Bare Below the Elbows: A Comparative Study of a Tertiary and District General Hospital

Abstract:

AM Collins, J Connaughton, ADK Hill, PF Ridgway

Abstract

A Bare Below the Elbows (BBTE) dress code policy has been introduced by the majority of NHS trusts in the UK. The aim of this Irish study was to evaluate the impact of an educational intervention on perception of medical attire. The study was carried out in two centres: a tertiary referral centre (Beaumont Hospital) and a district hospital (MRH, Portlaoise). Two questionnaires, incorporating photographic evaluation of appropriate attire for consultants and junior doctors, were completed pre and post BBTE education. One hundred and fifty patients participated. Analysis pre BBTE education indicated patients considered formal attire and white coats most appropriate for consultants and junior doctors respectively. Post-intervention analysis revealed a significant reduction in the popularity of both (p <0.001), with scrubs and smart casual attire gaining significant support in both cohorts (p <0.001). Our findings demonstrate the support for such a policy can be achieved if patients are informed that the aim is to reduce the spread of healthcare-associated infections.

Introduction

The hands of healthcare workers are frequently implicated in the transmission of healthcare-associated infections (HAIs). The reported prevalence in inpatients is 4.9% in the United States, 8.19% in England, 6.06% in Northern Ireland and 5% in the United States (1). There is no definite proof that contaminated clothes are related to the spread of infection. However, there is no doubt that contaminated clothing is associated with healthcare-associated infections. The importance of a doctor’s attire is acknowledged in the literature. In addition to the association between appearance and the perception of competence, appropriate apparel also plays a role in promoting professionalism. Concerns have been raised, therefore, regarding the effects of being BBTE on patient confidence. Conversely, it has been reported that patients are not influenced by the style of clothing of the healthcare professional. In an attempt to reduce HAI infection rates in the UK, the Department of Health devised guidelines for developing dress codes for healthcare professionals. In addition to potentially reducing bacterial transfer from clothing and jewellery, it was proposed that adopting a ‘bare below the elbows’ (BBTE) policy would improve hand hygiene by enabling more effective hand washing. Following implementation in England, similar strategies were introduced in Scotland and in Northern Ireland. The BBTE policy advocates the wearing of short-sleeves and advises against white coats, neck-ties and jewellery. The isolation of pathogens from the white coats, ties and wristwatches of healthcare workers has been documented, but without conclusive evidence linking such contamination with the spread of HAIs. The aims of the study included evaluation of the uninformed attitudes of Irish patients on the appropriateness of specific apparel for consultants and junior doctors, and the subsequent impact of an educational intervention.

Methods

A cross-sectional study was carried out in two centres: Beaumont hospital, a University-affiliated, tertiary referral centre, and the Midland Regional Hospital, a district general hospital in Portlaoise. Two centres were included to identify any discrepancies between urban (Beaumont) and rural (Portlaoise) opinion. The modus operandi of the study was approved by the research ethics committees. Consecutive samples of inpatients at each centre were studied. Two bespoke study-specific questionnaires were designed, incorporating patient demographic details, evaluation of appropriate attire for consultants and junior doctors. Although the BBTE guidelines apply to all healthcare workers, doctors were specifically selected as the study subjects. They are a highly visible sub-group of healthcare workers on the front line of the health service. Unlike other healthcare workers, doctors currently do not wear a uniform in either of the study centres. Furthermore, a single sub-group may have overcomplicated the study unnecessarily. A series of five standardised headless photographs were produced, consisting of a male model dressed in differing attire. The options ranged from formal, semi-formal and smart casual, to the traditional doctors white coat and surgical scrubs (Figure 1).

Participants were asked to rank the appropriateness of the attire using a five-point Likert scale: a score of 1 was indicative of the most appropriate attire and 5 was indicative of the least appropriate choice. In order to reduce bias, the same model was used throughout the series. A female model was not included in the series to eliminate possible gender bias. The second component involved elucidating patient opinion on the appropriateness of a selection of items of jewellery. Following completion of the first questionnaire, a second questionnaire beginning with the statement: “In the UK, the Department of Health have made recommendations regarding a suitable dress code for healthcare workers” was presented. No additional information was provided that could have influenced attitudes. In addition, none of the participants were aware of the existence of the policy prior to intervention. Data was tested for normality using Shapiro-Wilk tests and if normal, Wilcoxon-Signed Ranks (Mann-Whitney U) tests were used to compare dress code ratings pre and post BBTE education. P values, where appropriate, were taken to be significant at 0.05. All statistics were calculated using the Statistical Package for Social Sciences (IBM SPSS Statistics version 21).

