



Transforming Patient Pathway, Workflow & Outcome Learning Pathway.

2024-2025

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Executive Summary

The Transforming Patient Pathway, Workflow & Outcome programme (2024–2025), delivered by the European Society of Intensive Care Medicine (ESICM) with the support of an educational grant from Masimo, offered an innovative, multi-modal educational experience aimed at improving perioperative care for high-risk surgical patients.

Combining virtual learning, fellowships, hands-on workshops, and educational media, the programme enabled intensive care professionals to redesign patient pathways from prehabilitation through post-discharge. Participants reported measurable clinical impact, with several institutions initiating new hospital programmes, including Prehabilitation Services, Rapid Response Team interventions, and Virtual Ward Pilots.

The initiative addressed three interrelated areas of transformation. First, prehabilitation and perioperative care were enhanced through patient optimisation strategies, advanced intraoperative monitoring, and personalised interventions. Second, **Intensive Care Unit (ICU)** optimisation and rapid response capabilities were strengthened, streamlining patient flow, proactively preventing complications, and leveraging Internet of Medical Things (IoMT) technology alongside centrally connected control towers to improve situational awareness. Third, Virtual Wards and continuity of care initiatives extended patient safety beyond hospital walls through remote follow-up, early discharge strategies, and IoMT-enabled monitoring.

With **383 participants** from diverse professional and geographical backgrounds, the programme fostered a high level of engagement and cross-border knowledge exchange, with the majority rating the sessions as excellent in both quality and relevance.

The impact extended beyond education to tangible service redesign within participating institutions, reinforcing leadership capacity, interdisciplinary collaboration, and change-management skills. Recorded materials remain accessible to support ongoing learning and clinical application.

Looking ahead, the initiative presents opportunities to expand research, training, and digital integration while evaluating the economic and operational outcomes of redesigned care pathways. ESICM aims to strengthen healthcare professionals' leadership, digital literacy, and cross-disciplinary collaboration to sustain innovation and patient-centred care models.

The programme has established a robust foundation for the long-term adoption of evidence-driven, innovative practices in critical care. By enabling professionals to translate learning into tangible service redesign, it has already changed the trajectory of perioperative care across multiple institutions. ESICM is now positioned to lead a pan-European movement that redefines patient pathways, sets new benchmarks for quality, and drives measurable improvements in patient outcomes worldwide.



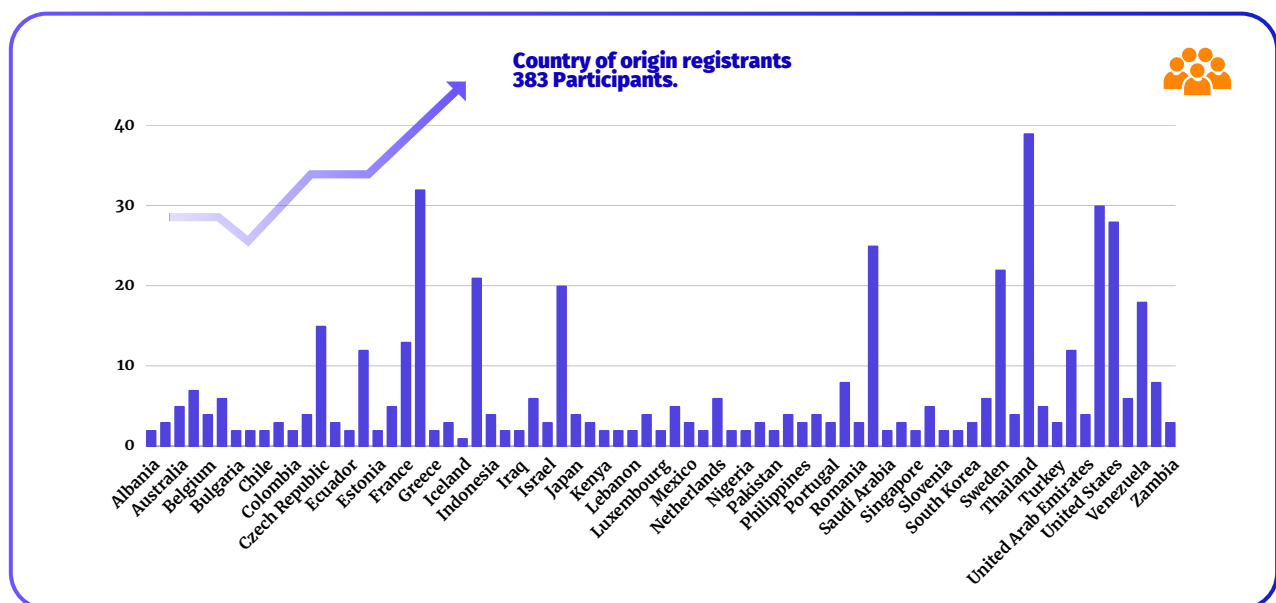
Introduction

High-risk surgical patients represent a growing clinical challenge, often experiencing avoidable complications due to fragmented care and resource limitations, which can be avoided.

The evolving complexity of surgical patient management, particularly for frail, multimorbid individuals, demands a reimagined approach across the perioperative care continuum.

The European Society of Intensive Care Medicine (ESICM), with the support of an unrestricted educational grant from Masimo, has launched this initiative to provide healthcare professionals with the strategies, knowledge, and tools required to improve outcomes through structured and innovative care pathways.

Patient centricity was created by combining theoretical insight with practical exposure, the programme connected international experts and frontline clinicians to build advanced competencies in **Intensive Care Unit (ICU)** care, including prehabilitation clinical management, rapid response systems, and virtual patient management programmes.



This programme was created in response to systemic gaps, aiming to:



Reduce variability in perioperative practices.

