



STICK SAFE

StickSafe is a simple, environmentally friendly, low cost device that can significantly reduce needlestick injuries from hypodermic needles. Its innovative design intuitively encourages healthcare workers to adopt safer workplace practices.

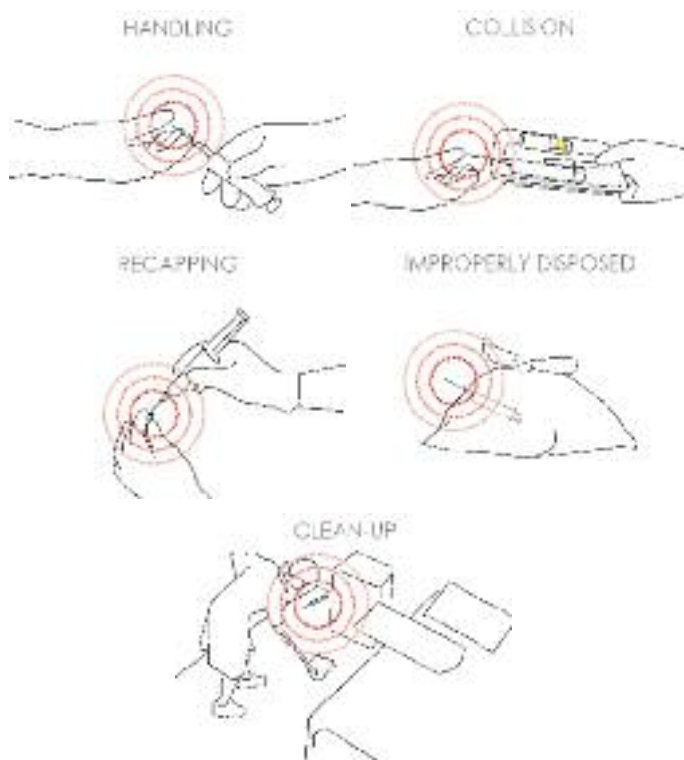
Needlestick injuries are wounds caused by the accidental puncture of the skin by a needle, and occur when needles are exposed during use and disposal. Such injuries carry the risk of infection of diseases such as HIV and Hepatitis B and C, that can require complex and lengthy treatment.

StickSafe is a purpose designed pulp tray that utilises a 'clutch' that compels the user to re-sheath contaminated needles and ensures safe separation of the used needle from syringe before disposal – avoiding the

biggest causes of needlestick injury. Sticksafe is fully compatible with standard hypodermic needles and the trays currently used to transport syringes and needles to and from the patient. StickSafe is cheaper than alternative modified needles and using it requires very little training.

In the UK, an estimated 100,000 needlestick injuries happen each year. Apart from the physical injury, needlestick injuries subject NHS staff to stress and anxiety. The NHS bears an estimated cost of many millions of pounds each year through lost workdays, litigation and the absence of highly trained personnel from the workforce.

Early trials indicate that Sticksafe is very effective and the developers are currently speaking to manufacturing companies. The device should be available to ambulance services very soon.



VIRTUAL VEINS™

FEEL THE DIFFERENCE

UK Haptics, based in Northumberland, has developed a virtual-reality training simulator that could revolutionise the way healthcare practitioners are trained in venepuncture, the procedure by which veins are pierced in order to take blood samples or insert cannulae. 'Virtual Veins' offers a highly-realistic training experience, a wide range of practice scenarios and a safe, controlled learning environment.

Haptics is the science of applying touch (or 'tactile sensation') and control to human interaction with computer applications. In trials, the software is so realistic (you can feel the vein 'pop' as the needle is inserted) trainees have even fainted!

Virtual Veins offers healthcare staff - at all levels and across a

range of disciplines - a more realistic training experience and a safer and more controlled learning environment. Simulations take place in real time and combine training with detailed testing to provide user-feedback and clinical metrics for assessment.

