



# Patients' Preference for Physician Attire:

## A Survey of Patients in Family Medicine Training Practices

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**BACKGROUND:** Conflicting evidence exists about how patients would like their doctors to dress. This is complicated by new evidence showing elements of common physician attire (white coat or ties) can be contaminated with pathogens.

**METHODS:** We conducted a survey on a convenience sample of adult patients in three academic primary care offices in South Carolina and Ohio during the summer of 2010. The survey asked about patient preferences for physician attire and how their doctor usually dressed. After a brief statement regarding evidence of microbial contamination of coats and ties, the preferences were reexamined.

**RESULTS:** A total of 432 patients participated in the survey. No clear preference was stated by patients, and patients' initial preference was not closely related to their own physicians' customary attire. After reading the statement about microbial contamination, a significant percentage of patients changed their preference to select categories that did not include a tie or a white coat and tie. This information was associated with a large shift in preference to having physicians wear dress shirts and slacks with no tie (from 16% to 41%).

**CONCLUSIONS:** Patients in these three academic family medicine practices did not show any consistent preference for their physicians' attire. However, providing information about potential microbial contamination of clothing was associated with a shift in patient preferences for physicians not wearing a tie and a white coat.

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The traditional physician attire of white coat and tie has become less common in many medical settings. Both changing customs of professional appearance and evidence that coats and ties may harbor contagious microbes have led several to reconsider what physicians should be wearing when seeing

patients. Many studies have looked to patients to be the arbiters of fashion in the office but with mixed results.<sup>1-8</sup>

Unfortunately, the variety of settings (inpatient versus outpatient), cultural differences in what is perceived to be appropriate attire, and the specialty area of the physicians

who were studied may limit the generalizability of these results to primary care practices. In addition, most of these studies were conducted in only one hospital or outpatient setting, leading one to wonder if the culture of the individual clinic and its influence on the patients who were attracted to that office informed patients' perceptions of what physicians should be wearing.

Additionally, while patient expectations have been used to help guide clinicians on what is expected in the office, patients are likely unaware of data about microbial infestations on common medical clothing. A cross-sectional study of the white coats worn by physicians to grand rounds at a large teaching hospital showed that 23% of coats were contaminated with *Staphylococcus aureus*, with 18% of these being Methicillin-resistant staphylococcus aureus (MRSA).<sup>9</sup> In a study of neckties done in a major teaching hospital in New York, 48% of all ties worn by health care providers carried harmful bacteria.<sup>10</sup> Another study showed that wearing a bow tie seemed to reduce contamination initially, but this reduction lasted only 3 days.<sup>11</sup> Concern about bacterial contamination of clothing led the British Medical Association to recommend that physicians stop

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wearing “functionless” articles of clothing, including neckties.<sup>12</sup> It is uncertain that patient perceptions might change if they were aware that certain clothing items have been shown to harbor organisms that could be detrimental to their health.

The purpose of this study is to examine patient preferences for physician attire in a network of family medicine offices geographically dispersed throughout the United States. In addition to examining individual patient preferences, this study also sought to see how closely patient preferences reflect the customary office attire of their own physician. Finally, we also wanted to determine if information regarding microbial contamination of physician clothing items such as ties changes patient preferences about doctors’ attire.

## Methods

### *Sample*

To address this question, a survey was conducted of patients in three family medicine outpatient offices affiliated with two academic departments of family medicine during the summer of 2010. Two of these offices were located in the Charleston, SC, area and separated by 21 miles; the third was located in Columbus, OH. The individuals participating constituted a convenience sample of adults between the ages of 18 through 70 who attended the clinic during a pre-designated 1-week time frame and could speak and read English and who had no evidence of cognitive impairment. Surveys were distributed to patients who met the entry criteria at the time that they registered for care at the clinic.

### *Data Collection*

The survey asked participants to indicate which type of dress they preferred for their provider. Forced choices included: white coat and tie (if male) or dress (if woman), white coat but no tie (male) or pants (woman), formal attire including tie (male) or dress (woman) without white coat, casual attire such as polo shirt and khaki pants, surgical

scrub dress, and a statement indicating it doesn’t matter as long as the physician is neat. Following that question, respondents were asked to indicate what their own physician usually wore. In addition to the above choices, patients were allowed to indicate that they did not have a usual provider.

Following those questions and located on the reverse side of the survey, a brief statement was provided explaining that some studies had found white coats and ties to be colonized by harmful bacteria. This statement read: “Recently, studies have shown that harmful bacteria are often found on the ties and white coats of doctors. While it is uncertain whether these can be spread to patients, some groups have suggested that doctors should not wear these when seeing patients.” With this information provided, respondents were then asked if their preference for their doctor’s attire changed and what they would not prefer their doctor to wear.

In addition to these attitudinal items, respondents were also asked about their age, gender, length of time in the practice, and insurance status.

### *Data Analysis*

Completed questionnaires were collected at the conclusion of each visit, and all data were entered into an Excel spreadsheet using a pre-tested data format. Comparisons of categories were performed using chi-square with a *P* value of <.05 considered statistically significant.

