

The Wee Catch It team consists of Bernie Higgins, Máire Kane and Catherine Marsh. Bernie Higgins is the leader of this product development and is the Assistant Director of Nursing for HSE Mid-West (Limerick, Clare and North Tipperary). She has assembled a team of innovative experts to aid with development of this new product.

Máire Kane is a designer who initially worked at St. James's Hospital and was part of the Spark Innovation group. She had been assigned to support this project but has since left her role at St. James's Hospital and is currently pursuing a master's in digital health and Entrepreneurship. Finally, Catherine Marsh is a registered Advanced Nurse Practitioner (ANP) and oncall forensic nurse examiner, with a strong clinical background.



Bernie Higgins

## CLINICAL EVALUATION STUDY



## **About Health Innovation Hub Ireland**

Health Innovation Hub Ireland (HIHI) was established by the Department of Business, Enterprise and Innovation and the Department of Health and is supported by Enterprise Ireland (EI) and the Health Service Executive (HSE) to drive collaboration between the health service and enterprise. We offer companies the opportunity for pilot and clinical evaluation studies and we provide the health service access to innovative products, services and devices that they may not otherwise be exposed to.

HIHI is built on the recognition that collaboration with enterprise can benefit patient care, patient pathways

and outcomes. We assess all concepts for healthcare innovation from those on the frontline – from clinician to porter. We encourage healthcare professionals to get in touch with HIHI if they have an idea or solution to how something in your job might work better.



## The Healthcare Challenge

Urinary tract infection (UTI) is one of the most common bacterial infections in childhood with 6-8% of children developing a UTI in their lifetime, leading to 8.1 million visits to healthcare providers each year. Early diagnosis with appropriate urine specimen collection techniques, investigations and treatment is necessary for prevention of renal damage and recurrence. However, collecting urine samples for diagnosis is challenging.

Collecting a sterile midstream urine sample in small babies and toddlers is a pain point for all healthcare workers and parents. To collect a sterile urine sample, the first 10-20 mL of urine flow must be discarded during a midstream urine collection to reduce contamination.

Collecting a sterile midstream urine sample from a baby and a wriggly toddler presents unique challenges due to their inability to follow instructions or control urination. The procedure requires meticulous attention to prevent contamination and obtain an accurate sample for diagnostic purposes.



#### The Healthcare Solution



Wee Catch It is a novel, non-invasive prototype designed to address the challenges of urine sample collection in patients where standard methods are not suitable. The innovation aims to reduce contamination, improve diagnostic accuracy, and enable timely access to reliable results.

The primary end users are pre-continent children and older adults with incontinence or mobility difficulties. Potential applications include emergency departments, hospitals, and nursing homes, where a rapid and dependable solution is most needed.

The project has secured Enterprise Ireland Proof of Concept funding to support further prototype development with DCU's RAPID Institute over the coming year.

#### **HIHI Role**

Health Innovation Hub Ireland (HIHI) runs clinical evaluations that connect companies with key opinion leaders and end-users. These evaluations provide vital feedback on product need, application, and market approach, while helping build a cohort of clinical champions. HIHI adds value through its structured, stage-gated framework that ensures meaningful insights and engagement with healthcare professionals.



## **Outcome Report**

HIHI facilitated three separate evaluation sessions with four clinical experts working within paediatrics. Clinician interviews reported that obtaining a clean catch urine sample is absolutely necessary to ensure that patients are accurately assessed and given the appropriate treatment in a timely manner, however the methods for obtaining a clean catch urine sample in a paediatric population are not fit for purpose.

All clinicians interviewed were highly impressed with the design of 'Wee Catch It', noting that its design eliminates a number of the pain points with collecting a urine sample in babies and toddlers. They believe that it would improve nurse workflow and allow for more efficient and accurate assessment of urine samples which would lead to more timely and effective treatment. It would also lift a huge emotional burden on children and their parents to obtain a clean catch urine sample.

If available in clinical practice, all clinicians interviewed would welcome its use as it would reduce staff workload, lead to a more accurate diagnosis, along with more efficient treatment while also positively affecting the emotional burden on children and parents.

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# **Testimonials**

""Health Innovation Hub Ireland (HIHI) played a pivotal role in the development of Wee Catch It. From the outset, HIHI provided essential support, connecting us with the right resources and helping us navigate the complexities of healthcare innovation.

Most importantly, HIHI acted as the catalyst in securing vital feedback from external clinicians, which was instrumental in shaping and refining our product. Their network, expertise, and hands-on approach ensured that Wee Catch It was developed with real clinical insight and end-user needs at its core.

We're incredibly grateful for their support and partnership throughout this journey.' Bernie Higgins