

THE 21ST CENTURY PHYSICIAN: EMPOWERED PHYSICIANS IN THE DIGITAL HEALTH ERA

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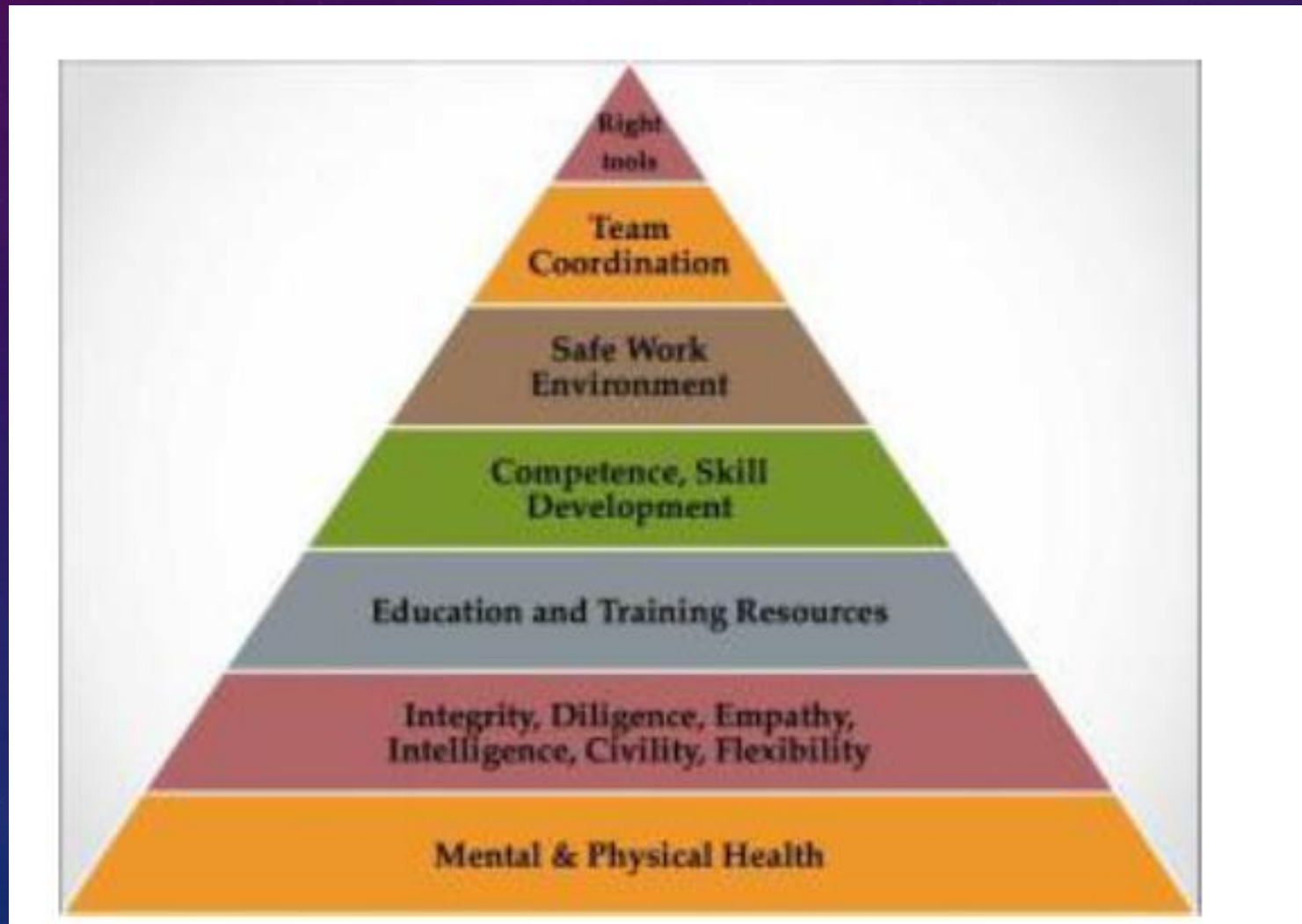
INSTITUTE OF BEHAVIOURAL SCIENCES

THE MEDICAL FUTURIST INSTITUTE





MASLOW'S HIERARCHY OF HEALTHCARE





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GLOBAL CHALLENGES

Growing number of chronic diseases,
Rising of life expectancy,
Lack of medical workforce,
Increasing amount of administrative
tasks,
The cost of medical treatment....

