



Telecare for vulnerable groups during COVID-19

Παναγιώτης Μπαμίδης

Καθηγητής, Ιατρικής Φυσικής, Ιατρικής Πληροφορικής, Ιατρικής Εκπαίδευσης
Εργαστήριο Ιατρικής Φυσικής, Τμ Ιατρικής ΑΠΘ

Ιδρυτής

Thessaloniki Active & Healthy Ageing Living Lab (ThessAHALL)
LLM Care Ecosystem & EIPonAHA 2* Reference Site



Πρόεδρος, Ελληνική Εταιρεία Βιοϊατρικής Τεχνολογίας (ΕΛΕΒΙΤ)
Πρόεδρος, Society of Applied Neuroscience (SAN)
Editor in Chief, Health Informatics Journal

panagiotis.bamidis
pdbamidis@gmail.com

<http://medphys.med.auth.gr>



@MedicalPhysicsA
@Bamidis



Εργ. Ιατρικής Φυσικής ΑΠΘ

The Lab of Medical Physics is a major research and development hub in

- assistive technologies
- applied neuroscience
- medical education technologies
- affective computing
- semantic web
- medical robotics
- brain computer interfaces
- space neuroscience
- radiation physics
- non-ionizing radiation.

Comprised of 10 research groups, leaders in their fields, recognised internationally for their research excellence

... funded by a wide spectrum of sources.





AUTH Medical Physics Lab

major research and development hub, 10 research groups (research excellence, experience & funding)

*assistive technologies, applied neuroscience, medical education technologies, affective computing, semantic web, medical robotics, brain computer interfaces, space neuroscience, radiation physics, non-ionizing radiation

- ISO 9001-2015 Certified: software Design, Develop & Production / Design & Implementation of Education/Training programmes
- EIPonAHA (2* EIP on AHA Reference Site)
- LM Care ecosystem in Cities
- MoU with the Hellenic Inter-Municipal Network of Healthy Cities - WHO

<https://medphys.med.auth.gr/>





We are ...

Relevant Research Groups at the Lab of Medical Physics



**MEDICAL EDUCATION
INFORMATICS**

Exploring shifting paradigms in education and breakthroughs in information technologies for healthcare education



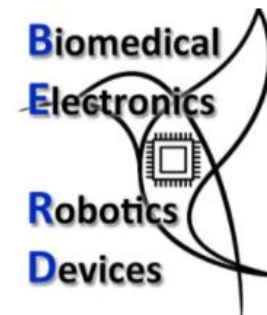
**ASSISTIVE
TECHNOLOGIES AND
SILVER SCIENCE**

Active and Healthy Aging as well as technologies for Assisted Living for special target groups.



**NEUROSCIENCE OF
COGNITION AND
AFFECTION**

Investigating human emotions Evaluating the effectiveness of non-pharmaceutical interventions of physical, cognitive, musical stimulation



**BIOMEDICAL
ELECTRONICS ROBOTICS
& DEVICES**

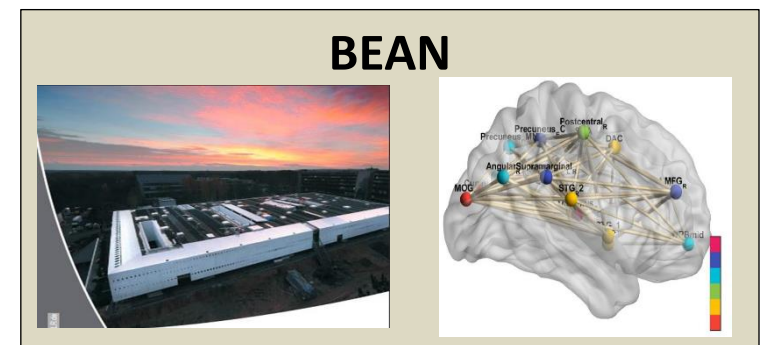
Brain computer interfaces, sensors, biomedical electronics, software development, automation and engineering

