

**Tackling Staff Shortages & Future-Proofing Skills in Health (TaSSEFSH joint
EPSU HOSPEEM project)**

Workshop 3: Digitalisation and Future-proofing skills

5-6 March 2026, Rome, Italy

Workshop report

Introduction

This report summarises the key points and aspects discussed in the third project workshop, intended to address the topics of digitalisation and future-proofing skills in the health sector as solutions to tackling staff shortages.¹ The workshop was attended in person by around 35 participants from 17 European countries (Austria, Czechia, Cyprus, Croatia, Georgia, Germany, Finland, France, Ireland, Italy, Latvia, Norway, Portugal, Romania, Spain, Sweden, Ukraine) amongst the EPSU affiliates and HOSPEEM members and other social partners and the European Commission.

The joint EPSU HOSPEEM TaSSEFSH² project aims to strengthen health services by empowering frontline healthcare workers and employers across Europe. Its main objectives include enhancing professional capacity, improving working conditions, and fostering participatory service design through co-creation with users and stakeholders. The project emphasises the importance of transnational learning, digital transformation, and social dialogue, aiming to build more resilient and responsive health service systems. It also seeks to reinforce social dialogue and collective bargaining as key mechanisms for sustainable reform to address staff shortages and ensure future-proof skills in healthcare.

To achieve these goals, the project organises a series of international workshops in Denmark, the Netherlands, Italy, Czechia and Germany, aiming to showcase innovative practices in addressing labour and skills shortages. The project aims to exchange good practices from the diversity of national contexts and adaptable strategies, concluding with reflections on lessons learned and recommendations for future action. The overarching message is that tackling shortages and developing skills of healthcare workers are essential for building inclusive, high-quality health services.

Framing the discussion: the European perspective

The scene setting from the European perspective was opened by Jan Behrens (European Commission, DG EMPL) with the progress on the Union of Skills, an EU initiative launched a year ago on 5 March 2025.³ With around 40 EU-level initiatives planned, the Union of Skills is aiming to ensure that the skills agenda is embedded into all policies and skills are not treated as an afterthought. The main objectives of the Union of Skills are to build skills for quality lives and jobs, upskill and reskill also for green and

¹ The report was drafted by project consultant Inga Pavlovaite, ipavlovaite@hotmail.com

² [HOSPEEM-EPSU Joint Project on Tackling Staff Shortages and Ensuring Future-Proofing Skills in Health - HOSPEEM Search | EPSU](#)

³ [Union of Skills - Employment, Social Affairs and Inclusion](#)

digital transitions, circulate skills across the EU and attract, develop and retain talent. One year into its adoption, the Union of Skills has achieved progress in all areas, including an Action Plan on Basic Skills, preparing the new EU strategy for VET or piloting the Skills Guarantee for strategic or growing sectors. A reinforced Pact for Skills also saw the ongoing partnerships in 14 sectors, including health (see the BeWell project below). Looking ahead, the EU Fair Labour Mobility package will be adopted later in 2026 and will be important for the health professionals. Progress is also made with the Skills Portability Initiative, intended also to make the mobility of regulated professionals easier in the EU (thus also potentially covering the health professionals). The EU Talent Pool initiative aims to offer a recruitment platform for third country nationals in key shortage occupations.

The Union of Skills is founded on the combination of governance measures, including the European Skills Intelligence Observatory with data-driven insights and foresight regarding skills, enabling early warning alerts for shortages within critical or strategic sectors. Also, a newly established European Skills High-Level Board convenes education and training providers, business leaders, and social partners to offer comprehensive guidance on skills matters to EU policymakers.⁴ The EU Recommendation on human capital, adopted in March 2026, is designed to address skills shortages in key strategic sectors, including health.⁵

Looking ahead, the discussions on the next EU financing period (the Multiannual Financial Framework from 2028) are underway. Current proposals foresee around EUR 40.82 billion for the Erasmus+ programme (also open to the candidate countries). The new European Competitiveness Fund will support strategic sectors including for skills development. Under the National and Regional Partnership Plans (EUR 865 billion), 14% would be allocated to the social target ESF (including amongst other social areas also skills investment).

