

# CPRD

## Clinical Practice Research Datalink

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NCIN

June 2012

**Simon Davies**  
**CEO of Teenage Cancer Trust**

“spoke to us recently about  
changing  
the current clinical trial system  
to auto-enrol recently diagnosed patients, .....

**John Parkinson  
of CPRD**

“spoke to us recently about  
changing  
the current clinical trial system

to randomise patients in everyday clinical care

And

to maximally link patients EHR with clinical trial  
databases

And

to ensure that all clinical trials are fully

E

Quality • NHS Clinical • Linkage • Real world • Randomised • PROs • Population 52M+



# Welcome to the world of CPRD

**MHRA** Medicines and Healthcare products  
Regulatory Agency

**NHS**  
National Institute for  
Health Research



**GPRD<sup>+</sup>**

**GPRD<sup>+</sup>**

**Excellence in Public Health Research**




**CPRD**  
MORE DIMENSIONS TO DATA

**Clinical Practice Research Datalink**

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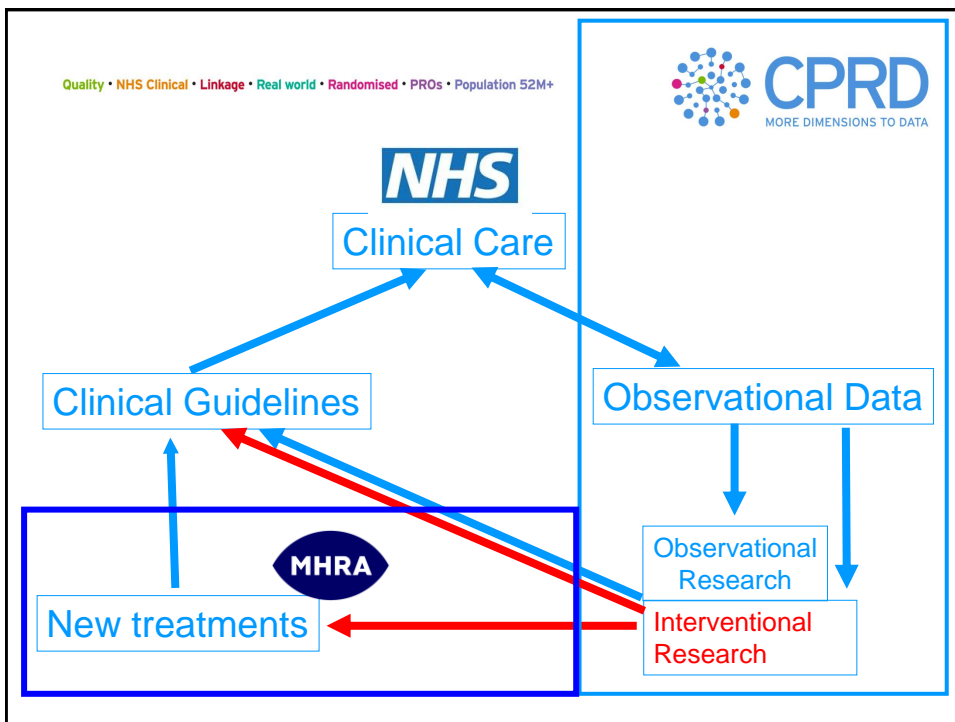


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# CPRD – more dimensions to data

- Quality** Metrics and validation, Gold and Silver, metadata
- NHS Clinical** Gatekeeper approach, universal, free at point of care
- Linkage** Unique, universally adopted NHS number
- Real World** Well coded data
- Randomised** Point of Care and P3/4 trials
- PROs** NHS and specifically collected
- 52M+** Large population, age, sex, s-e class, ethnicity  
Many national datasets




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# Unlocking the potential of NHS Patient Data in Research

+ other


**Observational & Interventional**



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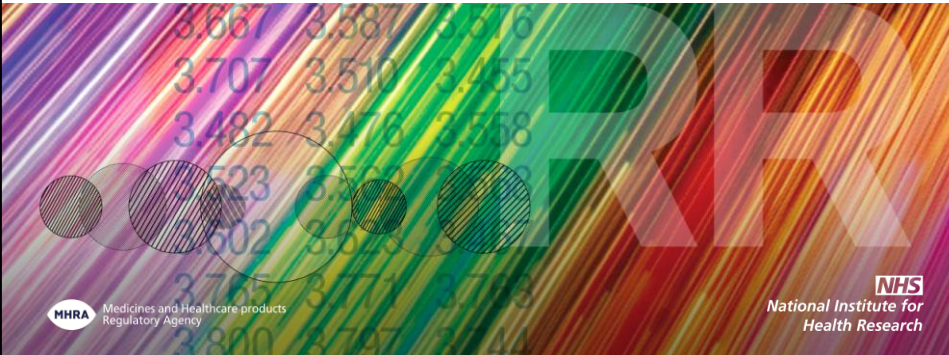
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## Other Data


Any data, included in an approved protocol  
...Tesco Club Card data?  
...environmental data



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**All England 52 million**  
+ 12 million – Scotland, Wales and NI.  
by agreement


**Incremental approach**



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**UK wide data**

Rare diseases and outcomes  
Risk Management Tracking new products  
4 nation studies (NICE and SMC)

?

