NHS Value Proposition

Stephen Tooke
Commercial Director
Tookie Limited

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www.tookie.co

@tookieco
Tookey is an award winning medical device design and development company, located in Liverpool Alder Hey Children's Hospital.

Tookey has four products now listed on the NHS Supply Chain, designed, engineered and developed in collaboration with the NHS through clinical and patient/carer centred focus groups.

Complications with Central Venous Catheters (CVC/central lines) are common and well documented, especially that of displacement & gravitational pull with tubes often snagging, twisting and looping - a large proportion being avoidable.

Accidental removal of a CVC from a patient receiving long term treatment can be life threatening.

Tookey has identified patient groups for which no existing product is available in the NHS to enhance the safety and security of treatment lines (the ‘Un-Met Need’).

Tookey's brand #ALifeMoreNormal is focused upon creating a portfolio of products addressing patients’ ‘Un-Met Needs’ delivering solutions in the form of wearable technology.

Tookey products are CE marked Class One Medical Devices designed for ‘single-patient-use’ compliant with relevant risk and regulatory standards.

Tookey products are engineered solutions following clinical advice and patient involvement designed to reduce the known complications of central lines, realising a solution for the “Un-Met Need”.

In addition to patient and clinical benefits, Tookey products will also enable cost reductions arising from unnecessary rework/line reinsertions.
What is the problem?

- Vascular access is an essential lifesaving therapy, with patients having CVC’s and other lines inserted and accessed on a daily basis to administer medicine and monitor health over prolonged periods.

- For example, over 10,000 children in the UK are being treated for cancer with many having their lines accessed on a daily basis to administer medicine and monitor health.

- In many instances, lines are left loose or taped to the skin, causing unnecessary discomfort and raised anxiety for patients and parents/carers.

- Line fall out can result in infection with serious risk of mortality, as well as the need for further invasive and costly line revisions.

- Further adverse affects of inadvertent fallout/loose lines include severe patient discomfort/poor patient experience.

- The need to protect lines often leads to heavily reduced movement and activity levels.
The Current Cost?

- Each replacement line costs at least £3,000 (costs provided by RMCH and CHS)
- The £3,000 cost is before the onset of any infection
- If infection sets in costs can escalate significantly

- In Paediatric Oncology at the Royal Manchester Children’s Hospital (RMCH), circa 10% of lines are removed inadvertently (according to RMCH clinical analysis)
- At the Adult Renal Centre in City Hospitals Sunderland (CHS), circa 20% of lines are removed inadvertently (according to CHS clinical analysis)
What is the Tookie solution/innovation?

- Products include:
  - Paediatric Oncology Vest
  - Paediatric Renal Vest
  - Adult Renal Vest (Male)
  - Adult Renal Vest (Female)

- Products are designed for later stage hospital use and for transition to the community/home, where patients are more vulnerable to line complications and where parental anxiety can be reduced when caring for patients.

- Working with patients and care teams, Tookie has produced a range of wearable garments which capture and secure the end of the central line.

- Key driver in the innovation is to enhance levels of security during activity along with greater levels of patient dignity and modesty.

Dr Saeed Ahmed - Consultant Interventional Nephrologist City Hospitals Sunderland with Dorothy - Tookie Renal Patient Ambassador.
How does Tookie’s innovation/solution address the problem?

Working with patients and care teams, Tookie has produced a range of wearable garments which capture and secure the end of the central line.

- Tookie products address the known complications with central lines, helping avoid CVC displacement, gravitational pull, snagging, twisting and looping.
- Tookie products are not only designed to help avoid line displacement, but also to aid patients to continue to live #ALifeMoreNormal as the vest helps to discretely secure the lines.
- Products offer safety and security for greater levels of activity, freedom, independence and reassurance, particularly for dialysis patients in mixed wards, where modesty and dignity must be respected.
The Tookie Vest for Paediatric Oncology, Paediatric Renal, Adult Male and Female Renal are all available on the NHS Supply Chain at a cost of £80 per unit.

The cost reduces to £70 dependent upon volumetric ordering.
### Potential savings if NHS uptake solution?

