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HEALTHCARE

How technology could cut millions of hospital visits across Europe

Remote care offers European hospitals a rare combination: fewer avoidable visits, better care and more capacity in a tight labour market. As staff shortages intensify and demand keeps growing, the technology is becoming a critical solution to mounting pressures



Remote monitoring is gaining ground as technology improves, with devices that measure weight, heart rhythm, blood pressure, blood glucose levels and more

Remote healthcare: at a glance

- Amid severe staff shortages in the healthcare sector across Europe, remote care can ease the pressure on hospitals.
- Remote monitoring is gaining ground as technology improves, with devices and wearables that measure weight, heart rhythm, blood pressure, blood glucose levels, oxygen saturation and lung function.
- Evidence shows that remote patient monitoring has more benefits than drawbacks: improved patient mobility, lower hospital admissions and shorter hospital stays.
- We estimate that roughly 50% of hospital care is suitable for hybrid care using

some form of remote patient monitoring.

- That means millions of hospital visits could be avoided across the EU with the adoption of remote healthcare.
- But broad scale-up in Europe is slow, and the four largest EU countries are falling short.
- Policymakers can accelerate scale-up through three levers.

Healthcare providers under pressure

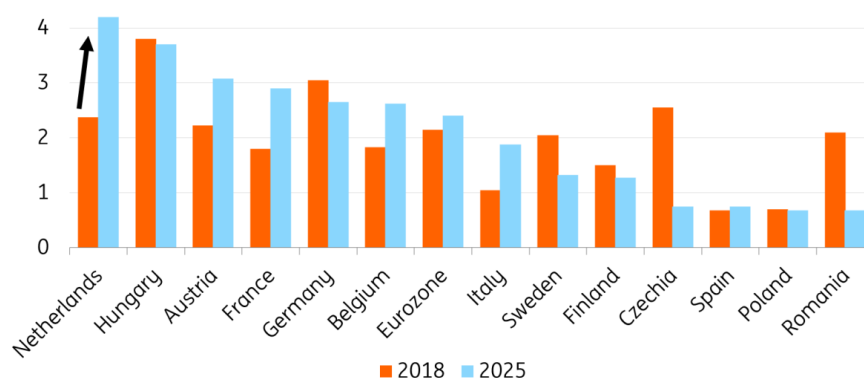
More people are working in healthcare in the EU than ever before, yet staff shortages continue to worsen. An ageing workforce is a major factor, compounded by heavy workloads that drive higher sickness absence and staff turnover.

The WHO expects the staffing gap to more than double over the next 15 years, exceeding 4 million workers by 2030. At the same time, demand for care is rising as populations age and chronic conditions become more prevalent, while expectations around quality continue to increase.

Against this backdrop, technology that can ease the pressure on healthcare providers is becoming an absolute necessity.

Healthcare staff are increasingly difficult to find in Western Europe

Average vacancy rate in the healthcare sector (number of vacancies per 100 jobs)



Source: Eurostat

Covid-19 accelerated the use of digital care

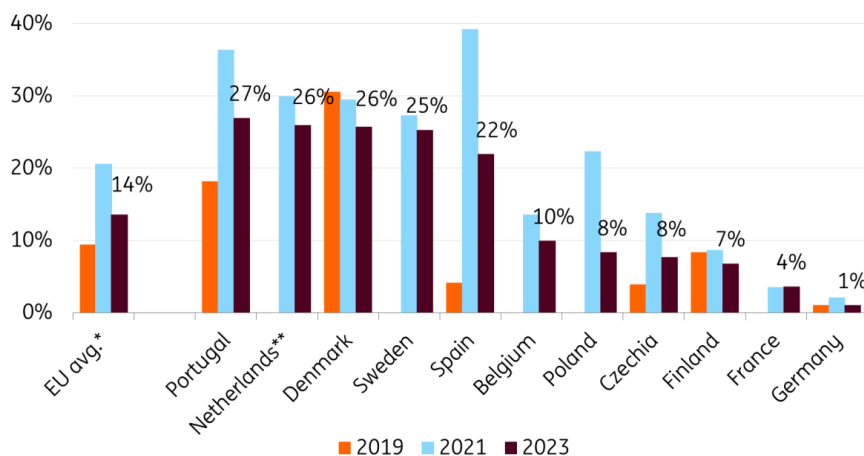
Digital technology makes healthcare less dependent on location, a shift that accelerated

during the Covid-19 pandemic. As waiting rooms emptied, doctors quickly switched to phone calls, video consultations and email. While teleconsultations have declined since then, they still accounted for an average of 14% of all consultations in 2023 – well above pre-pandemic levels.