The European perspective was further deepened by presentations of two pan-European projects, the BeWell project and the Joint Action HEROES, co-funded by the European Union (and supported by both EPSU and HOSPEEM).

The BeWell project⁶ was presented by the representative of the European Regional and Local Health Authorities (EUREGHA). The project is a Europe-wide effort to strengthen the health workforce's digital and green skills in response to major transformative forces such as digitalisation, climate change, demographic shifts, and lessons learned from COVID-19. The project's overarching vision, mission, and values emphasise patient-centredness, collaboration, inclusiveness, and the coordinated implementation of skills policies across local, regional, national, and EU levels.

A central focus is the growing skills challenges in European healthcare, driven by workforce shortages, rapid technological change, and the need to embed sustainability practices. The BeWell framework addresses these issues through four pillars such as the skills intelligence research, the establishment of a Large-Scale Partnership (LSP), the co-creation of a multi-level skills strategy, and development of pilot training programmes on digital skills, green skills, and emerging occupational profiles.

⁴ [European Skills High-Level Board - Employment, Social Affairs and Inclusion](#)

⁵ European Council, 2026, A Council Recommendation on human capital in the European Union, [pdf](#)

⁶ [BeWell – Blueprint alliance for a future health workforce strategy on digital and green skills](#)

Four key achievements of the BeWell initiative include the creation of integrated competence matrices outlining proficiency levels for digital, green, and soft skills; extensive multi-stakeholder consultations involving policymakers, managers, professionals, educators, and patients; the identification of priority skills gaps and implementation barriers across the health workforce; and the alignment of the initiative's work with wider EU policy developments, such as capacity-building under the European Health Data Space (EHDS).

BeWell targets the training in such digital competencies such as AI literacy, data literacy, telehealth, sustainable healthcare practices, communication, and teamwork—integrated into structured competence models.⁷ Output examples include competence matrices, stakeholder consultation processes, alignment with EU policy developments, and a training catalogue accessible through the BeWell platform. The BeWell Skills Monitor provides a Europe-wide overview of available digital and green skills training opportunities.

One of the main takeaways from developing digital and green skills training in the project is that time poses the greatest obstacle to upskilling. Digital competencies require immediate attention, whereas green skills need to be systematically incorporated into existing frameworks. Effective implementation depends on integrating training with actual work settings and maintaining practical approaches. Additionally, collaboration across different sectors is crucial for achieving scalable results.

Launched in 2022 and coordinated partly through the BeWell consortium, the Health Ecosystem LSP aims to anticipate and address skill needs, bring together existing initiatives, and support the digital and green transitions. Benefits for signatories include access to shared resources, participation in strategic activities, networking, and EU-level tools through the Partnership's hubs. EPSU and HOSPEEM are both project partners.

Looking ahead, BeWell experience shows the importance of moving from defining competencies to implementing them through multi-level pathways, embedding skills development into policies, education systems, organisational processes, and clinical practice. It emphasises supporting a realistic and sustainable transformation of health systems while laying the groundwork for future implementation initiatives, ensuring that the digital, green, and soft-skills frameworks developed by the project translate into long-term, systemic change across the healthcare ecosystem. The project also highlights the importance of ensuring sustainability of upskilling, stressing the need for structural—not purely project-based—investment, alignment of training with recognised credentials, and strategic coordination of multiple EU and national funding instruments (as health and education and training are national competences). Forward-looking steps include the upcoming events (e.g., the BeWell Final Conference in May 2026).

The experience of Joint Action HEROES⁸ was presented by the representative of the project coordinator AGENAS, Italy. This is a European initiative aimed at strengthening the capacity of Member States to plan for a sustainable, resilient, and accessible health workforce. It builds on the results of earlier EU project efforts — JA-HWF, SEPEN Joint Tender. The overarching mission is to improve the quality of health workforce (HWF) planning systems across Europe to address shortages, maldistribution, and skills

⁷ [Digital Skills – BeWell](#)

⁸ [JA HEROES | Health Workforce Planning Project – A WordPress Full-Site Editor Theme](#)

mismatches. The initiative brings together 19 European countries and several stakeholder associations, forming a total of 53 partners. The key project parameters include a budget of EUR 8.7 million, of which EUR 7 million is EU-co-funded, and a timeframe running from 1 February 2023 to 31 July 2026.