**INNOVATION &
TECHNOLOGY
EMPOWERED
LEARNING GROUP**



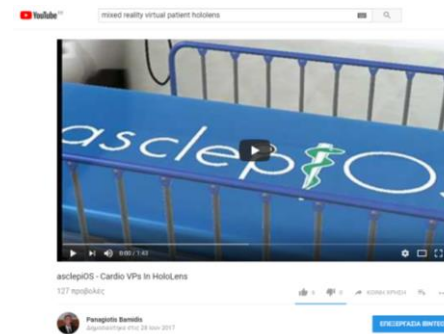
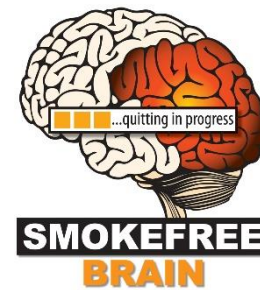
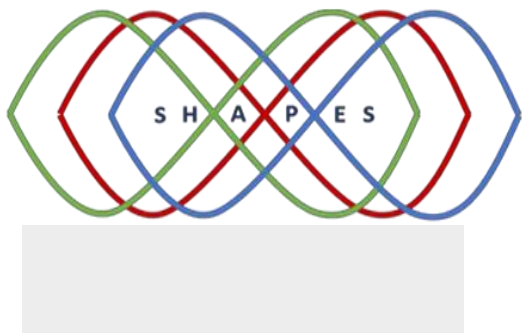
**BIOMEDICAL
ENGINEERING &
AEROSPACE
NEUROSCIENCE**

BEAN





Snapshots of funded Research Activity in our Lab





Co-ordination capacity...



life  champs



ePBLnet





Telecare challenges

Journal List > SAGE Public Health Emergency Collection > PMC7140977

SAGE Public Health Emergency Collection

Public Health Emergency COVID-19 Initiative

[J Telemed Telecare](#). 2020 Mar 20 : 1357633X20916567.

PMCID: PMC7140977

Published online 2020 Mar 20. doi: [10.1177/1357633X20916567](https://doi.org/10.1177/1357633X20916567)

PMID: [32196391](https://pubmed.ncbi.nlm.nih.gov/32196391/)

Telehealth for global emergencies: Implications for coronavirus disease 2019 (COVID-19)

[Anthony C Smith](#),^{1,2,3} [Emma Thomas](#),¹ [Centaine L Snoswell](#),⁴ [Helen Haydon](#),¹ [Ateev Mehrotra](#),⁵ [Jane Clemensen](#),^{2,3} and [Liam J Caffery](#),^{1,4}

▶ [Author information](#) ▶ [Article notes](#) ▶ [Copyright and License information](#) [Disclaimer](#)

This article has been [cited by](#) other articles in PMC.

Short abstract

Go to:

The current coronavirus (COVID-19) pandemic is again reminding us of the importance of using telehealth to deliver care, especially as means of reducing the risk of cross-contamination caused by close contact. For telehealth to be effective as part of an emergency response it first needs to become a routinely used part of our health system. Hence, it is time to step back and ask why telehealth is not mainstreamed. In this article, we highlight key requirements for this to occur. Strategies to ensure that telehealth is used regularly in acute, post-acute and emergency situations, alongside conventional service delivery methods, include flexible funding arrangements, training and accrediting our health workforce. Telehealth uptake also requires a significant change in management effort and the redesign of existing models of care. Implementing telehealth proactively rather than reactively is more likely to generate greater benefits in the long-term, and help with the everyday (and emergency) challenges in healthcare.

Keywords: Telehealth, telemedicine, pandemic, emergency, disaster management, sustainability, coronavirus, COVID-19