Burnout

Physician Burnout and Depression

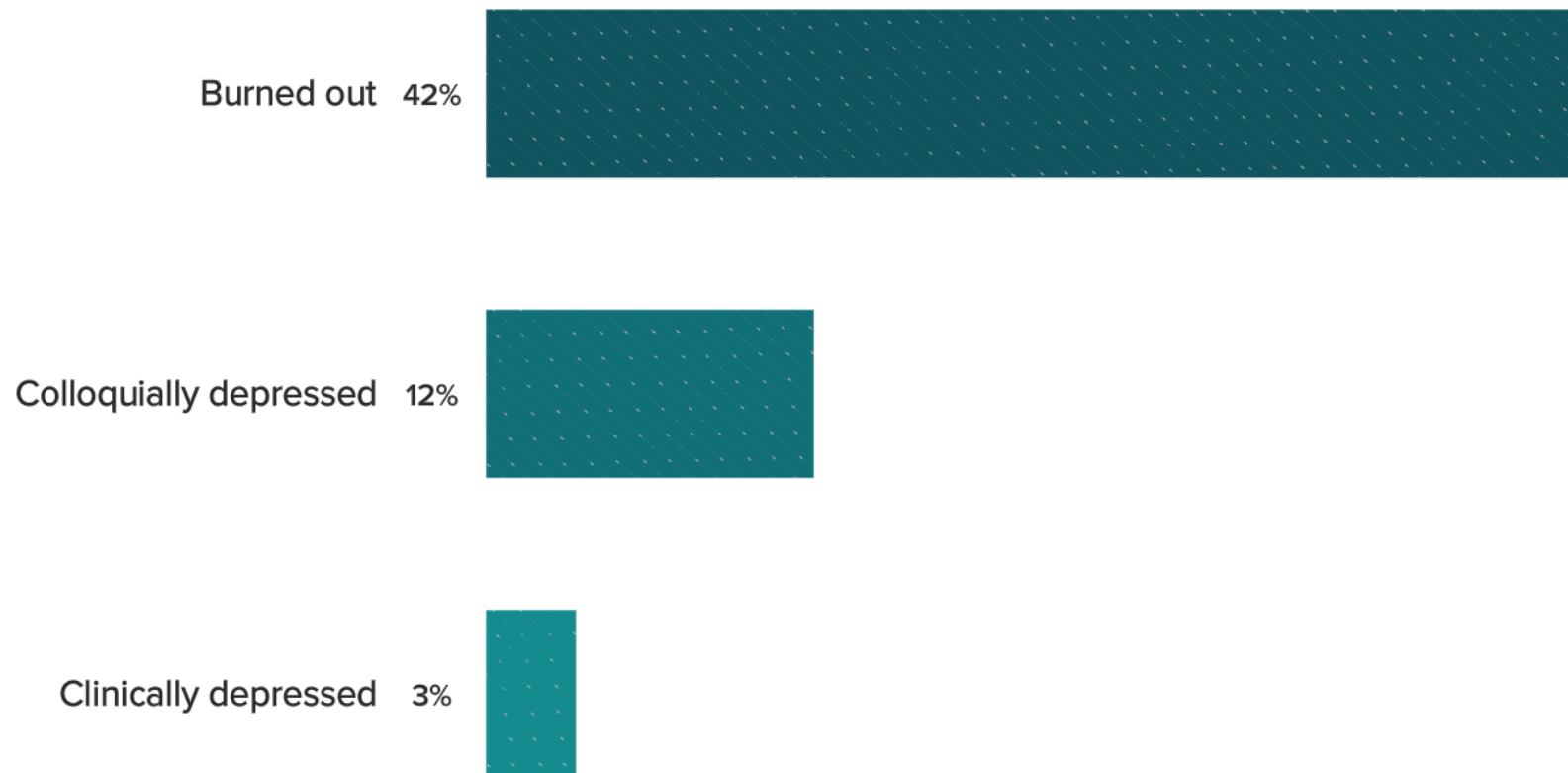
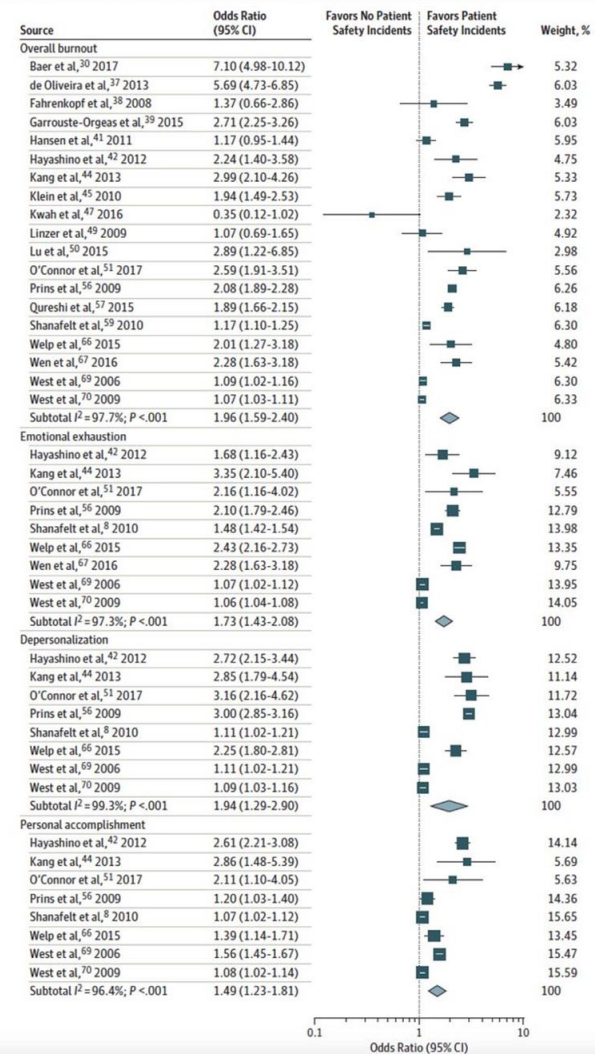
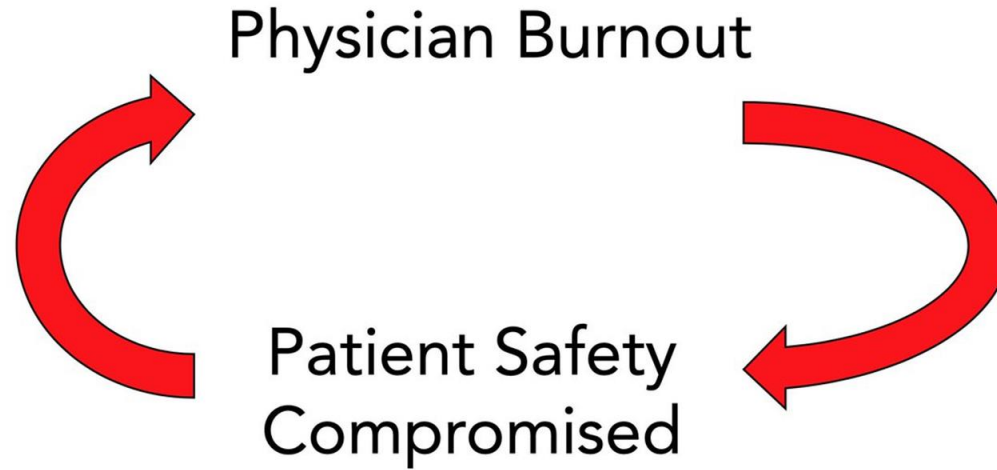


