

# Virtual Mentor

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## History of medicine

### The doctor's white coat—an historical perspective

by Mark S. Hochberg, MD

The white coat has served as the pre-eminent symbol of physicians for over 100 years. A child's earliest memory of a doctor is the person in the white coat. Patients expect to be treated in doctors' offices, hospitals and clinics by an individual wearing white. At virtually every medical school, the first symbolic act is the "White Coat Ceremony" originated by Arnold P. Gold, MD. This is the ceremonial "cloaking" of a doctor-to-be as she or he embarks on a medical career [1, 2]. So you may be surprised to learn that prior to the late 19th century doctors wore not white but black garb.

And not all doctors wear white coats today —pediatricians and psychiatrists eschew it—and not all professional societies expect their physicians to do so. Patients in Denmark and England do not expect their physicians to wear white; those in Sweden, Finland and Norway do. Studies show that younger patients prefer a doctor not to wear white, while older patients prefer the opposite [3].

Why do expectations about physician use or avoidance of a white coat differ? And how did the white coat come to represent physicians in the first place?

The word *candor* is derived from the Latin *candidus* which means white. In fact, the foundation of all professional societies is candor or truth. The term "candidate" comes from the fact that Romans seeking public office wore the white togas. The depiction of justice over the millennia has been a statue or painting of an individual clothed in white. The converse, of course, is evil or death depicted in black.

Physicians dressed themselves in black and were painted in black garb until the late 19th century. Black attire was, and is, considered formal (e.g., today's tuxedo). Consequently until about 1900, physicians wore black for their patient interactions since medical encounters were thought of as serious and formal matters. Clergymen also dressed in black, which indicated the solemn nature of their role in encounters with parishioners. An additional or alternative possibility for the dark garb might be that until the late 19th century seeking medical advice was usually a last resort and frequently a precursor to death. Until the last third of the 1800s, an encounter with a physician rarely benefited the patient. In fact, up to that point, virtually all of "medicine" entailed many worthless cures and much quackery [4].

Thomas Eakins created what is arguably one of America's greatest paintings in 1875 entitled "The Gross Clinic" (figure 1). It depicts a scene from Jefferson Medical College's amphitheater in Philadelphia showing Dr. Samuel Gross and his assistants—all dressed in black formal attire—performing a leg operation on a young man.

At about the same time, the idea of antisepsis was taking hold in Europe. It was Joseph Lister's contribution that truly moved medicine from home remedies and quackery to the realm of bioscience. For the first time, reproducible results helped researchers better understand how to prevent bacterial contamination.

Remarkably this progression was documented in Eakins' 1889 operating theater masterpiece entitled "The Agnew Clinic" (figure 2) from the University of Pennsylvania. D. Hayes Agnew, MD, can be seen in a white smock, with assistants also wearing white, suggesting that a new sense of cleanliness pervaded the environment. The patient is swathed in white sheets and the nurse has a white cap. Similarly, an 1889 photograph from the Massachusetts General Hospital archives shows surgeons in short-sleeved white coats over their street clothes.

Shortly after the Agnew painting, the Flexner report (1910) led to the closure of a large number of borderline medical educational institutions and the restructuring of medical education around laboratory science. Coupled with William Osler's 1892 textbook of medicine and Walter Reed's observation of the spread of malaria by mosquitoes during the construction of the Panama Canal, the value of cleanliness and antisepsis was firmly fixed as the core of medical science.

At the end of the 19th and the beginning of the 20th centuries, when medicine became the truly scientific enterprise we now know, the "whiteness" or "pureness" of medicine became reflected in the garb of physicians and, interestingly, nurses [5]. Up until that time nuns in their black habits functioned as nurses, largely in almshouses. At the turn of the 19th century the black habits of the religious nursing orders became white. In fact to this day nurses in England are called sisters, because of their religious origins. Our society has carried this symbol of whiteness to the marriage altar where brides traditionally wear white as a symbol of their purity.

In the 20th century, the white coat continued as the symbol of medical authority and respect as advance upon advance firmly established the patient-doctor relationship as a beneficial encounter. Probably the greatest development of medical science in the 20th century was the advent of antibiotics toward the end of World War II—the completion of Lord Lister's dream that bacteria could be successfully overcome. For the first time pneumonia, appendicitis, an infected blister or a toothache no longer condemned one to death.

A depiction of a physician in a white coat is indeed the symbol of medicine, eclipsing the black bag or the stethoscope [3]. But the image of the white coat has also become so intimidating that pediatricians and psychiatrists generally choose not

to wear it in order to reduce anxiety on the part of their patients. The term "white coat syndrome" is used to describe unrepresentative high blood pressure recordings due to a patient's anxiety upon seeing a doctor in a white coat.

Many patients now view the white coat as a "cloak of compassion" [1] and a symbol of the caring and hope they expect to receive from their physicians. Conversely, students beginning their studies in medical school see their education and role as future physicians as aspiring to be worthy of the long white coat. Medical school must give students the scientific and clinical tools to become doctors. Just as importantly, the white coat symbolizes the other critical part of students' medical education, a standard of professionalism and caring and emblem of the trust they must earn from patients. The White Coat Ceremony, as envisioned by Dr. Gold, welcomes those embarking on their medical careers to the community of physicians by giving them this powerful symbol of compassion and honor. It also gives them a standard against which they must measure their every act of care to the patients who trust them.