travelsafe

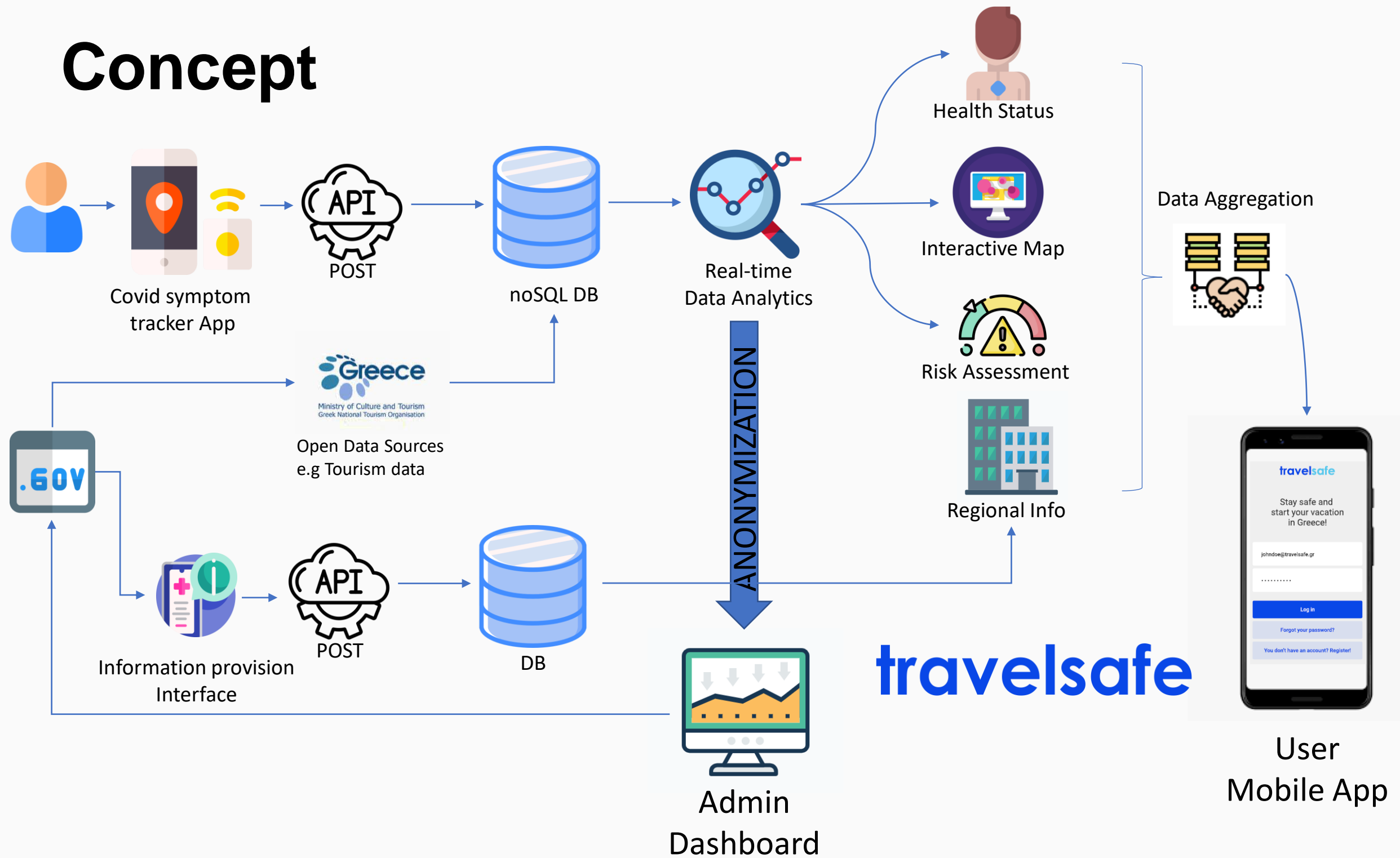
Stay safe and enjoy your vacation in Greece!

Project designed and developed by:
Data and Web Science Lab and Medical Physics Laboratory
Aristotle University of Thessaloniki

Contact persons:
Prof. Panagiotis Bamidis, Medical School, Aristotle University of Thessaloniki | bamidis@auth.gr
Prof. Athena Vakali, Department of Informatics, Aristotle University of Thessaloniki | avakali@csd.auth.gr

