  
scientist workforce it needs for the future

## OUR PLEDGE

- The IBMS recognises the risk of a potential skills gap due to an ageing workforce approaching retirement and are putting in place measures to support the supply stream of biomedical science graduates entering the profession and seeking HCPC registration.

The table below shows the changing age demographics of the UK population<sup>6</sup>, and the rise in the over-65 population, with their more complex health needs, to almost 25% of the UK population by 2045.

Year	Population in millions	0-15 yrs %	16-64 yrs %	65+ %
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## OUR PLEDGE

The IBMS:

- recognises that diagnostic laboratory services are undergoing a science and technology-driven revolution that requires its workforce to acquire new knowledge, new skills and often to work differently. In response, it is undergoing the most far-reaching review of its post-registration Specialist Portfolios since they were launched 20 years ago
- supports the early years of the new registrant workforce by reviewing the syllabi of the respective Specialist Portfolios to ensure their currency and their inclusion of the expanding repertoire of molecular pathology techniques
- is developing new Specialist Portfolios in Molecular Pathology and Genomics to support the post-registration training of biomedical scientists who are taking up roles in the new genomic hubs and to enable the expansion of a competent scientist workforce to meet the growing workload
- from 2024, will begin the development of a new Specialist Portfolio in Andrology to provide a more standardised approach to post-registration training for biomedical scientists working in the highly specialised fertility services laboratories.

## **OUR PLEDGE**

The IBMS will:

- ensure that places are available on all CEP courses by recruiting additional module tutors where required
- ensure that tutors review the content of the modules of each of the qualifications annually to ensure they remain current and directly relevant to professional practice
- commit to ensuring access to IBMS qualifications where they are needed. To achieve this, registered nurses will be accepted on to the Point-of-Care Testing qualification, and the Laboratory Information Technology and Clinical Informatics CEP will be open to non-scientific individuals who are managing or working within laboratory IT and responsible for supporting laboratory IT systems.

## OUR PLEDGE

The IBMS will:

- continue to encourage laboratories to see the service and financial benefits of a level 7-equivalent professional qualification to support the upskilling of their workforce
- begin the development of training and learning support materials for those candidates undertaking the higher qualifications
- continue to ensure that these qualifications are affordable and offer best value for money for individuals and departments
- promote these professional qualifications and a service-oriented alternative to master's programmes.

## OUR PLEDGE

The IBMS will:

- work with NHSE and the RCPATH to help deliver the vision in the Histopathology Transformation Six-Point Plan
- launch two new 'limited scope' histopathology reporting qualifications designed specifically to support the bowel and cervical screening programmes
- deliver condensed and targeted training programmes with the intention of delivering qualified reporting scientists within a period of 18 months
- work with the RCPATH to identify other histopathology reporting specialisms with medical workforce shortages and respond by developing further scientist reporting qualifications
- deliver new extended practice qualifications in haematology by the end of 2023
- launch extended practice qualifications in microbiology in 2024.

## **OUR PLEDGE**

The IBMS offers to NHSE its diagnostics experience, links to industry and innovation. Working together will drive improvement and the adoption of new diagnostic strategies to deliver the most rapid, effective, and efficient treatments for patients that utilises the biomedical science workforce to speed up adoption of proven, effective technologies and diagnostic tests.

# INSTITUTE OF BIOMEDICAL SCIENCE

## LONG TERM BIOMEDICAL SCIENTIST WORKFORCE PLAN

### SUMMARY OF KEY RECOMMENDATIONS

Introduce a registration training grant for departments to train individuals completing their IBMS Registration Training Portfolio.

Expand the number of training positions and enable more biomedical science graduates to become registered biomedical scientists and prevent an interruption in the pipeline of talent.

Ensure biomedical scientists are recognised as the key health service workforce in pathology and diagnostics, with IBMS qualifications as the primary route to its further development.

Support and cooperation from NHSE and the Government to deliver the pledges set out throughout this plan.

### OUR PLEDGE

The IBMS welcomes the publication of the NHS Long Term Workforce Plan and is committed to ensuring, through its own Long Term Biomedical Scientist Workforce Plan, that the biomedical scientist workforce will be a key part of its successful delivery.



Thank you



Up Next...





# Lunch & Networking



## Chairs Afternoon Address



**Chris Sleight**

Chief Officer - Greater Manchester Imaging &  
Pathology Networks - Greater Manchester  
Provider Federation Board



Up Next...





## Slido

Please scan the QR Code on the screen. This will take you through to Slido, where you can interact with us.



SCAN ME





Speaking Now...



**Professor Kevin Moore**

Co-Founder and CMO - SALUTARE LTD GROUP

# Digital phlebotomy

Anywhere, anytime,  
every patient

Kevin Moore  
Chief Medical Officer, Salutare  
Professor of Hepatology

17th October 2023

**Salutare:**



**No form means  
No test**

**Salutare:**



Salutare:

# The digital blood form



# Digital phlebotomy

Anywhere, anytime,  
every patient

Kevin Moore  
Chief Medical Officer, Salutare  
Professor of Hepatology

17th October 2023

**Salutare:**

# Simple Interface

### Patient Search

MRN/NHS Number

### Demographic Search

Last Name

First Name

Date of Birth

**SEARCH**

### Specimen Search

Select the patient

First Name	Last Name	Date of Birth	Gender	MRN Number	NHS Number
ZZZZ	ZZZZ	15/04/2001	F	60675637	
ZZZZZ	ZZZZZ	01/01/1958	M	60126735	
TUR	ZZZZZTEST	12/10/1981	F	20396055	
ZZZZZZ	ZZZZZ	15/04/2001	F	60675640	

Page 1 of 2

Select the orders

Select as batch

Scheduled Date	Order	Barcode	Path Lab	Order Origin	Tube Colour	Clinician	Track
16:24 10/10/2023	LUPS	37233003197	COAGULATION	Royal Free Hospital	LTBLUE	Kevin Moore	<a href="#">View</a>
16:24 10/10/2023	RAPA	37233003199	IMMUNOLOGY	Royal Free Hospital	RED.	Kevin Moore	<a href="#">View</a>
16:24 10/10/2023	QFT	37233003200	IMMUNOLOGY	Royal Free Hospital	QFTYellow	Kevin Moore	<a href="#">View</a>
16:24 10/10/2023	GUT	37233003198	GL	Royal Free Hospital	Not Found	Kevin Moore	<a href="#">View</a>
06:24 03/10/2023	CERU	37232910598	CHEMISTRY	Royal Free Hospital	GOLD	Kevin Moore	<a href="#">View</a>
06:24 03/10/2023	FANA	37232910599	IMMUNOLOGY	Royal Free Hospital	RED..	Kevin Moore	<a href="#">View</a>
13:08 03/10/2023	CK-CRB	37232910600	CHEMISTRY	Royal Free Hospital	GOLD	Kevin Moore	<a href="#">View</a>

# Simple Interface

The screenshot shows a web browser window with the URL `rfl-salutareprd.royalfree.nhs.uk/print`. The page features a blue header with the SALUTARE logo and navigation links for Print, Scan, Teams, and Reports. A user profile for Kevin at Barnet Hospital is visible in the top right.

The main content area is divided into two sections:

- Select the patient:** A search form with fields for First Name, Last Name, Date of Birth, Gender, MRN Number, and NHS Number. Below the form is a pagination indicator showing "Page 0 of 0".
- Select the orders:** A search form with a "Select as batch" toggle. Below the form is a table header with columns: Scheduled Date, Order, Barcode, Path Lab, Order Origin, Tube Colour, Clinician, and Track.

A left sidebar contains three search categories:

- Patient Search:** Input field for MRN/NHS Number.
- Demographic Search:** Input fields for Last Name and First Name.
- Specimen Search:** Input field for Barcode Number.

At the bottom, there is a "SEARCH" button, a "Reset" button, a printer selection dropdown (currently set to BTB3), a checkbox for "Label" (checked) and "A4", and a "Print" button.

