If the Shoe Fits: A randomised control trial measuring the effectiveness of digitised in-custody footwear technology compared with paper based methods

What are the efficiency and crime solving benefits as a result of deploying Tread Finder technology in a live custody environment, compared with the paper based alternative?

Key details

Status	Complete
Lead institution	University of Cambridge
Principal researcher(s)	Julie Henderson research.map@college.police.uk
Police region	Eastern
Level of research	Masters
Project start date	May 2017
Date completed	November 2017

Hypothesis

This project will repeat a previous lab-based RCT into a field environment testing the previous outcomes that Tread Finder is 98% faster and 92% cheaper than the alternative paper-based alternative. Additionally that Tread Finder will produce real-time intelligence links within 15 minutes of the digital sample being taken compared with hours, days and weeks observed using paper based alternative.

Geographical area

London Borough of Barnet, North London, Metropolitan Police.

Target sample size

128 samples.

Participants - inclusion criteria

All persons arrested for a recordable crime.

Interventions

Automated randomised allocation

Study design

Randomised controlled field trial, with allocation of footwear samples into a digitised in-custody footwear technology or the business-as-usual, paper-based model. Randomisation using the Cambridge Randomiser 2.0.

Summary of findings

This RCT provides evidence which supports the hypotheses:

a) the average speed of obtaining a Tread Finder Sample and a paper-based sample are similar – approximately 4 minutes – however the Tread Finder arm provided pattern matching and coding within the capture process, whereas the paper based method does not

b) the average time to obtain an automated intelligence package using the treatment is 08:40 minutes, while nil packages were detected using the comparison system.

Evidentiary materials from Tread Finder are linked to 16 intelligence links out 64 samples, with nil returns in the paper-based arm of the experiment.