Facilitate early intervention and patient optimisation.

Support continuity of care beyond hospital discharge through virtual solutions.

Promote interdisciplinary, patient-centred strategies.

The initiative was delivered through an integrated learning pathway that included:



Live Virtual Sessions (March–June 2024)

covering elective and emergency surgeries, ICU optimisation, discharge planning and continuity of care at home.



On-site Fellowships (Sept 2024–Feb 2025)

across leading European centres, offering practical immersion in perioperative workflows.



Video Case Production

in three leading European hospitals, simulating a real-world patient journey to support case-based learning.



Face-to-Face Workshop (Oct 2024) & Interactive Follow-Up Course (April 2025)

covering elective and emergency surgeries, ICU optimisation, discharge planning and continuity of care at home.

All components were designed with embedded feedback loops, small-group interaction, multidisciplinary collaboration, and actionable takeaways.

Introduction – Transforming Patient Pathway, Workflow & Outcome Learning Pathway.



Kick-Off Webinar

Overview and Learning Pathway Introduction

Date & Time: March 26, 2024— 16:00–17:30

Format: Expert Panel

Overview

This expert session introduced a comprehensive learning pathway focused on critical care and perioperative management. Faculty provided a structured roadmap covering key topics such as high-risk surgeries, ICU optimisation, and patient discharge processes.

The session effectively framed the educational journey ahead, highlighting major clinical challenges and best practices. Emphasis was placed on interdisciplinary collaboration and continuous learning as essential drivers for improving patient outcomes in complex surgical and ICU settings.

Agenda

- Presentation of the Learning Pathway
- Brief Introduction to the Topic / Taxonomy
- Elective High-Risk and Emergency Surgeries Requiring ICU Admission
- Optimising ICU Stay
- Discharge to Ward and Beyond



Key Takeaways

- ✓ Introduction to a structured educational pathway addressing perioperative and critical care essentials.
- ✓ Clear overview of taxonomy and foundational concepts in ICU and surgical patient management.
- ✓ Focus on three core themes:
 - Management of high-risk and emergency surgeries requiring ICU admission.
 - Strategies to optimise ICU stay for better patient outcomes.
 - Safe and efficient discharge planning from ICU to wards and post-ICU care.
- ✓ Closing remarks emphasize future learning opportunities and the importance of ongoing collaboration.

Overall Conclusion

The kick-off webinar successfully launched the learning pathway by outlining its core themes and setting a clear educational trajectory in perioperative and critical care. It provided participants with a solid conceptual foundation, highlighted key clinical priorities, and emphasized the vital role of interdisciplinary collaboration. This opening session laid the foundation for deeper engagement through the subsequent virtual sessions, fellowships, and practical training components.

Live Virtual Session 1:**Management of
Elective High-Risk
and Emergency
Surgeries Requiring
ICU Admission**

Date: April 30, 2024
Time: 14:00–17:30 CEST

**Overview**

The first live virtual session focused on the management of elective high-risk and emergency surgeries requiring ICU admission. Leading experts in anaesthesiology, intensive care, and perioperative medicine shared the latest evidence-based practices aimed at improving patient outcomes through effective risk assessment, prehabilitation, and intraoperative optimisation.

The session emphasized the critical need for a proactive, multidisciplinary approach to high-risk surgical care. By integrating thorough risk stratification, appropriate surgical timing, and targeted perioperative interventions, clinicians can enhance patient outcomes while optimising ICU resource use. The insights shared by the faculty laid a strong foundation for ongoing innovation in perioperative and critical care pathways.

Agenda

- Elective High-Risk Patients and Emergency Surgeries: From Risk Stratification to ICU Admission
- Timing of Surgery & Preoperative Optimisation
- Prehabilitation Programme
- Intraoperative Optimisation
- Depth of Anaesthesia Monitoring
- Perioperative Fluid Management
- Intraoperative Hemodynamic Management



Key Takeaways

- ✓ **Early and Structured Risk Stratification is Essential:**
Using validated tools helps guide ICU admission planning and perioperative management.
- ✓ **Timing of Surgery Can Be Optimised:**
Strategic delays, even in cancer surgery, can allow for patient optimisation without compromising outcomes.
- ✓ **Prehabilitation Improves Patient Resilience:**
Multimodal programmes enhance physical and mental readiness, reduce complication rates, and shorten recovery times.
- ✓ **Intraoperative Monitoring Improves Safety:**
Targeted monitoring of anaesthesia depth, fluid status, and haemodynamics ensures better intraoperative control and fewer adverse events.
- ✓ **Interdisciplinary Collaboration is Crucial:**
Seamless coordination among anaesthesiologists, surgeons, intensivists, and rehab teams ensures continuity of care.
- ✓ **Patient-Centred Approaches Enhance Outcomes:**
Tailored interventions and shared decision-making align care with individual needs and preferences.

Live Virtual Session 2:

Optimising ICU Stay and Outcomes Through Streamlining Patient Flow and Complication Prevention

Date: May 28, 2024

Time: 14:00–17:30 CEST

Overview

Building on the high-risk perioperative theme addressed in the live virtual session 1, session 2 concentrated on the early intensive care phase.

Key topics included sedation strategies and depth monitoring, cerebral perfusion and oxygenation (including Near-Infrared Spectroscopy [NIRS]), delirium prevention and detection, and the integration of wearables and remote monitoring into postoperative surveillance.

Case-based discussions provided practical insights into workflows for escalation to Rapid Response Teams (RRT), as well as effective handovers between the operating theatre, Post-Anesthesia Care Unit (PACU), and ICU.

