

Presentation

The future of digital public health

- **Professor Lucy Yardley**, Professor of Health Psychology, School of Psychological Science, University of Bristol and Centre for Applications of Health Psychology, University of Southampton



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Where is public digital health now?

The positives

- The internet has (in principle) made it possible globally to have **24/7 access to free, expert, personalised advice on all health problems**

The negatives

- This explosion of information, advice, apps makes it **very difficult for people to identify trustworthy, effective behaviour change support**
- We know that **information and individually-focused behaviour change support have weak effects on behaviour!**
- These **resources not well targeted at or used by those in most need of behaviour change support**

Where do we want future public digital health to be heading?

- Creating an **environment** that **automatically** prompts and supports healthy behaviour with less need for deliberate engagement
- Exploiting new capabilities for **unobtrusive continuous sensing** (wearables, internet of things, social media) - to detect situations where people could benefit from behaviour change support
- Using **artificial intelligence** to trigger **'just-in-time' interventions** – 'solution-focused', brief, accessible, engaging, appropriate



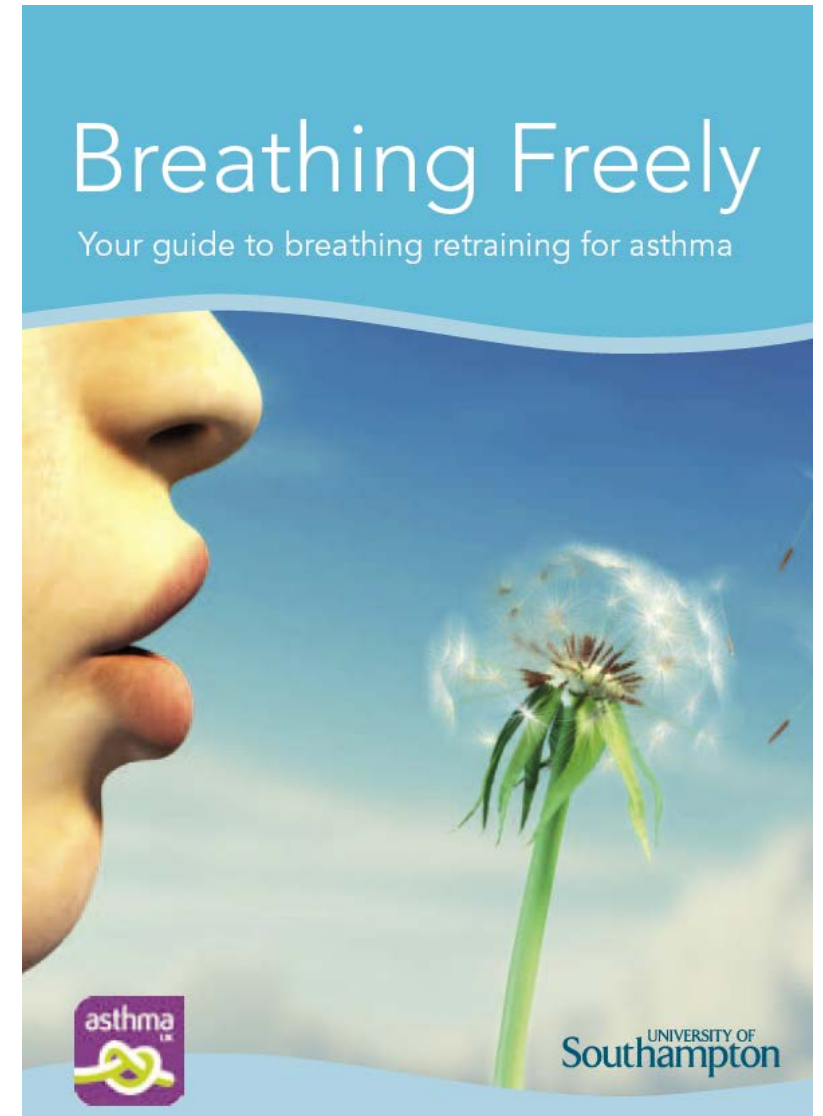
CAN WE BUILD 'HER'? WHAT SAMANTHA TELLS US ABOUT THE FUTURE OF AI



What methodological advances could help us achieve this?

More recognition of the **complexity** of behaviour change:

- The need to devote **substantial effort, investment and creativity** to ensure that digital interventions are engaging AND change behaviour
- The need for attention to detail in terms of **carefully designing, developing, targeting, and tailoring the content and format**



What methodological advances could help us achieve this?

Better **triangulation** of methods for developing and evaluating interventions

- **Participatory co-design** with users and stakeholders – absolutely crucial but not a complete solution!
- In-depth, **iterative qualitative and mixed methods research** with target users to inform development and implementation - **integrating user views with objective measures** of usage, responses, behaviour
- **Experimental testing** of intervention elements with cost implications – using rapid, efficient designs and methods (e.g. MOST, SMART)
- Creation of **‘public health learning systems’** using unobtrusively collected real world data to trigger, evaluate and continuously improve interventions

What methodological advances could help us achieve this?

Greater collaboration to develop, implement and improve (digital) public health interventions

- Experts in health, behaviour, social and organisational systems, technology, environment, design, policy, economics ...
- **Private and public sector partners who can provide the infrastructure** for the development/implementation/evaluation/improvement cycle of public learning health systems
- Incentives, funding structures and business models to encourage partnerships that are sustainable and focused on delivering effective, accessible, equitable public health

A key challenge for (digital) public health

- A) If the promise of global, accessible reach is to be fulfilled then digital interventions need to be adapted to a very **wide range of contexts**.
- B) The (digital) world is **changing very rapidly** – the technologies used and how they are used – interventions have to be updated to keep up.
- C) Developing an effective intervention requires considerable time and resource – so it is not **feasible or cost-effective** to undertake this process from scratch for all present and future contexts.

How do we identify the crucial characteristics of a complex intervention that must be preserved in order to maintain its effectiveness?

How can we efficiently transpose these characteristics across interventions for different global and future contexts?