

On the Value of an Old Dress Code in the New Millennium

AS I WAS preparing to deliver my annual lecture to the second-year medical students, I looked out over the audience and realized that the attendees looked different from those in years past: there were a substantial number of women (compared with 5% in my class); some students were unkempt and slouched, reading nonmedical material (as opposed to the bolt-upright, fearful, and attentive position in my day); and none of the men was wearing a tie or white shirt (an integral part of the uniform of the serious student up to the 1970s). Obviously, these men and women were not aware of or chose to ignore Hippocrates' advice that the physician should "be clean in person, well-dressed, and anointed with sweet smelling unguents."¹ I looked again at these differences and wondered, "Does it matter?" To answer this question, I reviewed the available literature in several electronic databases using search words such as "dress code," "professional attire," "physician attitudes," "white coat," and "clothing." Thirty-one articles were chosen to explore whether, reference to gender aside, the old adage "clothes make the man" still contains a measure of truth, and whether our patients actually feel comforted when they are approached by a medical person in formal rather than casual attire.

THE WHITE LABORATORY COAT

The white laboratory coat (followed closely by the stethoscope) is the universal symbol of the medical profession, as judged from ad-

vertisements in medical journals as well as from syndicated comic strips.² Why do physicians and other health professionals choose to wear white coats? The reason, in large measure, is tradition, but also economy and convenience. Anthropologists and sociologists tell us that symbol and ritual are important to all cultures; medicine as a societal subculture is no different. Originally beige, the white laboratory coat has been in use since the late 19th century, ostensibly to give physicians a cloak of scientific validity for their treatments and to represent purity and cleanliness: praiseworthy qualities in a healer. In 1993, to remind physicians of their Hippocratic responsibilities, the Arnold P. Gold Foundation of Columbia University College of Physicians and Surgeons, New York, NY, initiated the "white coat ceremony" that is now a rite of passage in most medical and osteopathic schools in the United States.^{3,4} Wear⁵ points out, however, that in addition to the positive attributes mentioned above, the white coat potentially lends itself to multiple, conflicting interpretations and can symbolize caregiving hierarchies, economic and social privilege, and cronyism. Thus, whereas the white coat symbolizes humanistic values in a formal curriculum, it also can symbolize more nefarious values, such as power and authority, in a hidden curriculum. Moreover, patients and nonphysician caregivers may interpret the white coat differently from the physician, based on complex and highly individual value systems. Physicians need to be cautioned against becoming the coat, and thus failing to be sensitive to the ways that their

patients respond to them and losing sight of the importance of self-reflection.

Are white coats then only a cloak preventing the "real" us from being seen, or are they allowing us to be seen in a certain light, or do they have any practical function, other than perhaps to protect our underlying clothes at the risk of cross-contamination? White coats do allow the health care worker wearing them to bring assorted needed materials and tools to the patient's side. In a study out of London,⁶ the most common reasons cited for wearing the white coat were (1) to be easily recognized by colleagues and patients (25%), (2) to carry needed medical items (23%), and (3) to keep underlying clothes clean (15%). Of the 29% of physicians and medical students who did not wear white coats, 82% were in psychiatry or pediatrics; about 50% of these were trying to avoid the perceived, but erroneous, negative effect of the coat on rapport with their patients in these specialties. A few consultants wore suits to distinguish themselves from more junior faculty.

In an interesting study performed at the University of Pennsylvania, Philadelphia, investigators convinced medical students, house staff, and faculty to empty the pockets of their white coats and then proceeded to evaluate the contents therein.⁷ Almost all persons carried medical equipment (eg, stethoscope, reflex hammer, penlight, and calipers), and 90% of their coats contained pocket manuals such as the *Sanford Guide to Antimicrobial Therapy*. Students and residents were much more likely than fellows or faculty to carry "to do" lists, phone

numbers, and journal articles, while personal digital assistants were increasingly found in the pockets of those persons with advanced training and higher salaries. The authors predicted that, in the future, such electronic devices might well become as ubiquitous as today's pager. Of note was the observation that pockets of medical students and first-year residents were more crowded than those of faculty; indeed, the white coat pocket of the chair of general internal medicine carried only a pen. A confirmatory study⁸ from Edinburgh, Scotland, providing the comforting quantification that physicians so like to see, showed an inverse correlation between the mean weights of white coats and seniority, ranging from 1.7 kg for the coat of the junior house staff officer to approximately 1.0 kg for that of the senior attending/consultant.

