

MORNING REPORT: PART II

IS THE BOW TIE A LESS FORMIDABLE FOMITE THAN THE NECKTIE?

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Today's physicians and medical students make decisions about their attire in a variety of clinical settings every day. One factor likely affecting their choices is the perception that patients care how their doctors dress. In this article, we review the literature on patient preference for physician attire. For doctors making a choice in neckwear, another consideration is the concern that neckties are a potential source of health-care-associated infections. Bow ties, a less common neckwear style, might represent an important alternative to the necktie.

The largest study to date to evaluate patient preference for physician attire was published in 2018 and involved more than 4,000 adult patient responses from a wide geographic area of the United States.¹ This survey of male and female patients (mostly over age 55) included photographs of both male and female physicians dressed in seven forms of attire. A composite of patient preferences for their doctor's appearance was calculated across five domains: knowledgeable, trustworthy, caring, approachable, and comfortable. The attire in the photographs ranged from casual to formal (with or without white coat). The three more formal attires depicted by a male model included a necktie, though this was not noted as a key component of the study. Bow ties were not included in this study. Overall, 53% of patients surveyed replied that physician attire was important to them. Formal attire with a white coat was the preferred uniform for a physician in both the hospital and the primary care clinic. This study highlights that despite changes in fashion across society and the rise of "business casual," patients still have a preference for more traditionally formal dress from their doctors.²

Neckties, given their lack of routine washing and potential for inadvertent occupational contact, could be a significant fomite for doctors in the hospital. A systematic review published in 2018 evaluated the available literature on this topic.³ These authors included and

analyzed six studies in their review, but were unable to perform a meta-analysis due to the lack of robust data. The authors concluded that neckties worn by doctors might be contaminated or colonized with nonpathogenic bacteria, but that limited evidence exists that they are colonized by more virulent bacteria or are able to transmit bacteria in a controlled experimental setting. These authors found insufficient evidence to support a policy restricting neckties, such as the United Kingdom's "bare-below-the-elbow," dress code program.³

One study cited by this systematic review, a 1993 multi-center randomized double-blind crossover trial in the United Kingdom⁴, addressed bow ties specifically. The authors postulated that bow ties were more hygienic from an infectious diseases standpoint as compared to neckties. They recruited physicians from two teaching and three general hospitals in Wales and England. Study participants wore one tie for three days in one week and the other tie for the same period in a second week. A sterile saline soaked swab was taken from the tip of the participants' ties at the end of the first and third working day and assessed for bacterial growth. Using a semiquantitative system, the specimens were classified if there was bacterial contamination or not, but the type of bacterial growth was not analyzed. Bow ties were significantly less contaminated on the first day (which was statistically significant); however, on the third day there was no difference in the level of contamination. The results were limited by the small number of physicians who participated ($n = 12$) resulting in a total of 54 swabs that were analyzed.

Intuitively, it would seem that bow ties are likely more hygienic and less likely than neckties to transmit organisms, but the bow tie cannot be strongly recommended over the necktie based on this study. Further studies using a larger physician sample size and more advanced microbiologic techniques might provide addition-

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al data to support the bow tie over the necktie. In our experience, tying bow ties is not particularly challenging, and patients, colleagues, and staff tend to find them memorable. In terms of infection prevention for patients, adhering to standard precautions such as hand washing is likely to play a larger role than one's choice in neckwear.⁵

While the bow tie is sometimes perceived as a traditional or overly formal neckwear choice, it has been embraced by diverse communities. For example, the Ties to Love™ campaign promotes bow ties on Fridays in support of the gender non-conforming and trans community.⁶ We would encourage the use of bow ties instead of neckties for physicians who are intrigued by the potential for infection reduction, but also understand that a patient's satisfaction might be linked to his/her doctor's attire.

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The authors in formal attire with white coats (and bow ties).