



A future worth building

Transforming healthcare workforce management with data, analytics and AI

Vision paper



Call to action

To transform healthcare effectively, we must first transform the healthcare workforce. Data and analytics, particularly agentic AI, are essential tools in this effort. However, merely investing in technology isn't sufficient; we must also invest in the healthcare workforce and provide opportunities for healthcare professionals to collaborate in the transformation process. This is a pivotal moment for healthcare systems, and we must seize this opportunity to implement changes that benefit everyone—beginning with healthcare professionals—and ultimately improve the outcomes and experiences for patients.

Now is the time to embrace a smarter, more human approach to workforce transformation. By leveraging data, analytics, and AI, we can create a sustainable and resilient healthcare system that benefits both professionals and patients.

Because if transformation doesn't work for the workforce, it doesn't work at all.

If your organization is ready to explore a smarter, more human approach to workforce transformation, we'd welcome the opportunity to collaborate—with tools, insight, industry knowledge and a shared purpose.

In this vision paper, we delve into the complexities surrounding workforce management in the healthcare sector, particularly within the European context. We outline the pressing challenges that demand immediate attention and propose strategic solutions designed to address these issues effectively. Our exploration includes a focus on the innovative use case of SAS, demonstrating how their advanced agentic AI solutions can be harnessed to propel healthcare toward a brighter future. By leveraging cutting-edge technology in workforce management, SAS provides a roadmap for creating a more sustainable and equitable healthcare system. This document serves as both a call to action and a guide for healthcare leaders committed to transformative change, showcasing achievable steps toward a robust, resilient future for both healthcare professionals and patients.

Learn more on:



[Healthcare Horizons Revisited](#)

[Intelligent healthcare](#)



[Healthcare & AI](#)

[Healthcare Solutions & Operations](#)

Preface

Throughout Europe, healthcare systems face significant challenges that require innovative solutions. Demographic changes, increasingly complex patient needs, workforce shortages, and the digital divide are prompting healthcare leaders to re-evaluate care planning and delivery to ensure sustainability. Rising healthcare costs and tighter budgets add urgency to this reassessment.

In response, leaders are embracing digital healthcare driven by innovation, necessity, and policy. However, the management of the healthcare workforce has not evolved as quickly. Current staff scheduling practices are often reactive, talent deployment remains inflexible, and processes are hindered by outdated and incomplete data. These factors prevent the full benefits of digitalization from being realized.

The consequence is a stressed workforce, with high attrition and turnover rates, which poses significant costs to healthcare systems and organizations alike. Recruitment and agency costs rise, and patient care suffers as fragmentation increases and waiting times lengthen. Modernizing workforce management is essential to address these challenges and ensure the delivery of high-quality patient care.

Imagine the possibilities if we harnessed data, analytics, and AI—ethically and transparently—to build a more adaptable and equitable workforce strategy. What if digital innovation focused on empowering healthcare professionals, enhancing systems, and optimizing schedules? At this critical juncture, integrating data, analytics, and AI is crucial for sustainable growth and improved patient outcomes. By prioritizing workforce transformation, healthcare leaders can create a future-ready system that benefits both professionals and patients.

In this document, we will explore how strategic use of data, analytics, and AI can transform healthcare workforce management into a more adaptable and equitable system. We will examine the current challenges facing healthcare systems across Europe and offer practical solutions to address them. By focusing on workforce transformation, we aim to ensure that digital innovations truly benefit healthcare professionals and improve patient outcomes, ultimately fostering a resilient and sustainable healthcare system for the future. We invite you to join us in discovering actionable insights and strategic approaches to drive meaningful change in healthcare delivery.

Karin Lemmens
Expert Workforce
KPMG Health

Anna Vree
Expert Nursing
KPMG Health

Christian Hardahl
SAS Healthcare Industry

Nicoline Mol
SAS Healthcare Industry

Workforce planning challenges

Right now, across many health systems, staff and finances are often organized by care settings. This means that primary, acute, mental health and community care are organized separately—and social care is often provided in completely different ways.

The implications are serious and multifaceted.

Currently, in numerous healthcare systems, staffing and financial resources are typically arranged according to different care settings. Consequently, services like primary care, acute care, mental health, and community care operate independently, while social care is frequently delivered in entirely distinct ways. These arrangements lead to serious and complex challenges.

The existence of silos within healthcare organizations can lead to significant variations in staff experience. Different departments and even individual wards often offer varied levels of support, opportunities for professional development, and recognition of work-life balance, which can affect employee satisfaction and performance.

Additionally, leaders frequently lack access to comprehensive and reliable data, which hinders their ability to make informed decisions regarding capacity, demand, skill mix, and staff wellbeing. As a result, issues are often identified only when they reach a critical stage, leading to last-minute changes in schedules and requiring staff to cover gaps with minimal notice. This creates a human cost characterized by increased stress, high attrition rates, and a lack of continuity, all of which adversely can impact patient care.



In siloed systems, responsibility for workforce planning and performance often rests with local or departmental leaders. They have little ability to think system-wide.”



Karin Lemmens
Expert Workforce
KPMG Health

Workforce is at the heart of healthcare transformation

In response to some of these problems, and others facing the healthcare system, many healthcare organizations have embraced the potential of digital transformation. They have concluded that new technologies offer the 'holy grail' of more efficient operations with better outcomes for patients.

