

Digitalization as a Growing Determinant of Health and Well-being: Getting it Right



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Professor Ilona Kickbusch, Director, DTH-Lab



Digital environments: A new setting for health



“Health is created and lived by people within the settings of their everyday life”

~Ottawa charter for health promotion (1986)

“The digital world is a new sphere in which health is created.”

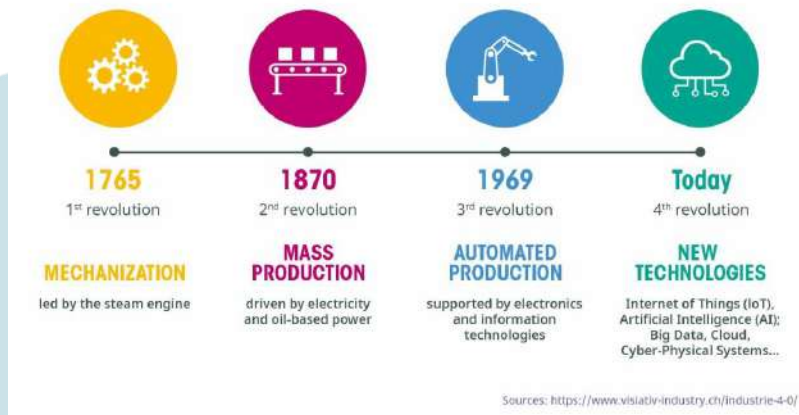
~Kickbusch & Holly (2023)



Digital transformation = societal transformation

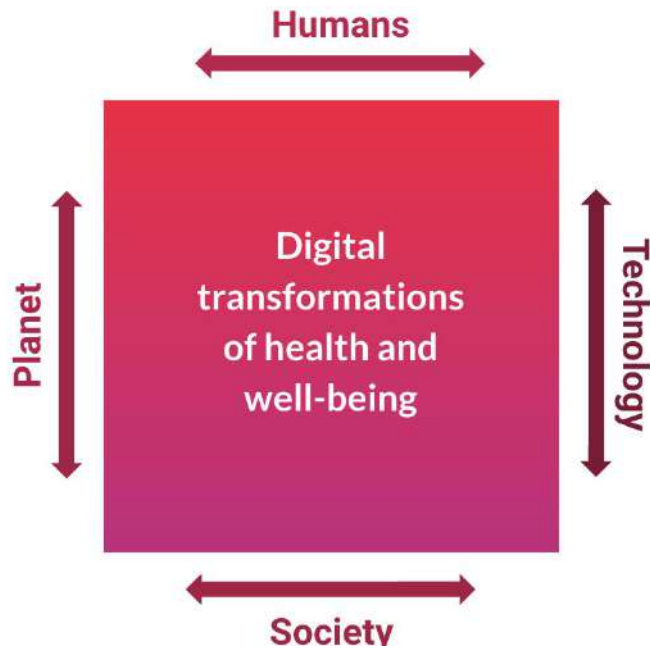


Four Industrial Revolutions



All major societal transformations have had significant health impact and have provided an opportunity to develop and innovate public health

The interaction between humans, technology, society and our physical environment is multi-directional.

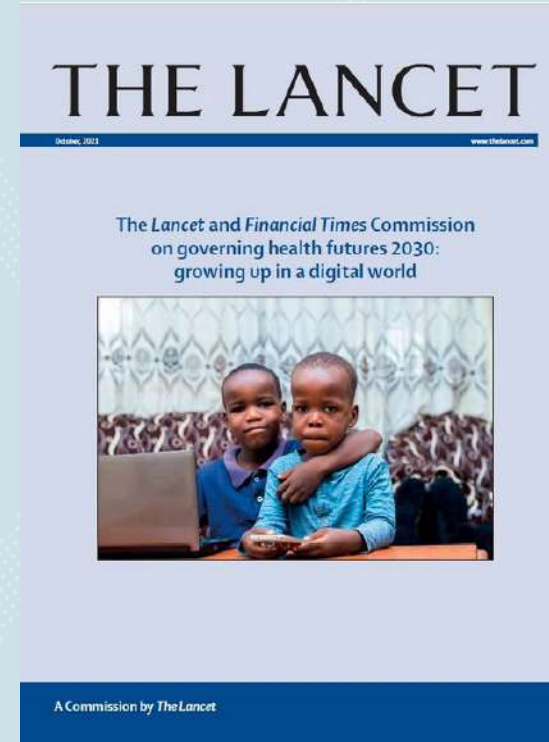


Digital transformations are increasingly a determinant of health

“Digital transformations have the potential to bring both enormous **long-term benefits** and **substantial disruption** in many different areas of health and health care.”

