



 <p>GIG CYMRU NHS WALES Iechyd Cyhoeddus Cymru Public Health Wales</p>	<p>Name of Meeting Knowledge, Research and Information Committee</p> <p>Date of Meeting 23 September 2025</p> <p>Agenda item: 3.6</p>
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The Pathogen Genomics Delivery Plan for Wales	
Executive lead:	Professor Fu-Meng Khaw, National Director of Health Protection and Screening Services.
Author:	Professor Tom Connor, Head of Public Health Genomics.

Approval/Scrutiny route:	Health Protection Screening Services Programme Oversight Team Health Protection Screening Services Directorate Management Team Business Executive Team
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Purpose

Genomics activity within the NHS is coordinated and planned on a Wales-Wide level by Genomics Partnership Wales (GPW), with current activity being outlined in the Genomics Delivery Plan for Wales 2022-2025. One of the key deliverables for PHW under this activity is the development of a specific Pathogen Genomics Delivery Plan, to provide a framework and focus for pathogen genomic service delivery moving forward.

Following an extensive development, engagement and approvals process, we have produced a Pathogen Genomics Delivery Plan for 2026-2029. This document will be owned by GPW and PHW. The intent is to formally adopt as interim while final external engagement is undertaken and KRIC is asked to endorse this approach, which is standard for documents of this type.

This paper gives further detail on the background and steps taken to date. The accompany document is the current draft of the Pathogen Genomics Delivery Plan, approved by BET.

Recommendation:				
APPROVE <input type="checkbox"/>	CONSIDER <input checked="" type="checkbox"/>	RECOMMEND <input type="checkbox"/>	ADOPT <input type="checkbox"/>	ASSURANCE <input type="checkbox"/>



The Committee is asked to:

- **Review** the content, timeline and focus of the Delivery Plan.
- **Take assurance** from the plan, to adopt as interim and enable its publication in draft format for comment and finalisation through the Genomics Partnership Wales governance process.
- **Consider** that if there are minimal further changes as a result of the final consultation stage the committee would be content for the Pathogen Delivery Plan to progress to full adoption, receiving an update for information. Progressing to full adoption would ensure publication prior to the update to the Main Genomics Delivery Plan for Wales.



Link to Public Health Wales [Strategic Plan](#)

Public Health Wales has an agreed strategic plan, which has identified seven strategic priorities and well-being objectives.

This report contributes to the following:

Strategic Priority/Well-being Objective	4 - Delivering excellent public health services
Strategic Priority/Well-being Objective	5 - Supporting a sustainable health and care system
Strategic Priority/Well-being Objective	6- Tackling public health effects of climate change

Summary impact analysis

Equality and Health Impact Assessment	<p>Not required - the delivery plan is provided as an output of an existing Welsh Government policy, and represents a set of activities to enhance existing provision/services. As the plan is focused on improving existing services and capabilities, and is covered by an existing Welsh Government policy an EHIA is not necessary.</p> <p>Some of the activities envisaged by the plan over the longer term (such as new sexual health services) may require an EHIA as part of their planning and development, however, this cannot be done until that planning starts – as we don’t know what those services would look like, and we haven’t yet begun the process of working these services up. The delivery plan fires the starting gun on that work, but new services or significant changes in services would require business cases and approvals as part of their development processes – and, as required, EHIAs would be carried out at that stage.</p>
Risk and Assurance	<p>The delivery plan supports the mitigation and management of strategic risk 5 on the corporate strategic risk register, and will provide assurance around;</p> <p>SR5.1 – improving our pandemic preparedness SR 5.2 – developing services, guidance and procedures to support cross-organisational working for the use and exploitation of genomics data for excellent public health services. SR5.6 developing and implementing of new services/service improvements</p>