Concept

travelsafe





Εργαστήριο Ιατρικής Φυσικής
Τμήμα Ιατρικής

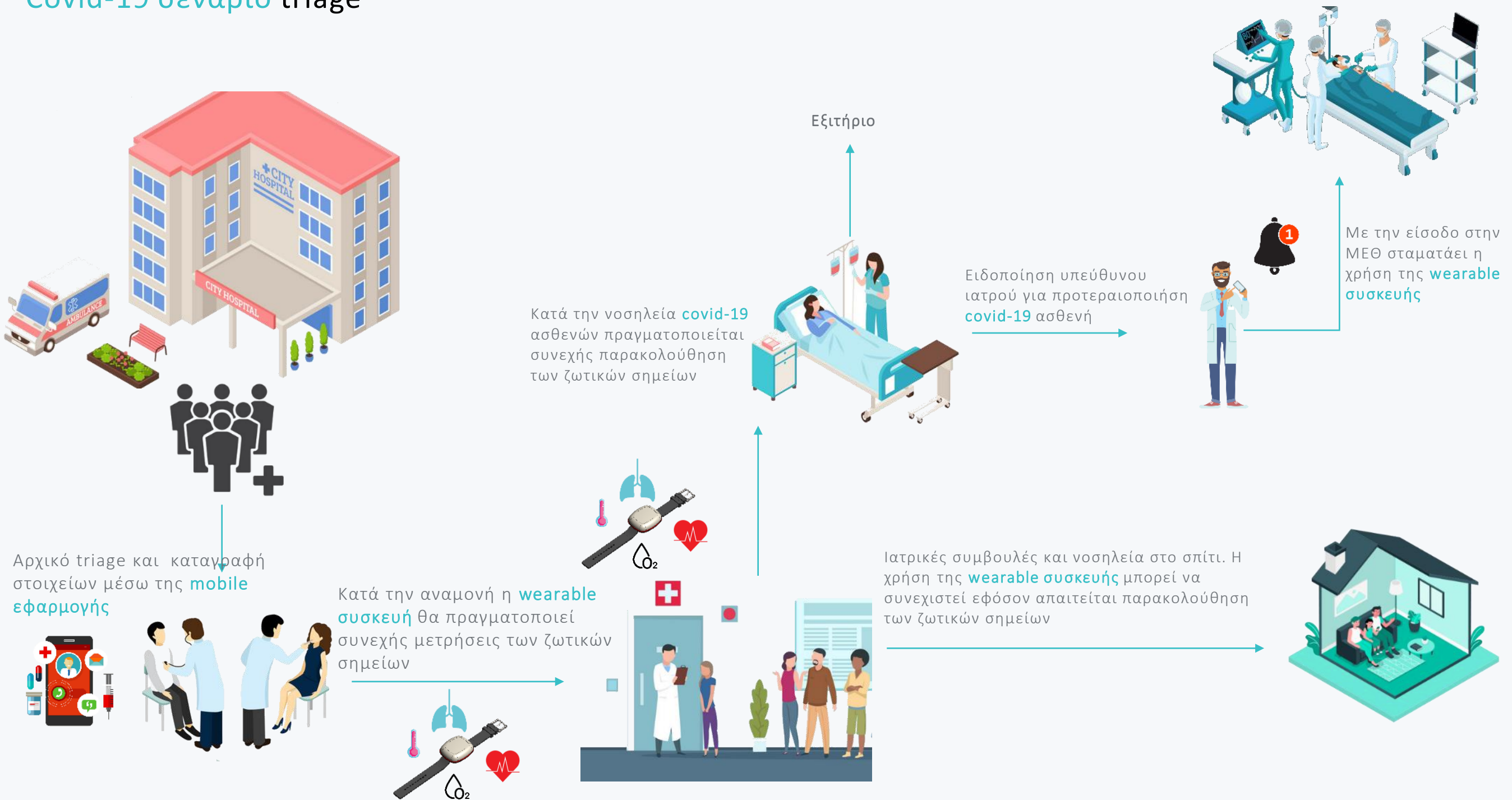
S.T.O.P. Covid-19

Supervise **Triage** & Organize Patient care with Covid-19

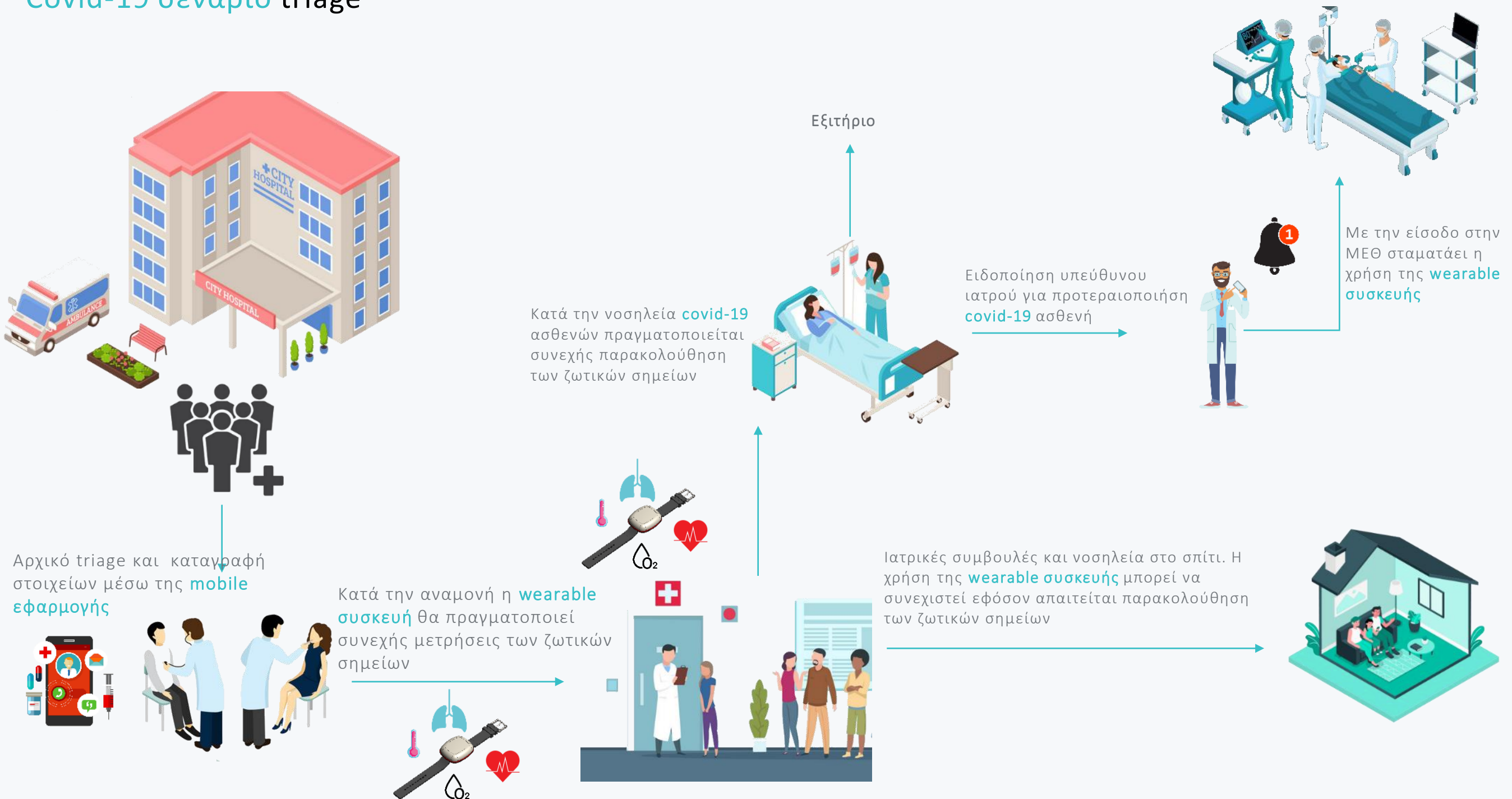
Ιούνιος 2020



Covid-19 σενάριο triage



Covid-19 σενάριο triage





Reshaping your Health with eCare and eCoaching

Lab of Medical Physics, Medical School, Aristotle University of Thessaloniki, 54124 Thessaloniki, Greece



Every day coaching at home



CAPTAIN

H2020 PM-15 project

socialIT software & consulting

DigiFlak

DCU INNOVATION

nvisio vicomtech

salumedia intras HoloCamp

Archangelos Michael Elderly People Nursing Home



CAPTAIN COACH

KEY CONCEPT

The user applies the technology to set so called **"SMART Goals"**:

The user decides to follow a SMART goal.

Coaching is contained inside each SMART goal.

The user receives a review of the results from the last week and a coaching plan for next week.