Figure 2. Association Between Physician Burnout and Patient Safety Incidents



Association Between Physician Burnout and Patient Safety, Professionalism, and Patient Satisfaction A Systematic Review and Meta-analysis

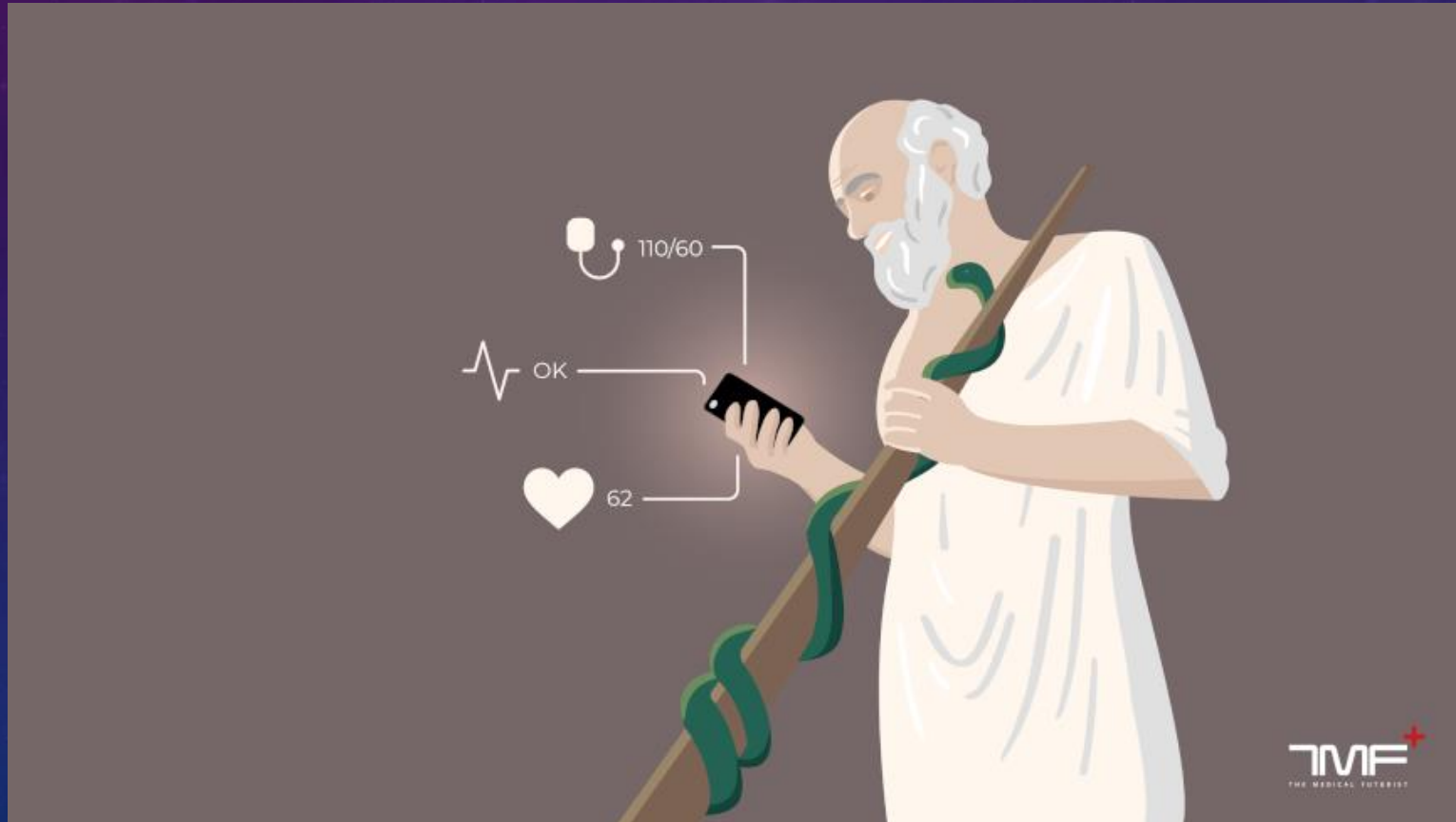
Maria Panagioti, PhD; Keith Geraghty, PhD; Judith Johnson, PhD; Anli Zhou, MD; Eftharis Panagopoulou, PhD; Carolyn Chew-Graham, MD; David Peters, MD; Alexander Hodgkinson, PhD; Ruth Riley, PhD; Aneez Esmail, MD, PhD