The final sentence is derived from the departmental publication which states “There is no conclusive evidence that uniforms (or other work clothes) pose a significant hazard in terms of spread of HAIs. However, a score of 1 was indicative of the most appropriate attire and 5 was indicative of the least appropriate choice. In order to reduce bias, the same model was used throughout the series. A female model was not included in the series to eliminate possible gender bias. The second component involved elucidating patient opinion on the appropriateness of a selection of items of jewellery. Following completion of the first questionnaire, a second questionnaire beginning with the statement: “In the UK, the Department of Health have made recommendations regarding a suitable dress code for healthcare workers” was presented. No additional information was provided that could have influenced attitudes. In addition, none of the participants were aware of the existence of the policy prior to intervention. Data was tested for normality using Shapiro-Wilk tests and if normal, Wilcoxon-Signed Ranks (Mann-Whitney U) tests were used to compare dress code ratings pre and post BBTE education. P values, where appropriate, were taken to be significant at 0.05. All statistics were calculated using the Statistical Package for Social Sciences (IBM SPSS Statistics version 21).
Results

Patient demographics

One hundred and five patients agreed to participate, 53 in the urban centre and 52 in the rural centre. The questionnaires of six participants were excluded from analysis due to incomplete information. No significant differences, in terms of gender distribution or age, were demonstrated between the centres.

Patient attitudes pre BBTE education

Prior to intervention, consultant ratings indicated participants in the urban centre regarded formal attire as the most appropriate choice. Both scrubs and the smart casual look were deemed inappropriate. Concerning junior doctors, the median ratings for the white coat and for scrubs indicated both were considered appropriate (Table I). Regarding jewellery, patients deemed wedding rings, engagement rings and watches appropriate apparel for doctors in the workplace (Figure 2). In the rural centre, formal attire was considered most appropriate for consultants prior to BBTE education. The white coat was also deemed appropriate. The lowest median ratings were awarded to scrubs and the smart casual option respectively. With regard to junior doctors, the highest median ratings were awarded to the white coat and scrubs indicating both were considered appropriate (Table I). Analysis of jewellery scores revealed results comparable with those in the urban centre, with wedding rings, engagement rings and watches regarded as appropriate for the workplace (Figure 3).

Patient attitudes post BBTE education

Analysis of consultant scores in the urban centre revealed a significant reduction in the popularity of formal attire (p<0.001, WSR, Table I). In contrast, significant increases were recorded in the median ratings for both scrubs and the smart casual option respectively (p<0.001, 0.038, WSR, Table I). Regarding junior doctors, the results demonstrated significant reductions in the popularity of the white coat and the semi-formal option (p<0.001, <0.001, WSR, Table I). Regarding junior doctors, analysis revealed significant reductions in the median ratings for the white coat and and semi-formal options (p<0.001, <0.001, WSR, Table I), thus neither were considered appropriate. In comparison, both scrubs and the smart casual look gained significant support (p<0.000, <0.000, WSR, Table I). Analysis of jewellery ratings indicated none of the items evaluated were deemed appropriate following BBTE education (Figure 3).

Combined Analysis: Urban and Rural Centres

Prior to intervention, combined analysis indicated participants regarded formal attire as the most appropriate choice for consultants, Both scrubs and the smart casual look were deemed inappropriate. Concerning junior doctors, the median ratings for the white coat and for scrubs indicated both were considered appropriate (Table I). Evaluation of consultant scores following BBTE education revealed a significant reduction in the popularity of formal attire (p<0.000, Table I). In contrast, significant increases in the median ratings for both scrubs and the smart casual option were recorded (p<0.000, MWU, Table I). With regard to junior doctors, the results demonstrated significant reductions in the popularity of the white coat and the
Discussion

A doctor's competence and professionalism is often judged on the basis of attire. Professional dress is significantly associated with trust and confidence-building during the patient encounter. The BBTE guidelines advocate adopting a casual dress code in the workplace. They also somewhat paradoxically suggest healthcare workers should dress in a manner likely to inspire public confidence. Concerns have been raised, therefore, regarding the effects of adopting a casual dress code on patient confidence, and on confidence in the health service. Analysis of suitable junior doctors prior to BBTE education revealed scrubs were considered appropriate in both centres. This perception may be influenced by contemporary television medical programming, such as Grey's Anatomy and Scrubs.

Following BBTE education, scrubs maintained their reputation as an appropriate choice for junior doctors. Interestingly, analysis of consultant ratings revealed a significant increase in the popularity of scrubs in both centres. In the rural centre in particular, they were deemed appropriate attire for hospital consultants. The diminished popularity of the white coat in both centres following the educational intervention is interesting. The iconic white coat has epitomized the medical profession for over 100 years. It has also somewhat paradoxically suggested healthcare workers should dress in a manner likely to inspire public confidence. This perception may be influenced by contemporary television medical programming, such as Grey's Anatomy and Scrubs.

It has previously been reported that patient opinion regarding the BBTE policy is malleable, and that patients are not averse to change. The support of such a policy may be achieved in Ireland and elsewhere, if patients are informed that the aim is to reduce the spread of HAIs. In order to achieve widespread support, our recommendations would include the delivery of a more comprehensive educational package and the consideration of patient preference, given differing regional informed opinions. Further study is warranted.

Correspondence: A Collins
Department of Plastic Surgery, Children's University Hospital, Temple St, Dublin 1
Email: annecol@rcsi.ie

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References


Comments: