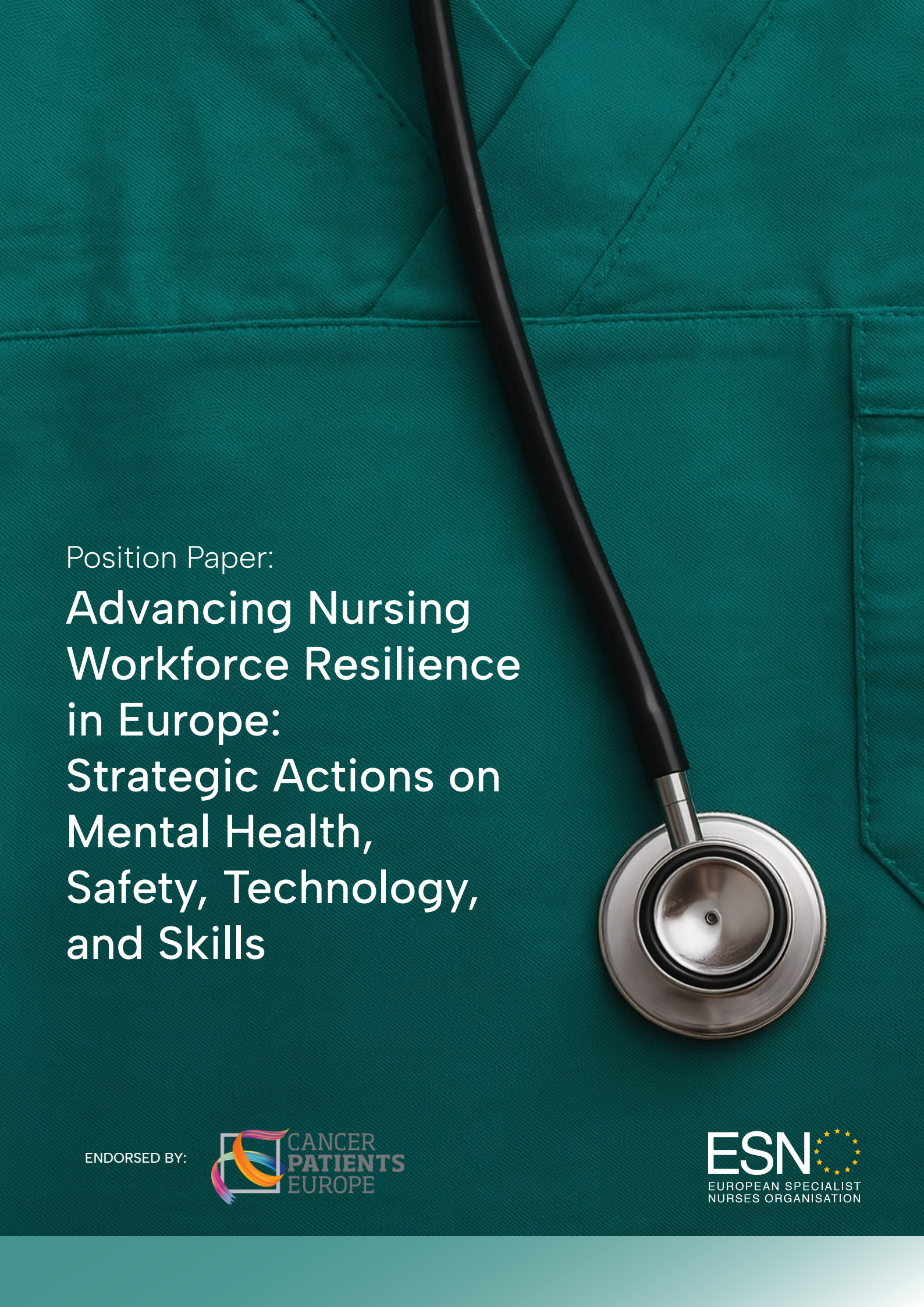

Position Paper:

Advancing Nursing Workforce Resilience in Europe: Strategic Actions on Mental Health, Safety, Technology, and Skills

ENDORSED BY:

CANCER PATIENTS EUROPE

ESN
EUROPEAN SPECIALIST NURSES ORGANISATION

Advancing Nursing Workforce Resilience in Europe: Strategic Actions on Mental Health, Safety, Technology, and Skills

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EXECUTIVE SUMMARY

The European Specialist Nurses Organization (ESNO) fully supports the WHO Europe Nursing and Midwifery Strategic Directions and advocates for targeted measures to enhance the working conditions, safety, and professional satisfaction of nurses across Europe.

