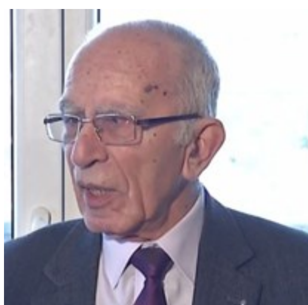
Management în health
XXIV/1/2020; pp. 1-5

CURRENT CONCERS IN EPIDEMIOLOGY



INTERVIEW with Associate **Professor Geza MOLNAR**
Honorary President of the Romanian Society of Epidemiology

Personal data:
Name and surname: MOLNAR B. Geza Gheorghe
Year and place of birth: 1943, Turda (Cluj district)

Education and Training:

1950-1961 "Mihai Viteazul" High School Turda, graduate in 1961
1963-1964 Post-secondary Sanitary Technical School, Cluj
1964-1970 Cluj Institute of Medicine and Pharmacy, Faculty of General Medicine
1976-1992 Physician, - specialist in the medical specialty of epidemiology, "Iuliu Hațieganu" University of Medicine and Pharmacy Cluj
1992-1998 Doctor in medical sciences, specialization infectious diseases and epidemiology (MEC-UMF Cluj)

1998-2010 Competence in "Management of medical and social services (UMF Bucharest)
1998-1999 Specialized certificates: Control of nosocomial infections (CPPMS-Bucharest, 1992); Field Epidemiology (CDC-FETP, 1996); Public health and health management (UMF Bucharest, 2002, 2005 and 2010); Monitoring and evaluation of morbidity due to non-communicable diseases and health statistics (UMF Cluj, 2006-2007); etc.

Experience:

1970-1976 Physician and general practitioner in general medicine in two rural health districts
1976-2009 Institute of Public Health and Medical Research - later Institute of Public Health Cluj, chief physician of the epidemiology and public health department (1986-2009 - with interruptions), with clinical (1976-1986) and didactic integration (1979-1984).
1998-1999 Secretary of State in the Ministry of Health (Bucharest)
2004-2008 Associate Professor teaching and examination associate (UBB - Sapientia University Cluj).
2009-2013 Personal advisor to the Minister of Health (Bucharest) and President of the Coordinating Council of the National Institute of Public Health (2010-2014)
2014 Retired doctor by age limit, contracts (consultancy and specialized courses within the National Health Programs)

Other socio-professional activities:
Founding member and elected president of the Romanian Society of Epidemiology (2002-2014) and honorary president since 2014;
Elected Vice President of the Romanian Medical Association (2011-2014);
Member of the Presidential Commission for the Analysis and Development of Health Policies (2007-2009);
Elected district councilor, secretary (1992-2000) and president (2000-2004) of the Health and Social Commission of the Cluj District Council;
President/vice-president in 4 NGOs with medical and social activity (1992-2002);
Member (appointed) in various commissions and boards of directors; etc.

Scientific activity:
Courses and exchanges of professional experience in the country and abroad, Professional activity nominated within national and international research grants and programs.
Scientific papers: 172 papers, of which 102 papers (first author) and 62 published (author or co-author) in specialized journals in the country and abroad.
Coordinator or co-author of a university course and two specialized professional development courses, author of two chapters from two monographs on sociology and public health, etc.

Distinctions for professional activity:
Sanitary Merit (1976),
Highlighted for medical work (1984)
National Order "Faithful Service" in the rank of "Knight" (2002).
Medals and diplomas of merit or excellence, e.g. from the Reform Commission of the Ministry of Health (1988), from the National Center for Surveillance and Control of Communicable Diseases (2015); from "Antibiotice" SA Iași (2015), from Romanian Society of Microbiology (2019); etc.

Reporter: Doctor, through the policies developed (including Global Health, One Health, etc.) the relevant organizations in the medical field have shown that there is a concern for the global approach to biological threats and that current and future issues are addressed through coherent and comprehensive policies that propose a change in the way we approach these threats.
- What would be the current changes in the field that deserve special attention?
- How do you apreciate the state of readiness at the moment, both globally, in Europe and nationally?
- Is Romania ready, or at least, are there premises for these dangers to be effectively addressed in Romania?

Geza MOLNAR: Because you mentioned the issue of global problems that could be solved through "coherent and comprehensive policies", I want to be very honest and to say that I have never been a supporter of a policy of

excessive globalization, with the unquestionable uniformization of "concepts" on problems solving the existence and well-being of humanity. In many areas, collaboration, mutual aid, solidarity, and broad support for educated conviction have gradually become the practices of centralized leadership in small decision-making groups, with the expansion of the forced integration of the world's populations, economies, and governments.

