

Challenges facing occupational health services in the 21st century

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The mission and tasks of occupational health services are reviewed in the context of the global megatrends of productivity increase, population overgrowth, and the implications of changes in the technology of information and communication. Current trends in attempts to achieve harmonization with respect to the concept and tasks of occupational health services in the European Union are described, along with the basic features of occupational health services as a human service organization with implications for the setting of objectives and criteria for assessing quality and performance and ethics. The need to adopt a quality-focused approach to occupational health service programs is emphasized, and some of the inhibitions and obstacles to quality work are mentioned. The need for professional commitment to develop and implement quality concepts is outlined. Evidence-based health care in the setting of occupational health services and some salient aspects of professional ethics in the 21st century are commented on.

Key terms evidence-based occupational health practice, occupational health services research, professional ethics in occupational health services, quality criteria of occupational health service performance, quality improvement of occupational health services.

As an introduction to this review of the most important determinants for the scenario in which occupational health services will be acting in the early 2000s, it is proper to point out two over-reaching developments, population explosion and productivity growth, with their long-term occupational health implications. In 1000 AD the world population has been estimated to have been 273 million with an annual productivity of 420 international dollars per head — a currency entity commonly used in international comparisons (1) — whereas in 1995 the world population, according to the same source, was established to be 5197 million with a corresponding productivity per head of 5664 in the same monetary units. This is, of course, an assessment with the character of approximation, in particular regarding points of time in distant history. There are, obviously, inter- and intraregional differences, and there are also large differences between the elite and underprivileged segments of various populations. These megatrends are, however, unmistakable. They have remained virtually unaffected throughout the years by wars, famine, epidemics, and other major events. In this growth process there are forerunners and lingers, and the differences between affluent and poorer regions of the world seem to be widening. There are also upmarket newcomers on the stage,

for instance, China, appearing as a contender with a steadily increasing share of the total world production. The second determinant with wide implications is the technology change that is resulting in a new horizon and a widened scope of occupational health risks. The entry of computer technology in a broadly pervasive way into all aspects of production and services is certainly a determinant factor. Information has already become an integral part of production and networking between organizations, and production units transcend national borders. Information and its management in a wide sense seems not only to enhance productivity, it actually replaces work and employment opportunities. In some sectors of industrial production the added value of products is largely to be brought about without an additional input of labor and, as we have already seen, it becomes possible to lay off large numbers of the work force (1).

Health issues are also displaying significant changes. The workplace health hazards arising from physical factors such as dust exposure, climatic conditions, chemical exposure, and physically strainful work are assuming less prominent positions in ranking lists, being replaced or outflanked by psychological and social strain that leads to stress syndromes and the phenomena of fatigue and burnout. At the same time an increasing

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awareness of the importance and impact of work organization factors is spreading, and intra- and interpersonal relationships at the workplace and social support are emerging as determinants of how the quality of life at work is perceived by the work force. The realization is dawning on management that the work capacity and performance of individual staff members is determined only partly by the characteristics of their staff, whereas the ability of the work organization to recognize and exploit the expectations and demands on, and the competencies and skills of, employees in their organization is growing.

Debate on the standardization of the management system for occupational health services

One of the current debates on occupational health and safety management concerns its integration into strategic and operational decision-making processes within companies, which implies integration with the management of production. The debate on this issue has partly concerned whether such integration should be left entirely to the enterprises themselves or whether harmonized and generally accepted guidelines for occupational health and safety management systems should be issued by public health authorities. The idea of promoting such integration by means of specifications allowing for certification issued by standard organizations has also received support. An important event in this debate was an international workshop, organized jointly by the International Organization for Standardization (ISO) and the International Labour Organisation (ILO) and held in Geneva in 1996. The point at issue was the discussion of the need for an international standard on occupational health and safety management systems. After having considered this thorny issue, the workshop did not achieve conclusive agreement on the need for an international standard. This negative outcome has shifted the debate to the national level. In several European countries national guidelines and activities to standardize management systems for occupational health services are already being developed (The Netherlands, Norway, Spain, the United Kingdom, Denmark, Finland, Ireland, and Poland). In view of this trend in several countries, the idea of European harmonization has not come unexpectedly. It was first taken up by Germany with an initiative in 1997 to start developing European requirements for managing occupational health and safety, not as a standardization strategy but as a voluntary European Union regulation. Obviously, having taken into account the wide differences in occupational health policies and regulation systems, the German initiative can be seen as a first step. There is still a long way to go. There are 7 major issues dominating the