The focus areas include optimising data and sources, planning models and tools, workforce-planning competencies, and stakeholder involvement. There are also ongoing actions such as the development of national action plans, cross-country comparisons, policy dialogues, and sustainability processes to ensure that the project results endure beyond the project's timeframe.

Several good practices from participating countries were highlighted. Examples include Hungary's development of an Advanced Minimum Dataset (AMDS) to assess planning-system maturity and support data harmonisation, as well as the Netherlands' advanced forecasting model led by NIVEL, which incorporates over 50 professions. Other countries—such as Malta and Croatia—are adopting or adapting this model, supported by bilateral partnerships and training. Alongside these tools, many Member States prioritise strengthening foundational knowledge of health systems and planning among the wider stakeholder community.

Finally, the project identified a paradigm shift in HWF planning in moving from counting “heads” to assessing “competencies.” The traditional health workforce planning has long relied on a quantitative “stock and flow” model, which assumes that every full-time equivalent (FTE) worker is essentially identical over time. This means the model treats, for example, a nurse in 2026 as having the same productive capacity as a nurse in 1990, ignoring changes in their skills, technology, and evolving roles within healthcare systems. This might no longer reflecting the realities of modern health systems. Digital upskilling fundamentally changes the value and productivity of health professionals, making the quality of the workforce as important as its quantity. This competency-based approach is also tied to retention, as empowered staff are more likely to stay. Digital skills, collaboration with other EU projects (e.g., BeWell), and outcome-driven planning are seen now in the project as essential elements of a future-proof European Health Union that is “not only bigger, but smarter.”

The discussions of these European experiences with the workshop participants highlighted a range of concerns and experiences. The first area discussed was the importance of the local and community dimension in the health workforce planning and upskilling processes. The experience of Spanish regions with strong health competences having a forum for knowledge sharing and joint discussion of challenges is key to move forward to approach these challenges in a strategic way. In addition, the question of treating digital and green skills together was discussed, in the context of skills shortages being one of the drivers for upskilling processes. Another area discussed was the need to focus on key skills needs which were identified in the two projects through extensive stakeholder consultation, also influenced by the experience of COVID-19 pandemic. New developments such as the AI or the need for tactical medical skills are addressed through creating a common framework for developing the skills competences for the future needs. Another area of discussion was whether upskilling also increases the workload of staff with new tasks and higher wage levels due to increased professionalisation of staff, with countries sharing different perspectives on this. In this context, the EU AI Act provides a

comprehensive legal framework for integrating AI into the high-risk systems such as health.⁹

Social partner experiences of future-proofing skills in health

The contributions from the representatives of the Health Workers' Union of Ukraine (an EPSU affiliate) showed the union efforts in supporting the preparedness of the health workforce in the context of ongoing war in the country. With 300,000 members in all regions of Ukraine, the union represents the interests of the main worker groups, including physicians, nurses, other health professionals as well as medical students. In the context of four years of ongoing war, the union is trying to develop the union activities despite the enormous challenges faced. Over the last four years, over 500 medical personnel were killed in the war, and over 3,000 medical workers wounded, with the union providing financial aid to the wounded workers. The sectoral collective bargaining agreement is negotiated with the Ministry of Health, whilst strikes are forbidden due to martial law. The minimum wage was established in January 2022 by the government decree¹⁰ and has risen since to around USD 600 for doctors and USD 400 for nurses. With 80 hospitals bombed and damaged, the union has been helping to get the funding to build new hospitals. The experiences in Ukraine highlighted several important dimensions of future-proofing skills in health:

- The importance of tactical medical training for all health professionals (and the general population overall) in tactical medical skills to provide first aid and treat rapidly the wounded at the battlefield and civilian victims, where the first hour of treatment is crucial to the survival and recovery of victims. This has been adopted in Latvia too where a new education module has been developed for newly trained doctors on the first hour medical skills.
- The bombardment of health and energy facilities highlighted the importance of developing and maintaining smaller self-sufficient medical units capable of providing medical services in a decentralised way. Some hospitals in Ukraine have moved their services underground to avoid continuous bombardment. Other hospitals have been evacuated into the western parts of the country.
- Digitalisation in health in the context of war is difficult, especially given the disruptions and technical challenges (in the energy blackout situations, there is no Internet connectivity to provide digital services). Still, digital services are being introduced in health. Similarly to the digital ID available on the official Ukrainian government app, digital systems for health records is introduced, and remote telemedicine consultations are provided.

Presentation from the representatives of the Health, Pharmaceutical and Social Care Workers Independent Trade Union of Georgia (an EPSU affiliate) highlighted the trade union activities in addressing the current and future healthcare workforce challenges in the country. Its structure and membership profile include 31 organisations and 2,124 members, most of whom are women and many under age 35. The union's key achievement has been in securing, for the first time, a sectoral minimum wage for medical workers, effective from 1 January 2024. This reform established salary thresholds for

⁹ Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 (Artificial Intelligence Act) [Regulation - EU - 2024/1689 - EN - EUR-Lex](#)

¹⁰ [Some Issues of Remuneration of Labor... | dated 13.01.2023 No. 28](#)

doctors, junior doctors, midwives, nurses, assistants, and sanitary staff, marking a significant milestone for Georgia's medical workforce.

The union has been active in organising protests and actions from 2020 to 2024. These include the "White Coats Action" in Rustavi over salary arrears, protests at the Universal Medical Center due to six months of unpaid wages, and actions during the COVID-19 pandemic when ambulance workers faced unfulfilled promises of wage supplements. The union played a crucial role during the COVID-19 pandemic, providing protective equipment, food, and logistical support for medical staff working around the clock. They also mobilised against the attempted demolition of the Republican Hospital, ultimately succeeding in ensuring the facility continued operating. Finally, the union highlights its financial and educational support initiatives, noting that between 2022 and 2025 it provided direct financial assistance to 1,135 employees and sponsored 129 workers to attend workshops and medical conferences.

The union also highlighted the systemic challenges in Georgia's healthcare sector, particularly chronic staff shortages. The strategies to address these issues—improving working conditions, offering competitive pay, strengthening ethical recruitment, and integrating digital health technologies—are aligned with broader European efforts through EPSU and HOSPEEM. This reaffirms the commitment to solidarity, mutual care, and building a resilient healthcare workforce for the future.

A key avenue to future-proofing skills is sharing of knowledge and innovative solutions between the health stakeholders and different countries. In **this context, the presentation of the representative of SALAR (the Association of Local and Regional Authorities in Sweden, a HOSPEEM member) highlighted the DELA initiative in Sweden.**¹¹ It is a peer-learning platform that turns local solutions into national assets and intends to serve as a model for cross-border knowledge exchange. The platform was developed by SALAR recently in response to the challenge of redundant innovation. The Swedish municipalities and regions often reinvent solutions to identical problems, leading to duplicated effort and inefficient use of public resources. Smaller municipalities in particular face a capacity gap, lacking the time, staff, or expertise to develop innovations from scratch—even though useful solutions already exist elsewhere. At the same time, broader societal pressures such as demographic ageing, workforce shortages, and fiscal constraints increase the urgency for smarter and scalable ways of working. Altogether, these issues underscore the need for a structured system that enables municipalities to reuse proven solutions instead of repeatedly recreating them.

The solution offered by DELA makes it easy to find, share, and adopt working methods and solutions that have already proven their value in real-world municipal and regional settings. SALAR collects effective local innovations—ranging from care practices to digital tools—and packages and quality-assures them together with Adda, ensuring they are ready for reuse across the country. The platform covers multiple areas, including care and health services, digital transformation, and sustainability, and is linked to a peer-discussion forum (Dela Digitalt) where practitioners can exchange insights. Importantly, the solutions remain owned by the municipalities who created them but are scaled nationally through DELA, helping the public sector avoid duplicated efforts and accelerate improvement.