The starched-white, clean appearance of a physician, however, may not have totally salutary effects on patients' comfort levels or their health parameters, and there may be caveats to consider when one is about to don this symbolic attire. Such coats are often worn while examining patients with varied disorders in diverse areas of the hospital, office, or outpatient setting, potentially allowing cross-contamination. In a study of the microbiologic flora on physicians' white coats, cultures were taken from the cuffs, front pockets, and backs of 100 coats on physicians in various specialties in a general hospital.⁹ *Staphylococcus aureus* was identified in approximately 30% of samples. Interestingly, a "plateau effect" was seen such that a steady state of maximal microbiologic contamination was reached within the first week of use and did not change significantly thereafter. Moreover, dirty-appearing white coats did not differ from clean coats in their level or type of microbial contamination. Also, almost 50% of the physicians from whose coats *S aureus* was isolated carried the organism in their nose, suggesting an important role for personal carriage in garment contamination. Although the epidemiologic evidence supporting the possibility of cross-contamination from white coats is not strong, it still seems

prudent, in view of the increasing documentation of localized outbreaks of *Clostridium difficile* and other pathogens in hospitals, to exclude garments worn during the examination of patients from nonclinical areas such as the cafeteria and library. Who has not observed a house staff officer or attending physician scurrying from the parking lot to his or her place of work to see patients before returning again to the car, all the while wearing a set of hospital greens under a long white coat? Another example of a possibly negative effect of this symbol of the physician is so-called white coat hypertension, a popular term used by health care workers and lay people to refer to the phenomenon whereby blood pressure levels become transiently elevated when measured by a physician. In one study, however, this phenomenon occurred in 20% of patients with borderline hypertension when their blood pressure levels were measured by a physician rather than by a technician, regardless of professional attire.¹⁰ Therefore, in actuality, this phenomenon may not be as much a consequence of attire as it may be an anxiety reaction to the presence of the physician or a conditioned response associated with sympathetic arousal. The appearance and attire of the physician are by no means defined solely by the white coat, although, as we will see, it is the most favored part of professional attire¹¹⁻¹⁶ or is second to the name tag as the most favored part,¹⁷⁻¹⁹ preferred by patients and physicians alike.

PHYSICIANS' ATTITUDES ON PROFESSIONAL ATTIRE

In a study specifically designed to investigate physicians' attitudes about their professional appearance, Gjerdingen and Simpson²⁰ distributed questionnaires to 35 residents and 77 staff physicians in 2 Midwest residency programs. Questionnaires asked for demographic and professional data, as well as about attitudes toward various items of apparel for male and female physicians. Most participants showed positive responses to traditional attire such as the white coat, name tag, shirt and tie, dress pants, skirt or dress, stock-

ings, and dress shoes. Negative responses were associated with casual items such as sandals, clogs, athletic shoes, and scrub suits, with blue jeans being the least acceptable form of attire. Not surprisingly, older physicians favored a more traditional appearance than did younger physicians. In another study, by Gjerdingen et al,²¹ it was surprising that patients seemed to have a more relaxed attitude toward the appearance of their physicians than did the physicians themselves. Three items, however, were rated more positively by patients than by physicians: name tags, visible stethoscopes, and groomed moustaches.

PATIENTS' ATTITUDES ON PROFESSIONAL ATTIRE: IT MATTERS

Is the medical profession's traditional concern for professional attire shared by our patients? Does it matter to our patients what we wear? These questions have been asked many times and have been answered by the use of questionnaires and photographs of male and female physicians in various styles of dress: the answer is a resounding, and almost universal, "Yes, it does matter!"

A multiple-choice questionnaire was used to interview 200 patients on the general medical services of teaching hospitals in Boston, Mass, and San Francisco, Calif.¹¹ Specific questions concerned the wearing of a white coat, a necktie for male physicians, and a skirt for female physicians and whether tennis shoes and blue jeans were acceptable for the physician to wear during the patient visit. Slacks were not worn by female physicians as often in the 1980s as they were in the 1990s or today. Approximately one third of respondents had no preferences on most issues, but those with preferences expressed a clear message: 65% believed that white coats should be worn, with only 7% feeling that they should not. The issue of a tie was more controversial, with 37% favoring and 33% not favoring its use. Thirty-four percent of patients preferred that female physicians wear a skirt or dress during the

