

Can data save healthcare

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IBM



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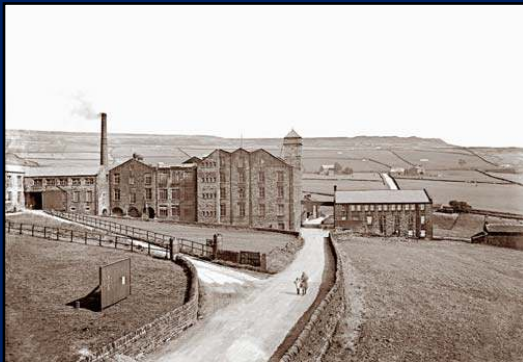
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Quadruple aim



Sikka et al (2015) BMJ Quality and Safety - <http://qualitysafety.bmj.com/content/early/2015/06/02/bmjqs-2015-004160.full>

Hebden Bridge

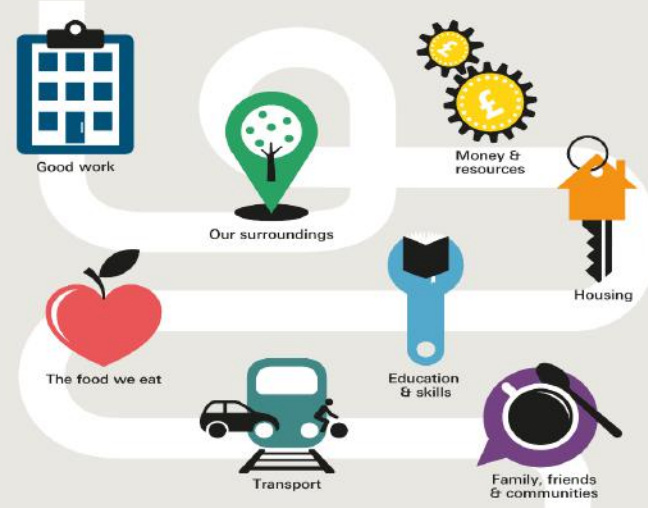


What makes us healthy?

AS LITTLE AS

10% of a population's health and wellbeing is linked to access to health care.

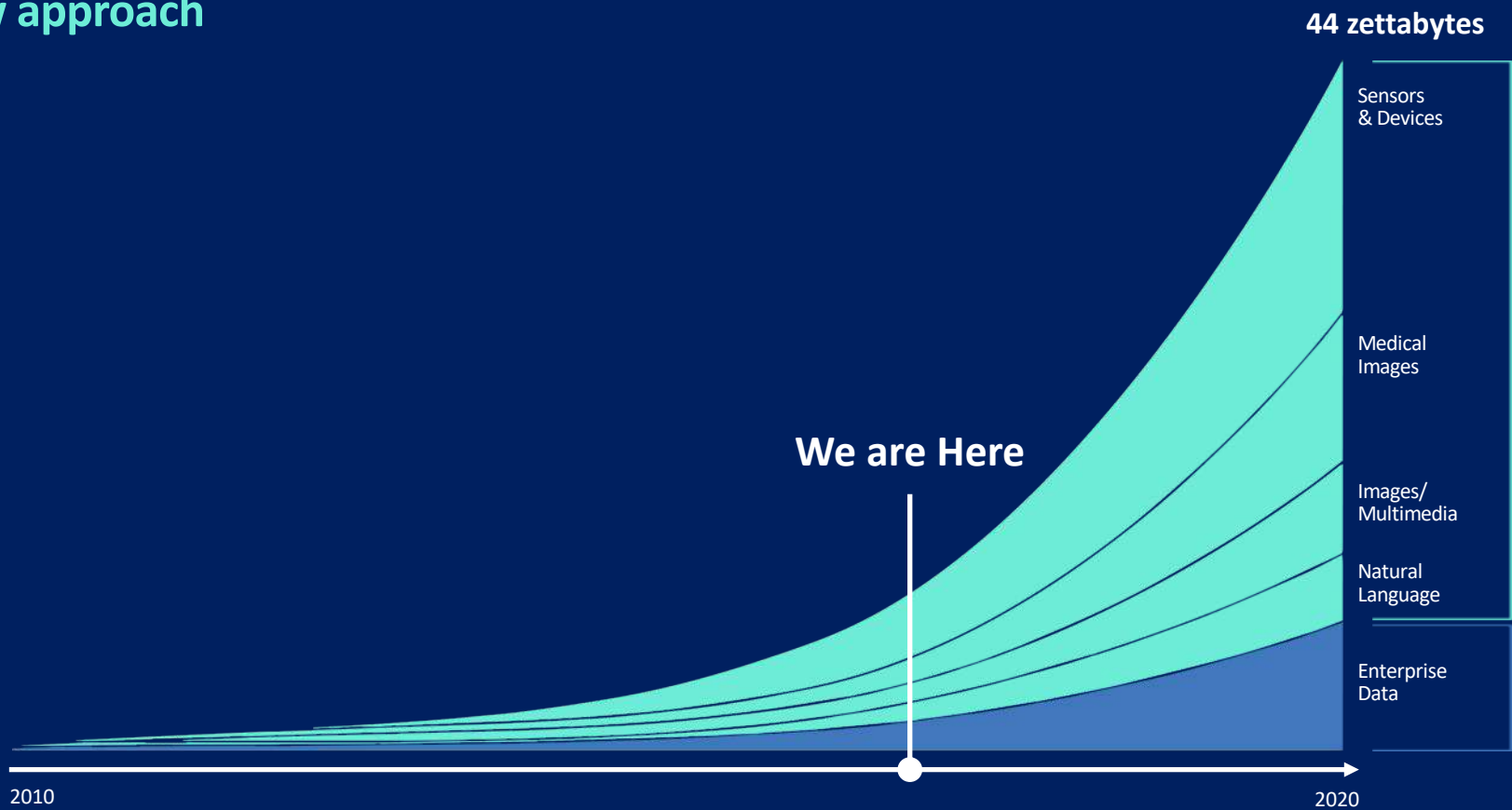
We need to look at the bigger picture:



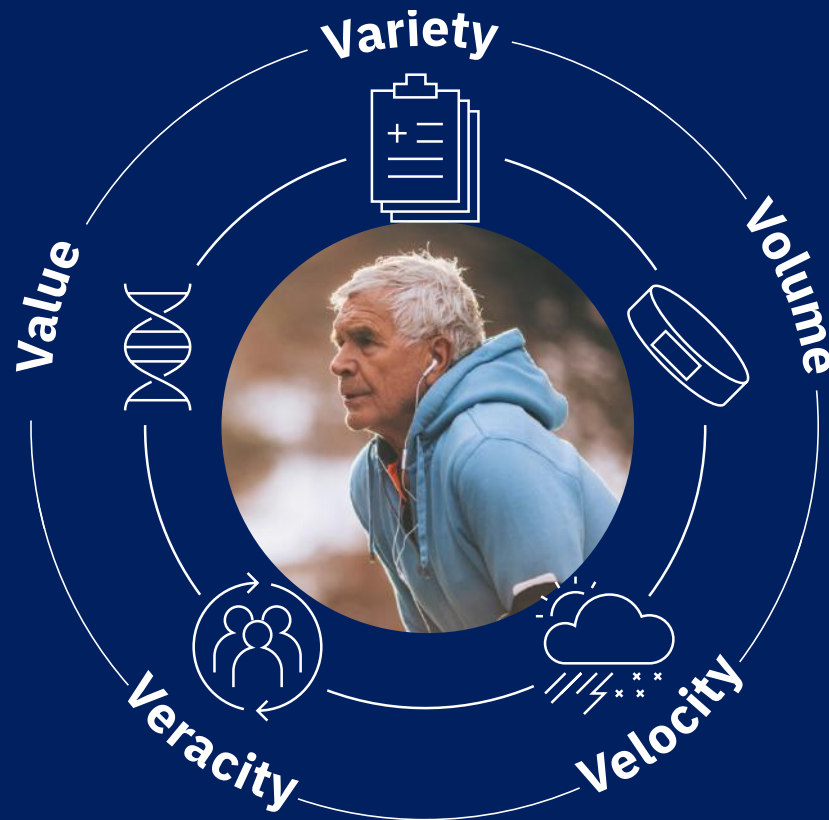
But the picture isn't the same for everyone.

The healthy life expectancy gap between the most and least deprived areas in the UK is: **19** YEARS

Growing data volume and complexity demands a new approach



How to Translate “Big Data” to “Actionable Insights”...