discussion about harmonizing management systems for occupational health and safety. They are (i) the relation of the harmonization to existing regulations, (ii) the added value of management system schemes or standards, (iii) the involvement of workers and their representatives in the humanization process, (iv) the impact of standards for occupational health and safety management systems on international trade, (v) the major incentives for companies to implement an occupational health and safety management system, (vi) the limitations of standardization, and (vii) the limitation of policies within the European Union.

The intricacies involved under these 7 headings are not reviewed in this paper. The reader is referred instead to the report by Zwetsloot & Bos (2).

Expert systems — occupational health services

In the context of ambitions to integrate health and safety management into the management of production, the role and functions of protective and preventive services, staffed by occupational health professionals (commonly referred to as occupational health services) come into focus. Clearly, such services are to be seen in the perspective of the fundamental responsibilities and obligations of employers, since employers are responsible for ensuring the safety and health of their workers at the workplace. The management of health and safety implies establishing and operating a system for (i) the prediction and identification of workplace risks and their avoidance, (ii) risk assessment, (iii) appropriate action for the removal or, alternatively, effective management of risks, (iv) activities to monitor and supervise health and safety at the workplace, and (v) the adequate training and competence development of all staff.

All these steps belong to a process involving the active and effective participation of the work force and the collaboration of management and staff. In pursuing these performance goals for the health and safety system, the employer is obliged, according to the European Council Framework Directive on Occupational Health and Safety (89/391/EEC), to assign one or more employees to provide an effective preventive and protective service for workers. In instances in which such action is judged not to be sufficient, assistance must be sought from persons or organizations outside the enterprise. This clause of the directive provides an opening for the entry of occupational health service organizations.

When the wide diversity in the organization of health care and social security, welfare arrangements, and occupational health legislation in the European Union is considered, there is no standard European solution for how the enterprises could be given access to effective

health services when so required. In view of the changes in many aspects of worklife, the requirement for access to occupational health services is generally regarded as important. Access is, however, not the only important aspect when the value of health services is being assessed. Other important criteria are performance quality, flexibility to meet customer needs and demands, the freedom of choice of the customer, the ethical standards of service, and economy in using or purchasing services. There may actually exist conflicts of objectives between these criteria, such as the combination of good access and requisite quality. Such competing objectives are difficult to adjudicate by governmental state regulations.

In many European countries, for instance, Finland, the strategy has been adopted to develop basic criteria that must be satisfied by occupational health service organizations in respect to good practice.

In an advisory committee on safety, hygiene and health protection at work, assigned by the Commission of the European Union, the following train of thought seems prevalent on the subject of "multidisciplinary services" in accordance with the European Council's framework directive (89/391). Each member state should establish a system ensuring that all workplaces have access to competent external expert assistance when needed and that the system is supplemented by a quality monitoring scheme making it possible for consumers to recognize service units and organizations meeting relevant competency requirements related to their needs. The key issues are (i) focus set on the prevention of workplace injuries, (ii) recognized national standards (or professional standards recognized by competent public authorities) of competency for services providing the external expert assistance, (iii) standards that facilitate the identification of competency, (iv) the need to update and sustain the competencies of occupational health services, (v) a system for ensuring and supervising the quality of externally provided health services, (vi) nationally available information documenting good workplace practices and valuable experience, and (vii) services operated on the basis of the highest professional standards of professional ethics, implying compliance with nationally or professionally recognized ethical standards or ethical codes.

