

Editorial

Occupational safety and health in the service of people

Work matters. It can help improve your health, reduce health inequalities and offer improved opportunities. Due to changing demographics in many parts of the world, such as Japan, China and Western Europe, having more people in work is more important for communities and for our economy. The health and wellbeing of people of working age is therefore of fundamental importance to our future. Occupational health and safety activities are thus under pressure to find novel and even more efficacious ways to operate. The vast technological advances may not have yet realized their potential at the workplace level, in the populations they serve. Why is this? What is the role of occupational medicine and occupational safety and health?

Classical epidemics are caused by natural agents (such as *Plasmodium falciparum*) and are driven by natural forces (such as mosquitoes and ecological factors thereof) acting upon these agents. The modern industrial disease epidemics, where the vector is the industry itself, are driven at least in part by corporations and their allies who promote a product that is also the disease agent. The 2011 UN high-level meeting on non-communicable diseases (NCDs) called for multi-sectoral action to control the modern “epidemics” by controlling the sales and promotion of tobacco, alcohol, and ultra-processed food and drink transnational corporations¹). We are living in an obesogenic world, where the commercialization of unhealthy commodity products together with sedentary lifestyle demand public regulation and market interventions to prevent the harm caused by them. The megatrends, such as globalization, are also restructuring the way of working and changing the worker-employer relationships. Employment laws are stretched when the businesses are run through franchising (e.g., McDonald) and through the kind of on-demand firms (e.g., Uber drivers). Who is responsible for occupational safety and health for these people—is there an employer, or are the workers just independent contractors?

NCDs, such as ischemic heart diseases, cancer and diabetes, have become the greatest public health challenge in the world. While discoveries in biomedicine and medical genetics provide new opportunities for individuals and groups of people, effective interventions in the field of public health, including occupational health, are yet to be

introduced in practice. Expectations at population level have increased due to easy access to medical information and enhanced opportunities to communicate. Individuals can have their genome screened for polymorphisms, some of which are suggested to have predictive significance in terms of risks for non-communicable diseases such as cardiovascular illnesses and cancer.

The United Nations' World Health Organization (WHO) in 1948 made a definition of health as “a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity”²). Health as such is considered an individual trait, but the term public health indicates that health is also a function of conditions outside the single individual. The terms “organized efforts and informed choices” imply that public health is also a communal and collective action based on rational and accepted premises. A few years ago the recent description of public health was given by Kickbusch³) as “...the science and art of promoting health...Public health acts on the knowledge that health is a fundamental resource to the individual, to the community and to the society as a whole and must be supported by soundly investing in living conditions that create, maintain and protect health.”

A few years ago WHO made a conceptual paradigm change from occupational health to workers' health. Workers' health should take into account the individual in his/her totality: in addition to work, the person is living as a member of the society and a family, has personal habits and hobbies. The NIOSH in the USA has coined the approach of Total Worker Health, to cover the same issues.

There is a very real issue of bridging the cultural line which public health has been built upon: the need to move from seeing a person as a patient to seeing people as citizens.

Occupational safety and health (OSH) activity is the practice of addressing threats to the health and wellbeing of a work community. The aim of OSH activity is to prevent harm, illnesses and accidents, and to improve health and work ability of people it is serving. This happens through industry-wide individual-based measures, such as systematic screening of the worker populations for e.g., bladder cancer in risk trades, or population-based non-

discriminatory actions, such as information targeted at political bodies, health and safety authorities and the general public. This indicates that the OSH measures may be aimed both at single individuals and the worker population as a whole. The OSH-field also heeds the social context of disease and suffering, including the issue of health equity.

The distinction between clinical medicine and OSH activities may be blurred when individuals are identified and submitted to disease prevention activities, such as screening and vaccination programs. The logistics surrounding these activities, measurement of effectiveness and assessment of efficiency, however, are based on collaborative efforts of epidemiologists and health economists.

On the basis of definitions of public health and OSH given above, the field of OSH science may be described as multidisciplinary in that it draws on and across research fields such as clinical medicine, molecular biology, genetics, epidemiology, biostatistics and social sciences, including psychology, economy and anthropology. Occupational medicine has traditionally been much involved in diagnosing, managing and curing the illnesses which workers have contracted. The occupational medicine experts have developed skills in early diagnoses and effective management of occupational diseases, which is important and can ideally keep the person's work ability in order. The workers are then expected to "follow doctor's orders", relying on the paternalistic style of the clinical medicine.

Moreover, during the last two decades, the concept of health has evolved. Health is no more considered as a "state" but rather an "ability": ability to deal with everyday life challenges. Salutogenesis, first described by Antonovsky in the 1980's⁴⁾, defines health relative to what matters to people, where the ultimate goal is to enable or facilitate health which is viewed as a key determinant of quality of life. According to this concept, occupational safety and health should strive to achieve value for the populations they serve, namely health, wellbeing and quality of life at work, as an addition to the more narrow focus on occupational disease and accidents at work. These value-based outcomes are not currently defined or measured by the occupational health and safety systems. If occupational health and wellbeing is at the core of what OHS-activity is mandated to address, then priorities and measures of performance should be aligned to monitoring outcomes based on articulated value. Only then can the existing gap be addressed between health related values held by people of working age and how the OSH system is currently constructed, organized, funded and evaluated.

The future OSH is shifting away from the paternalistic

"doctor knows best" approach, towards collaborative "what will best serve the goals of quality of life and wellbeing of the worker population". This collaborative model at the workplace level should be structured beyond the individual OHS-service provider context to include other actors, such as safety delegates, employers' representatives, and human resource developers. Inherent in this model is the need to engage individuals and worker populations so that they collaboratively make decisions on what the priorities are to support their unique values and health goals. Such decisions are complicated by the reality regarding who will benefit from different kinds of OSH-actions as there are no black-and-white separation lines. The reality is more like a ragged edge; some will clearly benefit more than others. But finally, it is in everybody's interest to have a work community which is able to manage its own quality of life and wellbeing, in addition to managing safety and curing the diseases using the traditional approaches of occupational medicine.

In order to guarantee the best outcome of the OSH activities, the workplace level activity must be well integrated into the general health and social care. In many countries, the health care provider systems are at least partially privatized, each provider competing for its "market share". Under any circumstance, it is important that stakeholders and organizations across the health, safety and social care collaborate, not compete, in order to achieve value for the populations they serve.

We are living in a world where "sick populations" exist alongside "sick individuals". It is this question where Geoffrey Rose's idea was to study characteristics of populations, not characteristics of individuals⁵⁾. A preoccupation with individual-level risk factors makes modern OSH specialists "prisoners of the proximate"⁶⁾. The more "distal" or "upstream" causes of the eventual harm will typically be identified in between-population comparisons, the more important they are because they offer greater potential for prevention strategies than the individual-based biomedical interventions. On the other hand, for any medico-legal purpose, e.g., recognition of an occupational disease and obtaining evidentiary basis for its compensation, requires evidence and information at the individual level. Therefore, it is obvious that also in the future, occupational health and safety system needs both the social aspect of population level as well as the biomedical knowledge from the individual person.

Rudolf Virchow's legacy "Medicine is a social science, and politics nothing but medicine at a larger scale"^{7, 8)} combined with Jeremy Bentham's vision of legislation

as “the art of healing practiced upon a large scale” is still very much true today, 150 years after the original statements. Occupational safety and health has a firm basis to go further, utilizing both the population level and the individual level approaches. The pendulum may be shifting from the individual personalized medicine towards the personalization of the whole OSH-system.

References

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