CAREPATH Newsletter

Spring 2025

Welcome to the latest edition of the CAREPATH Newsletter!

In recent months, the CAREPATH project team has been deeply engaged in a pivotal phase of development and conducting the Technical Validation and Usability (TVU) study to critically assess the usability, user experience (UX), and overall utility of the CAREPATH platform. This phase has not only focused on enhancing the functional aspects of the platform but also emphasised the safety of its features, ensuring any concerns were promptly addressed and resolved.

As part of our commitment to ethical standards and regulatory compliance, the team has been working to navigate the complex terrain of regulatory approvals. This collaborative effort has been crucial in securing ethical approvals for both the TVU and Clinical Investigation (CI) phases in Spain and Romania, as well as for the TVU phase in the United Kingdom. These approvals mark a significant milestone in the project, demonstrating our adherence to the highest standards of clinical safety and regulatory compliance.

Our clinical partners have shown exemplary dedication in meeting the stringent requirements set forth by national regulatory agencies. They have been well-supported in these efforts by our technical partners, who have provided essential inputs and expertise that propelled the project forward. This synergy between clinical and technical teams has been fundamental to our success, ensuring that CAREPATH not only meets but exceeds the expectations set for contemporary health technology platforms.

As we move forward, the CAREPATH project continues to set benchmarks in the development of innovative health solutions. With each phase of approval and each challenge overcome, we are closer to realising our vision of transforming the landscape of healthcare technology. We are excited about the journey ahead and remain committed to providing updates as we progress further in making healthcare more accessible, efficient, and user-centric.

Stay tuned for more updates as we continue to innovate and lead in the integration of technology and healthcare.

Project Highlights

Real-World Testing and Early Clinical Use in Spain

During these last months, the Technical Validation and Usability (TVU) phase has been completed in Spain, with the participation of four users, their informal carers and two health professionals. The TVU phase consists of the implementation of the system in the participants' homes for 90 days (three months), in order to validate the different platforms developed, their functioning, and usability by the target group.

The development of the phase has been carried out as planned, as indicated in the protocol, with telephone interviews conducted with all users to collect system incidents and possible improvements based on the participants' opinions. After one month of use,

the different tests were completed to measure the effectiveness, efficiency, and satisfaction of the system, in addition to an exercise in which users performed a series of typical tasks within the CAREPATH environment, such as confirming the taking of medication or carrying out a scheduled measurement of vital signs. The problems detected have been recorded and corrected, resulting in improvements to the system during this TVU phase. This phase was completed in Spain between September and December 2024.

We are currently in the Clinical Investigation (CI) phase in Spain. Six participants have been recruited, the system has been installed in their homes, and their care plan is being managed using CAREPATH, with the help of their informal carers and the healthcare professionals responsible for reviewing the information obtained and acting accordingly

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Blogs and News

Published Blogs

Transforming Clinical Guidelines into Actionable Clinical Decision Support (CDS) Rules

Managing multimorbidity, especially in elderly patients with mild cognitive impairment (MCI) or mild dementia (MD), presents complex challenges that require sophisticated solutions. The CAREPATH Project stands at the forefront of addressing these complexities by developing an integrated care platform tailored to multimorbid older adults with MCI or MD. The project's core mission is to empower multidisciplinary care teams to craft personalized care plans while adhering to evidence-based guidelines.

Read the full article.

Artificial Intelligence in Medicine: From Vision to Clinical Revolution

Artificial intelligence (AI) has emerged as one of the most transformative innovations in modern medicine. What once seemed like science fiction has evolved into a reality that is revolutionizing how diseases are diagnosed, treated, and managed. However, the integration of AI in healthcare didn't happen overnight. It is the result of decades of research, investment, and technological development, leading to significant breakthroughs, especially in medical imaging diagnostics and surgery.

Read the full article.