The effort to maintain and promote health in many of these "concepts" has led to the subtle but systematic erosion of "property" for decisions based on distinct demographic, sociological, economic, cultural, religious characteristics of populations in different geo-administrative territories. Many of the ideas of global strategies or "global" health that are declared the guarantor of sustainable social development, in fact they contain a series of "requirements" whose feasibility for their implementation in a predictable time gives rise to much disappointment and dissatisfaction, and leading gradually to lose of credibility in solving them and of social support for action.

I believe that the current changes in the medical field deserving special attention should aim at addressing and managing health through a consolidated scientific concept of integrated human ecology in the context of own risks (behavioral and social) and influences from the general ecosystem (natural, cultivated and artificially created), respecting the right to a mutually advantageous balance of existence, both of the human and extrahuman kingdom.

The reservation mentioned above does not mean that I would not be a supporter of the free movement of standardized and reproducible information and successful evidence-based practices, or of the free movement of persons and goods, or the respect for fundamental human rights, and so on.

One of the current "concepts" which theoretically seems feasible and promising in the field of maintaining and promoting health, is the "One Health" strategy. Approaching and managing health in an integrated, cross-sectoral and multidisciplinary system at all levels of ecology should be welcome.

It is difficult and probably beyond my competence to assess the "state of readiness" worldwide or in Europe. What is certain is that the COVID-19 pandemic has revealed many shortcomings in healthcare in “crisis” situations, even at the level of systems you did not expect. The abundance of information from the multitude of "factories" of ideas and concepts often becomes difficult to master, especially if they are stated as "absolute truths", "universally valid" but often contradictory, even if they come from a single "relevant" source. The multitude of institutional competences (agencies, commissions and institutions) should be rethought by clearly separating the administrative-social attributions from the expectations on the individual and community/population health condition from the professional healthcare.

Under this last aspect, a good example is the political-administrative “controversies” regarding quarantine and isolation in the COVID-19 pandemic. Quarantine is an administrative measure that has nothing to look for as a "decision" at the level of a medical professional structure while isolation and all activities related to the interruption of contagion are medical professional measure which must be managed exclusively at the level of health care structures.

When asked whether or not Romania is prepared to effectively address the current risks to the health of the population, I dare to make a statement in favor and confirmation of this capacity. I believe that health care in Romania, with the inherent punctual corrections and adequate funding, has real chances of correctly managing the avoidable risks for the health of the population, provided that the medicine and each medical specialty is left and supported to - exercises the profession, all in a context of efficient collaboration and collaboration.

As for the correct management of avoidable risks at community and population level, I will limit myself and I will refer only to the issues related to community health care and preventive medicine services without denying the role, contribution and purpose of curative medicine, including the sector of secondary and tertiary prevention.

- “Preventive medicine” cannot be successful without training in one form or another of primary medicine (family medicine), by expanding professional and social responsibility for community issues given that primary medicine is funded by capitation.
- The specialized network of preventive and community health care operates in a single professional structure, with decentralized services throughout the country and organized within a National Institute of Public Health with six Regional Centers and 42 District Public Health Directorates and one of the municipality of Bucharest. All these public state institutions, under the coordination/ subordination of the Ministry of Health as a sectoral representative of the Government, have the obligation and medical professional purpose to manage the maintenance and promotion of the health of the population as an attribute of the State and according to the Constitution. These institutions include medical services, epidemiology for disease surveillance and control, hygiene for surveillance and control of health risks in human habitat and public health to assess the health of communities and the population. The reorganization of these institutions (by maintaining non-medical attributions in activity and continuing in a subtle way, but more and more accentuated, by entrying on stage of some non-medical structures, but which more and more claim their right to deal human health, taking over and adopting in the "mirror" of "recommendations" inconsistent with medical practice) will inevitably lead to the professional disorganization of these institutions and services, restricting the professional skills of the network, unjustified bureaucracy of activities, removal from real requirements and practical training and professional development specific to human resources, etc.

The multiple criticisms and objections regarding the recent activity of District Public Health Directorates, in the COVID-19 pandemic, cannot be attributed exclusively to the “fault” of these institutions. Most of the reported irregularities come from administrative measures imposed by third parties, contrary to the legislation in force on their organization and operation and which, over the years, have resulted in an increased degree of deprofessionalization and insufficient human resources in the medical field.