Occupational health services as human service organizations

It is widely acknowledged that social welfare institutions, which include occupational health services in most European countries, are facing growing difficulties in terms of social legitimation, allocation of resources, and expectations on the part of the general public, and also on the

part of the management, administration, and staff of enterprises. This has even been referred to as the revolt of the middle-class against the welfare state (3). In addition, the rising expenses of such services have been coupled with an accelerated bureaucratization of health care systems that implies a proliferation of administrative bodies and bureaucracy, allegations of rigidity, a lack of coordination, and the absence of responsiveness to human needs. It is necessary to point out that occupational health services are, in terms of their general service, mission, orientation and professional culture, closely related to general health care systems. It is within this context that the management issues of occupational health care units and organizations must be addressed. Most theories on the organization of behavior have, until recently, been based on business and industrial organizations. Human service organizations, regardless of whether they are to be regarded as profit or nonprofit, are characterized by the following attributes:

1. Human service organizations work on people by processing or changing them individually or collectively. The persons directly handled by the organizations are simultaneously their input, raw material, and product (4, 5). In their interaction with people, decisions and actions undertaken by such organizations involve sets of cultural values and moral judgements.

2. Human service organizations are characterized by having to confront the multiple expectations and conflicting demands of many stakeholders and actors in a pluralistic society. As a consequence, human service organizations are likely to develop ambiguous and sometimes contradictory goals and service missions. The issues concerning who should be served and what services should be provided are never really fully resolved, and it seems difficult to establish goal priorities (4).

3. Human service organizations acquire very limited autonomy in relation to their task environment. They are highly dependent on resources controlled by other organizations, such as authorities (in the public sector) or customers or clients (in a commercial market). This dependency on task environment imposes constraints on these organizations to develop services that reflect the actual needs of the populations served. It also reduces the incentives of human service organizations to innovate since there seems to be little real payoff in developing new programs unless clearly guaranteed funding is available (public sector) or they are judged to be marketable (in free market context).

4. A major characteristic of human service organizations is the lack of determinant and effective technologies. The methods are based on a limited and fragmentary knowledge base while having to deal with complex human behavior. Only a few of the technologies implemented can

actually be demonstrated to be effective. This lack of technology generates a great deal of internal ambiguity and inconsistencies in responding to client needs. Development of explicit criteria for performance assessment becomes highly problematic.

In efficiency and effectiveness measurements of human service organizations, problems continue to exist despite considerable efforts to find solutions. This situation is partly due to the fact that most attention at workplaces has been focused on outcome variables for specific topics, such as recurrent disease manifestation or the successful abatement of symptoms of stress. Far less effort has been devoted to assessing organizational outputs or performance related to explicitly stated activity goals. Ambiguity of goals and objectives, an embarrassing lack of criteria for determining efficiency and effectiveness, and also some resistance to the measurement of outputs and outcomes and criteria for successful performance are common.

Management of production

In the context of production management, there is a trend towards the integration of health and safety into production management. Observing and examining the developments of such trends in the health services of European countries is also important. These developments, to a large extent, have been inspired — to the point of emulation — by ideas and strategies implemented in the private sector of production. The packages of solutions to the problems are sometimes referred to as “new public management”, implying decentralization, management by objectives or incentives, introduction of competition, establishment of internal quasimarkets within the public sector, and the utilization of external contractors. Examples of extensive new public management can be found in the United Kingdom, Sweden, Australia, and New Zealand, as described by Hood (6).

The contours of a new wave of strategies for new public management can now be discerned in public services in many countries (7). Earlier, emphasis was placed on health services management becoming efficient and adapting to market conditions, in a more or less competitive context. The new wave brings in modalities for quality management using designations such as a “balanced score card”, benchmarking, just-in-time management, and total quality management. All these techniques address the aspects of development potential, quality, and customer focus and, in addition, the need for the standardization and control of work processes, measurements of outcomes and effects, and comparisons between organizations in terms of performance capacities. Finally, continued monitoring is applied. It is evident that these

strategies and techniques of new public management are currently receiving more and more attention in the management of health services.

There are only a few studies addressing the implementation of modern management strategies, such as new public management, with respect to the implications for occupational health and life quality in enterprises. It is usually tacitly assumed that no conflict exists between efficient lean production and good work conditions that promote the health of the work force. This notion of harmony (8) implies that the consequences of implementing new public management strategies for employees are commonly and effectively taken into account. There are, however, also reminders of the conflicts between the rhetorics and reality on closer examination of such situations, for example, Legge in 1995 (9).

