

# We are IntechOpen, the world's leading publisher of Open Access books Built by scientists, for scientists

6,900

Open access books available

185,000

International authors and editors

200M

Downloads

Our authors are among the

154

Countries delivered to

TOP 1%

most cited scientists

12.2%

Contributors from top 500 universities



WEB OF SCIENCE™

Selection of our books indexed in the Book Citation Index  
in Web of Science™ Core Collection (BKCI)

Interested in publishing with us?  
Contact [book.department@intechopen.com](mailto:book.department@intechopen.com)

Numbers displayed above are based on latest data collected.  
For more information visit [www.intechopen.com](http://www.intechopen.com)



# Medical Humanism in Neurosurgery

*Rajab Al-Ghanem*

## Abstract

Patient-centered care means organizing health care that is respectful and responsive to the patient needs, preferences, and values, and ensuring that the patient values guide all clinical decisions. Teaching of medical humanism becomes a necessity to help neurosurgery residents in their future practice to do what they are already doing but in a more humanistic and empathic attitudes. A training programme to teach medical humanism core values through lectures, role modeling, and training in interpersonal skills, literature and humanities study can improve attitudes and behaviors. A set of 10 medical humanism values relevant to contemporary challenges, research, and practice of neurosurgery practice that can help residents and practicing physicians to maintain humanism behaviors in their practice are presented. A humanistic neurosurgeon provide a skilled, compassionate, and empathic care to her/his patients, and demonstrates respect for their values, autonomy, beliefs and cultural backgrounds. Neurosurgery is an apprenticeship profession, where humanism values can be taught and behaviors associated with humanism can be learned.

**Keywords:** humanism, medical education, neurosurgery, patient-centered care, professionalism, values

## 1. Introduction

Patient-centered care means organizing health care to serve the patients. In this context, and in order to respond to the new demands of society for the reliability of doctors in the 21st century and seeking greater adaptation and development of professionals, Competence Based Training (CBT) was developed [1]. Humanism in medicine, a central aspect of professionalism, combines scientific knowledge and skills with respectful, compassionate care that is sensitive to the values, autonomy, beliefs and cultural backgrounds of patients and their families.

According to Jean-Paul Sartre, “humanism is a theory which upholds man as the end-in-itself and as the supreme value”. Man is the point-of-care, the thing-of-focus, and the centerpiece of our attention. Medical humanism, or humanistic medicine, is an interdisciplinary field which aims to address problems in health care. According to The Arnold P. Gold Foundation, it is “characterized by a respectful and compassionate relationship between physicians and their patients” centered on several ideals, including integrity, excellence, compassion, altruism, respect, empathy, and service [2].

Humanism represents the basis of medicine throughout history, beginning from the time of Hippocrates and the development of the Hippocratic Oath.

Medicine has been regarded as a moral profession and carried out in accordance with a set of morals and ethics [3]. The first conference concerned with humanism, was held at Chicago University in 1933, recommended considering humanistic science as the basis of morality and decision-making in medical practice.

The past four decades showed great advances in medical knowledge and new technological devices have been extensively incorporated into medical practice. Physicians emphasized on the disease, use of technology, laboratory investigations, treatment and physical recovery. They ignore patient psychological status, ethical and social cultures. These events abolished medical humanistic spirit. Such dehumanized medicine appears to have no past, no cultural language and no philosophy.

Sir William Osler (1837–1901), considered as the father of modern medicine, advised “Listen to the patient. He is telling you the diagnosis”. Sir Osler also stated that (it is much more important to know what sort of person has a disease, than to know what sort of disease a person has) [3]. Marañón’s words provide us with the following reflection “... a mere diagnostic system, deduced exclusively from analytical data, dehumanized, independent of direct and endearing observation of the patient, carries the fundamental error of forgetting the personality, which is so important in etiologies and to stipulate the prognosis of the patient and teach us, doctors, what we can do to alleviate his sufferings” [4].

Humanism is an essential component of the art of Neurosurgery that allows the science of Neurosurgery to prosper. Without humanism, medicine is no longer; without medical science, medical humanism has no vehicle. The practice of Neurosurgery is both a science and an art. Contemporary Neurosurgery is based on scientific rigor but good medical practice should be ‘an art that uses science as one of its tools’. It is the art of Neurosurgery that facilitates teamworking, communication, partnership with patients and maintenance of trust—key elements of professional guidance on good medical practice—whereas science upholds evidence-supported practice.