# So we set up teams with location

Select Your Current Location

Barnet Hospital Ground Floor - Barnet Hospi ▾

**Barnet Hospital Ground Floor - Barnet Hospital - Phlebotomy**

Chase Farm Hospital Ground Floor - Chase Farm - Phlebotomy

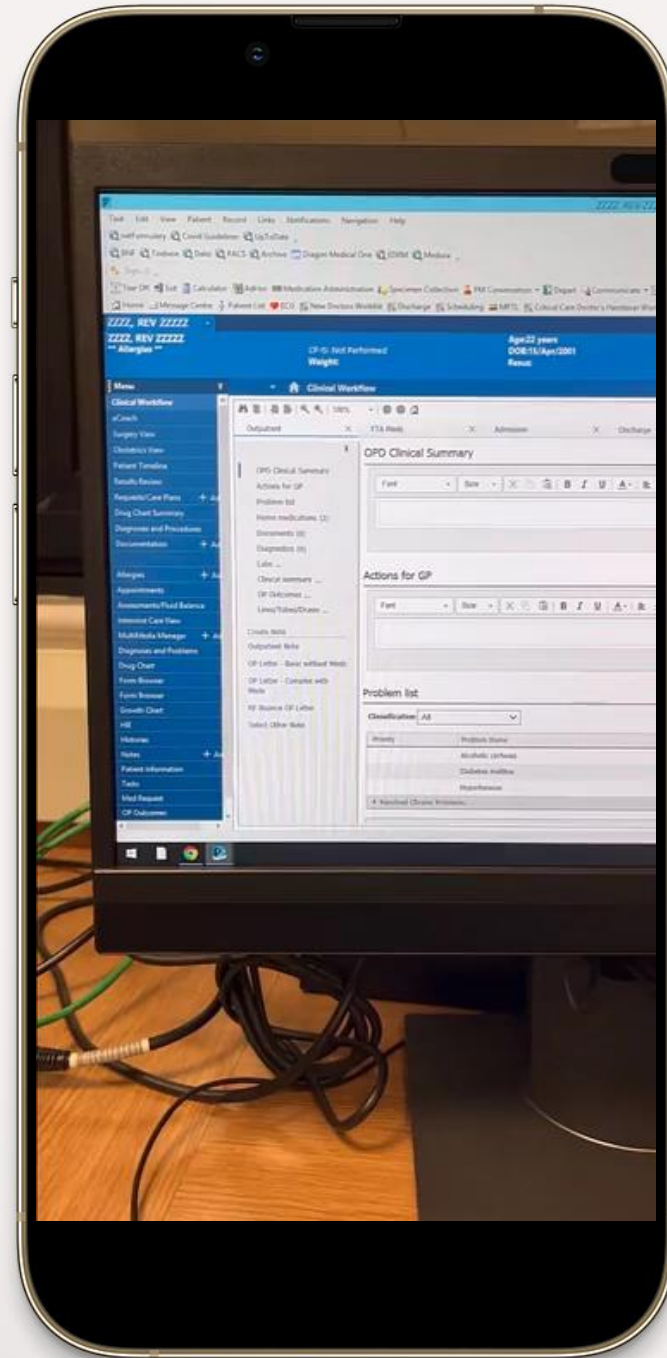
Edgware - Zone B - Edgware Hospital - Phlebotomy

RFL - IT Users

Royal Free Hampstead Ground Floor - RFH - Phlebotomy

[Log out](#)

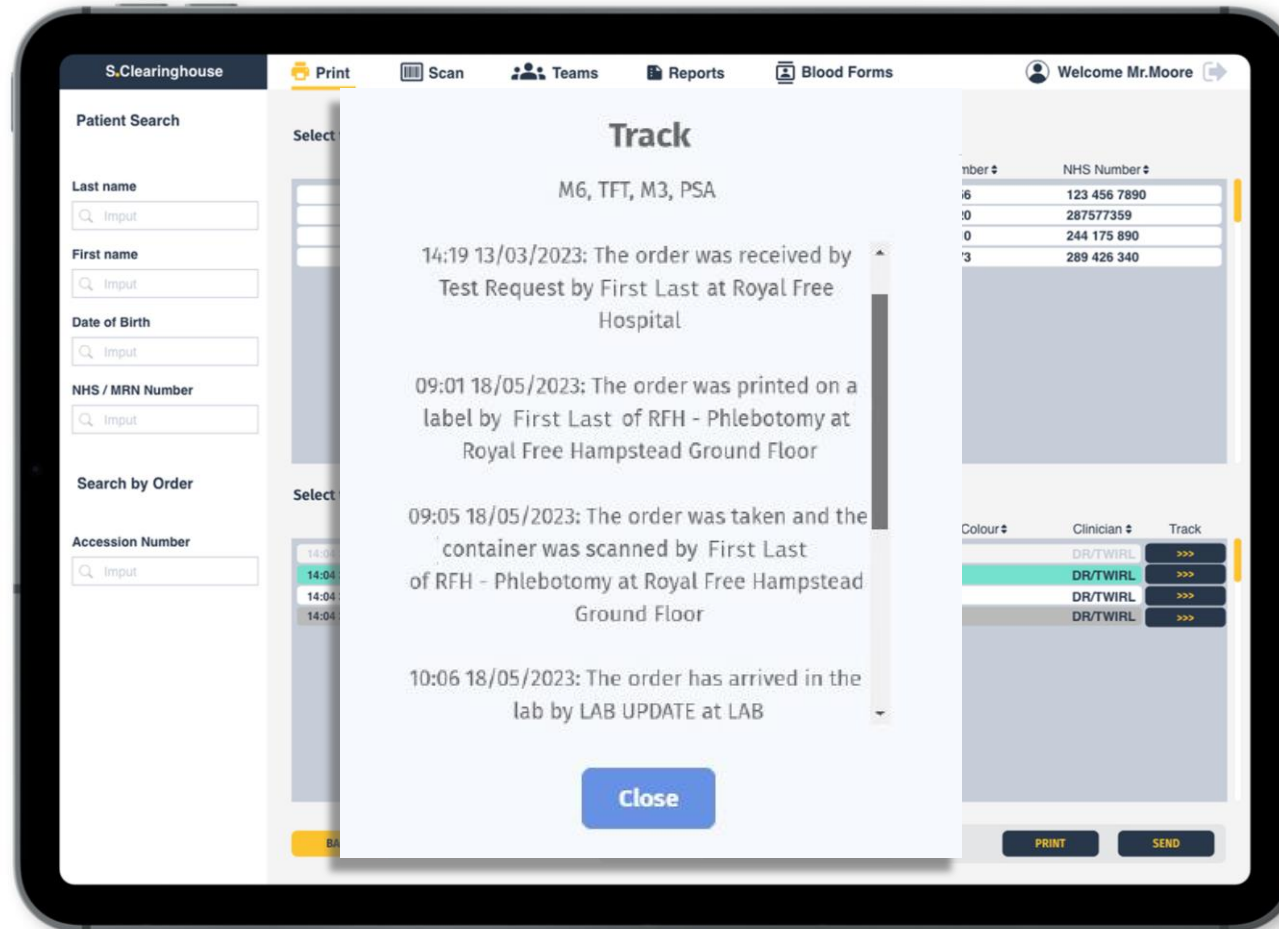
In action



Salutare:



# Tracking built in



## Patient information and booking blood tests

- Where is my blood form?
- Last time there was no test request
- How do I book a blood test?
- Where do I go?

# Digital phlebotomy

Anywhere, anytime,  
every patient means

**Community Diagnostic Centres, Pharmacy Phlebotomy, Care Homes  
*as well as GP practices and hospitals***

**Salutare:**

# - Coventry & Warwickshire Adult Blood Tests

Ordered by next available appointment

[← Back to clinic type](#)



## Vantage pharmacy

[Visit Website](#)

[Vantage chemist 131-132 Far Gosford street, ...](#)

Next available time:

**13:50**

**16-10-2023**

[Book an appointment](#)



## Warwick Hospital Bloods

[Visit Website](#)

[Lakin Rd, Warwick CV34 5BW, UK](#)

Next available time:

**14:15**

**16-10-2023**

[Book an appointment](#)



## Styvechale Pharmacy

[Visit Website](#)

[Styvechale Pharmacy, 84 Baginton Rd, CV3 6...](#)

Next available time:

**07:30**

**17-10-2023**

[Book an appointment](#)



## Stratford Hospital Bloods

[Visit Website](#)

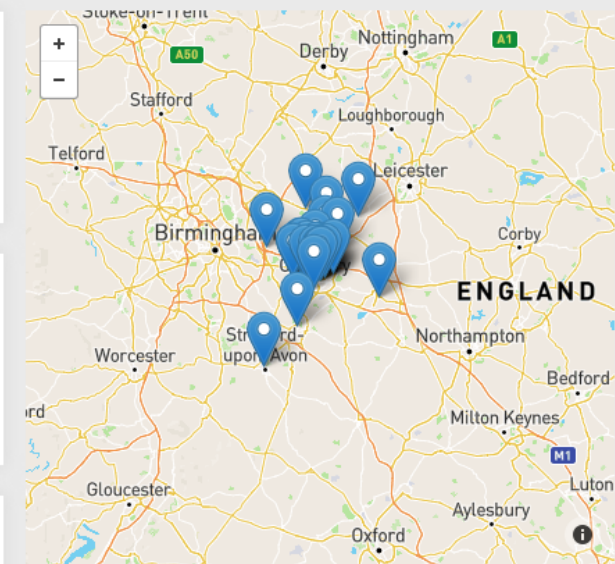
[Arden Street , Stratford-upon-Avon, Warwick...](#)

Next available time:

**08:05**

**17-10-2023**

[Book an appointment](#)



Need help?