Live Virtual Session 2:

Optimising ICU Stay and Outcomes Through Streamlining Patient Flow and Complication Prevention

Agenda

-  ICU Admission Optimisation
-  Ward Transfer with Remote Monitoring & Wearables
-  ICU Patient Outcome Optimisation
-  Sedation Management
-  Cerebral Perfusion Optimisation
-  Total Oxygen Delivery & Consumption



Key Takeaways

- ✓ **ICU Admission and Discharge Should Be Goal-Oriented:**
Clearly defined objectives and proactive discharge planning help reduce ICU Length of Stay (LOS) and readmission risks.
- ✓ **Remote Monitoring Can Enable Early Ward Transfers:**
Wearables and continuous monitoring tools are viable options for selected surgical patients, allowing safer transitions from ICU to general wards.
- ✓ **Optimising Oxygen Delivery Is Multifaceted:**
Careful monitoring of sedation, cerebral perfusion, and total oxygen consumption is critical to reduce ICU-related complications.
- ✓ **Delirium Prevention Requires Proactive Strategies:**
Avoiding deep sedation, promoting day-night orientation, and early mobilization are key interventions.
- ✓ **Technology and Human Factors Must Coexist:**
While wearables and remote monitoring enhance care, clinician oversight and judgment remain irreplaceable.
- ✓ **Interdisciplinary Collaboration Enhances ICU Efficiency:**
A team-based approach involving intensivists, nurses, and surgeons ensures coordinated, patient-centred ICU care.

Live Virtual Session 3

Safe and Efficient Discharge to Ward and Beyond






Date: June 25, 2024**Time:** 14:00–17:45 CEST

Overview

The third session in the series focused on strategies for safe and efficient discharge from ICU to the ward and beyond. It addressed key challenges such as hospital capacity pressures, post-critical illness recovery, medication management, and the integration of virtual ward care models.

A multidisciplinary panel of experts emphasized the importance of coordinated care and the role of data, technology, and teamwork in optimising patient transitions. The session highlighted how innovative solutions like virtual wards can support healthcare systems in managing demand while maintaining patient safety and continuity of care.

Agenda

-  Hospital Capacity Pressure, Risks and Patient Safety
-  Cambridge University Hospitals Virtual Ward Design and Function: Whole Hospital Approach
-  Virtual Ward and Patient Care from the Nurses' Perspective
-  Medicines Management in Virtual Care
-  Virtual Care and the Surgical Patient: Transoral Robotic Surgery
-  Using Data to Identify Potential Surgical Pathways
-  Post-operative Hypotension
-  Virtual Care after Critical Illness

Key Takeaways

- ✓ **Hospital Capacity Management is Critical:**
Proactively managing capacity and flow reduces risks and improves patient safety.
- ✓ **Virtual Wards Enhance Continuity of Care:**
Integrating remote monitoring and virtual care models supports safe transition from ICU and wards.
- ✓ **Nursing Perspectives are Vital in Virtual Care:**
Nurses play a key role in managing patient care remotely, including medication safety.
- ✓ **Data-Driven Surgical Pathways Enable Efficiency:**
Analytics help identify optimal pathways for surgical patients to reduce complications and length of stay.
- ✓ **Post-Operative Hypotension Requires Vigilance:**
Early recognition and management reduce adverse outcomes.
- ✓ **Post-Critical Illness Care Benefits from Virtual Platforms:**
Virtual follow-up facilitates rehabilitation and monitoring, supporting better recovery.
- ✓ **Interdisciplinary Teamwork Drives Success:**
Collaboration between clinicians, nurses, and data specialists is essential for seamless patient transitions.



Participant Satisfaction and Feedback for All Sessions

Across all three sessions, participants reported **high satisfaction, strong alignment with professional needs, and clear potential** for application in their clinical settings.

- **Overall Impression**

64–80% rated the sessions as excellent.

- **Educational Goals**

74–77% confirmed that learning objectives were fully met.

- **Usefulness**

60–100% found the content directly relevant to their professional activity.

- **Implementation Intent**

44–64% planned to apply the learning in practice.

Participants valued the **expert-led discussions, practical focus on perioperative and critical care pathways, and multidisciplinary perspectives** from anaesthesia, intensive care, nursing, and allied health.

Suggestions for future editions included more **case-based discussions** and **additional interactive** elements to encourage deeper engagement.

Overall Conclusions of the Live Virtual Sessions Series



The 2024 live virtual session series provided an evidence-based overview of the perioperative and critical care continuum, from high-risk surgical decision-making to ICU optimization and post-discharge recovery.

Experts highlighted the importance of early risk stratification, multidisciplinary collaboration, and advanced monitoring. Discussions emphasized how prehabilitation, intraoperative optimization, goal-directed ICU care, and delirium prevention improve outcomes and safety.

The series also showcased innovations such as remote monitoring, virtual wards, and data-driven approaches to extend continuity of care and ease hospital pressures.

Together, the sessions advocated for a shift toward proactive, integrated care models, reinforcing that better outcomes depend on aligning teams, technology, and processes around patient needs.

They also laid the foundation for the remaining learning components of the pathway such as fellowships, face to face courses, and workshops to translate theoretical insights into practice and strengthen cross-border collaboration.

Fellowship Programme

Date: Sept 2024–Feb 2025



A total of 25 fellowships were conducted across several leading European centres, providing participants with practical, hands-on exposure to the management of surgical patients from prehabilitation through surgery, ICU care, and discharge to ward or home.

This initiative fostered professional development and aimed to improve patient outcomes by combining clinical practice with innovation in patient care pathways.

Fellowship Programme

Vall d'Hebron Hospital & Hospital Clinic, Barcelona, Spain

Date:

September 30 – October 4, 2024

Overview

This intensive fellowship provided a comprehensive programme encompassing advanced clinical care in critical care, anaesthesia, perioperative management, and organ transplantation.