## **2. Humanism core values in neurosurgery**

The young resident begins the residency full of dreams and desires to take care of patients, full of idealism; and by a process that has not been explained sufficiently ends up becoming indifferent to human suffering, gets used to the disease, unleashes the sufferer and becomes “dehumanized”. The question is: what skills and qualities do neurosurgeons need to practice a humanistic patient-centered care?

Knowing how to care for the sick in all their human dimensions is the main challenge facing medical education today. This is the construction of a new medical humanism capable of harmonizing the care that the patient needs. A training programme was conducted to teach medical humanism core values through lectures, role modeling, and training in interpersonal skills, literature and humanities study. Improvements in medical humanism attitudes and behaviors were attained after successfully completing the course through lectures, role modeling, and training in interpersonal skills, literature and humanities study. A humanistic neurosurgeon provides a skilled, compassionate, and empathic care to her/his patients, and demonstrates respect for their values, autonomy, and cultural backgrounds. Neurosurgery is an apprenticeship profession, where medical humanism can be taught and behaviors associated with humanism can be learned.

A set of 10 humanistic values that can help residents and practicing physicians to maintain humanism behaviors in their practice are presented here [5]. A proposal of a new model of medical humanism in neurosurgery, resulting from harmony that

perfectly combines the science of modern neurosurgery with the art of care, which involves understanding the sick as a person, focusing on the patient.

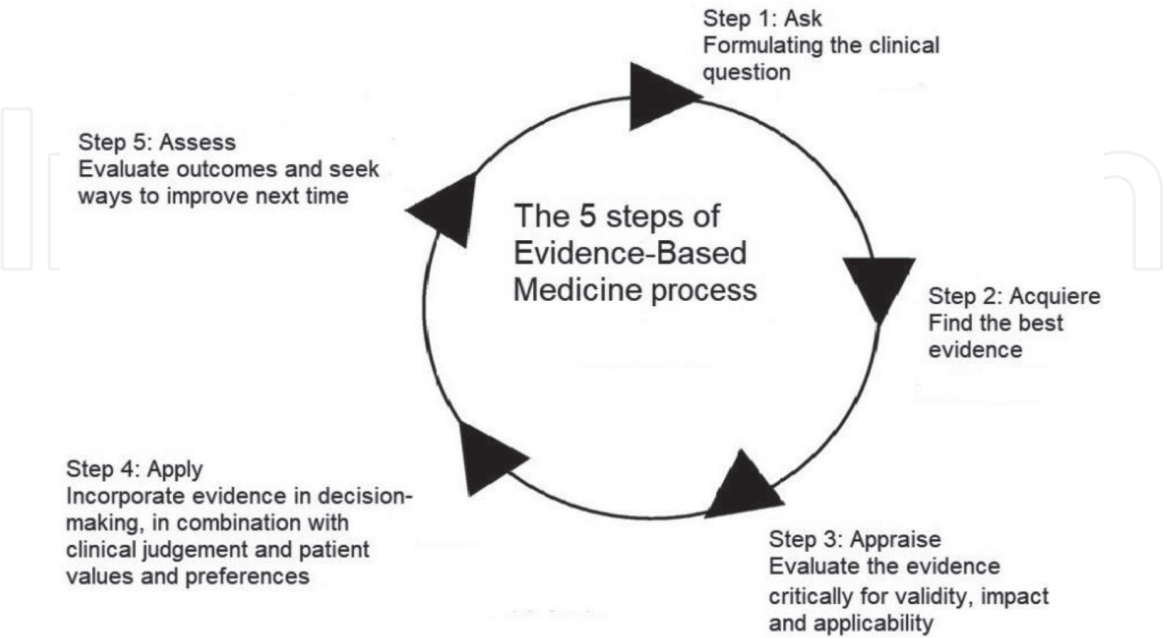
1. The utmost important rule in Medicine: *Aeger Primo*, “The Patient First” [5]. The patient-centered perspective suggests physician-patient relationship, communication and relational skills and techniques are a core professional competence to be used by clinicians. Placing patients first adds important dimensions to how we judge the success and failure as neurosurgeons.
2. Every patient is a unique human being: In patient-centered medicine, the patient has to be understood as a unique human being. “Treat the patient, not the disease”. The biopsychosocial model challenges the neurosurgeon to address both the biological as well as psychosocial dimensions of illness; care the needs of the patient [6]. The practice of neurosurgery that reflects humanism values involves physician– patient interactions during which the patient is seen as a unique individual who should be treated with dignity and respect.
3. The practice of Neurosurgery is both a science and an art. Carefully planning the surgical procedure is accomplished by a thorough preoperative assessment and a comprehensive treatment plan, review the anatomy and follow a careful and aseptic technique, the most basic principle of surgery. The supreme rule of the Greek medical ethics (Hippocrates): *opheléein ê mê bláptein*, “first to be useful, then do no harm”.
4. Some neurosurgical conditions have no satisfactory solutions: To be honest but not brutal, to offer hope always and if we cannot cure, we can help, are some useful principles in guiding patients through their process when faced with catastrophic disease that has no satisfactory solution [7]. Some diseases are incurable; it’s attributed to Hippocrates that in Medicine we are called “to cure sometimes, to relieve often, and to comfort always”. The neurosurgeon must remember that any outcome estimates are statistical probabilities based on large groups of patients and do not predict how any given individual patient will respond.
5. Neurosurgery, as much as Medicine, is a service profession and the commitment to serve our patients is a hallmark of humanistic physicians. The Gold Foundation defines service as “the sharing of one’s talent, time, and resources with those in need; giving beyond what is required” [8].
6. The humanistic neurosurgeon demonstrates the following attributes: Integrity, clinical excellence, compassion and collaboration, altruism, respect and resilience, empathy and service to her/his patients.
7. To participate in biomedical research and the advancement of neurosurgery and medicine. We, as a community of learners and knowledge builders, can and must develop meaningful methods of learning and improvement in practice [9]. We must find ways to make continuous learning and improvement an integral part of our workday, just as much as our neurosurgical procedures themselves.
8. To maintain an open, flexible and life-long learning-oriented mentality. Carl Rogers, a humanist psychologist, stated the goal of modern education:

The only man who is educated is the man who has learned how to adapt and change—the man who has realized that no knowledge is secure and that only the process of seeking knowledge gives a basis for security. The goal of education, if we are to survive, is the facilitation of change and (life-long) learning.

- 9. To be skeptical: scientific knowledge, the methods and results must be continuously scrutinized for possible errors. It is difficult for the medical literature to exceed 50% (17–85%) of correction, on average. Understanding of the methodology and application of evidence-based medicine (**Figure 1**) is needed to correctly interpret the literature on causation, prognosis, diagnostic tests and treatment strategies.
- 10. Neurosurgery is a teamwork: preparation, effective communication and respect are essential elements that affect both patient outcomes and the work environment. Good leadership knowledge and skills are crucial to team success and, more important, patient outcomes.

The humanities incorporated in the academic training process are an important resource that allows developing the human dimension of the physician. In coexistence with these realities, the humanities help and, above all, they educate. Educating is much more than training skills: involves creating a thoughtful attitude and a continuing desire to learn.

Teaching medical humanism today implies facing the challenge of promoting a true philosophical reconstruction of the physician, which is the anthropological position. And thus building “bifocal” neurosurgeons, who are capable of caring to their patients with a professional, technical and humanistic competence, in harmony, taking advantage of the best that progress offers them, to serve them in their physiological and human needs (**Table 1**).



**Figure 1.** The 5 steps of evidence-based medicine process (5 A's) based upon the Sackett et al. model [10]. Integrating the best available evidence with clinical expertise (proficiency and judgment) and patient values, beliefs and preferences.



<ul style="list-style-type: none"><li>• Attitudes:</li></ul>	Humility Curiosity Standard of behavior Humanism as medically important for the patient. Humanism as important for the physician. Role of physician as treating more than just the disease.
<ul style="list-style-type: none"><li>• Habits regularly practiced by physicians</li></ul>	Self-reflection Seeking connection with patients Teaching/role modeling humanism Striving to achieve balance Mindfulness and spiritual practices
<ul style="list-style-type: none"><li>• Deliberate, intentional work at habits to sustain humanism.</li><li>• Develop communication and learning skills to work with families: Caring for the patient and his family.</li><li>• Comprehensive training as a person: Humanistic training of the physician.</li><li>• Leadership and management learning: Acquiring leadership knowledge and skills.</li><li>• External/environmental support: Physician colleagues, nurses and learners are important.</li><li>• Humanism as antidote to burnout: Treating patients humanistically can be “the antidote” to burnout.</li></ul>	

**Table 1.**  
*Factors that help sustain humanism in medical education and patient care (modified from Chou CM et al. [11]).*

### 3. Connecting professionalism to humanism

Humanism and professionalism, to some authors, identify two different ethos of physician practice and emerge from divergent visions for the physician–patient relationship (**Table 2**) [12].