encounter, especially if the respondent was older than 55 years; there was no difference in response between male and female patients; 27% did not prefer that mode of attire. Less acceptable were blue jeans and tennis shoes, disapproved of by 53% and 27%, respectively; 43% and 48% of patients, respectively, preferred their use. In general, house staff tended to be conservative in attire; however, house staff were found to have less formal dress habits than a substantial portion of their patients preferred. Of 74 physician respondents, 67 (91%) never wore blue jeans and 42 (57%) never wore sneakers when seeing patients. Forty-four (85%) always wore a tie, and 57 (77%) sometimes (36 [49%]) or always (21 [28%]) wore a white coat. There was but minor variance in attire that was geographic specific: ties were more commonly worn in Boston (33 [97%] of 34 male physicians vs 11 [61%] of 18 male physicians), whereas blue jeans were more often worn in San Francisco (6 [20%] of 30 physicians vs 1 [2%] of 44 physicians). Nineteen (86%) of 22 female physicians always (2 [18%]) or sometimes (15 [68%]) wore a skirt or dress. Regardless of geographic location, older patients tend to be more conservative in their expectations of what constitutes proper professional attire. In another study performed in northern Norway, there was a clear trend for patients, especially female patients, to want their physicians to wear white coats during office consultation, a trend that increased with advancing age of the patient.¹²

In many studies, including one conducted in 2 family practice settings (one site located in an urban hospital-based unit and another site in an outpatient clinic in a northern pulp and paper mill town in Ontario, Canada), most patients felt that physician dress influenced their trust and satisfaction and believed that a physician should dress "professionally."²² Of note, 36% of the 80 patients in the latter study and 47% of those older than 70 years said that they dressed specifically to see their physician. Sixty percent felt that a male physician in a tie, dress suit, and white coat most inspired trust and confidence, followed by only

16% who felt the same way if the white coat was not worn. The mode of dress for female physicians that would accomplish the same level of trust and confidence was less well defined, with formal dress and white coat and green scrubs and white coat being equally inspiring. A large number of patients in this study felt that green scrubs were most defining for a female physician and best inspired their trust and confidence by avoiding the potential confusion of a female physician in a dress with a secretary or one in a white coat with a dietician, nurse, or social worker.

The issue of appropriateness of professional attire also has been addressed frequently in the pediatric and emergency medicine literature. In one study performed in a general teaching hospital affiliated with the University of Alberta, Edmonton, it was clearly shown that a relationship exists between house staff physician attire and parents' initial perceptions of competence.¹³ A series of study photographs were created using 3 dress variables for male and female physicians (formal street clothes and a long white coat; an intern's uniform of a short white jacket, casual shirt, casual shoes, and white pants or casual slacks; and operating room "greens" with a short white intern's jacket and casual shoes). Photographs of the 15 possible paired-gender combinations were shown to visiting parents of children on pediatric inpatient units who were asked to choose the more competent of each pair. Formal dress was preferred at a highly significant level, with no gender preference. Of note was that attire preference and perception of competence were less common in parents with a university education and those who had not previously had a hospitalized child than in parents with less schooling or those who had had a hospitalized child. The article concluded, "at the very least it would seem desirable to consider the inadvertent reduction in parents' perceptions of competence associated with the intern uniform. . . . The simple white lab coat may still be the appropriate order of the day." Moreover, in a study from Ben Gurion University in Beer-Sheva, Israel,²³ 50% of 130 patients in 3 family

medicine clinics who preferred a white coat for the physician or nurse preferred it to be closed, while only 6% preferred it to be open.

A questionnaire also was used by Barrett and Booth²⁴ to evaluate the positive and negative attributes assigned to photographs of male and female physicians in various manners of attire in the outpatient department of Children's Hospital in Birmingham, Ala. Seventy percent of 203 consecutive child-parent pairs rated physicians' dress as important, with more children rating it "very important." Men and women in white coats were regarded by 44% of the children as most competent among physicians in various dress styles, but of lesser friendliness. In casual dress, male and female physicians were rated most friendly and gentle, but of lesser competence. Parents preferred more casual dress but expressed preferences less strongly than their children, and they predicted poorly which attire their children would prefer. The issue of friendliness and gentleness, or perhaps familiarity, may in part help to explain the findings of a study from Groningen, the Netherlands, in which preference of children for a physician in a white coat or informal dress was shown to depend on the child's medical history.²⁵ The more extensive the medical history, the more the preference shifted to the informally dressed physician.

