University of New Hampshire

2022 Age of Champions

eHealth Readiness & Adoption among Older Adults during COVID-19

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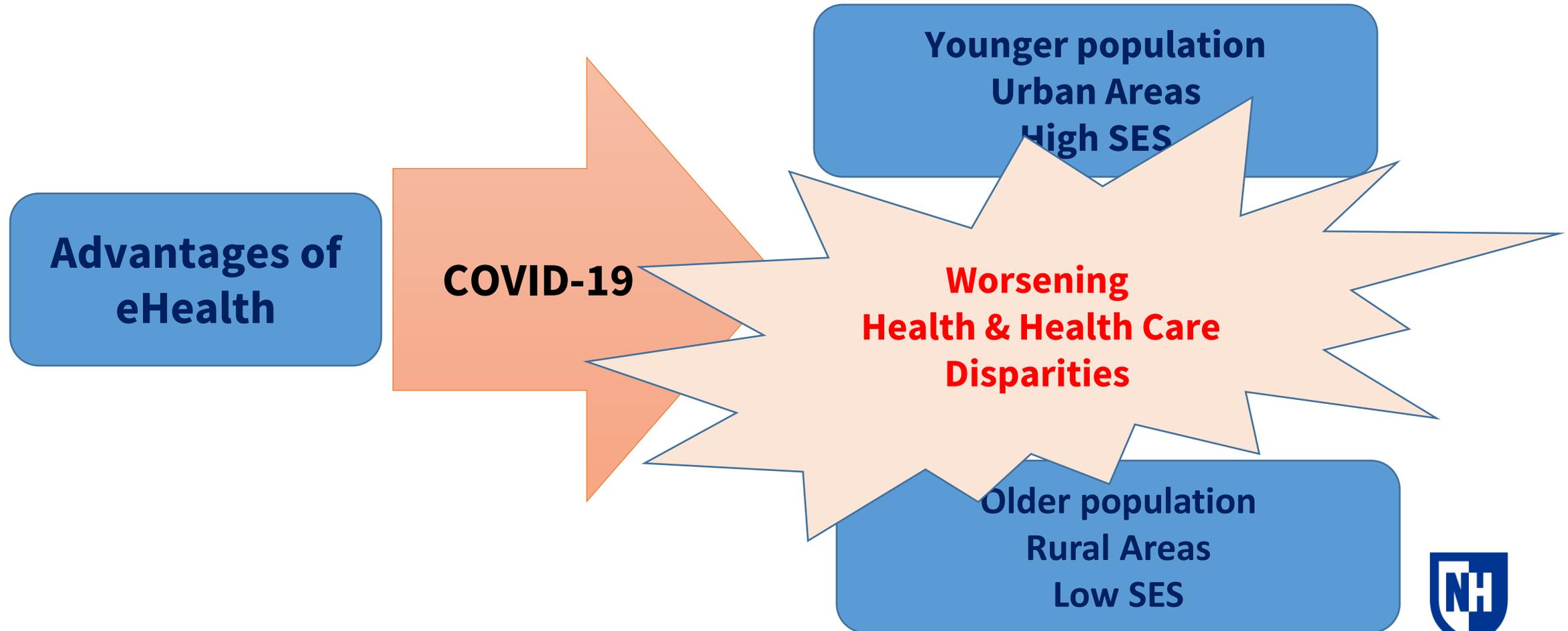
eHealth

- The cost-effective and secure use of information and communication technologies (ICT) in support of health and health-related fields

- Telehealth, telemedicine, mobile health (mHealth), electronic medical or health records (eMR/eHR), big data, wearables, and even artificial intelligence

World Health Organization

Background

Aims

To improve our understanding of eHealth readiness and adoption among older adults

Aim 1. To explore needs for and perceptions of eHealth among older adults

Aim 2. To investigate multilevel facilitators and barriers to eHealth adoption among older adults

