



CDDF WORKSHOP

27 - 28 September 2021

ONLINE WORKSHOP

*Digital Tools and Artificial  
Intelligence in Oncology Drug  
Development*



# Digital Tools for Recruitment

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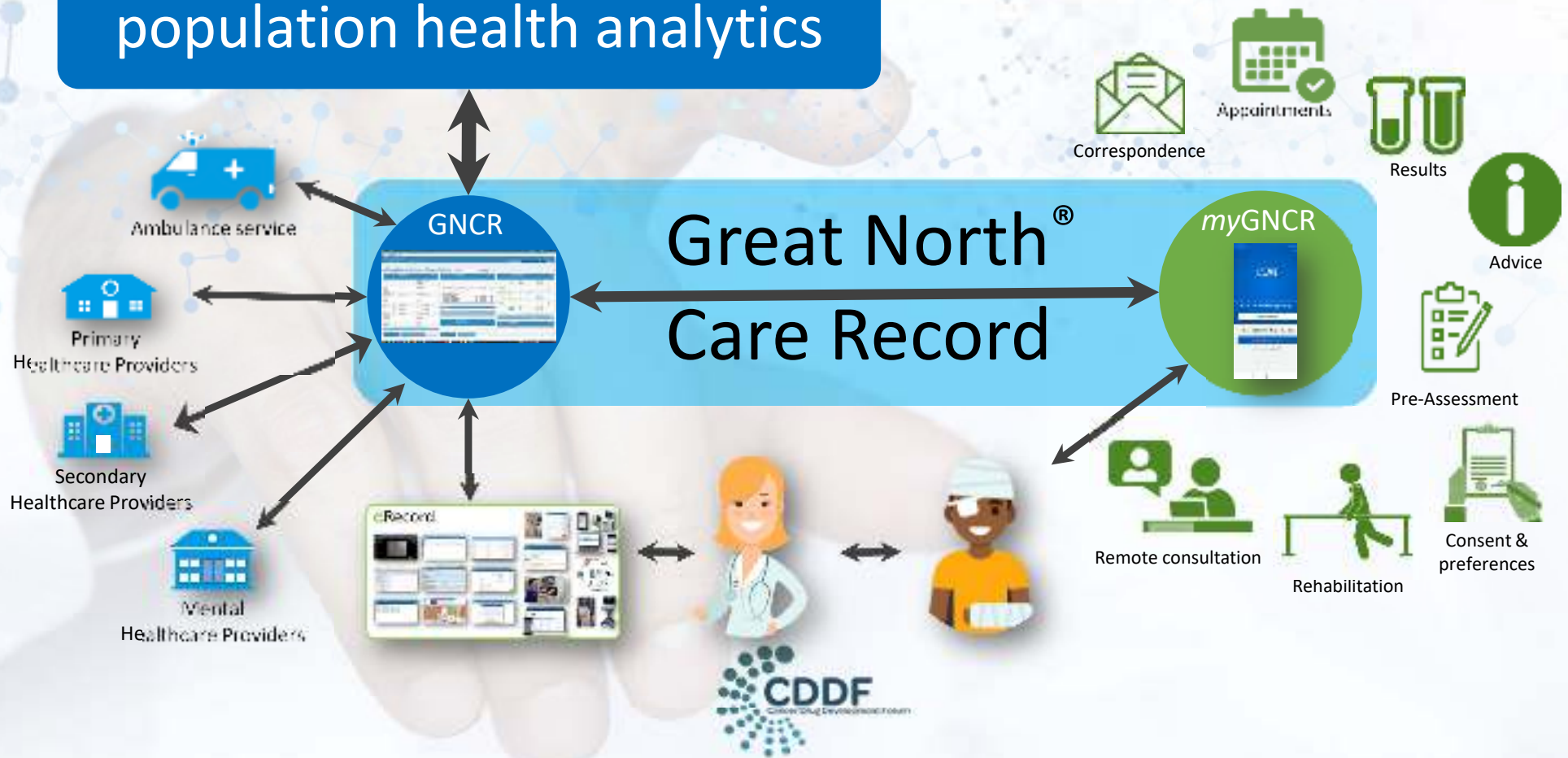
# Disclaimer