Coach assistant for older adults via voice and gesture interaction

**Set
GOALS**

**Achieve
GOALS**

**Get
FEEDBACK**

Hello "Peter", I am your coach and I will support you to set and achieve your goals for improving your everyday life regarding physical, social, nutritional and cognitive aspects. Each goal will focus on only one of:

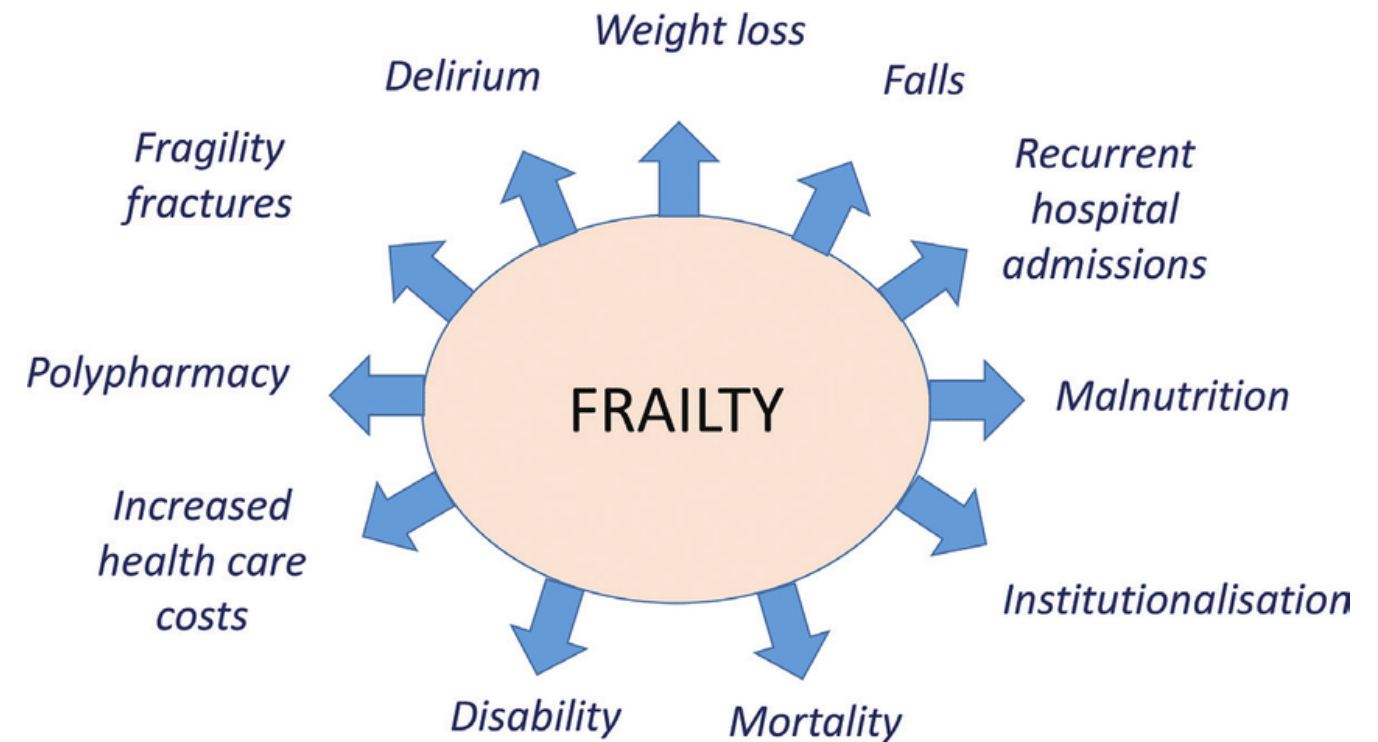




Ολιστική προσέγγιση – Αξιολόγηση συνδρόμου ευπάθειας

Comprehensive Geriatric Assessment

“A multidimensional, interdisciplinary diagnostic process to determine the medical, psychological, and functional capabilities of a frail older person in order to develop a coordinated and integrated plan for treatment and long-term follow-up.”