	<p>SR 5.10 – supporting genomic horizon scanning and then implementation of findings into practice</p> <p>SR 5.11 – providing data to improve modelling and forecasting</p>
<p>Health and Social Care (Quality and Engagement) (Wales) Act</p>	<p>The development, and mainstreaming of genomics in healthcare in Wales aligns directly with the duty of quality. The work described within the delivery plan aims to improve the services we provide, making them safer, more timely, more effective, while including efforts to ensure a strong patient voice. The delivery plan reflects our role as a systems leader, working across the system to lead the development and implementation work required to realise the widespread adoption of transformative technologies.</p> <p>The delivery plan also includes activities to consider the value/prudence of measures, and to use this as part of the evaluation of the measures that are planned, enabling an evaluation of efficiency as part of the work. Collectively, the delivery plan represents a strong, tangible, demonstration of commitment to improving the quality of services in Wales, which is in strong alignment with our responsibilities under the duty of quality.</p>
<p>Financial implications</p>	<p>The delivery plan outlines a set of activities to mainstream the use of genomics across microbiology services. There will be costs to this, and until development work starts, it isn't possible to know what these costs may be. The work may offer some opportunities for savings as well as bringing additional/new costs. The plan notes that activities under the plan will be subject to revenue asks, and Welsh Government has indicated that through the development of the delivery plan, opportunities will be available to request additional funding to support identified activities.</p>
<p>People implications</p>	<p>Mainstreaming has significant implications for workforce development and training. Key elements of this have been covered by HEIW in their Strategic Genomics Workforce Plan. The provision of new services may also create a need for additional staff to be recruited in new areas of activity (e.g., bioinformatics) and so there are other workforce implications.</p>



1. Situation

Under the Genomics Delivery Plan for Wales 2022-2025, PHW has a responsibility to develop a specific Pathogen Genomics Delivery Plan to provide a structure and roadmap for the development of pathogen genomics within Wales.

Working across PHW, and with external partners, over the last two years, the Public Health Genomics Programme has developed a detailed plan covering the development of pathogen genomics capability in Wales, supporting the mainstreaming of genomics services, building on the established microbiological and health protection strengths within PHW.

2. Background

Within Wales, pathogen genomics services are delivered on an All-Wales basis by Public Health Wales (PHW). Whole genome sequencing capacity was first established within PHW in 2016, following the purchase of a set of MiSeq instruments, with a view to providing genomics services for HIV and TB. This early-stage work then formed part of the basis of the Welsh Government 2017 Genomics for Precision Medicine Strategy, which saw the formation, in 2018, of Genomics Partnership Wales to deliver that strategy. 2018 also saw the formation of a Pathogen Genomics Unit within PHW, to undertake the pathogen genomics work that was envisaged.

From the small team that existed in 2018, Wales has developed a set of clinical pathogen genomics services accredited to ISO 15189 standard including HIV and TB. In addition to these originally planned services, Wales has built a world-first ISO accredited service for typing *C. difficile* using genomics, and the first ISO 15189 accredited end-to-end SARS-CoV-2 genomics service in the UK – both of which were developed and launched during the pandemic, as well as providing genomics services to support surveillance (e.g., Influenza) and outbreak response. Some of the key services that we provide relate to pathogens that are particularly significant for communities (LGBTQ+) or those with risk factors (age, poverty) which could lead to inequalities in access, treatment, and outcomes.

Since the completion of the Genomics for Precision Medicine strategy, which ran from 2017-2022, the development and delivery of genomics within the NHS has been directed by the Genomics Delivery Plan for Wales, which was envisaged to run from 2022-2025. The Genomics Delivery Plan for Wales 2022-2025 identified two deliverables that are specific to Pathogen Genomics, namely;

- To embed genomics as part of the core vision for PHW, with the creation of a cross-organisational programme for Public Health Genomics within PHW.
- Development of a Pathogen Genomics delivery plan for Wales, co-produced with stakeholders; it will provide a roadmap for the Public Health Genomics programme and provide an agreed framework for the evolution of pathogen genomics services in Wales.

The first of these has been completed with the formation of the Public Health Genomics Programme. The second of these is the focus of the attached delivery plan, to which this SBAR relates.

3. Analysis

The development of the Pathogen Genomics Delivery plan has been a multi-year process, begun in 2023, which has included a range of engagement activities with;

- The core genomics team, including;
 - The Pathogen Genomics Unit, hosted within Infection division
 - Specialist labs that currently run services
 - Staff that utilise the data produced at present, such as the Genomic Epidemiology Unit
- Functions within HPSS who may want to run/access genomics services in the future
- Functions outside of HPSS who may be affected by planned activities
- Senior staff across HPSS, through direct communications, via the Public Health Genomics Leadership Group and through the HPSS Programme Oversight Team meetings (which also includes staff representation from Research, Data and Digital)
- Patients and the public to solicit their views on key areas of consideration, such as the uses of genomic data
- External stakeholders to develop the vision, including GPW partners and collaborators outside of Wales.

