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Competence and reliability

FELIPE RODRÍGUEZ DE CASTRO

Felipe Rodríguez de Castro

Former Dean of the Faculty of Medicine, Universidad de Las Palmas de Gran Canaria

Trustee of the Medical Education Foundation (FEM)

He holds a Degree in Medicine and Surgery from the Universidad de Valladolid (1981) and a PhD in Medicine and Surgery from the Universidad de Las Palmas de Gran Canaria (ULPGC) (1991). He was an Internal Medical Resident (MIR) of Pneumology at the University Hospital Universitario Ramón y Cajal in Madrid (1982-86) and worked at the Hospital Virgen de la Luz in Cuenca in 1986, at the Hospital Universitario 12 de Octubre in Madrid in 1986-87, at the Hospital Universitario Insular de Gran Canaria in 1994-95 and at the Barnes-Jewish Hospital in Saint Louis (Mo, USA) in 1997. He has been Head of Studies of the Doctor Negrin Hospital Universitario de Gran Canaria (2002-2008), member of the European Board for Accreditation in Pneumology (2008-2017) and Dean of the Faculty of Health Sciences of the ULPGC (2010-2014). He was Vice President of the Spanish Society of Pneumology and Thoracic Surgery (SEPAR) (2005-2010) and the National Pneumology Commission (2000-2010), and President of the Spanish Society of Medical Education (2013-2018). He is currently Head of the Pulmonology Service of the Doctor Negrin Hospital Universitario de Gran Canaria and Professor of Medicine at the ULPGC. His main line of research is respiratory infections.

He is the Chief Editor of the Postgraduate Section of the journal of the Medical Education Foundation (FEM), of which he is a member of the board, and Corresponding Academician of the Royal Academy of Medicine of Santa Cruz de Tenerife (Canary Islands). He is also a member of the BQM (The Good Work of the Physician) working group of the Spanish Medical Council and has participated in the projects 'Learn to be a Doctor: shared social responsibility' and 'The doctor of the future' of the FEM.

To date, he has directed 13 doctoral theses and has published more than 50 books or chapters of national and international books and over 150 publications in national and international indexed journals (JCR).

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For Ortega, the concern for values is a recent conquest of humanity ; however, he admits that this issue could not have been ignored by classical philosophers, although always hidden under the idea of 'the good'. The values framework is complex and diverse, and although values are abstract qualities, throughout history we have been shaping them with different content to improve our existence, behaviour, and attitudes. In the set of works collected in *A reconstruction of historical materialism,* Jürgen Habermas describes the history of the human species as a progressive process of reasoning, reasoning that is not only technical-instrumental but also moral-practical. In other words, societies learn not only technically but also morally.

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Because of this 'moral learning', social values and expectations regarding medical practice have also been modified and diversified. The challenges and responsibilities of physicians, their social role and professional reality have been changing progressively. The current medical model demands a new social contract reflecting the ethical will of the community and the result of the negotiation of the latent moral conflicts derived from the values emanating from different social groups. In this context of change and of important transformations and the increase in complexity in the practice of medicine, professionalism is perceived as the new model of social contract replacing the more traditional, based on the Hippocratic oath, which today is insufficient to respond to the challenges posed by society to doctors. The Hippocratic oath was performed before Apollo, Hygeia and Panacea with the compromise to help patients ; today, doctors are committed to society and practise for the sake of citizens, healthy or sick.

Almost 20 years ago, Albert Jovell reflected on the difference between being a doctor, the profession, and that of being a doctor, the occupation. The verb 'profess' translates as a public commitment to a set of values. For Cruess, a profession is an occupation whose core element is work based on the mastery of a complex body of knowledge and skills used for the service of others. Members of a profession are governed by ethical codes and profess a commitment to competence, integrity, and selflessness, promoting the public good within their field, in this case, medicine. This commitment forms the basis of the contract between the medical profession and society,

which, in return, grants doctors a monopoly on the use of their doctrinal body, the right to some degree of autonomy, and the recognition of self-regulation. Medical professionalism obviously derives from the concept of profession and could be defined as the set of values, behaviours, and relationships underpinning the trust society places in its doctors.