Combining lectures, clinical visits, workshops, and practical sessions led by expert faculty, it addressed complex surgical patient pathways and postoperative care challenges.

Highly valued by participants, the fellowship delivered through the collaboration of two leading hospitals in Barcelona successfully blended clinical practice with innovative care approaches.

Continued support was recommended to further develop critical care expertise and improve patient outcomes.

Highlights:

- Visits to Adult ICU, Burn Patient Unit, Surgical ICU, Hepatic ICU, Respiratory ICU, and specialized transplant rounds.
- Workshops on sedation, analgesia, diaphragmatic ultrasound, hemoperfusion, and veno-venous ECMO techniques.
- Focus on postoperative delirium, intensive care for complex patients (cirrhotic, cancer), and damage control resuscitation in polytrauma.
- Integration of legal aspects and data security in anaesthesiology and ICU practices.



Fellowship Programme

Hospital Clínico Universitario Valencia & Hospital Universitari i Politècnic La Fe, Spain

Date:

October 21 – 25, 2024



Overview

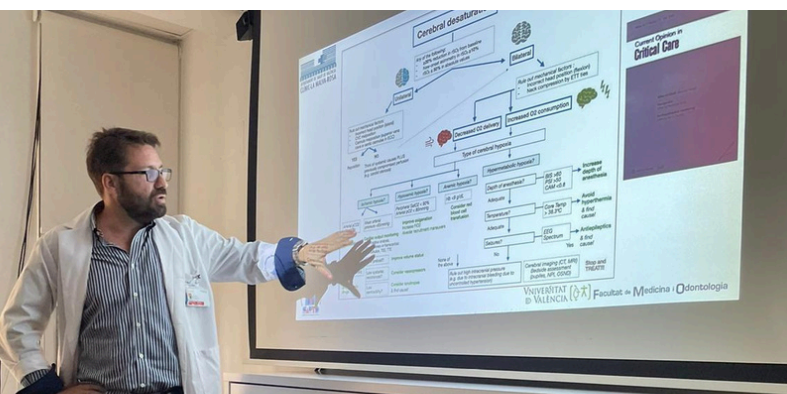
This intensive week-long programme combined presentations, clinical tours, and interactive sessions focused on perioperative monitoring and critical care management.

Delivered through a collaborative effort between two leading Spanish hospitals, it provided broad exposure to neurocritical care, cardiac surgery, emergency procedures, and perioperative remote monitoring technologies.

By effectively integrating theoretical knowledge with practical experience, the fellowship enhanced participants' expertise in advanced perioperative care. The partnership between the two centres enriched clinical diversity and training opportunities, preparing fellows to excel in complex perioperative environments.

Highlights:

- Comprehensive tours of surgical ICUs, neurosurgery, cardiac surgery, thoracic surgery, emergency operating rooms, and interventional radiology.
- Presentations on cutting-edge non-invasive monitoring technologies such as brain oximetry and Sedline.
- Emphasis on perioperative remote monitoring, individualized patient monitoring strategies, and multidisciplinary clinical pathways.

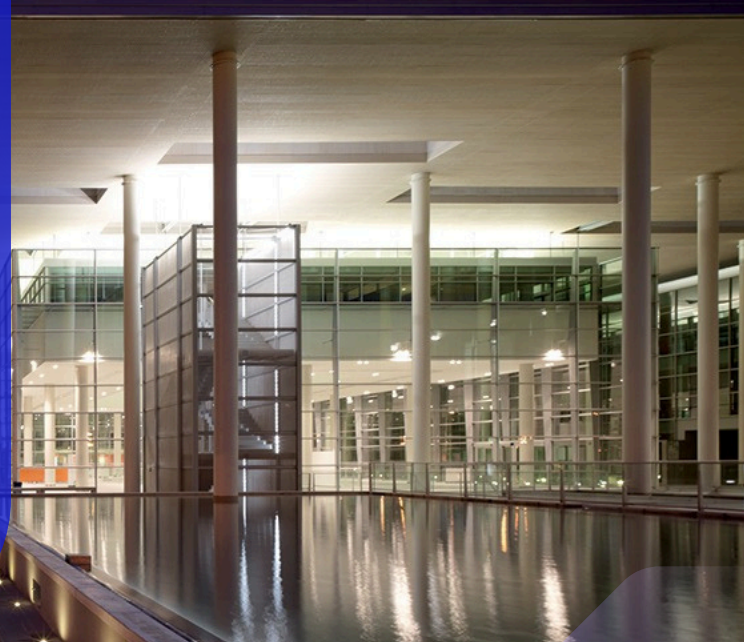


Fellowship Programme

Careggi Hospital, Florence, Italy

Date:

February 3 – 7, 2025



Overview

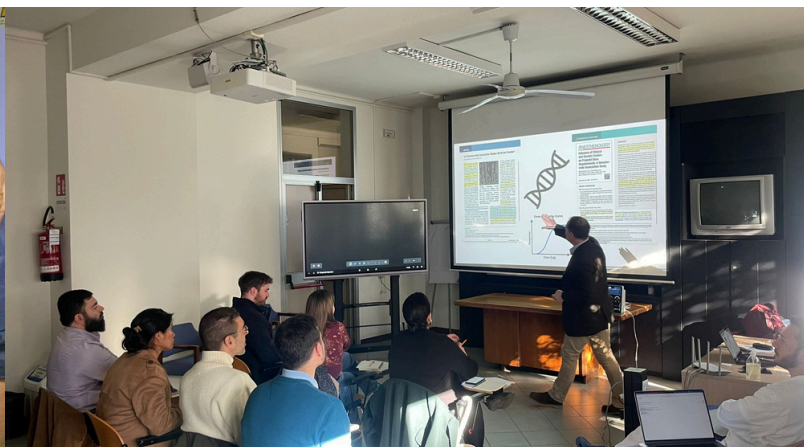
This five-day intensive programme centred on perioperative care, anaesthesia, critical care, and vascular access, combining lectures, hands-on workshops, hospital tours, and group activities.

