HIMSS e-Health Week 2018

It's all about person centricity

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My father (69) and mother (64), live on the 4th floor of a building without a lift.

My brother and I live in different cities.

Everybody is very happy.
Stroke

Health protocols in place
Why integrated care?
Why integrated care?
Why Integrated Care

*Hector Upegui et Al, “Integrated Care: The third care pathway” to be published
We are drowning in data
Is this question difficult for a computer?

Who is the Prime Minister of the United Kingdom?

Answer: Theresa May
Is this question difficult for a computer?

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Answer: the Prime Minister of the United Kingdom
Is this question difficult for a computer?

William Wilkinson’s “an account of the principalities of Wallachia and Moldavia” inspired this author’s most famous novel.

Answer: Who is Bram Stoker?

- IBM Watson won Jeopardy in 2011. This was the last question to win
- https://www.youtube.com/watch?v=ocE4fKUd8f4
So YES a computer was able to do it.

Computers with cognitive computing capabilities can **read, understand, reason, learn and interact** with humans and with other machines.
Watson can read over 200 million pages in 3 seconds

Source: IBM DeveloperWorks Study – 26th February 2014
I had a brief discussion this morning with Laurie. I think she is lonely and perhaps even mildly depressed since her divorce 3 years back and her onset of diabetes and congestive heart failure. I suspect she needs to get out more and often discussed how her kids don’t visit her that often and she is a bit scared about being diagnosed with heart disease. Our local team were not aware of her depression so we should reach out to Laurie. Laurie used to be an English teacher and perhaps would like to help run a book club at a local community centre, we should look into that.

Laurie had complained about being stuck at home and was having difficulty preparing meals and she wanted to get out more, she likes to be seen as independent so would not admit it easily.
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In 17 seconds

Watson has analyzed:

- 3,469 Textbooks
- 69 Guidelines
- 247,460 Journal articles
- 61,540 Clinical trials
- 106,054 Other clinical documents
Our cognitive footprint

118,000 patients
affected by IBM cognitive health applications

46,000 cancer patients
affected by IBM Watson Health™ oncology offerings

40+ peer-reviewed publications, abstracts, and presentations on cognitive applications published by Watson Health

100+ journal publications
on deep learning applications in health published by IBM Research

210 million
clinical and claims data records

IBM is ranked 1st in US patents¹

400+ patents
granted or pending for Watson Health

25+ patents
granted in deep learning applications for healthcare and life sciences

13,000+
clients and partners

1. Source: Bloomberg – IBM Patents – 01.09.2018

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### Knowledge sources
- Scientific papers
- Guidelines
- Books

### Data sources
- Longitudinal records
- Patient-reported data
- Claims, Rx, labs

<table>
<thead>
<tr>
<th>Watson Health analytics</th>
<th>Knowledge sources</th>
<th>Data sources</th>
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<tbody>
<tr>
<td>200 million+ lives</td>
<td></td>
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<tr>
<td>100 million+ patient records</td>
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<td>30 billion+ images managed</td>
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<td>1.2 million medical abstracts</td>
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<td>3 billion+ reference points</td>
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<td>4 million+ drug patents</td>
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<tr>
<td>40 million+ research documents</td>
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Facts as of 30.04.2018
IBM data principles

**Purpose**
AI is for augmenting intelligence, giving insights and supporting what humans do, not replacing them

**Transparency**
Your data is your data; There is transparency about how our systems are trained and the data and knowledge used to train them

**Skills**
AI systems are trained by and supported by human professionals, leading to “new skills” and “new collar” jobs
Imagine a world where services are centered around a person’s true needs
Thank you
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