In modern societies, doctors play two fundamental roles : the healing physician and the professional physician. Both roles share many aspects, but they come from different traditions and involve different commitments and obligations. The tradition of the healing physician comes from Hippocrates, and the characteristics are universally recognised. In contrast, doctors as members of a profession have had little social impact until science provided the foundation for modern medicine and the industrial revolution provided sufficient well-being so that health could be considered an accessible and negotiable good. As a result, society organised health care around the existing professions and granted them, as a counterpart to the contract, a practice monopoly, considerable autonomy, the ability to self-regulate, and remuneration. One of the attributes both physician roles share is competence.

The concept of medical competence can be interpreted in different ways. One refers to the knowledge, skills, and attitudes proper for the profession that qualifies a doctor to solve the problems posed by medical practice. A new concept of competence is part of medical training and can be defined as the degree to which a subject can use the knowledge, skills, attitudes, and good judgement associated with their profession to practice it effectively in all situations corresponding to the field of their practice. For the chronically ill, predominant in our health system, medical competence connects elements of skill and technical knowledge (to have knowledge and interest in the disease presented by the patient, to be successful in its diagnosis and treatment, and to maintain continuity of care with adequate follow-up and appropriate diagnostic tests) with other components related to communication and information.

Technical competence reflects the need to adapt knowledge and skills relevant to medical practice to the continuous advances in the health sciences; it is the search for professional excellence

Technical competence reflects the need to adapt knowledge and skills relevant to medical practice to the continuous advances in the health sciences and includes quality health care, scientific updating, participation in teaching activities and research, responsibility when making decisions and carrying out actions, and professional autonomy (without being influenced by the many environmental pressures, whether administrative or economic or by the users themselves) ; it is the search for professional excellence.

The shelf life of medical knowledge and skills is increasingly shorter as technological change accelerates ; for this reason, the need to stay current is more urgently felt by doctors than by other professionals. The average life of a ‘scientific truth’ in medicine is estimated as 50 years, and every 15 years, the number of scientific publications doubles. It is estimated that an exabyte of data is currently produced per day, while over the centuries and until the

beginning of the present century, only five exabytes of knowledge had accumulated. In Spanish universities, the area of medicine and pharmacology is second in scientific production, with 114,470 documents in the decade 2006-15. It has been conjectured that an internist would need to read 17 articles every day of the year to stay current in the field. Reasonably, this 'data overload' forces physicians to be true knowledge managers in their professional practice and to decide, with a healthy critical spirit, the appropriate use of these advances in specific patients. As pointed out by Gual, Oriol, and Pardell in *Physician for the future,* physicians must flee from scientism and take advantage of the benefits of the scientific method to incorporate into their practice only proven technological innovations. In this regard, it should be remembered health spending devoted to ineffective or directly harmful procedures can reach 20% of total expenditures according to some estimates.

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It is clear that competent clinical practice involves the use of the best available scientific knowledge. Currently, it is not admissible for medical practice to ignore the existence of sources of information that would allow professional practice to stay current. However, as already said, it is easy to get lost in the vastness of the medical literature. The challenge of remaining up-to-date with this information overload and thus of being able to ensure the best possible compassionate care to patients is relieved by the easy accessibility to information, electronic data storage, and instant communication, continuous and without borders, and the emergence of movements such as evidence-based medicine, which have decisively contributed to the interpretation and critical reading of medical literature. Currently, clinical practice based on routine or on non-evidence-based opinions is unacceptable. This progress, apparently unlimited and beneficial, encourages reflection on aspects such as the fairness, effectiveness, and sustainability of new technologies. As technology is an inseparable part of medical practice, it should not lead physicians to fall into an irresistible technological fascination—commonly generating new uncertainties—nor, on the contrary, into the irrational resistance to diagnostic and therapeutic advances because of feeling more comfortable with traditional procedures. Competent doctors, with the scientific-technical and human capacity to practise the profession with quality, must be able to select the information they provide to their patients and avoid over-information, misinformation, or information confusion. In this asymmetric relationship with their patients, competent doctors must avoid a paternalistic relationship and foster deliberation, enabling patients to make decisions about their own health.