Another study used photographs of male and female physicians dressed in 5 styles of attire ranging from formal (short white coat and tie [male] or skirt [female] to informal (open shirt or blouse and slacks without a white coat).²⁶ In an outpatient facility, children older than 5 years and their parents were asked to match a list of positive and negative attributes (eg, most or least competent, friendly, concerned, and gentle) to the photographs and to choose the one preferred most or least. Both parents and children gave positive attributes to men and women dressed formally and viewed the informally attired physicians negatively. Children's preferences were neither as strong nor as clear as those of their parents and, while they had no strong positive preferences, children

seemed to feel negatively about informal attire, especially the lack of a tie or white coat in a male physician and the use of slacks without a white coat in a female physician. Children also had somewhat stronger responses to male attire than to female attire, suggesting greater latitude in dress codes for women.

In yet another study in the outpatient setting using photographs, this one from Western Ontario, 101 children ranging in age from 4 to 8 years and their parents were shown 2 pairs of photographs: the same man and woman each with and without a white coat.¹⁷ Both child and parents were asked which physician they would prefer to have as their own or as their child's physician, respectively. Both selected the person wearing the white coat two thirds of the time! On a questionnaire rating the appropriateness of various aspects of the physicians' attire and appearance, parents identified the name tag as the most appropriate item of dress, followed by the white coat. A groomed moustache and groomed beard also were rated favorably. The most negative ratings were given to clogs, open-toed sandals, shorts, and blue jeans, while long hair and earrings for male physicians and dangling earrings for female physicians were perceived somewhat negatively. Parents were neutral about the shirt-and-tie look, hospital scrubs, blouse and skirt, or dress. In other studies,^{18-21,23} the name tag also was selected as the single most suitable dress item for a male or a female physician.

In one study devoted to the feelings of adolescents, there was no expressed association between the comfort level of the adolescents and their physicians' dress style, although 85% of the adolescents surveyed did prefer that their physicians not "dress like them," and 78% felt that their physicians "dressed as a doctor should dress."²⁷

Studies also have been performed in emergency departments, where patients have little choice in their physicians and severity of illness is of preeminent concern. Colt and Solot¹⁸ did a cross-sectional survey of 190 emergency department patients and various specialists, family practitioners, surgeons, and emer-

gency physicians in a community hospital in Pennsylvania. Seventy-three percent of physicians and 43% of patients thought that physical appearance influenced patients' opinions of medical care. Again, patients were more tolerant of casual dress than were physicians, but both groups disliked excessive jewelry, prominent ruffles or ribbons, long fingernails, blue jeans, and sandals. The most liked dress item for both patients and physicians again was the name tag, followed by the white coat, but both were of lesser importance than either personality or a neat, clean appearance. Short hair and a shirt and tie edged out the visible stethoscope as desired elements of appearance. Neatness also was cited as of most concern in 2 other studies.^{14,28} In a study by Blondell et al,¹⁴ all patients commented on the physician's demeanor, and facial expression overrode concern about attire. The authors concluded with an advisement that while traditional conservative dress might not be necessary, it was important to wear a white coat, have an overall clean, neat appearance, and have a pleasant expression, thereby displaying confidence and concern. In a study by Friis and Tillis,²⁸ while most patients in 4 clinical settings maintained by the University of California, Irvine, Medical Center had no preference regarding attire, the majority did feel that neatness was moderately to very important.

A controversial piece of professional formal attire is the tie. Should it be worn as part of an attempt to make our patients predict our competence? In the above-mentioned studies, there was evidence to suggest an overall positivity for this accessory when it was part of a relatively formal look. In an interesting study designed to determine the effect of wearing a tie by physicians as the only variable of attire, 316 emergency department patients discharged from a community teaching hospital in Pennsylvania were prospectively followed up.²⁹ Physicians were randomly assigned by dates to wear a tie or not, their attire being similar in all other regards. No significant differences were recorded between groups, including patients' perception of their

physician's appearance. However, nearly 46 (30%) of 161 patients incorrectly identified their physician as wearing a tie when no tie was worn, and of 96 patients who thought they recalled their physician wearing a tie on the day when he was in fact not wearing one, 46 (48%) perceived it incorrectly. Patients were much more accurate when their physician was truly wearing a tie, with only 4 (4%) of 104 erring in their perception; the perception of the wearing of the tie was correlated with a positive impression of the physician's appearance. Wearing or not wearing a tie did not affect the patients' impression of their physician or the care they received, but patients did seem to prefer the appearance of physicians whom they perceived to wear ties.