Bejerot (10) has recently drawn attention to the implications of implementing production-oriented management strategies with respect to work conditions in dentistry in Sweden, while addressing the conflicting aspects of ruthless management efficiency and professional staff perceptions of the “healthiness” of the workplace. In Bejerot’s analyses of her own field survey data, this cleavage between production goals and healthy work goals is particularly obvious with respect to health and safety. In work which does not imply a human relationship, this dualism may be less conspicuous. Bejerot makes the valid point that general statements on the nature of work are abundant in worklife and occupational health research, and she adds that the object of work has not received as much research attention. When the object of work is nonhuman, aspects such as motivation (12), job enrichment (11), intellectuality and discretion at work (13), social support at work (14), coping and stress (15), work demands and control (16), and work effort and reward (17, 18) are often generalized. In contrast, having human relations as a work object has other significant implications for many aspects of perceived life quality at work (19, 20).

The advent of new public management opens up a whole set of questions and research issues bordering on, and having numerous ramifications for, the occupational health domains of research and practice, such as:

- How are new production management strategies introduced and established? How is the problematics defined and described? What are the efficiency and effectiveness criteria as transformed to a human service organization (= occupational health service) perspective?
- How is new public management implemented and what are the consequences for the occupational health professionals involved? Are the management strategies imposed in a vertical top-down fashion or are they implemented as a participatory process?

- What are the implications of new public management in terms of responsibilities, demands, rewards, incentives, social support, information overload, development of competencies, and relationships between management and staff? Trust? Commitment? Loyalties?

Challenges facing occupational health services

Occupational health professionals are confronting major changes in the work of the populations they serve and, as a consequence, in their own work. They are facing a growing body of information on new health disorders, with many explanations — none of them really satisfactory — and varying relatedness to work conditions and work organization. The pertinence and implications for the practical action of research findings — often ambiguous and uncertain — may be very problematic indeed. Still, it remains the hallmark of an occupational health professional to apply the principles of evidence-based medicine — a concept, for good reasons, lately revisited and translated into evidence-based management decisions in health care. The core component of this concept is about asking questions, delineating and appraising the relevant data, and transferring the implications to everyday occupational health practice. It is, in essence, simple in principle. The first question is “What are the facts of the case?” The elementary step is posing the right question and making it answerable and specific, as has been emphasized by Øvretveit (21).

The 2nd step is to search for relevant published or otherwise documented studies, which is usually a rather time-consuming activity. Proficiency in the use of electronic data bases of bibliographic information of the Medline type and data bases of primary or secondary publication is of paramount importance for success.

The 3rd step is to assess the research and other material collected for quality and relevance. This step obviously raises the hard question of what constitutes “evidence” in health care or in management research. How are the requirements for predictions in occupational health research on health hazards at work to be assessed for validity? For some types of research, expert advice is certainly needed, but often occupational health practitioners and occupational health managers can be trained to develop reasonably structured instruments for examining study description and objectives, data and information sources, and study designs (22).

Next follows the drawing of inferences and conclusions and the impact of their implementation on the routines of everyday practice, the planning of a project, study protocol, or the framing of occupational health policies or guidelines on the workplace, enterprise, or branch levels. In addition, the importance of a judicious

selection of objects, outcomes, and other aspects of development to be followed and further evaluated at a later date must be added.

Links between quality and evidence-based practice

The quality movement that has swept the United States and Europe during the last decade has, together with the conception of evidence-based medicine in health care, provided occupational health practice with a research-based framework. This development implies that judgments are based on the scrutiny of documents following rigorously applied criteria. In the health care sector the most important criteria are in judging solutions and interventions in which there are actual results. They are good if they work.

