

Making history with women's health innovation



2024 Winner

Bladder & Bowel UK
Product Innovation Award

Forte Medical Limited



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For the first time in the history of women's diagnostic and urological health, accurate urine collection has arrived.



Peezy Midstream collects with as low as 0% specimen contamination – a marked contrast to the national average of 30%*.

Urine has diagnostic parity with blood, yet a protocol for its reliable and hygienic collection has been systematically overlooked. Dr Vincent Forte, NHS GP of over 20 years, Forensic Physician and medical author changed all that. In daily surgery, Vincent noticed the distress experienced by his female patients when asked for a midstream urine sample.

Peeeing into a narrow Universal Container was messy, undignified and unreliable – wet hands, wet tube and red faces all round.

Evidence based Peezy Midstream is designed to meet the need for preventative practice for UTI diagnosis and prenatal screening in Primary Care and Community settings.

This unique collection device rejects the first flush of urine, which can carry flora and bacteria off the skin and into the urine sample, creating a mixed growth. Mixed growth can mask the problem bacteria sought by either a dip stick or lab culture.

A compressed cellulose sponge expands to block the urine flow, diverting midstream into the lab compatible Primary Tube. Excess urine is rejected into the loo. Peezy Midstream cannot overflow.

No mess, no fuss, no transfer of urine from cup to tube to lab ... just clean, dignified midstream.

*Oxford Nuffield



Preventing Sepsis



As a condition responsible for 1 in 5 deaths worldwide, Sepsis is the final common pathway to death from most infectious diseases. It is intrinsically interlinked with antimicrobial resistance (AMR), and lack of diagnostic accuracy hampers efforts not only to treat sepsis but also to deliver responsible antimicrobial stewardship.



With between 15 and 20% of cases in high income countries being caused by urinary tract infection, and with resistance to first-line treatment among the most common urinary pathogens running as high as 50% in some regions, **any product which improves diagnostic accuracy** will not only improve outcomes for individual patients but is also likely to help us counter the threat of AMR.

Ron Daniels BEM, Founder The Sepsis Trust

Why Peezy Midstream?

- ✓ Helps deliver precision medicine at point of care, with right-first-time specimen collection
- ✓ Meets new Government policy around preventative medicine and reduced antibiotic prescribing
- ✓ Accuracy helps tackle Antimicrobial Resistance by promoting targeted antibiotic treatment
- ✓ Clinical and diagnostic excellence: ticks all boxes on the NHS Diagnostics Recovery and Renewal paper around point of care testing, accuracy, first-time analysis etc.
- ✓ Infection control: reduces bacterial spread of potentially infected urine during specimen delivery by patient on hands and environment
- ✓ Unreliable specimens lead to unreliable outcomes and poor antibiotic stewardship
- ✓ Meets all ambitions of the Getting It Right First Time (GIRFT) programme

Statistics to support accurate point of care urine collection.

66%

saving on lab spend for **GP
Surgeries** using **Peezy Midstream**
as part of a **triage system (PHW)**

0-2%

*(as low as) **contamination** when
urine is collected using **Peezy
Midstream** in **GP surgery setting**

30%

*(up to) of **urine specimens** are
unreliable, contaminated
by mixed growth

10%

of all women suffer with **UTI** each
year (NIHR) - that's around **3.5m**
with **30% (10.5m) recurrence**
within **six months**

34-60%

of people diagnosed with UTI
are **prescribed antibiotics**
before diagnosis is confirmed
by laboratory (**NIHR**)

20%

of **sepsis** episodes are
caused by untreated UTI
(**The Sepsis Trust**)

£386m

the **cost** of unplanned
hospital admissions due to **UTI**
in 2017/18 (**Longitude Prize**)

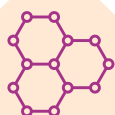
Environmental credentials



Reduces single-use plastics and
products across the GP-Lab
diagnostic pathway as a result of
reduced lab sampling and retesting



Wider environmental benefits as
a result of reduced specimen
transport and patient travel



Forte Medical is actively seeking
a sustainable, stable polymer for
device manufacture



Reduces footfall and patient
visits across Primary, Acute and
Community pathways freeing
staff and appointment time



Device made of Polypropylene,
which is easily recyclable, and
non-toxic when incinerated

Primary Care Evidence

Case Study:

Improving UTI diagnosis by introducing a UTI triage and clean catch MSU process

Health Board:

Cardiff and Vale PCIC Board
(The Primary, Community
and Intermediate Care
Clinical Board)

