



# Healthcare Conference 2022

17 - 18 March 2022 | QEII Centre, London

## UDI and traceability

#bettercarecostsless

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## The importance of accurate data and data capture

**Professor Sir Terence Stephenson**

Chair of the Health Research Authority

#bettercarecostsless



# **‘The importance of accurate data and data capture’**

## **GS1 – March 2022**

**Professor Sir Terence Stephenson**

**Nuffield Professor, Institute of Child Health, University College London  
Consultant Paediatrician UCLH & Great Ormond Street Hospital, London**

**Chair of the Health Research Authority for England 2019-22**

**Former Chair of UK GMC 2015-18**

**Past-President UK Royal College of Paediatrics & Child Health 2009-12**



Українська Академія Педіатрії  
Союз Медичних Спеціальностей

2-3 жовтня 2020

IV-Й МІЖНАРОДНИЙ ПЕДІАТРИЧНИЙ  
УКРАЇНСЬКО-ЛИТОВСЬКО-ПОЛЬСЬКО-ГРУЗИНСЬКИЙ  
КОНГРЕС "ЗДОРОВ'Я ДИТИНИ"

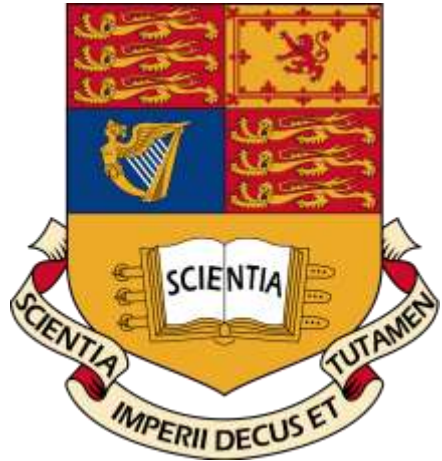


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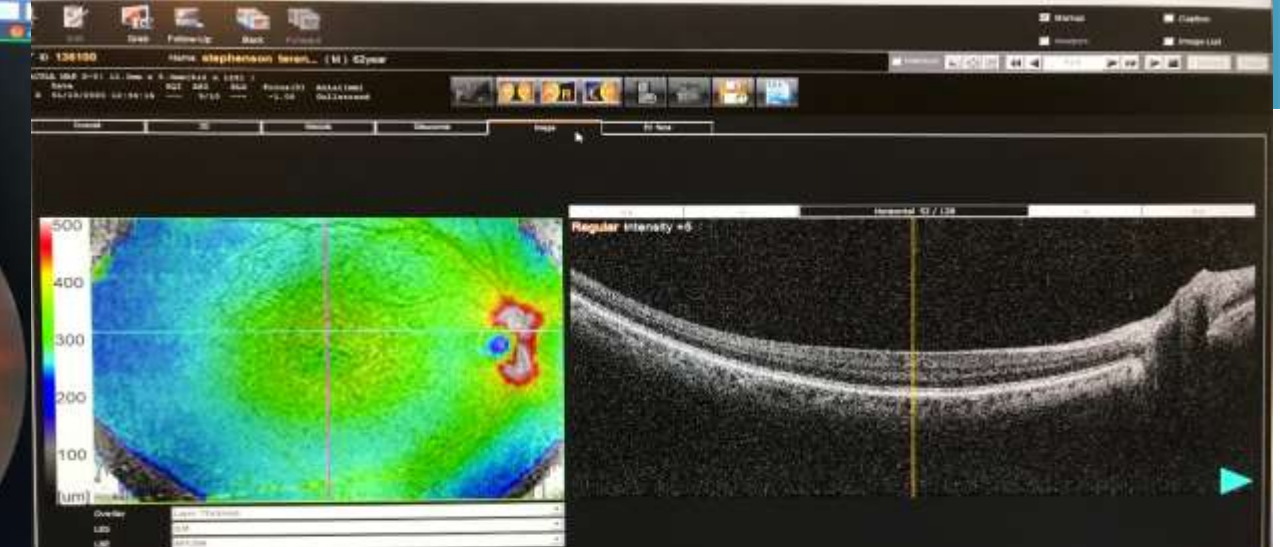
**"The past is a foreign country: they do things differently there."**

