Electronic Health Literacy

Electronic Health Literacy:

From Theory to Practice

Edited by

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A PRELIMINARY LOOK AT GLOBAL E-HEALTH LITERACY RESEARCH

UNIT 1

INTRODUCTION TO THE WORLD EHEALTH LIVING LAB

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General Introduction to The World eHealth Living Lab

Website: https://wearewell.net eHealth is commonly defined as the utilization of information and communication technologies, particularly internet-based technologies, to enhance or promote health and healthcare services. This broad field encompasses various applications, ranging from digital nutrition diaries for diabetes management to the implementation of artificial intelligence in intensive care units. In practice, the terms eHealth and digital healthcare applications are often used interchangeably. Digital health solutions are poised to play a crucial role in fostering sustainable healthcare models; however, their success hinges on effective integration into conventional healthcare systems. To achieve this, it is imperative to understand which interventions are effective and which are not.

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The World eHealth Living Lab (WeLL) serves as an independent, international platform designed for stakeholders engaged with evidence-based eHealth applications and digital health. Participants in WeLL contribute to this collaborative environment through knowledge sharing, the exchange of personnel and PhD students, joint proposal writing, and the development of scientific papers, as well as involvement in specific eHealth and digital health projects.

National eHealth Living Lab (NeLL) is the Dutch branch of the WeLL. Within WeLL, NeLL collaborates with a large number of national and international companies. In addition, NeLL has a close connection with universities and (inter)national academic institution all over the world, focusing on new e-Health-tools and their further development and implementation to realize scientifically- proven, effective eHealth applications to enable them to become a fully integrated part of effective healthcare and to upscale these tools.

Mission of WeLL

Digital tools offer individuals increased self-reliance, autonomy, and freedom. Care is provided within a health pathway that is centered around the citizen or patient, and is integrated across different levels of care, taking into account the employer perspective and the social domain. This approach helps ensure that care remains accessible, affordable, and feasible for everyone, regardless of their location. WeLL is actively building a global collaborative community consisting of healthcare professionals, the business community, and public organizations, with the goal of sharing

knowledge and experiences. Ultimately, our aim is to establish cooperative partnerships between WeLL, NeLL (the Dutch section of WeLL), and other partners to initiate scientific projects focused on digital healthcare applications.

Focus of WeLL

In order to develop, implement, and scale up sustainable care and health models, we believe that digital healthcare applications meet a number of preconditions. The preconditions we apply are:

- Co-creation: A prerequisite for the proper use of eHealth solutions is that they connect with all end users. Involving them in all phases of the development process is therefore crucial. WeLL organizes co-creation with all end users, including researchers, healthcare professionals, software developers, patients, patients with low health literacy, paying attention to health inequalities, and developing tailor-made eHealth for people with low health literacy or low literacy.

- Validation and evaluation: As an independent party, WeLL validates eHealth products and services and chooses the validation strategy that best suits the product development cycles. In addition, WeLL plays a pioneering role in the creation and implementation of (inter)nationally applicable eHealth quality standards.

- Education: eHealth solutions often involve multiple end users, each of whom needs knowledge and skills to implement these solutions in their daily actions. Education of all end-users is therefore essential. WeLL is a specialist in the development of educational tools that support the implementation of eHealth solutions.

- Laws, regulations, and ethics: WeLL helps to translate applicable laws and regulations into practice and, by involving end users, ensures the ethical application of eHealth technology in healthcare.

- Implementation in the care process: eHealth solutions are often most effective when they are applied in collaboration with healthcare and health professionals (blended care). That is why WeLL is designing new blended care pathways, in co-creation with all end users.

- Structural funding: Scaling up eHealth solutions requires structural

funding that fits the place of eHealth in the healthcare process. WeLL works closely with health insurers and umbrella organizations to apply existing funding structures in the right way and to develop new forms of funding.