“Digital transformations are in themselves a **determinant of health**, but they also **interact with the many other determinants** that define the health futures of children and young people.”

~Governing Health Futures 2030 Commission (2021)



What are the DDoH?

DDoH can be characterized in three levels:



Digital health

The application of digital technologies in health systems, health care, and for self-monitoring of health status and behaviours.

Everyday tech use

Use of digital media and technologies in everyday life which can influence physical and mental health and well-being,

Digital ecosystem

The impact of the wider digital ecosystem (including data, AI and digital infrastructure) on individual and population health.

Digital determinants interact with other social, commercial, political and environmental determinants of health



Digital technologies are changing how we interact with health care ecosystems



- Improved access to healthcare for underserved populations
- Greater convenience & efficiency for patients and providers
- Individuals can play an active role in managing their health through apps, wearables, etc
- Decision-making, monitoring and diagnosis enhanced through data & AI
- Digital access & literacy are key for people to benefit from digital health

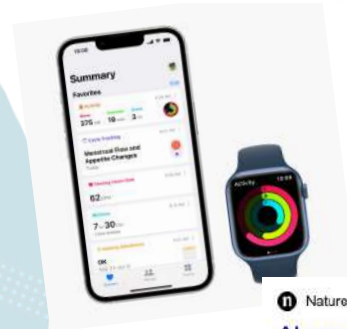


Cancer Support Group for Patients and Their Families

Private · 50K members · 10+ posts a day

Hi everyone, I wanted to create a place where those of us can come together and talk about our family members or those who have cancer can talk. If you want to...

Join

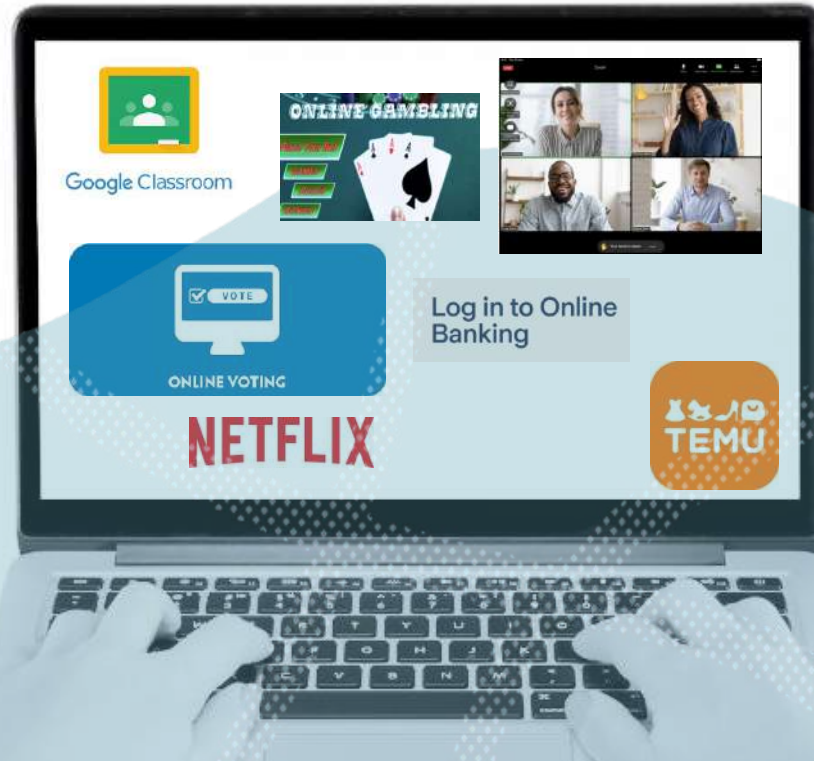


Nature

AI powers a new era of drug discovery and development



Everyday use of digital technologies also impacts our health and well-being



Young people are particularly vulnerable to the impacts of digital transformations

- Globally, one in three internet users is a child under 18
- Developmental factors during early childhood and adolescence make children vulnerable to digital harms
- The effects of smartphone use and social media are a major concern
- Young people around are already using digital technologies to support their health and well-being
- They are often aware of the risks associated with being online and want to be better protected



88%

of children and youth use digital technologies to support their health and well-being.