## World's 5 biggest companies all use Big Data

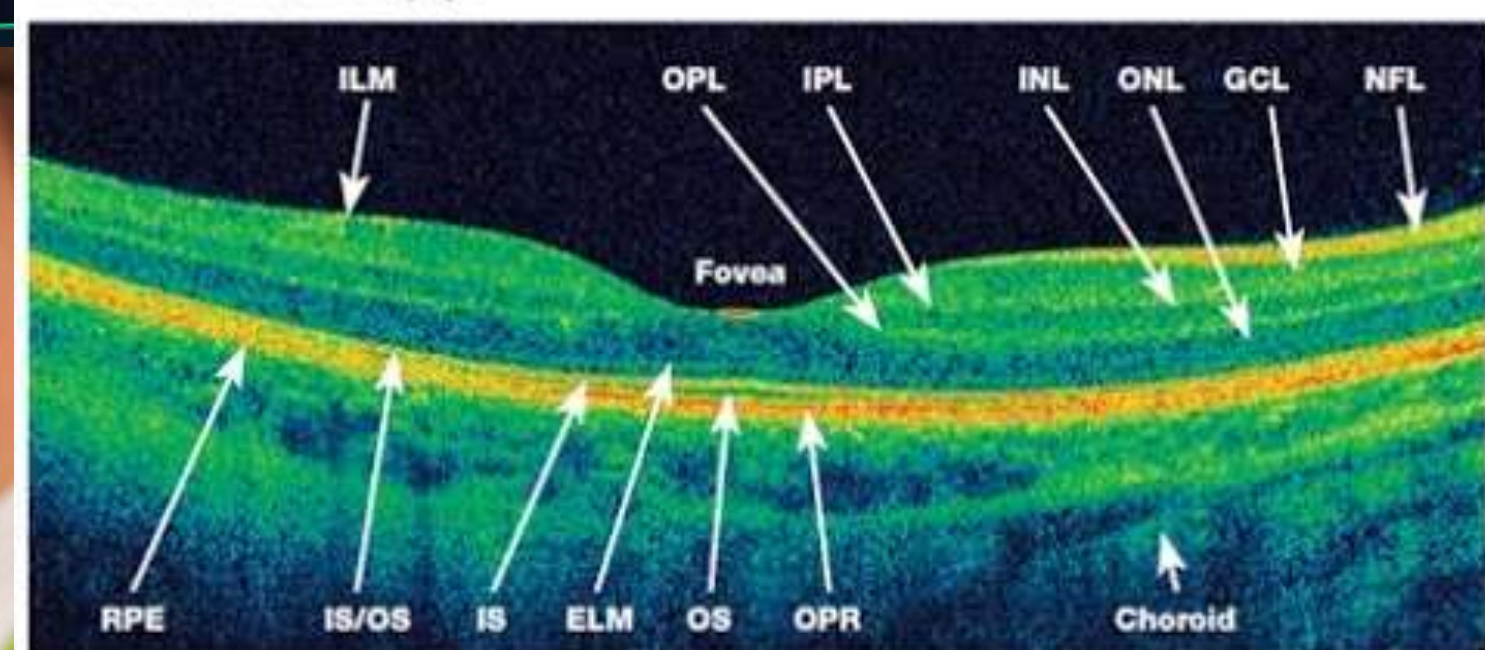
- By 2020, an average UK hospital generated 1000 terabytes/year = 1 petabyte
- 1 petabyte of music would take 2000 years to play on an MP3 player
- 90% of the world's data generated in the last 2 years