Core Functions and Collaborations of WeLL

WeLL is dedicated to advancing eHealth through scientific research, education, consulting, and knowledge sharing. Our key functions include:

Scientific Validation & Research: WeLL conducts rigorous research on eHealth applications, focusing on validation, effectiveness, and implementation. We collaborate with international partners on joint grant proposals and contribute to the development of innovative digital healthcare solutions.

Consulting & Development: WeLL supports both healthcare providers and technology developers by identifying urgent healthcare challenges, analyzing organizational and patient needs, and recommending appropriate eHealth applications.

Education & Training: WeLL develops and delivers educational programs to enhance digital literacy among healthcare professionals, students, policymakers, and patients, ensuring effective adoption and use of eHealth solutions.

Knowledge Sharing & Networking: WeLL actively disseminates insights through lectures, publications, and presentations. By fostering collaborations among stakeholders, WeLL facilitates knowledge exchange to drive innovation in digital healthcare.

WeLL Projects

An overview of representative eHealth projects to which WeLL contributes is presented below. For example, WeLL conducts research into the application, develops the underlying methodology or algorithms, designs education, participates in drawing up validation criteria or has tested the tool. Openness and transparency are significant to WeLL. Therefore, WeLL aims to offer a comprehensive understanding of the conditions and criteria

that are used for the eHealth projects in which WeLL participates. These include the following:

Conditions

- WeLL has a clearly defined role within the project.
- The project overview includes information such as the start and stop date, grant provider, etc.
- A designated WeLL contact person is always associated with the projects.
- The results of the examination (whether negative or positive) are always made public.
- Upon completion of projects, the results report or publication is appended to the project page.
- Advertising is strictly prohibited.

Criteria

- This is an eHealth project.
- The formulated problem addresses the specific needs of the end user, and there is a clear plan for identifying these needs in the project.
- It examines the (financial) added value for the end user and society as a whole.
- Practical experience has been or is being gained with the end user.
- The aim of the project is to generate evidence on effectiveness and/or feasibility through scientific research.
- The objective and intended results have the potential for scaling up at the local and/or (inter)national level.
- Privacy and security considerations are in accordance with the applicable laws and regulations.

- The application complies with the required clinical guidelines mentioned in the National Health Care Institute's register for the specific condition or care need.

- The technology/ICT meets or can meet the required standards and guidelines.

For more information about the projects, please visit the official website: https://nell.eu/

Examples for international eHealth projects

1. IMPALA: An Innovative Monitoring system for PAediatrics in Low-resource settings: an Aid to save lives.

https://nell.eu/projecten/impala-an-innovative-monitoring-system-for-paediatrics-in-low-resource-settings-an-aid-to-save-lives

This section was authored by Dr. María Villalobos-Quesada

Background:

Child mortality is a global persistent problem that reflects the global inequities in access to care and quality of life. The most recent global data shows the progress made globally in reducing the under-five mortality rate (WHO 2025), but it also highlights that this progress is simply not enough. The most recent data available showed that in 2023, 4.8 million children continued to die from preventable causes, and mostly in low and middle-income countries (LMIC) (WHO 2025; Sharrow et al. 2022). Many of these deaths are caused by poverty-related diseases for which treatment options are available, but they are recognized too late for effective treatment. A child under five living in the highest-mortality country has 80 times greater chance of dying than in the lowest mortality-country (UNICEF 2025).

Addressing child mortality has been addressed from different perspectives, such as improving the accessibility to immunization, maternity and postnatal care, and basic services such as safe water, hygiene and sanitation (WHO 2025; Sharrow et al. 2022). However, if we aim at reducing global child mortality further, it is necessary to address the in-hospital quality of care. In this setting, monitoring children's vital signs is crucial for establishing timely diagnosis and treatment. Specifically in critical care settings, it can assist the early detection of critical illnesses, which can be lifesaving. However, in low-resource settings (LRS) the combination of limited qualified healthcare staff and the lack of adequate monitoring systems, significantly hinders the ability to monitor hospitalized children. Current monitoring systems have been designed for the needs, and economic capacity of high-resource settings, often being too expensive and incompatible with the LRS.

