

# Who needs general internal medicine?

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**Introduction** The answer to the title question regarding the importance of internal medicine at

present and in the future depends on the adopted health care model. It is not possible to define the role of internal medicine using prospective randomized blinded trials in order to satisfy evidence-based medicine criteria. I will therefore present several subjective reflections of a practicing clinician, who, during 40 years at the turn of the 20th and 21st centuries, had an opportunity to observe a dynamic development of basic sciences and clinical medicine. These observations were also made from the perspective of a researcher, teacher, and an employee of an international company, and were associated with the whole range of emotions.

**Rise of modern medicine and medical specialties** Attempts to treat diseases date back to the beginning of civilization. For a long time, these attempts were based exclusively on observation and experience or resorted to magical cures. Even the progress in physiology (including experimental physiology), anatomy, embryology, pathology, chemistry, and pharmacology, seen at the turn of the 18th and 19th centuries, did not significantly influence medicine practiced at that time. The fiasco of therapeutic methods such as bloodletting and laxatives resulted in strong critique of physicians and helped mountebanks and quack doctors approach patients with fraudulent theories and cure-alls, including mesmerism, heavenly bed, or potions to dissolve urinary tract stones. Hence, the 18th century can rightly be referred to as the golden age of charlatans and frauds.

All this happened despite the fact that, already in the Middle Ages, schools educating physicians had been incorporated into universities as medical colleges; each graduate was awarded a diploma of Doctor of Medicine. Only in the Napoleonic era did universities start to award the degree of Doctor of Surgery, who replaced the barber surgeon. In the middle decades of the 19th century, a professional category of internal medicine doctor emerged, who, contrary to the surgeon, was concerned with “the invisible” (ie, internal diseases). Other newly developed specialties were ophthalmology (at that time associated with otology),

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urology, dermatology, pediatrics, psychiatry, and neurology. Pharmacy, dentistry, and nursing also became separate disciplines.

Although it may seem strange to us now, in the 19th century, it was believed that the emergence of specialties brought no advantage to the patient as doctors might not be able to provide the right treatment without knowing the whole. However, due to rapid expansion of medical knowledge and continued development of interventional procedures, it became unmanageable for an individual physician to keep up with all developments in the field of medicine. With time, patients started to put more trust in doctors specializing in a particular disease. It should also be noted that new specialties emerged not only as a result of the growth of knowledge in a given area (eg, pathology) but also due to the development of new diagnostic and therapeutic instruments (eg, in laryngology and urology). Hence, manufacturers of medical apparatus and equipment and, first of all, the pharmaceutical industry markedly contributed to the explosion in medical practice division in the 20th century.

#### **Success of the 20th-century medicine: control of infectious disease**

It is highly probable that the emergence of specialist medicine stemmed from a spectacular success in microbiology and the control of communicable diseases, which had a major impact on the epidemiology of mortality. At the beginning of the 20th century, infectious diseases were the leading cause of death, whereas nowadays, at the turn of the 20th and 21st centuries, the major causes of death are cardiovascular disease and cancer.<sup>1</sup> Iatrogenic effects are the third leading cause,<sup>2</sup> and it is not the first warning in history that there is a price to pay for the benefits of progress. All efforts should be taken though to make the price as low as possible.

Far from disregarding the effects of antibiotic discovery, it should be noted that the control of infectious disease mainly resulted from effective prevention including immunization and promotion of sanitation and hygiene. Communicable diseases that cannot be prevented continue to claim victims in different parts of the world.

#### **Challenges for the 21st-century medicine: civilization diseases**

There are similarities and differences between infectious and civilization diseases. The progress of the latter is difficult to control despite enormous advances in medical science and technology and spectacular achievements of clinical medicine. Although noncommunicable, civilization diseases are hardly preventable—not because we do not know how to reduce the incidence thereof, but because we have not been able to persuade societies to adopt preventive health measures (eg, change food attitudes and lifestyle habits).

All this results in the disproportion between magnificent achievements of basic sciences providing knowledge of the functions of the human

body, and considerably slower progress and capacity of practical medicine; there is also an issue of the lack of improvement of health conditions in societies worldwide, causing popular discontent. The problem cannot be solved or alleviated by advances in modern emergency medicine, intensive care, and transplant surgery that save human life and health under circumstances hitherto considered hopeless. Medical emergencies in which heroic efforts of medical staff prove successful against all odds are widely publicized; however, the truth is they constitute a small proportion of all medical interventions.

Attempts to reform health care systems undertaken by different political forces and economic entities that refer to the medical profession as “health business”, physicians as “health providers”, and patients as “health consumers” have also been far from successful. The reason for this failure is easy to explain. Health is not a product that can be purchased. Health is a state of complete well-being, much easier to lose than to be restored. A majority of people live with the illusion that their health should be taken care of and secured by appropriately specialized teams or individuals providing medical services. In a sense, such attitude is advantageous for physicians, who, overwhelmed by the vast range of medical knowledge and continuous influx of related information, strive to limit their activities to areas of expertise. This allows them to increase their skill level in a fairly narrow field, master state-of-art techniques and hence achieve perfection, respect, and, last but not least, high remuneration. The next step would be to find a patient whose ailments match the physician’s skills. However, a majority of patients ask for an appointment not to talk about a particular disease; instead, they bring in nonspecific complaints and their individuality. The physician cannot focus on just one organ or even system. Suffering is not reduced to biophysical disturbances; there is also a psychic component, both inborn (predispositions, sensitivity, intellect) and acquired (upbringing, knowledge, habits, preferences, attitudes). Social and cultural components are also of importance as they can trigger positive or negative behaviors, for example, alcohol abuse or smoking.

