



Personalised
Medicine
All-Party Parliamentary Group

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Jo Churchill, MP

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Improving outcomes through personalised medicine

MEMBERS' BRIEFING – JANUARY 2017

This document summarises the 2016 NHS England report *Improving outcomes through personalised medicine*, setting out the aim to make the NHS the first health service in the world to truly embrace personalised medicine and planned approach:

'This is the dawn of a new era in medicine that will need to move and evolve at the scale and pace of scientific and technological advances if real improvements for patients and the public are going to be made.'

The Four Ps of personalised medicine

Personalised medicine is defined as a move away from a 'one size fits all' approach to the treatment and care of patients to one that uses new approaches to better manage patients' health and target therapies to achieve the best outcomes in disease prevention and management. Science and innovation are crucial to delivery.

Prediction / Prevention: Identifying those most at risk of disease before the onset of symptoms, enabling new options for intervention and supporting people to make informed lifestyle choices to reduce risk, thus reducing the growing burden of disease.

Precise: Knowledge of an individual's complex molecular and cellular processes, combined with other clinical and diagnostic information, will allow proper understanding of the causes of disease and dysfunction.

Personalised: From trial-and-error to in-depth knowledge of an individual's genetic variants and complete pharmacogenetics profile in order to identify best treatments.

Participatory: Clinicians and patients will be able to discuss information like individual genomic characteristics, lifestyle and environmental factors, and interpret personal data from wearable technologies.

Key features for the NHS

Embedding personalised medicine in mainstream medical practice is said to be an intrinsic part of delivering the Five Year Forward View (FYFV) and closing the finance and efficiency, care and quality, and health and wellbeing gaps. Key points of note are:

- **Interdependency with integrated informatics 'cannot be overstated'** – informatics are a crucial enabler, so interactions with NHS Digital programme and issues around data security, privacy and consent are vital
- **Anticipated change the way in which medicine is delivered** from a system based on similar symptoms to one based on similar underlying causes, and with targeted treatments for different patient sub-groups
- **Firm intentions to build on the 100,000 Genomes Project** and genomic medicine centres currently focused on rare diseases and cancer
- **Maximising the value of the £15 billion annual drug spend** by using medicines more effectively as well as using other treatments, dietary and lifestyle interventions



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Next steps for NHS England

1. **Engage and involve stakeholders** - public, patients, clinicians, academics, industry
2. **Build commissioning, data and informatics infrastructure**
3. **Develop enabling framework for adoption** based on evidence, value and ethics
4. **Trial in a small number of exemplar projects** linked to clinical priority areas

The plan is to develop a system informed and shaped by research and innovation, focused on prevention and earlier detection of disease, and delivering better outcomes through new models of care. Ensuring public confidence in the use of technology and addressing concerns about data and confidentiality is seen as a priority.

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