Objectives:

The IMPALA project aims to develop an affordable, durable, and user-friendly monitoring system for hospitalized children in low-resource settings, the IMPALA system (IMPALA Project, 2025). This system will integrate innovative sensors, machine learning algorithms, and point-of-care biomarkers to enable health workers to detect and predict critical illnesses in a timely manner.

IMPALA is carried out in Malawi, specifically at Zomba Central Hospital and Queen Elizabeth Central Hospital in Blantyre. The consortium partners include the Amsterdam Institute for Global Health & Development, Imperial College London, GOAL3, Kamuzu University of Health Sciences, Malawi University of Business and Applied Sciences, and WeLL/NeLL.

Activities:

- Further developing the current tablet-assisted monitoring system specifically designed for LRS pediatric in-hospital care. The IMPALA system would provide real-time prediction of critical events through predictive algorithms based on vital signs, optionally supplemented with clinical data and biomarkers allowing timely, life-saving interventions.

- Developing algorithms to predict critical illness based on vital signs, and potentially enhance accuracy by including clinical data and/or biomarkers data.

- Conducting extensive implementation research to inform the development and implementation. This includes the identification of key barriers and facilitators to implementation of vital signs monitoring and the use of algorithms in LRS.

- To design further steps for assessing the impact of the IMPALA system and implementation strategy on in-hospital paediatric survival in LRS.

Expected Outcomes:

By the end of the project, the following outcomes are expected:

- IMPALA System: A fully functional, affordable and durable tablet-based monitoring system that meets the needs of LRS.

- Improved Early Detection of Critical Illnesses: The system will enable healthcare workers to detect and predict critical illnesses early, leading to better patient outcomes.

- Contributing to reducing child mortality: Improving the in-hospital care of children by means of implementing vital signs monitoring, which can timely address critical illness, reducing child mortality.

- Informing future large-scale critical trials of the IMPALA system and its implementation in LRS.

Role of WeLL:

WeLL contributes to the IMPALA project by providing expertise in the areas of data management, implementation research and design, ethics and, responsible AI. Specifically, we led a study that explored nurses´ perspectives on data-driven algorithms. The study provided us with insights into the context, the types of algorithms regarded as valuable for healthcare professionals at Zomba Central Hospital and Queen Elizabeth Central Hospital. It also presented a design prototype of the algorithm´s output, which informed the next IMPALA monitoring system (Rakers et al. 2024). We also contributed to a scoping review on machine learning algorithms (Nkhono et al. 2025). In another study, we explored the healthcare-seeking behaviors of guardians whose children were admitted to the pediatric high-dependency unit at Zomba Central Hospital, providing a better understanding of the barriers to accessing care (forthcoming). Closely

together with the Malawian partners, we contributed to setting up a responsible and fair data stewardship strategy and data infrastructure, suitable for advanced computing while ensuring access and international collaboration. Finally, WeLL has played a central role in the ethics monitoring activities of the IMPALA project.

Further reading:

1. Cautiously optimistic: paediatric critical care nurses' perspectives on data-driven algorithms in low-resource settings—a human-centred design study in Malawi (Rakers et al. 2024).

2. Machine Learning for Predicting Clinical Outcomes of Hospitalised Children: A Systematic Review of Applications in Low- and Middle-Income Countries. Forthcoming in Lancet eClinical Medicine (Nkhono et al. 2025).

Funding statement:

This work was supported by the second EDCTP programme as part of the European Union's Framework Programme for Research and Innovation, Horizon 2020 (ISRCTN71392921).

2. Kansen voor West program

https://nell.eu/projecten/kansen-voor-west

Background:

Healthcare costs in the Netherlands are projected to rise to 174 billion euros by 2040, more than double the cost in 2015. This sharp increase is primarily due to demographic changes, such as an aging population, and the escalating costs of expensive treatment options for various diseases. In order to maintain affordable healthcare, the use of smart, scalable technology is crucial. eHealth, defined as the use of contemporary information and communication technology to support or improve healthcare, is seen as a key solution. This includes infrastructure solutions like telemonitoring, teleconsultations, and digital platforms like personal health environments (PBL), as well as automated decision support and self-management applications.