### *Human Subjects Review*

This study was reviewed by the Medical University of South Carolina Institutional Review Board and approved as exempt.

## Results

A total of 423 surveys were returned at the three sites that participated. The characteristics of the respondents are shown in Table 1. While two thirds of the respondents were women, there was nearly equal

distribution of the sample based on age, time in the practice, and insurance status.

Table 2 shows patients’ preferences for physician attire and how patients say their physician usually dresses. As a group, patients clearly had no clear preference for any particular style of dress. Only 44% selected the two categories that include a white coat, and 33% selected the two categories that included more formal attire that included a tie for men and dress for women. But no single category appeared to be highly preferred, with nearly equal percentages of patients choosing among the five highest rated selections. The only attire that appeared to be unfavorably viewed was a smock or surgical scrubs, with only 6% preferring that option.

When we looked at what patients said their physicians usually wore, the results were similar to patient preferences, with no single category gathering more than 23% of responses. However, when we compared what patients desired and what their physicians usually did, we found that there was fairly poor agreement. For example, among patients who wanted their doctor to wear a white coat (43%), only 55% did. Similarly, of those patients who selected categories indicating their preferred less casual attire for physicians, only 32% stated that their physicians dressed that way. Thus, patient preferences did not seem to be driven by their own physicians’ customary way of dressing. In fact, at least half the patients seemed to prefer their physician dress differently—no matter how they dress now!

To explore preferences on attire further, we looked at whether patient demographics were associated with respondent’s choices. Examination of dress preferences based on patient characteristics found no differences in preference based on patient age or time in practice. Patient gender was associated with a difference in preference but only in the percentage of patients who preferred scrubs where male patients were significantly less

**Table 1: Characteristics of the Survey Respondents**

	n (%)
Gender	
Female	284 (67%)
Male	107 (25%)
Did not specify	32 (8%)
Age	
18–30 years old	101 (24%)
31–45 years old	84 (20%)
46–60 years old	120 (28%)
Age over 60	96 (23%)
Did not specify	22 (5%)
Insurance status	
Medicare	107 (25%)
Medicaid	83 (20%)
Privately insured	180 (43%)
No insurance	21 (5%)
Did not specify	32 (8%)
Years seeing physician	
Less than 1 year	99 (23%)
Between 1 and 5 years	116 (27%)
More than 5 years	167 (39%)
Did not specify	41 (10%)

likely to prefer a physician in scrubs compared to women (1% versus 7%,  $P=.02$ ). Finally, insurance status was related to preferences in two areas. Patients with Medicaid (28%) and no insurance (38%) were more likely than those with Medicare or private insurance (16%,  $P=.05$ ) to prefer that physicians wear white coats with ties (or a dress). Additionally, patients without insurance (33%) and, to a lesser extent, those with private insurance (29%) were more likely than those with Medicare or Medicaid (17%,  $P=.01$ ) to prefer physicians in more casual dress but with a white coat.

Finally, we explored whether the information about microbial contamination of coats and ties changes

patients' opinions about physician attire. After reviewing this information, 45% of those who initially preferred a white coat or tie stated that their opinion had not changed, while 41% said that it had and 13% were unsure. However, when asked to indicate their preferences using the same categories as initially presented, there were significant decreases in the categories that include white coat and ties or more formal attire that included ties while the category of less formal attire without a white coat increased (Table 3). The category that included white coats without ties also decreased, but this was not statistically significant.

## Discussion

The results of this study suggest that there is no dominant preference among patients in family medicine practices about how their physician should dress. This was evidenced by nearly equal proportions of patients choosing five different attire categories. While we initially believed that patients would prefer the attire that their usual doctor adopted, this was not necessarily true. In only about 30%–50% of cases did patients' preferences match what their doctor wore.

These data are consistent with observations from other outpatient settings. In one study in Wales of patients seen in otolaryngology outpatient settings, patient preferences were about evenly split, with 49% of respondents preferring a photograph of a junior physician in shirt and tie and 40% preferring the picture of the same physician in scrubs.<sup>4</sup> One study in a Veteran's Administration primary care clinic showed that a large majority of patients (76%) preferred physicians wearing professional attire with a white coat rather than surgical scrubs (10%) or business dress (8.8%).<sup>5</sup> A survey done of patients in a general medicine/endocrinology clinic in an Irish tertiary care center also found that white coats were preferred over other types of clothing.<sup>6</sup> In a study in an urgent care center, patients preferred physicians wear a white coat but were equally happy with this coat being over professional attire or scrubs.<sup>7</sup>

In contrast to these studies, Scottish patients overwhelmingly (76%) preferred that their ENT physician not wear a tie.<sup>8</sup> A study in an obstetrics and gynecology outpatient clinic that used photographs of clinicians in a variety of attires found that patients showed no difference in their comfort level or preference for physicians based on dress but that physicians dressed in scrubs with a white coat were perceived to be the most competent.<sup>13</sup> Likewise, a study conducted in an obstetrics and gynecology teaching clinic that randomized