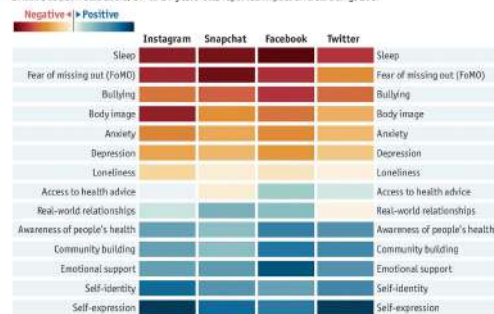
#Youth4HealthFutures

Data from Governing Health Futures 2030 / U-Report survey



Like, obsessed

Britain, social media users, 14- to 24-years-old, reported impact on well-being, 2017



Source: Royal Society for Public Health

© 2018 RSPH

Digital harms to health and well-being can take many forms



Persuasive design features

Marketing of health harming products

Environmental impacts of digitalization

Deepfakes, sextortion & doxing

Reduced physical activity

Addiction

Obesity

Posture

Health misinformation

Data misuse

Cognitive development

Disrupted sleep

Anxiety & stress

Cyberbullying

Technology-facilitated violence

Eye health

Mental health disorders

Content promoting unhealthy body image & behaviours





More research is needed but there is sufficient evidence to act

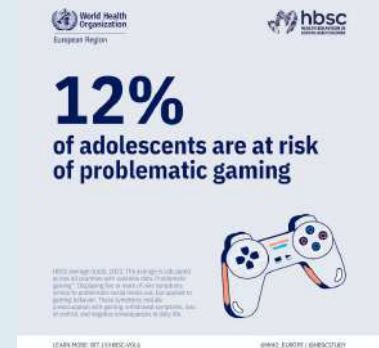
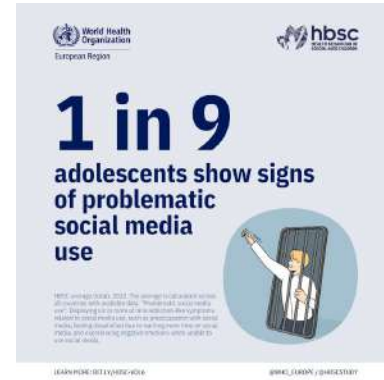
"Frequent social media use was associated with increased alcohol consumption; drug use; tobacco use; sexual risk behaviours; anti-social behaviour; and gambling." (Purba et al, 2023)

"Greater social media use related to online harassment, poor sleep, low self-esteem and poor body image; in turn these related to higher depressive symptom scores." (Kelly et al, 2018)

"Among cross-sectional studies, significant associations between excessive social media use with poor mental health outcomes, poor sleep quality, and significant associations between poor sleep quality and negative mental health (n = 16) were found." (Alonzo et al, 2021)

"Evidence from a variety of cross-sectional, longitudinal and empirical studies implicate smartphone and social media use in the increase in mental distress, self-injurious behaviour and suicidality among youth; there is a dose-response relationship, and the effects appear to be greatest among girls." (Abi-Jaoude et al, 2020)

"The synthesis of the evidence revealed that digital experience does have positive and negative impacts on children's brains, structurally and functionally" (Wu et al, 2023)

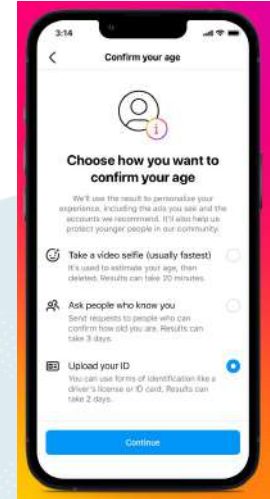
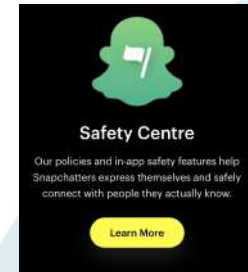


Technology companies have introduced some measures to protect children



- Parental controls
- Age verification & age-gating systems
- Child-specific platforms (e.g. YouTube Kids) & teen filters
- AI tools & human reviewers for content moderation and filtering
- Anti-bullying tools
- Screen time management tools
- Educational and digital literacy resources for children and families
- Community guidelines & reporting mechanisms
- Collaboration with child safety organizations

***Many of these tools are easily overridden by children*



Safety

Mar 1, 2023

New features for teens and families on TikTok

By Cormac Keenan, Head of Trust and Safety, TikTok Today we're announcing new features for teens, families, and our broader...



But, the commercial motives of digital platforms do not always align with public health



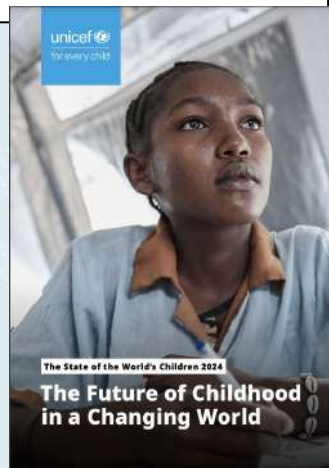
Calls are growing for digital environments to be made fit for children



French families sue TikTok over alleged promotion of self-harm content

They allege the platform is responsible for self-harm-related content promoted by its algorithm.

“As we collectively try and keep pace with frontier technologies, **safeguarding children, their lives and their health, including their mental health must be a priority**”
~ UNICEF, 20 November 2024



United Nations

**Convention on the Rights of the Child**

Distr.: General
2 March 2021

Original: English

Committee on the Rights of the Child

General comment No. 25 (2021) on children's rights in relation to the digital environment

New regulation and laws are emerging, with a focus on protecting children's data



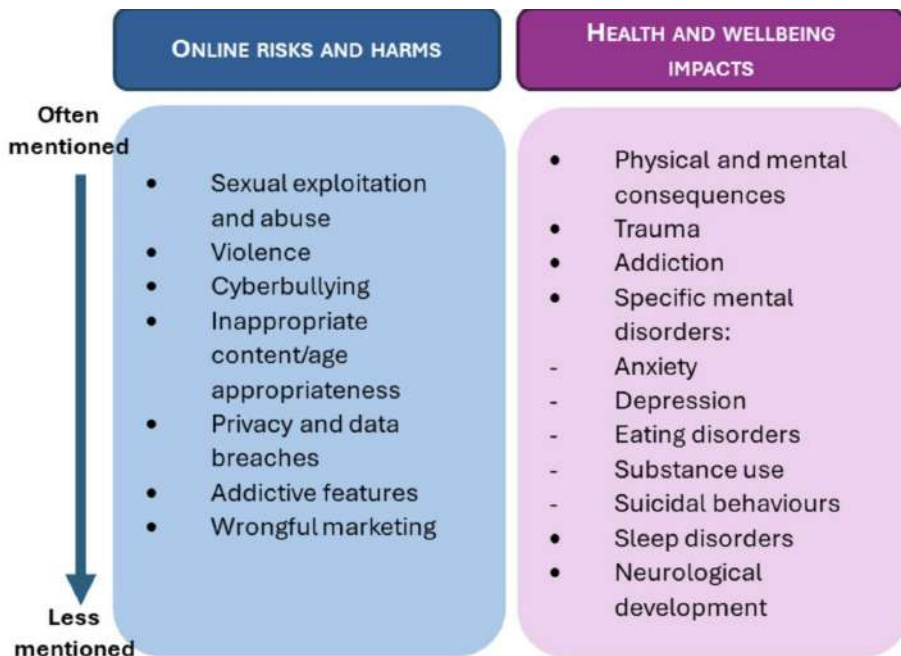
SURGEON GENERAL'S WARNING:

Social Media may cause profound harm to the mental health and well-being of children and adolescents.

