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EDITORIAL

RE-STARTING FROM A SOCIAL-ECOLOGICAL APPROACH TO HEALTH

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COVID-19: CRISIS AND OPPORTUNITY

The Covid-19 pandemic, being an "extraordinary" event, has led to a serious crisis of the "ordinary": of medicine (and its established certainties) and of the healthcare system (and especially its sclerotic practices).

The emergency has hit our lives like an unexpected storm. Not because a pandemic was not expected - pandemics are cyclical - but because the power of science and technology had given us an illusion of invincibility. The very idea of death seemed to have been dismissed, banished, to some extent defeated. As Gordon pointed out, medicine had offered us the illusion that «humans can overcome nature, no longer a victim, but in the omnipotent driver's seat» (1).

Death and illness, however, have returned with force to mark our days through the bulletins that arrive from the territories and inform us of new cases, admissions to hospital and intensive care, and deaths. The Covid-19 pandemic reminded us that «the radical autonomy projected in western society is a social construct, aided greatly by naturalism and biomedicine» (1).

As to healthcare organisation in Italy, the pandemic has highlighted the limits of a structure of services focussed on highly technological hospital care, rather than on primary care, and in general too much oriented towards therapy and very little towards prevention activities. The pandemic has brought to the forefront the central role of communities - meant as groups of people who live or work together, or who share relationships, interests, and habits - and of community institutions (families, associations, informal networks, *etc*.), in taking care of patients. On the whole, we can say that Covid-19 has highlighted the limits of an approach to care and health that may go unnoticed by those who are generally in good health and come into contact with the service system in a sporadic and occasional manner, but that has already negatively affected those categories of people who were in a particularly fragile condition: the chronically ill, the elderly, immigrants and ethnic minorities, the homeless. And it pointed the way to reorient the health system from "cure" to "care".

HEALTH AS QUALITY OF THE "BETWEEN"

We have clearly seen how the effects of Covid-19 are influenced by an altered human-environment balance as much as by a deterioration in the human-human relationship within societies, where the weight of inequalities is still heavy.

As to the first issue, several studies seem to show that a correlation exists between short-term exposure to atmospheric pollutants and the spread of COVID-19 (2-4). For example, Pozzer *et al*. estimated that, on average, about 15% of all deaths caused by Covid-19 worldwide are attributable to long-term exposure to air pollution, and this percentage increases further in some countries (29% in the Czech Republic, 27% in China, 26% in Germany, 22% in Switzerland) due to low air quality caused by the presence of fossil fuels (5).

The plausibility of causal links between pollution, contagiousness and symptomaticity of SARS-CoV-2 would call into question fine dust (especially PM 2.5 particulate matter), which seems to play a role in inducing the over-production, by the cells of the respiratory mucosa, of ACE2 receptors (the same receptors that act as a gateway to the virus) (5-7).

As to the second issue, chronic diseases typically associated with poverty and socio-economic disadvantage increase the severity and lethality of the infection. Specifically, a vicious circle is observed between chronic diseases and Covid-19: chronic diseases increase the clinical severity of Sars-CoV-2 infection, and the infection exacerbates pre-existing clinical conditions in carriers of comorbidities (asthma, COPD, obesity, hypertension, diabetes, *etc*.). This connection seems to highlight the role of social inequalities in determining an impact of the disease on the population. It is no coincidence that, with reference to Covid-19, Horton revived the expression "syndemic" created by the anthropologist Merrill Singer to describe and explain the correlation between the various morbid conditions (such as non-communicable diseases and infectious diseases) and the socio-economic and environmental interacting factors that amplify the negative effects on health (8-9). At the same time, the pandemic has contributed to exacerbate inequalities, that have impacted on the management of the emergency, marking a significant difference between those who could choose to stay at home and those who could not, those who could isolate themselves from people, and those who lived in promiscuous places and could not avoid infection (10-12).

The pandemic has therefore powerfully re-proposed a "socio-ecological" concept of health: no longer merely understood as a condition internal to living beings (the proper functioning of the body-machine), but as the quality of the "between", *i.e*. of the relationships that bind us to the natural environment and the social fabric, and which prove capable of conditioning the quality of life and well-being of people. The pandemic reminded us that "the human body is not a machine, that health and illness are not merely biological states but rather that they are conditions which are intimately related to and constituted by the social nature of human life" (13). As Didier Fassin pointed out, people are unequal in the face of illness and death due to the material conditions of their existence, which have an influence on their state of health as well as on their ability to care for themselves. In this way, differences in status and wealth are inscribed in bodies, converting "*le social en biologique*" (14).

But how can we rebuild from the lessons learned from Covid-19, and from this systemic vision of health? What are the implications in terms of health policies? How to re-start?

THE TWO FRONTS OF THE RESTART

Two fronts seem to open up, one which is strictly related to the environment, and the other one related to the remodelling of health services and activities.

Environment and health

On the first front, there is the need to rebuild the relationship with the environment, in terms of greater salubrity and sustainability. To this purpose, the Mission 6 - Health of the Italian National Recovery and Resilience Plan (hereinafter NRRP) envisaged a new governance system to redefine prevention strategies and interventions in the health, environmental and climate fields, and the way health needs related to pathologies with environmental aetiology are addressed (15). The aim is to enhance the advocacy role and capacity of the Italian National Health System in intersectoral actions (according to the "health in all policies" approach), by creating a new National System for Health-Environment-Climate Prevention − in synergy with the current actions for the environmental protection coordinated

by the Ministry of the Environment. This new System will focus on: monitoring and controlling the effects of environmental contamination on health; managing health risks of environmental origin; and building decision-making scenarios, according to a transdisciplinary, multi-institutional and cross-sectoral approach, which connects diverse fields (economic development, mobility, urban planning, use of land and water, agriculture, safety in relation with energy choices and the green transition, digital and technological developments, *etc*.) (16).