Theoretical Framework
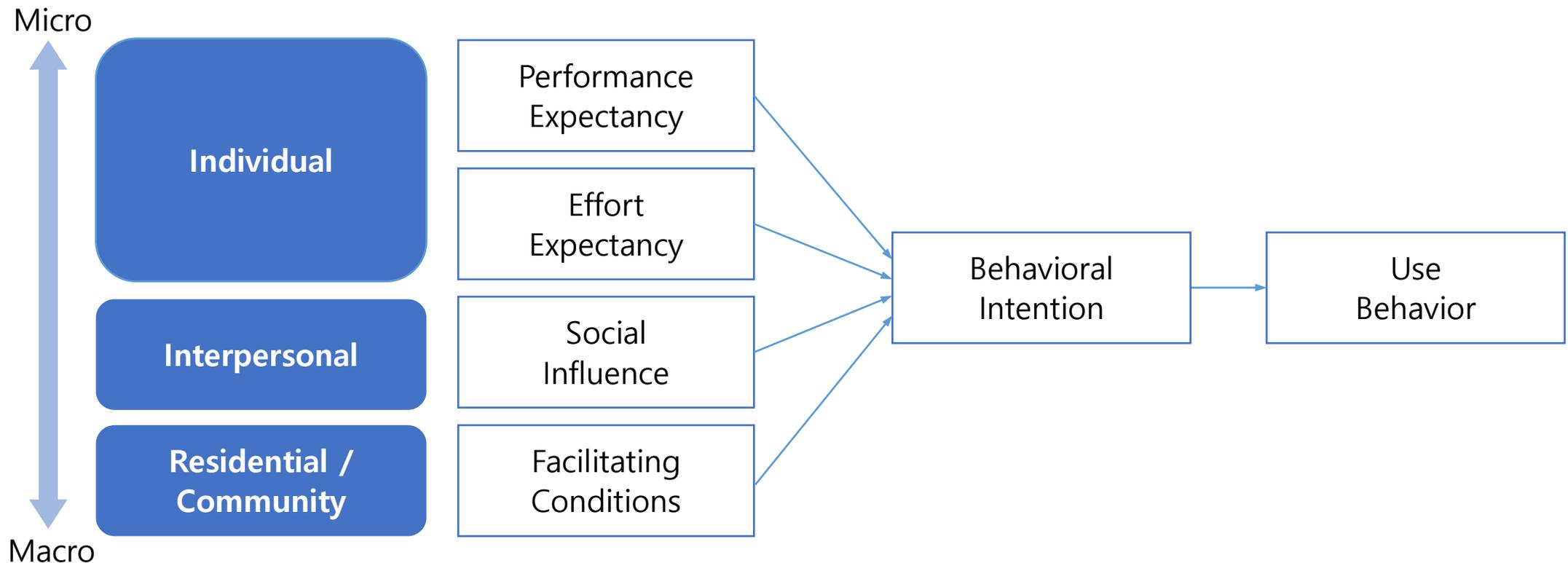# The Unified Theory of Acceptance and Use of Technology (UTAUT)

Figure 1. Intervention Framework: The Unified Theory of Acceptance and Use of Technology

Sample

❑ Older adults living in non-urban communities (N=31)
  July 2021-September 2021

❑ **Inclusion criteria**
  (a) living independently without any help from caregiver
  (b) living in the areas covered by any broadband services
  (c) having at least one chronic conditions and/or ongoing health issues

❑ **Exclusion criteria**
  (a) younger than age of 60
  (b) having a cognitive impairment or progressive disorder

Procedure and Data Collection

Screening Interview via phone
- Check inclusion/exclusion criteria: 1) Internet access, 2) Internet users or not, 3) independent zoom interview availability / or strong phone interview preference, 4) Interview schedule
- Overview the main interview

One-hour zoom interview (phone interview option)
- Perceptions of eHealth, ICT skills, social networks and environments associated with eHealth access and use

Sample Characteristics

		%
Gender	Female	80
Age	Mean=74.27 (SD=3.32, 60 – 88)	
Marital Status	Married	52
	Divorced/Widowed/Single	48
Education	More than college	74
	High school	23
	Less than high school	3
Income	<$25k	21
	$25k-35k	11
	$35k-50k	21
	$50-75k	14
	>$75k	39

		%
Family structure	Living alone	45
	Living only with a spouse	45
	Living with others	10
Self-rated health	Poor	4
	Fair	35
	Good	35
	Very good	29
# of doc visit	Mean=3.93 / year (SD=3.58, 0 – 16)	
Distance to doctor's office	less than 3miles	23
	3-5miles	13
	5-10miles	42
	more than 10miles	23

eHealth Use During Covid-19

USE (80%)

Internet search for health information

Telehealth – zoom appointment

Patient portals

Mobile apps

Others – community forums, wearable devices, etc.