Designed to enhance clinical skills and patient outcomes, it emphasized multidisciplinary collaboration and mentorship.

The fellowship effectively integrated theoretical learning with practical training, equipping participants to implement advanced perioperative care strategies while fostering professional growth and clinical excellence in anaesthesia and critical care.

Highlights:

- Training in prehabilitation, vascular access, and enhanced recovery protocols.
- Workshops covering patient blood management, opioid-sparing strategies, fluid therapy, and point-of-care ultrasound.
- Exposure to ICU management, anaesthesia protocols, endoscopy suites, and prehabilitation centres.
- Discussions addressing workforce challenges such as anaesthesiologist shortages and the role of nursing in perioperative care.



Fellowship Programme

Cambridge University Hospitals, Cambridge, United Kingdom

Date:
February 3 – 7, 2025



Overview

This programme introduced Virtual Wards (VW) and community healthcare management through a blend of theoretical instruction and practical experience.

Participants gained knowledge in remote monitoring, clinical governance, ward rounds, and multidisciplinary collaboration to optimise patient care in both virtual and intensive care settings.

By focusing on teamwork, governance, and technology integration, the fellowship equipped healthcare professionals with the skills needed to effectively manage patients using innovative remote and community care models, preparing them for the evolving demands of multidisciplinary healthcare environments.

Highlights:

- In-depth sessions on VW operational models, remote patient monitoring, and electronic patient records governance.
- Practical exposure to ward rounds in High Dependency Units and ICU microbiology.
- Training on oxygen therapy, intravenous antibiotics administration, antimicrobial stewardship, and multidisciplinary team roles.
- Emphasis on safety during home visits and the role of allied health professionals in community care.



Participant Satisfaction and Feedback

The fellowships received **outstanding evaluations**, with 100% rating them *useful to extremely useful* and 95% reporting a **significant positive impact** on their clinical practice.



Participants praised the balanced mix of theory and hands-on training, exposure to diverse hospital workflows, and exploration of innovative topics such as multimodal prehabilitation, remote patient monitoring, and virtual ward management.

The collaborative learning environment and opportunities for direct interaction with mentors were considered key strengths.

Recommendations for future fellowships included extending the duration to 10–14 days for deeper immersion, adding more practical workshops and patient case discussions, expanding hands-on virtual ward management, dedicating mornings to theoretical content, and increasing coverage of nutrition and pharmacology in perioperative care.

Participant Voice

“This fellowship broadened my perspective on patient rehabilitation pathways and virtual wards, inspiring similar initiatives in my clinic.”

“The multidisciplinary approach and technology integration will influence my clinical practice profoundly.”

“Valuable insights on neuro-monitoring, vascular access, and multimodal prehabilitation are already shaping my daily practice.”

“Networking with international peers and exposure to diverse healthcare models was invaluable.”

Overall Fellowship Conclusion



The fellowship programmes across these leading European centres provided a rich blend of theoretical knowledge and practical experience in perioperative and critical care medicine.

By emphasizing multidisciplinary collaboration, cutting-edge technologies, and patient-centred care, the fellowships significantly advanced participants' clinical skills and understanding.

The positive feedback highlights the importance of expanding these programmes, particularly by increasing duration and practical exposure, to further develop professional competencies and improve patient outcomes across Europe's healthcare systems.

Face-to-Face Workshop

Location: ESICM Annual Congress, Barcelona

Date: October 8, 2024

Format: Interactive Clinical Case

Overview

This face-to-face workshop featured an educational video case designed with the support of three European hospitals (Cambridge University Hospitals, Cambridge, United Kingdom, Careggi Hospital, Florence, Italy, and Hospital Clinic, Barcelona, Spain) to illustrate a complete patient journey through a modern perioperative care model.

The video systematically showcased clinical decision-making, multidisciplinary collaboration, and the integration of virtual ward technologies across three key phases:

- 🕒 **Prehabilitation & Surgery**
- 🕒 **Postoperative Follow-Up & ICU Care**
- 🕒 **Remote Patient Monitoring (Virtual Ward)**

As part of the *Transforming Patient Pathway, Workflow & Outcome learning pathway*, the session served as an interactive, case-based training and discussion tool to simulate real-world challenges and innovations in perioperative and post-ICU care.

Face-to-Face Workshop

Prehabilitation & Surgery

Phase I



Objective

Introduce early intervention strategies for high-risk surgical patients through personalized, multidisciplinary prehabilitation.



Key Segments :

Introduction to case objectives and educational goals.

Patient profile and surgical risk context.

Surgical risk screening methods.

Baseline assessments and personalized prehabilitation plans.

Day-of-surgery safety and coordination workflow.

Interactive questions to stimulate reflection on local system applicability.



Face-to-Face Workshop

Postoperative
Follow-Up & ICU Care

Phase II



Objective

Demonstrate the coordinated response to post-surgical deterioration and ICU admission using RRT systems and critical care protocols.



Key Segments :

Ward-RRT coordination and bedside care strategies.

Transition planning and ICU admission workflows.

Overview of ICU protocols within the first 48 hours.

Learning points related to care escalation from the ward to the ICU and monitoring

Interactive questions to reflect on escalation pathways in different clinical settings.