Intrinsic Capacity vs. Artificial Intelligence

In recent years, the concept of *Intrinsic Capacity* has gained increasing importance in healthcare, particularly in the care of the elderly. This innovative approach, promoted by the World Health Organization, focuses on the combination of a person's physical and mental abilities, aiming to maintain their independence and quality of life as they age. It represents a significant shift from the traditional focus solely on managing diseases.

Read more in the full article.

Geofencing in CAREPATH: Enhancing the Care for Multimorbid Elderly Patients with Dementia, their Independence and Quality of Life

The CAREPATH platform integrates geofencing functionalities to monitor patients' movements and alert the caregivers when and where polygonal boundaries are trespassed.

The CAREPATH project is an innovative initiative aimed at enhancing health outcomes of multimorbid patients with Mild Cognitive Impairment or Mild Dementiacare, through the integration of personalized health pathways, like tailored care plans, patient engagement in physical activities, playing games and social activitie, interdisciplinary collaborations, and others. Among them, automatic data gathering from wearable sensors and deivces and data analytics to monitor patient health and track progress, and geofencing.

Read the full article.

The empowerment of informal caregiver in homecare settings

Informal caregivers play a crucial role in the home care of elderly patients with multimorbidity, providing both physical assistance and emotional support. Their contributions are essential, as many older adults with complex health needs prefer to remain in their homes rather than move to institutional settings. Informal caregivers, often family members, deliver the majority of care for older adults with multimorbidity. This includes managing medications, assisting with daily living activities, adherence to care plans, and coordinating medical appointments. Studies show that nearly 80% of home care for elderly individuals in Europe with chronic conditions is provided by informal caregivers. Beyond medical tasks, caregivers offer emotional and social support, which is vital for the psychological well-being of elderly patients.

Read the full article.

Addressing Fragmented Data and Interoperability in Germany's Healthcare System

Germany's healthcare system, one of the most advanced and expensive in the world, faces significant challenges in managing fragmented data, particularly for patients

Intrinsic capacity and aging: maintaining vitality

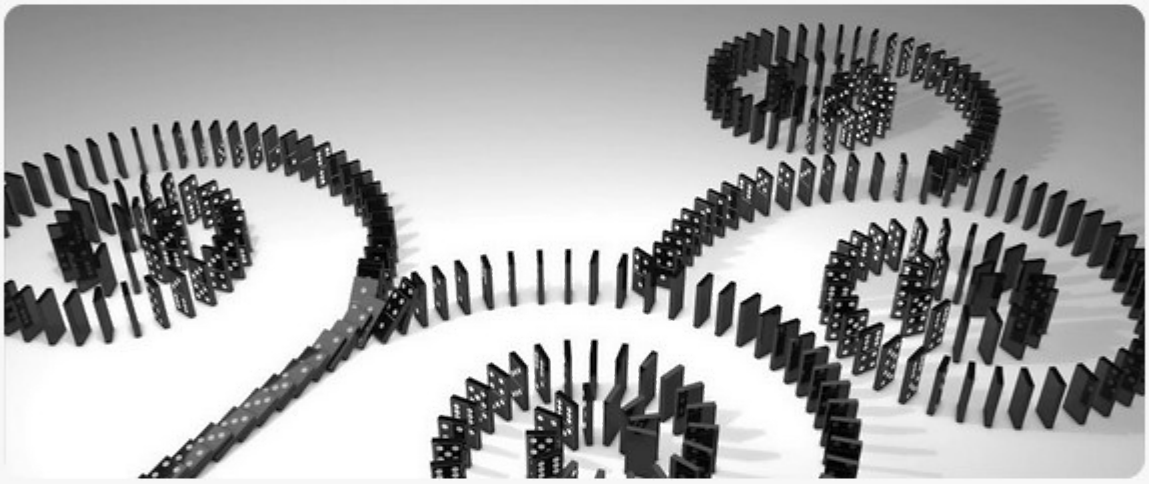
Aging is not just a biological process, but a complex journey involving body, mind and emotions. It is often associated with the idea of an inevitable decline in capacity, but this view fails to consider the enormous possibilities offered by a

fragmented data, particularly for patients with multimorbidity and cognitive impairments. The federal structure of Germany's healthcare system, combined with the coexistence of public and private health insurance providers, has led to a highly decentralized and compartmentalized data landscape. For individuals with complex care needs, this fragmentation results in inefficiencies, delays in treatment, and reduced quality of care. Addressing these issues is critical for ensuring that Germany's.

Read the full article.

proactive and personalized approach. This is where the concept of intrinsic capacity comes in: a dynamic resource that we can cultivate and preserve to live not only longer, but with greater quality of life.Intrinsic capacity, represents the sum of physical, mental, and emotional functions that enable a person to cope with daily challenges. With age, some aspects of this capacity may decline, but this does not mean that the decline is inevitable or irreversible. Through targeted interventions and innovative technologies, it is possible to slow, and in some cases reverse, this trajectory.

Read the full article.



The relevance of the spillover effects in the evaluation of Alzheimer's disease interventions

Since dementia carries significant social and economic implications, the evaluation of health and social care systems is crucial. This approach can offer the most reliable evidence for policy and service development. In this sense, one of the main functions of economic analysis is to generate information useful for informing decision-makers about the health and welfare costs and benefits of choices about health interventions, as broad public health programmes, new treatments, the use of medical devices, or changes in the organisation of health care services, without exhausting the list.

An important element to consider is the perspective from which the analysis is performed. This perspective is usually limited to the health system (on the cost side) and to the patients affected by a disease (in the case of health and well-being outcomes). However, in the case of diseases such as dementia, such a perspective is clearly insufficient.

The term 'spillover effect' refers to situations in which a situation experienced, or action

taken by one person can affect not only that person but also the well-being of others. Although the concept can be applied to a variety of situations, e.g. vaccination programmes, the context in which spillover effects have been most studied has been in the family and affective environment of people receiving non-professional (informal) care.

Explore more

Transforming the Management of Mild Cognitive Disorders and Dementia through AI-enhanced CDSS

The rise of Artificial Intelligence (AI) in healthcare brings the potential for managing neurodegenerative conditions, particularly mild cognitive disorders and mild dementia. Clinical Decision Support Systems (CDSS) enhanced with AI capabilities are dignified to revolutionise early detection and intervention, which are crucial for these conditions.

Early Detection and Continuous Monitoring

One of the most promising aspects of AI in CDSS is its ability to aid in the early detection of mild cognitive disorders and dementia. AI algorithms can analyse subtle patterns in patient data, such as changes in speech, memory lapses, and even minor alterations in routine behaviours that might elude even skilled clinicians. This early detection is critical , as it allows for the initiation of care plans and interventions at a

CAREPATH - Data, Delivery and Future Development

On the 18th March 2025, The European Commission, in collaboration with the Polish Presidency hosted a major event on health data entitled: “The European Health Data Space (EHDS) – Unlocking Europe's Health Data Future Together.” The event was held to mark the formal adoption and publication of the EHDS Regulation, which is considered by many to be major milestone in Europe's digital health transformation. The Euopean Health Data Space Regulation “aims to establish a common framework for the use and exchange of electronic health data across the EU. It enhances individuals’ access to and control over their personal electronic health data, while also enabling certain data to be reused for public interest, policy support, and scientific research purposes.

stage where they can significantly slow the progression of the disease.

Read the full article.

Read the full article.

Event Participation

Highlights from MIE2024: Innovative Presentation on CAREPATH's Help Desk Services

Dr Omid Pournik from the University of Birmingham - School of engineering presented parts of our findings in the CAREPATH PROJECT at the MIE2024 Conference, which took place from August 25-29. The presentation, titled "Developing a Help Desk Service for Enhanced Coordination in Health Informatics Projects," focused on innovative strategies for improving project management and fostering collaboration within the field of health informatics.

The presentation explored the development of a streamlined help desk service aimed at facilitating better coordination and support across health informatics projects like the CAREPATH. This initiative is expected to optimise outcomes and enhance efficiency within the sector.

If you're interested in learning more, you can find the full paper here.