[Visit Our Help Centre](#)

## Laboratory and Phlebotomy metrics

- Numbers
- Samples lost
- Phlebotomy performance
- Scanning rates

Chaos and mayhem



Salutare:

Peace and calm



# Digital phlebotomy

Anywhere, anytime,  
every patient

Kevin Moore  
Chief Medical Officer, Salutare  
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17th October 2023

**Salutare:**

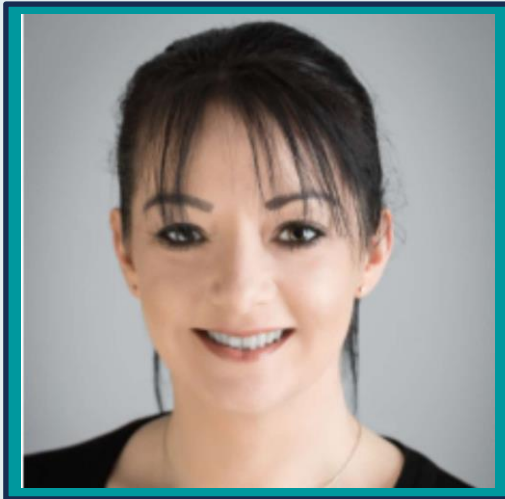




# aiforia Training Workshop...



# Cross Nation: Delivering Differently - Co-presentation



**Catherine Ross**  
Chief Scientific  
Officer - Scottish  
Government



**Ian Young**  
Professor of Medicine,  
Queen's University Belfast  
Chief Scientific Advisor,  
DoH NI - Queen's  
University Belfast and  
Department of Health,  
Northern Ireland



**Professor Dee  
Ripley**  
Deputy Chief  
Scientific Adviser  
for Health  
Welsh Government

# Partnership approach to delivering – Diagnostics in Scotland

**Professor Catherine Ross**  
**Chief Scientific Officer – Scottish Government**  
**@catherinemross**



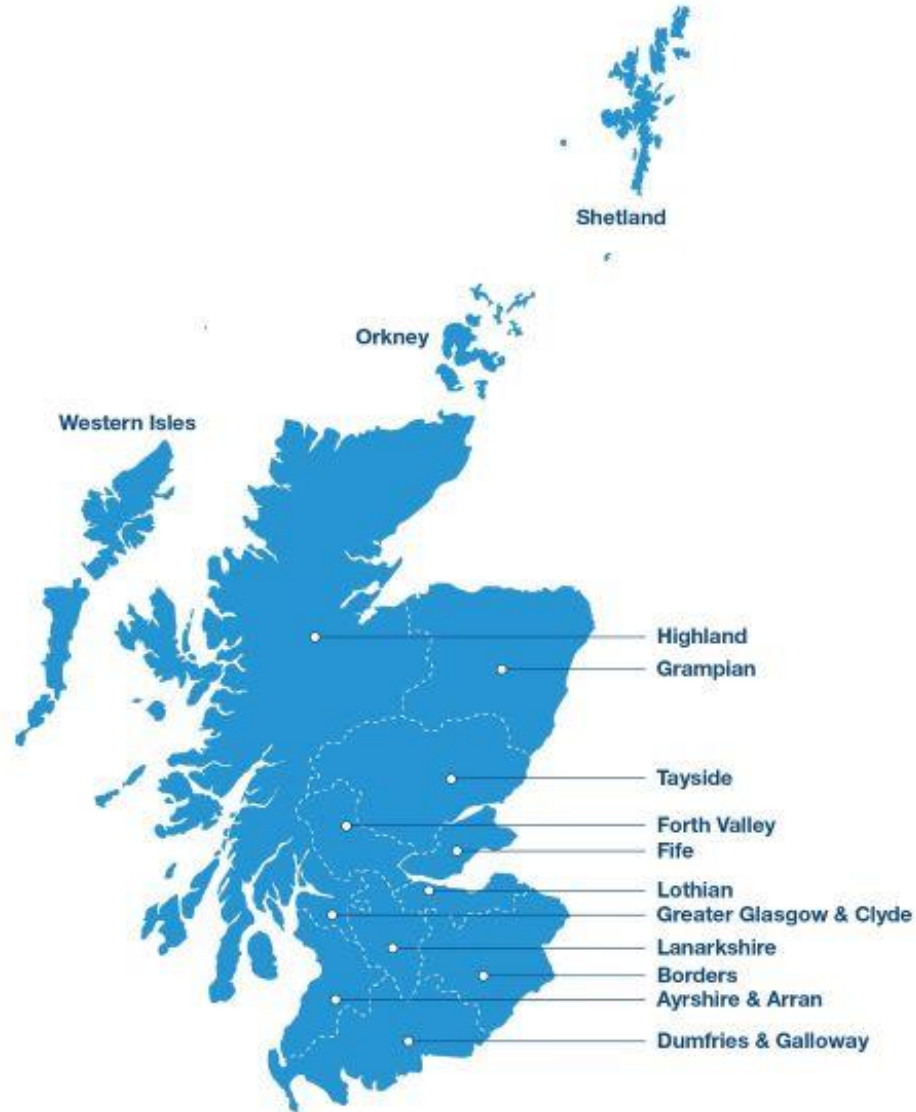
- Cabinet Secretary for NHS Recovery, Health and Social Care
- Minister for Public Health and Women's Health
- Minister for Social Care, Mental Wellbeing and Sport



- National Performance Framework, and the Outcomes it sets out, guides the approach to policy making within Government, to support areas such as increasing wellbeing and reducing inequalities - aligned with UN Sustainable Development Goals.
- ‘People are *healthy and active*’



# The NHS in Scotland



- 14 regional NHS Boards delivering frontline healthcare services.
- 8 special NHS Boards providing specialist and national services.
- Locally led by Chairs and Chief Executives
- Public Bodies (Joint Working) (Scotland) Act 2014 – Requires Local Authorities and Health Boards to work together to plan and deliver adult community health and social care services.



# Population Data



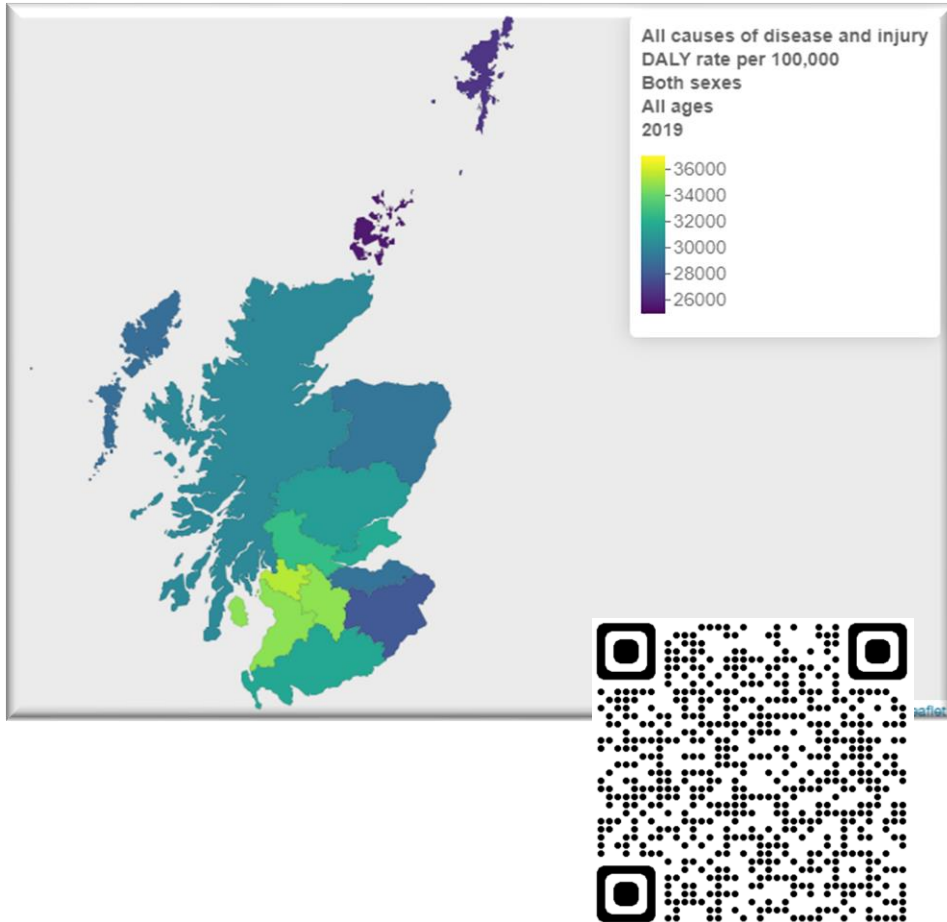
- The 2022 census shows Scotland's population has risen to 5,436,600 – the highest figure on record
- Scotland's population is **increasing**.
- Scotland's population is **ageing**.



- Healthy life expectancy variances are increasing (**up to 24 years**) between most deprived and least deprived.
- **Significant gap in outcomes** for children who have been looked after and accommodated.



# Data informed decision making - Burden of disease across Scotland



- The annual disease burden is forecast to **increase by 21%** over the next 20 years.