Face-to-Face Workshop

Remote Patient Monitoring (Virtual Ward)

Phase III



Objective

Highlight continuity of care through virtual ward operations, remote interventions, and multidisciplinary follow-up.



Key Segments :

Introduction to virtual wards and their clinical value.

Hospital discharge protocols and planning.

Virtual multidisciplinary team (MDT) collaboration:

- Interpretation of biomarkers.
- Remote pharmacist consultations for pain management.

Final discharge planning and follow-up calls.

Embedded interactive questions to prompt system-level thinking.





Purpose & Educational Application

This video case served as a high-impact, advanced training tool for multidisciplinary teams.

It enabled participants to visualize a coordinated, patient-centred care pathway spanning hospital and home settings.

Suitable for use in classrooms, workshops, and international training events, the tool supported practical discussions around implementation, teamwork, and healthcare innovation.

Participant Satisfaction & Feedback

The workshop was extremely well received, with positive feedback on both content and delivery.

Key findings:

95%

Overall Quality:

Over 95% rated the workshop as good or excellent

90%

Organisation:

Over 90% rated event organization as good or excellent

90%

Professional Usefulness:

Over 90% found it highly relevant to their clinical practice

95%

Educational Value:

Over 95% stated that the workshop met their learning expectations

90%

Evidence-Based Content:

Over 90% recognized the content as scientifically valid and balanced

70%

Engagement:

Over 70% felt the session allowed adequate time for questions, discussion, and interaction

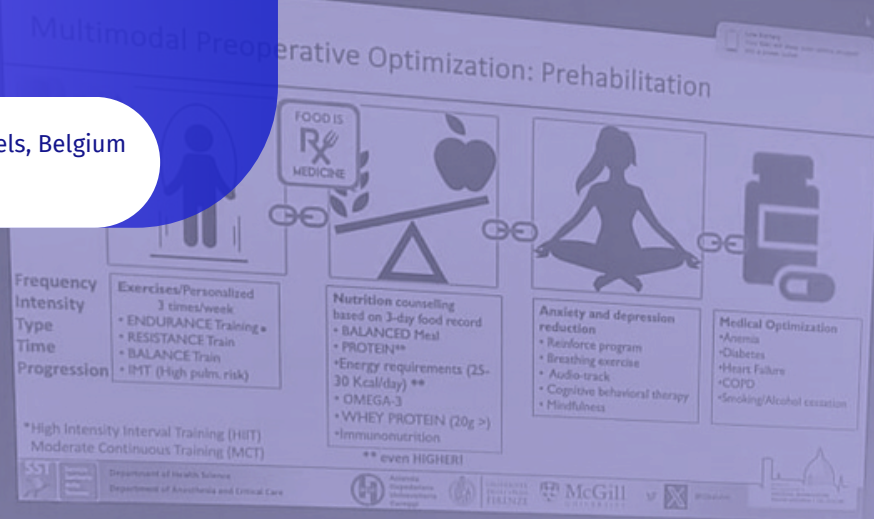
Conclusion



The workshop successfully demonstrated how integrated, multidisciplinary care pathways supported by technology and innovation can transform perioperative and critical care. Through high participant engagement and strong satisfaction scores, the session confirmed the value of case-based learning as a platform for collaborative training and system improvement in critical care delivery.

Follow-Up Face-to-Face Course

Location: ESICM Training Centre, Brussels, Belgium
Date: April 8–9, 2025



Overview

This two-day interactive course brought together international healthcare professionals to redesign and optimise patient care pathways, spanning perioperative care, ICU optimisation, and virtual ward integration.

Through expert-led discussions, structured small-group rotations, and hands-on design challenges, participants collaborated to reimagine hospital-based models that extend into the home.

The programme goal was to equip participants with actionable frameworks and management tools for implementation within their own institutions.

Follow-Up Face-to-Face Course

Session Agenda & Content Summary



Day 1

Date : Tuesday, April 8

Opening & Keynote:

Welcome, course introduction, and discussion of global trends shaping patient pathway innovation.

Individual Activity:

Video case review to identify key process improvement areas.

Small Group Sessions – Rotation I:

- Prehabilitation & Perioperative Care
- ICU Optimisation & RRT Integration
- Virtual Ward & Hospital-at-Home Models

Group Project Work:

Teams designed new clinical services based on assigned topics, presenting initial implementation strategies.

Day 2

Date : Wednesday, April 9

Small Group Sessions – Rotations II & III:

Participants engaged with all three thematic areas, focusing on integration strategies and system innovation.

Final Project Work & Presentations:

Groups refined proposals and delivered practical, localized solutions, receiving faculty feedback.

Follow-Up Face-to-Face Course

Participant Satisfaction & Feedback



Interactive Learning

Participants valued the hands-on nature of the course, particularly the small-group discussions, design challenges, and case-based learning in prehabilitation, RRTs, and virtual wards. Some noted that the final presentations did not always reflect the full depth of earlier work, suggesting that a clearer structure and expectations could strengthen outcomes.



Faculty Engagement

Accessible and supportive faculty mentorship was highlighted as a major strength. Participants welcomed the opportunity for real-time guidance but called for more critical, constructive feedback to help refine project ideas.



Networking & Collaboration

The in-person, international format fostered cross-border collaboration and rich sharing of healthcare perspectives. Suggestions included more diverse group composition to encourage broader viewpoints.



Programme Design & Duration

The programme's structure and organization were praised. However, the two-day timeframe was considered too short for deeper topic exploration and extended networking.



Inclusivity & Representation

Exposure to varied healthcare models broadened systems-level thinking. A few participants noted occasional language barriers and requested greater nursing-specific input to ensure balanced representation.