This position paper identifies four strategic action areas critical to building a sustainable and resilient nursing workforce across the EU27 and the broader WHO European Region:

- 1. Enhancing psychological safety and expanding mental health support in the nursing workforce.
- 2. Improving physical safety through stronger workplace protections and preventive measures.
- 3. Accelerating the integration of digital health technologies and innovation in clinical practice.
- 4. Harmonizing core competencies and skill standards to ensure professional mobility –institutional and cross-border– and quality of care.

1. Enhancing Psychological Safety and Expanding Mental Health Support in the Nursing Workforce

A psychologically safe workplace is essential to retain, support, and empower nurses, particularly early-career professionals, facing high-pressure, emotionally demanding situations. Without appropriate mental health resources and a culture that encourages open communication, nurses are at increased risk of burnout, disengagement, and early attrition. The European Specialist Nurses Organization (ESNO) calls for a systemic shift towards organizational cultures where psychological safety is not just a goal but a fundamental institutional practice.

To support this transition, we recommend the following key actions:

- **Foster a Just Culture:** Establish work environments that promote learning from errors rather than penalizing them. Encourage feedback and dialogue at all levels to reinforce trust and team cohesion.
- **Implement leadership models and mentorship programs that support resilience, particularly for early-career nurses...**
- **Combat Mental Health Stigma:** Adopt institutional policies that normalize emotional expression and promote stress management as part of professional practice. Mental well-being should be viewed as an integral component of professional health.
- **Provide Tailored Psychological Support Services:** Ensure confidential counselling with licensed professionals is available to all staff, including in-person sessions.
- **Formalize Peer-Support Networks:** Embed structured peer-led initiatives within organizational practices to offer accessible, informal mental health support.

These actions have been proven to reduce burnout and absenteeism, increase retention, and improve team performance, with benefits especially pronounced among younger professionals.

A Call for a European Strategy on Psychological Safety in Healthcare

A psychologically safe workplace is essential to retain, support, and empower nurses, particularly early-career professionals, Despite these known advantages, the current landscape across Europe remains fragmented and under-resourced. ESNO urges the European Commission, in collaboration with WHO Europe, to develop a unified strategy for psychological safety in healthcare. Such a strategy should establish minimum standards for mental health and psychosocial support in all healthcare institutions, while also ensuring equitable access to confidential counselling, structured debriefing after traumatic events, and resilience training for all staff. In parallel, it is essential to protect healthcare professionals who raise safety concerns, shielding them from retaliation or professional harm. To ensure long-term impact, psychological safety must also be integrated into EU occupational health and safety legislation and reflected in accreditation frameworks for healthcare systems.

This initiative must be supported by dedicated EU funding mechanisms to enable effective implementation across all Member States. Investing in mental health protection for nurses is not only a matter of individual well-being — it is essential for the resilience, sustainability, and attractiveness of the nursing profession across Europe.

> **Psychological safety is not only a workforce issue — it is a cornerstone of safe, high-quality care for patients across Europe.**

Psychological Safety: A Pillar of Quality Care

Just as healthcare professionals are expected to be physically protected, we must no longer accept workplaces that neglect their psychological well-being.

Psychological safety must be recognized as a core pillar of healthcare quality, workforce sustainability, and patient safety.

