Background
Around 10-15% of men experience persistent urinary incontinence after treatment for prostate cancer. This incontinence can be very distressing and is known to have a profoundly negative effect on men's lives, often affecting social activities, personal relationships and mental well-being. Most men are provided with absorbent pads to contain their incontinence (they are easy for nurses to prescribe and do not require any skilled fitting) but these have disadvantages and men often find larger pads to be bulky, feminine or babyish.

There are three other main types of products which are specifically designed for men with urinary incontinence; these male devices are

(i) sheath drainage systems (similar to a condom attached to a drainage bag)
(ii) male collection devices (a cone or pouch device held over the penis by a belt or straps, with an integral collection bag
(iii) penile clamp (which compresses the penis to prevent - rather than contain - urine leakage)

Although these devices are readily available on prescription in the UK (except for the penile compression device which is self-purchased) they are used much less commonly than pads, probably because little research has been carried out on them and it is known that nurses lack knowledge and skills in fitting them.

Methods
We carried out a clinical trial of three male devices (i) sheath drainage systems, (ii) male body-worn urinals, (iii) penile clamp - tested by men who used absorbent pads. Devices were tested for three weeks each after which men completed questionnaires on device performance and their strengths and limitations. The same data was collected about the men’s pads. At the end of the study men stated which products they preferred to use and three months later stated what products they were actually using and for what activities and circumstances.

Results
Fifty-six men completed testing all the devices. There were substantial and significant differences between products in terms of their performance characteristics and differences in the circumstances and activities under which they were found to be useful. The sheath was found to be good for keeping skin dry, not leaking,
not smelling and being easy for storage and travel. Sheaths were good for using over extended periods (e.g. golf and travel) when pad changing is difficult and they take up little space (e.g. in bags/suitcases). The body-worn urinal was generally rated worse than the sheath and was mainly used for similar activities but by men who could not use one (e.g. retracted penis), the body-worn-urinal was not good for seated activities. The clamp was the most secure device, least leaky, most discreet but most uncomfortable or painful. The clamp was good for short vigorous activities like swimming, exercise or dancing. The pads were found to be most easy to use, comfortable when dry but also most leaky and most uncomfortable when wet. Pads were good for everyday activities and were the best product for night-time use. Around two thirds of men were using a combination of pads and devices 3 months after completing testing.

**Conclusions**

The three male devices tested and absorbent pads have different strengths and limitations that make them more (or less) suitable for particular activities. Most men prefer to use a combination of devices and pads in order to meet their lifestyle needs. Men need better information and preferably skilled advice about how to use male devices and how to obtain them.

**Relevance and benefits to men with prostate cancer**

Persistent urinary incontinence (bladder leakage) is a common problem following treatment for prostate cancer and can be a devastating blow to quality of life. Discreet, leak-free, reliable, acceptable and comfortable management of urinary incontinence is essential to enable men to carry out their preferred activities with confidence. Use of absorbent pads is widespread but little is known about the value of male devices in the management of incontinence and the use of these devices is much less common.

This study demonstrates for the first time that different male devices and pads have different strengths and limitations and that most men prefer to use a mixture of devices and pads.

This has important implications for men and healthcare professionals (particularly continence services) regarding product selection and provision. Rather than simply providing absorbent pads men should be offered (and be provided with skilled fitting of) male devices. In addition, men should be given information about how to use and manage devices successfully for a range of activities. This study also demonstrated the need for better information for help-lines, health care professionals and men themselves to enable supported self-management – such information is scarce and should be made available on-line and for print.