



# An Evaluation of Exemplary Characteristics of Mythological Figures for Modern Physicians

Hayriye Dilek Akdoğan<sup>1</sup>

<sup>1</sup> Department of Medical Education, Bakırçay University Faculty of Medicine, Izmir, Türkiye.

ORCID: 0000-0001-6864-4839

**Hayriye Dilek Akdoğan, M.D., Ph.D.**

*Assistant Professor, Department of Medical Education, Bakırçay University Faculty of Medicine, Izmir, Türkiye.*

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**ABSTRACT:** *The process of medical education is a multidimensional educational process that aims not only to impart knowledge but also to foster the development of attitudes and behaviors essential for training “good physicians”. One of the most significant guideline texts describing the qualities of “good physicians” is the World Health Organization’s concept of the “five-star doctor”. According to the World Health Organization, the five essential attributes of a five-star doctor are: Care-provider, Decision-maker, Communicator, Community leader, and Manager.*

*The aim of this review is to explore whether historical and mythological figures can be utilized as references for the qualities expected in a “good physician,” and to identify which characteristics of these figures might serve as guiding examples for modern physicians. In this article, major mythological figures related to medicine — such as Asclepius, the God of Medicine and Healing; Asclepius’s children; the serpent-entwined staff of Asclepius; and the symbolic meanings of the serpent in its historical context — are examined. Viewing history and mythology from a different perspective reveals that, as in the World Health Organization’s model of the five-star doctor, numerous professional, ethical, and vocational values that define the qualities of a good physician are embodied in historical and mythological figures.*

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**KEYWORDS:** *Good physician, Five-star doctor, Medical education, Mythology, Professional and ethical values.*

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## I. INTRODUCTION

The medical education process is a multidimensional and complex educational process that aims not only to impart knowledge and skills but also to develop the attitudes and behaviours of a “good physician” [1]. Educational processes that lead to changes in attitudes and behaviours also include values education and the instilling of professional and ethical values [2]. Various pioneering and guiding texts have been proposed for the characteristics of a good and qualified physician. The five characteristics of a five-star physician published by the WHO in 1993 are among the most important of these [3]. This text lists the five characteristics of a five-star doctor

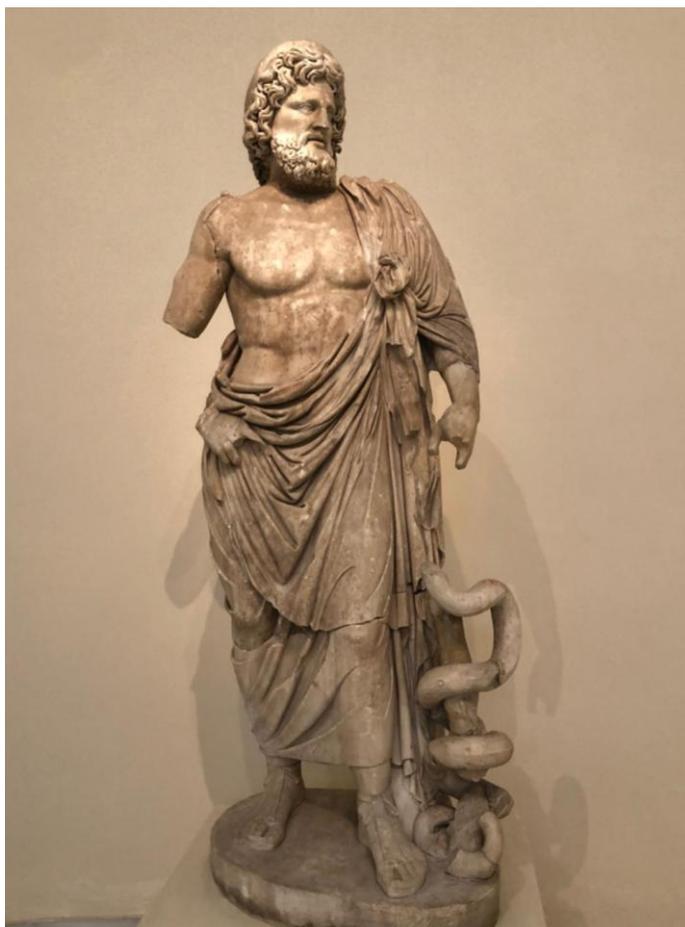
as follows: Care provider, Decision maker, Communicator, Community leader and Manager. The concept of the Five-Star Doctor was defined by Dr Charles Boelen, who was working at the World Health Organisation at the time [4]. In summary: 1- A Care-provider who treats the patient holistically as an individual and an integral part of their family and community, providing quality, comprehensive and personalised care within a trusting relationship. 2- A Decision-maker who makes sound judgements about the use of treatments, taking into account the person's wishes, ethical values, cost-effectiveness, and the best possible care for the patient. 3- A Communicator who can promote healthy lifestyles through effective explanation and advocacy, thereby empowering individuals to improve and protect their health. 4- A Community leader who has earned the trust of those they work with, can reconcile individual and societal health needs, can advise groups of people, and can take action on behalf of the community. 5- A Manager who works harmoniously with individuals and organisations, uses health data appropriately, and can meet the needs of patients and communities on an individual basis.