- Although our overall population is forecast to decrease, this is negated by the **more significant increase of burden of disease.**

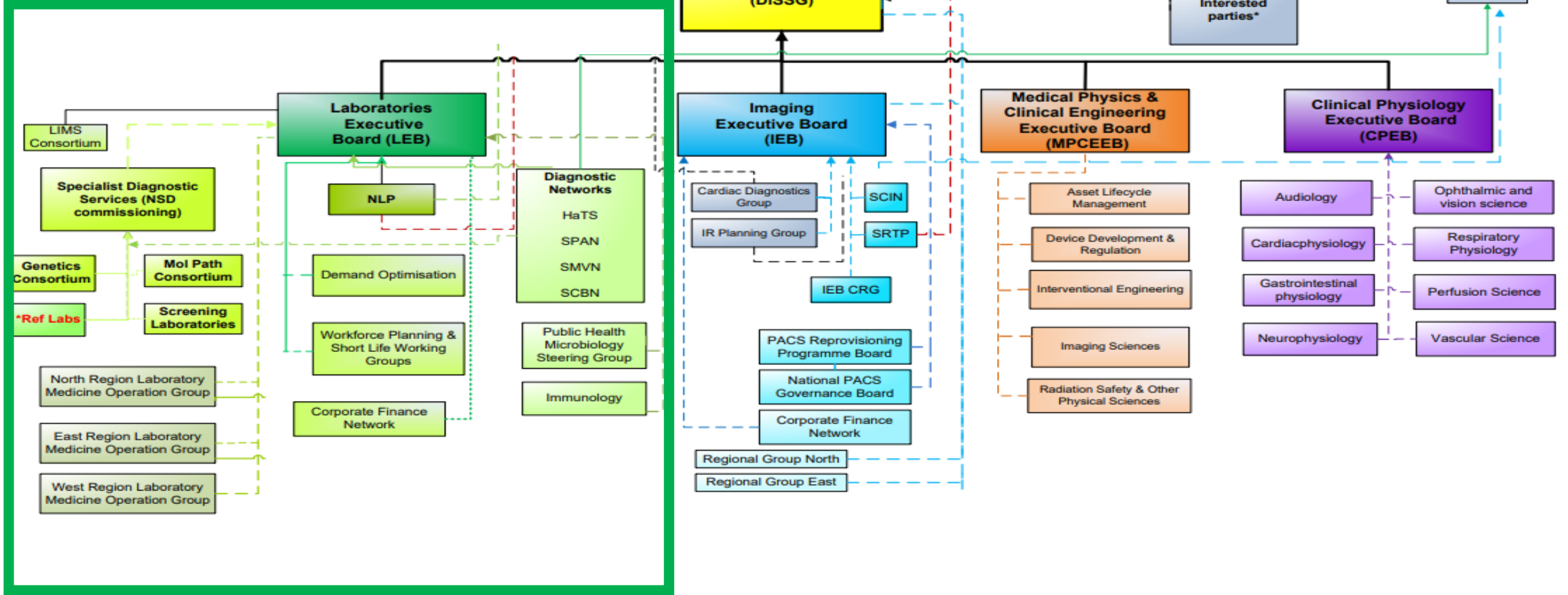
- Forecasted estimates of annual disease burdens for each cause of disease and injury group indicate that 19 out of 21 cause groups are **forecasted to have higher annual disease burdens in 2043 compared to 2019**

- Cancer remains the highest** disease burden and is forecast to see an increase of 24%.

- Highest increases seen from **cardiovascular disease and neurological disorders** (both 34%)



# Previous Diagnostics Structure



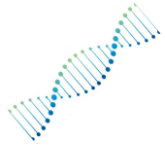


# Consultation

- Access: multiple co-morbidities; remote and rural; hard to reach communities; focus on prevention
- Workforce: current and future capacity and capability
- (Digital) infrastructure: barrier for diagnostics and wider healthcare
- Fragmented approach to improvement and delivery
- National programmes vs 5 national diagnostic networks vs local improvement initiatives
- Challenges / solutions replicated in 14 territorial boards; capacity/resilience varies
- Is unwarranted variation fully understood?



# Strategic Network Model



Scottish Strategic  
Network for  
Genomics  
Medicine



SCOTTISH  
HEALTH IN CUSTODY  
NETWORK  
PRISON CARE



Scottish  
Perinatal  
Network



SCOTTISH  
HEALTH IN CUSTODY  
NETWORK  
POLICE CARE

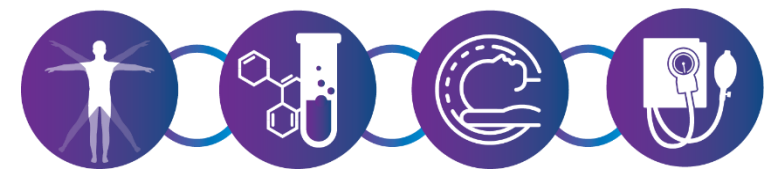


Fertility  
Scotland  
NATIONAL NETWORK



Scottish  
Strategic  
Network for  
Diagnostics







- Create vision for diagnostics
- Roadmap to transformation
- Across the clinical pathways
- Aligned to a strategic Policy





New governance model to support whole system, strategic change – enabling a **‘Once for Scotland’** approach



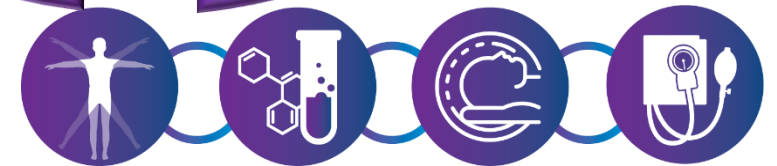
Supported by a  
**Scottish Government  
Framework for Diagnostics**



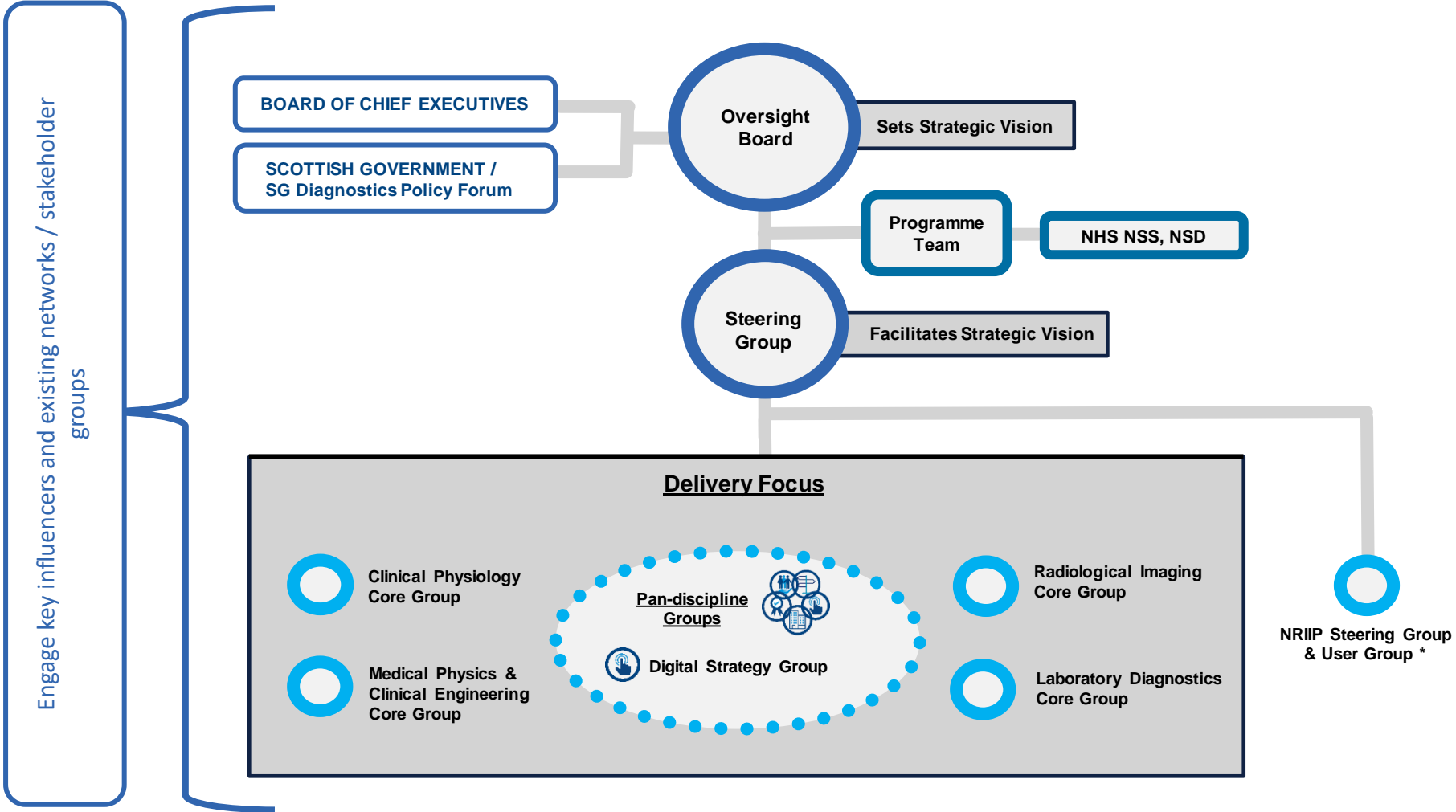
**Partnership working  
across  
boundaries**

- **New ways of working** & service delivery models
- **Maximising** infrastructure and innovative technologies
- **Workforce** capabilities
- **Environmental sustainability**

**Increased  
profile of  
Diagnostics**



# Scottish Strategic Network for Diagnostics (SSND) – Governance Structure



\*The NRIP/Data Workstream was set up by SRTP. SRTP will close at the end of September, but the NRIP/Data Workstream will continue as a Scottish Government funded programme until the end of March 2024 to support NRIP's move to business as usual. The SSND will provide governance for this transition period until the end of March 2024.