Dr Pournik - MIE 2024

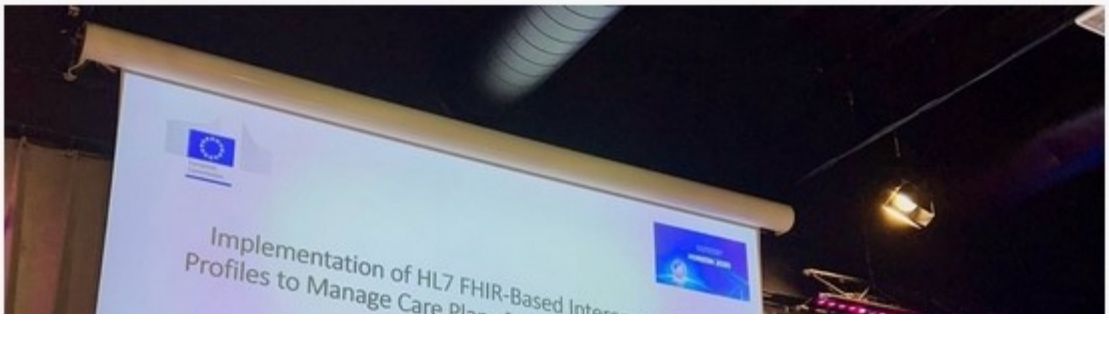
Implementation of HL7 FHIR-Based Interoperability Profiles to Manage Care Plans for Multimorbid Patients with Mild Dementia, presented in MIE 2023

Gothenburg, Sweden. 22-25 May 2023

Medical Informatics Europe 2023.

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

The conference theme 2023 was "Caring is Sharing", and this was closely connected to the rapid development of health data sharing taking place both in Europe and globally. It focused on the opportunities of health informatics and the research within the EFMI community to enable trustworthy sharing of health data to improve human health.



Upcoming Events

Medical Informatics Europe 2025

We will be hosting a workshop at the MIE2025 Conference! This is a unique opportunity for professionals in the field of health informatics to engage in deep-dive sessions on the latest trends and innovations.

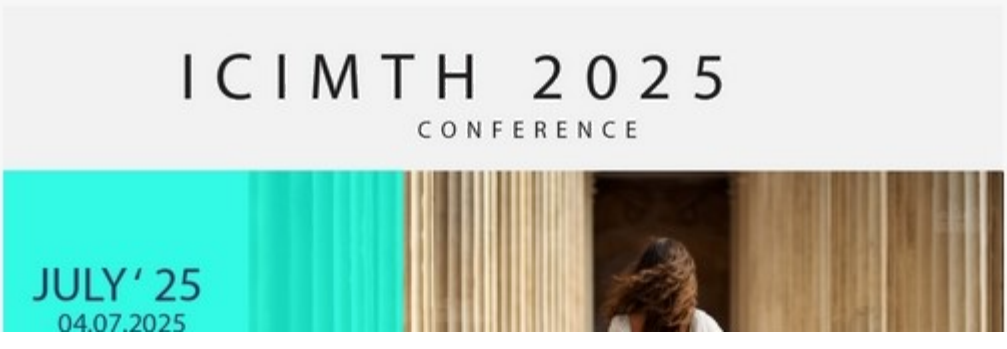
Our workshop is designed to facilitate knowledge exchange and foster collaborations among experts from various disciplines within the health informatics community. The session will feature interactive discussions, hands-on activities, and presentations from renowned experts.

Details of the workshop, including the agenda, and speakers, will be shared soon via our project website. Mark your calendars and stay tuned for more updates!

We look forward to seeing you at MIE2025 and engaging in enriching discussions that propel our field forward.

MIE 2025

International Conference on Informatics, Management, and Technology in Heealthcare. ICIMTH 2025



Past Events

MIE 2024

34th Medical Informatics Europe Conference

Digital Health & Informatics Innovations for Sustainable Health Care Systems

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

Email us: carepath.newsletter@eclexys.com

CAREPATH

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