That said, adoption varies widely across Europe: 22-27% of consultations are remote in countries such as Portugal, the Netherlands, Denmark, Sweden and Spain, compared with just 4% in Germany and 1% in France.

More teleconsultations than before the pandemic

Share of teleconsultations in the total number of medical consultations



Source: Eurostat

*Approximate EU average based on available country data; **Netherlands based on DHD, Nov. '25

Remote monitoring offers major benefits for patients and hospitals

Modern technology has made it possible to both consult patients remotely and to treat them outside the hospital. Through remote patient monitoring – also known as remote monitoring or remote patient management – hospitals can offer patients more comfort and convenience, while reducing stress, travel time and travel costs. This can be particularly valuable for people with limited mobility or patients who live far from a hospital.

Continuous monitoring by patients or community nurses enables doctors to make better-informed decisions and respond more quickly when conditions worsen. Involving patients more actively can also boost their engagement.

For hospitals, the key gains are reduced pressure on staff and more effective care. By limiting

visits to cases where measurements or symptoms warrant it, both consultations and admissions per patient fall. This allows remote patient monitoring to boost capacity and treat more patients. Meanwhile, the expanding stream of data offers a rich source for analytics and research, supporting better-targeted care.

Remote monitoring is gaining ground as technology improves

Remote monitoring is gaining ground thanks to improvements in measuring devices and internet connections, as well as growing acceptance of digital care solutions among patients and hospitals.

Healthcare providers use mobile devices and digital platforms to carry out medical tests manually or automatically, wherever the patient is. Depending on the treatment, patients use one or more devices at home to regularly measure specific health indicators and share them with their doctor or nurse through medical apps. This may include devices or wearables that measure weight, heart rhythm, blood pressure, blood glucose levels, oxygen saturation or lung function.

The benefits increasingly outweigh the negatives

Scientific research, international case studies and our interviews with experts show that the benefits of remote patient monitoring increasingly outweigh the potential drawbacks, such as limited digital skills or difficulties in taking and recording measurements independently. Another barrier is the investment needed in devices, platforms, maintenance, training and changes to workflows and treatment pathways, while reimbursement for hybrid care using remote monitoring remains unclear or insufficient in many European countries to cover start-up costs.

An increasing number of benefits are strongly supported by scientific evidence. Review studies [show](#) that remote patient monitoring can improve patient safety and treatment adherence. It also has positive effects on patient mobility and the ability to perform daily activities. For healthcare providers, remote monitoring lowers hospital admissions and shortens the average length of stay.

Case studies also show improvements in patient [satisfaction](#). A survey by the Dutch patients federation indicates that nine out of 10 Dutch patients are positive about it. An international study suggests that when patients in areas with limited healthcare provision can return home earlier thanks to remote monitoring, total healthcare and travel costs fall by around 27% on average.

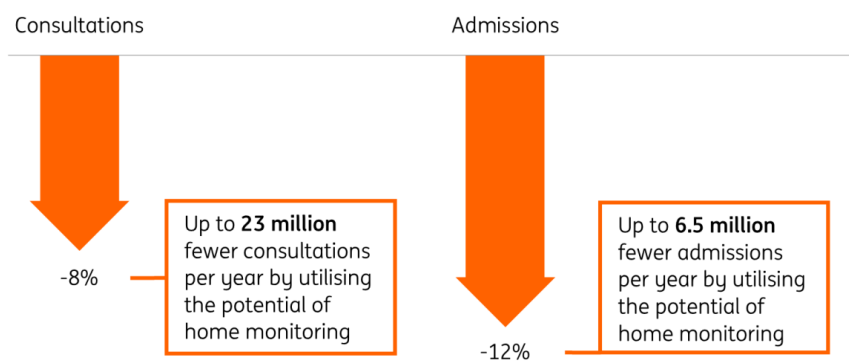
Millions of hospital visits could be avoided

Based partly on expert interviews, we estimate that roughly 50% of hospital care is suitable for hybrid care using some form of remote patient monitoring. This includes both long-term monitoring for chronic conditions such as COPD and diabetes, and short-term monitoring, for example after early discharge following a procedure.