47 studies, 42,472 doctors
JAMA Internal Med October 2018

<https://jamanetwork.com/journals/jamainternalmedicine/fullarticle/2698144>

2017 CHICAGO: „I WILL ATTEND TO
MY OWN HEALTH, WELL-BEING, AND
ABILITIES IN ORDER TO PROVIDE CARE
OF THE HIGHEST STANDARD.”



PRESENCE OF DIGITAL HEALTH



IBM Investor Briefing

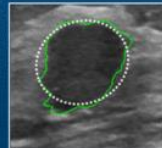
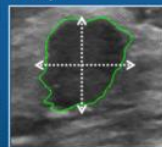
IBM

Cognitive Computing Application: "Medical Sieve"

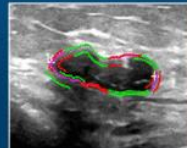
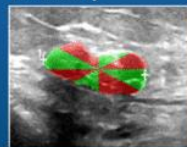
Image anomaly detection and identification

- Quickly filters irrelevant images
- Highlights disease-depicting regions
- Multi-modal decision support

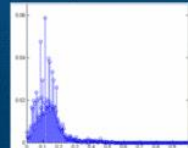
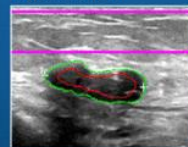
Shape



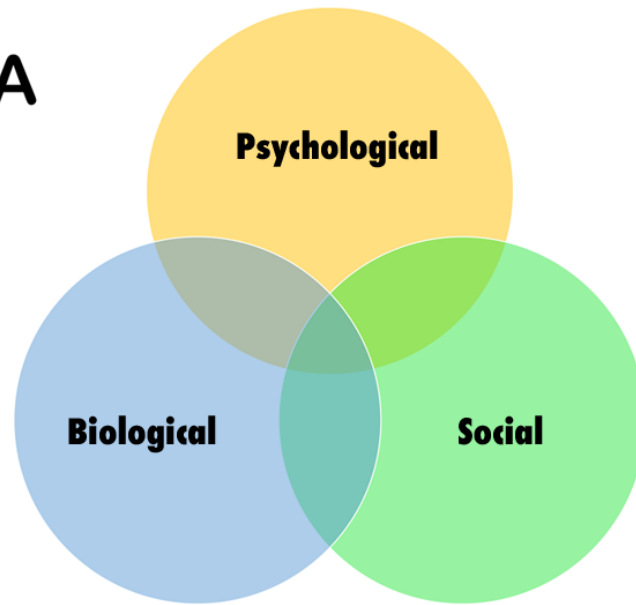
Boundary



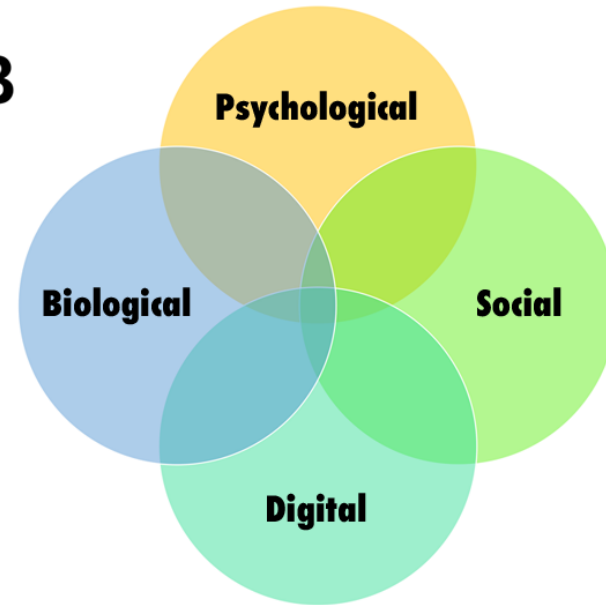
Attenuation



A



B



Biological

Gender
Physical illnesses
Disabilities
Genetic vulnerabilities
Immune function
Medications

Social

Social support
Family background
Cultural traditions
Socio-economic status
Education

Psychological

Learning/Memory
Personality
Behaviours
Emotions
Coping Skills
Previous mental issues

