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THE FUTURE OF INTENSIVE CARE IN EUROPE: CHALLENGES, OPPORTUNITIES

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Background: Intensive care medicine in Europe faces a defining period of transformation. Increasing demand from ageing populations and complex disease, persistent workforce shortages, unequal access to critical care, and vulnerabilities exposed by the COVID-19 pandemic challenge the resilience of healthcare systems. At the same time, technological innovation, multinational research and stronger engagement with European institutions offer opportunities to reshape the specialty.

Objective: To identify the major challenges and emerging opportunities for European intensive care and outline a collaborative strategy for improving workforce sustainability, equitable access, clinical innovation and preparedness.

Key themes: A sustainable intensive care system depends on skilled multidisciplinary teams rather than physical bed capacity alone. Burnout, staff retention and variation in training and professional recognition require coordinated responses, including improved working conditions, team-based care and cross-border mobility. Geographic disparities in ICU capacity and access highlight the need for common standards and stronger European advocacy. Responsible adoption of artificial intelligence may improve risk prediction, clinical decision support and administrative efficiency, provided that implementation is clinically led, transparent and supported by appropriate training. Shared registries, interoperable data and multinational research networks can accelerate evidence generation while extending research participation to under-resourced settings. Environmental sustainability and preparedness for emerging infections, antimicrobial resistance, extreme weather and other crises must also become integral to ICU planning.

Conclusions: Collaboration is the essential mechanism for translating these opportunities into meaningful progress. European professional societies can unite clinicians around harmonised education, shared research infrastructure, workforce advocacy, sustainable practice and coordinated emergency preparedness. Building on experience from the pandemic, multinational studies and policy engagement, the future of European intensive care should prioritise people,

equitable access, responsible innovation and care extending beyond ICU survival. No single hospital or country can achieve these goals alone.

Keywords: Intensive care; European collaboration; Workforce sustainability; Health equity; Innovation