**Table 2: Patients' Preferences for Physician Attire and Their Physicians' Actual Customary Attire**

	What Patients Would Like Physician to Wear	What Their Physician Usually Wears	Concordance Between Preference and Actual Dress
White coat, dress slacks, and tie (if male) or dress (if female)	83 (20%)	98 (23%)	36/70 (51%)
White coat, dress slacks, and no tie (if male)	98 (24%)	51 (12%)	30/85 (35%)
Dress shirt and slacks (with tie if male) or dress (if female)	56 (13%)	90 (21%)	31/51 (61%)
Dress shirt and slacks (no tie if male)	66 (16%)	67 (16%)	19/48 (40%)
Smock (scrubs)	27 (6%)	14 (3%)	6/22 (27%)
Polo shirt, neat slacks	65 (16%)	24 (6%)	12/53 (23%)
Don't care as long as he/she is neat	21 (5%)	—	N/A
Do not have usual doctor	—	77 (18%)	N/A

**Table 3: Patient Preferences Before and After Information About Microbial Contamination of Coats and Ties**

	Preference Before Additional Information	Preference After Information About Potential Contamination	P Value
White coat, dress slacks, and tie (if male) or dress (if female)	83 (20%)	46 (11%)	<.001
White coat, dress slacks, and no tie (if male)	98 (24%)	82 (19%)	.18
Dress shirt and slacks (with tie if male) or dress (if female)	56 (13%)	30 (7%)	.003
Dress shirt and slacks (no tie if male)	66 (16%)	172 (41%)	<.001
All others	113 (27%)	93 (22%)	.11

physicians to either business attire, scrubs, or casual clothing each week showed no difference in patient satisfaction scores based on physician attire.<sup>14</sup> Among patients in a psychiatric setting, 97% of patients felt that their psychiatrist should not wear a white coat. Psychiatrists were of a similar opinion.<sup>15</sup>

Even podiatrists have considered this issue. A study of patients from a private podiatric practice and hospital clinic showed that 68% of patients preferred their podiatrist to wear professional attire, and 96% felt a white coat inspired the most confidence.<sup>16</sup>

In contrast to the outpatient setting, patients in the hospital appear

to have clearer preferences that are supported by multiple studies. A study of preferred hospital attire in England showed that patients had the most confidence in physicians who were wearing a white coat as opposed to either "professional casual" attire. Casual attire inspired the least confidence of the six choices presented to patients.<sup>1</sup> In a study asking about the appearance of surgeons in the hospital, white coats also were clearly preferred by most of the public.<sup>2</sup> Finally, based on patient satisfaction scores after discharge from a general medical service in Australia, Nair and colleagues found that physicians who had two out of four

critical items of formal attire (identified as dress pants, dress shirt, tie, or white coat) inspired the most satisfaction. The quantification of this minimal formality necessary to inspire confidence they termed the NND (number needed to dress).<sup>3</sup>

The variability of these results suggest that patient preferences are likely to be culturally specific, not only reflecting the culture of the region but also of the type of physician. For surgical physicians, for example, scrubs may be acceptable to patients who may be accustomed to seeing these doctors in similar outfits in a hospital setting. Likewise, patients cared for in a veteran's facility may take comfort from the uniformity of



their health care providers if they are all dressed the same in white coats. These results also point out the difficulty in extrapolating findings from one health care facility or specialty to another.

This study also found that patients who have been provided information about clothing contamination with bacteria prefer physicians not wear white coats or ties. Currently, information about microbial contamination of physician clothing is limited to the inpatient setting. These findings prompted the British National Health Service to ban ties and long-sleeve garments for physicians working in the hospital setting.<sup>17</sup> There are no data on clothing contamination in the office setting, and up until the present no recommendations have been made for physicians to modify their attire because of fears of contamination. However, if data do show that physician attire in the outpatient setting can harbor pathogenic bacteria, our data indicate that patients' current preferences would change based on that information.

This study should be interpreted in light of the limitations based on its design. It was conducted in a training setting where there already is diversity in physician attire. In settings where physician attire is proscribed, patient preferences may be more closely linked to customary physician attire since patients may perceive that their doctors dress the "correct" way. Second, while our survey asked patients to indicate a preference, we had no way of knowing the intensity of their preference. Some patients may have been adamant about their physician wearing a white coat, for example, while those who preferred no white coat might not have felt as strongly. In this example, patients who encounter a physician who is not wearing a white coat might be highly

dissatisfied while those with a weak preference for no white coat might not care if their physician wears one. However, our finding that most patient preferences did not match what their physicians currently wore suggests that attire is not a major factor driving patient satisfaction or selection of their physician.

Additionally, because of the nature of the sampling, we have no information on nonrespondents so we cannot state with authority that our sample is representative of the entire population of patients who are served by these practices. However, the diversity in the age groups, insurance status, and years in the practice would indicate that it is unlikely that this is a skewed sample. Similarly, this study was limited to patients in three teaching practices; while the practices were drawn from two different regions of the country, they may not be representative of all family medicine offices or even those associated with training programs.

In summary, this study shows that in these family medicine settings, patients did not have a uniform preference for any particular physician attire. However, when given information about microbial contamination of ties and coats, patients' preferences shifted away from more traditional attire and toward physicians wearing a dress shirt and slacks without a white coat or tie.

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