This may be true—but only if they work for healthcare professionals. That is not always the case.

In conversations with nurses, doctors and clinical managers, a common theme emerges: technology is often introduced to them, not with them. Impressive and potentially useful technology adds an additional step to already stretched professionals because they are not given guidance on its use.



Data without context doesn't empower...Technology must be introduced in ways that enhance professional judgment, not confuse it."



Anna Vree
Expert Nursing
KPMG Health

Well-designed digital tools can improve the lives and work of healthcare professionals. Introduced in the right way, they can be both respectful and empowering. However, that only happens when staff are brought into the design process early, consistently, and meaningfully.

This includes an adjustment of the entire process and no change will work if the workforce is not behind it.



Put simply, no major change can be realized without reshaping how we plan, support and empower the people delivering care."



Karin Lemmens
Expert Workforce
KPMG Health

If we want to truly modernize healthcare, workforce management—and with it workforce analytics—must move from the margins to the center of strategy.

Data, analytics and AI in healthcare workforce management

Workforce analytics can substantially help to better workforce management in healthcare. Smarter data integration, predictive analytics and agentic AI can help leaders:

- forecast demand more accurately, including far in advance;
- match skills to patient needs at the unit level;
- automate administrative overhead in scheduling and shift management;

- identify early signs of burnout or inequity among teams; and
- build adaptive staffing models that respond to real-world conditions.

Agentic AI is proving to be particularly useful in this context.

The role of agentic AI in reshaping workforce dynamics according to SAS

Agentic AI goes beyond analysis to take defined actions with set parameters. Agentic AI can be used to support both healthcare professionals and managers. AI agents can draft schedules, alert supervisors to risks, suggest micro-adjustments to prevent fatigue, or communicate directly with staff about scheduling changes and training opportunities. Agentic AI can be used to predict staffing needs based on historical data, ensuring that the right number of staff with the right skills are available at all times.

It is important to note that Agentic AI is not there to replace the judgement of the people. Instead, it enhances and supports that judgement by identifying patterns, highlighting risks, and suggesting options. This is not a matter of rigid automation, but enabling adaptable, real-time responsiveness to problems and issues as they arise.

Technology must of course be technically sound. It must also be trustworthy, explainable and aligned with ethical principles. That means that agentic AI must be:

- **Transparent:** staff should know what the AI agent is doing and why
- **Governed:** leaders must set clear rules for when and how the AI agent acts
- **Inclusive:** frontline professionals must be co-creators of these tools
- **Fair:** equity in workload distribution must be designed into every algorithm.

When deployed in this way, agentic AI can significantly reduce administrative burdens and decision fatigue. This frees up time for care and restores a sense of fairness and control.



These tools are providing practical information to support better decisions, fairer scheduling, and more resilient care systems. The future is intelligent, adaptive, and agentic."



Christian Hardahl
EMEA Healthcare Industry
Leader, SAS

According to Hylke Kingma, Partner at KPMG, 'The integration of AI in workforce management is a game-changer for the healthcare industry'.

No single part of the system is enough on its own. Technology, process and culture must be harnessed together to drive real change.



Trust, culture and collaboration: the real levers of change

Across every case study, one conclusion is clear: cultural readiness matters more than technological readiness.

You can have the best predictive model, the smartest AI agent, the slickest interface—but if staff don't trust it, or if managers don't back it, or if executives don't champion it—it will sit unused.

What would cultural readiness look like in practice? There are several elements that are crucial:

- **Supportive leadership:** clean vision on and support of transformation combining human and technology
- **Clinical sponsorship:** clinicians who are trusted by their peers and are already modelling the desired behavior within the organization
- **Communication:** honest, ongoing conversations about what's changing and why, with executives, clinical leaders and head nurses sharing consistent messages and being prepared to listen to the responses
- **Training:** protected time for staff to build digital fluency, and not as a one-off, but as a key part of the culture; and learning by doing
- **Co-design:** staff fully involved in building, testing and refining the tools they are going to use, or that will be used to drive staffing decisions, to ensure that these tools really work for frontline healthcare professionals.

This is change with a culture of collaboration.

Making change happen: five practical questions for leadership teams

Before investing in the next workforce technology pilot or analytics upgrade, leadership teams should ask:

01

Do we have a joined-up view of workforce data across patient care services and professions?

02

Are our analytics aligned to decision-making timeframes—and trusted by those who use them?

03

Where can we use AI to automate or augment repetitive tasks and free up staff energy?

04

How are we involving clinical staff in the design, deployment and governance of these tools?

05

What cultural investments—training, leadership, communication—are we making alongside the investment in technology?

Contacts

Karin Lemmens

**Partner Health
KPMG**

lemmens.karin@kpmg.nl

Anna Vree

**Senior Manager Health
KPMG**

vree.anna@kpmg.nl

Christian Hardahl

**EMEA Healthcare Industry
Leader SAS**

christian.hardahl@sas.com

Nicoline Mol

**Director of Sales, Public &
Healthcare
SAS Nederland**

nicoline.mol@sas.com



SAS and all other SAS Institute Inc. Product or service names are registered trademarks or trademarks of SAS Institute Inc. In the USA and other countries.

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

© 2025 KPMG Advisory N.V., a Dutch limited liability company and a member firm of the KPMG global organization of independent member firms affiliated with KPMG International Limited, a private English company limited by guarantee.

All rights reserved.