

# VIEWS & REVIEWS

## PERSONAL VIEW

### Doctors and medical students in India should stop wearing white coats

Evidence shows that long sleeved coats facilitate the transmission of infection in hospitals, leading to avoidable harm and cost to patients, says **Edmond Fernandes**

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Although emphasis on evidence based medicine is increasing, we still selectively tackle issues that we like and collectively ignore the ones that we don't—such as doctors wearing white coats.

Historically, long sleeved coats, popularly called aprons, were worn by laboratory scientists. But in the 19th century, after scientists showed that many doctors' remedies were useless, doctors started wearing them. They adopted the colour white to symbolise purity and goodness, hoping to improve their damaged reputation.<sup>1</sup>

In 1975 Joseph P Kriss, former professor of medicine and radiology at Stanford University, wrote in the *New England Journal of Medicine*, "The physician's dress should convey to even his most anxious patient a sense of seriousness of purpose that helps to provide reassurance and confidence that his or her complaints will be dealt with competently.

"True, the white coat is only a symbol of this attitude, but it has also the additional practical virtues of being identifiable, easily laundered, and more easily changed than street clothes if accidentally soiled . . . Casual or slovenly dress is likely to convey, rightly or wrongly, casual or inattentive professional handling of their problem."

It is now time to rethink all this: do doctors need to wear white coats at all?

#### Spreading infection

Today we know that white coats harbour potential contaminants and contribute considerably to the burden of disease acquired in hospital by spreading infection.<sup>1-5</sup> White coats are often contaminated with *Staphylococcus aureus*, and many isolates are resistant to meticillin.<sup>6</sup>

Microbiological analysis of swabs that were taken from the pockets and cuffs of doctors' white coats at an acute care hospital in Nigeria showed that 91.3% of the coats were contaminated with bacteria, including diphtheroids, *S aureus*, and Gram negative bacilli.<sup>5</sup> A cross sectional study in Bangalore

found that the most contaminated area was the sides of the coat followed by the collar and pocket. *S aureus* was the most common isolate.<sup>7</sup>

Many of these findings that incriminate doctors' white coats come from locations outside India, with higher standards of cleanliness and hygiene. The infrastructure in India is different, and more research is needed to understand the harm that white coats cause here, which is likely to be greater.

In India changing areas in hospitals are rare because of space constraints, so white coats are commonly worn by students coming from college and outside the hospital. They are also often left on chairs, tables, and in corridors. Doctors and medical students tend to wear their white coats to the library, the cafeteria, the toilet, and so on. In many cities in India some junior doctors are now seen wearing white coats in shopping malls and cinemas too, and then they enter sterile zones in the hospital in the same attire.

Given India's tropical climate, common sense indicates that we should discourage wearing white coats that are washed perhaps only every few weeks.

#### Traditional gowns

The United Kingdom took the landmark decision to ban long sleeved white coats in 2007.<sup>8</sup> At the time the UK had some of the highest rates of meticillin resistant *S aureus*, the "superbug" resistant to nearly every antibiotic in use, in Europe.

In the United States the non-profit Arnold P Gold Foundation, which promotes humanism in medicine, runs the "white coat ceremony" to impress upon new medical students the importance of compassion and humility, but perhaps the white coat was the wrong symbol to choose.<sup>9</sup>

About 1.7 million hospital acquired infections and 99 000 related deaths occur every year in the US, affecting almost 5% of all US hospital patients, and the financial burden may be \$10bn (£6.4bn; €9.1bn) a year.<sup>10 11</sup> The American Medical Association

in 2009 wanted to follow the UK Department of Health and dump the white coats, but the proposal was dismissed because clinicians wanted to keep their traditional gowns.

Some may argue that white coats are a badge of honour, but they are mere symbolism and wearing them does not itself confer status or professionalism. Dressing presentably and sporting a smile are more important than white coats. To ensure we remain visible to patients, institutions should give every medical student and doctor a recognisable name badge to wear.

We can do other things to reduce hospital acquired infections—for example, better handwashing compliance. A study of healthcare workers in the intensive care units of a multispecialty hospital in northern India found poor compliance, with some care providers washing hands after contact with a patient rather than before.<sup>12</sup>

Every hospital should have a committee to check and respond to hospital acquired infections. But an easy win would be for India's ministry of health to ban doctors and medical students from wearing white coats, to reduce the harm and cost that results from hospital acquired infections.

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