air warming system for venous access

Proven Impact Across NHS Case Studies

PATIENTS FELT GREATER COMFORT & CONFIDENCE DURING CANNULATION

Case Study Highlights

"Airglove should be included in standard cannulation protocols with ongoing staff education"
- Edinburgh Cancer Centre

"Veins were more visible, palpable, and easier to cannulate"
Broomfield Hospital

"Supports difficult IV access and treatment delivery"
Freeman Hospital

"Improved comfort, reassurance, and workflow"
Leeds Gamma Knife Centre

"Improved patient and staff experience"
Edinburgh Cancer Centre

"The oncology services experienced improved warming consistency, reduced patient anxiety, and stronger cannulation outcomes."
Cheltenham Hospital

"Demonstrated improved first-time cannulation success, enhanced patient comfort, improved clinical flow, and reduced delays over a five-year period."
Solihull Hospital

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Payer Benefits*

The following payer benefit summary is based on 1,000 patients.

£2,564 SAVING FROM REDUCTION IN FAILED **CANNULATION ATTEMPTS**

SAVING **4,020** MINUTES OF ASSOCIATED **NURSING TIME**

£692 SAVING REDUCED ESCALATION **TO SENIOR STAFF**

FIRST TIME SUCCESS IN CANNULATION INCREASED FROM **55%** TO **88%**

£1,880 SAVING FROM REDUCTION IN **CLEAN UP & PREP TIME**

£370 SAVINGS FROM REBOOKED APPOINTMENTS

Overall Impact Cost Benefit*

£5,506 TOTAL SAVINGS

£5.50 = PER PATIENT *VS* **£1.00** PER AIRGLOVE

Executive Summary

- Airglove is a warm-air vascular dilation system that replaces outdated, manual methods like hot water basins with controlled heat, making veins far easier to access.
- Proven in real-world settings across hospitals like Broomfield Hospital, Freeman Hospital, Cheltenham Hospital and Solihull Hospital, it transforms peripheral access for all stakeholders. Patients enjoy a safer, far more comfortable experience that reduces the stress and pain of repeated needle sticks.
- Healthcare providers gain increased vein visibility and higher first-time cannulation success rates, jumping from 55% to 88% which boosts staff confidence and streamlines clinical workflows.
- Payers unlock substantial cost efficiencies, saving £5,506 per 1,000 patients (£5.50 per patient) through £2,564 saved on failed access attempts, £1,880 in prep and cleanup savings, £692 in reduced escalation to senior staff, and £370 saved from eliminated rebooked appointments.

For a full list of references please scan the QR code:

References

*Scales, K., 2005. Vascular access a guide to peripheral venous cannulation. Nursing standard:official newspaper of the Royal College of Nursing, 19(49), pp. 48-52.

*Comfort,P. & device, W.,Service Evaluation of the Airglove Patient Warming Device. http://www.airglovemedical.com/wp-content/uploads2018/01/Patient-Evaluation-Final-Report-030118-1.pdf

Airglove National Case Study: https://healthinnovationeast.co.uk/about-us/our-projects/airglove/

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ASSOCIATED HOSPITALS:

1. Broomfield Hospital
2. Freeman Hospital
3. The Leeds Gamma Knife Centre
4. Edinburgh Cancer Centre
5. Cheltenham Hospital
6. Solihull Hospital

Patient Benefits of Using Airglove

Reduced Anxiety & Stress
The device successfully lowered pre-cannulation tension, particularly patients with previous poor venepuncture experiences. Patients reported reduced anxiety and often requested Airglove due to prior positive experiences.

1 2 3 4 5 6

Improved Dignity & Professionalism
Patients felt the Airglove provided a more dignified and professional experience compared to traditional methods like standing over a sink with a basin of warm water.

1 2 3 4

Enhanced Comfort & Warmth
Patients found the regulated warming experience to be physically comforting and relaxing. The warm air technology further supports patients who may otherwise feel anxious about cannulation.

1 2 3 4 5 6

Fewer Painful Attempts
By improving first-pass success, patients experienced less pain and discomfort. Patients undergoing long-term treatments benefited from reduced repeated attempts, which helped preserve their veins.

1 2 3 4 5

Skin Safety
The regulated air warming ensured that the patient's skin integrity was not compromised, removing the risks associated with hot water.

1 2 3 4

Reduced Treatment Delays
By achieving stronger cannulation outcomes, patients experience reduced delays and improved clinical flow, allowing them to begin their critical IV therapies and chemotherapy treatments faster.

1 2 3 4 5 6

Healthcare Provider Benefits

Improved Vein Visibility & Palpability
Clinicians noted that the controlled heating consistently made difficult veins much easier to see and feel. Warming the whole arm brings up veins that staff would not have otherwise considered.

1 2 3 4 5

Streamlined Workflow and Efficiency
Accelerated vascular access shortens procedure times, improves unit patient flow, and minimises bottlenecks. This enables nursing teams to manage peak workloads, reduces escalations to senior staff, and supports complex treatment delivery.

1 2 3 4 5 6

Infection Control Compliance
Utilising single-patient-use gloves eliminated the cross-contamination risks associated with reusable heat packs or communal water basins.

1 2 3 4

Elimination of Manual Handling
The lightweight device removed the physical and environmental hazards of carrying heavy bowls of hot water around the ward, as well as the risk of water spills.

1 2 3 4

Higher First-Attempt Success Rates
The use of Airglove directly correlated with more successful first-time cannulations & a reduction in total attempts per patient.

1 2 3 4

Increased Staff Confidence
Airglove provided a reliable, regulated approach to warming, replacing the inconsistent temperature of warm compresses and water bowls. Nurses and practitioners therefore felt significantly less stressed and far more confident when managing difficult intravenous access (DIVA) patients.

1 2 3 4

Whole-Arm Warming
Warming the entire arm reveals hidden veins and supports challenging access procedures.

1 2 3 4 5 6

Reduced Medical Waste
A higher success rate naturally led to a reduction in wasted cannula components and consumables.

1 2 3 4