

Making science and innovation work for health: a call to action

As we enter the run-up to the General Election, a critical priority for the new Government will be dealing with the crisis facing the NHS, not only the immediate pressures on an over-burdened service, but also the looming threat of increasing demand and spiralling costs.

Transformational change is required to address these mighty challenges, as recently called for by the House of Lords Select Committee on the Long-Term Sustainability of the NHS. As suggested in the report of an international workshop hosted by the PHG Foundation last autumn, Personalised healthcare: bringing the future into focus, radical action is needed to free up data; engage citizens; break down silos between research, clinical care and population health; and actively develop leaders to influence, inspire and motivate disruptive innovation in health systems.

Used appropriately, new and emerging science and technology offer unprecedented opportunities to help deliver change and ensure that citizens and patients reap maximum health benefits. The next Government must build on these foundations and go further to support innovative changes in health systems and engage citizens in efforts to protect and improve their health.

The priorities identified in the PHG Foundation 2015 Health Innovation Manifesto are crucial for successful change, and we draw them to the attention of aspiring governments:

INDIVIDUALS

- Place individuals at the centre of their care
- Embed personalised healthcare, including personalised prevention

Citizens and patients must be at the centre of care. Personalised healthcare offers individualised disease prevention, monitoring and treatment, informed by accurate science and enabled by new technologies. These same technologies can help deliver care in new ways both to suit the needs of a twenty-first century population, and to deliver essential NHS efficiencies, but ongoing public engagement will be essential to ensure they are put to the best use.

INFORMATION

- Champion data-sharing
- Prioritise interoperable digitisation

The next government must engage the public and champion the sharing of personal data for the public good, whilst providing proportionate safeguards. Delivery of complete, interoperable digitisation throughout the NHS is a prerequisite to making the most of big data both for clinical care and research, but resourcing suitable infrastructure

and learning systems to store, share and analyse datasets are also critical to support widespread data sharing within the NHS. Data-sharing for direct clinical care should not be compromised by safeguards surrounding data sharing for secondary research purposes: efforts in this area should build on valuable work already done by the National Data Guardian and the 100,000 Genomes Project.

INFRASTRUCTURE

- Make NHS systems and structures innovation-ready
- Provide robust support and education for health professionals
- Support NHS leaders to deliver radical transformational change

NHS and supporting systems and structures must change to allow rapid, widespread integration of genomic, biomedical and digital health technologies, and to enable patients to have increasing involvement and autonomy in their own care. Existing barriers (such as between clinical care and research, prevention and treatment and social and biological approaches to health) must be broken down. Rapid and equitable access to the best standards of care can only be delivered by streamlining the evaluation and adoption of innovations, supported by health care professionals who have sufficient education, support and incentives to make the most of new opportunities. Future leaders must be explicitly developed and nurtured who understand the need for radical transformational change and can lead in the creation of a technology-enabled, people-driven NHS

Finally, it is vital that the UK retains its global eminence in not only developing but also making use of innovative technologies for health. Brexit poses valid concerns that will need to be addressed as a matter of urgency, to ensure that the UK can attract and retain the best scientific and medical talent. It will also be important to swiftly clarify regulatory requirements for biomedical, pharmaceutical and technological research pertaining to health.

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