***R:** If we look strictly epidemiologically, it seems that the current issue caused by the emergence of COVID-19 is not fully known, as there is not enough time to study the*

Management în health
XXIV/1/2020; pp. 1-5

issue. With some effort we could describe the distribution of this disease, even the relationship risk factor - disease, but it is quite difficult to make predictions about the probable number of diseases in a given population and thus to correctly base programs to prevent and combat disease in a given population, or modeling health services for the population.
- How do you see the approach of the epidemiological process in such situations?
- What is the role of the epidemiologist in this context and what are the levers through which epidemiologists can support the process of counteracting the consequences of these new threats?

GM: The current global situation caused by the COVID-19 pandemic that is labeled as a "crisis" situation (social, economic, medical, etc.) is the result of our approach to the problem, regardless of the fact that such situations can occur at any time, under the conditions which are not respected and natural ecological balances are disturbed, either by behavior or social disturbances that are conducive, or by the willful or accidental forcing of ecological barriers. Mankind is "doomed" to a permanent coexistence with the world of microorganisms and largely depends on us whether this coexistence remains within the limits of natural mutual benefit or occasionally turns into human infectious pathology in favorable risk conditions. Despite the knowledge and scientific and technological development, only a very small part of communicable diseases and infectious diseases will be eradicable, and emerging and re-emerging etiologies are a natural and inevitable process. For these reasons, any epidemic or pandemic risk must be approached with our judgement and with much reasoning, whereby the target of action must be the epidemiological process and not society as a whole.
From 2019, a new Coronavirus (SARS-CoV-2) producing the pandemic disease COVID-19 "surprised" the world. Through its adaptability to an increased interhuman transmission rate and the general receptivity of populations to a new virus and the generation of a respiratory virus pathology with multiorgan damage and significant mortality, it has put both health systems and the social and economic life of populations to the test.
Although there is an abundance of information from the last 6 months, often contradictory or non-essential in the "fight" against the pandemic, at present, a number of problems regarding the epidemiological process, the complex pathogenetic mechanism and diagnostic investigation, the means of etiological therapy and specific efficient and safe prophylaxis, they are all only promises for the future.
In my opinion, at the current stage, from an epidemiological point of view, there are three possibilities for reducing the negative impact of the pandemic:
- correct and complex epidemiological surveillance of the population, prompt and effective intervention in outbreaks with active detection and isolation of sources of infection through epidemiology and family medicine network, with effective punctual measures instead of extensive unpopular quarantines;
- the provision and appropriate endowment of medical and intensive care services (ATI) to save lives and increase the share of avoided mortality;
- the correct and convincing education of the population by all possible means for the rational use of the essential non-specific means of protection (personal hygiene, as the case may be a mask of protection and physical distance, all in the context of educated and responsible behavior).
Exaggerated administrative measures with social and economic disruption, the aggressive threat of the population through administrative and social restrictions which create a state of uncertainty and accentuate the decrease of social support in adopting a preventive behavior, they are not effective methods.
This also happened in Romania where the population subject to general restrictions and much too long was a "shield", for a short period, against to an increased rate of transmissibility (possibly justified in the first phase of the epidemic due to recognized deficiencies from healthcare). But this appraoch led to a massive resurgence of the contagion, not through the fault of the population but due to the natural evolution of an epidemic of respiratory virus that is difficult to control. Today, to feed the premature hope of the population in purchasing an effective vaccine is a wrong approach. Even in the case of the marketing of an authorized vaccine, obtaining a population immune suppression will require at least 3-5 years. Also, excessive bureaucratization and unpredictable inconsistency in decisions, the transfer of responsibilities in a collective "anonymity", the loading and blocking of health care by compulsory hospitalization of asymptomatic "carriers" and their "etiological" treatment with a medication complex whose value therapeutic and today is only researched and discussed, etc., they are serious "traps" in gaining general confidence in the only way to avoid infection by simple and accessible means of preventive behavior.

R: *With some surprise, we find that we are anchored in a world that is becoming increasingly insecure, and in which the factors of aggression for health are becoming more and more numerous. Epidemiology must prove its essential role in the prevention of infectious diseases and make available the achievements of the past.*
- Why do you think it happens that humanity will have to face the major threat posed by the new coronavirus, at the level of 2020? Do you think this is a normal cycle and that it was expected to happen? Please detail the context in which the threat posed by the new coronavirus occurred.
- What do you think are the strengths of the authorities in the face of the threat of the new coronavirus, and what do you consider to be the strengths of the new coronavirus in front of the authorities?