A big data study  
Many confounding factors  
BIAS  
Poor data quality



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**NHS** National Institute for Health Research

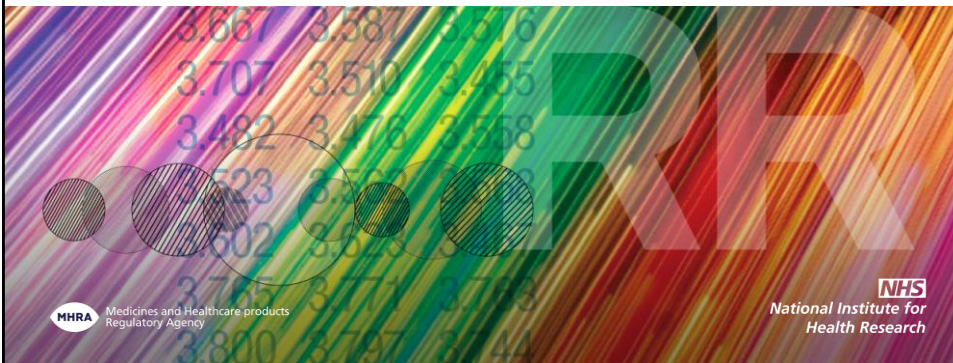
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# Health and Wealth Agenda

All research studies benefit the NHS in some way

CPRD welcomes research from Pharma, Biotech, Devices & CROs



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**Partnerships**  
• **NIHR**

- NHS Research Networks
- Topic specific Diabetes, Mental Health, Children, Cancer, Stroke, Neurod.
- Primary Care
- Comprehensive.
- Thousands of **Researchers**
- Thousands of **Sites**
- Detailed and specific **expertise**

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**CPRD...NCIN**

- Specialists
- Centers
- Knowledge synergy



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## CPRD – 3 key services

- **Real world data and linked data**
  - NHS
  - Social Care
  - Other health related
- **Interventional**
  - Clinical Trials
  - PROs
  - Bio-samples

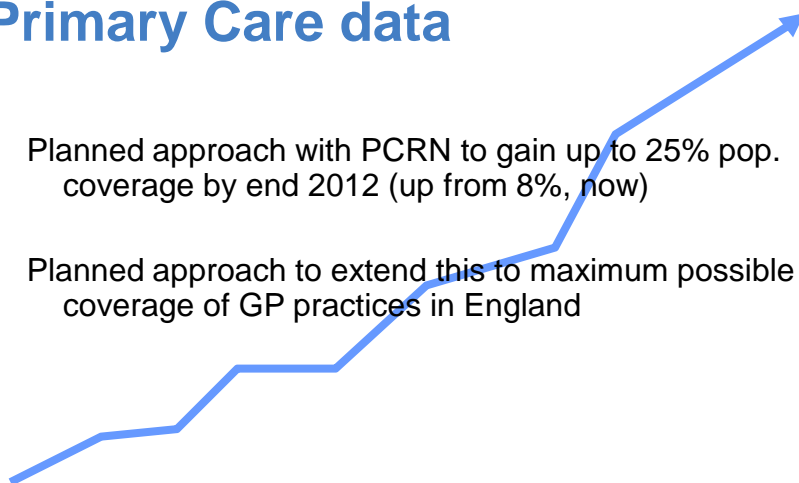
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## Primary Care data

Planned approach with PCRN to gain up to 25% pop. coverage by end 2012 (up from 8%, now)

Planned approach to extend this to maximum possible coverage of GP practices in England