Location:

Highlight Park Practice, Barry

Project Leads:

Heather Crowley, ANP,
Highlight

Park Practice

Ceinwen Frost, Practice &
Professional Development
Nurse, PCIC

Clinical Board

Andrew Turner, Forte Medical

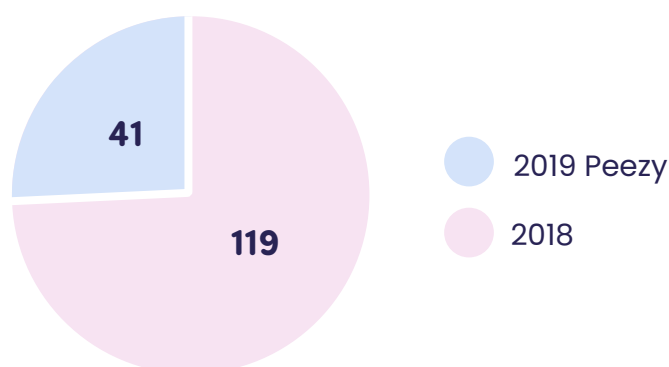
Project Sponsor:

Kay Jeynes, Director of
Nursing PCIC Clinical Board

“ Using the Peezy device in clinical practice has allowed us to completely transform how we approach caring for patients presenting with UTI symptoms. Care is now streamlined, avoiding the need for repeat samples and avoiding mixed growth culture results; this means antibiotic prescriptions are far more appropriate. As a surgery, it has allowed us to empower the non-clinical team to provide patients with clear and concise information at their first point of contact with the surgery. The advice given to patients is consistent due to the use of algorithms and scripts and coupled with the Peezy device, has improved patient care dramatically. From a clinical perspective we have seen the number of prescriptions for antibiotics reduce as well as the number of mixed growth culture results; we are able to get the best outcomes for our patients in the quickest and safest manner. ”

Heather Crowley, Project Lead

Comparison of specimens sent to the lab between 2018 (non Peezy Midstream) and 2019 with Peezy Midstream



Sending samples to the lab is expensive at around £10 per sample, its vital to reduce the number sent unnecessarily to the lab from 119 in 2018 to 41 in 2019, a reduction of 78, which corresponds to a £585 saving, equivalent to £1404 per year. The economic upside covers the cost of the Peezy Midstream device and generates a real money saving over the existing methods [of collection].

Laboratory results demonstrated improvements in culture outcomes, mixed growths, mixed growths with pathogens, no growths, pure growths all improved during the trial, importantly no specimens were rejected during the trial. **2018: samples containing a mixed growth : 14%**

2019: samples using Peezy Midstream in the same period containing mixed growth: 0%

Midwifery Back to Basics: Auditing Urinalysis in Practice

Two audits were conducted over two years to help the maternity unit to consider how they might enhance their urine screening service.

1 The first audit aimed to review how many urine samples were being sent to the laboratory for culture and sensitivity, the outcomes of these investigations and costs that this incurred at one maternity service antenatal clinic and maternity day assessment unit.

2 The second audit aimed to review a new system of urine collection and how this impacted on the urinalysis screening false positives for contamination and to assess the costs of introducing a new urine collection system across maternity service clinics.



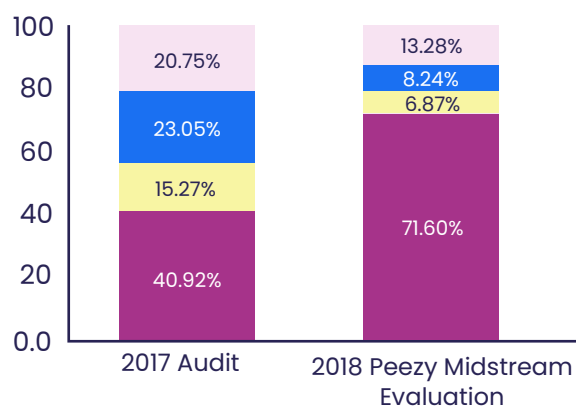
Introducing Peezy Midstream had a significant effect on the number of false positive leucocyte dipstick results, showing more no abnormality detected (NAD) results and therefore reducing the number of samples sent off for culture.

Reviewing the findings of both audits, it can be surmised that using a clean collection system reduced the false-positive results of urinalysis and also reduces the costs of unnecessary laboratory testing. Also, the Peezy Midstream system offers a more efficient and user-friendly unit to aid appropriate sample collection. It was found to be valued by staff and service-users alike.