### References

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### Related article

[The White Coat Ceremony](#), April 2002.

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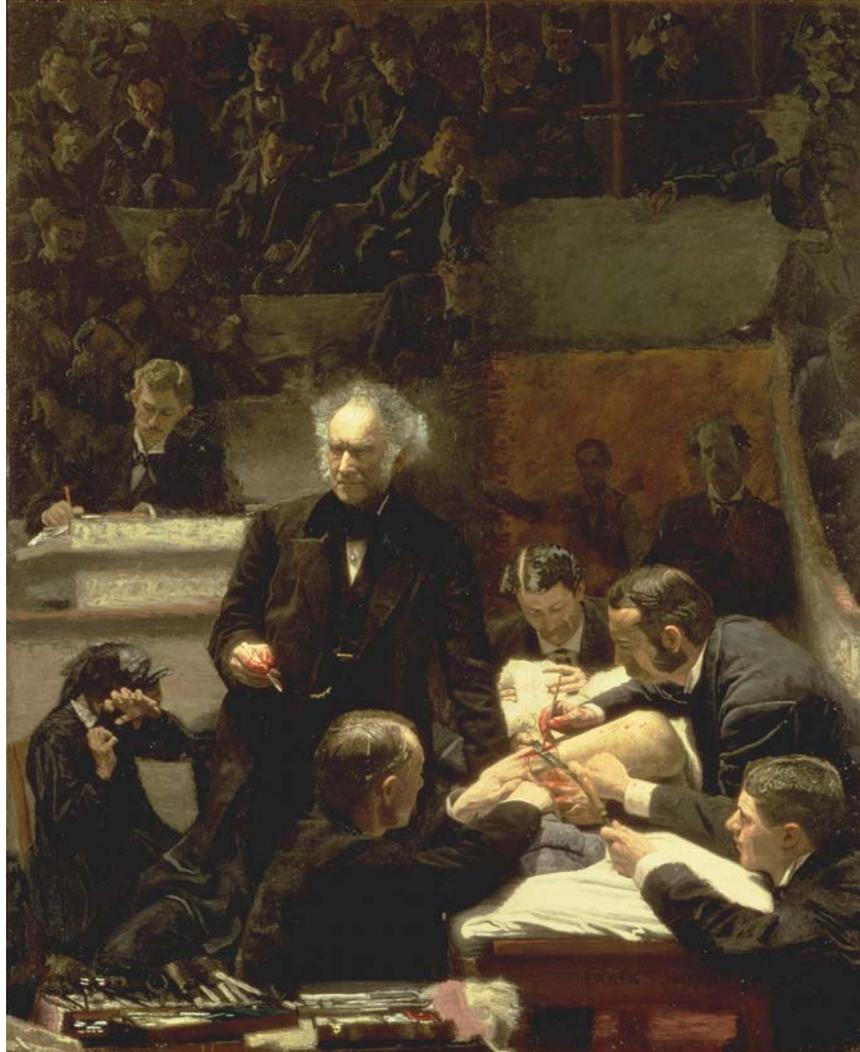


Figure 1 “The Gross Clinic,” by Thomas Eakins (1875)  
Courtesy of the Philadelphia Museum of Art and Pennsylvania Academy of the Fine Arts

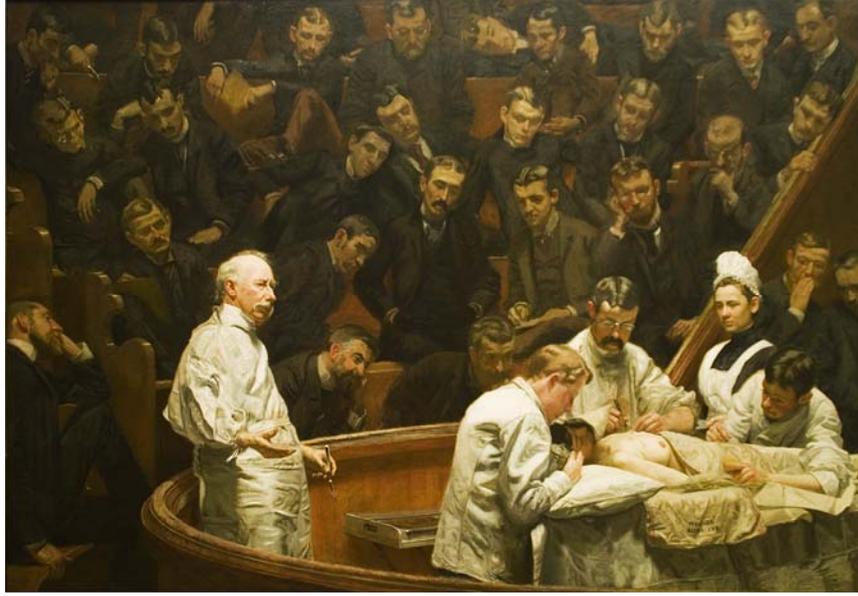


Figure 2 “The Agnew Clinic” by Thomas Eakins (1889)  
Courtesy of the University of Pennsylvania Art Collection

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