GM: I will try to answer the last part of your question first.
The SARS-CoV-2 coronavirus, and in general no etiological agent of communicable infectious diseases, has any "trump card before the authorities". By a chance of natural selection, aided more or less by their genetic mobility, they try to survive. In the case of respiratory viruses, survival depends on their ability to transmit parasitism to living cells, regardless of the severity of the changes in the parasitized organism. Each genus/species of virus has a natural bio-ecological reservoir to which it has adapted for survival. If this biotope becomes unsuitable for it,

through the selection mechanism, the variants adaptable to other biotopes (with or without intermediate host) become dominant. The natural reservoir becomes unsuitable for survival either by natural means (due to ecological changes or natural resistance in the host population) or due to human intervention at the biotope level that is nowadays more and more frequently and with massive expansion. In this context, adaptable variants of viral species will seek for survival and penetration of biotope or kingdom barriers. Thus, they become the etiological agents of zoonoses adapted for the parasitization of human cells, resulting in the etiological agents of human infections. Due to radical ecological changes, naturally or artificially created by man, this phenomenon is becoming more common and it is rightly stated that human infectious pathology in the near future will be dominated by zoonoses.

With regard to the first part of your question.

Yes, it is a natural cycle, not mandatory necessary but predictable. For many years, we have been waiting and predicting a pandemic with a new flu virus what cannot be denied even today. To avoid or mitigate the consequences of this possible pandemic, hundreds and thousands of studies are being conducted through epidemiological and epizootological surveillance, unlike the Coronavirideae family, to which the known scientific concern has remained quite limited.

This is difficult to understand because they have been identified in the animal world since the 1960s and proven in the last 50 years as etiological agents with a frequency of 10-15% of human respiratory viruses. And in the recent past, there have been two epidemic episodes of Coronavirus warning, fortunately “with mediocre success” (pandemic alert from 2002-2003 with SARS-CoV and epidemic alert from 2012 with MERS-CoV).

In place of the predicted new influenza virus, another new respiratory virus (SARS-CoV-2) has emerged that has caused a COVID-19 pandemic.

Neither the existence of the SARS-CoV-2 virus nor the pandemic-epidemic evolution can be disputed. No matter where the virus came from (from or near the Wuhan market, directly from a bat species population, natural hosts or through an intermediate host still uncertainly identified, etc.) it exists and spreads following natural selection to which humanity is globally exposed through general receptivity and favored by its great social mobility which today can no longer be "abolished" by administrative measures.

The strength of society (and not of the authorities) in the face of the threat remains the conscious adoption of a broad preventive behavior (individually and collectively) adapted with gradual exigency according to the risk situation, age groups, biological vulnerability and recognition of current limits on existing therapy possibilities and prevention by health care.

If both decision makers and public health care will address the current pandemic as an unexpected and unknown bio-ecological but whenever possible event when we will have to find the most appropriate and agreed measures to reduce and prevent its negative consequences and we will not necessarily claim the elimination or eradication of the virus that "threatens human existence", in the immediate term, then I am convinced that progress in knowing the event will make it possible to rebalance and reduce the presence of pandemics and epidemics of this infection, even if this result will require a period of "coexistence" probably longer than expected at the moment.

R: *Over time, the crises that humanity has gone through have shown a great capacity to return to normal, and threats have been removed, diminished and even annihilated, one by one.*

- What do you consider were the biggest battles won so far?

- How do you see the future major threats being solved and what would be the structures and roles that these structures should have? What improvements to the current system would be needed?

GM: I would go too far to evoke the whole history of human failures and successes "in the battle" against communicable infectious diseases with epidemic or pandemic manifestations. Many times, these diseases have left their mark on the course of history, but mankind has always survived. Some diseases disappeared through the "generosity" of microorganisms, which no longer had the ability to adapt to spread, others were forced to "accept" a more restricted and less threatening spread, and others were reduced to sporadicity or endemo-sporadicity due to effective anti-epidemic measures.

At present, in the known history of mankind we have only one communicable infectious disease, smallpox, which has been eradicated through a conscious and consistent effort of humanity (eradication, a term often used incorrectly, meaning the global absence of infection and disease for a long time and the non-identification of the etiological agent, neither in man nor in the extrahuman kingdom).

Today, through the development of effective means of specific prophylaxis, there are several infectious diseases that are candidates for territorial elimination or some even for eradication (eg polio). Others are effectively controllable, by limiting their spread or territorial elimination, while others are successfully restricted from becoming a source of infection through the means of pharmacological therapy.

