The art of the possible: Deploying a new pharmaceutical product London-wide while generating real-world evidence and pharmacogenomic insight

The London Life Sciences Strategy offers the potential to accelerate adoption of new pharmaceutical products and leverage London's unique data assets and diverse population to generate insights through real-world evaluation of the health economics and outcomes for patients to inform adoption elsewhere

Starting point

- London has a diverse population and established genetic screening programme making findings applicable worldwide
  - Diverse population with over 100 diasporas from around the world and 63% identifying as other than white british[1]
  - Established biobanks including at Genomics England with >500,000 genomes sequenced[2] including globally underrepresented populations[3]
- London has successfully deployed programmes of care for monogenic conditions such as familial hypercholesterolaemia[4]
- London has designed care pathways, primary care and prevention programmes integrating complex risk scoring and patient identification such as the Million Hearts and Minds Programme[5]

Potential new programme

- New pharmaceutical products often face challenges translating value from phase III trials into real-world settings where patients are not treatment-naive, may have co-morbidities and variable pharmacogenomics
- A London-wide pharmacogenomics programme could be developed to deploy new products while generating evidence for market access elsewhere in the UK and internationally
- Key elements of such a programme could be:

a. Innovative multi-year funding for deployment (multiple sources)

b. Coordinated deployment support with risk-sharing arrangements

c. Combining OneLondon health data with genomics data

How the London Life Sciences Strategy would help deployments such as these…

- **Innovation Funding:** Rapid deployment of a new product could be co-funded by:
  - London commissioners (Integrated Care Boards)
  - Research funding (NIHR and manufacturer)
  - London Health Innovation Fund
- **Contracting and procurement:** Coordination of contracting to generate a fully-joined up service across London
  - London-wide contract on product pricing / supply
  - Coordinated and aligned service specification and costing (e.g. new contracts for providers) managed across London via adoption hubs
- **MHRA regulatory sandbox:** more rapid regulatory approach to AI tools for patient identification
- **OneLondon Integrated Health data:** Core data for Real-world evidence (RWE) and Health Economics and Outcomes Research (HEOR) are available via the OneLondon healthcare data programme with support for industry partners access and use it safely – including:
  - Linked primary care data, prescribing data and outcomes for the whole population
  - Genomics data (primary sequence, linkage studies, and functional genomics) for samples of the population
- **Health Innovation Information Exchange:** Support for companies seeking to expand operations in London provided via this programme from Mayor's office alongside support navigating the London health and care system

Sources: 1. UK Census 2021; 2.Genomics England; 3. Example: East London Genes and Health project enrolled 75,000 people from Bangladeshi and Pakistani communities; 4. Example: Programme led by UCLPartners to identify and treat patients in North London; 5. London Association of Directors of Public Health;