**amazon**



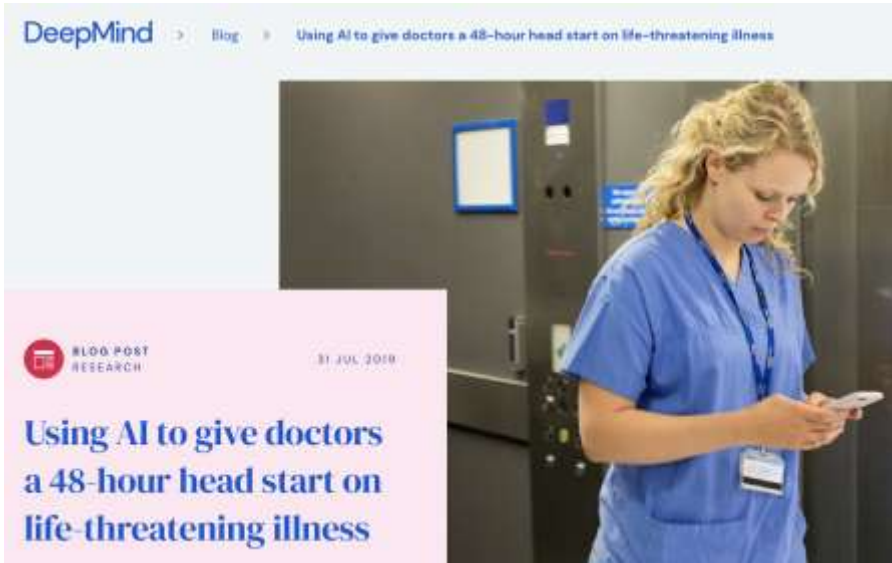
An HD-OCT scan of a healthy eye:



**NFL:** Nerve fiber layer      **OPL:** Outer plexiform layer      **IS/OS:** Interface between IS and OS  
**ILM:** Inner limiting membrane      **ONL:** Outer nuclear layer      **RPE:** Retinal pigment epithelium

# “JAW-DROPPING” DEEPMIND ALGORITHM ON PAR WITH RETINAL SPECIALISTS

Preliminary results indicate AI technology used to analyse OCT scans can diagnose eye disease with the same skill as world-leading clinicians  
 15 Aug 2018 | by Selina Powell, Laurence Derbyshire



npj | Digital Medicine

ARTICLE OPEN

## Evaluation of a digitally-enabled care pathway for acute kidney injury management in hospital emergency admissions

Alistair Connell<sup>1,2</sup>, Hugh Montgomery<sup>1</sup>, Peter Martin<sup>3</sup>, Claire Nightingale<sup>5,4</sup>, Omid Sadeghi-Alavijeh<sup>5</sup>, Dominic King<sup>2</sup>, Alan Karthikesalingam<sup>2</sup>, Cian Hughes<sup>2</sup>, Trevor Back<sup>2</sup>, Kareem Ayoub<sup>2</sup>, Mustafa Suleyman<sup>2</sup>, Gareth Jones<sup>5</sup>, Jennifer Cross<sup>5</sup>, Sarah Stanley<sup>5</sup>, Mary Emerson<sup>5</sup>, Charles Merrick<sup>5</sup>, Geraint Rees<sup>6</sup>, Chris Laing<sup>5,7</sup> and Rosalind Raine<sup>5</sup>

local care



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[Google DeepMind: Q&A](#)

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[Privacy Impact Assessment extension of access to Streams for clinicians at Barnet Hospital](#)

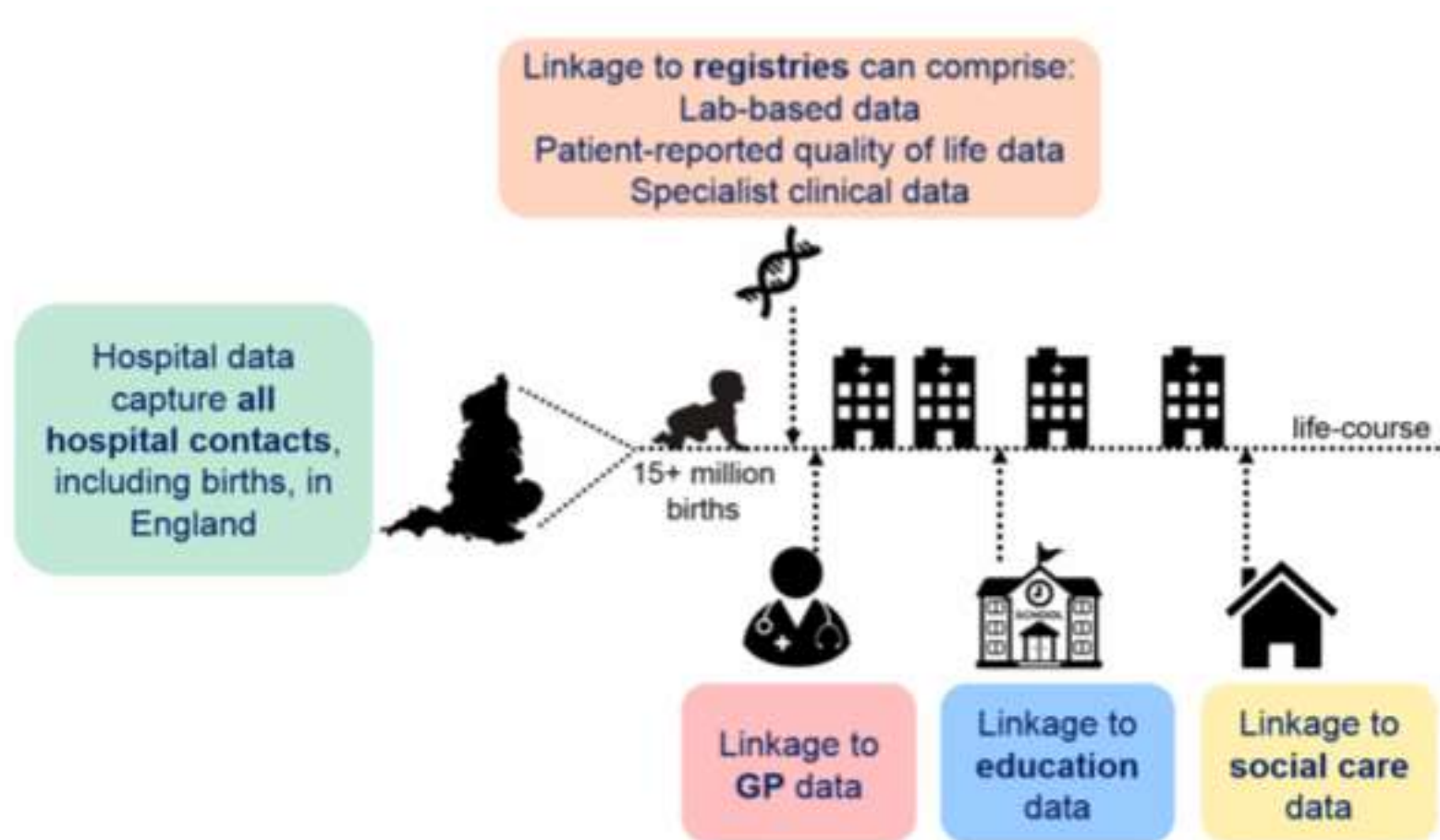
[How we use and share your information](#)