- No conflicts of interest



# digital healthcare

population health analytics



# digital opportunity



1,900,000/y

6000/day  
35,000,000

44,000  
networked  
devices

250,000/month



1,574 beds



17,000  
staff



1300  
applications



11,000  
notes/day



# digital opportunity

**3.2M** people  
**431** dental practices  
**346** GP practices  
**236** community services  
**13** local authorities  
**9** secondary care Trusts  
**8** Hospices  
**2** mental health Trusts  
**1** ambulance Trust



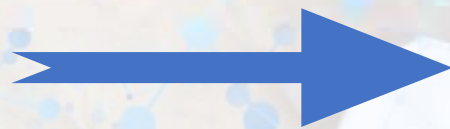
care → multiple teams, multiple sites  
collaboration > competition  
functional unit of healthcare delivery  
digital maturity = “diverse”

# digital opportunity

LIMS

PACS

DMS



numerical  
imaging  
unstructured text

extraction

sharing



information

# digital opportunity

health and social care data on citizens

available for direct patient care

available for audit

available for anonymised use with ethical approval

available for identifiable use with consent



# digital opportunity

trust of citizens  
trust of healthcare professionals  
citizen & patient consultation  
communication of risks of not sharing  
societal norms



# recruitment - feasibility

inclusion & exclusion criteria v data  
assessment of prevalence  
estimate of incidence  
sensitivity v specificity (incomplete data)  
anonymised data  
opportunity to amend trial design  
opportunity to select sites who can deliver

# prevalence

patient identification from existing records

[illegible]

Clicking the criteria on the left, highlights the evidence in the unstructured data

# recruitment - screening

preferences

patient identification from existing records



# recruitment - screening

preferences

patient identification from existing records



incidence - approach to patients  
real-time patient screening



in- and out-patient  
own and other specialities

# recruitment - screening

approach to citizens

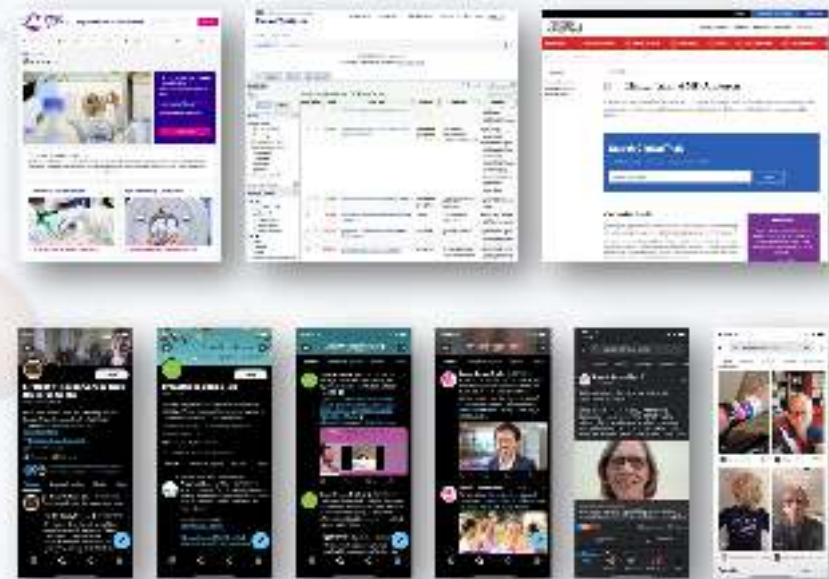
trusted websites

[cancerresearchuk.org](https://www.cancerresearchuk.org)

[clinicaltrials.gov](https://clinicaltrials.gov)

[mdanderson.org](https://www.mdanderson.org)

targeted social media





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# Conclusions



# conclusions

the data exist  
incomplete  
fragmented  
siloes  
...but can be used



# conclusions

## systematic approach to digital-enabled research

trust

citizens, patients & healthcare staff

governance

law

ethics

consent

data access



# conclusions

systematic approach to digital-enabled research

partnerships

patients

researchers

healthcare systems

IT teams (funding)

industry

systems

identification

data access



A close-up of a human hand holding a white rectangular sign with rounded corners. The sign is tilted upwards and to the right. The word 'OPPORTUNITY' is written on the sign in large, bold, blue capital letters. The background is a light blue with faint, abstract molecular or network-like patterns.

**thank you for  
your attention**