It is stated that ancient gods of health (Apollo, Asclepius, and others), mythological figures, and symbols influence the conceptualisation, socio-cultural expression, professional values, and ethical practices of modern medical science. Mythological figures permeate modern practices with their socio-cultural, symbolic, and ethical expressions, while also preserving respect for rational action and practice [5].

The aim of this study is to explore whether historical and mythological figures can be utilised in teaching professional, ethical, and medical values regarding the characteristics expected of a “good and qualified physician”, and which of these figures can serve as guiding principles for modern era physicians. This article will examine the primary mythological figures related to medicine: Asclepius, the God of Medicine and Health; Asclepius’ children; Asclepius’ staff entwined with a snake; the snake in its historical context; and the meanings these symbols represent. Thus, will attempt to reveal which aspects of historical and mythological figures can serve as examples for today’s physicians.

### **Asclepius**

One of the oldest and most important figures in mythology is Asclepius, the God of Medicine and Health (Fig. 1) [6]. The first source to mention Asclepius is Homer's Iliad, written in the 8th century BC [7]. Here, Asclepius is mentioned as the father of two physicians, Machaon and Podalarius, who participated in the Trojan War (ca. 1300 BC), and as a “perfect physician”. In the works of the ancient Greek poet Pindar, in the 5th century BC, Asclepius is referred to as the son of Apollo (god of healing, truth, and prophecy), one of the Olympian gods, and the mortal princess Coronis [8,9]. After his birth, Apollo entrusted his son to Chiron, a centaur, to raise him. Chiron trained many heroes, especially Asclepius and Achilles, in medicine, surgery, morality, virtue, and music. Thus, Asclepius received an excellent education [6,10]. Over time, a cult formed around him, and he was deified through mythological stories about him. In Hesiod's myths (ca. 700 BC), Asclepius is presented as a physician who learned not only surgery but also how to make medicine for patients, find healing in plants, protect patients from disease, cure them, and even raise the dead. According to the work of the ancient poet Pindar (5th century BC), the god Hades saw these actions as an encroachment on his authority and complained about Asclepius to Zeus. Asclepius dies from a thunderbolt sent by Zeus as punishment for reviving the dead [9,11].

