CAREPATH

Newsletter

Spring 2023

Welcome to the latest issue of the CAREPATH Newsletter! Over the last few months, the team has been busy preparing the CAREPATH Platform components in readiness for the Technical and Validation Study, and finalising the clinical investigation protocol and ethics approvals at the 4 pilot sites. In this issue, you will find some highlights of the project activities and planned ones.

Blogs and News

Team Highlights

From January 2023, a new partner organisation has joined the Consortium. While the partner organisation is new, the members of the team are not. The University of Birmingham is joining the Consortium, with the team from the University of Warwick moving there with Prof. Theodoros Arvanitis being appointed as the new Head of the Department of Electronic, Electrical and Systems Engineering in the School of Engineering.

The team is part of the Digital Health Technology Research Group (DHT), at the Department of Electronic, Electrical and Systems Engineering, School of Engineering, College of Engineering and Physical Sciences at the University. DHT's objective is to enhance the quality, safety, accessibility, and productivity of healthcare by supporting the implementation of digital solutions for the public, patients and professionals, underpinned by rigorous, multi-disciplinary research, development and evaluation. DHT has an 8-strong team including software engineers and health informaticians. DHT brings strength in the areas of technological solutions of connectivity within and across domains, building databases and applications, and developing training for end-users.

An aerial view of the arch of red-brick buildings around Old Joe, the University of Birmingham's clock tower - the tallest free-standing clock tower in the world.

Image: Copyright University of Birmingham

At the end of March 2023, the CAREPATH team waved goodbye to our colleague, Henrike Gappa from Fraunhofer FIT. Happy retirement Henrike!

Henrike Gappa has a Masters Degree in Special Education (Lesley College, Cambridge, USA, 1984) and the first state examination for teachers of children with special needs (University of Cologne, 1986). Since 1986 she has worked in different research organizations like the University of Cologne with focus on computer-aided intervention for people with special needs. At the Fraunhofer Institute for Applied Information Technology FIT, she is currently a senior researcher involved in several national and European research projects related to Web accessibility, usability and e-health. Her key working areas are user requirements engineering and design of multimodal user interfaces for people with disabilities and older persons.

CAREPATH welcomes Sarah Von Styp Rekowski, a new member of the Fraunhofer FIT team, to the project.

"My name is Sarah von Styp Rekowski. I finished my master's degree in media informatics in July 2022. During my master's degree, I started working on a research project on the topic of "digital in old age". I then moved to Fraunhofer in 2023, where I am working on my doctoral thesis, among other things. In CAREPATH, I am mainly concerned with the creation and implementation of the usability study."

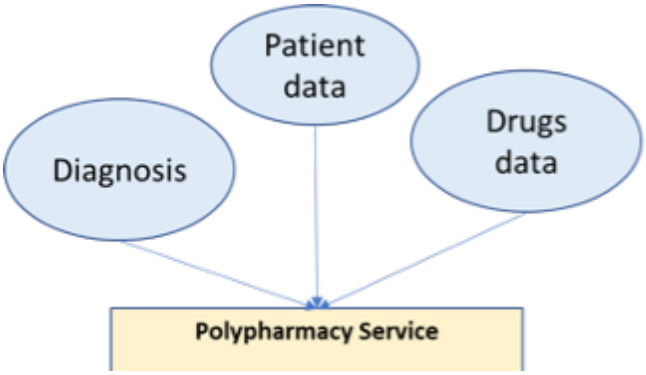
Security Aspects of AI in the Healthcare Sector

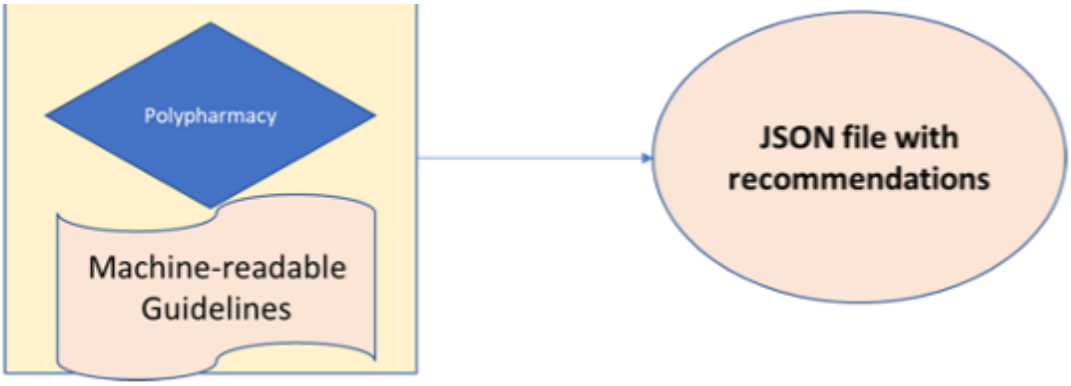
Artificial intelligence applications are massively used in most of today's healthcare systems, from medical diagnostics to e-health assistants to robot-assisted surgeries. This has leveraged the efficiency of healthcare professionals and helped patients as well. However, these advantages may come at the cost of security of patient data and professionals. The healthcare sector is one of the most vulnerable in industries when it comes to cybersecurity. This vulnerability has significantly increase since the starting of the Covid-19 pandemic. The intensity of healthcare-related incidents, Artificial intelligence (AI) applications and cybersecurity threats in healthcare are currently facing severe attacks. Cyberattacks have become more advanced using AI, therefore attacking systems that are secured with conventional methods becomes easier.

It is thus important that AI applications in healthcare have a high consideration while developing new AI- algorithm for security to constantly manage and secure the increasing volume of healthcare Internet of Things (IoT) sensor nodes as they connect and disconnect from healthcare networks.

Read the full article.

CAREPATH: Converting Polypharmacy Guidelines into Computer Interpretable Rules



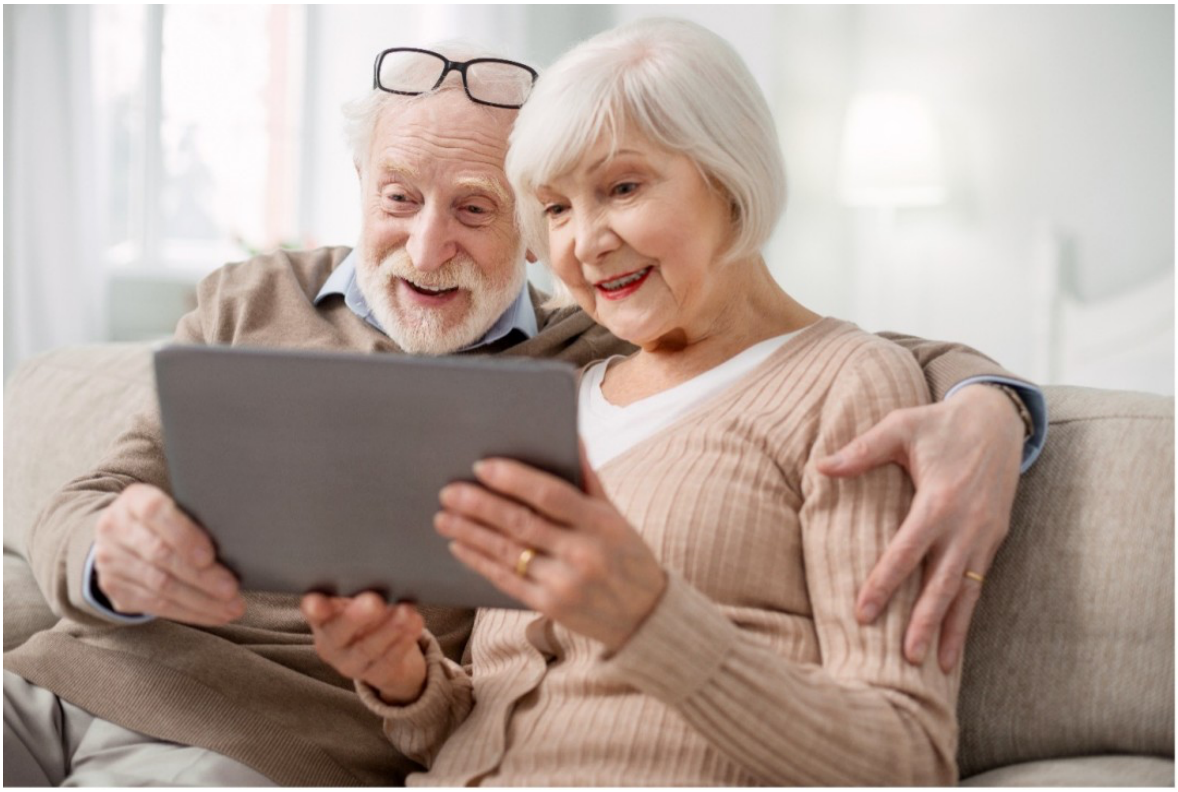


Older patients tend to suffer from multi-morbidity illnesses, i.e., the presence of many diseases or disorders that exist concurrently with a primary disease. This is challenging in multiple aspects for health care professionals and leads to increased usage of health care resources, leading to more complicated and/or multiple concurrent treatments, which usually lead to long-term use of multiple drugs in combination, called polypharmacy.

In CAREPATH, the polypharmacy service was designed to computerise the polypharmacy guidelines, such as Beers' criteria and "Screening Tool of Older Persons potentially inappropriate Prescriptions" (STOPP) and "Screening Tool to Alert doctors to the Right Treatment" (START) criteria set. These list of medications that can be considered inappropriate for older patients in long-term care.

Read more in the full article.

Silver Surfers Versus Low Digital Literacy Among Older People



Even though digital skills are definitely in need of improvement in the older generation, there are more and more older people who are getting into the use of digital media, especially through the use of messenger services on smartphones and the associated social inclusion. Boosted by the Covid-19 pandemic, many have benefited from the use of messenger services and video telephony to stay in touch with family and friends. But overall, the big digitisation push in the over-65 generation has failed to materialise.

However, to make the older generation sufficiently digitally fit, they need more than the ability to download apps to their smartphones or to do online banking. Low-threshold learning opportunities are needed in the municipalities.

Read more in the full article.

Event Participation

Upcoming Events

Berlin, Germany. 25-27 April 2023

DMEA 2023

Yehya Mohamad, Fraunhofer, will participate in this event and will talk about the CAREPATH project in his presentations.

DMEA 2023 is Europe´s leading Digital Health Conference and Trade Fair with more than 300 inspiring keynotes, practical lectures and discussion panels by and with experts from politics, self-administration, business and science. It includes a comprehensive exhibition with more than 500 manufacturers and suppliers presenting their products and solutions. More than 11,000 trade visitors from a total of 42 countries are expected.

Stuttgart, Germany. 28 April 2023

Accessibility Day of the Media University

Yehya Mohamad, Fraunhofer, will give a Lecture on "Opportunities and challenges for future living in an aging population" and present some of the CAREPATH work, amongst others. The programme topic for the event is: Inclusive design creates social responsibility - smart cities and smart homes for a self-determined life.

Next Consortium meeting to be held in Bielefeld, Germany, 3-5 May 2023

Our partner SKB will host the next Consortium meeting, which will take place in Klinikum Rosenhöhe, in the Department for Geriatric Medicine. The meeting will include training sessions in preparation for the Technical and Validation Study

sessions in preparation for the Technical and Validation Study.

View over Bielefeld from Sparrenburg. Photo credit: Karsten Wehner

Bielefeld Rosenhöhe Clinic

klinikumbielefeld
unsere kompetenz für ihre gesundheit

UK OWL
UNIVERSITÄTSKLINIKUM OWL
der Universität Bielefeld
Campus Klinikum Bielefeld

Gothenburg, Sweden. 22-25 May 2023

Medical Informatics Europe 2023.

Mert Genkturk, SRDC, will present the paper "Implementation of HL7 FHIR-Based Interoperability Profiles to Manage Care Plans for Multimorbid Patients with Mild Dementia".

The conference theme 2023 is "Caring is Sharing", and this is closely connected to the rapid development of health data sharing taking place both in Europe and globally. The focus will be on the opportunities of health informatics and the research within the EFMI community to enable trustworthy sharing of health data to improve human health. This includes healthcare, community care, self-care and public health, as well as innovation and development of future proof digital health solutions.

MIE 2023 will be a co-arrangement with our yearly Swedish conference Vitalis.

Past Events

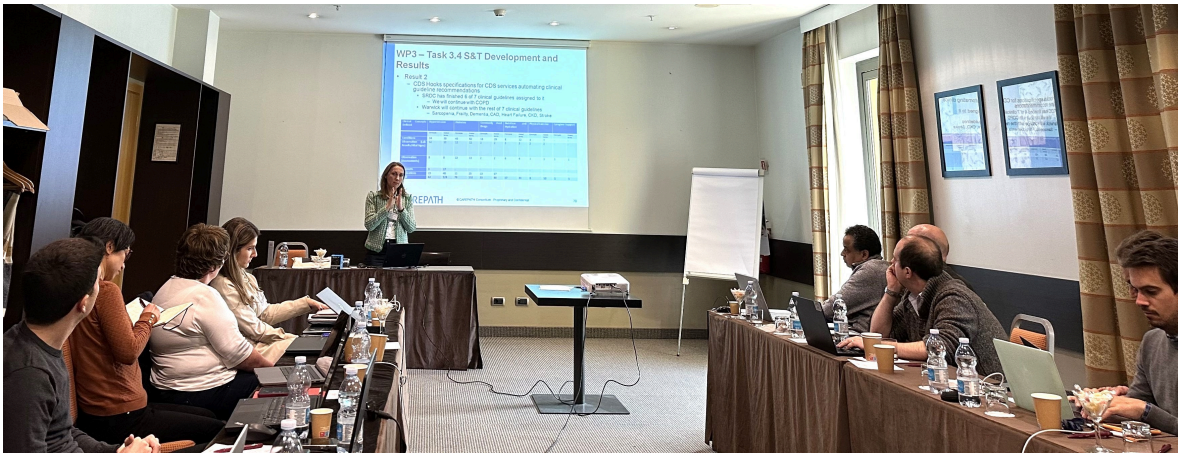
First Project Review, 16 March 2023

After 18 months since the start of the CAREPATH project, the Consortium participated in its first review virtually. We had a productive day presenting and discussing our work with the Project Adviser and two reviewers.

Second Project General Assembly in Milan, Italy 14-15

December 2022

The CAREPATH project Consortium met in Milan for the 2nd General Assembly and Consortium meeting. We had two fruitful days and we also had the pleasure to be joined by the Project Adviser, Aikaterini-Marina Kyrieri.



Gokce Banu Laleci Erturkmen, SRDC, presenting the progress in Task 3.4 Providing smart early warning decision support tools as Clinical Decision Support Services.

Pedro Abizanda, SESCAM, presenting the progress in WP5 for the clinical investigation.

We will be back in the summer with more news from the CAREPATH project!

Email us: carepath.newsletter@eclexys.com

CAREPATH

Horizon2020
European Union Funding
for Research & Innovation

This project has received funding from the European Union's Horizon 2020 research and innovation programme under grant agreement No 945169.

CH