Humanism conveys a deep respect to humans individually, and to humanity collectively, and concern for their general welfare and flourishing. The hallmarks of humanism are its universality, its egalitarianism, and its scope. Its concerns, on the one hand, and obligations, on the other, apply to all humans equally; its training ground, for the most part, is experience—as a human and with humanity; and its ultimate vision is for human welfare, as broadly conceived as possible.

Professionalism, in contrast, is a socially constructed, local phenomenon. Professionalism raises expectations for professional behavior to the level of ideology, encouraging all members to embrace the traditions of the profession and to be as “professional” as they can. However, promoting professionalism -competence and excellence- does not mean to train technicians. No profession will be exercised competently if technical skills are not subordinate to a broader cultural training that encourages cultivating the spirit, the humanistic dimension. So, it is necessary to incorporate the humanistic dimension in the teaching of professionalism.

Nurturing the humanistic predispositions of residents seems to be the key to ensuring that future neurosurgeons manifest the attributes of professionalism,

Characteristic	Humanism	Professionalism
Types of values	Universal (Apply to all humans equally)	Local (A socially constructed, local phenomenon)
Sources of learning	Human experience	Socialization into profession
Motivation	Human welfare	Strengthening of professional identity
Primary duty	To other humans; to society	To the professional group
Cognitive basis	“Postconventional thinking”: Judging behavior through deliberation about universal values.	“Conventional thinking”: Judging behavior by comparison with the accepted social norms of a specific group.
Connecting professionalism to humanism: nurture the humanistic dimension to promote professionalism.		

**Table 2.**  
*Humanism and professionalism characteristics (modified from Goldberg JL [12]).*

as professionalism and humanism share common values and that each can enrich the other [13, 14]. The teaching of humanism values is recognized as an essential component of medical education and continuing professional development of physicians [15]. The application of humanism values in medical care can benefit residents, clinicians and patients [16]. The study of humanism values has a solid research base. Research has demonstrated that behaviors that are associated with humanism values improve practice and patient outcomes. The teaching of humanism values can be integrated into formal learning experiences and clinical settings, incorporating empathy, nurturing dignity, respect and confidentiality and fostering role modeling [5, 17].

The fast scientific advances require, to maintain the equilibrium, an expansion of the scope of the medical humanism, that is, a medical humanism at the height of scientific advancement. And it would be this extension of humanism, adapted to the present day, in a modern version, which would lack the process of medical education. If this humanistic update is not made, it would fall into a disproportion that would be reflected in neurosurgeons technically trained, but with serious humanistic deficiencies. We will have deformed physicians, with hypertrophy of technical knowledge, without balance, which naturally does not conquer the confidence of the patient who expects a balanced doctor. Therefore, the function of the University and the training institutions would be to expand the humanist concept in modern views, opening horizons and new prospects. And, to achieve this, the methodology and the systematic learning how to do things, when these things are many and they are wrapped in high technology and commanded by a fast scientific progress. Thus building “bifocal” neurosurgeons, who are able to care for their patients with professional, technical and humanistic competence, in harmony, taking advantage of the best that progress offers, to serve them in their physiological and human needs and beliefs.

Humanism is, therefore, a source of knowledge that the neurosurgeon uses for his/her profession. A knowledge as important - neither more nor less - such as those acquired by other ways that help him in his desire to take care of the human being who is sick. They are different routes that find in the person –the realm of medical care- their common goal and allow, with mutual coexistence presided over by respect, the union of forces, synergy in the active will to heal. Humanism in Neurosurgery it is not a temperamental issue, an individual taste, not even an interesting complement. All that would be to place “humanistic attitudes” in the balance, to compensate for the excesses of science. Humanism is, for the

neurosurgeon, a true work tool, not a cultural appendix; it is a scientific attitude, weighting, the result of a conscious effort of learning and a method. It is necessary for the neurosurgeon to have a correct balance, a bifocal perspective, that manages to combine in an artistic symbiosis the attention to the disease – with all the technical evolution – and to the patient who feels sick - with the vital understanding that requires. This is, in practice, the person-centered medical care, the most accurate synthesis of the physician practicing science and art simultaneously.