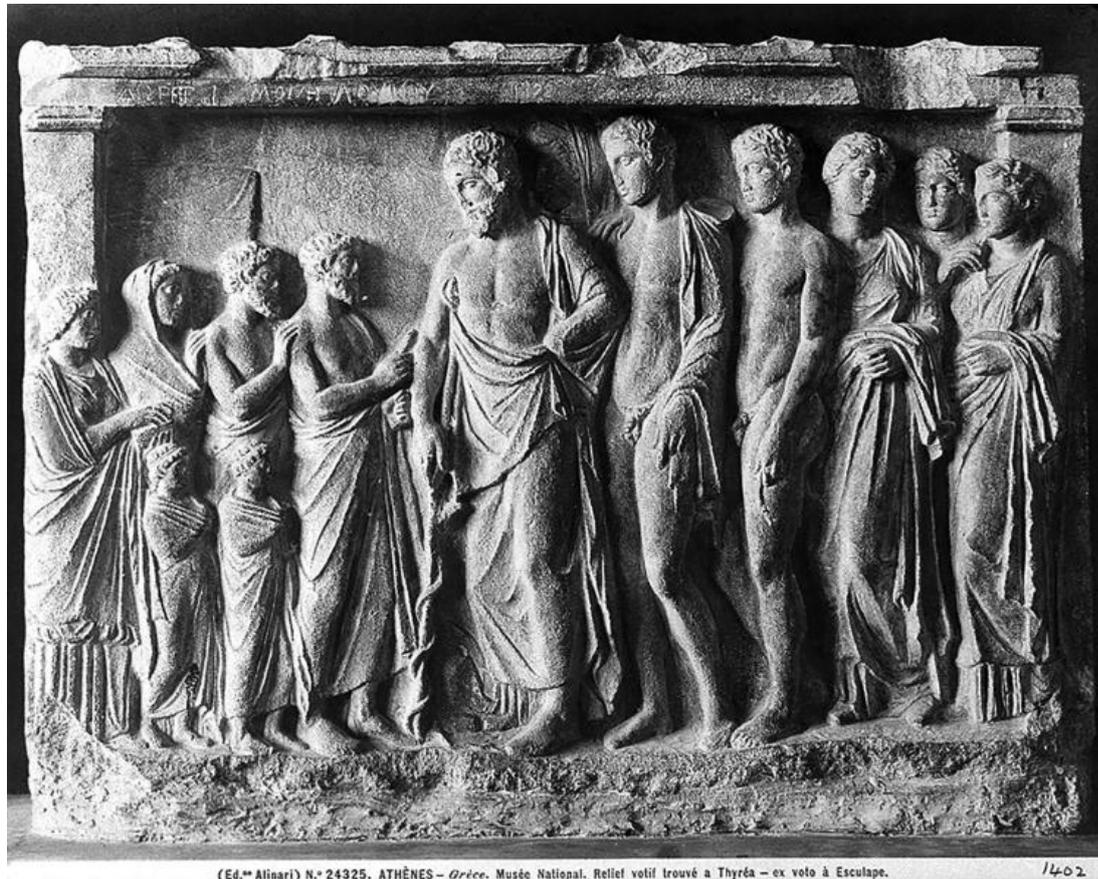


**Figure 1:** Asclepius, God of Medicine and Health in mythology.

Despite the existence of numerous gods and goddesses associated with health in mythology, such as Apollo, Artemis, Hera, and Leto [12]. One of the most important reasons for Asclepius' popularity, the fact that people sought his help for centuries, the construction of ancient hospitals named after him (Asklepeions), and the emergence of priest-physicians as his followers is that he was half-god, half-human. His mother was mortal, making him a mortal god, and indeed, Zeus had killed him. This situation caused people to feel close to Asclepius. He was not unreachable because he was not on Olympus and could be reached at any time [13]. In modern terms, this situation corresponds to a doctor who is a good communicator and care-provider, which are good physician characteristics. Another reason was that Asclepius was not born a god or a god of health like the other gods. After receiving a good education, he became a physician and surgeon and then began to heal. This brought him to a position of respect in the eyes of the people [11]. Asclepius was the healer of all people, not just the nobility or aristocracy, and was always ready to provide healthcare. Thus, he became a beloved figure for all people, almost a folk hero [6]. From a modern perspective, this emphasises the social aspect of medicine and an egalitarian approach to health from a social and economic standpoint. Asclepius became a communicative and egalitarian figure, accessible to all segments of society without discrimination. These correspond to the five-star physician characteristics of “Care-provider”, “Decision-maker”, “Communicator”, and “Community leader” physician.

### The Children of Asclepius

According to mythology, Asclepius married Epione, the goddess of pain relief, and had nine children (six daughters and three sons). The secrets of medicine were passed on to his children by Asclepius (Fig. 2) [14].