In all these "battles" for eradication, territorial elimination, reduction to sporadic presence or annihilation as a potential source of contagion, I believe that the three great successes of mankind can be enumerated: the implementation in practice of specific primary prophylaxis by vaccination, the discovery of antimicrobial drugs in therapy and secondary and tertiary prophylaxis and the development of knowledge and possibilities to identify and characterize the etiological agents of infections.

Despite all the successes listed, infectious diseases are and remain a presence and a possible real threat in the daily life of mankind. Failure to consider climate change, deviations from ecosystems and natural biotopes, radical changes in social status and behavior, the adoption of the slogan of a "total war" against all microorganisms, etc., in most of them the result of human activity create serious additional risks in supporting a realistic strategy for maintaining and promoting health.

In the contemporary stage, the attention of prevention must be directed in infectology and epidemiology, in addition to maintaining the "successes" in the field.

Management în health
XXIV/1/2020; pp. 1-5

Special care must be taken for the "new" problems of "candidates" for emerging etiologies, for mitigating the spread of re-emerging pathologies and infectious risk for vulnerable populations and for progressive exacerbation of the resistance of microorganisms to existing and available therapeutics.
Of course, in order to solve these problems, the necessary political-administrative will and funding are needed for scientific research and adequate institutional organization with dedicated professional practical activity. In one of your previous questions, referring to community preventive care, I stated that the current structure of organization and operation of these specialized services allows and ensures the necessary premises for good management of public health (perhaps, they can be accused of subjectivism). But, to this statement I added a backup supplement which, now being asked what improvements would be needed, I try to detail through three specific and solvable additions:

- epidemiology, hygiene and public health cannot be practiced successfully and efficiently only through an activity in the "field" and to the patient's "bed", by evaluating a series of components of the life of the community/ population to which it is addressed and of the healthcare services to which it has accessibility.
Today, we are increasingly witnessing an “office” activity that elaborates statistical figures, often without relevance, and theoretical “syntheses” regarding the state of health without practical solutions. In this respect, even with the risk of misunderstanding on the part of younger colleagues, the rehabilitation of the professional responsibilities of the old Anti-Epidemic Centers (“SANEPID”) would be a possible solution. Let's not forget that public health care in Eastern European countries was the best performing institution of the time, the model of activity being, in the last 20-25 years, more and more "copied" by Western European countries and North Americans. Of course, the revival must target to another level of professional knowledge, technological development and technical-material endowment.

- the human resources specialized in epidemiology and hygiene in these institutions have been declaning over the years. Due to the professional disillusionment, which has increasingly moved away from the activity with medical content, the salary significantly lower than the therapeutic area, in parallel with the aging and retirement of specialized medical staff. All these led to a degradation in the professionalism of these institutions and a unattractive for specialization and employment in the field. If in 2010, within the institutional "reform" when we had over 4000 employees of which 70% were specialized medical staff for this field of activity, today this share does not reach even 30%. Statistically we are talking about almost 400 epidemiologists, when in fact, those who actually work in epidemiological surveillance and disease control are not even 200 (statistics inflated by the second specialization, but who do not actually participate in the activity of the organized prevention system).

- the content of the postgraduate specialization curriculum in epidemiology and hygiene is outdated and inadequate to the requirements of contemporary practice. For the epidemiological practice of disease prevention and control (transmissible and non-communicable), in addition to acquiring the basic theoretical and practical concepts of the specialty, it is needed a set of acquisitions and skills that include: knowledge of clinical semiology, sufficient clinical guidance in the pathogenesis and therapeutics of diseases, adequate documentation in medical microbiology, information on the structure of the health services with which it works, etc. These ones must be supplemented with the necessary notions on the basic indicators of medical sociology (demography, morbidity and mortality, natural increase, etc., the dominant characteristics of life and general social behavior and specifically , of the population to which it is addressed by activity). And very important, all this knowledge can be acquired and practiced only through clinical integration and field work.

***R:** Would you like to add something else, maybe an answer to an unaddressed question in this interview?*

GM: For the current health threat from the COVID-19 pandemic, even if it is not
strictly related to health care, I recommend considering the urge of a regretted teacher almost 50 years ago: "Never forget that God, with the sending of a disease to earth also sent the cure for its treatment, but which, in order to be found, must be deserved by rational thought." I believe that the merit of mankind in finding the "cure" for the current pandemic would be individual and social preventive behavior.

Thank you for kindly answering our questions.

Interview conducted by: Mariana Negoiță