



# The Society Of Clinical Perfusion Scientists

## Report: UK Perfusion Cannula Supply Crisis (December 2025 – June 2026)

*Supply Chain, Patient Safety and Governance Review*  
**REPORT**

Prepared by Jacqui Simmons | Published: June 2026





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## Authors

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**Purpose of report:** This report provides a structured review of the UK perfusion cannula supply disruption between December 2025 and June 2026, with emphasis on patient safety, national escalation, procurement resilience and the coordinating role undertaken by SCPS. It draws on contemporaneous correspondence between SCPS, NHSSC, MHRA, NSDR and supplier representatives, including updates shared by Rebecca Friar, Melissa Morton and Alexander McLaren during April–June 2026.

## Chair's Personal Message

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As Chair of Society of Clinical Perfusion Scientists of Great Britain and Ireland (SCPS), I want to be clear that the central concern throughout this period has been patient safety. Cannula supply may appear, at first glance, to be a procurement issue; however, for perfusion teams and cardiac surgical services it is a direct clinical safety issue. Without the right cannula available at the right time, teams are placed under avoidable pressure and the ability to deliver safe, timely cardiac surgery can be compromised.

This report reflects the leadership role that SCPS has taken on behalf of the profession. We have listened to services, escalated concerns, worked with external stakeholders and used our collective professional voice to ensure that the realities facing perfusion teams were understood. I am grateful to every colleague who contributed intelligence, shared concerns, supported mutual aid and remained focused on safe patient care during a period of uncertainty and pressure.

## Executive Summary

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Between December 2025 and June 2026, UK cardiac surgery services experienced a major disruption to the supply of perfusion cannula. Whilst supply-related patient safety incidents are not wholly unprecedented within cardiac surgery, this episode was unique in its scale, duration and the degree of reliance on a single high-volume supplier for multiple critical product lines, including arterial, venous and cardioplegia cannula.

The disruption evolved from a supply issue into a system-wide patient safety risk, with some centres reporting critically low stock levels and the potential for cancellation of cardiac surgery procedures. The crisis exposed vulnerabilities in national procurement systems, supplier dependency, regulatory pathways and the absence of real-time visibility of national stock holdings.

The experience also invites comparison with previous national patient safety challenges in cardiac surgery, including the heater-cooler and *Mycobacterium chimaera* outbreak. Although the nature of the risk was different, the learning is similar: specialist services require early recognition of system-wide risk, clear professional leadership, coordinated communication, transparent escalation routes and sustained collaboration between clinical teams, national bodies, regulators and suppliers.



From the outset, SCPS (SCPS) recognised that this was not simply a procurement inconvenience, but a direct patient safety and service continuity risk. This was a collaborative leadership response between me as Chair, Aswani Parmar as Vice Chair and Rebecca Friar as Safety Committee Lead. Rebecca's role was central to the response: she led the Safety Committee coordination, collated risk intelligence from services, helped structure the national safety narrative and translated frontline perfusion concerns into clear escalation for national partners.

This report also recognises that a considerable proportion of the national response took place through confidential, behind-the-scenes professional dialogue. This included careful liaison with manufacturers, procurement teams, regulators, clinical leaders and national stakeholders. Such work was essential to maintain trust, avoid unnecessary alarm, protect commercially sensitive information and enable honest discussion about risk, supply constraints and practical solutions.

At the time of writing, supply has not recovered. The release of the Field Safety Notice (FSN) is likely to place further pressure on an already fragile position, with unclear projections for resolution and continued uncertainty for services attempting to plan safe cardiac surgical activity.

The SCPS perfusion community response demonstrates the value of professional networks during periods of system stress. Discussion across Chief Perfusionists, Safety Committee members, suppliers and national bodies created a shared understanding of the operational reality in theatres and helped translate local concerns into national intelligence.

## Preliminary Evidence Base and Source Material

The findings in this report are informed by internal SCPS correspondence, supplier updates, NHS Supply Chain (NHSSC) communications, MHRA liaison, and feedback from Chief Perfusionists. Key source material includes the April 2026 correspondence regarding Medtronic Gundry™ and DLP™ Retrograde Coronary Sinus Perfusion cannula, NHSSC updates on market share, manual allocation and supplier constraints, SCPS safety communications and stock surveys, and June 2026 escalation discussions regarding national coordination, live inventory and the need for formalised resilience pathways.