**Figure 2:** Asclepius and his children (Asclepius, his sons Podalirius, Machaon, and three daughters), relief dating to circa 470-450 BC, National Archaeological Museum of Athens, Greece (<https://iif.wellcomecollection.org/image/L0003119EA/full/full/0/default.jpg>).

### Hygieia

Hygieia is the goddess of health, cleanliness, sanitation, and hygiene (Fig. 3). Her name is the origin of the word "hygiene" [15]. While her father Asclepius healed the sick, his daughter Hygieia ensured protection from disease and a healthy life. Hygieia's mission emphasised the importance of cleanliness and hygiene in preventing disease [14]. Hygieia's role corresponds to preventive medicine today [7] and fits the "Care-provider" heading in the five-star doctor definition.



**Figure 3:** Hygieia, the goddess of health, cleanliness, sanitation, and hygiene, daughter of Asclepius.

### **Machaon and Podalirius**

Machaon, the eldest son of Asclepius and the most famous of his children, is the god of surgeons (Fig. 2). “Machaon” means a warrior and a person who treats with surgical skills. Ancient texts mention that Asclepius taught the basic principles of medicine to his two sons. In Homer's Iliad, it is written that Asclepius’ two sons, Machaon and Podaleirius, participated in the Trojan War (approximately 1300 BC), with Machaon being both a warrior and a surgeon, and Podaleirius being a physician (Hom. Il. 2.729-733). Machaon became synonymous with traumatology and surgery in ancient Greece [8].

Podalirius, the god who healed unseen evils, participated in the Trojan War alongside his brother Machaon (Fig. 2). In Homer's Iliad, Podalirius is referred to as a “physician”. In this sense, just as Machaon is the father of surgeons, Podalirius, who was particularly skilled in diagnosis, is the father of internists [8]. Both Machaon and Podalirius are prototypes of all physicians working under difficult conditions. Physicians perform to the same standard under all circumstances and pressure, including war, epidemics, natural disasters, and nuclear attacks. Machaon and Podalirius are equivalent to “Care-provider” and “Community leader” in the five-star doctor definition.

### **Aegle, Iaso, Aceso, Meditрина, and Panacea**

Aegle is the goddess of natural beauty, and her name derives from the word “Aegle”, meaning “Brightness” or “Glory”. It is said that the origin of this name comes from the beauty possessed by the human body when healthy. On the other hand, Iaso is the goddess of healing from illness in Greek mythology. Aceso was the goddess of the healing process. She is also the goddess who heals wounds [7,8]. Meditрина is the goddess of long and healthy life. She is the goddess of healthy and long life. Ancient sources also state that Meditрина was responsible for drug therapy [15]. Panacea was the goddess responsible for soothing all kinds of pain, medicinal plants, and natural treatments. Panacea means “cure-all” [15]. The names and missions of their daughters reflect a specific subset of the concept of “health” [14]. Epione, wife of Asclepius, is also the goddess of alleviating pain and soothing suffering [8,15]. The original Hippocratic Oath begins as follows: “I swear by Apollo, Asclepius, Hygieia, and Panacea, and by all the gods and goddesses, that I will fulfil the following Oath to the best of my ability and judgement...” [15].

Asclepius’ daughters and wife are associated with concepts related to the healing period, such as healing processes, wound healing, medicinal plants and natural treatments, and pain relief. Furthermore, we observe that the modern understanding of health preservation, development, and maintenance was already present in ancient times through Asclepius’ daughters.

### **Telesphorus**

Telesphorus, the god of healing (convalescence), is the god who bestows energy and healing power. Telesphorus was the god of the convalescence period and was depicted as a small human figure wearing a large headdress. Telesphorus was the youngest son of Asclepius. He is thought to have emerged in the cult of Asclepius in Pergamon, where a temple dedicated to him existed, towards the end of the first century AD. This child god figure, whose name means “to heal, to rise again” in Greek, was included in the Roman pantheon due to his prevalence in the Greco- Roman period. He was believed to give energy to patients during convalescence [7,16]. This effect may be related to the psychological and placebo effects seen today. Additionally, in terms of the five-star doctor definition, he fits the description of a “Care-provider” physician who takes a holistic approach to his patients.