¹¹ [SKR – DELA](#)

An example relevant to health is an innovative collaboration between the regional eye clinic and the municipality to bring glaucoma pressure checks directly into residential care homes, eliminating the need for frail elderly patients to travel long distances. The previous model required lengthy hospital transport, additional escort staff, and often caused significant stress or anxiety—especially for patients with cognitive impairments, some of whom required sedation before and after travel. By shifting the checks into care homes, the initiative now serves 45 patients per cycle without any travel, achieving zero sedation incidents and maintaining the usual 6–9-month check intervals without compromising clinical quality. From 2026 onward, community nurses trained by the hospital will fully take over the checks, creating a sustainable shared-care model that frees hospital capacity while improving patient comfort and safety.

Another way to future-proofing skills in health was offered by the representatives of KT (the Finnish local and county government employers, a HOSPEEM member). The national AI ecosystem for care and health sector (SOTE) was developed in Finland as a network of stakeholders led by the Ministry of Health.¹² The network contains 280 members, such as public authorities, health institutions, social partners and researchers. It also includes all welfare counties which in Finland are responsible for public healthcare. The stakeholders discuss concrete AI solutions, pilot projects and experiences to develop a common vision for AI in healthcare, and shared capabilities, rules and interoperability of solutions. Coordinated by DigiFinland together with STM, THL, HUS, and UNA Oy, the ecosystem brings together all the key players to prevent fragmented development and build shared principles, structures, and visions. Its activities include thematic working groups (risk management, MDR interpretation, vision work), monthly communication channels, collaborative events, and support for joint research and pilot initiatives. A major component is the national AI pilot programme, which funds and coordinates ten practical experiments across regions, ranging from AI-assisted documentation and medication risk assessment to predictive analytics in child welfare, cancer imaging, obesity treatment, and real-time interpretation.

The ecosystem also leads Finland's national AI vision work for the sector. Results to date show strong optimism about AI's potential—high daily use, positive experiences, and expectations of efficiency gains—while also highlighting gaps in cost-effectiveness evidence and the need for ethical guidance, leadership, and workforce support. The resulting recommendations emphasize strategic planning, impact evaluation, ethical frameworks, competence development, and international collaboration.

Social partner experiences of digitalisation in health

Experiences of digitalisation in health workplaces were shared by the workshop participants from Czechia (TUHCSS CR, EPSU member), Germany (Klinikum Nürnberg, a member of the German HOSPEEM member VKA), APHP (Portugal, employer) and Spekter (Norway, HOSPEEM member).

The trade union representative from Czech Republic provided a written contribution stating that in Czechia, the eHealth Programme marks a major advancement in the digitalisation of Czech healthcare, initiated in 2024 with funding from the National Recovery Plan and supported by a new coordinating body, the National Centre

¹² [AI Ecosystem in Social and Health Services \(SOTE\) - DigiFinland](#)

for eHealth (NCEZ). It integrates over twenty IT projects to establish a unified digital healthcare infrastructure set to be fully operational by January 2026. The NCEZ leads the Programme, managing project implementation, standards, communication, and coordination, with financing exceeding CZK 600 million from European grants. The Programme includes master healthcare registries, the National eHealth Portal, a national certification authority, an electronic referral system, and the EZKarta mobile app, all designed to form an integrated digital ecosystem and a single coordinated framework. The Programme is not focused solely on the development of technical solutions, as it has been accompanied by an extensive communication and education strategy. The success of the Programme will depend on healthcare systems adapting to new standards, sustainable state support post-NRP, alignment with European Health Data Space (EHDS) regulations, and the professional community embracing electronic documentation over paper. The eHealth Programme lays the foundation for advancements in telemedicine, AI, personalised medicine, and data use.

Experience with implementing a digitalisation strategy on the ground recently was shared by the representative of Klinikum Nürnberg (Germany), a HOSPEEM member, reflecting the context of a large public university hospital with over 9,000 employees and over 2,500 beds (and attached private medical university). The large-scale digitalisation started in the hospital in 2024 with the support of EU funds. It was based on a comprehensive vision of digital healthcare innovation, strategies, projects, and technologies transforming hospital systems and patient care.