> **The time for action is now. Europe must take the lead in safeguarding the minds and spirits of those who protect the lives of others.**

2. Improving physical safety through stronger workplace protections and preventive measures.

Concerns about physical safety are among the leading reasons why nurses are leaving the profession across Europe, exacerbating critical shortages in already strained healthcare systems. Daily, nurses are exposed to a range of hazardous conditions that compromise their long-term health and well-being. These include contact with dangerous substances — such as antineoplastic agents and anesthetic gases — frequent exposure to infectious agents, and the high prevalence of musculoskeletal disorders (MSDs) resulting from the manual handling of patients. These risks are significant and cumulative, and their impact intensifies over time. Posing serious threats to the long-term health and well-being of frontline healthcare workers. Yet despite the existence of regulatory frameworks and safety guidelines, many healthcare environments still lack the infrastructure, protective equipment, and sufficient staffing needed to implement effective prevention and mitigation strategies.

Without urgent action – including improved facility design, the adoption of safer medical devices, and robust systemic protections – the European Union risks compromising not only the health and safety of its nursing workforce, but also the long-term stability and attractiveness of the profession itself.

1. Antineoplastic agents:

Antineoplastic agents — including chemotherapy and other cytotoxic drugs — are widely in the treatment of both cancer and non-cancer patients. However, occupational exposure to these substances poses serious long-term health risks for healthcare workers, including organ damage, infertility, and even cancer. The European Commission has recognized these risks within the Carcinogens, Mutagens and Reprotoxic Substances (CMR) Directive, which includes a list of hazardous drugs and the recommendations from EU-OSHA.

Despite this regulatory recognition, a significant implementation gap remains. Many healthcare environments still lack enforceable standards for monitoring surface contamination, making it difficult to assess real exposure levels and to ensure compliance with safety protocols. Compounding the issue, the use of Closed System Transfer Devices (CSTDs), which are proven to reduce the release of hazardous aerosols and spills, remains optional in most EU countries. Without a harmonized requirement, protection levels vary significantly from one healthcare facility to another, leaving nurses particularly exposed during the preparation, administration, and disposal of these high-risk medications.

This inconsistency in regulations and practices across Europe underscores the urgent need for binding EU-wide standards on environmental monitoring of hazardous drugs, along with the mandatory use of CSTDs in all healthcare settings where such substances are handled.

2. Infectious agents:

Exposure to infectious organisms is everyday in healthcare settings. Bloodborne pathogens, in particular, present significant occupational hazards, with the risk of transmission through needlestick injuries, mucous membrane exposure, and skin contact. Among the most serious are HIV (human immunodeficiency virus), HBV (hepatitis B virus), and HCV (hepatitis C virus) — all of which can have severe consequences for exposed healthcare workers.
To address these risks, the EU Medical Device Regulation (MDR) 2017/745 includes specific provisions aimed at reducing sharp-related injuries. Clauses 11.1 and 22.2 of the MDR require that all medical devices be designed and manufactured to minimize the risk of injury from sharp components, such as needles and lancets. In alignment with these requirements, the European Commission has formally requested that CEN and CENELEC revise the ISO 23908 standard — which sets out safety features for sharps protection — and update Annex ZA to reflect the MDR's General Safety and Performance Requirements (GSPRs). The goal is to integrate the MDR's safety principles into harmonized European standards, making them binding across the EU.

As a result, starting January 2028, only safety-engineered devices—such as needles or infusion systems with integrated sharps injury protection—will be eligible for CE marking under the MDR. This represents a significant regulatory shift toward the mandatory use of safer medical devices throughout the EU, thus significantly enhancing occupational safety in clinical practice.