Innovative Elements & Impact on Practice



Hands-On Design Challenges

Role-play as hospital leaders allowed participants to design and stress-test clinical service models. This strengthened strategic thinking and directly inspired real-world initiatives, such as launching or enhancing RRTs and prehabilitation programmes.



Creation of Work Protocols

Practical workshops produced tangible clinical pathways. Many participants plan to apply these to early ICU discharge processes and integrate telemonitoring into follow-up care.



Forward-Looking Care Models

Virtual wards and telemedicine concepts were seen as progressive and adaptable. Some participants have already started implementing early versions in their institutions, often taking incremental "baby steps" toward change.



Leadership Development

Collaborative exercises enhanced leadership and managerial skills, equipping participants to advocate for pathway redesign and lead multidisciplinary improvement projects.

Follow-Up Face-to-Face Course

Expert Recommendations – From Rationale to Action

Why These Recommendations Matter

High-risk surgical patients, often older, frail, and multimorbid, face significant complication risks. ICU resource constraints, practice variability, and evolving care demands call for integrated, consensus-based strategies that span the full patient journey.

01. Prehabilitation & Perioperative Care

- Target major complications identified in large studies (e.g., VISION study).
- Focus on preoperative optimisation, enhanced intraoperative monitoring, and balanced anaesthesia.
- Apply intraoperative scoring tools (e.g., Surgical APGAR) to guide postoperative planning.
- Integrate into hospital operational strategies for sustainability.

02. ICU Optimisation & Rapid Response Teams

- Implement structured evaluation protocols for deteriorating patients.
- Integrate diagnostics and antimicrobial stewardship into workflows.
- Adapt RRT development to available resources while embedding them in care pathways.
- Use audits and data feedback to support continuous improvement.

03. Virtual Wards & Hospital-at-Home Models

- Enable safe early discharge with structured home monitoring.
- Address ongoing risks such as pain, infection, and cardiac events.
- Tailor models to institutional context, considering barriers and facilitators.
- Leverage telemedicine for continuity of care and value-based delivery.

04. Multiprofessional Collaboration

- Engage intensivists, anaesthesiologists, clinical pharmacists and nurses as equal partners.
- Combine complementary expertise for holistic, patient-centred solutions.

05. Cross-Cutting Strategies for Sustainability

- Align programmes with patient-centred “five pillars” of care.
- Train participants to develop business cases for institutional change.
- Plan for scalability, especially in low- and middle-income countries (LMICs).
- Prepare for future healthcare trends: AI, wearables, predictive analytics, patient co-management, workforce task-sharing, and real-world evidence integration.

06. Moving from Guidance to Implementation

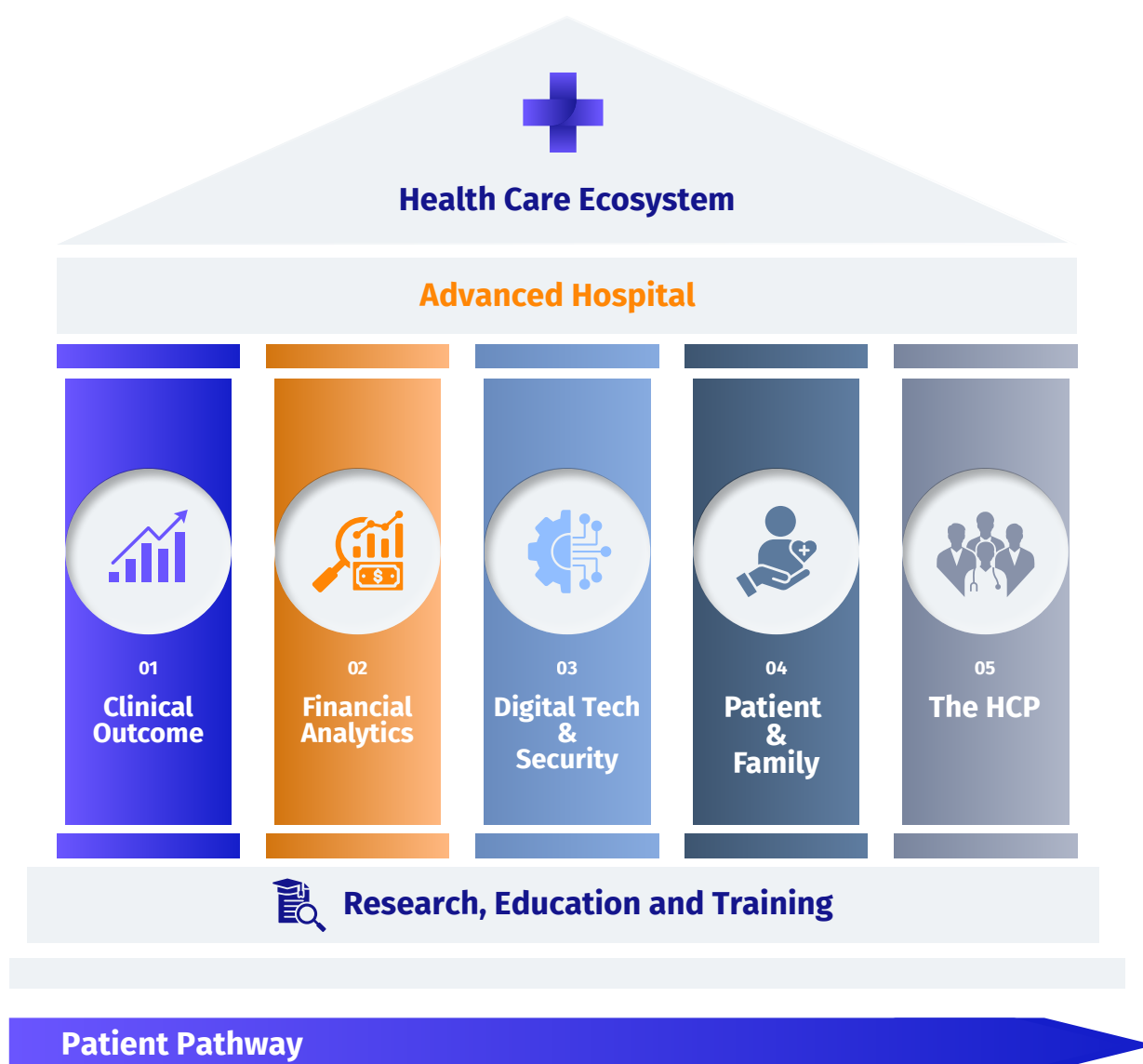
- Identify barriers and enablers of innovation.
- Strengthen digital literacy and change management skills among clinicians.
- Adapt strategies to diverse healthcare settings.
- Actively engage patients, families, and interprofessional teams in redesign efforts.