We have sought to identify areas of activity that are either low hanging fruit, or where a change in practice through the introduction of genomics could be transformative. The areas of activity have been developed to align strategically with current activities, and to ensure that Wales has an effective and comprehensive plan for the development of pathogen genomics services for the future.

The plan is composed of 11 objectives, with a set of activities under each objective. We have attempted to provide realistic timescales for delivery, and an indication of what success would look like for each objective.

The scale and scope of what is proposed is significant, but in many cases, it captures activities that are already underway and reflects the need to plan for the mainstreaming of genomics into an increasing number of services.

Within the plan as it stands, we make clear that the achievability of the plan will depend on finances being available to support the activities, and in preparation to support this, we have also worked to improve the GPW budget setting process within PHW to better enable the funding of genomics activity within PHW in future. Given the process to date has seen extensive internal engagement within PHW and planning taking place, the draft is close to being final. As PHW will own all of the key actions, it is vital that this is recognised and agreed by senior leadership.

The next steps in the process are;

- Publication of the draft plan on the GPW website, and communication of draft to key stakeholders (e.g., UKHSA) for comments prior to finalisation. Adoption as interim.
- Translation and finalisation of plan, with Welsh Government signoff (October/November 2025).

GPW is in the process of updating the main Delivery Plan, which will reference this plan, and other activities – such as the Pharmacogenomics Delivery Plan are also due within the same timescales. It is therefore important this work be completed to mesh effectively with these other areas of work.

3.1 Well-being of Future Generations (Wales) Act 2015



The Delivery Plan provides a clear, well defined and detailed plan that provides a platform for the mainstreaming of pathogen genomics in the NHS. The plan covers 3 years, and is setup to enable the creation of services that will persist over the next 10+ years. The plan therefore provides a platform for the development of future services over the long term, meeting this objective.



Sequencing has a key role in supporting prevention efforts. The Delivery Plan provides a set of measures that support primary prevention (e.g., through supporting vaccination), secondary prevention (e.g., through rapid, organism-independent diagnostics), tertiary prevention (e.g., through supporting outbreak detection and response) and quaternary prevention (e.g., by supporting efforts to ensure patients are given the correct treatment, supporting goals such as a reduction in AMR through over-use of antimicrobials). Using genomics unlocks a set of opportunities for prevention in the management of infectious disease, and this is a core component of the planned activities.



The Delivery Plan is going to be a document owned by Genomics Partnership Wales, and will see collaboration and co-creation across the partnership – demonstrating integration within the NHS and public sector in Wales. The plan also includes measures to support integration and collaboration with the UK Public Health Agencies, supporting integration on a UK-wide level to deliver outcomes that are aligned to the act’s wellbeing goals.



The Delivery Plan includes a set of actions owned by PHW, but these are contingent upon collaboration and co-creation with other parts of the system. Collaboration is also recognised in key enablers – research and data – which form part of the plan itself.



Patients sit at the heart of Genomics Partnership Wales, and the involvement of our patients – through the Genomics Partnership Wales governance and programme boards, and patient sounding board – is intrinsic to the development of the Delivery Plan as a partnership-wide activity. Patient views have specifically been sought as part of the development of this plan, and once approved by BET, the plan will be shared with the patient sounding board and patient reps for their views on the document.

4. Recommendation

The Committee is asked to:

- **Review** the content, timeline and focus of the Delivery Plan.
- **Take assurance** from the plan, to adopt as interim and enable its publication in draft format for comment and finalisation through the Genomics Partnership Wales governance process.
- **Consider** that if there are minimal further changes as a result of the final consultation stage the committee would be content for the Pathogen Delivery Plan to progress to full adoption, receiving an update for information. Progressing to full adoption would ensure publication prior to the update to the Main Genomics Delivery Plan for Wales.