We expect that around half of these patients would be able and willing to use it, meaning that about 25% of all hospital patients could be eligible for remote monitoring.

An analysis of 35 scientific studies shows that remote monitoring reduces hospital admissions by an average of 50% and consultations by 35%. If all eligible patients actually participate and new care pathways deliver similar average results, total hospital admissions could fall by more than 12% and consultations by more than 8% compared to a situation without remote monitoring. Across the EU, that would mean avoiding roughly 6.5 million admissions and 23 million consultations.

Substantial decrease in hospital visits upon utilisation of home monitoring potential



Source: ING Research

Remote monitoring can play an important role in prevention

To slow the growth in demand for care, prevention and effectiveness will need to play a bigger role in what hospitals provide. The focus is shifting from medical intervention itself to guiding people towards healthier lives. This means more accessible care facilities in local communities, closer cooperation with social organisations to address issues such as debt or addiction at an early stage, and giving patients a more active role through lifestyle interventions and by measuring and sharing health data

themselves as part of their treatment.

Health promotion and disease prevention, like digital transformation, are part of the [EU4Health](#) programme launched after the Covid pandemic, which makes more than €5bn available to strengthen public health and healthcare in Europe between 2021 and 2027.

The US is the pioneer and frontrunner

Remote patient monitoring is currently most widely used in wealthy countries with large, sparsely populated areas. The US is the frontrunner. Well before the pandemic, virtual consultations, remote intensive care and care and monitoring at home already played an important role at major US healthcare providers such as Cleveland Clinic, Mayo Clinic, Kaiser Permanente and Mount Sinai Hospital.

Growth accelerated when Medicare started reimbursing remote monitoring for chronically ill patients in 2019. In 2022, this reimbursement was extended to monitoring recovery treatment at home, such as tracking home exercise programmes for musculoskeletal conditions.

As a result, telemedicine is increasingly becoming the norm in the US for rehabilitation and post-operative monitoring. The Peterson Center on Healthcare notes that spending under traditional Medicare on monitoring chronically ill patients has risen [rapidly](#), from \$6.8m in 2019 to \$194.5m in 2023.

The UK and Scandinavia are furthest ahead in Europe

Remote patient monitoring is also gaining ground in Europe. By 2022, it was already being used in 39 of 51 European countries. Comparable data is limited, but the rollout has generally been slower than in the US and varies widely by country.

The UK was one of Europe's pioneers, with a large-scale and uniform approach. British virtual wards use remote monitoring, digital platforms and local medical teams to treat patients outside of hospital. This model was rolled out quickly during and after the Covid pandemic, supported by central funding. Since that specific national funding was discontinued, growth in the number of virtual wards and remotely monitored patients in the UK has stalled.

Scandinavia was also an early mover. The Danish government launched an action plan for the nationwide rollout of telemedicine as early as 2012. Since then, remote monitoring has become the standard care pathway for people with severe COPD, with expansion to other chronic conditions now underway. Finland, Norway and Sweden have also made significant progress in telemedicine and remote patient monitoring, especially in response to the pandemic.

Regional innovators can help accelerate scale-up

The Covid pandemic can be seen as an external shock that gave the adoption and scaling of remote patient monitoring a one-off boost, before momentum slowed again as conditions normalised.

But Europe still has ample room for regional innovators that can gradually inspire wider adoption. Charité in Berlin, the highly regarded and largest university medical centre in Europe, aims to conduct 50% of its consultations remotely by 2030.

NHS Greater Glasgow and Clyde is continuing to expand hospital-at-home care with advanced monitoring, treatment and multidisciplinary support at home.

Karolinska in Stockholm recently signed an eight-year contract with technology partners, including Philips, to provide remote monitoring and digitally connected care pathways for more than two million residents.

Although these initiatives remain fragmented, they can serve as examples and catalysts for further scale-up. The same applies to a large five-year European project launched in January 2026, which aims to improve the quality and scalability of remote monitoring.