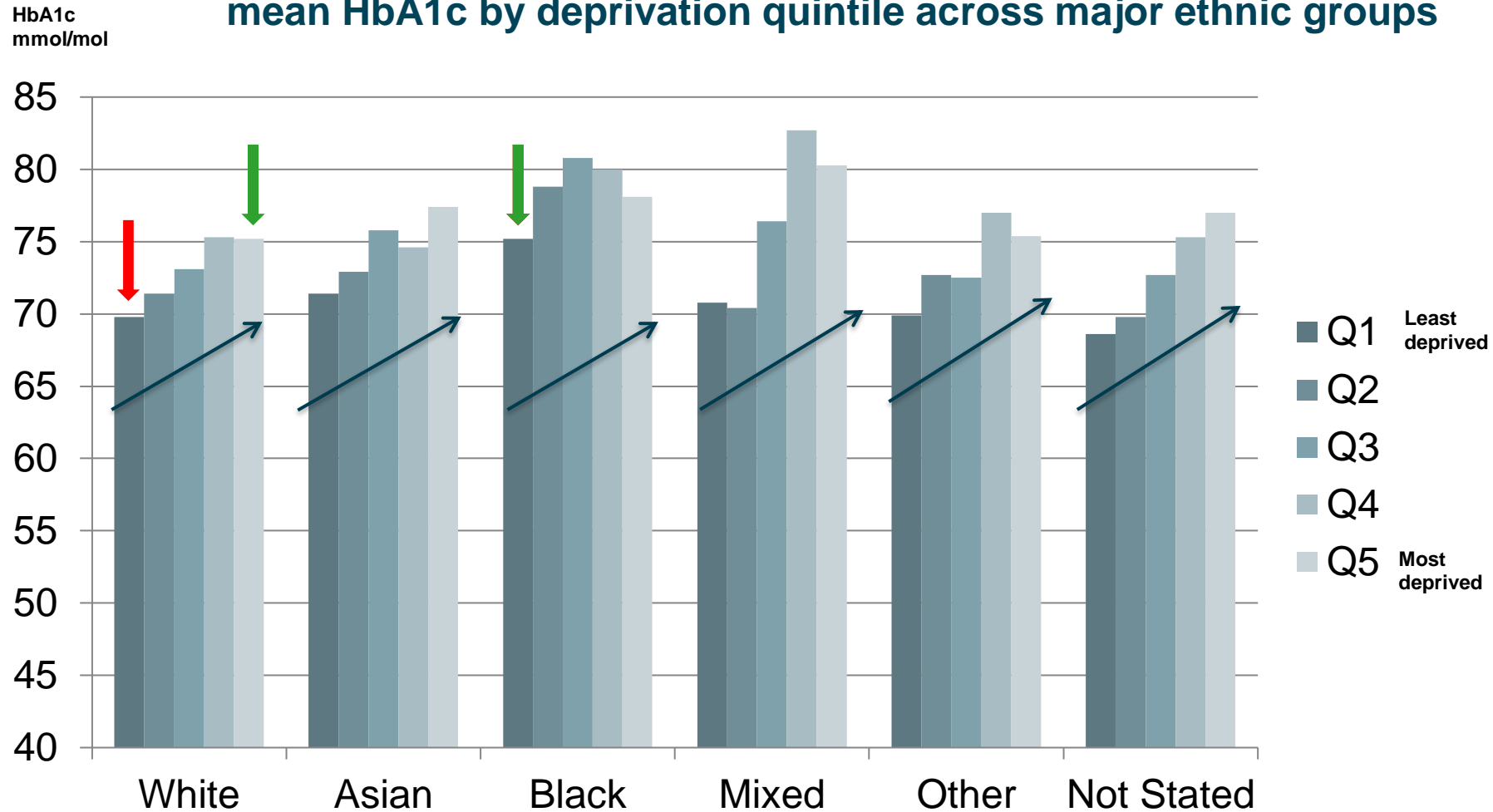
DeepMind



# Data collection to improve real time individual patient care



## Data collection to improve national patient care: Inequalities in glycaemic control in Children from the national type 1 diabetes audit - mean HbA1c by deprivation quintile across major ethnic groups

