MedTech Europe
from diagnosis to cure

AI in medical technologies

Improving healthcare systems and patient outcomes

Artificial Intelligence (AI) holds the promise to support humans in their daily lives, take care of routine tasks, and advance human knowledge. It has great potential to improve patient outcomes and healthcare systems as it can be present throughout the patient journey.

AI could save 400,000 lives yearly, account for 200 billion Euros in annual savings, and free up to 1.8 billion working hours every year, the equivalent of having half a million additional full-time healthcare professionals.

The positive effect of AI in healthcare

AI can facilitate clinical radiology workflow by image acquisition. The reduction in radiation during image acquisition can have significant benefits for patients.

AI increases the success rate of medical interventions, as **robot-assisted surgery** can **contribute** to **52%** increase in successful operations.

Robot assisting nurses can significantly benefit medical staff by taking care of repetitive tasks. These robots could handle **around 30% of clinical nurse tasks** that do **not involve direct patient interaction**.

MedTech Europe's vision

An environment where safe, high-quality, and trustworthy AI in medical technologies can **improve healthcare and patient outcomes** and a regulatory landscape that supports the accessibility of AI in medical technologies. It should provide a clear and innovation-friendly legal framework aligned with sectoral legislation, such as the Medical Device Regulation (MDR) / *In Vitro* Diagnostics Regulation (IVDR).

Safe, high-quality and trustworthy AI

Patients' access to AI-enabled medical technologies depends on their **trust in AI and willingness to embrace it in healthcare**, which has to be built on tailored safety, transparency and explainability requirements for medical technologies.

About MedTech Europe

MedTech Europe is the European trade association for the medical technology industry including diagnostics, medical devices and digital health. Our members are national, European and multinational companies as well as a network of national medical technology associations who research, develop, manufacture, distribute and supply health-related technologies, services and solutions.

1) McKinsey, The era of exponential improvement in healthcare? https://www.mckinsey.com/industries/healthcare-systems-and-services/our-insights/the-era-of-exponential-improvement-in-healthcare (May 2019)
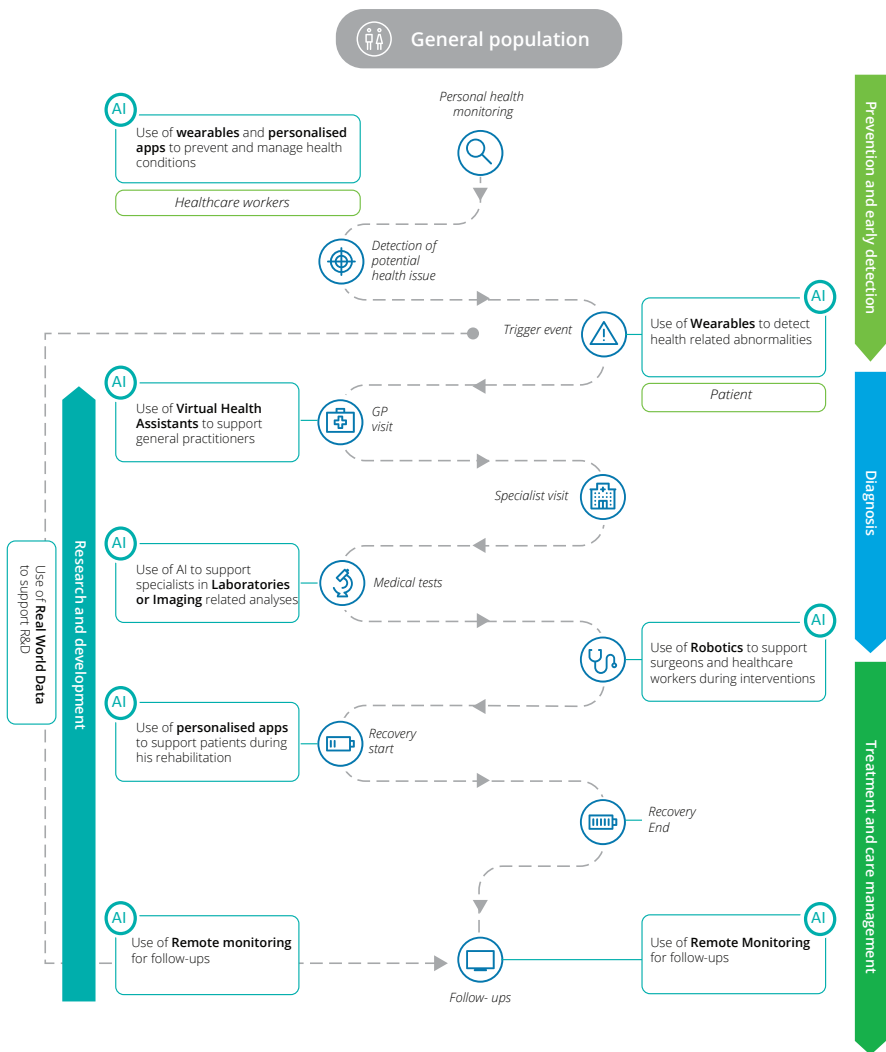
Innovation

As healthcare is one of the most fast-paced sectors in developing new practices and approaches[1], AI in medical technology can bring an additional layer of agility and adaptability. It is paramount that the legal framework is seen as an **opportunity to drive innovation by making rules more transparent and effective** to strive for better patient outcomes.

Harmonisation and legal certainty

Creating a level playing field for all actors involved is crucial to improve health systems throughout Europe. Therefore, ensuring **legal certainty and regulatory alignment is essential** to overcome fragmentation between horizontal and sectoral regulations, such as the AI Act and the MDR/IVDR.

MedTech Europe and its members are committed to be trusted and collaborative partners in policy discussions on the responsible application of AI in healthcare.

General population

Use of **wearables** and **personalised apps** to prevent and manage health conditions
 Personal health monitoring

Healthcare workers

Detection of potential health issue

Trigger event
Use of **Wearables** to detect health related abnormalities

Use of **Virtual Health Assistants** to support general practitioners
GP visit

Patient

Specialist visit

Use of AI to support specialists in **Laboratories or Imaging** related analyses
Medical tests

Use of **Robotics** to support surgeons and healthcare workers during interventions

Use of **personalised apps** to support patients during his rehabilitation
Recovery start

Recovery End

Use of **Remote monitoring** for follow-ups
Follow-ups
Use of **Remote Monitoring** for follow-ups

Research and development

Use of **Real World Data** to support R&D

Prevention and early detection

Diagnosis

Treatment and care management

The figures and graphic have been taken from Deloitte for MedTech Europe, The socio-economic impact of AI in healthcare: Addressing barriers to adoption for new healthcare technologies in Europe https://www.medtecheurope.org/resource-library/the-socio-economic-impact-of-ai-in-healthcare-addressing-barriers-to-adoption-for-new-healthcare-technologies-in-europe/ (October 2020)

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