Despite the vast potential of eHealth and the high demand for digital healthcare products, only a fraction of eHealth products successfully reach the healthcare market and achieve scale. The process for bringing innovative eHealth products to widespread use in healthcare is complex. These products must undergo rigorous testing, scientific validation, efficiency evaluation, and reimbursement procedures before they can be fully integrated into the operational healthcare system.

Objectives:

The primary objective of the Opportunities for West project is to enable start-ups and SMEs to validate their eHealth products scientifically and economically within a shorter period of time and at reduced costs. This would streamline the market introduction of eHealth products, bolster the innovative capacity of participating companies, and promote their sustainable participation in the healthcare sector.

Activities:

- Development of Process Innovations: NeLL and project partners will collaborate to create new technological solutions and processes that allow companies to validate their products more efficiently.

- Support for SMEs: NeLL will develop tools and educational resources for SMEs, guiding them through the process of assessing and implementing hybrid or digital health innovations in real-world healthcare settings.

- Collaborative Partnerships: The project involves partnerships with organizations like Basalt, TNO, TU Delft, and Innovation Quarter to ensure a broad range of expertise and resources are utilized.

Role of WeLL:

WeLL plays a crucial role in the Opportunities for West project by facilitating knowledge exchange and fostering international collaboration. WeLL contributes its expertise in the global application and scaling of eHealth innovations, helping ensure that the products and solutions developed are aligned with international standards. Additionally, WeLL supports in gathering international feedback and providing insights on system integration and cross-cultural adaptation.

3. REDUX eLearning module

Project link: https://nell.eu/projecten/ontwikkelproces-van-de-redux-elearning-module

Background

The REDUX pilot study showed that training general practitioners (GPs) and practice nurses in physical assessment can shorten the time between early COPD symptoms and patients seeking care by up to 70% (Hallensleben et al. 2020). Early treatment of exacerbations improves outcomes, helps prevent hospital admissions, and supports better self-care. Building on these results, an eLearning platform is being developed to make this training more widely available to primary care professionals.

Objectives

The REDUX eLearning module aims to:

- Develop an eLearning platform for in-service training to improve exacerbation management in COPD for first-line healthcare providers, including GPs and practice nurses.
- Expand the training to include second-line pulmonary care providers and an international audience.
- Create an unambiguous, easy-to-follow action plan for patients that can be used in both digital and paper formats.
- Explore the possibility of integrating the REDUX registration and disease burden meter into an app for healthcare providers and patients, supporting blended care in the future.

Activities

- eLearning Development: Design and create an engaging, user-friendly online training module focused on optimizing exacerbation management in COPD. The training will be available in both Dutch and English.

- Action Plan Creation: Develop a clear action plan for COPD patients to follow when exacerbations occur, ensuring consistency in care and treatment both digitally and on paper.

- International Expansion: Plan for the international rollout of the training module, ensuring its accessibility and relevance to healthcare providers in different countries (e.g., China).

- App Integration: Investigate and develop a future-proof strategy for linking the eLearning platform to a mobile application for both healthcare professionals and patients, enabling seamless data tracking and communication.

Role of WeLL

WeLL is involved in the development of the REDUX eLearning module, contributing expertise to optimize the delivery of exacerbation management training for healthcare professionals. WeLL's involvement will extend to evaluating the effectiveness of the eLearning in various international contexts and contributing to the development of the mobile app for future integration with the platform.