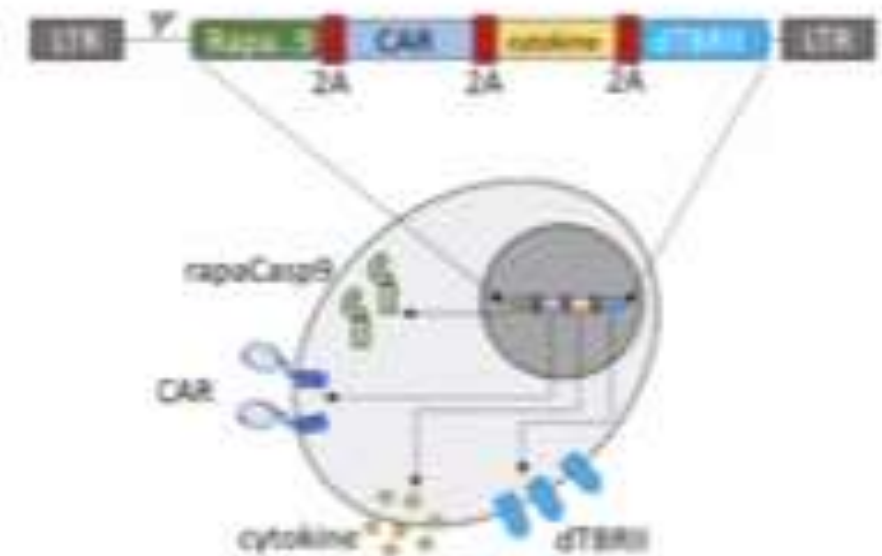
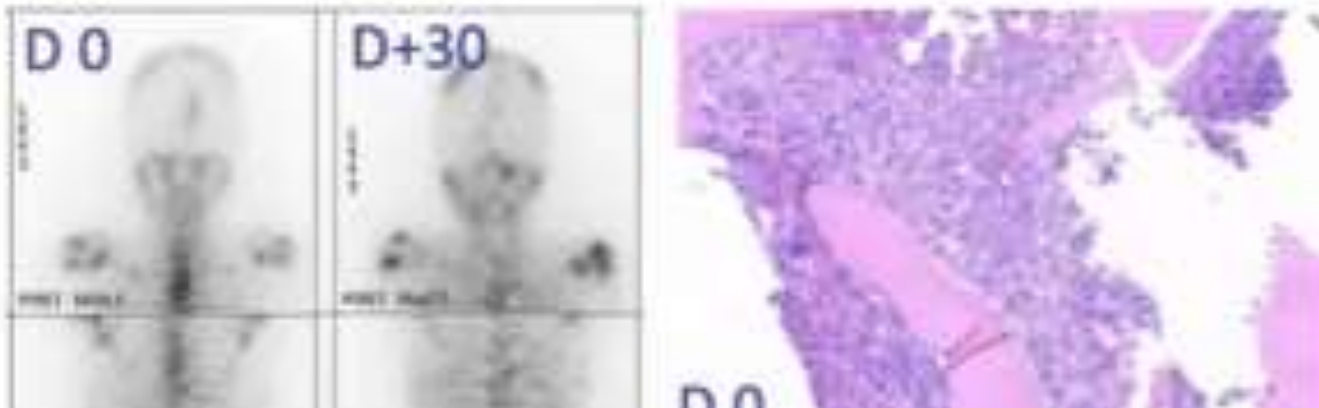


## Data collection for personalised medicine

SCIENCE TRANSLATIONAL MEDICINE | RESEARCH ARTICLE

CANCER

### Antitumor activity without on-target off-tumor toxicity of GD2-chimeric antigen receptor T cells in patients with neuroblastoma



## **Data collection to make healthcare safer**

## Bungling doctors drilled into the wrong side of a patient's HEAD as list reveals shocking mistakes cost NHS£10million in compensation every year

- One patient had her fallopian tube removed instead of her appendix
- In another medical mishap, a surgeon cut into the wrong testicle of patient
- Such incidents are described as 'never events' and cost the NHS millions
- The NHS defines these as 'wholly preventable' but harmful incidents
- According to latest figures, 345 never events have been reported this year

By [SHARI MILLER FOR MAILONLINE](#)

PUBLISHED: 16:07, 20 November 2016 | UPDATED: 16:16, 20 November 2016



© Alamy Stock Photo



Medical blunders: 345 so-called 'never events' have been reported to the NHS so far in 2016

A Freedom of Information Act disclosure from health watchdog NHS Improvement, also found that of the cases reported this year, 137 related to doctors operating on the wrong part of the body.

Another 83 relate to an item left by accident inside a patient.

# Is the NHS safe?

- **Of the top 20 risk factors for all deaths, adverse in-hospital healthcare events come eleventh – above alcohol, drugs, violence and road traffic accidents.**
- **In the NHS each year there are: 624 million prescriptions, 300 million GP visits, 2.9 million emergency ambulance calls, and an estimated 900,000 adverse events.**
- **Every week – two wrong site surgeries and two operations with kit wrongly left inside.**
- **wrong site/retained foreign body/wrong implant = 79%; Medication error causing harm = 12%**
- **Adverse events (unintended injury caused by medical management rather than disease) lead to an additional three million NHS bed days. Costing at least £1 billion a year.**

2010 MHRA safety alert: metal-on-metal hip replacements

2010 MHRA safety alert: PIP silicone implants



**Review of Medical Devices for the Medicines &  
Healthcare products Regulatory Authority (MHRA),  
Jan 2014**

**Expert Clinical  
Advice – MHRA  
Medical Devices**

Report of the independent review on MHRA access to clinical advice and engagement with the clinical community in relation to medical devices.