Amidst all this, we are offered a mirage of there being a real chance to identify a cause of each and every ailment and to develop medicines for all diseases. It also happens that some of the spectacular diagnostic and therapeutic modalities turn out to be more beneficial for physicians, not to mention pharmaceutical companies, than for patients who they are meant for.

Despite these pessimistic reflections and allusions, it is more than certain that progress in science and proliferation of medical specialties will not stop. The need for specialist medicine supported by extensive knowledge in basic sciences and modern technology is no doubt indisputable. After all, due to subspecialty development, we have been able to recognize the interactions

between body organs and systems as well as the multitude of protective mechanisms that guard the body's basic parameters (eg, arterial pressure and circulating blood volume) against sudden changes.

However, the rise of multiple but narrow specialties and subspecialties has several drawbacks. Although reductionism undoubtedly lay at the basis of science development, it then became a risk in clinical practice. It is not possible to try to restore the function of one organ and disregard all others. As already mentioned, the human being is a psychophysical entity who comes to a doctor not with a diseased organ but with her or his ailments. Surprisingly enough, those ailments have been the same for ages: pain, difficulty breathing, weakness, sleeplessness, vomiting, diarrhea, wasting, among others. Recently, more and more people seek medical advice due to laboratory abnormalities, whose causes, those long-established and those recently identified, can now be more accurately accounted for. This helps achieve spectacular therapeutic success in a particular patient but does not improve general health of a society. Despite promises that elimination of all diseases is only a question of time and adequate expenditure, the number of sick people continues to grow. Lifespan extension (partly due to progress in medicine) is among the reasons since advanced age is a risk factor for the majority of civilization diseases.

#### Internal medicine as a proposal of solving health problems

Nowadays, the role of a geriatrician providing care to the elderly is unquestionable. Nor will anyone put into question the importance of a holistic approach when dealing with aging patients. Nevertheless, a somewhat rhetorical question arises of whether a human being becomes a psychophysical entity only when they reach a certain age. Aging does compromise the function of all organs and increases the risk of multiple morbidity. It should be noted though that the effects of a whole range of harmful factors may exceed the adaptive capacity of the body at any age; they may also coincide with inherited or acquired impairments to bodily structure and function. The number of possible combinations of the above determinants and pathogens is beyond all disease classifications. Also spiritual needs, usually noted by palliative care physicians,<sup>3</sup> are not limited to the end of life.

Specialists take a lot of effort to use their skills for the benefit of their patients and do this with strong engagement. However, one must admit that focusing on the parameters of a particular organ or system is a risk factor associated with a reductionist attitude to the patient. Such an attitude may easily get across to the patient, who then stops perceiving his or her body as a whole. The threat associated with this tendency was emphasized by Professor Kornel Gibiński, one of outstanding Polish internists.<sup>4-6</sup>

One might get an impression that history has come full circle. At the turn of the 20th and 21st centuries, the world faces not only the explosion of scientific breakthroughs, but also pseudoscientific theories and charlatan-like practices. Those mainly to blame are the representatives of academic medicine, who disregard the majority of the patient's needs and make promises that cannot be fulfilled. There is also pressure from industrial companies and the problem that out of key research directions those are undertaken that raise hopes for the highest profits, while the needs of particular patients and the whole society are not met.

It is not at all easy to remedy the situation. All members of the society must get intellectually and organizationally engaged and all must be aware of the responsibility for their own and their family members' health. A special role falls to government authorities who should seek to adopt the most efficient health care model.

Medicine cannot develop without achievements of basic sciences, new technologies, and highly specialized and competent specialists who are able to use all these advances to help patients in a wide range of circumstances, sometimes dramatic or even extreme. However, it is not achievements and technologies that determine overall health improvement. The key factor would be to decrease the incidence of the most common chronic diseases as well as to prevent disability and alleviate suffering that these diseases may cause.

People with health complaints and those who faced death but were saved due to heroic efforts of a medical team must be put under care of a physician who will provide further treatment. This physician must be well acquainted with the most recent achievements of clinical medicine so that they could properly refer the patient to specialist and subspecialist consultations. They should also be oriented in humanities to recognize the patient's needs and be aware of secrets and mysteries that are inherent to each human being. They should know the potential, limitations, and risks of medical interventions and—based on this—be able to make correct decisions and accurately manage the treatment process no matter how nonspecific the symptoms could be. They should realize there is no “never failing” method and no result that could not be misinterpreted. Furthermore, physicians should not be afraid of emphasizing the responsibility of the patient for their own health and should know how to do this. First of all, they should understand that they should set a good example.

An internist of the 21st century is an internist who, despite being highly specialized, is still capable of perceiving the whole patient, and, while seeing the patient as a primary care physician, he or she is also able to coordinate specialist care. Hence, the answer to the title question seems obvious: internal medicine is a necessary component of medical care, which we all need.

**Note** The opinions expressed by the author are not necessarily those of the journal editors, Polish Society of Internal Medicine, or publisher.

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