Definition of Population Health

...is an approach aimed at **improving the health of an entire population**

It is about improving the physical and mental health outcomes and wellbeing of people, whilst reducing health inequalities within and across a defined population

It includes action to reduce the occurrence of ill-health, including addressing wider determinants of health, and requires working with communities and partner agencies

Focusing on people

- Understanding needs
- Understanding value
- Working with communities



Coordinating individual care

- Integrating care pathways
- Understanding risk
- Identifying gaps and overlaps
- Citizens as experts



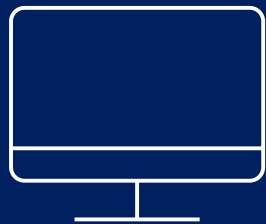
Dynamic management of the whole system

- System redesign
- Financial reform & incentives
- Workforce redesign
- Governance and accountability



1
2

Foundation for Delivering Change in this New Era...



Content



Cloud



Cognitive

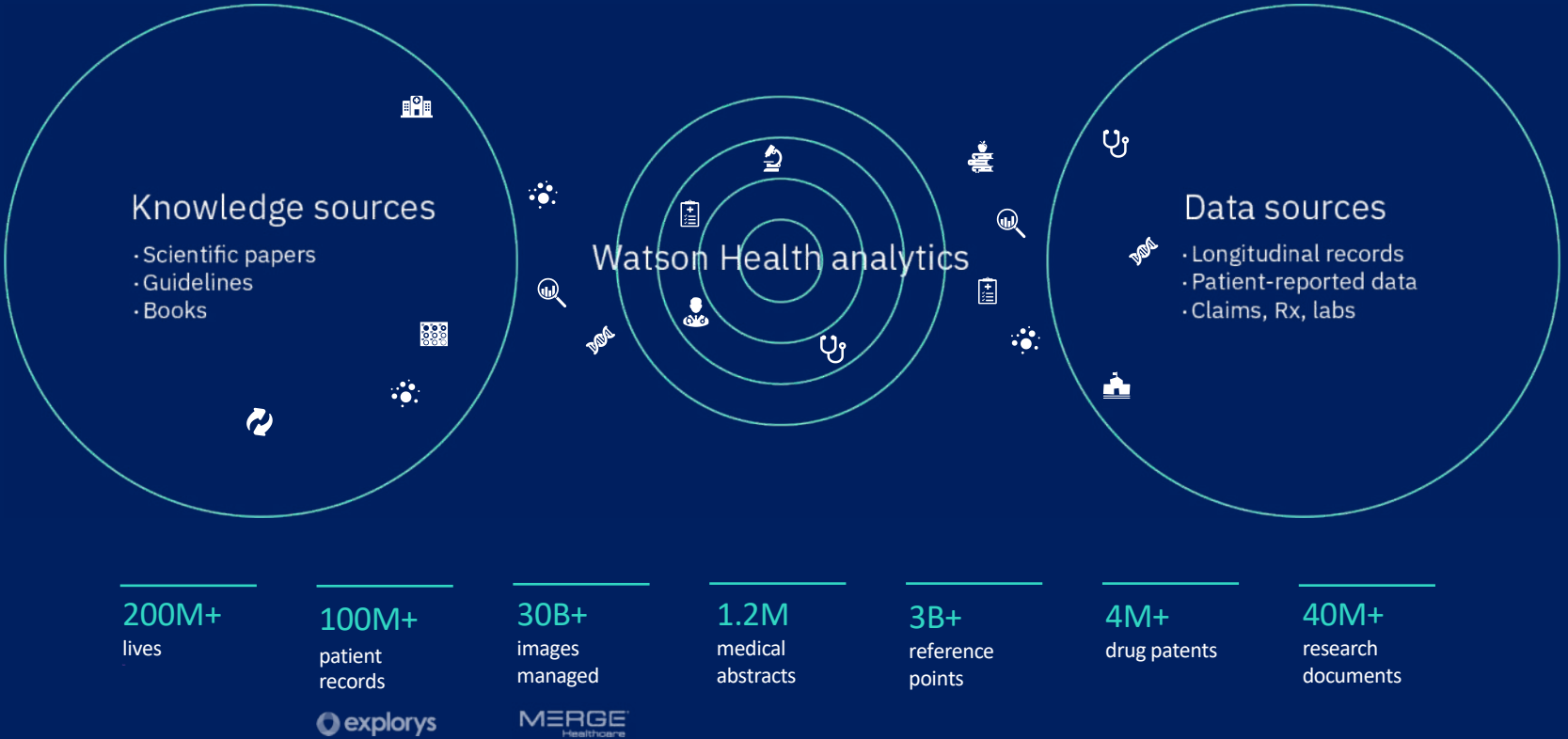


Collaboration

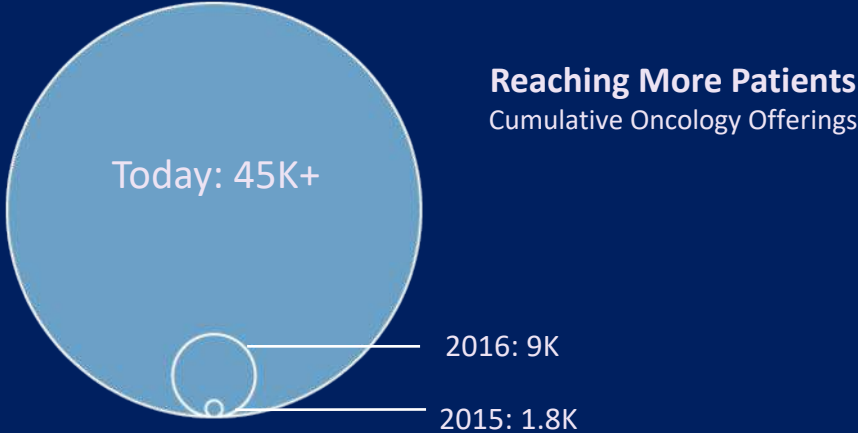


**Care/Clinical
Evidence**

Generating insights from information



The Evolution of Watson in Oncology



Increased Deployment in Hospitals and Health Organizations
Cumulative Oncology Offerings



Additional Cancers Trained