### **Asclepius and His Staff**

Asclepius is depicted with a staff entwined with a snake (Fig. 1). The symbol or emblem of medicine has been known since ancient times as a snake entwined around a staff [17]. Asclepius never leaves his staff behind; wherever he goes, he takes it with him and leans on it for support when tired [18]. In this depiction, a bearded, trustworthy, wise man, the staff, and the snake occupy an important place. The staff is made of wood and is a modification of the ancient tree of life, believed to grant eternal youth. With his staff in hand, Asclepius projects an image of being ready for action at any moment, mobile and dynamic [6]. With his staff in hand, Asclepius embodies the characteristics of being a “Communicator”, “Community leader”, and “Manager” as defined in the five-star doctor description, as well as being wise, trustworthy, and having earned the trust of patients.

### **Snake**

The snake is an animal that features in the mythology of almost every culture. From the earliest records of civilisation and history, it is known that the snake played an important cultural role as an enigmatic creature [19]. Due to its shedding of skin, the snake has been a being that evokes immortality but is feared and respected for its deadly venom. Since the earliest periods of history, communities observing snakes and their nature have feared this dual nature and, at the same time, attributed sacredness to it because of this fear. This fear of the snake transformed respect for it into worship [19,20]. In the mythological period, the snake was considered a sacred creature due to its unique characteristics, such as its ability to move quickly despite not having legs like other animals, and its ability to live above ground, underground, and in water. In many civilisations, the snake has been associated with health, medicine, wisdom, power and eternal life. In the mythologies and legends of ancient societies, the snake was considered a symbol of eternal life because it shed its skin every year and rejuvenated

itself [20,21]. The history of man's relationship with snakes has brought with it disgust, hatred and fear, admiration, curiosity and even idolisation. The totem of the city of Thebes (Thebai) in Egyptian civilisation, from which the word 'medicine' originates, is the snake, meaning that snakes were worshipped here [22].

The characteristics of snakes are, interestingly, the characteristics expected of a good and qualified physician. Characteristics such as the snake's ability to keep its eyes open, move swiftly and quickly, and be attentive are similar to the characteristics expected of a good physician, such as the ability to make quick and correct decisions and to always be attentive [13]. The fact that the snake carries both its venom and its antidote within itself, its shedding of skin associated with renewal, rejuvenation, and health, and the respect accorded to the snake linked to protection, trust, and wisdom, have ultimately led to its association with health [13,21]. In terms of the characteristics of a five-star physician, these characteristics correspond to the physician's "Decision-maker", "Community leader" and "Manager" characteristics.

The matching of the five-star physician with important mythological figures in history in terms of the medical values they contain is shown in Table-1 below.

**Table-1:** Five-star physician and mythological figures pairing.

Five-star physician	Mythological figures
Care-provider	Asclepius, Hygieia, Machaon, Podaleirius, Telesphorus and other children of Asclepius
Decision-maker	Asclepius, Snake
Communicator	Asclepius, Asclepius' staff
Community leader	Asclepius, Machaon, Podaleirius, Asclepius' staff, Snake
Manager	Asclepius' staff, Snake

## II. CONCLUSION

Ultimately, mythological figures are not static, passive figures and symbols from a bygone era with no message. On the contrary, they are a rich cultural heritage that speaks to us today and even to our future, from which lessons can be learned, examples can be taken, models can be considered, and values can be kept alive. When evaluated from a broad perspective, mythological figures continue to guide medical education and modern-day physicians, as exemplified by the five-star physician model proposed by the World Health Organisation. We believe that numerous professional, ethical, and occupational values that could serve as examples for the characteristics of a good and qualified physician in the medical profession may be found in mythological figures throughout history.

### DECLARATIONS

#### Ethics approval and consent to participate

Not applicable.

#### Consent for publication

Not applicable.

#### Competing interests

The authors declare that they have no conflict of interest.

#### Authors' contributions

Hayriye Dilek Akdoğan led the project and the first draft of the manuscript was written by Hayriye Dilek Akdoğan. Author read and approved the final manuscript and declare that she has no conflict of interests.

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