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The role of NHS England in supporting the effective implementation of pathogen genomics within the health system: policy recommendations

To be read in conjunction with the Executive Summary and recommendation list of the *Pathogen Genomics Into Practice* report*.

Genomic technologies have the potential to transform infectious disease management, but the integration of these technologies will require a coordinated and flexible approach from, and open communication between, all stakeholders. Through extensive collaboration and cooperation, especially with Public Health England, NHS England can contribute to the short-term effective evidence-based implementation and delivery of genomics services, and in the long-term drive innovation and expansion of these services. Key actions NHS England should take are outlined overleaf.

*The report can be downloaded at www.phgfoundation.org/reports/16857

- **Develop a coordinated strategy:** work with PHE and other relevant stakeholders to share and co-develop a pathogen genomics strategy to ensure that both local and national infectious disease surveillance needs are met. This includes establishing mechanisms to ensure that pathogen genomics data collected in hospitals can be used by PHE for the benefit of public health.

Relevant recommendations: 1, 11, 12, 15, 16, 19, 20, 22

- **Determine service procurement arrangements:** reach agreement with PHE with regards to funding for service development and delivery where pathogen genomics services have a dual clinical and public health benefit.

Relevant recommendation: 2

- **Assess service needs and support implementation:** work with frontline staff to determine the need for pathogen genomics services, their impact on patients, and the priorities for sequencing. Coordinate with service providers during the development of pathways – from test referral mechanisms to reporting – to ensure that services are responsive to the needs of the health system.

Relevant recommendations: 3, 4, 5

- **Prepare systems for change:** prepare staff and develop systems such that new services and technologies are taken advantage of as appropriate and used optimally. Once implemented, work with staff to monitor and collect evidence of how pathogen genomics infectious disease services are meeting requirements, and adjust to optimise provision.

Relevant recommendations: 8, 9, 35

- **Support adoption and diffusion through effective collaboration:** encourage service providers to take part in a national collaborative network of pathogen genomics service providers, in order to share knowledge and best practice, collaborate on service and methodology development and agree standards for clinical and public health service delivery. Also ensure that NHS commissioned services are accredited to the appropriate national / international standards.

Relevant recommendations: 7, 9, 10, 11

- **Support innovation:** ensure that commissioned services are supported to participate in research initiatives that explore the translation of scientific developments into patient benefit.

Relevant content: chapter 9