RMCH and CHS historical analyses of inadvertent line fall-out and the costs of line re-insertion

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<tr>
<th>Hospital</th>
<th>Financial Savings</th>
<th>Costs of Line Re-insertions</th>
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<tbody>
<tr>
<td>Royal Manchester Children's Hospital - Paediatric Oncology</td>
<td>£270,000</td>
<td>£70,000</td>
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<tr>
<td>RMCH</td>
<td></td>
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<tr>
<td>Costs of Line Re-insertions</td>
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<td>Tookie Solution Costs</td>
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<tr>
<td>Retrospective audit of patient records by Chief Investigators over a twelve month period - unpublished</td>
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<tr>
<td>City Hospitals Sunderland - Adult Renal</td>
<td>£132,000</td>
<td>£18,000</td>
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<td>CHS</td>
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<td>Financial Savings</td>
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Benefits to the NHS would be greater where the onset of infection is avoided.
What evidence exists, or do you plan to obtain evidence to prove the potential benefit?

- Although the problems and complications associated with vascular access and central line stability are well known and documented, the NHS as a rule does not record specific data as to why a line has been removed— the overall scale of the problem is not currently quantified.

- RMCH and CHS have undertaken retrospective audits of patient records to derive a baseline figure, highlighting in the case of Manchester that c.10% and in Sunderland c.20% of patients have complications which require line revisions.

- Three NIHR CRN Portfolio Adopted “Qualitative & Quantitative” Evaluation studies across RMCH, CHS and Newcastle are asking the same research question “Does the Tookie Vest reduce the rate of known inadvertent line fall out?”

- Each evaluation study is at a different stage with the study designs approved, protocols written, peer reviewed and submitted for adoption, while others are still drafting protocols with the NIHR CRN research teams.
Our Products

Tookie products are patient/parent and clinician driven innovations, focusing upon security of CVC’s and incorporating lines for other patient groups.

The health benefits of the Tookie Vest are broad with the fundamental ethos of enabling patients to return to a life with greater levels of normality, freedom & independence – “A LIFE MORE NORMAL”.

Tookie products enable more active patient participation in activities of their choice.

No other product exists in the NHS nor on the NHS Supply Chain.

Tookie products can be delivered Direct-To-Trust and/or via NHS Supply Chain.
Mr. Ross Craigie, Consultant Paediatric Surgeon, Royal Manchester Children’s Hospital (RMCH)

“As a children’s surgeon, I see first-hand the concerns that parents have around care and security of their child’s central line and also the implications of premature line removal. The Tookie vest aims to give both actual line security and also peace of mind to families, something that we have been waiting for in central line care. I am happy to support the development of this product by performing an evaluation of the vest at the RMCH to assess not only the potential clinical benefits but also the effect that it has on the patient and their carers.”

Catherine Barry, Advanced Neo-Natal Nurse, Practitioner & Lecturer

“This vest is life-saving and a central line insertion is not without risks. If I had a child with a central line I wouldn’t hesitate to use it. It’s simple, functional and cosmetically doesn’t look like you’re wearing a brace or a cast. This vest will reduce fall-out and infection; in many instances the infection itself will kill the patient before the underlying disease itself.”
Mother of 3-year-old

“We thought the Tookie vest was a great idea. I was so intrigued to see it in the making and I’m glad we did. It’s soft, lightweight and easy to wash. My son finds it comfortable to wear and forgets he’s even wearing it. With him only being 3 and just starting nursery, we were worried about him playing with the other children and possibly having his brovaic line (mr wiggly) accidentally pulled, as it just sat in a bag around his neck. Now we will feel much more relaxed. He loves football and has just started football training, he wears the vest each week to football, it allows him to play without having to be afraid of joining in, and he enjoys himself to the max!!!

The vest is invisible under his clothes. I still love the vest as it keeps his line out of way an safe. He’s been able to be a lot more mobile wearing it - its improved his life we are so grateful to your company for keeping his line safe”.

Dr. Saeed Ahmed, Consultant Interventional Nephrologist (Dr. Ahmed sits on Vascular Access Society of Britain and Ireland Executive)

“Vascular Access is the cornerstone to providing adequate HD which is ultimately a life-saving therapy and as a surgeon who is published on the complications of catheter displacement, I understand and can see the real value to patients that Tookie’s Renal vest provides. As Chief Investigator, I am delighted to be part of a research team that includes my own patients which has contributed to the design of a medical device that will improve patient quality of life on a global basis.”
Nicola Wesley (Chief Operations Officer NE and NC AHSN)

“The North East and North Cumbria Academic Health Science Network (NE and NC AHSN) in association with MedConnectNorth a joint venture with the NIHR CRN provided support and advice to Tookie via ‘The Innovation Pathway’ facilitating connections with clinicians and patient involvement, regulatory and Innovation and Research advice for product design and development from concept to reality, through to navigating the complexities of the NHS pathway to final NHS adoption.

We are delighted to have supported Tookie Limited through their journey to now see patients benefiting from the unique and innovative range of Tookie products. We are proud to have played a significant role in supporting this initiative and having advocated Tookie on to the Atlas programme we are certain this will assist the spread of this innovation across the entire AHSN network”.

Patient – Dorothy (Tookie Renal Patient Ambassador)

“When I first became a HD patient, I was totally unaware of what was to come. Four months into my treatment, I was introduced to Tookie. Their concerns for the comfort of HD patients was obvious from the beginning. The vest gives comfort and modesty in a mixed unit, but most important of all, it gives security with restricted movement to the neck line, decreasing the possibility of having to replace the neck line”.

Patient – Dorothy (Tookie Renal Patient Ambassador)
Mr Richard Stubbs, CEO, Yorkshire and Humberside Academic Health Science Network (YH AHSN)

“The Tookie vest’s provision of an effective and comfortable method of securing central lines, provides patients with the ability to lead a ‘life more normal’ whilst undergoing treatment, and responds to a real unmet need within the NHS. We are excited to see the further developments in Tookie’s range as they develop products for further clinical areas and needs.

“The Yorkshire & Humber Academic Health Science Network recognised the potential of the Tookie vest from an early stage. We were pleased to support initial proof of concept work and further product development as the range of clinical areas served has expanded”.

Dr Paul Dimitri, Clinical Director, NIHR Children & Young People MedTech Co-operative

“_TOOKIE_ became the TITCH network’s first adopted SME as we recognised the value of what they were bringing to the NHS in improving patient care and supporting NHS efficiency, through a portfolio of products designed specifically for the children population with direct patient involvement - products for the patient created by the patient.

“In our three years of support for Tookie, TITCH is delighted to see and recognise their success, including recently being awarded an NHS Supply Chain Contract and in winning many highly prestigious awards on their innovation pathway journey”.
Tookie Awards
Our Partners

- Devices for Dignity Healthcare Technology Co-operative
- Academic Health Science Network
- ConNeCt North
- TRUSTECH
- City Hospitals Sunderland NHS Foundation Trust
- TITCH Technology innovation transforming child health
- Greater Manchester Academic Health Science Network
- MEDILINK
- Greater North Children’s Hospital
- NHS
- National Institute for Health Research
- Sheffield Children’s NHS Foundation Trust
- Royal Manchester Children’s Hospital
- Central Manchester University Hospitals NHS Foundation Trust
- CYP MedTech
- Yorkshire & Humber Academic Health Science Network
- DAD
Support from our NHS Partners

Innovation event this Wednesday in Hospital Main Entrance - with Tookie

Tookie Co will be visiting Sheffield Children’s Hospital (Main Entrance) on Wednesday 11 July.

Sheffield Children’s Hospital through the TITCH network have supported Tookie in the development of a number of their innovations over the past few years. Earlier in the year, Tookie won the highly prestigious Medlink Innovation Award. Presently they are working with Heather Elphick on a respiratory support device for children.

Tookie will be at SCH to showcase some of the innovations and to speak to children, families and clinicians about unmet needs and how they can make their products even better to meet the needs of all stakeholders.

If you are passing on the day make sure to go and have a chat. Please see the attached flyer with further information about Tookie.
Stephen Tooke
stephen.tooke@tookie.co
Mobile: 07580425686

www.tookie.co   @tookieco
Graphic Design provided by Khloe Blackburn