Digital respiratory medicine – realism vs futurism

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What’s the plan...

- Digital acceleration
- Evaluation
- Integration and new clinical pathways
- Access and equity
- Relevance to high and low resource settings
Digital acceleration – impact of covid-19

Impact on practice

Quality Watch 2021
The Virtual world

Covidom, France

Relevance to COPD, early discharge, post op care, clinical trials

Wearables, apps and telemonitoring

Sim I NEJM 2019

Choi J Clin Sleep Med 2018
Artificial intelligence, data - uses and counterbalances

- Narrow AI and then.....
- Clinical algorithms
- Deep learning
- Problems with data, ethics
- Whose data?

Nam et al ERJ 2021
Observer May 30 2021
Global relevance

- EU data space, regulations, barriers and ways forward
- Disease surveillance, real time data – ECDC
- Pharmacovigilance – EMA, diagnostics
- Digital inclusion, learning from patients, real world data
- Digital approaches in low resource settings
Is digital medicine different?

To coincide with the 70th anniversary of the National Health Service (NHS) on July 5, a new NHS app enabling patients to make appointments, order repeat prescriptions, access their general practitioner (GP) records, and make urgent medical queries was announced by Jeremy Hunt, then UK Secretary for Health and Social Care. The app, developed by NHS England and NHS Digital, will be freely available from December, 2018. Hunt acknowledged that while technology has transformed many sectors, the health sector has remained comparatively unchanged. The UK, with its single predominant state-level health system, should be a strong candidate for rapid large-scale dissemination of digital innovations, and, in May this year, risk. Randomised controlled trials, the gold standard of evidence, are rarely used in digital medicine, partly because the current classification of clinical trials does not fit with the iterative nature of product design and because the cost of such trials is high compared with the product’s perceived level of risk. The relatively low barriers to market entry have encouraged innovative small and medium sized companies, often new to the health market. Research, especially for AI work, remains centred on machine learning outcomes, and the shift to clinical outcomes has not kept pace with the products’ move into clinical practice. Inherently, digital products collect a wealth of data in real time, and other methods.

Without a clear framework to differentiate efficacious digital products from commercial opportunism, companies, clinicians, and policy makers will struggle to provide the required level of evidence to realise the potential of digital medicine. The risks of digital medicine, particularly use of AI in health interventions, are concerning. Continuing to argue for digital exceptionalism and failing to robustly evaluate digital health interventions presents the greatest risk for patients and health systems. • The Lancet

From: Lancet 2018
Prof Thierry Troosters, Past President, ERS