Digital

Digital expansion of
biological self
Digital engagement of
patients
Social networking

Core Digital Health Categories:

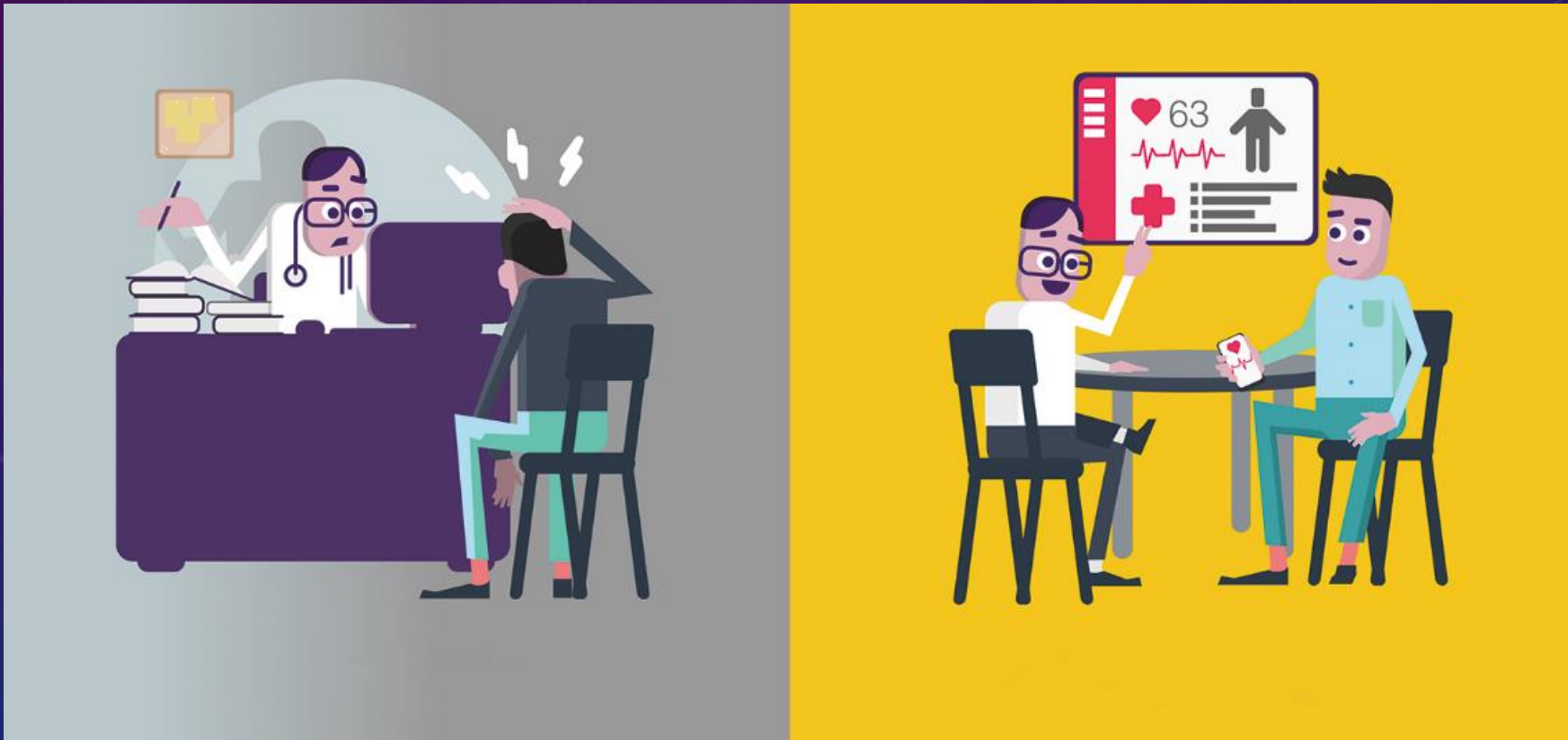
B	P	D	Electronic health records
B	P	S D	Online health info and reviews
B	P	D	Mobile health tracking
B	P	S D	Wearable technologies
B		D	Genetic services
B	P	S D	Telehealth and telemedicine

WHAT IS DIGITAL HEALTH?

- Digital health is defined as “the cultural transformation of how disruptive technologies that provide digital and objective data accessible to both health care providers and patients leads to an equal-level doctor-patient relationship with shared decision-making and the democratization of care.”

- *Meskó B, Drobni Z, Bényei É, Gergely B, Győrffy Z. Digital health is a cultural transformation of traditional healthcare. mHealth 2017;3:38.*

PRESENT AND FUTURE: PARTICIPATORY MEDICINE



E-PATIENT MOVEMENT:

THE LETTER „E” CAN STAND FOR

- „electronic” (using digital technologies in their disease or health management),
- „equipped” (having digital health technologies at their disposal),
- „enabled” (having newly acquired access to information),
- „empowered” (by the loss of the ivory tower),
- „engaged” (taking an active part in their care), and
- „expert” (in using technologies in their care or health management)



Article
Text



Article
info



Citation
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Share



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Article
metrics



Alerts

Health services research

Research



What happens when patients know more than their doctors? Experiences of health interactions after diabetes patient education: a qualitative patient-led study

Rosamund Snow¹, Charlotte Humphrey², Jane Sandall³

[Author affiliations](#) +

Abstract

Objective To explore the impact of patient education on the lives of people with diabetes, including the effect on interactions with doctors and other healthcare professionals.