# High-level Themes



# High-level Themes



Optimising Services Delivery,  
Evidence & Transformation



Education & Workforce



Digital, Information &  
Innovation



Quality Assurance, Patient  
Safety & Stewardship



Equipment, Facilities &  
Environmental Sustainability





Education & Workforce

## Mandate

---

- Assess & map current diagnostic workforce capacity and capability
- Identify gaps in workforce capacity and capability within diagnostic services based on population health needs
- Identify options for improving capacity and resilience in the diagnostic workforce

## Focus areas

---

- Map of current workforce capacities and capabilities
- Gap analysis (existing vs required)
- Develop options for future workforce and education models to meet future diagnostic needs by considering e.g.
  - Improved retention and (on-the job) training opportunities
  - Training pipeline and career pathways
  - Skills mix and diversification of roles
  - Future requirements in workforce skills and competencies
  - Providing flexibility in utilisation of staff within and across diagnostic services
- Identify priority areas and quick wins

## Existing 'Building Blocks'

---

- S RTP workforce plan and modelling tool
- Laboratory workforce intelligence & recommendations
- Clinical Physiology intelligence & recommendations
- Advancing practice (NES, IBMS, S RTP)
- Audit data Professional Bodies

## Deliverables

---

- Assessment of current and required diagnostic workforce capacities and capabilities
- Development and assessment of options to increase workforce capacity and capability
- Recommendations regarding long term transformation of the diagnostic workforce and quick win areas to progress in the short to medium term

## Key partners

---

- NHS Education for Scotland
- NHS Scotland Academy
- Universities
- Professional Bodies
- National Diagnostic Networks
- Scottish Government
- NSS

***Please note these are still in DRAFT***



Education & Workforce

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- NSS

***Please note these are still in DRAFT***



# Collaborative approach





# Scottish Strategic Network for Diagnostics

**Professor Catherine Ross**  
**Chief Scientific Officer – Scottish Government**

**[Catherine.ross@gov.scot](mailto:Catherine.ross@gov.scot)**  
**[@catherinemross](https://twitter.com/catherinemross)**



# **Developments in the delivery of Pathology Services in Northern Ireland**

Ian S.Young

CSA Health, NI

# Ian S.Young



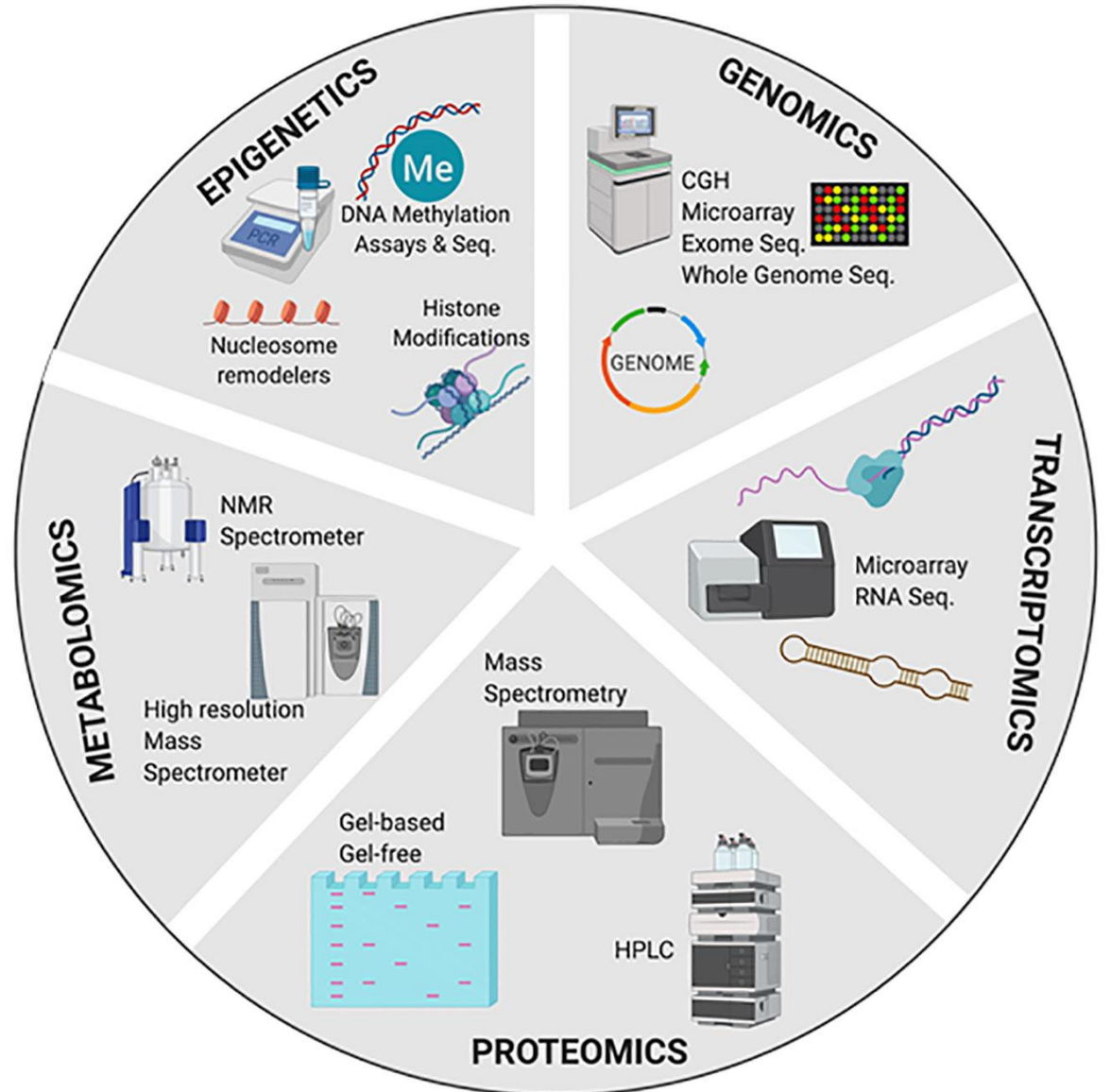
Professor of Medicine. Queen's University Belfast,  
UK  
Chief Scientific Advisor, Northern Ireland Department  
of Health  
Consultant Chemical Pathologist, BHSCT

**Previously** Chair of Scientific Division, IFCC  
President, ACB, UK  
Chair of JCTLM

**Currently** Chair of ICHCLR  
Deputy Editor. Clinical Chemistry

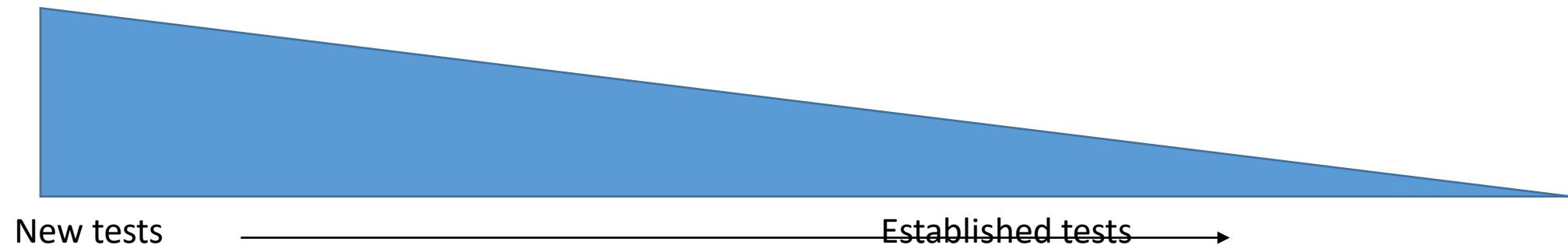
# Diagnostics – a time of huge opportunity

- Understanding of pathophysiology
- New diagnostic modalities – imaging/omics
- Integration of clinical data / risk scores and diagnostic data
- Artificial intelligence and machine learning approaches to interpretation of integrated diagnostic and clinical data



# Twenty years of diagnostics – what has been learned?

- Proposing / developing new diagnostic tests is relatively easy
- Proving the validity of new diagnostic tests is more difficult – in different settings and populations
- Demonstrating consistent clinical value (effectiveness) is even more difficult
- Becoming part of a routine clinical pathway (effectiveness, cost effectiveness and affordability) is the most difficult thing to achieve



# Overall Position

- Previously, pathology services delivered by 10 hospitals and the Northern Ireland Blood Transfusion Service (NIBTS)
- Pathology Transformation Programme aims to:
  - establish a **new regional pathology service management structure** within 2-3 years; (*'Blueprint project'*)
  - ensure an independent **LIMS programme** successfully achieves its objectives; and
  - oversee delivery of a range of **complementary regional projects necessary to address existing service challenges** and deliver service transformation.

*We will achieve the above 3 aims via our well-established Network governance structures i.e. Network Board, Specialty Forums, Lab Managers Forum & engagement with Regional Services.*

# The challenge of accurate measurement

- what do patients, clinicians and policy makers expect?

- **Accurate results** – which will enable the use of local, national and international guidelines
- **Consistent results** - which will enable a comparison of changes with time
- **Comparable results** – from all laboratories and devices, and at all times

# The challenge of accurate measurement

- what do patients, clinicians and policy makers expect?

