

The EU is positioned to support safe, effective, ethical and equitable AI deployment in healthcare

The European Commission has issued its Final Report on the **deployment of AI in healthcare**. European healthcare systems are facing growing pressures from an **ageing population, constrained resource and increasing service demand**. Recent breakthroughs in Artificial Intelligence (AI) could transform Europe’s healthcare approach. To unlock AI’s full potential, the EU must address challenges in **data standards, funding and governance**, while fostering public trust. Successful AI deployments provide equitable and scalable digital transformation towards **system sustainability and addressing future needs**.

Current state and future implications of AI in EU healthcare	
 Healthcare Professionals Today - AI tools exist mainly in pilot (radiology, cancer planning, cardiac triage) to reduce administrative time/cognitive load Limited integration with electronic health records (EHRs) with opaque “black-box” algorithms and liability ambiguity - Clinicians report low trust and slow adoption due to lack of validation in real-world settings and “black-box” nature of AI	Future - AI tools (e.g., predictive algorithms, chat agents) alleviate pressures on workflows by assisting in triage/prioritisation Automation of administrative tasks enable practitioners to focus on direct patient care, improving efficiency of care delivery Professional upskilling, as AI becomes integrated into care, requiring new digital competencies and digital literacy
 Patients Today Uneven AI exposure; pilots concentrated in tertiary hospitals Limited understanding of data usage and privacy safeguards - Concerns about bias, consent, and over-automation Few mechanisms for transparency/feedback on AI tools used Optimistic sentiment about AI’s potential to enhance clinical outcomes, if transparency concerns are addressed	Future Faster, more accurate diagnoses, particularly in acute cases (cancer and cardiology) improving long-term outcomes - Improved access to personalised, equitable care, in treatment plans tailored to individual needs, and reduction in regional disparities in service provision through telemedicine - AI-enabled wearables for continuous monitoring of patients with chronic diseases / who live far from care facilities
 Hospitals / Health Providers Today AI deployment concentrated in imaging and oncology units. High upfront costs, outdated IT, poor interoperability impede scaling and AI not covered in procurement / reimbursement Lack of clear ROI evidence prevents sustained investment Lack of change management, requiring multi-disciplinary teams and end-users, to champion AI and demonstrate digital competency / literacy	Future Improved operational efficiency via automation and predictive resource management Enhanced service coordination, and faster clinical pathways, enabled through data-driven insights Improved quality and consistency of care delivery across facilities, through AI-supported diagnostic systems Harnessing of large volumes of health data can improve long-term population health management
 Regulatory & Policy Stakeholders Today Fragmented frameworks: AI Act, In Vitro Diagnostic and Medical Devices Regulations, HTA Regulation, Product Liability Directive, and European Health Data Space (EHDS) Regulations exist but overlap and slow implementation - Data protection and cross-border interoperability remains unresolved No central EU mechanism for post-market AI monitoring yet operational	Future Proactive, evidence-backed AI policymaking, supported by large volumes of performance data, allowing assessment of AI’s operational and clinical value Development of clear regulatory frameworks on liability and accountability to address potential for harm caused by AI and assign shared responsibility between developers and deployers Improving public trust through transparency legislative acts and quality assurance mechanisms for AI tools
 AI Developers & Innovators Today - R&D robust → 553 EU-funded projects (2015-24) but translation to practice limited (< 10 % deployed) - Companies face barriers: restricted data access, high compliance costs, fragmented national rules - Most AI apps classified “high-risk”, requiring strict oversight, risk management, documentation, post-market monitoring. Uncertain clinical added value hampers reimbursement and investor confidence	Future Requiring standardised health data, allowing scalable development of AI apps, interoperable between Member States Establishment of EU Centres of Excellence for dissemination of best practices for AI deployment across Member States Accelerated validation of AI solutions in regulated ‘sandboxes’, enabling faster deployment in clinical settings. Coupling this with real-world testing and iterative model re-training will ensure performance across diverse settings and infrastructures

Why does this matter?		
 AI shaping Europe’s innovation edge - AI as a key enabler to overcoming mounting population, resource and demand pressures and transforming healthcare in a globally competitive market, where care delivery is local, but health tech innovation is global - Deployment of AI in health as a technical and strategic challenge, critical to the EU’s global competitiveness vs US, UK and China	 From strategy to system change EU-level initiatives, including EU regulatory and health technology assessment (HTA) and EHDS foster the environment to harness AI advancements, not through adoption alone, but shape global standards - Payor decisions remain nationally reviewed, creating variation in how innovation is adopted and technology used	 What is not addressed in the study No quantified assessment of economic / clinical value of AI adoption Limited country-level analysis, gaps in payor, HTA, and implementation details Lack of impact modelling to show system-level / cross-border outcomes - Consideration should be given to the impact on EU4 vs other European countries’ progress in AI-enabled healthcare through a global lens