Transitioning from imagination to technological innovation and digitalisation strategy, the digitalisation in the hospital aimed to enhance patient safety, provide patient-centred care, alleviate staff workload, achieve economic efficiency, and cultivate an innovative image. The development roadmap is structured into short-term (1-2 years), medium-term (3-4 years), and long-term phases (beginning from year 5). The digitalisation encompasses a wide range of areas of hospital work outlined below, including clinical projects, digital patient care, application of AI in clinical procedures and hospital workflows and administrative management systems.

The clinical projects where digitalisation was mainstreamed included the implementation of a holistic Hospital Information System (HIS) and Patient Data Management System (PDMS). This also involved defining and implementing modern workflows across medicine, nursing, administration, with AI-supported innovations like wound analysis and predictive analytics. The hospital also introduced digital speech recognition, mobile rounds, and clinical decision support tools. Digital patient care included developing digital patient records, medication management, and patient portals. The digitalisation benefits here include intuitive handling, real-time access, error reduction, as well as the use of speech recognition and AI to enhance documentation efficiency.

AI and Internet of Medical Things (IoMT) technologies now support the processes of diagnostics, documentation, care planning, and virtual assistants. IoMT sensors enable real-time monitoring, ambient computing, and predictive analytics. Digitalisation projects include neonatal AI pilot, infusion technology, and proactive medicine with early warning scores. AI is also used for imaging and diagnostics in radiology for image analysis, prioritization, and 3D reconstructions. In addition, the hospital has implemented platforms for AI-based radiology decision support and automated ECG analysis and advanced image analysis for surgical planning. Robotic systems are also used in operating rooms,

pharmacy, and rehabilitation as well as automated drug preparation, robotic-assisted therapy, and smart operating rooms. Key emphasis is placed here on efficiency, safety, and early mobilisation of best suited hospital staff.

The benefits the hospital has seen from the comprehensive digitalisation include reduced costs, errors, and hospital stays, as well as improved outcomes and patient experience. The digital transformation at Klinikum Nürnberg focused strongly on reducing the workload for staff. Automated documentation was introduced to ease the administrative burdens, while integrated digital systems streamlined the workflows and improved data accessibility. These measures aimed to simplify daily routines, accelerate processes, and enhance internal communication to better support employees in their clinical work.

The experience of applying digital technologies in Portugal was shared by the representative of APHP (the Association of Private Hospitals in Portugal, employer). This includes the example of the Digital Assistant and LUZ24 service. The Digital assistant started in one hospital was an integrated patient-centred first contact point for patients communicating with the hospital. It offers a secure channel of communication based on two-factor identification. Based on an initial AI platform, the system directs the patients to the relevant customer service agent and hospital department. It has shown to reduce the waiting time and increase trust amongst patients. Furthermore, the example of LUZ24 service offers AI based clinical service assessments in the private hospitals with over 300,000 triage assessments annually. It has shown to reduce the unnecessary emergency care times and improve the overall care levels. Originating in the private hospitals, it has now been partly adopted by the Portuguese public health service.

The representative of the Norwegian employer organisation SPEKTER (HOSPEEM member) outlined a major challenge facing Norway of a growing labour shortage in healthcare. Due to the increasing difficulty of recruiting qualified personnel, the government appointed the "Health Personnel Commission." The Commission identified technology, digitalisation and task sharing as priority measures to help address these future workforce needs.

The digitalisation in Norway state owned health sector is happening in the context of strong social dialogue between employers and trade unions. SPEKTER negotiates collective agreements with all the main trade unions, in accordance with the Main Agreement. Questions related to the hospital development and the organisation of workplaces, including the AI use and resulting challenges, are also discussed with local shop stewards representing the different trade unions.