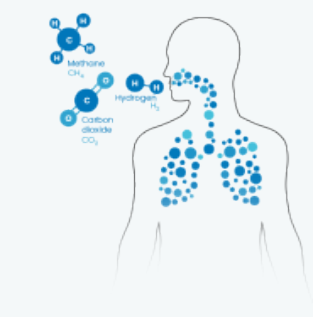
Further reading

1. REducing Delay through edUcation on eXacerbations (REDUX) in patients with COPD: a pilot study (Hallensleben et al. 2020)

2. REducing delay through edUcation on eXacerbations for people with chronic lung disease: Study protocol of a single-arm pre-post study (Song et al. 2022)

3. Factors influencing REducing Delay through edUcation on eXacerbations (REDUX) implementation: A stakeholder analysis (Song et al. 2025)

4. Breath-Sense - Development of an innovative approach for early detection of COPD exacerbations



https://nell.eu/projecten/breathe-sense

Background

Chronic obstructive pulmonary disease is often characterized by exacerbations which are events of persistent symptom worsening causing permanent pulmonary impairment, psychological distress, an increased risk of hospitalization, and healthcare costs. Symptom worsening can be experienced as, increased shortness of breath, coughing and (tough) mucus in a short period of time. Exacerbations are the main predictor for future exacerbations. However, recognizing exacerbations remains challenging since symptoms are similar to the daily symptom fluctuations of COPD and patients often struggle to recognize exacerbations timely.

Objectives

To tackle this problem, the European Breath-Sense consortium is working on the development of a hand-held breath analysis device that uses breath biomarkers to recognize exacerbations in a presymptomatic stage in a remote home setting. This would enable, timely intervention and treatment initiation to prevent an exacerbation, or to significantly reduce its severity and duration.

Expected results

In the 3.5-year Breath-Sense project, this promising technology will be further developed and adapted for eventual use and integration in healthcare.

Role of WeLL

The WeLL maps out the wishes and needs of end users with regard to the device (product) and its use in their daily lives (process). This entails the use of the physical product and exploring how it can be embedded within current healthcare practices In the final phase of the project, a proof-of-concept study will be conducted.

Future directions

If an innovative, safe and reliable approach is successfully developed, it can contribute to profound changes in COPD and exacerbation management. Existing reactive health care could then evolve towards a more proactive and preventive approach to COPD management: from delayed diagnosis based on symptoms, to preventive home monitoring before worsening of symptoms.

5. ePartners4All

https://nell.eu/projecten/epartners4all

Background:

Children from disadvantaged backgrounds or those with additional care needs often face greater barriers to maintaining good physical and mental health. Tackling these challenges during early childhood can help reduce long-term adverse outcomes. Primary schools offer a critical opportunity for early support, and the integration of digital technologies into youth healthcare may help identify risks and respond more effectively. This initiative is designed to foster health equity by using digital tools to enable proactive, personalized care pathways for children showing early signs of health concerns (Zijp et al. 2024).

Objectives:

The ePartners4All project seeked to:

- Develop and evaluate the blended, personalized youth healthcare solution, "ePartner4All."
- Co-create the project with end users and relevant stakeholders to ensure the solution is effective and practical.
- Use e-health technology to support early detection of health problems in primary school children.
- Provide a tailored, and preventive intervention for at-risk children, promoting their health and well-being.

Activities:

- Understanding User Needs: Researchers conducted in-depth consultations with families, health workers, and educators to map out unmet needs and barriers in youth health, with special attention to vulnerable populations.
- Digital Solution Development: Tools such as interactive companions (including robots and virtual assistants) were designed to promote engagement and facilitate conversations about health in an age-appropriate way.
- Pilot Implementation: A trial phase explored how the system performs in real-world settings—evaluating its usability, potential for early detection, and capacity to guide targeted support.
- Needs Assessment: Conduct an in-depth needs assessment with stakeholders, including school-aged children, caregivers, and healthcare professionals, to understand the health challenges faced by children, particularly those from vulnerable groups.

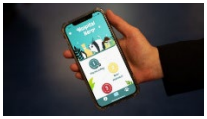
Role of WeLL

The WeLL contributed substantially to the pilot phase of the project, including the design of the study protocol, data analysis, and preparation of the resulting scientific manuscript.