Public health has not been at the forefront



- Mapping of over 90 policies and regulations designed to protect children and adolescents from online harms.
- Limited involvement of health ministries or departments in shaping these policies.
- Many countries are focused on restricting children's access to social media and smartphones.
- Existing legislation often aims to tackle mental and physical health consequences of online sexual exploitation, abuse and cyberbullying
- Other health risks like exposure to harmful content, addictive applications and misleading marketing practices are largely overlooked.



From Lopes SC et al Mapping policies and regulations for safe and healthy digital environments for children and adolescents (Forthcoming)



Ways forward



Public health must be at the table in shaping new policies and laws



“We will convene the first-ever European-wide enquiry on the impact of social media on the wellbeing of young people.

Ursula von der Leyen, President of the European Commission



THE SAFER PHONES BILL A Bill to make smartphones less addictive to support healthier, happier childhoods

Josh MacAllister OBE MP (Labour - Whitehaven and Workington)



“In the next Parliamentary fortnight we will introduce legislation into the Parliament to make 16 the minimum age to access social media.”

Anthony Albanese, Prime Minister of Australia

The 5 action areas of the Ottawa charter can guide us



- 1 Build healthy *digital* public policies
- 2 Create supportive *digital* environments
- 3 Strengthen community actions *to address DDoH*
- 4 Develop personal *digital, health and civic* skills
- 5 Reorient health services *to harness benefits of digitalization*