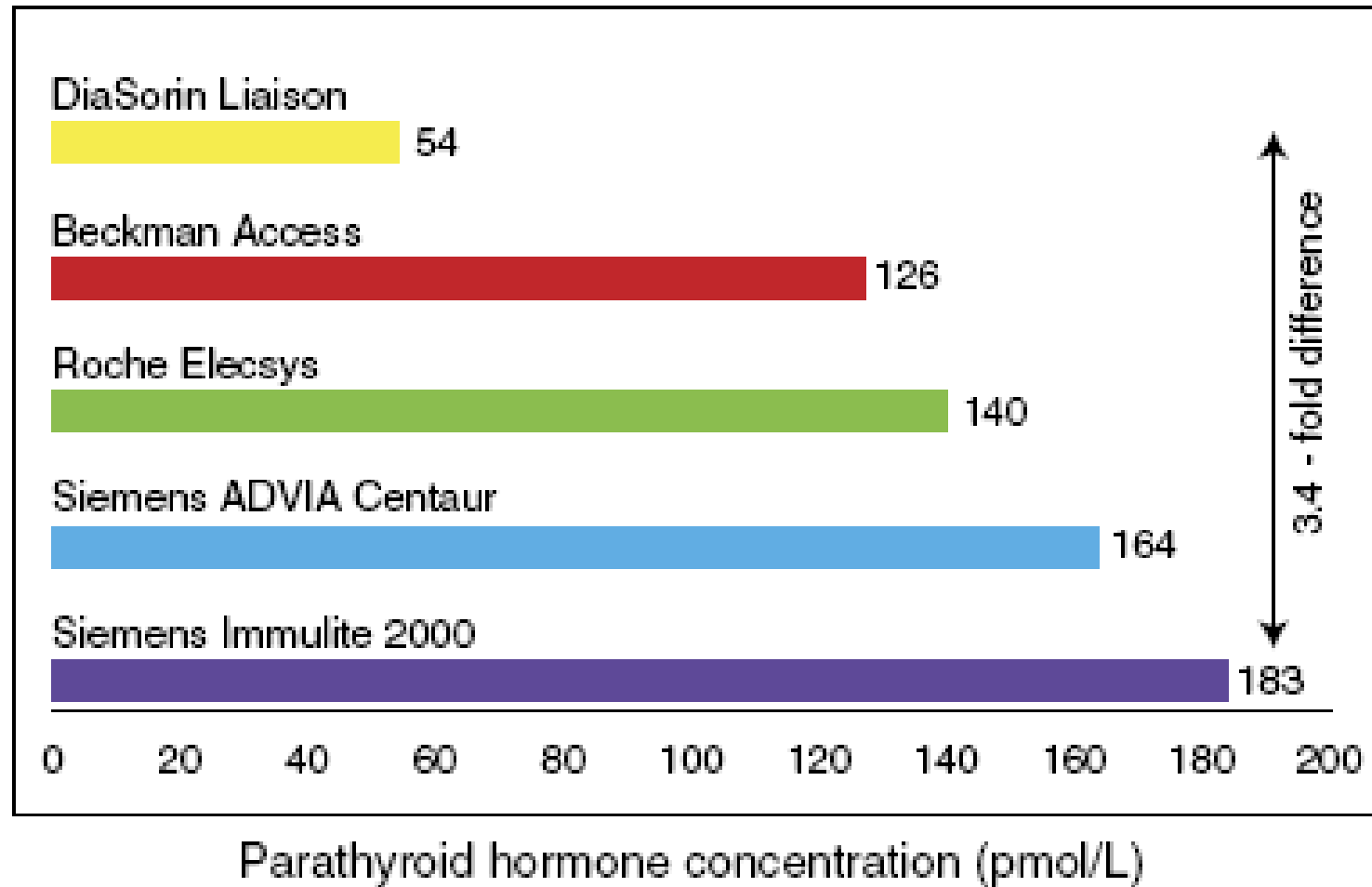
- **Accurate results** – which will enable the use of local, national and international guidelines
- **Consistent results** - which will enable a comparison of changes with time
- **Comparable results** – from all laboratories and devices, and at all times



# Benefits of measurement accuracy in the health care system

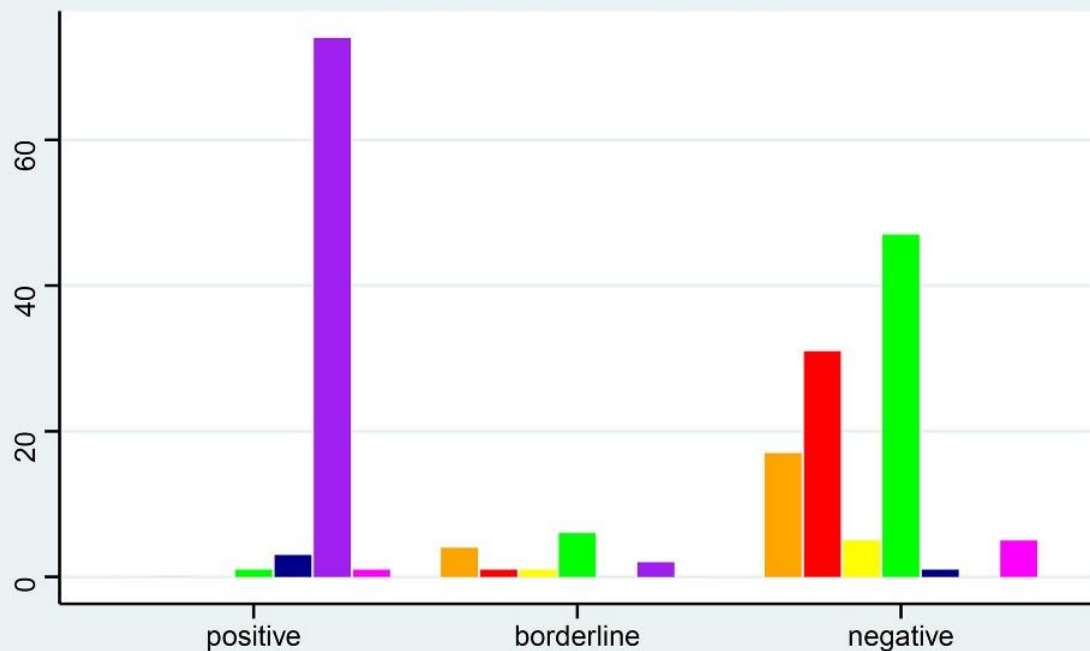
- Consistent decisions by clinicians
- Consistent decisions for patients
- Equitable implementation for policy makers
- Value for money for funders
- Easy adoption of emerging evidence

# What do patients, clinicians and policy makers get?



**A**

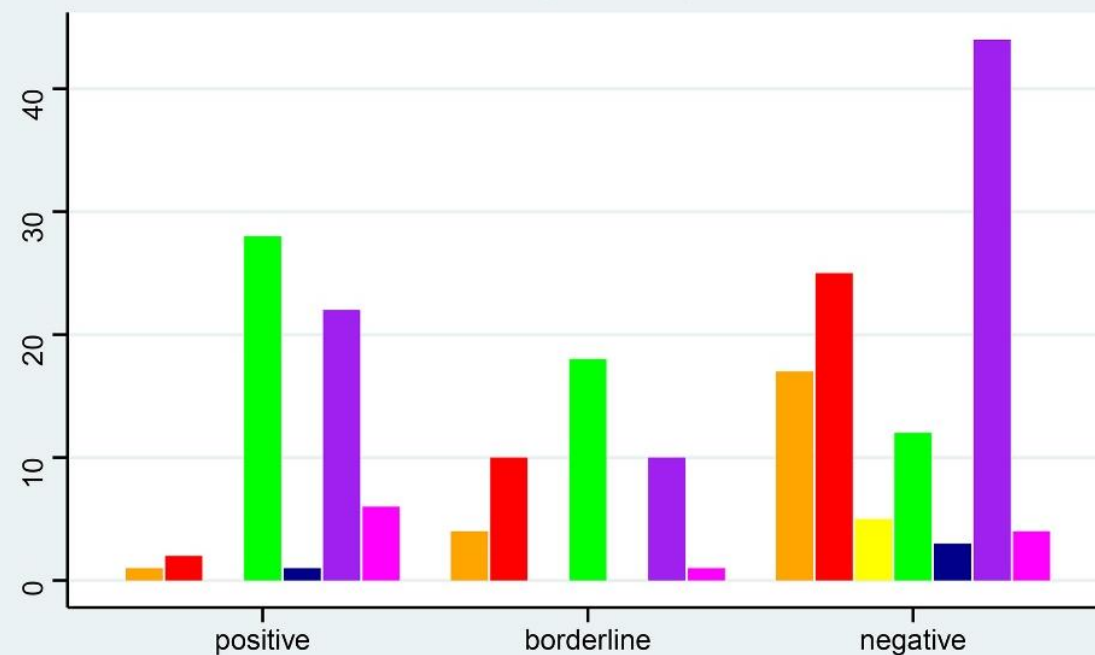
EQA#2 IgG Sample 5



Assay  
 Abbott    Epitope    Mikrogen    Siemens  
 DiaSorin    Euroimmun    Roche

**B**

EQA#3 IgG Sample 10

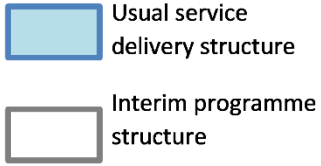


Assay  
 Abbott    Epitope    Mikrogen    Siemens  
 DiaSorin    Euroimmun    Roche