3. Chemical hazards:

Hazardous chemicals are commonly used in healthcare settings to support patient treatment, specimen preparation, and disinfection of surfaces, medical instruments, and equipment. While these substances are essential to modern medical practice, they also pose serious occupational health risks to healthcare workers, patients, and others. Among the most concerning are anesthetic gases — including nitrous oxide, sevoflurane, and desflurane — which are widely used in medical and veterinary care across Europe. Despite their routine use, growing concerns are being raised about their classification as chemical hazards, particularly about chronic occupational exposure. When proper control measures are lacking — such as adequate ventilation, effective gas scavenging systems, or procedural compliance — long-term exposure to anesthetic gases has been linked to headaches and fatigue, reproductive health disorders, and possible neurotoxic effects. Although the EU-OSHA has addressed this issue and called for harmonized exposure limits and enhanced preventive strategies under the Chemical Agents Directive (98/24/EC), the enforcement of safety measures remains inconsistent across Member States. A lack of uniform data collection, surface and air monitoring protocols, and investment in updated technologies continues to hinder practical risk assessment and mitigation — particularly in operating theatres, recovery areas, and dental clinics, where exposure levels are highest. Protecting healthcare professionals requires a coordinated and comprehensive approach. This includes the implementation of engineering controls, such as modern scavenging systems and efficient room ventilation to capture waste gases directly at the source. Routine maintenance and leak testing of anesthesia machines are essential to prevent accidental release. Where clinically appropriate, the use of intravenous anesthesia — for example, propofol via infusion pumps — offers a compelling alternative, eliminating exposure to volatile agents. In cases where inhalational anesthesia is necessary, the adoption of low-flow techniques and closed-circuit systems can significantly reduce emissions. While personal protective equipment (PPE) provides limited protection, it remains useful during equipment cleaning and in the event of accidental spills. Finally, regular staff training and ongoing environmental monitoring (both air and surfaces) are essential to raise awareness, reinforce compliance, and ensure sustained exposure control. Together, these measures form an evidence-based framework to ensure the safety and well-being of healthcare professionals.

Surgical smoke, also known as plume, is a chemical and biological hazard produced during procedures that involve thermal tissue destruction — such as with electrosurgery, lasers, or ultrasonic scalpels and represent health hazard to OR personal.

The EU must urgently establish dedicated investment mechanisms to support a comprehensive strategy aimed at preventing occupational exposure to anesthetic gases. A coordinated EU approach should involve the gradual adoption of intravenous infusion pumps, where clinically appropriate, to replace inhaled agents. It should also mandate the installation of engineering controls, such as gas scavenging systems, and improvements to hospital ventilation infrastructure. Additionally, funding should be allocated for staff training, regular equipment maintenance, and deployment of real-time monitoring technologies to ensure safe working conditions.

Without structured investment and regulatory guidance, healthcare facilities in lower-resource regions may remain dependent on outdated systems that jeopardize both worker safety and patient care. Protecting healthcare professionals from toxic exposure must become a clear priority for Europe, supported by tangible commitments and long-term funding.

4. Musculoskeletal disorders (MSDs):

MSDs remain among the most significant physical risks faced by nurses in Europe, with high prevalence linked to repetitive strain from manually moving patients and the physically demanding task of changing adult diapers. These actions, performed daily and often without adequate ergonomic support, contribute to chronic pain, long-term injury, and elevated absenteeism in healthcare staff.
To tackle this, a coordinated European response is urgently needed to ensure the mandatory implementation of appropriate patient-handling systems—including mechanical lifts, repositioning aids, and transfer devices—in all healthcare facilities. In parallel, promoting the widespread adoption of external urinary management systems for patients with incontinence can drastically reduce reliance on diapers, thereby lowering the physical burden on nurses and improving patient dignity and skin health.

To strengthen the evidence base for CAUTI prevention strategies in Europe, further research and data collection on the use and outcomes of female external urinary catheters across EU Member States is essential. ESNO encourages collaboration with national surveillance systems to include female external urinary catheters related metrics in future prevalence studies.

5. Zero-tolerance policies, mandatory staff training in conflict de-escalation:

Enhanced security infrastructure and Stronger legal protections for healthcare workers. These measures should be part of an integrated strategy that addresses violence proactively and systemically, not merely reactively.

A coordinated European framework is essential to guide Member States in the development and implementation of comprehensive safety protocols tailored to different healthcare settings. These may include physical security enhancements, the presence of trained on-site security personnel, the establishment of clear internal procedures, and patient-focused interventions to manage risk factors. Equally important are policy and administrative actions aimed at standardizing responses to workplace violence, ensuring accountability, and embedding safety into institutional culture.