Conclusion



This course successfully combined theory, practice, and innovation to equip participants with strategies for improving perioperative and critical care pathways. The blend of international perspectives, multidisciplinary collaboration, and real-world problem-solving generated not only fresh ideas but also concrete plans for immediate implementation, positioning participants to lead meaningful change in their institutions.

5 Pillars of Care



Programme Value and Future Opportunities



Programme Value

The programme delivered a uniquely comprehensive, structured journey through the perioperative pathway, bringing together:

- Evidence-based strategies from global experts.
- Real-time collaboration between ICU, surgical, anaesthesia, clinical pharmacists and nursing professionals.
- Tools for clinical redesign, digital innovation, and interdisciplinary coordination.

Programme Value and Future Opportunities

Key Learning Outcomes & Programme Benefits

Key Learning Outcomes

Participants gained:

- ✓ Deep understanding of surgical risk assessment and prehabilitation.
- ✓ Practical strategies for ICU flow, sedation, hemodynamics, and delirium reduction.
- ✓ Insight into virtual ward design and continuity of care.
- ✓ Leadership skills for system transformation and quality improvement.

Programme Benefits

Participants gained:

- 🟡 **Actionable Tools and Frameworks** for implementing perioperative, ICU, and virtual ward innovations.
- 🟡 **Cross-Border Knowledge Exchange**, exposing them to varied hospital models and approaches.
- 🟡 **Enhanced Leadership and Strategic Planning Skills** to drive institutional change.
- 🟡 **Stronger Professional Networks** for ongoing collaboration and peer support.
- 🟡 **Confidence in Innovation**, with many feeling empowered to take incremental steps toward systemic change.
- 🟡 **Ongoing Access to Learning Materials**, allowing all 383 registrants to review content and integrate knowledge at their own pace.



Programme Value and Future Opportunities

Future Directions

While early results confirm clinical and educational impact, there is a clear need to further expand and consolidate evidence, scale best practices, and drive systemic transformation across surgical, medical, and emergency settings.



Research, Education, and Collaboration

- Advance longitudinal research on outcomes, workflows, and pathway redesign across surgical, medical, and emergency settings.
- Strengthen international collaboration to harmonize standards of care and promote innovation.
- Expand education to foster professional development and institutional readiness.



Economic and Operational Impact

- Assess financial and economic implications of integrated patient pathways
- Measure return on investment (ROI) and impact on hospital resource utilization and scalability in both high-resource and LMIC contexts.



Digital and Technical Infrastructure, Data Governance

- Evaluate the digital and technical infrastructure, interoperability, and cybersecurity, and resilience of digital platforms.
- Safeguard data privacy and regulatory compliance to secure long-term trust.



Healthcare Workforce Adaptation and Well-being

- Support workforce adaptation through targeted training in digital literacy, task-sharing, and multidisciplinary coordination.
- Monitor and address well-being and resilience.



Patient and Family Engagement

- Strengthen adherence and trust in digital and hybrid care models.
- Address satisfaction, equity, and access across surgical, medical, and emergency settings.

Programme Value and Future Opportunities

Programme Conclusion

Programme Conclusion



The "Transforming Patient Pathway, Workflow & Outcome" programme marks a significant step forward in reshaping perioperative and critical care for high-risk surgical patients and beyond. Through an integrated approach that combines education, clinical immersion, innovation, and collaboration, it has enabled healthcare professionals to rethink patient pathways from prehabilitation through ICU care to post-discharge recovery.

The programme has shown that strategic redesign of care models, supported by multidisciplinary collaboration, digital integration, and system-level thinking, can improve clinical outcomes and healthcare delivery. Participant engagement, feedback, and early implementation efforts confirm the programme's relevance and real-world impact.

Yet this is only the beginning. To sustain and scale its impact, the programme must evolve from a pioneering initiative into a sustainable, evidence-driven movement. Building on its strong foundation, the next phase should expand research, evaluate clinical and economic outcomes, strengthen technical and digital infrastructure, and support healthcare workforce adaptation. Equally important is the need to deepen patient and family engagement to ensure trust, adherence, and equity in emerging care models.

As a direct spin-off of this learning pathway, consensus-based recommendations have been proposed, focusing on innovative organizational models and integrated care pathways for critically ill patients. This work will provide further guidance and strengthen the evidence base for implementing sustainable change across healthcare systems.

By pursuing these priorities through continued collaboration and innovation, the programme has the potential to serve as a blueprint for a more resilient, efficient, and patient-centred healthcare ecosystem across Europe and beyond.



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¹ Kick-off Webinar

² Live Virtual Sessions

³ Fellowships

⁴ Video Case Production and Face-to-Face Workshop

⁵ Follow-Up Face-to-Face Course

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