"…I think that COVID-19 impacted us to do telehealth. I don't think that there was really a lot of telehealth prior to COVID-19. I mean, if there was, I was not involved in it or didn't know about it or didn't do it (ID 1010)"

No USE – NO INTEREST (20%)

o Never heard about eHealth

o Don't feel they need to use it

"… I still like the personal touch of talking and being with a doctor as opposed to emailing him back and forth, …" (ID 1023)

Positive Perceptions of eHealth

No travel, no parking, no driving

No geographic constraints

No waiting

Comfortable and safe

Easy management of appointments, information

Enhance health knowledge/literacy

Patient-oriented care

*"The first is what a great idea. I live 15 miles away from my primary care, I'm a widow, and **transportation if I was really sick would be difficult.** So, the idea that I might be able to communicate with somebody would be helpful."* (ID 1025)

"the Portal was my first personal experience... it was amazing actually, it was because I couldn't get ahold, you call and you have to be on a queue. And so I just was ecstatic. The first time, I was able to write a message directly to my provider on the portal. And I had a written record what I said, and a written record of what they said, and I love that actually a lot." (ID1017)

"It's immediate, I don't have to wait for my appointment with the doctor, I can just go online and find out what's going on." (ID 1008)

Negative Perceptions of eHealth

"...Is the doctor's office going to be staffed? Is the doctor's office going to be paid to take my call and to meet with me one on one Initially, I don't know. So I might be forced to rely on technology. Because the level of service I've had in the past is no longer there... When you are a patient, sure they say, 'hey, register here and login here' and everything else. So it's more sort of forced that way, I think than it is by familiarization" (ID 1013)

"... the patient portal doesn't offer me anything, Why do I need the patient portal? I think the doctors need the patient portal...So my question is, why am I constantly bombarded with using something that the doctors use? (ID 1001)

Poor quality of information and services

Lack of accuracy

Inefficient management- easy to forget, delayed responses

Security concern

Technology –hard to manage, hard to learn, complicated

Forced – Provider-centered care

"Is it a secured site? Nobody else is going to get into this where it's just doctors, medical team. That's the only thing I worry about." (ID 1031)

Facilitators for eHealth adoption

Performance Expectancy
Perception – usefulness, trust, convenience, low cost
Knowledge – understanding of eHealth, professional background

Effort Expectancy
Familiarity with technologies, understanding of ICT

Social Influence
eHealth users around (family, friends, & community members)
Encouragements and/or help from others

Facilitating Conditions
COVID-19; Adaptive technologies
Encouragements/suggestions by health care providers

+

New Category (Personal)
Personality: Curiosity, self-motivation
Needs: Health care needs (health history)

Barriers to eHealth adoption

Performance Expectancy
Perception – not interested, no benefits, lack of trust, lack of perceived needs,
Knowledge – lack of awareness

Effort Expectancy
Lack of confidence in technologies (frustration); Lack of technology education;
Difficulties in management (feel complicated, password, not user friendly)

Social Influence
Lack of eHealth users around (family, friends, & community members)
Lack of encouragements and/or help from others

Facilitating Conditions
Financial issues, poor internet access, no device;
No suggestion/information from health care provider

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New Category (Personal)
Prefer in-person appointment; Resistance to technology
Physical and cognitive limitations (vision, hearing, typing, memory, etc.)

Discussions

❑ Multilevel approach is needed to increase eHealth adoption among older adults

- o   Individual level: improve knowledge on and skills for eHealth
- o   Interpersonal level: help from family, friends, and community members; peer influence
- o   System level: old-age friendly system; Recommendations by medical provider

➔ Old-age friendly eHealth
➔ along with eHealth training program to increase perceived usefulness and easy of use
➔ Group training-network among older eHealth users