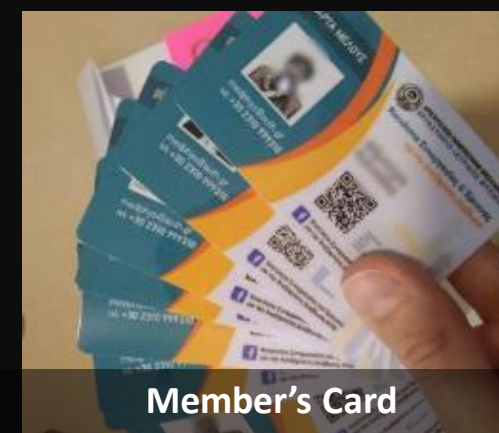
<https://em3.org.uk/leicgem-lecture-1>

Collaboration & Research Community for Independent Living

“Partners of Experience” Research Group:

- More than **70 older adult collaborators** (60+ y.o.) of the Lab, participating in city science activities research and social innovation activities, providing:

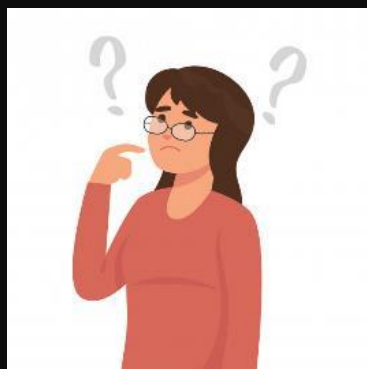
Experience – Requirements – Ideas - Feedback



Member's Card



Virtual Support Groups
(eCoffee sessions with Older Adults)



App for training patients in
the CoVid-19 era

mob.deepraft.com

<https://medphys.med.auth.gr/covid19>



<http://www.helani.gr/>

Study on the CoVid-19 effect on people with Multiple Sclerosis
(MS)/ Respiratory Diseases and their caregivers

CoVid-19 initiatives



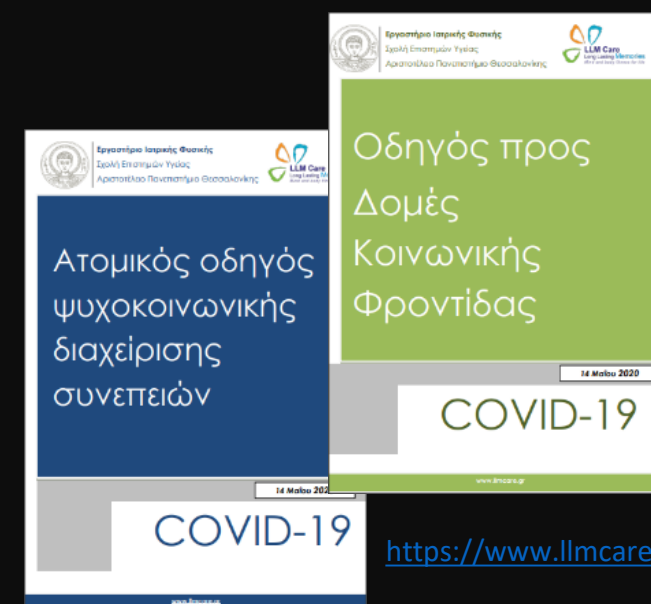
App to Supervise Triage &
Organize Covid-19 patient care

<https://medphys.med.auth.gr/news/stop-covid-19>



Web App to track & monitor
CoVid-19 symptoms

<https://covapp-project.herokuapp.com/>



CoVid-19 Effect management tips
& general guidelines

<https://www.llmcare.gr/>



ΕΥΧΑΡΙΣΤΩ!

Παναγιώτης Μπαμίδης

Καθηγητής, Ιατρικής Φυσικής, Ιατρικής Πληροφορικής, Ιατρικής Εκπαίδευσης
Εργαστήριο Ιατρικής Φυσικής, Τμ Ιατρικής ΑΠΘ

Ιδρυτής

Thessaloniki Active & Healthy Ageing Living Lab (ThessAHALL)
LLM Care Ecosystem & EIPonAHA 2* Reference Site

Πρόεδρος, Ελληνική Εταιρεία Βιοϊατρικής Τεχνολογίας (ΕΛΕΒΙΤ)

Πρόεδρος, Society of Applied Neuroscience (SAN)

Editor in Chief, Health Informatics Journal



panagiotis.bamidis
pdbamidis@gmail.com

<http://medphys.med.auth.gr>



@MedicalPhysicsA
@Bamidis