Design Qualitative user-led study using longitudinal interviews and 146 h of participant observation. Data were analysed using a narrative approach.

Participants 21 patients with type 1 diabetes, those either about to attend a patient education course or those who had completed the course in the previous 10 years.

Setting Established patient education centres in three UK teaching hospitals teaching the Dose Adjustment for Normal Eating (DAFNE) course.

Results Both postcourse and several years later, most participants spoke of the experience of taking part in education as life-changingly positive. It helped them understand how to gain control over a very complex disease and freed them from dependence on medical advice and restrictive regimes. However, interactions within the health system following patient education could be

feedback



HILDE T. MYRHAUG AND TONE HANSEN: CO- PRODUCING A SYSTEMATIC REVIEW WITH PATIENTS

FEBRUARY 8, 2019 IN BMJ



Meskó B, Radó N, Györffy Zs:
Opinion leader empowered patients about the era of
digital health: a qualitative study
BMJ Open 2019;9:e025267.



WHAT EMPOWERED PATIENTS NEED: EMPATHY, TIME, AND ATTENTION





@NATHANAGRAY INKVESSEL.COM

HOW COULD DIGITAL TECHNOLOGY MAKE AN IMPACT ON PRIMARY CARE?

THE RESPONDENTS

183 questionnaires from **37** countries
70 % work in cities smaller than 1 million residents
Mean size of practice was around **2,000 patients**
42.6 % of the respondents were women
Age varies between **24-77**, while the average age was **47.5**

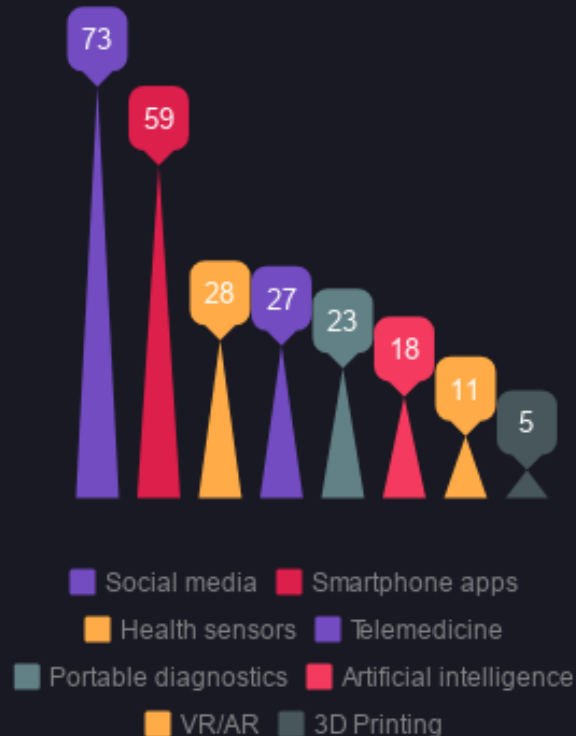


ATTITUDES TOWARDS DIGITAL HEALTH

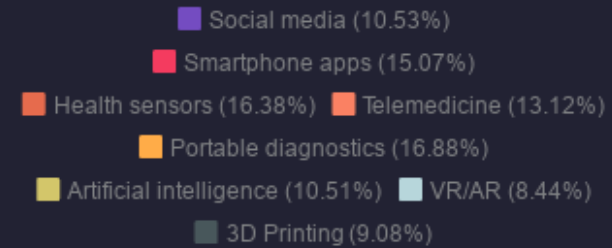
75.4 % eagerly uses digital health tech

20.8 % haven't adopted yet

TYPES OF DIGITAL HEALTH TOOLS PHYSICIANS USE

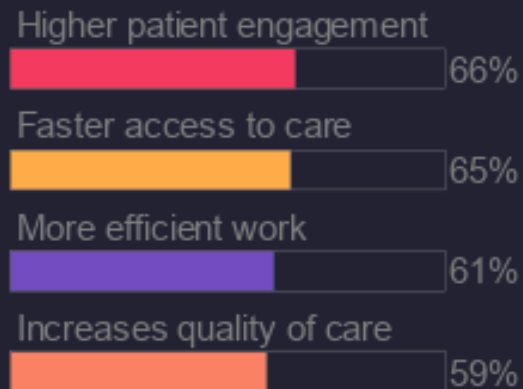


WHAT DO THEY WANT TO USE IN THE (NEAR) FUTURE?



General practitioners are not eager to use very futuristic or less comprehensible technologies.