Broad European scale-up is slow, and the four largest EU countries lag

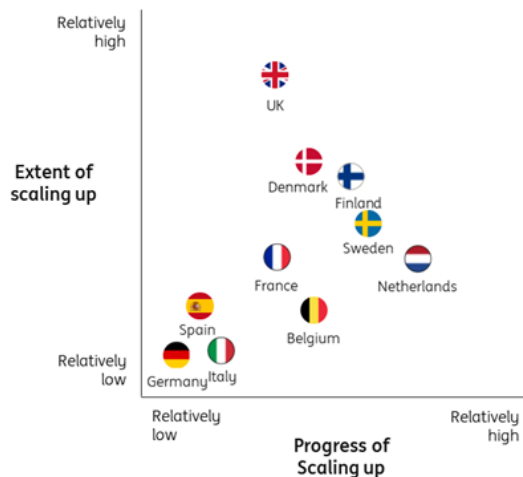
The four largest EU countries are not among the frontrunners. Germany has a strict separation in regulation and funding between hospital care and ambulatory care. Remote monitoring for heart failure is used on a limited scale, but for new areas of application it is still largely restricted to patients in care homes, while hospitals have to rely on funding from an [innovation fund](#).

In France, following the successful [ETAPES](#) experiment, telemonitoring for several conditions is fully reimbursed by the national health insurance system. However, actual patient participation still appears to be rising only slowly.

Italy is also behind, but in 2023 it launched a large-scale digital care renewal [programme](#) using funding from the EU recovery fund. A national telemedicine platform now supports and coordinates a regional network offering various digital services, including remote monitoring. Spain has regional initiatives, but no national programme for remote monitoring yet; adoption depends on the priorities of local health authorities.

Home monitoring most advanced in UK & Scandinavia, fastest-growing in the Netherlands

Schematic overview of home monitoring development by country



Source: ING Research

Less centralised direction and financial support slow adoption and scale-up

Differences in adoption and scale-up between countries partly reflect differences in regulation and reimbursement for remote monitoring. Another decisive factor is the way healthcare systems are organised. Countries with one strong central delivery organisation, such as the UK, have more capacity to scale innovations. The same applies to countries with one strong regional provider and only a few delivery regions, such as Denmark.

The rest of Scandinavia, and especially France, Spain and Italy, have more fragmented healthcare systems with multiple regions and therefore relatively many regional delivery organisations. Central direction is weaker, making rapid scale-up more challenging.

Other systems also have more national or regional competition, including the Benelux countries, Germany, Czechia, Slovakia, Austria and Switzerland. In these systems, scale-up is often slower than desired, especially when financial incentives are limited. A 'not invented here' attitude often plays a role. Different scale-up initiatives can still lead to wider adoption, but usually in a more fragmented and slower way.

The Middle East and Asia are also gaining ground

Remote monitoring and wider digital care are also gaining traction outside Europe and

North America. South Africa's largest Health Maintenance Organisation, which combines health insurance and care provision, recently partnered with Dutch and Swedish e-health companies to strengthen its care-at-home services.

Countries such as China and India are increasingly using large telemedicine platforms that integrate remote monitoring, AI-supported care and virtual consultations to serve remote areas better and improve care outcomes.

The Middle East is also building on opportunities that became clearer during the COVID-19 pandemic. Israel is a frontrunner in digital care: its integrated HMO model, broad coverage of electronic patient records, innovative hospitals and local medtech companies all support innovation. Sheba Medical Center, Israel's first virtual hospital, offers patients hospital admission, rehabilitation programmes, cardiac rehabilitation and telemonitoring at home.

Another advanced example is SEHA Virtual Hospital in Riyadh, Saudi Arabia, known as the world's largest digital hospital. It provides primary and secondary digital care for more than 224 hospitals and facilitates more than 16 million virtual appointments a year. It also offers remote monitoring at scale and improves preventive interventions by using AI to create a digital twin – a virtual replica of a person's health that can predict potential health problems.

Dutch medical service centres are supporting scale-up

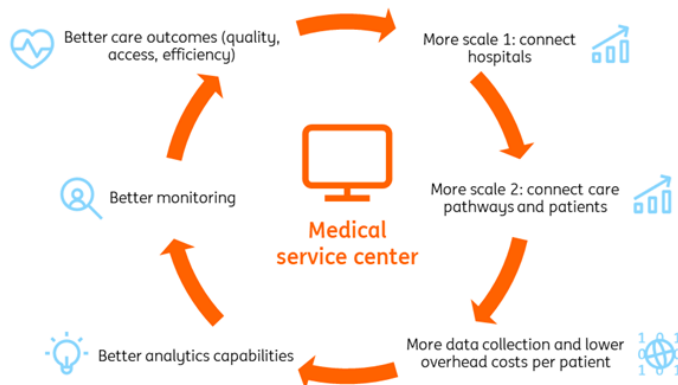
The Netherlands has made significant progress in remote patient monitoring in recent years, supported by five factors: broad experience built up over time, the scaling of national medical service centres, support from health insurers, relatively severe staff shortages, and more than €2bn in government funding for healthcare innovation linked to national implementation agreements.

This momentum has also accelerated the growth of nationwide medical service centres. These centres continuously monitor data and signals from patient apps used by affiliated healthcare providers and ensure patients can quickly be referred to the outpatient clinic of the relevant hospital when abnormalities occur.

'Zorg bij jou', a service centre set up by the eight top clinical Santeon hospitals, grew from virtually zero to 33,000 monitored patients in three years by the end of 2025. In 2026, it aims to grow further to 50,000 patients by connecting more hospitals and applying remote monitoring to more care pathways and to more patients within each pathway. This nationwide growth improves efficiency and quality, as fixed costs are spread across more participants and more monitoring data becomes available for research.

Success of medical service centre leads to accelerated scaling

Schematic scaling cycle for home monitoring via a shared medical service centre



Source: ING Research

A clear strategy and sufficient scale make expansion easier

Scaling remote monitoring within an organisation starts with a clear vision from hospital leadership. A clear plan for more hybrid care is needed to bring staff along. Sufficient financial strength and scale are also essential to carry the costs, make investments worthwhile and properly support staff. Given the relatively small size of many European hospitals, cooperation or mergers with other providers are often necessary.

Policymakers can accelerate scale-up through three levers

Labour shortages are not always enough to trigger timely action. Policymakers can accelerate scale-up through three routes: stronger central direction, supportive reimbursement and smooth data exchange.

1. Stronger central direction

Successful examples of rapid remote monitoring scale-up have one thing in common: some form of central direction. This does not necessarily have to come from a single national delivery organisation, as in the UK. It can also come through a national implementation agreement, with some large health insurers acting as drivers, as in the Netherlands. This can help enforce standardised guidelines for technology platforms and hybrid care pathways. The experience with British virtual wards points in the same direction. The Dutch medical service centre Zorg bij jou is therefore working on uniform hybrid care pathways and monitoring protocols to scale faster.

One way to strengthen central direction at the regional level is to allow more HMO-like structures, in which one organisation provides both insurance and care in a region. Such an organisation can steer care design and innovation scale-up more directly, especially when it

also has a financial incentive to do so. Healthcare systems with one delivery organisation per region can also use more directive steering to encourage or enforce scale-up.

2. Supportive reimbursement

Remote monitoring temporarily requires higher spending on IT adjustments and digital platforms, and possibly investment in monitoring or measurement equipment. Changing workflows and training or recruiting staff also requires additional funding. This is a high barrier, especially because profit margins at European hospitals are generally limited, particularly among non-profit and public institutions. Another brake is the risk of lower care revenue if remote monitoring is not reimbursed and fewer hospital visits are not compensated. This matters less under fixed contracts with insurers, and where waiting lists are long, because freed-up capacity can then be used quickly.

If policymakers, delivery organisations or health insurers really want to scale remote monitoring, they need to address these negative incentives in reimbursement. This still happens too little. Funding is limited and reimbursement is fragmented: providers each have their own budgets, sometimes under different healthcare laws. This hampers cooperation and can create perverse incentives. Reimbursement for remote monitoring also does not always cover all costs, especially in the start-up phase when costs per patient are relatively high.

3. Smooth data exchange

Fast exchange of patient data between IT systems, applications and healthcare providers supports the scaling of remote monitoring. Because patients often see multiple providers and use different devices and apps, cooperation between hospitals, GPs and, for example, elderly care providers is needed to coordinate care and monitoring properly. An up-to-date and complete view of a person's medical situation and medication use is crucial for making the right decisions and interpreting monitoring data correctly.

Clear national agreements are needed to make this work. Medical data should be recorded as uniformly as possible and made available through one national platform, or a few interoperable regional platforms, that provide a complete patient view. Belgium, Estonia and Denmark have the most advanced data infrastructure, but many other EU countries still lag. Ireland, and also the Netherlands, still have considerable ground to cover, as shown by OECD figures and a [study](#) commissioned by the European Commission. Under the phased implementation of the EHDS [regulation](#), EU citizens should have control over their digital health record by 2031 at the latest and be able to share it smoothly with healthcare providers both within and outside their own country.

Read the extended version of [the report in Dutch](#) here

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