Tookie Vest for Oncology

**TECHNOLOGY**

The Tookie vest is a wearable, supportive device that has been developed by Tookie Ltd to secure central venous catheters (central lines) for children receiving treatment for cancer.

The Tookie vest is designed to maintain integrity of the central line to prevent inadvertent fall outs by holding the central line in place inside a pouch, attached to the vest.

The vest and pouch are made from 100% polyester coated with an antibacterial agent. The vest has a back closure mechanism that keeps it secure and prevents removal by the child, whilst also allowing continuous access by medical staff. According to the company, the vest can be used at night time, is dermatologically tested, non-flammable and fully washable. The Tookie vest is designed primarily for use during the transition from hospital into the home and to encourage greater freedom of movement for the child.

The vest was designed in consultation with clinical teams, academics, patients and parents, in collaboration with the National Institute for Health Research (NIHR) Devices for Dignity Healthcare Technology Co-operative (HTC). The Tookie vest is fully patented and received a CE mark in July 2016. The company anticipate UK NHS launch in February 2017.

The company are currently overseeing the development of a similar Tookie vest at City Hospitals Sunderland NHS Trust, specifically for patients needing renal replacement. A similar project is also underway at Sheffield Children’s Hospital to design a Tookie vest specifically for patients with respiratory complications or those requiring total parenteral nutrition.

Other sleeves and body wraps for the management of central lines also exist; including the CareAline wrap, developed by US based company CareAline Products, LLC.
POTENTIAL FOR IMPACT

Over 10,000 children in the UK are being treated for cancer and many have central lines inserted into central veins and placed in the upper side of the chest to provide a site for administering drugs into the bloodstream. Complications related to the central lines are common, with tubes often snagging, twisting and looping. Central lines usually need to be taped or bandaged leading to irritation, potential dislodgement and discomfort to patients. The accidental dislodgement of a central line is also possible, potentially leading to infections and other serious complications. The company state that approximately £36.2 million is spent on treating central line infections each year, a large proportion of which could be avoided.

The company state that the Tookie vest has been designed to increase safety by reducing the risk of complications linked to inadvertent pull out of central lines. Additional benefits for patients include a non-invasive approach that offers an improvement in protection and comfort. This is in addition to concealment of the central line equipment, making it less obvious to others. The company add patient anxiety may also be reduced, whilst carers and clinicians may also benefit from ease of central line management. Amongst the system benefits, the company anticipate a reduction in re-admissions, reduced infections and improved continuity of care. The company anticipate that the vests will cost £100 each.

If clinical and cost effectiveness can be demonstrated, the Tookie vest may offer an option for paediatric patients with cancer. Even if clinical and cost effectiveness is not demonstrated to the patients, there may be additional benefits in terms of comfort, ease of movement and carer confidence.

This technology is predicted to have an impact on the following domains of the NHS Outcomes Framework (www.england.nhs.uk/resources/resources-for-ccgs/out-frwrk):

Domain 2 Enhancing quality of life for people with long-term conditions;
Domain 5 Treating and caring for people in a safe environment; and protecting them from avoidable harm.

EVIDENCE

ONGOING STUDIES

An evaluation of the Tookie Vest for Oncology is currently underway at Royal Manchester Children’s hospital.

COMPANY INFORMATION

Tookie Ltd is developing a product portfolio entitled ‘A Life more normal’.

INFORMATION FROM

This Alert is based on information from the company and a time-limited internet search.
Lay summary

The Tookie vest is a device for children with cancer who are required to wear central lines. Children undergoing treatment for cancer receive drugs through central lines. These can accidentally fall out and cause infections. The Tookie vest is designed to hold the central line in place so that it doesn't move or fall out. This helps to avoid any unnecessary infections or problems that may be caused by the central line falling out.