The NRRP reform action is connected also with the Investments Plan proposed in the "Complementary Fund" financed through the multi-year budget variance approved by the Italian Council of Ministers. These investments converge on two main lines: on the one hand, the overall strengthening of the structures and services of the National System for Health-Environment-Climate Prevention at national, regional, and local level; on the other hand, the development of specific operational programs aimed at experimenting, in selected contaminated sites, models of "ecological public health" (17) informed by the principles and guidelines of health-environment-climate integration. This latter aspect, which is particularly innovative, aims to combine - within an integrated and systemic approach - the actions of environmental detection and bio-monitoring (to support the identification of the pollutants, of the effects on health in terms of genetic and epigenetic alterations, and of individual susceptibility), with interventions of primary prevention (risk mitigation and minimization through environmental remediation and requalification), secondary prevention (active health surveillance) and organization of health care (development of diagnosis, treatment and rehabilitation paths).

Health services: from medical deserts to proximity

In terms of services, health care can only become more responsive to the real needs of people and more equitable in granting access to care for all if it restarts from the understanding of the dialectic between health needs, healthcare supply and demand, with reference to the increasingly widespread concept of "medical desertification". The term "medical desert" does not refer only to the simple "absence" of services, but also to the poor quality and low accessibility of health care paths. This analysis, functional to the reprogramming of healthcare services, must be developed with specific attention for those fragile groups that require a greater protection effort from the service system, in particular the chronically ill, the elderly, migrants and ethnic minorities, women (with reference to the gender issue) and socio-economically disadvantaged groups, for whom the risk of suffering the negative effects of an inaccessible service system is higher (18).

The analysis should take place along three fronts, in line with the framework proposed by the WHO (19). The first front is that of availability. When considering a territory, the first question is: *are there services?* In other words, it is necessary to assess whether the number of health professionals, the supply of beds, territorial facilities, residential facilities, home care programs are sufficient in relation to the distribution of the population and its specific epidemiological characteristics.

The second aspect is that of quality: *the services are there, but are they working?* As a matter of fact, healthcare practices sometimes lack efficacy and services do not always guarantee appropriate standards of care, from a clinical and organizational point of view.

Finally, there is a third question: *the services are there and are working, but do they work for each and everyone in the same way?* This question leads to the great issue of equity, which involves the accessibility as well as the acceptability of treatments, also in relation to the values and the preferences of the patient. As a matter of fact, in some circumstances, legal, economic, social, linguistic-cultural, logistical, organizational barriers may determine inequalities in access to healthcare.

From an operational point of view, the key word in health planning papers seems to be "proximity": an expression associated with positive meanings and values capable of supporting action.

Proximity healthcare is integrated healthcare organized on a local scale, easily accessible and therefore permeable, which "looks out" from institutional spaces to intercept emerging needs and dialogues with civil society, the care resources that come from the territories (private social organizations, patient associations, neighbourhood communities) and other public entities (research, environment, social sector). In this approach, the paradigm of "waiting for" is replaced by "going towards", to reach and enter the silence that often surrounds those who experience situations of greater discomfort.

The interventions that support a remodelling in the perspective of proximity fall into three strategic macro-areas: a) outreach activities, *i.e*. socio-health activities carried out in places close to the commu-

nities and with easy access or directly in the living and working places of the target groups (for example, active offer of first and second level services and screening programs through the use of mobile clinics, or home care), in which operators are asked to leave traditional health facilities to reach those who would otherwise experience difficulty in accessing treatment, or would not be able to express a request for help; b) system mediation, which includes measures and initiatives aimed at improving the accessibility and usability of traditional health services. Examples for this include: involving case-managers with the role of facilitators within health facilities; adopting agile and "low-threshold" organizational solutions, including the creation of integrated clinical-assistance paths for specific typologies of patients to promote appropriateness and continuity of care, but also to reduce slowness and the indifference of bureaucratic mechanisms in the face of the urgency of illness and discomfort; planning and implementing training plans for operators on issues related to relational and communication aspects; and c) active involvement of target groups, *i.e*. strategies aimed at creating resilient communities by enhancing the role of the single individuals and community institutions (such as families, associations, informal networks, *etc*.) who are involved - in agreement and/or in synergy with the health and social care operators - in the design, implementation and evaluation of actions for the promotion and protection of health (20).

A SYSTEM PERSPECTIVE

The crisis triggered by the COVID-19 pandemic offers us the opportunity to reflect - in this time of change that preludes to a change of times - on the evolution of the concept of health and on the implications that this entails in terms of promotion, prevention, and protection of the individual and collective well-being.

It becomes crucial to adopt a systemic, anti-reductionist, multidisciplinary and intersectoral perspective which, in line with the Declaration of Alma-Ata, considers health in relation to the material, biological, cultural, and social dimensions of life and fosters the development of effective policies and actions for each of these dimensions.

To make a significant contribution to health improvement, all public health interventions and strategies should be included within intersectoral programs that should take into account the socially produced conditions and dynamics, that interact with the biological and environmental factors, contributing to influence the health-disease processes.

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Authors' contribution

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