**Assessing the Quality of Serological Testing  
 in the COVID-19 Pandemic: Results of a  
 European External Quality Assessment  
 (EQA) Scheme for Anti-SARS-CoV-2  
 Antibody Detection**



2021 Aug 18;59(9):e0055921.  
 doi: 10.1128/JCM.00559-21. Epub 2021 Aug 18



**Department of Health (DoH)**

**Digital Health & Care NI Programme Board**

**Network Board**

**DoH Steering Group for Pathology**

**Trusts & NIBTS**  
Business as usual

**NI Pathology Information Management System (NIPIMS) Programme**  
*Procures & implements replacement of LIMS & Blood Donation / Supply & Tracking Solution*

**NI Pathology Network**  
Regional Network Board, Speciality Fora, Lab Managers' Forum and Strategic Projects  
*Produces deliverables for pathology transformation<sup>1</sup>*

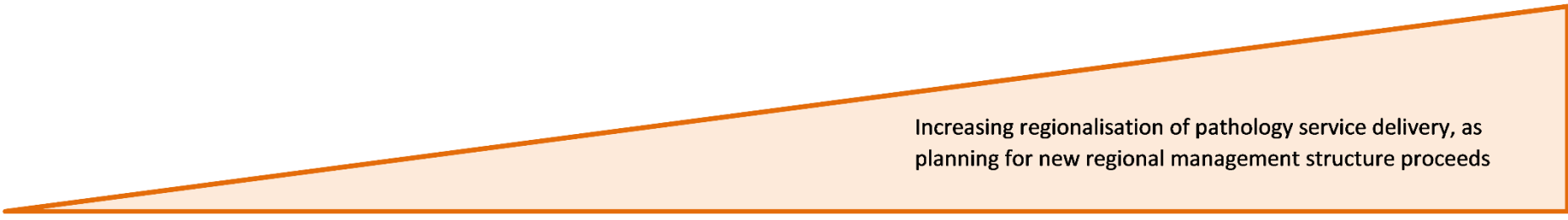
**Blueprint Programme to plan for the establishment of a new regional pathology management structure<sup>2</sup>**  
*Creates the Blueprint for future regional pathology management structure*

*Advise & deliver together*

*Advise & deliver together*



*Trusts & NIBTS fully engaged*



**Interim state**

**Legislation**

**New Regional Pathology Management Structure**  
*Delivers pathology & blood donation/supply services previously delivered by Trusts & NIBTS.*  
*New information systems and equipment in place*  
*Includes a network linking pathology disciplines, primary & secondary care clinical services, academia, industry and other stakeholders*  
*Engages with other Networks in UK and beyond*

**Future state**

# Approach to transformation

- Co-design of overall programme
- Single LIMS and laboratory methodology
- Standardization of methodology (pre-analytic, analytic and post-analytic), including universally applied guidelines and SOPs
- Continuous engagement with clinical stakeholders, professional bodies and trades unions

