# AI個資爭議在英國與歐盟的經驗

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TECHNOLOGY NEWS 29 April 2016

# Revealed: Google AI has access to huge haul of NHS patient data

A data-sharing agreement obtained by **New Scientist** shows that Google DeepMind's collaboration with the NHS goes far beyond what it has publicly announced



Gathering information
Oli Scarff/AFP/Getty Images

# ico.
Information Commissioner's Office

The UK's independent authority set up to uphold information rights in the public interest, promoting openness by public bodies and data privacy for individuals.

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# Royal Free - Google DeepMind trial failed to comply with data protection law

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Date    **03 July 2017**

Type    **News**

The ICO has ruled the Royal Free NHS Foundation Trust failed to comply with the Data Protection Act when it provided patient details to Google DeepMind.

The Trust provided personal data of around 1.6 million patients as part of a trial to test an alert, diagnosis and detection system for acute kidney injury.
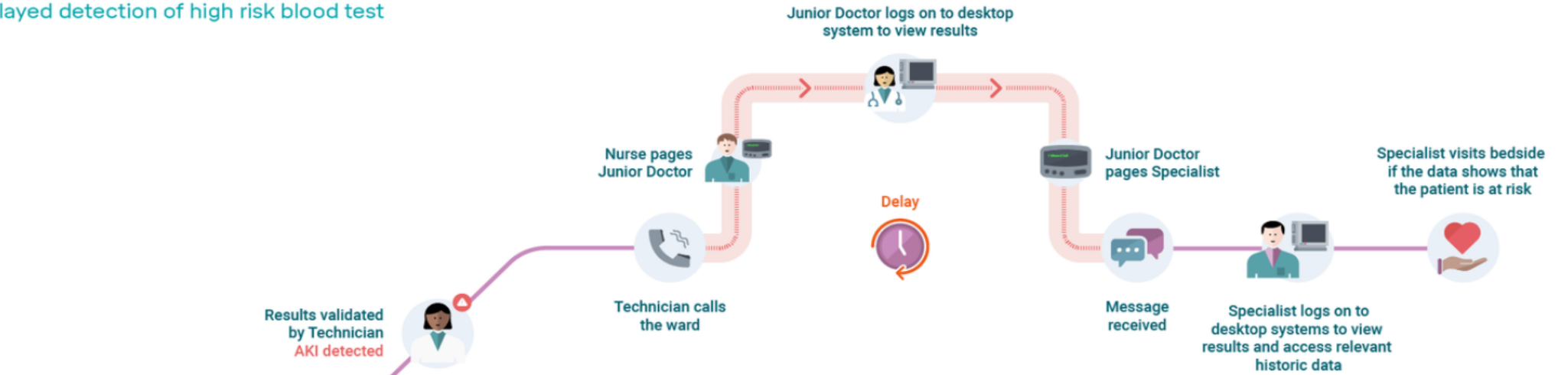
But an ICO investigation found several shortcomings in how the data was handled, including that patients were not adequately informed that their data would be used as part of the test.
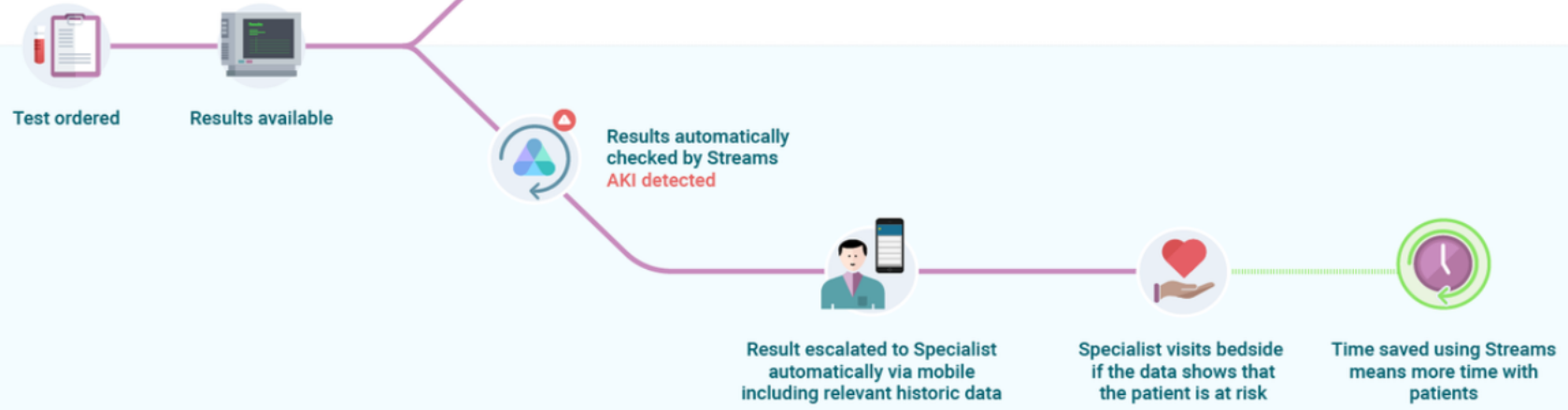
# ROYAL FREE HOSPITAL- GOOGLE DEEPMIND

- UK's Information's Office (ICO) ruled that the Royal free London, National Health Service (NHS) Foundation Trust **failed to** comply with the Data Protection Rule. (July 2017)

- Information Sharing Agreement (Sep 2015)

- DeepMind would process patient records in the past 5 years with personal identifiable information held by Royal Free to develop a new smartphone app called "Streams".