Building on this, the hospitals in Norway are already at the forefront of AI adoption, using new technologies to deliver better treatment and shorter waiting times. AI is perceived as an essential part of the solution to staffing challenges, helping healthcare services do more with fewer resources. There are a number of ways how AI is being integrated into clinical workflows, improving efficiency and supporting medical decision-making. Several concrete examples illustrate current and emerging applications. In radiology, AI systems are now performing imaging assessments for fracture patients and are being scaled nationally. Another notable use case is AI-assisted patient documentation, where an AI assistant listens to patient consultations and drafts clinical notes for later quality assurance—a solution already adopted in many hospitals. Additionally, Norway has allocated 46 million NOK (EUR 4.1 million) to strengthen AI-based medical research, and further innovations

include AI for surgical capacity planning and digital management of major hospital projects.

Thus, whilst the health employers in Norway recognise that AI holds high strategic priority, they also state that it must be used responsibly. All AI solutions undergo thorough assessment before implementation to ensure they remain ethical, privacy-secure, quality-assured, transparent, and understandable for both patients and healthcare professionals. Ultimately, AI is framed as a tool that increases the work capacity of health professionals while maintaining public trust.

Concerns and challenges of using AI in healthcare were also highlighted by the representative of trade union Fagforbundet (an EPSU affiliate) in Norway.

In this context, the trade union movement has a special responsibility when new technologies are introduced into working life. The role of trade unions is not only to assess potential gains from technology in efficiency and productivity, but also to raise critical questions about how the new technology affects working conditions, power relations, and social and environmental responsibility throughout the entire production and supply chain locally, nationally, and globally.

The current discussion around artificial intelligence often overlooks its broader social and environmental implications, portraying AI as an inevitable revolution rather than a choice shaped by political and ethical considerations. While research, such as the Danish report “Large Language Models, Small Labour Market Effects,”¹³ suggests that AI’s impact on productivity and employment may not be as significant as assumed, the development and deployment of AI technologies entail real human and environmental costs as well as perpetuate gender inequalities in health.

While ethical considerations are relevant across all industries where AI is deployed, they are especially critical in health care. The sector is distinguished by significant professional responsibility, stringent time constraints, and direct implications for patient safety. Decisions influenced by digital systems are seldom impartial; such tools affect clinical judgment, documentation methods, resource allocation, and the delegation of responsibility among clinicians, administrators, and technology providers. As a result, implementing AI and digital decision-support mechanisms should not be viewed merely as initiatives to enhance efficiency. Their adoption should also involve extensive discussions regarding trust, accountability, professional independence, and the definition of quality in patient care. Consequently, health care serves as an essential environment for evaluating whether ethical standards for AI are upheld in real-world settings.

Within this framework, the necessity for collective responsibility in technological advancement was emphasised. Trade unions play a vital role in assessing ethical, social, and environmental impacts, negotiating safeguards, and promoting transparency and accountability. Employers are obligated to engage employees and their representatives, prioritise quality and safety above immediate financial gains, and ensure that technological solutions address human needs, rather than compromise them. Employees, particularly those in hospitals, must approach technology with diligence—raising concerns when it

¹³ Anders Humlum & Emilie Vestergaard (2025) Large Language Models, Small Labor Market Effects, NBER Working Paper 33777, DOI 10.3386/w33777, [Large Language Models, Small Labor Market Effects | NBER](#)

affects quality, safety, or workplace conditions, and applying their expertise to its implementation.

Norway offers strong examples of using AI to enhance patient safety and working conditions. At Sykehuset i Østfold, a public county hospital, the NarKontroll system was developed for managing controlled medications. Managers and administrators use its web portal for oversight and reviewing logs, while healthcare staff access the app on hospital smartphones for their daily routines. NarKontroll replaced traditional paper ledgers through close collaboration between clinical experts and developers, eliminating issues like illegible handwriting, calculation errors, and unverifiable signatures. The system ensures compliance with accounting rules and mandatory double-checks, offering complete traceability with timestamped, searchable transaction records. Reports show that NarKontroll is highly valued by nurses, healthcare workers, and managers. Additionally, it boosts security and minimises risks of misuse or fraud by improving control and oversight. By directly addressing practical challenges, the system empowers practitioners, builds trust, and improves daily workflows. Involving workers in development has helped NarKontroll increase safety and efficiency, demonstrating that ethical technology means creating solutions that involve both workers and patients, uphold quality, and reflect shared values.