**Standardization is key to  
equity of access and delivery**



Llywodraeth Cymru  
Welsh Government

# Delivering Differently - Pathology in NHS Wales

Professor Dee Ripley

Deputy Chief Scientific Adviser for Health

# Cymru Iachach:

ein Cynllun Iechyd a Gofal Cymdeithasol

#cymruiachach

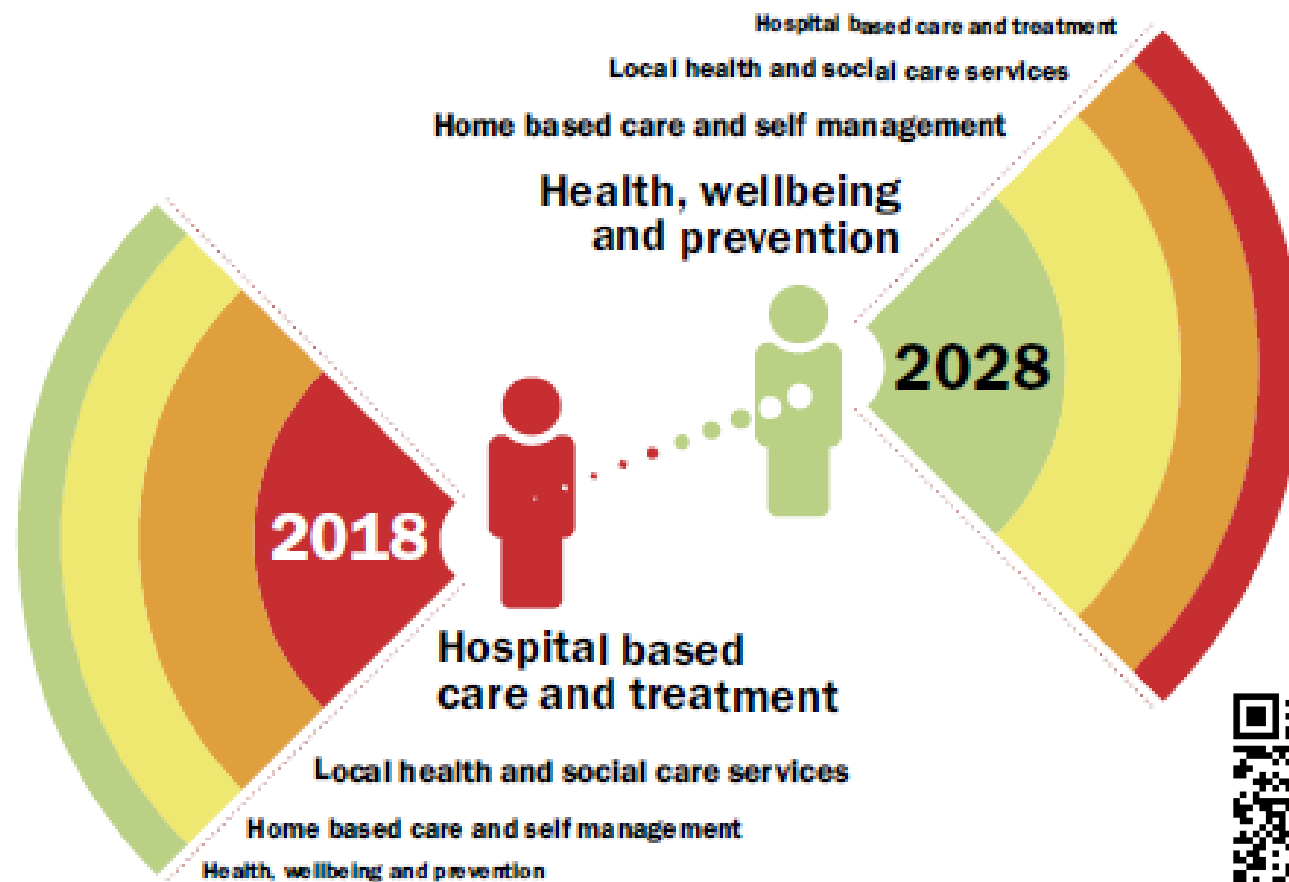


**A Healthier Wales:**  
our Plan for Health and Social Care

# A Healthier Wales:

our Plan for Health and Social Care

#ahealthierwales

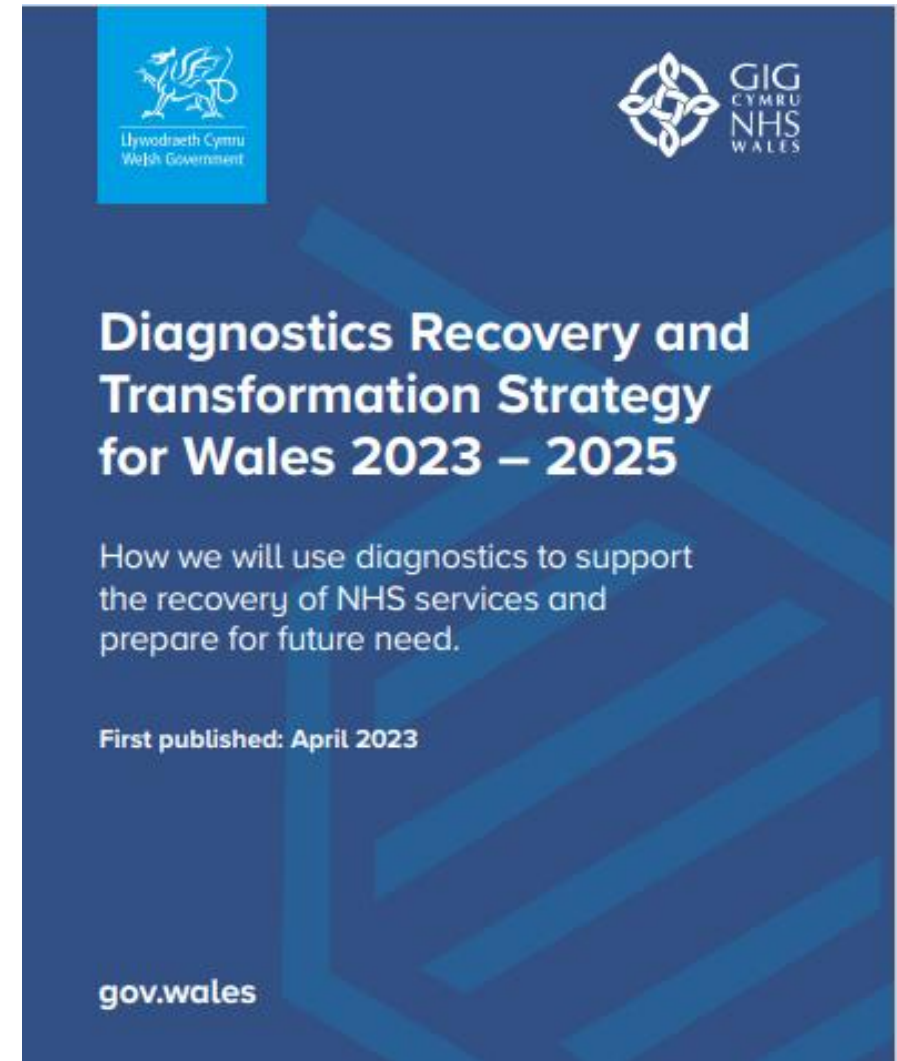




Population Projections	Long-Term Conditions (LTCs)	Risk Factors	Supply: NHS staff, beds, social care	Economic Considerations	New Technology, Genomics and Artificial Intelligence (AI)
Ageing population: 1 in 5 age 70+ by 2038	Ageing population means a higher proportion living with LTCs	21% of people in Wales living in relative income poverty	Reductions in time spent in hospital expected	NHS Wales under significant pressure from growing patient needs and restricted capacity	Advanced tech will likely increase self-management of some LTCs
UK life expectancy growing slower than similar countries	People living with 4+ LTCs to almost double by 2035	Cost of living crisis likely to deepen existing health inequalities	Significant increase in NHS staffing needs*	Funding gap in Wales – spending per person is like England, but less than EU-14 **	Increased use of digital and tech will likely improve health surveillance
Stark differences in life expectancy between least and most deprived groups	The majority of people with 4+ LTCs will have mental ill-health by 2035	Rates of obesity are expected to rise until 2031-37	Impacts may be mitigated by changes in technology and workforce composition	UK spends 55% less on Capital Health spending than EU-14** (eg, buildings and equipment)	Improvements to medicine and public health through new genetic and genomic technologies
Potential causes: widening health inequalities, slow economic growth	More cancer cases in people aged 70+ by 2040	Adult smoking trends have been decreasing over time	Burden on GPs and community/ social care is likely to increase	Population health impacts individual and national prosperity	Adoption of AI and supporting Research and Development will drive innovation in healthcare
	Diabetes prevalence to rise, a 22% increase by 2035-36	Modifiable behaviours are risk factors for many LTCs	Number of 65+ requiring unpaid care is growing	Poor physical and mental health is associated with drop in earnings	AI needs to be regulated, ethical and transparent
	Deprivation is a risk factor for many preventable LTCs		Addressing waiting lists would have economic benefits	Onset of ill health increases likelihood of employment exit	

# Diagnostics Strategy

- Diagnostic Strategy for Wales published in April 2023 to:
  - Improve health outcomes and reduce whole system pressure
  - Address unmet care need
  - Enable people to live longer, healthier lives at home
  - Support earlier, faster detection of disease





Partneriaeth  
Genomeg  
Cymru  
Genomics  
Partnership  
Wales



GIG  
CYMRU  
NHS  
WALES

Rhaglen Delweddu  
Genedlaethol  
National Imaging  
Programme



GIG  
CYMRU  
NHS  
WALES

Rhaglen Patholeg  
Genedlaethol  
National Pathology  
Programme



Healthcare  
Science  
Cymru  
*Delivering tomorrow, today!*



Rhaglen Endosgopi  
Cenedlaethol  
National Endoscopy  
Programme

# National Diagnostic Programme

- Healthcare Science
- Pathology
- Genomics
- Imaging
- Endoscopy

# Nine themes of focus

Exploration of the historical, current and likely future needs for diagnostic services has identified nine key themes which will require specific focus:

## 1. People and Patients

- Do what matters for people with a determination to co-produce and understand value.
- Vigorously pursue and reduce inequalities in all of our work.

## 2. Workforce

- Significantly increase the training pipeline of diagnostic specialists, including advanced practice roles (e.g. reporting biomedical scientists, reporting radiographers,

## 3. Service Transformation

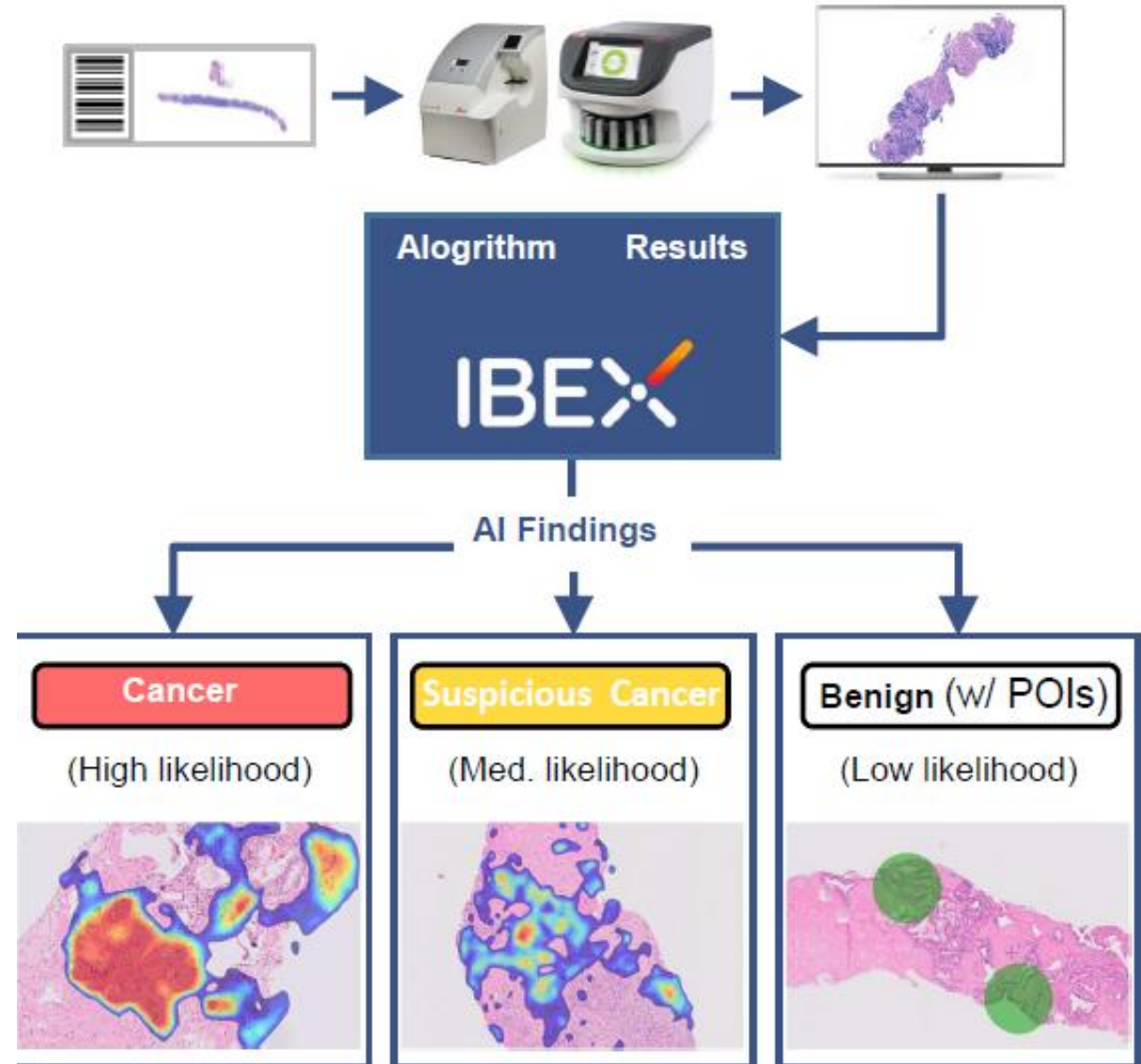
- Create national or regional models for fragile services with consolidation of some services to improve safety, throughput and efficiency.
- Push less complex diagnostics closer to primary and community care.
- Implement national planning for complex imaging provision such as PET-CT.

## 4. Digital

- Integrate and digitalise all test requesting and reporting via single national platforms, with reporting across Health Board boundaries and adopt innovative digital technology solutions including artificial intelligence (AI).

# Innovation - AI in Pathology

- Dr Muhammad Aslam, Consultant Pathologist, Betsi Cadwaladr UHB is using AI to diagnose prostate, and now breast and colorectal cancer
- Uses the Galen platform from Ibex to pre-screen digital slides taken from biopsies on suspected cancer patients
- First AI application cleared for clinical usage in histopathology in the UK



- Partnership, collaboration and joining forces on shared challenges will be the key to driving ambitions forward





# Canapés, Drinks and Networking



**Thank you for attending The  
Pathology Conference!**





## THE PATHOLOGY CONFERENCE



Improving NHS  
diagnostics

Register for the next Pathology  
Conference in September 2024...