Protecting nurses from violence is essential—not only for their safety and dignity but also for the sustainability of healthcare systems across Europe

Implementing these measures collectively—not in isolation—can foster a working environment where nurses feel protected, respected, and empowered, ultimately enabling them to deliver high-quality patient care in safe and supportive conditions.

3. Enhance Technology Integration for Psychological Safety and Efficiency.

When appropriately implemented, technology can reduce psychological distress, improve workflow efficiency, and enhance the overall well-being of nurses. As frontline healthcare professionals face mounting challenges — such as chronic staffing shortages, increasing patient complexity, and rising occupational risks — their workload has become unsustainable, posing a direct threat to both care quality and workforce retention.

The European Union must urgently prioritize the assessment, funding, and deployment of technologies that reduce stress and enhance psychological safety in the nursing workforce. Under a dedicated European Nurse Support Plan, a coordinated effort should be launched to promote evidence-based innovations that support nurses in high-pressure environments. These include digital workflow and coordination platforms, which streamline communication and reduce administrative burden; medication traceability systems, which improve accuracy and reduce the mental stress associated with potential medication errors; wearable alert and safety devices, which enhance immediate response capacity; and environmental design improvements, aimed at reducing noise, cognitive overload, and fatigue in clinical settings.

Such tools are not optional luxuries; they are essential components of a modern, resilient, and sustainable healthcare system. Investing in digital innovation to support nurses means investing in the efficiency, safety, and mental health of those who form the backbone of patient care in Europe.

Case example 1:

Medication Traceability Systems:

In high-risk clinical areas such as oncology and intensive care, medication traceability systems play a critical role in improving accuracy, reducing errors, and alleviating the mental strain associated with the fear of making mistakes. One such example is the **ONCOPTIMAL Project** in Spain (https://fundacioneco.es/project/oncoptimal/), which demonstrated a measurable reduction in medication errors and improved nurse satisfaction in oncology settings. Through the integration of digital tools, real-time coordination, and standardised workflows between pharmacy, nursing, and medical teams, the project achieved a reduction of up to 8 days in waiting time for cancer treatment initiation, a clinically and emotionally significant result for patients. For nurses, the use of barcode scanning, automated verification, and digital medication protocols resulted in over 30% increased efficiency in medication administration. This not only reduces the risk of medication errors but also allows nurses to redirect their time and energy toward direct patient care.

The significance of such technologies is recognized at the European level: the European Comprehensive Cancer Network (ECCN) includes the implementation of digital medication safety systems as a quality standard under Section 6.2.10 of Work Package 10 (WP10). The ONCOPTIMAL model shows how **aligning national innovations with European guidelines can lead to scalable, impactful improvements in cancer care delivery, and provide much-needed relief for the nursing workforce.**

Case example 2:

Central Infusion Systems:

Another critical area where technology can directly improve both patient safety and nurse well-being is the management of **alarm fatigue**. This issue is particularly acute in high-intensity environments such as intensive care units and oncology wards, where infusion pumps generate a constant stream of auditory alerts. Many of these alarms are non-critical or false, contributing to sensory overload and the desensitization of clinical staff.

As a result, healthcare professionals may delay responses or miss critical alerts, with potentially serious consequences for patient safety. This continuous exposure to noise significantly increases cognitive stress for nurses, while also compromising the early detection of serious issues such as occlusions, dosage interruptions, or air-in-line hazards. To address this, centralized infusion systems—which allow for remote monitoring and integration of multiple pumps into a unified platform—offer a highly effective solution.

These systems can filter, prioritize, and manage alarms in real time, reducing background noise while ensuring that clinically relevant alerts receive immediate attention. By mitigating alarm fatigue, such technologies not only support faster response times and lower medication error rates but also contribute to a safer and more sustainable working environment. Ultimately, reducing unnecessary alarms improves both operational efficiency and psychological safety, helping to address one of the most pervasive sources of stress and burnout in clinical practice.