Professor Terence Stephenson



# Review of Medical Devices for the Medicines & Healthcare products Regulatory Authority (MHRA), Jan 2014

## Recommendations:

- all implanted devices should have a Unique Device Identifier (UDI) linked to a Unique Patient Identifier (NHS number) through an e-patient record.
- ‘One Click’ reporting system for device ‘incidents’:
  - UDI
  - The problem
  - The reporter’s email address

## Cumberlege Report

**“Medicine used to be simple, ineffective and relatively safe. It is now complex, effective and potentially dangerous”**

**Professor Sir Cyril Chantler**

# **First Do No Harm**

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**The report of the Independent  
Medicines and Medical Devices  
Safety Review**

# Cumberlege Report

## Theme 9: 'Collect once, use often' – Data capture and the electronic record

*'Collect once, use often...'*

**Matt James, CEO of the Patient Healthcare Information Network (PHIN)**

the *'collect once, use often'* approach to data collection. **As a minimum every interaction the patient has with a health service provider should be captured once by one or other data subset, ideally in the electronic health record, with the NHS number acting as the consistent data field that enables those subsets to be linked.**

**Recommendation 7:** A central patient-identifiable database should be created by collecting key details of the implantation of all devices at the time of the operation. This can then be linked to specifically created registers to research and audit the outcomes both in terms of the device safety and patient reported outcomes measures.

# WHO safety initiatives

- **Flagship = handwashing**
- **Medicines safety could have had barcoding as a flagship but not taken forward by Essential medicines division of WHO**
- **Surgical checklist = Atul Gawande**









Health

## Breast implants and other medical items get safety barcodes

25 December 2015 | Health



Barcodes are being printed on breast implants and other medical items for patient safety reasons.

The Department of Health initiative is to avoid future scandals like the PIP breast implant scare of 2010.

Problems arose tracing nearly 50,000 British women who had been fitted with the faulty silicone implants.

The new system is intended to record every medicine and implant given to patients by scanning the product packet and the patient's identity wristband.

Health Secretary Jeremy Hunt said: "This can actually save lives for the NHS."

## NHS trials barcode system to reduce mistakes during treatments

The Health Secretary hopes the technology could one day help reduce the 150 avoidable deaths that happen every week in the NHS.



The barcodes would be attached to everything - including equipment, doctors and patients.

News

## Barcoding breast implants and hip replacements 'could save NHS £1bn'

share 3 Comments



by cutting your mortgage payments

Your home may be repossessed if you do not keep up repayments on your mortgage. HSBC

**THE REVOLUTION IS COMING AND IT'S GLAZED WITH HONEY AND MUSTARD!**

Find out more

Top Stories

Brexit de means U must lea single m:

## Breast implants are being given barcodes by the NHS in an attempt to 'revolutionise' patient safety by being able to track them in case they are faulty

- The Department of Health will give every surgical item a barcode to track it
- Products are scanned alongside a patient's wristband to match them together
- It is hoped the £12 million system will help to prevent any possible human errors
- Early results from 6 pilot NHS hospitals suggest it has the potential to save lives
- And it may also help the health service save up to £1 billion over the next 7 years



# Reducing the % – worthwhile?

If 99.9% were good enough...

- Major plane crash every 3 days
- 12 babies given to wrong parents every day
- 37,000 ATM errors every hour

*Institute for Healthcare Improvement  
(data relate to US population)*



# Pre-COVID pandemic, for NHS England:

- The NHS dealt with over 1 million patients every 36 hours
- There were 10 million operations per year
- There were over 20 million attendances at Accident & Emergency departments each year
- There were 16 million hospital admissions per year
- There were 85 million outpatients seen per year

**Real-world evidence from many hospitals on how the unique identification of every person, every product and every place can help NHS hospitals enhance patient safety, reduce unwarranted clinical variation and improve operational efficiency**



**THANK YOU**