Doctors' qualification requirements are increasingly growing. Continuous advances in the health field generate high expectations in society and additional pressure in the medical profession. The inability to assimilate and select all available knowledge, the difficulties of transferring that knowledge to daily practice and to individual patients, the increase in specific training areas, specialities and sub-specialities, and the shelf life of knowledge create additional pressure

for doctors. In addition, high expectations of society in scientific progress and technological advances increase the perceived standards of doctors' competence. They are required not only to practise their speciality correctly but also to perform a variety of actions related to the knowledge of different disciplines and diverse medical skills (epidemiology, statistics, research, management, communication), requiring continuous training in all areas and periodic reaccreditation of all professional skills. The complexity of medical knowledge, its probabilistic nature and thus the uncertainty implied impose a series of limitations deserving greater social recognition. Likewise, the fragmentation of medical knowledge in specialities and sub-specialities poses the challenge of defining their contents, competencies, and impact on the homogeneity of a profession around a minimum set of structured values society can recognise. This apparent contradiction carries the risk of ambiguity in the responsibility of care provision, making it difficult to identify the doctor in charge of a patient and could be a source of errors if there is no effective coordination between the different health care levels involved in the care of a patient.

The practice of medicine in a health system based on knowledge requires learning to learn from a university education and from a work environment that promotes the generation and use of knowledge and the acquisition of professional work skills (continuous training and professional development). This implies the commitment not only of doctors but also of different organisations, scientific societies, professional associations, and the administration. Knowledge, both explicit and tacit, has a close relationship with training, attitudes, and competence. A learning-oriented attitude tends to increase the value of professionals and is a quality recognised and appreciated by patients.

Given the asymmetry of information and knowledge between doctor and patient and the situation of vulnerability in which patients find themselves, doctors must ensure compliance with the commitments made

Society desires satisfactory clinical results, obtained by practising according to the best available evidence and adequately justifying their decisions when evidence is not available. Society has expectations and assumes it cannot judge the competence underlying the medical profession and the decisions derived from the application of specialised, complex, incomplete, and undetermined knowledge. In these circumstances, doctors request the trust of society to which they offer, in exchange for the recognition already mentioned, competence to apply specialised knowledge and skills, the search for professional excellence, and staying current in their knowledge. A competent doctor is a trustworthy, reliable doctor. This trust is the essential element of the new social contract model. In fact, trust is based on two basic ideas : competence and commitment. Patients need to trust the medical profession, and providers should offer reliability. Given the asymmetry of information and knowledge between doctor and patient and the situation of vulnerability in which patients find themselves, doctors must ensure compliance with the commitments made : altruism, preference of the patient's interests, and confidentiality.

Throughout history, medicine has witnessed various cycles of moral confusion, of doubts about whether there is something specific demanding more rigorous standards of ethical integrity for those who practice the profession. When a profession 'de-professionalises', it rejects these higher moral demands and accommodates the prevailing political and cultural climate. The causes of this de-professionalisation are diverse, but one of the essential factors is associated with a deficit of professional competence and a resulting decrease in quality of care, an increase in health expenditure, variability in clinical practice, and uncertainty about the real impact of many medical practices on the health of citizens. The increase in scientific production and the paradoxical competence deficit are connected to the so-called 'risk society', which Beck defines as 'one in which the production of knowledge leads to creating situations of greater uncertainty'. Also related to the deficit of professional competence is the tendency to conceal medical errors and the automatism against professional practices in need of improvement.

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The confluence of the biotechnology and information technology revolutions seems to place artificial intelligence in a better position to perform probability calculations and pattern recognition and even to perform tasks that require intuition about other people. Two important non-human capabilities of artificial intelligence are connectivity and the ability to update, and in that sense, it could provide much better and less expensive health care to billions of people who do not normally receive care. Future reliability in the medical profession will depend on the ability of the medical profession to assume the values of professionalism, transparency, honesty, independence, and accountability and, ultimately, the non-negotiable commitment to professional competence.

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