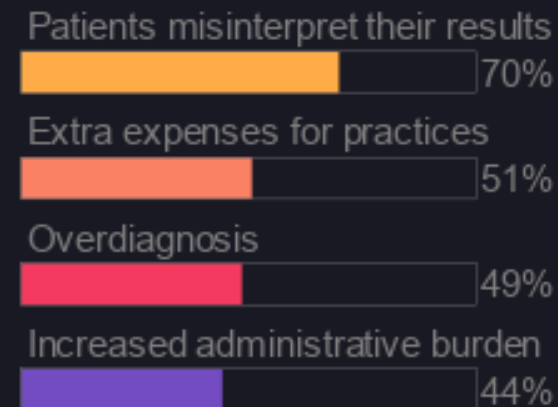
WHY IS IT BENEFITIAL TO WORK WITH DIGITAL TECH?



Money doesn't matter.
Only **14.2 %** of GPs
mentioned digital tech would
bring extra income.

WHAT COULD BE THE POTENTIAL NEGATIVE CONSEQUENCES?

The biggest fear of primary
care physicians is patients
misinterpreting their results.
70 % of the respondents said it.



WHAT DOES THE FUTURE HOLD?

76 % think data analysis will be part of practicing medicine

For **70 %** of the respondents, the use of digital tech is inevitable in the future

Patients will be the point of care, says 69.9 %

Medical decision-making will be a shared process between patients and their caregivers according to **61.8 %** of the surveyed GPs

THE RISE OF EMPOWERED PHYSICIANS

MESKO B, GYÓRFFY Z

THE RISE OF THE EMPOWERED PHYSICIAN IN THE DIGITAL HEALTH ERA:
VIEWPOINT

J MED INTERNET RES 2019;21(3):E12490



FEATURES OF E-PATIENTS AND

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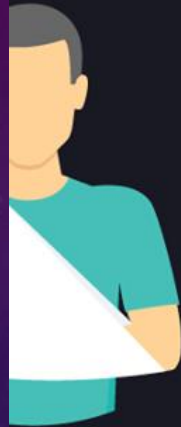


E-PHYSICIANS



E-ELECTRONIC

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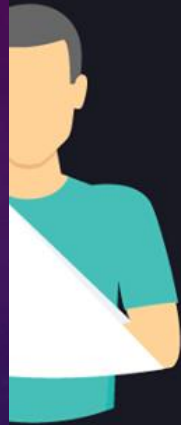
Uses digital technologies in their disease or health management.



Uses digital technologies in their practice with ease.

E-EQUIPPED

TMF⁺
The Medical Futurist



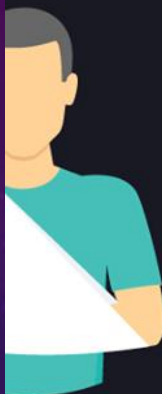
Has digital health technologies at their disposal (e.g: wearable sensors).



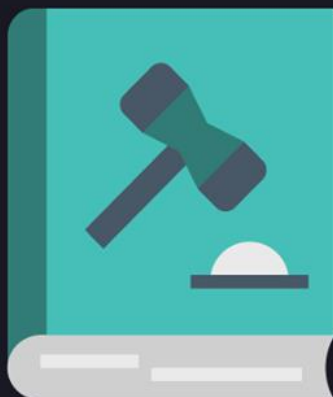
Has digital health technologies at their practice (e.g: live access to patients' data).

E-NABLED

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The Medical Futurist



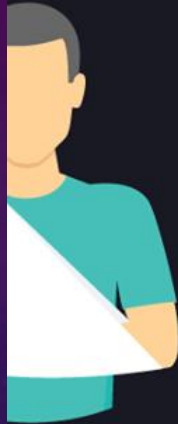
**Enabled by their
newly acquired
access to data
about their health.**



**Enabled by
regulations and
guidelines to use
digital technology
in their practice.**

E-MPOWERED

TMF⁺
The Medical Futurist



**Empowered by
the loss of the
ivory tower.**



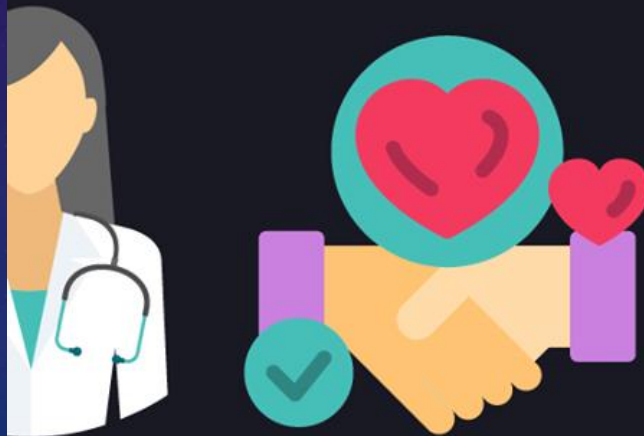
**Empowered by
technologies that
support their job
and their
e-patients.**

E-NGAGED

TMF⁺
The Medical Futurist



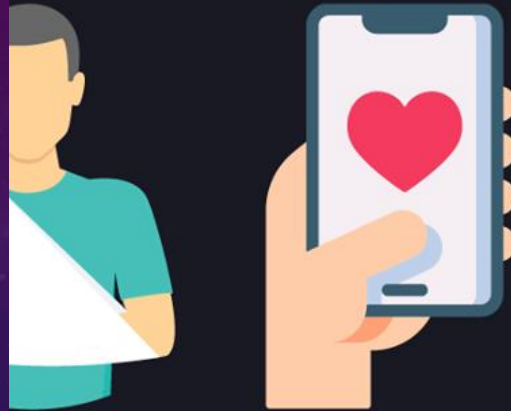
Can take an active part in the decision making of their care.