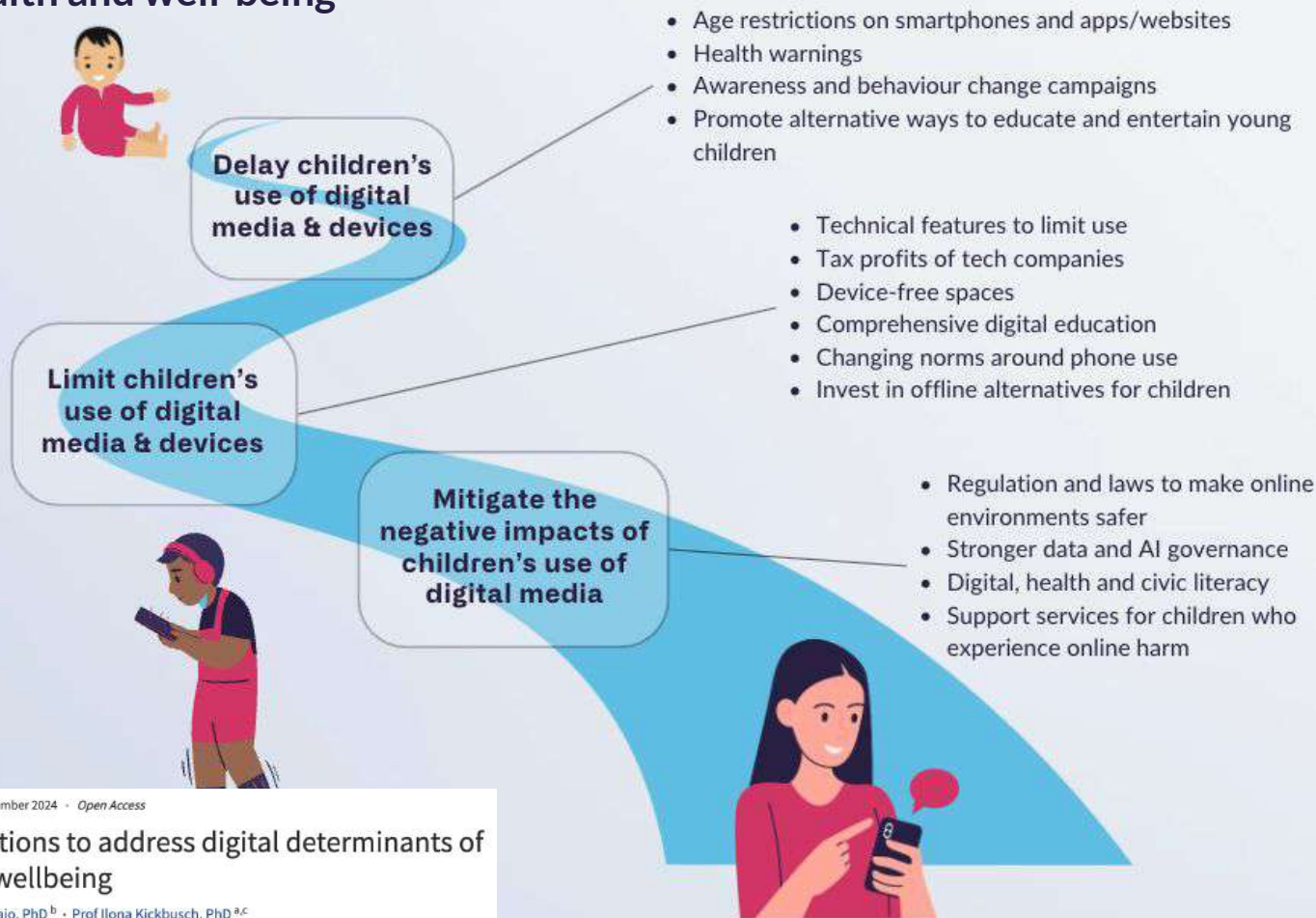
JOURNAL ARTICLE

Addressing the digital determinants of health: health promotion must lead the charge FREE

Ilona Kickbusch, Louise Holly ✉

Health Promotion International, Volume 38, Issue 3, June 2023, daad059,
<https://doi.org/10.1093/heapro/daad059>

We can learn from existing public health strategies to address the digital determinants of children's health and well-being

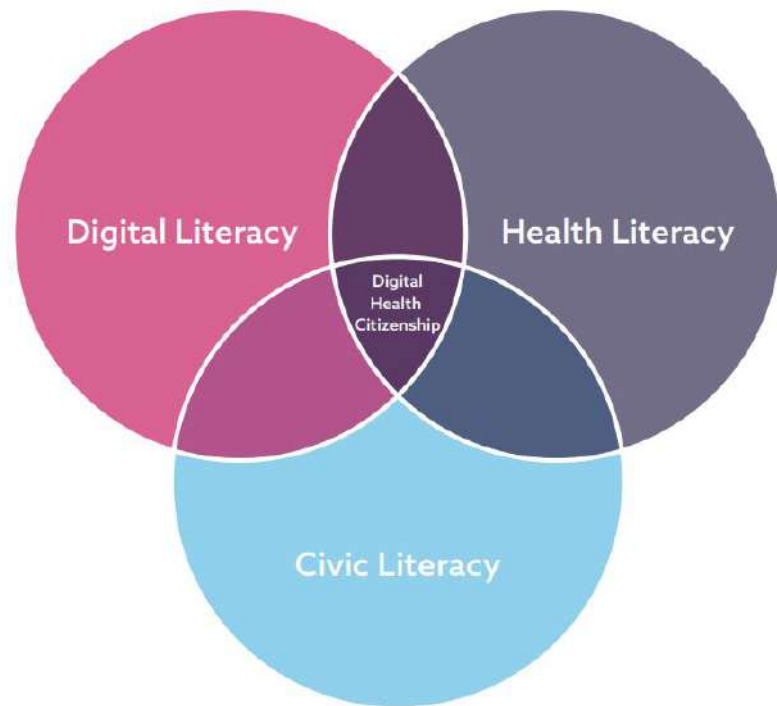


We must support young people to become empowered digital health citizens



Equitable health benefits can only be realized in the digital world when young people are empowered to:

- Critically engage with digital ecosystems
- Access online spaces that are safe & health promoting
- Make informed choices about their data.





Mobilizing a call to action:

Address the digital determinants of children's health and well-being

- **Digital technology companies:** redesign tools and services with children's health and well-being as a central consideration.
- **Public health agencies:** work with diverse stakeholders, including children and their families, to develop public health strategies that address the digital determinants of health.
- **Governments:** collaborate globally to build safe and healthy digital & real world environments for children.

Contact
team@dthlab.org if you
are interested to support





Digital transformations for health - achieving the future we want



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dthlab.org | team@dthlab.org

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