- DeepMind had received 1.6 million patient records without patients' consent

- No prior consulting to relevant regulatory bodies (ICO, HRA)

## Delayed detection of high risk blood test

Junior Doctor logs on to desktop system to view results

Nurse pages Junior Doctor

Delay

Junior Doctor pages Specialist

Specialist visits bedside if the data shows that the patient is at risk

Technician calls the ward

Results validated by Technician
AKI detected

Message received

Specialist logs on to desktop systems to view results and access relevant historic data

Test ordered

Results available

Results automatically checked by Streams
AKI detected

Result escalated to Specialist automatically via mobile including relevant historic data

Specialist visits bedside if the data shows that the patient is at risk

Time saved using Streams means more time with patients

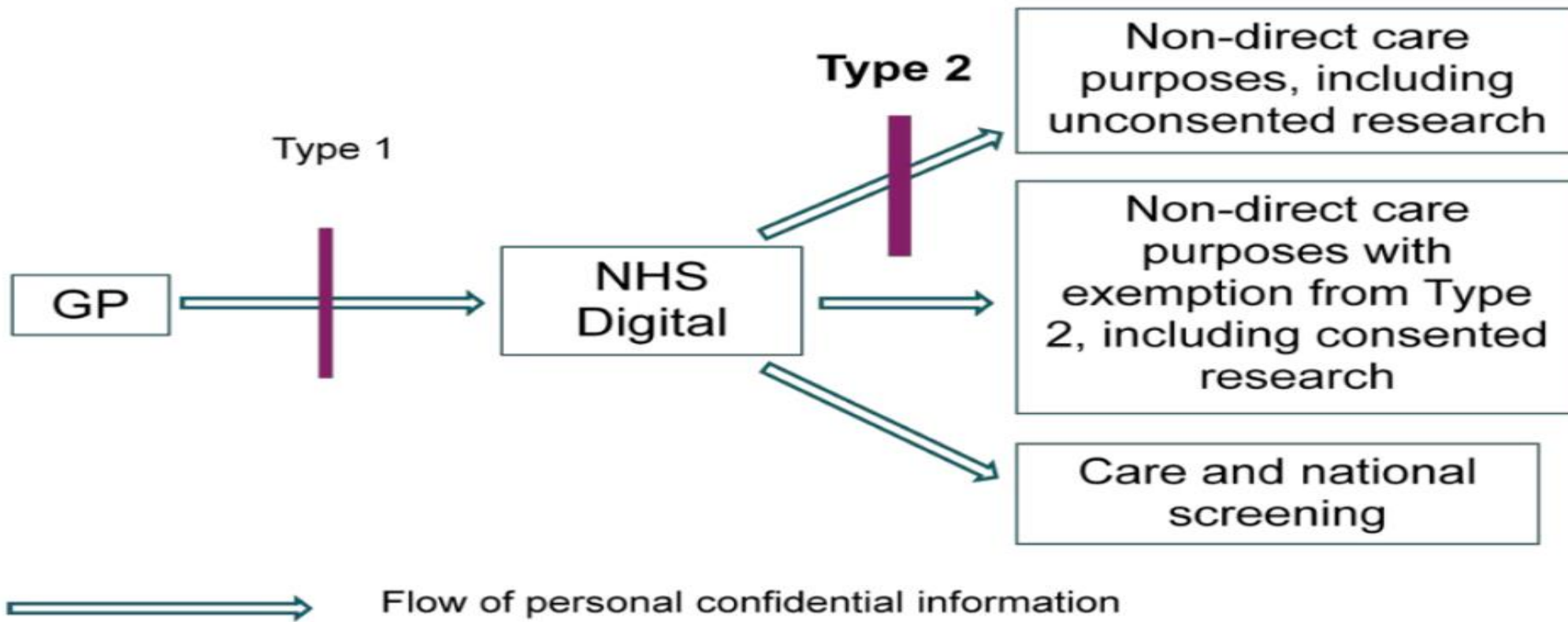## Accelerated detection and direct notification

# INFORMATION COMMISSIONER'S OFFICE (ICO)

- Data transfer without explicit consent

- No privacy impact assessment had been carried out

- The scope of data transfer was too much extended

- Data Controller (Royal Free) vs Data Processor (DeepMind)

- DeepMind:

  (a) direct care (no explicit consent required)

  (b) the app would not apply any of the machine learning or AI techniques.

# THE CONCERNS FROM THE SOCIETY

● Care. Data Programme (2014)

● DeepMind was able to access **all data stored at the Secondary User Service (SUS) database** as there is no separate dataset for kidney conditions, including sensitive data and day-to-day hospital activity

● Opt out issue: patients need to write to GP for opting out from the SUS database.

● Data could be used to build other tools: Google DeepMind refuse to discuss what other tools it could build based on the data

● Transparency & Accountability

Type 1

Type 2

GP → NHS Digital

Non-direct care purposes, including unconsented research

Non-direct care purposes with exemption from Type 2, including consented research

Care and national screening

→ Flow of personal confidential information

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- Transparency & Accountability

- Data monopoly by Mergers and Acquisitions

# AI AND PRIVACY

- AI system depends on ingesting as much training data as possible— it is adverse to the goals of privacy for data minimisation.

- Privacy impact assessment -- Q: how do we value fairness and accuracy in the assessment?

- Adaptive algorithms are changing constantly, and even the designer may not fully explain the results they generate.

- Q: the right to explanation under the EU GDPR?

- Transparent + Comprehensible

# THANK YOU FOR YOUR ATTENTION