#### 4. Conclusion

Therefore, it is not enough to recommend training in medical humanism, but rather it is necessary to find a formal curricular space, that is, it is necessary to dedicate time and resources. Acknowledge and address the hidden curriculum, while sustaining a vision that incorporates humanism values. Nurturing the development of humanistic values in neurosurgery residents requires individual and institutional appreciation, recognition and commitment. A successful training programme turns residents into professionals prepared for the exercise of the art and science of Neurosurgery, by means of an active learning, where the patient is the focus of health care. A humanistic neurosurgeon provides a skilled, compassionate, and empathic care to her/his patients, and demonstrates respect for their values, autonomy, beliefs and cultural backgrounds. Neurosurgery is an apprenticeship profession, where humanism values can be taught and behaviors associated with humanism can be learned. We present a set of 10 medical humanism core values that can help residents and practicing physicians to maintain humanism behaviors in their practice. A proposal of a new model of medical humanism in neurosurgery, resulting from harmony that perfectly combines the science of modern neurosurgery with the art of care, which involves understanding the sick as a person, focusing on the patient.

In conclusion, to train a neurosurgeon who treats patients rather than diseases, and who lives the values of humanism.

#### Conflict of interest

The author declares no conflict of interest.

#### Author details

Rajab Al-Ghanem  
Department of Neurosurgery, University Hospital of Jaén, Spain

\*Address all correspondence to: [ral\\_ghan@yahoo.es](mailto:ral_ghan@yahoo.es)

#### IntechOpen

© 2021 The Author(s). Licensee IntechOpen. This chapter is distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/3.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. 



## References

- [1] Lobato RD, Jiménez Roldan L, Alen JF, Castaño AM, Munarriz PM, Cepeda S, et al. Competency-based Neurosurgery Residency Programme. *Neurocirugia*. 2016; 27:75-86.
- [2] Gold A, Gold S. Humanism in medicine from the perspective of the Arnold Gold Foundation: Challenges to maintaining the care in health care. *J Child Neurol*. 2006;21: 546-549.
- [3] Hulail M. Humanism in medical practice: what, why and how?. *Hos Pal Med Int Jnl*. 2018;2(6):336-339. 10.15406/hpmij.2018.02.00119.
- [4] Marañón G. *La Medicina y nuestro tiempo*. Madrid: Espasa Calpe;1954.
- [5] Al-Ghanem R, Abdullah El-Rubaidi O. Medical humanism values for neurosurgery resident. *Neurocirugia (Astur)*. 2020 Mar-Apr;31(2):103-104. Spanish. doi: 10.1016/j.neucir.2019.08.002. Epub 2019 Oct 13. PMID: 31615692.
- [6] Engel GL. The Biopsychosocial Model and Medical Education. Who Are to Be the Teachers? *N Engl J Med*. 1982;306:802-805.
- [7] Shetter AG. The fundamentals of patient assessment: The importance of the examination and the patient relationship. *Clin Neurosurg*. 2004;51:26-29.
- [8] Kesselheim JC, Cassel CK. Service: An essential component of graduate medical education. *N Engl J Med*. 2013;368:500-501.
- [9] Asher AL. Enlightened learning in a knowledge society. 2008 Congress Of Neurological Surgeons Presidential Address. *Clin Neurosurg*. 2009;56:2-8.
- [10] Sackett DL, Strauss SE, Richardson WS, Rosenberg W, Hayes RB. *Evidence-based medicine: how to practice and teach EBM*. 2nd ed. New York: Churchill Livingstone; 2000.
- [11] Chou CM, Kellom K, Shea JA. Attitudes and habits of highly humanistic physicians. *Acad Med*. 2014 Sep;89(9):1252-1258.
- [12] Goldberg JL. Humanism or professionalism? The White Coat Ceremony and medical education. *Acad Med*. 2008 Aug;83(8):715-722. doi:10.1097/ACM.0b013e31817eba30. PMID: 18667880.
- [13] Cohen JJ. Viewpoint: linking professionalism to humanism: what it means, why it matters. *Acad Med*. 2007 Nov;82(11):1029-1032.
- [14] Swick HM. Viewpoint: professionalism and humanism beyond the academic health center. *Acad Med*. 2007 Nov;82(11):1022-1028.
- [15] Liaison Committee on Medical Education. 2004. Functions and structure of a medical school standards for accreditation of medical education programs leading to the M.D. degree. Washington, D.C.: Liaison Committee on Medical Education.
- [16] Robbins J, Bertakis K, Helms L, Azari R, Callahan E, Creten D. 1993. The influence of physician practice behaviors on patient satisfaction. *Fam Med* 25:17-20.
- [17] Cohen LG, Sherif YA. Twelve tips on teaching and learning humanism in medical education. *Med Teach*. 2014 Aug;36(8):680-684.