Incorporates the feelings and views of their patients into the healing process.

E-XPERT

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**Knows how to use
technologies in
their treatment
or health
management.**



**Knows how to
apply new
technologies in
their clinical
practice.**

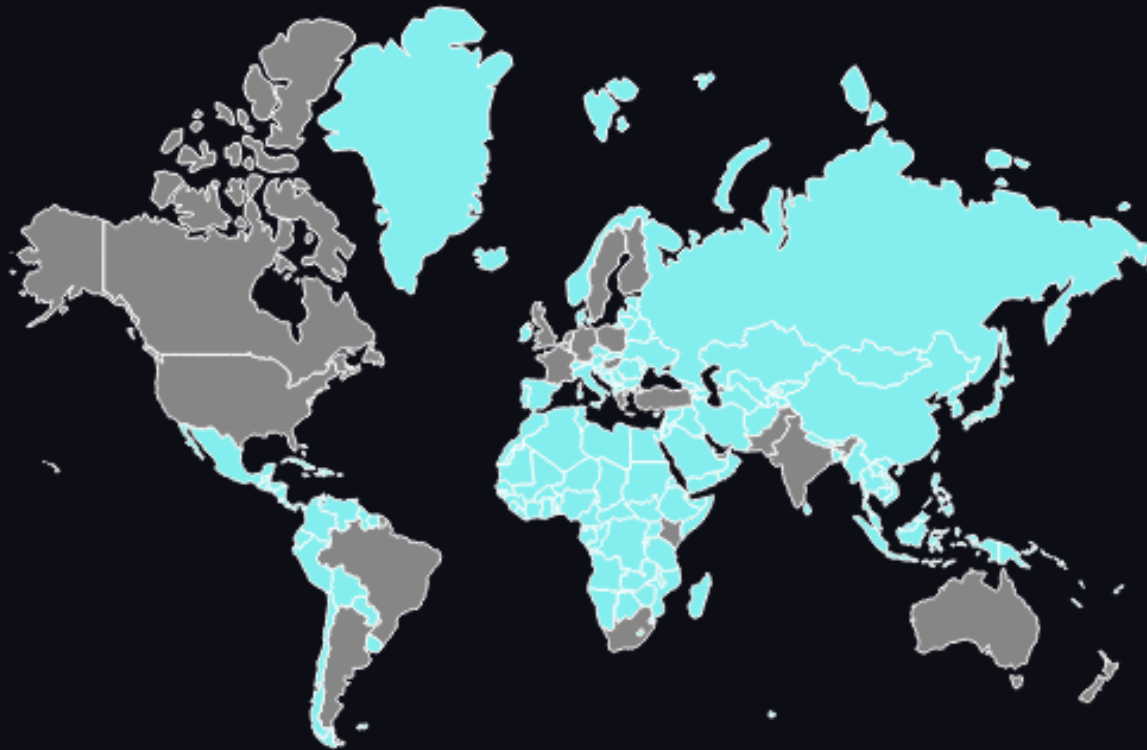
STATISTICAL HIGHLIGHTS

We sent out more than 100 packages to 22 countries.

577 badges and/or pins arrived to
hundreds of medical professionals in 10 months.

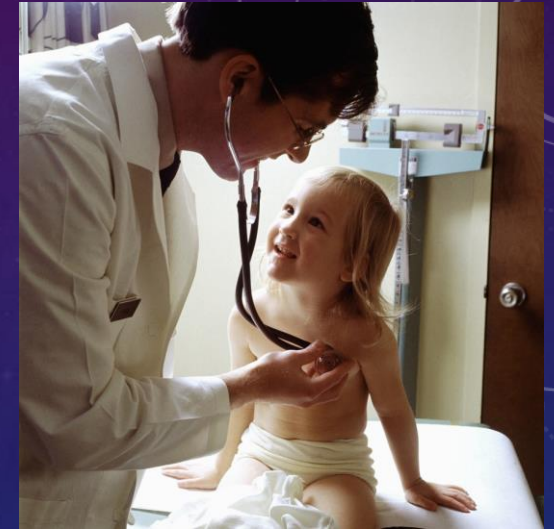
Badges/pins per country

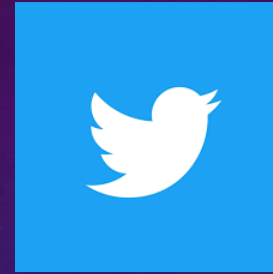
Australia	142
Sweden	128
USA	95
Netherlands	48
Belgium	16
Hungary	16
South Africa	14
Canada	14
India	13
UK	12
Brazil	10
Finland	6
Singapore	4
United Arab Emirates	4
Germany	4
Pakistan	4
New Zealand	4
Greece	4
France	2
Argentina	2
Kenya	2
Turkey	1
Poland	1





„THE DOCTOR TREATS, PERSONAL RELATIONSHIPS HEAL”





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