

## **PRESS RELEASE**

**Monday 8 September 2008**

### **Will the 'bare below the elbows' rule for doctors cut infection rates or just patient confidence?**

Should surgeons be bare below the elbows and tie less or are new UK dress rules for doctors compromising their professional image without sufficient evidence that hospital-acquired infections will be reduced?

That's the question posed by urology consultant Mr Adam Jones from the Royal Berkshire Hospital, Reading, UK, in the September issue of **BJU International**.

Charting the history and attire of surgeons from the early nineteenth century, he points out that it is hard to find significant evidence that the 'bare below the elbows' rule outside the operating theatre will reduce hospital-acquired infections like MRSA and C.difficile.

"The evidence for the roles of ties, shirt cuffs, rings or watches in infection is hard to find and mostly in obscure medical journals" says Mr Jones. "Indeed similar levels of bacterial contamination have been reported on doctors' stethoscopes and pens."

However, research has shown that patients don't like to see surgeons walking around in what they perceive as casual clothing - they feel more confident in their professional competence when they see them in white coats.

"In America and much of Europe doctors change into some type of 'uniform' from their street clothes, but this has significant implications in terms of sufficient changes of clothes, laundry services and adequate changing rooms" says Mr Jones.

"Any uniform would have to confer some degree of seniority or status to maintain patient confidence."

He points out that hospitals have come a long way since the Victorian practices described by Lord Moynihan (1865 -1936), one of the first surgeons in England to use rubber gloves.

Describing a consultant from his medical student days in Leeds, Lord Moynihan says: "The surgeon arrived and threw off his jacket to avoid getting pus or blood on it. He rolled up his shirt sleeves and in the corridor to the operating room took an ancient frock from the cupboard, it bore signs of a chequered past and was utterly stiff with blood. One of these coats was worn with special pride, indeed joy, as it had belonged to a retired member of staff."

Infection rates were huge during this period, says Mr Jones, and someone having an amputation had a less than 50 per cent chance of survival.

“Surgery was the last resort and not the treatment of choice” he points out. “Indeed pus exuding from a wound, known as laudable pus, was seen as a sign of healing and thought to be essential.”

Evidence of surgeons’ attire from that period mainly comes from drawings and paintings of the time. And operating theatres were just what the name suggested – an auditorium with a raised platform where the surgeon would perform the operation in front of an audience.

Mr Jones’ commentary highlights the surgeons behind other key historical advances:

- Obstetrician Oliver Wendell Holmes (1809-1894) established an early link between infection, surgeons’ attire and cleanliness. He urged fellow surgeons to wash themselves, put on clean clothes and refrain from deliveries for 48 hours after coming into contact with a case of puerperal fever.
- Hungarian Ignaz Semmelweis (1818-1865) from the Vienna Maternity Hospital, noticed that a ward attended by medical students had a death rate of about 20 per cent while a ward attended by midwives had a death rate of three per cent. Students regularly came straight from the anatomy dissecting rooms without washing their hands, then performed internal examinations. Infection rates plummeted when they started washing their hands with chloride of lime when they entered the ward.
- Joseph Lister (1827-1912) treated his first compound fracture – which was normally fatal in the 1860s - with wool soaked in carbolic acid (now known as phenol) after noticing it was used by a local sewage works to reduce the smell of the waste. He reported on the first 11 patients treated that way in the Lancet in 1867. Nine recovered without losing their limb, one survived but required an amputation and one died.
- During the Franco-Prussian War (1870-1871) the Germans, but not the French, adopted Lister’s two great principles, that germs caused infections and laudable pus was not beneficial or inevitable. The German death rate after amputations was significantly lower than the French rate of 76 per cent.
- Polish surgeon Johannes Von Mikulicz-Radecki (1850-1905) was probably the first to use a face mask and William Halstead (1852-1922) is said to be the first surgeon to use rubber gloves. He commissioned them from the Goodyear rubber company for his theatre sister who developed a skin irritation caused by repeatedly immersing her hands in antiseptic solution. Scottish surgeon William MacEwan (1848-1924) is credited with the introduction of a sterilisable surgical gown.

But infection was not just a problem in Victorian times.

“The introduction of the ‘bare below the elbows policy’ by the UK Government is a response to rising rates of hospital-acquired infections like MRSA and C.difficile” says Mr Jones.

“But medical opinion is divided. Some feel the rules will undermine patient confidence and others feel it could, despite the flimsy evidence available, help to reduce infection rates.

“I suspect some compromise will need to be found that maintains the patient’s perception of a highly professional doctor and yet also reflects the concern that doctors’ clothing is transmitting infection”.

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#### Notes to editors

- Bare below the elbows: a brief history of surgeon attire and infection. Jones A. **BJU International**. 102, pp 665-666. (September 2008).
- The new policy was announced by Health Secretary Alan Johnson on 17 September 2007 with instructions that all acute hospitals should have a ‘bare below the elbows’ policy in place by January 2008. The announcement can be found at <http://nds.coi.gov.uk/environment/fullDetail.asp?ReleaseID=314953&NewsAreaID=2&NavigatedFromDepartment=False>
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