## Preliminary Chronology of Key Events

Period	Key development	Significance
December 2025	Initial manufacturing constraints affecting Medtronic cannula supply became apparent.	Early indication of vulnerability caused by high market dependency and limited alternative supply.
April 2026	FSN activity and correspondence regarding Medtronic Gundry™ and DLP™ Retrograde Coronary Sinus Perfusion cannula highlighted potential interruption of supply.	Regulatory and supplier issues moved from isolated product concern to wider patient safety risk.
Late April–May 2026	NHSSC, MHRA and SCPS exchanged updates on Medtronic market share, manual allocation, MDR transition, alternative suppliers and derogation routes.	Confirmed the need for coordinated national oversight and clearer escalation pathways.



Period	Key development	Significance
May 2026	Chief Perfusionist feedback indicated low trust-level stock, continuing venous cannula constraints, reliance on mutual aid and concern regarding case cancellations.	Demonstrated that national-level supply signals did not always reflect the operational reality in departments.
June 2026	Discussions focused on live inventory, formal national coordination, strategic stockholding and inclusion of NSDR and Department of Health stakeholders.	Shifted emphasis from immediate mitigation to long-term resilience, governance and supply assurance.

## Abbreviations

<b>SCPS</b>	Society of Clinical Perfusion Scientists of Great Britain and Ireland
<b>CCPS</b>	College of Clinical Perfusion Scientists of Great Britain and Ireland
<b>ECMO</b>	Extracorporeal Membrane Oxygenation
<b>FSN</b>	Field Safety Notice
<b>IFU</b>	Instructions For Use
<b>MDR</b>	Medical Device Regulation
<b>MHRA</b>	Medicines and Healthcare products Regulatory Agency
<b>NHS</b>	National Health Service
<b>NHSE</b>	National Health Service England
<b>NHSSC</b>	National Health Service Supply Chain
<b>NSDR</b>	National Supply Disruption Response
<b>PSIRF</b>	Patient Safety Incident Response Framework

## 1. Background

Cannula supply disruption was first formally recognised in December 2025 when shortages affecting key Medtronic perfusion products became apparent. Early concerns centered on inconsistent deliveries, product backorders and a move towards manual allocation, but the issue rapidly escalated as multiple product lines became constrained at the same time. The disruption affected arterial cannula, venous cannula and cardioplegia cannula, all of which are essential to safe cardiopulmonary bypass practice.

By January 2026, services had begun reporting concerns regarding the ability to continue scheduled cardiac surgery due to insufficient cannula stock. The disruption subsequently persisted. NHSSC communications identified substantial disruption across the perfusion cannula portfolio, including approximately 178 affected product lines referenced in national incident communication material.

The crisis affected the majority of UK adult cardiac centres and had the potential to compromise both elective and emergency cardiac surgery activity.

The crisis was particularly serious because cannula are not interchangeable in the same way as routine consumables. Device choice is influenced by patient anatomy, procedure type, expected flow requirements, surgeon preference, institutional familiarity, and local governance approval.



Substitution therefore carried clinical, operational and governance implications. At this point only two cannula manufacturers existed on the NHSSC.

## 1.1 National and Global Supply Chain Context

The cannula shortage should be understood within a wider national and global context. Modern cardiac surgery depends on highly specialised medical device supply chains, many of which are concentrated around a limited number of manufacturers, manufacturing sites, regulatory approvals and distribution routes. When a single high-volume supplier experiences manufacturing, quality, regulatory or distribution disruption, the effect can rapidly become national or international rather than local.

This means that future prevention cannot rely solely on individual Trusts holding more stock. A more resilient system requires national demand visibility, horizon scanning, agreed contingency routes, supplier diversification, regulatory readiness, clinically informed substitution frameworks and a clear route for escalation when early warning signals emerge.

The lessons from the heater-cooler and *Mycobacterium chimaera* experience are relevant here. In both situations, the immediate technical issue exposed wider system questions about surveillance, escalation, communication, governance and the visibility of specialist perfusion-related risk. The cannula disruption reinforces the need to retain and apply that learning, rather than allowing hard-won experience from previous national incidents to be lost.

## 2. Factors Contributing to the Crisis

The disruption resulted from a combination of interacting factors:

### 2.1 Manufacturing Failure

Manufacturing difficulties affecting Medtronic cannula production represented the primary trigger for the crisis.