Discussions of the examples between the workshop participants related to the following areas:

- The mechanisms for identifying errors, dealing with downtimes and technical failures in digital and AI based tools. The experiences shared here pointed out the principle of human control and the strong layers and mechanisms put in place in hospitals for such error identification, safeguards, cybersecurity and data protection and continuous improvement based on the learning from experiences. Here, the importance of health professionals was also emphasised, ensuring that AI and digital tools are used in the appropriate way. The role of general practitioners as goalkeepers for accessing the specialist services was also emphasised.
- The question of whether a wholesale adoption of digital tools and AI will lead to increased workload and job losses amongst health professionals. Views shared included positive aspects such as digitalisation reducing the time nurses spent on non-core nursing tasks, thus improving the overall working conditions and job satisfaction. Where concrete examples of digitalisation were identified, job losses occurred primarily amongst the administrative staff who however have been retrained to work in other hospital departments. Introduction of new technologies requires training of staff across organisations, as well as follow up training delivered in an appropriate manner. Thus, the introduction of AI can be expected to lead the reorganisation of tasks and shifting of job tasks and contents, rather than an outright job loss amongst the health professionals.
- Sharing of data inside and between hospitals and between private and public hospitals. The interoperability between the systems in different hospitals and public and private systems remains a significant challenge as different systems are rarely developed with the view of outside interoperability. Discussions highlighted the need for the legal basis for this and robust data exchange and security platforms.

Conclusions from the workshop discussions

Across Europe, the health sector is experiencing acute labour and skills shortages, while digital solutions increasingly enable staff to focus on core clinical duties. From an EU policy perspective, the workshop connected sector needs to the evolving “Union of Skills” agenda, including basic skills actions, VET strategy, skills portability, fair labour mobility, and talent attraction/retention initiatives. Two pan-European projects illustrated how this agenda can be operationalised: BeWell (building digital, green and soft skills through competence matrices, skills intelligence, partnerships and pilot trainings) and Joint Action HEROES (modernising health workforce planning through better data, models, competencies and stakeholder involvement). A recurrent theme was the shift to assessing and investing in workforce capabilities with digital upskilling affecting both health staff productivity and retention.

Country social partners’ good practice examples highlighted both urgency and implementation realities for digitalisation and future-proofing skills in health. Ukraine and Georgia showcased how unions support resilience, pay floors, training and continuity of services under severe constraints; Sweden’s DELA platform demonstrated how structured peer learning can scale proven local innovations; and experiences from Czechia, Germany, Portugal and Norway showed that digital strategies (e.g. through patient portals, telehealth, AI decision support, documentation tools) can improve safety and efficiency when paired with training, interoperability work, and robust governance. At the same time, participants underlined risks and prerequisites - time as the biggest barrier to upskilling, the need for “human control” and error-handling during downtime, cybersecurity and data protection, careful management of workload/task redesign, and strong social dialogue - to ensure AI is trustworthy, transparent and aligned with the core values of healthcare.

The workforce showcased the shift in the health workforce strategies to competencies by linking planning, training and retention to evolving roles of healthcare staff, technology and productivity. Upskilling delivers the strongest results when aligned with the care delivery priorities, supported by recognised credentials and sustained funding. Digitalisation can improve safety, quality and efficiency (e.g., patient portals, speech recognition, AI for imaging and documentation) when paired with change management in dialogue with workers and trade unions and training. At the same time, the use of responsible AI in health requires human control, transparency, accountability and trust, with social dialogue helping to manage impacts on working conditions and professional judgement. Peer learning and scaling proven local innovations can reduce duplicated effort, close capacity gaps, and speed up service improvement.

Further resources identified in the workshop

Project website: [HOSPEEM-EPSU Joint Project on Tackling Staff Shortages and Ensuring Future-Proofing Skills in Health - HOSPEEM Search | EPSU](#)

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HOSPEEM: [Social Dialogue Archives - HOSPEEM](#)