Further Reading

A robot-delivered training program to improve children's mental health and resilience: a pilot in Dutch primary schools (Zijp et al. 2024)

6. Hospital Hero



https://nell.eu/projecten/hospital-hero

Background

A first version of the Hospital Hero app was developed with the NeLL to reduce stress and anxiety in children aged 4 to 10 years who undergo medical procedures. This first version was aimed at blood drawing procedure. Using gaming and storytelling the app creates a playful and familiar experience, bridging the gap between home and hospital environments (Poot et al. 2023).

Objectives

1) To reduce preprocedural stress and anxiety in children visiting the hospital. 2) To provide engaging preparation, distraction, and information through an interactive, game-based app. 3) To improve the overall hospital experience for children, making them feel more comfortable before, during, and after their medical procedures.

Key Features

- Storytelling and gamification: Children can search for hidden animals in the hospital by scanning QR codes and unlocking the animals behind them, turning the visit into a safari game.
- Distraction & Engagement: The app keeps children engaged during hospital visits, shifting their focus away from stressful medical procedures.
- Preparation: the app provides fun and engaging content to prepare children and their parents.

- Parental Involvement: Parents can participate in the activities with their children, helping to create a more supportive and comforting hospital experience.

Development & Testing

Co-Creation & Prototyping: Developed through stakeholder collaboration, incorporating insights from children, parents, and healthcare professionals. Focused on preparation, distraction, and information provision.

User Testing & Feedback: Tested with children and parents, who responded positively, noting reduced stress and increased enthusiasm during hospital visits.

Role of WeLL

The WeLL was involved in the development and pilot testing of the prototype, MVP and first version of the app in one children's hospital.

Future Expansion

The app was spun out of the LUMC and NeLL in 2022 and is part of the non-profit organization Hospital Hero. Within the organization, the app is currently offered to hospitals and outpatient clinics. It has been further developed by the Hospital Hero team and co-designed with children, including the interactive game 'Take a peek', for which they received the Klokhuis Wetenschapsprijs. The app is expanded to other departments within the hospital (e.g., radiology and ophtalmology) and primary care diagnostic centres.

Project Partners & Supporters

Hospital Hero collaborates closely with Bio Diversity Centre Naturalis, App developers, The Willem-Alexander Children Hospital, Erasmus MC Sophia Children Hospital, faculty of Industrial Design Engineering from the TU Delft and partner organisations such as Stichting Kind en Zorg.

Further reading

1. How to use participatory design to develop an eHealth intervention to reduce preprocedural stress and anxiety among children visiting the hospital: The Hospital Hero app multi-study and pilot report (Poot et al. 2023)

7. KAPPA

https://nell.eu/projecten/kappa

Background:

About a quarter of people in the Netherlands experience allergic rhinitis at some point, often disrupting work, study, and daily life. It is also a key risk factor for chronic respiratory conditions like asthma, posing a significant public health concern. Although common, the full impact of pollen-related allergic rhinitis remains unclear. Pollen is a major trigger and has also been linked to cardiovascular symptoms, increased vulnerability to colds, and even higher mortality. Climate change is worsening the situation by extending pollen seasons, increasing allergen levels, and interacting with air pollution. As cities promote green spaces, there is a growing need for accurate pollen forecasting tools and public health responses to support those affected.

Objectives:

The KAPPA project aimed to better understand the impact of climate change on pollen-related allergies and to develop reliable tools and models to help individuals manage allergic rhinitis more effectively. Specific objectives included:

- To predict the start, duration, and intensity of pollen production based on environmental variables.
- To refine bio-meteorological models that predict pollen concentrations spatially and temporally.
- To assess the impact of pollen exposure on the burden of disease, considering climate-related factors like air pollution and heat.
- To analyze the allergenicity and climate resilience of common urban tree species.

- To determine the most effective methods and timing for providing allergy sufferers with information to modify their behavior and reduce health impacts.

