Medilink Midlands Case Study:
Advancing Neonatal Monitoring with MeTAP Support

AT A GLANCE

- **Company:** SurePulse
- **Sector:** MedTech / Neonatal Care
- **MeTAP support accessed:** Grant funding, clinical simulation coordination, neonatal expertise, video capture and advisory support
- **Key outcome:** Workflow validation of SurePulse NeoPatch, quantifiable efficiency gains, regulatory progression support

THE CHALLENGE

SurePulse is developing SurePulse NeoPatch, a wireless, multi-parameter neonatal monitoring patch designed for immediate use at birth, measuring heart rate and skin temperature.

Existing neonatal monitoring solutions are often bulky, wired, or repurposed from adult devices

These limitations can:
- Delay vital sign measurement
- Disrupt established delivery room workflows
- Interfere with skin-to-skin contact and parent–infant bonding

At a critical stage of development, SurePulse needed to evaluate how SurePulse NeoPatch would integrate into real clinical workflows while generating robust evidence to support regulatory submissions and future adoption.

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METAP SUPPORT

Through MeTAP, SurePulse secured grant funding to commission a clinical simulation study delivered via the West of Scotland Innovation Hub.

Support included:
- Full coordination and oversight of the simulation study
- Neonatal clinical expertise (Consultant Neonatologist and ANNP)
- Video capture of simulation outputs
- Professional video production for validation and training purposes

This structured support enabled rigorous testing of SurePulse NeoPatch in simulated delivery room and operating theatre scenarios, alongside comparison with standard-of-care monitoring systems.

IMPACT & OUTCOMES

The MeTAP-funded Glasgow simulation generated clear, quantifiable evidence of workflow efficiency gains.

Time to apply monitoring:
- Traditional wired systems: ~40 seconds
- SurePulse NeoPatch: under 5 seconds
- Reduction: up to 87% in some scenarios

Clinician feedback consistently highlighted:
- Faster application
- Reduced cognitive load
- Improved ability to support delayed cord clamping
- Enhanced facilitation of early skin-to-skin care

One clinician estimated an overall time saving of approximately 60% when accounting for practical challenges such as vernix-covered infants or transfers to mothers or NICU.

In addition to timing metrics, the study generated valuable qualitative insights into:

- Usability
- Sterility considerations in theatre
- Early adoption requirements

These findings are now directly informing product refinement, clinical investigation planning and regulatory submissions. Crucially, the grant enabled SurePulse to maintain R&D momentum and retain specialist expertise during a pivotal phase of development.

ADDED VALUE OF METAP

Without MeTAP funding and advisory support, delivering a high-quality, video-supported simulation study with experienced neonatal clinicians would not have been possible at this stage.

The programme reduced technical and clinical risk, accelerated evidence generation and positioned NeoPatch for the next stage of regulatory and commercial development.

"The MeTAP support enabled us to evaluate the SurePulse NeoPatch within realistic clinical workflows at a critical stage of development. The programme reduced technical and clinical risk, accelerated evidence generation, and gave us confidence as we progress towards regulatory approval and wider adoption." - James Carpenter, CEO, SurePulse

LOOKING AHEAD

SurePulse is now:

- Completing UK and EU regulatory submissions (following initial FDA submission)
- Expanding clinical investigations with real patients
- Preparing for manufacturing scale-up
- Exploring partnerships to support NHS and international adoption

Insights from the MeTAP-funded study are directly shaping training materials, clinical engagement strategies and long-term commercial planning.