Unlike conventional techniques, that use manikins, 'Virtual Veins' uses a set of fully-manipulable 3D virtual reality arms and hands. Different models are available, including an adult male hand, a geriatric hand and an Afro-Caribbean hand, in which the veins can be harder to identify, making practice on such hands highly desirable. By doing away with the need for the 'disposables', that are an essential but expensive feature of traditional training regimes, it makes training more affordable.





How Michael Gave a 'Lift' to Needle-Safety!

Michael Korn of product-design consultancy, 'The Lift', has, along with his colleagues, had first-hand experience of just how easy it is to turn a 'blue-sky' design idea in to a real product by working with the NIC team. Below he tells his story...

Michael Korn came up with the innovative concept for the StickSafe tray whilst studying for his Master's Degree at the Royal College of Art. During this time, his sister, who works in the NHS, suffered a needlestick injury at work. She was pricked by an unsheathed needle, which was sticking out of an overfull sharps bin as she was trying to safely dispose of the one that she had been using. "My sister suffered weeks of stress and fear, because

potentially lethal diseases from the patients that they were trying to treat. Fortunately in my sister's case, her tests were negative for these life-threatening illnesses."

Needlestick injuries are a huge problem for the NHS, and there are approximately 100,000 incidents of NHS staff accidentally sticking themselves at work, which costs the NHS £300 million a year to prevent and treat.

In developing StickSafe, Michael observed first-hand "that

that there was an opportunity to redesign the paper-pulp trays currently being used, to incorporate a safety feature which would enable one-handed, safe use and disposal of needles and vacutainers. This new tray, became StickSafe, and it also has a follow-on benefit of allowing hospitals to much more efficiently utilise their sharps bins, as the needles can be separated from the syringe, which allows cost savings for the NHS in sharps disposal.

Michael, together with his business partners at 'The Lift', Denis Anscob and Evie Bergson, took StickSafe to the National Innovation Centre to try and gather support for the product, and also advice as to how to try and launch their product in one of the most difficult market places. What they got was much more. Denis Anscob, Commercial Director has this to say of their experience of working with the NIC. "When we approached the NIC we were expecting the process of launching SitckSafe to be extremely laborious and full of red-tape, as the NHS is notoriously one of the most problematic markets to penetrate. But our experience has been very different. We haven't had to undergo endless meetings, and we have found the NIC to be an extremely efficient machine at driving products through the appropriate channels. They were extremely quick at understanding the problem we were trying to tackle with StickSafe, and they could straight away see that our solution was a simple and practical one, that would save the NHS money, whilst protecting and safeguarding the NHS's most valuable asset, it's staff."

Being NHS outsiders, it is often very difficult for small companies such as 'The Lift' to launch new products within the NHS.



However, with the NIC's support, Evie Bergson, Marketing Director found that in the case of StickSafe, a lot of the perceived hurdles were dramatically reduced. "Through the NIC we have been able to form very good relationships with the end users of StickSafe - NHS staff, which has helped the later design process for StickSafe immensely. We were able to gather constant feedback from ward staff, which we were to utilize in later design models of the tray. Being new to the NHS meant that our company had new ideas, and could look at the problem from a fresh perspective, but the NHS is a difficult market to navigate. Through the NIC's whole-hearted support it has been much easier for us negotiate this difficult terrain, and we have an enormous amount to thank them for".



the needle she was pricked by was untraceable, so she didn't know whether she could have contracted a serious disease. In my research following this incident, I discovered other moving stories of doctors, nurses, porters and paramedics who, in similar ways to my sister, had been pricked accidentally by a dirty needle, and who had then contracted HIV, Hepatitis or other

the current practice in NHS wards is very dangerous, as healthcare professionals are forced to carry round exposed, potentially lethal, used needles." He found the current alternatives to be unpractical or unpopular, as safety needles are very expensive and mini-sharps bins in plastic trays require cleaning before every use. In his research he followed the needles around the ward, and saw