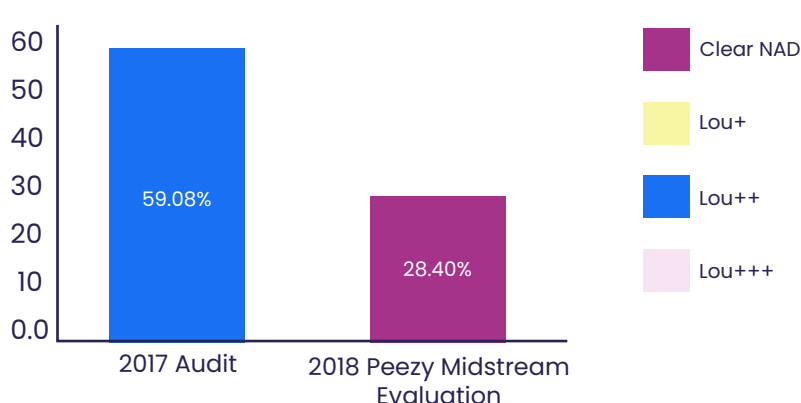
Sylvia Bone, Patient Safety Midwife.

Cost Reduction Using Peezy Midstream	Average Monthly Patients	Average Yearly Patients	Average Saving Per Patient	Average Yearly Saving in Maternity
30.8%	501	6,012	£1.34	£8,078.43

2017 Audit Vs 2018 Peezy Evaluation



% of Urines Sent for Additional Analysis



“ We have used Peezy Midstream with patients in clinic. Comparison with historical specimen results show that it collects a better specimen with lower contamination, which means fewer repeats. Patients are happy with the hygiene because urine gets into the tube and not on their hands. The lab is happy to receive a proper MSU in a clean tube that fits their analysers. The system delivers accuracy, efficiency and hygiene for all parties. ”

Professor Frank Chinegwundoh MBE, Consultant Urological Surgeon

2016 Barts Health NHS Trust Quality Improvement Audit	Historical	Peezy
Historic comparison of urine contamination data	Percentage	Percentage
Flow Cytometry indicates no culture needed	38.8%	77.3%
Heavy mixed growth	7.1%	0.0%
Profuse mixed growth	3.8%	1.5%
Moderate mixed growth	6.5%	0.0%
No significant growth	14.0%	4.6%
No growth	7.6%	15.2%
Urine cultured and yielded a significant result	22.7%	1.5%
Average contaminated sample rate*	17.4%	1.5%

*(Heavy, profuse and moderate mixed growth)

Usability Study⁶

NHS National Institute for Health Research 2017

NHS
National Institute for
Health Research

100%

Instructions clearly explain
how to use the device

94%

Peezy collects
midstream easily

94%

Patients confident
using Peezy

88%

Needed no further instruction
with using the device

88%

Would be comfortable
using the device again

70%

Would recommend this
device is used in future

Research conducted by the NHS National Research Institute with the Trauma Management Healthcare Technology Cooperative, Birmingham University Hospital Trust and supported by West Midlands AHSN.

For more information please contact the team
at hello@forte-medical.com



Giovanna Forte
Co-Founder and CEO

Giovanna has led commercialisation of Peezy Midstream from innovation to patient. She has also conceived the company's next two devices: Peezy First Stream for early stage cancer diagnoses and Peezy Twin Stream for Sports Dope Testing and Evidential Forensic Medicine, both in development.

giovanna.forte@forte-medical.com



Owen Jones
Operations Director

Owen has been with the company for 12 years, overseeing R&D, regulatory work, manufacture, sales fulfilment and more.

Previously a Civil Servant in Government, Owen moved into the private sector to join Forte Medical where he has experienced first-hand the cut and thrust of building a HealthTech enterprise.

Owen has stayed with Forte Medical because he believes in the Company's innovation, enterprise, integrity and preventative healthcare ambitions.

owen.jones@forte-medical.com



**Dr Vincent Forte, BA (Cantab),
MBBS (Lond), MRCGP, MSc,
DA., Medical Director**

Vincent was an NHS GP for over 20 years, a Forensic Physician and co-author of best-selling Primary Care reference book Symptom Sorter (CRC Press).

A listening Doctor, Vincent invented Peezy Midstream in response to his patients' difficulties in collecting a reliable midstream sample.

Vincent's role is to oversee device design for @home Peezy Midstream, Peezy First Stream and Twin Stream devices. His remit includes ensuring seamless clinical outcomes and patient experience.