4. Standardize Competencies and Skills Across the EU27

Significant variation in nursing competencies across EU Member States continues to hinder professional mobility, reduce job satisfaction, and compromise the quality and equity of care delivery. Disparities in education, clinical training, and scope of practice create systemic fragmentation and limit the ability of nurses to work effectively across borders, particularly in times of crisis or workforce shortage.

To address this, the European Specialist Nurses Organization (ESNO) calls for the **harmonization of nursing competencies and scopes of practice** throughout the EU27. A key component of this effort should include the development of **common certification standards** for advanced nursing procedures — such as the insertion of peripherally inserted central catheters (PICCs) — ensuring that all nurses, regardless of country, are trained to the same high-quality standards.

Standardizing core competencies would not only facilitate cross-border recognition of qualifications but also strengthen professional confidence, improve patient outcomes, and reduce the risk of nurses leaving the profession due to inconsistent expectations and limited career progression. A unified system would also support workforce planning, enabling healthcare systems to deploy qualified personnel where they are most needed—an essential element in building resilience and responsiveness in European healthcare.

The European Union must take decisive action to create a **European Nursing Competency Framework**, aligned with patient safety goals and EU health priorities. This framework should be co-created with professional associations, educational institutions, and frontline nurses, and embedded into relevant EU directives, regulatory standards, and funding instruments.

A strong, skilled, and cohesive nursing workforce is essential for the future of healthcare in Europe, and harmonizing professional standards is a necessary step forward.

Conclusion

The WHO Europe Nurse Plan represents a pivotal opportunity to strengthen and transform the nursing profession across the continent. The European Specialist Nurses Organization (ESNO) calls on EU institutions, national governments, healthcare providers, and professional associations to embrace the strategic actions outlined in this paper. By investing in psychological and physical safety, advancing technological integration, and harmonizing competencies and standards, Europe can ensure the development of a resilient, highly skilled, and mentally healthy nursing workforce capable of meeting the complex challenges of modern healthcare.

Nurses are the backbone of patient care, and their well-being is essential to the sustainability of health systems. This is not simply a workforce issue—it is a matter of public health, patient safety, and social justice.

Now is the time for bold, coordinated action.

Together, we can build healthcare environments where nurses do not merely endure but truly thrive.

Bibliography

1. CEN and CENELEC. (n.d.). Mandate M/575 – Standardization request in support of Regulation (EU) 2017/745 on medical devices. Retrieved from https://www.cencenelec.eu

2. European Agency for Safety and Health at Work (EU-OSHA). (n.d.). Guidance on risk assessment and hazardous medicinal products. Retrieved from https://osha.europa.eu/en/legislation/guidelines/guidance-safe-management-hazardous-medicinal-products-work

3. European Commission. (1998). Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work. Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:31998L0024

4. European Commission. (2004). Directive 2004/37/EC on the protection of workers from the risks related to exposure to carcinogens or mutagens at work (as amended). Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:32004L0037

5. European Commission. (2019). Draft standardization request to the European Committee for Standardization and the European Committee for Electrotechnical Standardization as regards medical devices and in vitro diagnostic medical devices in support of Regulation (EU) 2017/745 and Regulation (EU) 2017/746. Retrive from https://ec.europa.eu/docsroom/documents/36104

6. European Parliament and Council. (2017). Regulation (EU) 2017/745 on medical devices (MDR). Retrieved from https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32017R0745

7. European Comprehensive Cancer Network (ECCN). (2022). Work Package 10 – Quality Standards for Cancer Care: Section 6.2.10. [Internal EU documentation].

8. Fundación ECO. (2022). ONCOPTIMAL Project. Retrieved from https://fundacioneco.es/project/oncoptimal

9. International Organization for Standardization (ISO). (2011). ISO 23907:2019 – Sharps injury protection – Requirements and test methods. Retrieved from https://www.iso.org/obp/ui/en/#iso:std:iso:23907:-1:ed-1:v1:en

10. World Health Organization (WHO) Europe. (2021). Nursing and midwifery strategy 2021–2025. Retrieved from https://www.who.int/publications/i/item/9789240033863