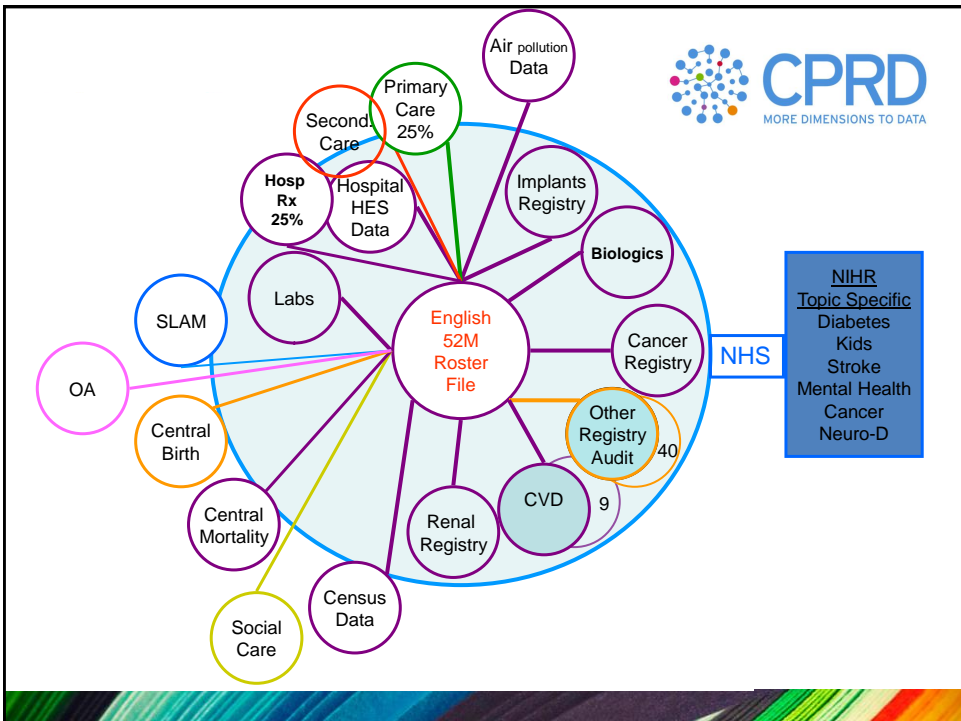


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## Secondary care

- All Hospital (HES) data
- + all drugs in hospital (not ward trolley)
- + cancer registry data
- + **new** cancer administered drugs
  
- + other audit or disease registers
- + environmental data (air pollution)
- + ?




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## CPRD Data access

Gp OnLine Data	Data Cuts based upon cohort
<b>GOLD</b>	GP Data Cut <b>SILVER</b>
+ For added Power	+ detailed Hospital Data HES
	+ Disease Regs.
	+ Audit data
	+ other

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## CPRD TRACK-marts

- Pregnancy
- Children
- Drug Track
- Device Track
- Cohort Track
- Cost Track
- Vac Track
- Niche Track
- PRO Track

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# CPRD Interventional

efficiency

- \* Clinical Trials
- Working in partnership with NIHR

## Point of Care randomisation

### eCRF P3/P4

- \* Samples
- \* PRO collections enabled



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# CPRD Point of Care randomisation

In one GP EHR - InPS  
On-going inclusion in EMIS/TPP

- Auto-detection of patients via EHR
- On screen messages
- Randomisation
- Normal prescription
- All data in EHR

**Pragmatic randomised trials using routine electronic health records**

What to prescribe for a patient in general practice when the choice of treatments has a limited evidence base?

**Tijds-Pieter van Staa and colleagues** argue that using electronic health records to enter patients into randomised trials of treatments in real time could provide the answer.

**Introduction**

Randomised controlled trials (RCTs) are the gold standard for evaluating the effectiveness of treatments. However, they are often expensive, time-consuming, and may not reflect real-world practice. Pragmatic randomised trials, which use routine electronic health records (EHR) to identify and randomise patients, offer a more efficient and representative alternative. This approach allows for the evaluation of treatments in a real-world setting, where patients are treated according to their usual clinical practice. This method can reduce costs and increase the generalisability of trial results. However, there are challenges associated with this approach, such as ensuring data quality and maintaining patient confidentiality. Despite these challenges, pragmatic randomised trials using EHR have the potential to revolutionise clinical research by providing more timely and relevant evidence for healthcare decision-making.



# CPRD Interventional *efficiency*

Efficacy.....effectiveness....real world P3.....adaptive

**Feasibility**

Real World Data  
Powerful Tool

**Optimisation**

Real World Data  
Powerful Tool

**NIHR Sites**

**e**      **Linked**

eCRFs

→

→

→

→

→

EHR

Dash Boards

Central Recruitment  
S + P

Just in time

Low Loss  
To follow up

eGCP

Link to other data

EHR Follow up

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## CPRD Want to know more REGISTER

### Register at CPRD.com

**Medication and devices**    Drug utilisation-compliance and persistence    Pharmacovigilance    Pharmacoepidemiology    Pharmacoeconomics    Life cycle planning    Licence extension research    Comparative effectiveness research

**Clinical outcomes**    Patient Reported Outcomes

**Public health research**    Epidemiology    Health Services research    Risk management research    Risk-benefit research    Risk score development

**Cutting edge research**    Clinical trials    Genetic, geno-pheno studies

**CPRD observational data resources and services**    Disease and drug registers    Pan European and US data

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Thank you

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