Activities:

- Pilot Studies: Five research work packages worked on these objectives, focusing on the region of Leiden-The Hague and surrounding areas:
- WP1: Developing methods to predict pollen production using meteorological data.
- WP2: Refining bio-meteorological models to predict pollen concentration variation.
- WP3: Examining how pollen exposure, combined with climate factors, affects health outcomes.
- WP4: Investigating the allergenicity and climate resilience of common urban tree species.
- WP5: Identifying the information needs of allergy sufferers and determining the best way to communicate this information to modify patient behavior.

Collaboration:

This project was conducted by a consortium comprising: Leiden University Medical Centre, Wageningen University, RIVM, Terra-Nostra B.V., University of Twente, Stichting Elkerliek Ziekenhuis, GGD Rotterdam-Rijnmond, Nederlandse Service Apotheek Beheer B.V.

Role of WeLL:

WeLL was involved in Work Package 3 (investigating the health burden of pollen exposure) and Work Package 5 (assessing and delivering information to patients to modify their behavior).

Further reading:

1. Self-management and information needs of adults with seasonal allergic rhinitis in the Netherlands: A focus group study. (Mulder et al. 2025)

2. Method to develop a regional guide for the allergenic potential of tree pollen (De Weger et al. 2024)

8. Perfect Fit

https://nell.eu/projecten/perfect-fit

Background

Smoking and physical inactivity are major risk factors for cardiovascular disease. Despite many people expressing a desire to quit smoking or exercise more, achieving and maintaining these lifestyle changes remains challenging (van Vliet et al. 2024). One key barrier is the lack of timely, personalized support, especially at moments when individuals need it most.

To address this gap, the Leiden University Medical Center (LUMC) and NeLL, in collaboration with a strong national consortium, have received €2 million from the Netherlands Organisation for Scientific Research (NWO). The funding supports the Perfect Fit project, which aims to develop an AI-driven virtual lifestyle coach that offers real-time, personalized guidance to help people adopt and sustain healthier behaviors.

Objectives

1) To reduce the risk of cardiovascular disease by supporting individuals in quitting smoking and increasing physical activity. 2) To develop an AI-powered virtual coach that provides personalized, low-threshold support anytime, anywhere. 3) To use big data and machine learning to determine which coaching strategies work best for different individuals.

Key Features of the Virtual Coach

- Personalized Coaching: Offers tailored guidance based on individual preferences and behavioral patterns.
- 24/7 Support: Provides flexible and on-demand assistance, bridging the gap between healthcare providers and daily life.
- Integrated Lifestyle Approach: Unlike traditional interventions that focus on either smoking cessation or exercise, Perfect Fit combines both into a holistic lifestyle program.

- Data-Driven Optimization: Uses advanced analytics to continuously refine coaching strategies based on real-world effectiveness.

Research & Development

Perfect Fit is a multi-institutional collaboration that brings together academic institutions, private companies, and public organizations to develop and evaluate the virtual coach:

- University of Twente: Leads the data collection and integration process; Develops machine learning techniques for analyzing physical activity patterns.

- Leiden University: Specializes in behavioral science, designing targeted intervention strategies to enhance motivation and engagement.

- Delft University of Technology: Develops the AI-driven virtual coach, ensuring adaptive and personalized communication.

- LUMC & NeLL: Conduct clinical validation studies to test the acceptability, feasibility and effectiveness of the virtual coach in real-world settings.

Role of WeLL

WeLL plays a key role in translating research into practice by ensuring that the virtual lifestyle coach is user-friendly, evidence-based, and clinically relevant. By integrating eHealth innovations with practical healthcare solutions, WeLL helps make the Perfect Fit virtual coach an effective and sustainable tool for cardiovascular disease prevention.

Future Impact

The Perfect Fit virtual coach could serve as a scalable model for supporting lifestyle changes in various health conditions, contributing to preventive healthcare and digital health innovation worldwide.

Project Partners & Supporters

Perfect Fit is funded by the Netherlands Organisation for Scientific Research (NWO) and involves collaboration between: