



**PRODUCT
PILOT**



PoCUS Spray

One of the winners of the HIHI, HSE and ICGP GreenTech in Health Call 2025, ECCO Spray is a refillable fine mist ultrasound gel delivery system. The water-based coupling agent is designed for point-of-care ultrasound (PoCUS) examination to replace traditional, messy gels and impact waste. Successfully piloted previously by HIHI in Tallaght University Hospital, to assess clinical efficacy, this HIHI GreenTech pilot with University Hospital Galway, trialled the introduction of ECCO Spray, as a sustainable alternative to traditional 5 ml single-use gel sachets within a high volume urology outpatient department.



Will Hogan, Founder and CEO of ECCO Spray

About HIHI GreenTech in Healthcare

Health Innovation Hub Ireland (HIHI) recognises the link between the health and wellbeing of individuals and the health and wellbeing of the environment. Climate change is a significant threat to public health, the health and human services system and the social determinants of health and wellbeing. HIHI is committed to stimulating and supporting the development of innovative products and services that promote environmental sustainability in healthcare.



The field of green technology in healthcare is a continuously evolving group of methods and materials, from techniques for generating energy to the use of energy, production, direct patient care provision, lab services and ancillary activities - cleaning and decontamination, catering and waste disposal.

The Healthcare Challenge

Overall, the Irish healthcare system produces over 120,000 tonnes of waste annually, with hospitals responsible for the majority. Bladder scanning is a routine diagnostic procedure and when repeated at scale it generates substantial single-use waste due to reliance on gel sachets and paper towels. With clinical waste disposal costing Irish hospitals up to €1,800 per tonne, replacing single-use consumables with refillable systems like ECCO Spray offers both environmental and economic benefit.

Point-of-care (PoC) ultrasound: emergency, medical, surgical, maternity, critical care, community settings - 2.5 million diagnostic imaging tests each year across all modalities. PoC ultrasound accounts for a conservative 20% of total imaging activity, equates to roughly 500,000 ultrasound scans annually nationwide.



The Health Solution

Under the traditional approach, each bladder scan requires a 5 ml single-use gel sachet and several disposable paper towels to manage gel application and clean-up. ECCO Spray is an innovative, refillable fine-mist ultrasound gel delivery system specifically designed to support more sustainable clinical practice. Unlike 5 ml single-use gel sachets, which dispense far more gel than is typically required, ECCO Spray enables clinicians to apply only the minimal amount of product necessary to achieve optimal imaging, reducing consumable use and gel wastage during every scan.



HIHI Role

HIHI secured a pilot site in UHG and provided expertise in clinical research, supported pilot design, pilot delivery and facilitated participant feedback. The pilot was designed to ensure diagnostic quality and clinical workflow remained unchanged. It compared scan time, preparation, clean up and ease of probe positioning. Staff workflow, usability, cleanliness and satisfaction were also examined. HIHI intentionally conducted the pilot within normal clinical workflow rather than a controlled research setting. This means the findings reflect real clinical practice, providing an accurate picture of how ECCO Spray may perform at scale.



Outcome Report

Sustainable impact:

- 95% reduction in gel volume per scan.
- Complete elimination of plastic gel sachets
- Full removal of paper towel use for gel management costs and plastic waste.

Clinical Workflow:

- No change to scan protocol.
- Faster application, no sachets.
- Cleaner, controlled gel use.
- Improved efficiency: reduced post-scan clean.

Cost savings:

- Consumables and waste disposal costs if the per-scan saving observed in this service were applied at national scale: A single outpatient service delivering 160 scans/month saves €461 annually. Ireland performs an estimated 500,000 POC ultrasound scans nationally per year (a conservative 20% of 2.5M total imaging tests). Scaling the observed unit saving to national volume suggests a potential system-wide saving in the order of €240,000+ per year from ultrasound alone.

Testimonial

"We greatly value the structured support provided through HIHI and the collaboration with the clinical team . It has been an important step for us in evaluating PoCUS ECCO Spray as as sustainable alternative within a real-world outpatient setting" Will Hogan, Founder and CEO of ECCO Spray



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