In the pediatric emergency department, Gonzalez del Rey and Paul¹⁵ showed that emergency physicians' attire did not matter to most parents/guardians. However, when the parents or guardians were asked to choose among photographs of physician pairs in dress ranging from formal (white laboratory coat, tie, and dress shoes) to surgical scrubs with tennis shoes, clear preferences were evident: 75% preferred the formal attire and 84% chose the photographs of physicians who wore tennis shoes as the least preferred physician. However, the formal attire was preferred more by subjects visiting the emergency department between 7 AM and 11 PM than it was by those visiting between 11 PM and 7 AM. A majority (72%) of parents/guardians did feel that the physician they preferred most in the photograph might not be necessarily more capable than the other choices. Parents of children with surgical emergencies, however, were more likely to prefer physicians in surgical scrubs. Explanations of respondents who chose the picture of a physician in formal dress were "looks professional," "serious and experienced doctors," or "clean"; dislikes for the informally clad included "sloppy," "coming off the street," and "doesn't look like doctors." The most popular single items of formal attire were the laboratory coat (65%) and tie (54%), while tennis shoes were the least favored item (84%).

PATIENTS' ATTITUDES ON PROFESSIONAL ATTIRE: IT DOES NOT MATTER

A recent study in the dermatology literature reaffirmed patients' preferences for their physicians to be formally attired, just as in the many studies published decades ago,³⁰ but in 3 of the 31 studies that I reviewed, physician attire was shown not to affect overall patient satisfaction with care.^{16,19,31} In the first, out of Nottingham, England, a male anesthetist made a preoperative visit to each of 2 groups of patients and alternately dressed for the visit either in a suit and tie or in an open-necked shirt, jeans, and training shoes.¹⁹ While patient satisfaction was not influenced by the physician's attire, and words descriptive of professionalism and adjectives suggesting approachability were used equally by similar numbers of patients in each group, specific items of dress were "firmly" selected or rejected by the patients who were interviewed. Most desirable (90%) was a name tag, followed by a white coat (65%), polished shoes (62%), and short hair (57%). Largely disapproved were clogs (84%), earrings (64%), long hair (62%), jeans (70%), and training shoes (67%). Once again, older patients were more conservative in their choice of attire for their physicians.

The second study involved physicians and physician assistants in an emergency clinic setting in Springfield, Mass.³¹ In that study, health care providers wore a white coat with surgical scrubs on even days and a white lab coat with formal attire (shirt, tie, and slacks for men and a dress or blouse and slacks for women) on odd days. A questionnaire did not reveal any difference that was attire related for the providers' courteousness, concern for the patient's problem and comfort, or the medical skill and knowledge of the provider. The authors expressed the belief that attitude, mannerism, and professionalism of the treating physician have more of an influence on patient satisfaction than does physician attire.

The third study was performed in a university clinic in Japan, a country where communication only recently was recognized as a vital com-

ponent of the patient-physician relationship.¹⁶ In this questionnaire-driven study, which was the first in the Japanese-language literature to evaluate the effect of physician attire on the patient, patient satisfaction with the consultation was not influenced by whether the consultant wore a white coat or "private clothes." However, elderly patients and those seen by physicians who were wearing a white coat preferred the white coat to private clothes because of cleanliness, image of the physician, trust, and professionalism; reasons not to prefer the white coat included a relaxed relationship, friendliness, and equality.

CONCLUSIONS

It appears that the attire of the health care provider is important to patients across all lines of population and geography studied to date: young or old, child or parent, eastern or western, northern or southern. A neat, clean appearance, however, is more important than attire. Among professional apparel, the name tag and the white coat are most preferred by patients. In general, physicians are more conservative in their opinions about their attire than are their patients. Older patients especially, but individuals in all age ranges, tend to favor more formal dress; formal need not mean stiff and uncaring. There is no substitute for a gentle, concerned physician with an engaging, friendly, empathic demeanor. Is attire important? Yes! Is personality important? Yes. Everything is important!

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