Watson for Clinical Trial Matching (CTM) and Watson for Oncology (WfO)

	Breast
	Lung
	Colon
	Rectal
	Gastric
	Cervical
	Ovarian
	Prostate
	Bladder
	Liver
	Esophageal
	Thyroid
	Endometrial
2016	Breast
	Lung
	Colon
	Rectal
Today	Liver
	Esophageal
	Thyroid
	Endometrial

WFO/CTMWFO Only

Clinical Evidence: Operational Efficiency with Clinical Trial Matching

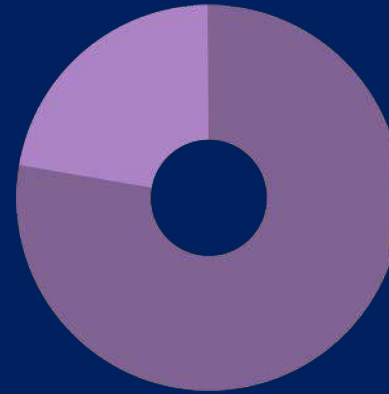
During a 16-week trial period, data from 2,620 visits by lung and breast care patients were processed in the **Clinical Trial Matching (CTM)** system

Watson for Clinical Trial Matching successfully demonstrated the ability to expedite patient screening for clinical trial eligibility, reducing processing time from 1 hour and 50 minutes to 24 minutes

2017 ASCO Annual Meeting. Cognitive technology addressing optimal cancer clinical trial matching and protocol feasibility in a community cancer practice. DOI: 10.1200/JCO.2017.35.15_suppl.6501 Journal of Clinical Oncology 35, no. 15_suppl (May 2017) 6501-6501. Accessed at: http://ascopubs.org/doi/abs/10.1200/JCO.2017.35.15_suppl.6501#affiliationsContainer

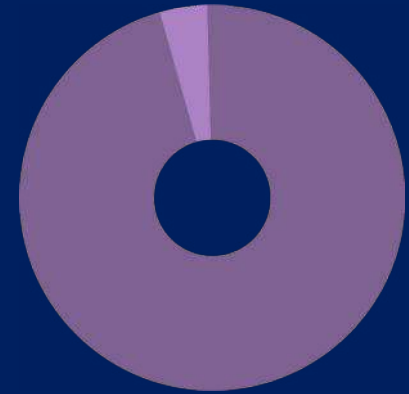
Increased efficiency

(Compared to manual work by a clinical trial coordinator at Highlands Oncology Group)



78%

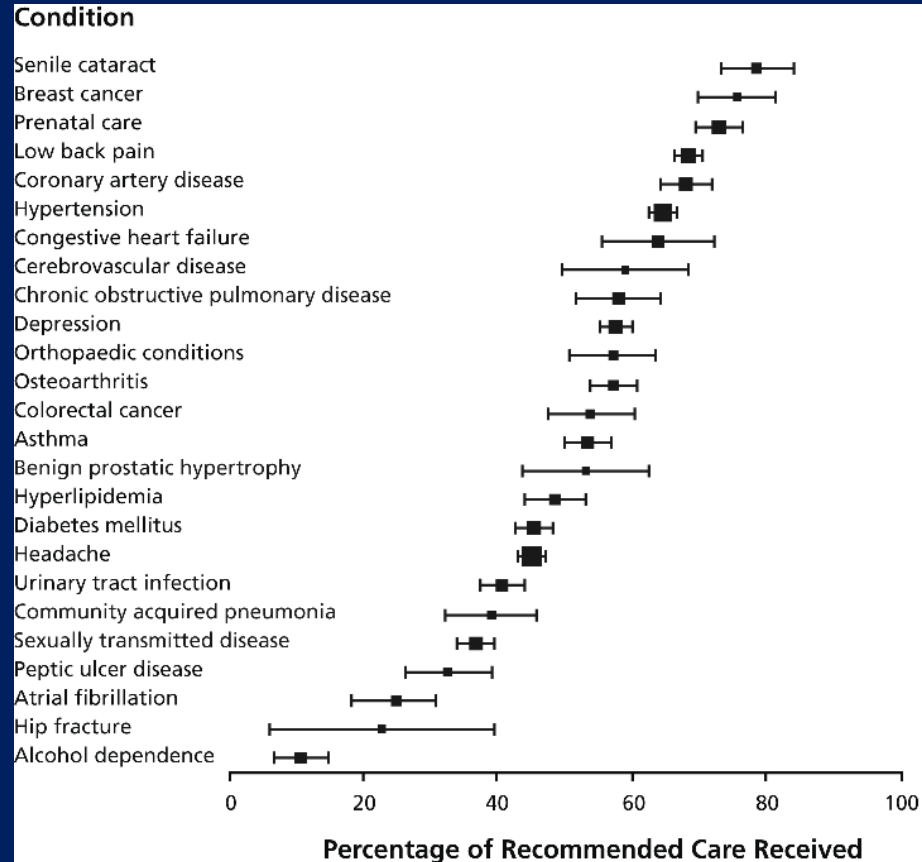
Reduced pre-screening
wait time



94%

Omitted 94% of non-matching patients
automatically

	Generally well/ good wellbeing	Long term condition(s)/ social needs	Complexity of LTC(s)/ social need and/or with disability
Children and young people			
Working age adults			
Older people			



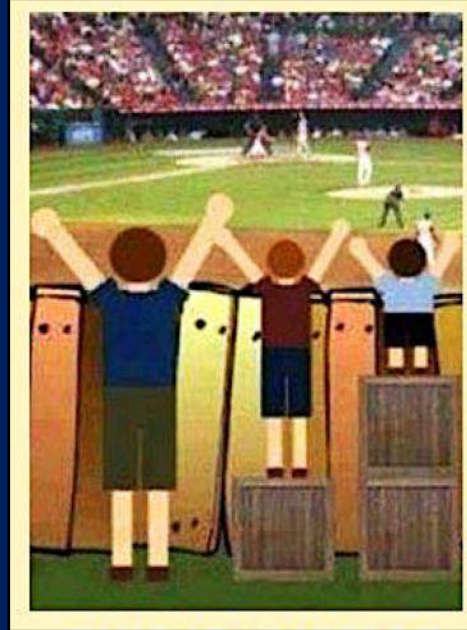
Courtesy of Bill Runciman,
APSF – Extracted data from
AHRQ 2006 report, USA

Why segment?

Uniformity



Equality



Humans + AI="Augmented Intelligence"

People excel at:



Common sense



Dilemmas



Morals



Compassion



Imagination



Dreaming



Abstraction



Generalization

Artificial Intelligence systems excel at:



Natural
Language



Pattern
Identification



Locating
Knowledge



Machine
Learning



Reduce
Bias



Endless
Capacity

20 Let's Partner to INVENT the Future ...



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*"The best way to predict
the future is to invent it."*

-Alan Kay