Subsequently, additional concerns emerged relating to specific product lines, including the 22Fr EOPA arterial cannula.

### 2.2 Excessive Market Dependency

The UK cardiac surgery community had become heavily dependent upon a small number of manufacturers for essential consumables. Furthermore, defaulting to 22Fr EOPA further exacerbated pressures on production in crisis times.

In many centres, Medtronic products represented the default or sole routinely stocked option, limiting resilience when shortages occurred.

### 2.3 Regulatory Constraints

Additional supply pressures arose from:

- MDR regulatory delays.
- Delays associated with supplier transitions (Edwards → EnableCV → Unipharm).
- Requirement for derogations for certain alternative products.
- Limited availability of approved alternative devices.
- Training and competency needs for surgeons.
- These factors significantly delayed introduction of replacement products.



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## 2.4 Procurement System Limitations

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A number of procurement challenges became apparent:

- Lack of visibility of national stock levels.
- Fragmented ordering arrangements.
- Delays in communication between suppliers and hospitals.
- NHSSC ordering pathways not consistently reaching suppliers.
- Absence of coordinated national inventory management.

The crisis highlighted that existing procurement systems were designed for stable supply environments rather than prolonged market disruption.

## 3. Patient Safety Impact

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The supply disruption constituted a significant patient safety issue.

Risks identified included:

- Cancellation or postponement of cardiac surgery.
- Delays to urgent and emergency procedures.
- Inappropriate use of alternative devices and/or IFU.
- Reduced ability to match cannula selection to patient anatomy.
- Increased clinical variation.
- Potential for suboptimal perfusion strategies.
- Increased cognitive workload for theatre teams.
- Increased emotional and stress loads for theatre teams.
- Increased risk associated with unfamiliar products.

In particular, the additional stress upon surgeons using unfamiliar products and perfusionists undertaking hours of unoptimised or potentially dangerous cardiopulmonary bypass should be noted.

Some centres reported operating with only one week's remaining stock.

The subsequent FSN affecting 22Fr EOPA cannula placed further pressure on already constrained services.

At the time of writing, this pressure remains ongoing. Supply has not recovered, and the FSN is likely to worsen an already constrained position. The absence of clear projections for resolution creates continuing patient safety, operational and governance uncertainty for services.

Importantly, despite prolonged disruption, widespread reports of patient harm were avoided due to significant mitigation undertaken locally and nationally.

The absence of widespread reported harm should not be interpreted as evidence that the risk was low. Rather, it reflects sustained mitigation by perfusion teams, surgeons, anaesthetists, procurement colleagues, suppliers and national stakeholders. The workload associated with avoidance of harm was significant and relied heavily on professional networks, local judgement and informal coordination.

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## 3.1 Patient Safety Incident Response Framework and Resilient Healthcare

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The Patient Safety Incident Response Framework (PSIRF) provides a helpful lens for interpreting this event. When applied to this cannula shortage, the central question becomes how the wider system can better anticipate, detect, respond to and recover from high-consequence consumable shortages.

The event also illustrates the need to move beyond a purely Safety-I approach towards a complementary Safety-II perspective, examining how safe care continued despite difficult conditions, recognising how perfusion teams, procurement colleagues, surgeons, anaesthetists, suppliers and national partners adapted successfully to preserve patient care. Safety-I remains important in identifying supply-chain failure points, regulatory constraints and escalation gaps.

From this perspective, the absence of widespread reported harm represents active resilience: monitoring stock, adapting clinical practice, sharing intelligence, using mutual aid, assessing alternative devices, escalating concerns and maintaining professional communication under pressure.

#### **4. SCPS National Leadership and Oversight**

The SCPS UK&I assumed a pivotal national leadership role throughout the crisis, with collaborative professional oversight from the Chair, Vice Chair and Safety Committee Lead, and with Rebecca Friar leading the Safety Committee response and risk collation work.

##### **4.1 Early Recognition and Communication**

Following recognition of the disruption, SCPS:

- Validated information directly with manufacturers.
- Drafted and circulated national communications.
- Provided regular updates to members.
- Shared intelligence regarding product availability.

This ensured services received consistent and timely information.

##### **4.2 National Coordination**

SCPS leadership, including the Chair, Vice Chair and Safety Committee Lead, coordinated activity across the UK by:

- Engaging directly with Medtronic, Edwards, EnableCV, Uniphar and LivaNova.
- Facilitating communication between centres.
- Encouraging mutual aid arrangements.
- Attempting national stock mapping exercises.
- Collating intelligence regarding shortages and alternatives.

SCPS effectively acted as the national coordinating body in the absence of a formal NHS mechanism.

###### **4.2.1 Boundary-Spanning and Joined-Up Working**

The SCPS response can be understood as a boundary-spanning function. SCPS operated across professional, organisational, commercial and regulatory boundaries, linking frontline perfusion services with suppliers, NHSSC, MHRA, NSDR and national policy stakeholders. This form of joined-up working was essential because no single organisation held all the information, authority or operational insight required to manage the crisis effectively.

Boundary spanning required diplomacy, credibility and confidentiality. Some discussions necessarily took place behind the scenes to allow honest assessment of supply risk, protect sensitive commercial information, prevent avoidable public anxiety and maintain constructive relationships with



manufacturers and national agencies. This confidential work should be recognised as part of the safety response, not as an absence of transparency. The distinction is important: confidential coordination enabled better public-facing communication, more accurate risk assessment and more effective escalation.

### 4.3 Escalation and Advocacy

As shortages persisted, SCPS escalated concerns to:

- NHSSC.
- MHRA.
- NSDR.
- Department of Health.
- NHSE stakeholders.

Survey data and intelligence gathered from centres informed these discussions.

SCPS ensured perfusion services maintained a national voice throughout the escalation process.

### 4.4 SCPS and Safety Committee Actions

SCPS undertook a coordinated programme of action to ensure that the cannula supply disruption was recognised, escalated and managed as a national patient safety risk. This work, as guided by SCPS' mission statement, to protect patients and support members worked to ensure that the clinical implications of supply disruption were understood at the highest appropriate levels. The SCPS and Safety Committee did not treat the issue solely as a procurement concern; it was escalated as a clinical safety, operational resilience and governance issue affecting the ability of cardiac surgical services to deliver safe care.

Key actions included:

- Escalating the risk to relevant national bodies, including NHS procurement colleagues, NHSSC, NSDR, MHRA and other governing or oversight organisations.
- Collating and explaining the risk in a structured way so that national partners could understand the urgency, clinical implications and potential impact on cardiac surgical services.
- Building and maintaining communication routes and professional relationships with manufacturers, suppliers, procurement teams, regulators, clinical stakeholders and national partners.
- Developing and circulating clear communications to members, Chief Perfusionists and wider professional networks to ensure that services understood the nature of the risk and the routes available for escalation.
- Circulating a national cannula oversight survey using Jotform to obtain intelligence from centres on local stock position, critical shortages, mutual aid requirements and potential service impact.
- Distributing the survey through email and LinkedIn to maximise reach across the perfusion community and ensure that frontline intelligence could be captured quickly.
- Providing information to services on how to escalate concerns, report critical stock positions and raise supply-related patient safety risks through appropriate channels.
- Using survey responses and direct feedback to support escalation conversations with national stakeholders and to evidence the operational reality being experienced by cardiac centres.



- Updating the Jotform process so that future replies are directed to SCPS Safety, NHS procurement colleagues and NSDR, enabling more timely shared oversight and coordinated response.
- Working closely with the Society for Cardiothoracic Surgery in Great Britain and Ireland (SCTS), including meetings and joint discussions, to align perfusion and surgical perspectives on risk, recovery and ongoing management.
- Co-designing a recovery and management approach with relevant stakeholders to move from immediate crisis response towards structured oversight, recovery planning and future resilience.

This work provided a bridge between local service pressures and national system response. It enabled frontline concerns to be translated into actionable intelligence, supported escalation where stock levels created potential patient safety risk, and helped ensure that recovery planning reflected both clinical and procurement realities. It also demonstrated the importance of collaborative professional leadership: listening carefully to the experience of services, recognising risk early, drawing on the complementary roles of the Chair, Vice Chair and Safety Committee Lead, and ensuring that the perfusion voice was present in national decision-making.

SCPS was also able to occupy a privileged position within the response, bringing together professional clinical insight with the purchasing power, reach and delivery capability of the NHS. This enabled the SCPS to support a proportionate and suitable national response, ensuring that procurement action was informed by the realities of clinical practice and that clinical concerns were visible within system-level decision-making.

This work is fundamentally what SCPS exists to support: protecting patient safety, promoting professional leadership and helping to ensure that appropriate cannula and other critical perfusion resources remain available for safe cardiac surgical care. It should also be acknowledged that much of this work was undertaken voluntarily by SCPS officers, Safety Committee members and wider professional colleagues, alongside their substantive clinical and professional roles. As Chair, I would like to record sincere thanks to all those who contributed intelligence, shared concerns, supported escalation, engaged constructively with national partners and worked collaboratively to preserve safe services during a period of significant pressure.

#### 4.5 Summary of SCPS Leadership Points

The SCPS response demonstrated several important leadership functions that should be recognised and retained for future incidents:

- Early recognition of risk: SCPS identified that the cannula shortage was not solely a procurement matter, but a direct patient safety and service continuity issue.
- Professional visibility: SCPS ensured that perfusion had a clear national voice and that the realities facing services were not lost within wider procurement or regulatory discussions.
- Constructive escalation: Concerns were escalated in a proportionate and evidence-informed way, using centre intelligence, survey data and professional judgement.
- Trusted communication: SCPS provided a route for consistent communication with members, Chief Perfusionists, suppliers, NHS procurement colleagues and national stakeholders.
- Boundary-spanning leadership: SCPS linked frontline clinical services with manufacturers, NHSSC, MHRA, NSDR, SCTS and other national partners, helping to bridge gaps between clinical risk, procurement process and system response.



- Confidential coordination: Some of the most important work took place behind the scenes, where trust, diplomacy, civility and professional credibility allowed honest discussion of risk, supply constraints and recovery options.
- Patient safety advocacy: SCPS kept the focus on the impact to patients, clinical teams and cardiac surgical services, rather than allowing the issue to be framed only as a supply chain disruption.
- Support for recovery and resilience: SCPS moved the conversation beyond immediate crisis management towards recovery planning, future resilience and clearer escalation routes.

Taken together, these leadership actions demonstrate the value of a professional SCPS that can act quickly, responsibly and credibly during system stress. They also show why perfusion must be represented early in national discussions about critical consumables, rather than being consulted only after risk has already escalated. The national leadership role described above did not replace local decision-making; rather, it supported and amplified the actions being taken within individual cardiac centres. The following section therefore considers the local mitigation strategies used by services to preserve safe cardiac surgical activity while national escalation and recovery work continued.

## 5. Local Service Mitigation Strategies

Alongside the national coordination and escalation led through SCPS, cardiac centres implemented numerous local mitigation strategies to maintain safe services, manage constrained stock and support clinical decision-making under pressure. These actions demonstrate the resilience of local perfusion teams and the importance of linking national intelligence with practical theatre-level response. Strategies included:

### 5.1 Stock Management

- Daily and weekly stock reviews.
- Creation of live supply trackers.
- Restriction of stock use.
- Escalation thresholds for critical products.

### 5.2 Product Diversification

- Review, evaluation and regular utilisation of alternative products and sizes to ensure safe patient application.
- Introduction of alternative arterial and venous cannula.
- Procurement from multiple suppliers.
- Clinical review of unfamiliar devices.

### 5.3 Clinical Rationing

Many services adopted case-by-case allocation strategies.

Cannulation decisions were increasingly made during team briefings, balancing:

- Patient anatomy.
- Procedure complexity.
- Flow requirements.
- Available stock.

Preferred products were reserved for patients with the greatest clinical need.



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## 5.4 Mutual Aid

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Hospitals increasingly shared stock to maintain service continuity.

These local mitigation strategies were essential to avoiding widespread service disruption, but they also relied on significant professional judgement, informal networks and local governance. The experience therefore leads directly into the need to examine how such decisions were overseen, documented and escalated within formal governance structures.

## 6. Governance and Oversight

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Strong governance arrangements proved essential.

Key governance measures included:

- Formal risk register entries.
- Safety committee oversight.
- Multidisciplinary review of alternatives.
- Documentation of deviations from standard practice.
- Communication with surgeons and anaesthetists.
- Incident reporting where required.
- Ongoing supplier review.
- Escalation through organisational governance structures.

The crisis demonstrated that supply disruption should be considered a patient safety issue rather than solely a procurement problem.

Future governance arrangements should recognise critical consumable shortages as clinical risk events. This requires early notification, named executive ownership, live operational intelligence, explicit clinical prioritisation arrangements and clear routes for escalation beyond individual trusts. Where mutual aid is used, it should be supported by documented principles for requesting, approving, transporting and replenishing stock.

Governance was therefore not a separate administrative layer, but a core part of the safety response. It provided the framework through which local adaptation could be made visible, proportionate and defensible. The learning from these governance arrangements informs the wider lessons set out in the next section.

## 7. Lessons Learned

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The cannula crisis exposed significant system vulnerabilities and reinforced learning from previous national cardiac safety events, including the heater-cooler and *Mycobacterium chimaera* outbreak. Although the specific nature of the risk was different, the wider learning is highly relevant: specialist clinical risks can escalate rapidly if early warning signals, procurement intelligence, regulatory constraints and frontline experience are not brought together quickly enough.

The key lesson is that critical perfusion consumables must be treated as patient safety dependencies. They are not routine stock items. Cannula selection affects the ability to deliver safe cardiopulmonary bypass, respond to emergency cases, support complex surgery and maintain service continuity. Shortages therefore require clinical leadership, not only procurement management.

Key lessons include:

**7.1 Single-supplier dependency creates unacceptable system risk.** Heavy reliance on one high-volume supplier for multiple critical cannula product lines created a national vulnerability. Future

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resilience requires better supplier diversification, clinically approved alternatives and a clearer understanding of market exposure.

**7.2 National visibility of stock is essential.** During the crisis, no single organisation had a complete real-time view of stock levels across services. This limited the ability to anticipate risk, coordinate mutual aid and plan recovery. A national or near-real-time inventory view is needed for high-consequence perfusion consumables.

**7.3 Escalation routes transparency before a crisis occurs.** Services need to know how and when to escalate critical shortages, and national bodies need agreed triggers for recognising when a local supply issue has become a system-level patient safety risk.

**7.4 Professional intelligence must be valued alongside procurement data.** National supply figures may not reflect the reality in theatres. Chief Perfusionists and frontline teams hold essential intelligence about stock usability, clinical substitution, case complexity and operational risk. This intelligence must be built into national response mechanisms.

**7.5 Alternative products require prior clinical and governance preparation.** Alternative cannula may require clinical evaluation, surgeon and perfusionist confidence, governance approval, training, documentation and risk assessment. These arrangements should be prepared before supply becomes critical.

**7.6 Confidential coordination is sometimes necessary for effective safety management.** Behind-the-scenes discussions with suppliers, procurement colleagues, regulators and national stakeholders enabled frank assessment of risk and recovery options. Confidentiality, when used appropriately, supported trust and better escalation rather than limiting transparency.

**7.7 Local resilience depends on clear governance.** Local services need agreed stock thresholds, risk register entries, escalation triggers, documented decision-making, mutual aid principles and multidisciplinary review when non-standard devices are used.

**7.8 National professional bodies provide essential leadership** during system stress. SCPS was able to connect services, interpret frontline intelligence, escalate risk, communicate with members and support national coordination. This role should be recognised formally in future resilience planning.

**7.9 Learning from previous national incidents must be retained and actively applied.** The heater-cooler and experience demonstrated the importance of early recognition, communication, national coordination and specialist professional leadership.

**7.10 Recovery planning must begin before the immediate crisis has fully resolved.** Recovery must include review of stockholding, supplier diversification, escalation pathways, procurement governance, clinical substitution frameworks and national oversight.

**7.11 Recovery cannot be assumed while supply remains unresolved.** The unclear resolution projections mean that services must continue to plan on the basis of ongoing constraint rather than imminent recovery.

Overall, the central learning is that patient safety must balance individual clinical decisions, but also on the resilience of the systems that make safe care possible. Critical consumables, procurement routes, regulatory pathways, supplier relationships and professional intelligence must be understood as part of the safety system.



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## 8. System Prevention and Future Resilience

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Preventing recurrence requires a shift from reactive shortage management to **proactive resilience design**. The goal should be to create systems that can identify early warning signals, understand national exposure, support rapid clinical decision-making and maintain safe services when global supply chains are disrupted.

A resilient national model would include: routine mapping of high-consequence perfusion consumables; agreed minimum resilience standards; live or near-real-time stock visibility; named escalation routes; pre-approved alternative products; multidisciplinary clinical guidance for substitution; and a national forum where perfusion, procurement, regulatory and supplier intelligence can be brought together before risk becomes critical.

## 9. Recommendations

### National Recommendations

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- Establish a national cardiac surgery consumables resilience group.
  - Develop real-time national inventory visibility.
  - Diversify supplier arrangements.
  - Create formal escalation triggers for national shortages.
  - Develop pre-approved alternative device frameworks.
  - Strengthen communication between manufacturers, NHSSC and providers.
  - Define a national owner for critical perfusion consumable resilience, aligned with NHS England, NHSSC, NSDR, MHRA and SCPS.
  - Develop an agreed national framework for clinical prioritisation during shortages, including urgent, emergency, paediatric, ECMO and high-risk pathways.
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## Local Recommendations

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- Maintain live stock dashboards.
- Undertake routine supply chain risk assessments.
- Develop local contingency plans.
- Maintain familiarity with alternative devices.
- Include consumable resilience within governance frameworks.
- Review stock holdings of critical consumables regularly.
- Document local decision-making when non-standard or non-preferred cannula are used, including clinical rationale, risk assessment and multidisciplinary agreement.
- Establish local minimum stock thresholds for high-consequence cannula, with escalation triggers linked to theatre activity, emergency cover and replenishment lead times.

## Conclusion

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The UK perfusion cannula shortage represented one of the most significant supply chain challenges faced by cardiac surgery services in recent years. It was not without precedent in the broader sense of national cardiac safety events, but it was distinctive because of the reliance on a single high-volume supplier and the direct impact this had on access to essential cannula for safe cardiac surgery.

Through collaborative working, strong local governance, national coordination by SCPS, supplier engagement and proactive clinical mitigation, widespread service failure was avoided.

However, the crisis highlighted significant vulnerabilities within current procurement and supply systems. Supply has not yet recovered, and the release of the FSN is likely to intensify pressure further. Without clear resolution projections and without systemic change, similar or worsening disruptions remain likely in the future.

The response to this crisis demonstrates the importance of a connected professional society that can bring clinical expertise, safety oversight and national relationships together in the interests of patients. SCPS, working voluntarily through its officers, Safety Committee and wider professional network, provided leadership by recognising risk early, listening to services, coordinating intelligence, escalating concerns, maintaining professional communication and keeping patient safety at the centre of the response. This leadership was explicitly collaborative, drawing on my role as Chair, Aswani Parmar's support and leadership as Vice Chair, and Rebecca Friar's leadership as Safety Committee Lead. Rebecca's contribution was central and should be particularly recognised: she led the detailed Safety Committee coordination, collated risk intelligence from services, helped structure the national safety narrative, and ensured that frontline perfusion concerns were translated into clear, evidence-informed escalation for national partners. This leadership was not about recognition; it was about responsibility. As Chair, I believe the learning from this event, alongside the learning from previous national experiences such as the heater-cooler and *Mycobacterium chimaera* outbreak, must now be used to strengthen national resilience, clarify escalation routes and ensure that future supply risks are identified and managed before they threaten safe clinical care.

Next steps will include further meetings with key stakeholders to agree the next phase of recovery, management and long-term resilience. These discussions must recognise that supply has not recovered. SCPS will continue to keep members and professional colleagues informed as this work progresses, and will ensure that perfusion remains represented in national discussions. Too often, perfusion services are contacted or considered late in system-level conversations; in this response, SCPS has been involved from the outset. My personal commitment as Chair is that SCPS will continue



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to lead constructively, speak clearly on behalf of the profession and keep patient safety at the centre of every discussion about cannula availability, recovery and future resilience.

## **References and Supporting Evidence**

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- SCPS correspondence and Safety Committee updates regarding national perfusion cannula stock position, December 2025–June 2026.
- NHSSC correspondence regarding Medtronic market share, manual allocation, RAPID review, supplier constraints and framework supplier updates, April–May 2026.
- MHRA correspondence regarding Medtronic Gundry™ and DLP™ Retrograde Coronary Sinus Perfusion cannula, FSN activity, device exceptional use and supply continuity considerations, April–June 2026.
- Chief Perfusionist feedback and SCPS stock survey intelligence regarding local stock levels, reliance on mutual aid, use of alternative cannula and risk of procedure cancellation, May–June 2026.
- Supplier updates relating to Medtronic, LivaNova, Edwards/EnableCV, Uniphar, Andocor and Cardiologic supply routes and regulatory status, April–June 2026.