Quality improvement approaches have met many obstacles in the development of health care and, by implication, also in occupational health. Occupational health services in most countries of the European Union are, in practice, extensions or close relatives of primary health care. The 10 most important obstacles can be summarized as: (i) *confusion*: confusion among professionals and managers on how to define and measure quality and how to improve it in practice, (ii) *awareness*: little awareness about methods to implement continuous quality improvement in a health care organization, (iii) *prejudice*: equalizing quality with bureaucracy or viewing it as being all about customer satisfaction, (iv) *health professional's generation gap*: discomfort among older professionals as they feel threatened by new demands having an impact on the way they relate to clients and colleagues, (v) *professional compartmentalization*: emphasis on professions' specific quality improvements, each profession pursuing its own effort with absence of coordination and organization of improvement, (vi) *knowledge*: lack of knowledge about how to implement quality programs, (vii) *quality-cost understanding*: lack of awareness of the costs and the cost saving potential of projects, (viii) *investment financing*: difficulty attracting investments to quality, given the competing demands for the financing of other projects, such as additional staff and new equipment, (ix) *experience and skills*: lack of skills to develop continuous quality improvement methods and project management and lack of knowledge of quality systems and effective strategies, and (x) *incentives and recognition*: lack of encouragement and the recognition of quality work as creditable competence development in professional careers or, in contrast, the view that quality improvement is a dishonest term for extra work. See Øvretveit in 1997 (21).

All these difficulties have been observed in most countries of the European Union with widely differing

types of financing and ownership structures providing the context for quality work in health care systems. One of the reasons for the limited extent of quality systems being implemented in occupational health settings may be the structural relatedness of occupational health services to primary health care, where the work is carried out in small units. The practice of quality assessment has been based on review processes focusing on the performance of individual professionals. During the last decade the tendency has been to widen the scope to be more comprehensive in examining whole group practices and whole health care teams. As cost awareness increases in the market of health services, the customers will probably learn to specify quality requirements in their purchase of services. In countries in which the health market is free in the sense that it is accessible to both publicly and privately funded organizations in competition, differing strategies will be pursued by public authorities in ascertaining the equality of access. In some countries emphasis will be placed on public health agencies inspecting important aspects of quality. In others accreditation procedures for health and safety will be established on a voluntary or compulsory basis. The role of governmental and nongovernmental agencies is likely to change from examining processes for compliance with technical standards to assessing the appropriateness and effectiveness of quality systems. This change will have obvious implications for the training of occupational health professionals with the view to achieving the knowledge and skills necessary to establish, operate, and evaluate quality systems. It will also provide possibilities for learning from the solutions and experiences gained by others. It is a reasonable assumption that, in the field of occupational health services, many other units have developed solutions for the type of problems we are now facing. It is also likely that we can speed up our quality improvement by looking at others and sharing their ideas. The establishment of effective systems for the cross-national learning of quality improvement and the communication process involved is one of the most important challenges today in occupational health services. This challenge can be met by (i) government-professional organization partnership, (ii) training and education programs for professionals, (iii) incentives for quality improvements (eg, quality performance or recognition as prerequisites for contracts), and (iv) benchmarking.

The bottom line is that we should, in our own best interests as occupational health professionals, set our own goals and identify the quality criteria judged by us to be the most pertinent in our professional performance. In doing so, we are well advised to harbor a healthy skepticism as to what can be achieved by depending on standard instruments for quality assurance. Standardization, as a principal strategy and approach, may be helpful. It may, however, also draw attention to less important aspects

of service performance. And it may also — with a bit of bad luck — be an obstacle to creative thinking and development.

Quality and professional ethics

If, as a point of departure, we adopt the stance that professional quality is highly important in dealing with professional challenges, what has it then to do with ethics? Professional ethics is, in principle, action-related. It deals with motives and goals and their underlying sets of values and the consequences of actions taken. Occupational health professionals cannot, however, live in the exclusive realm of philosophical reflections. They must connect such considerations to action and, simply, figure out what to do (23). The ethical examination starts with a scrutiny of the facts — in their organizational and social context — with their constraints and opportunities and the implications of different courses of action. This step makes ethics an integral part of the evidence-based approach. There is always a whole set of alternative solutions, carrying more or less equal moral weight. The consequences can be beneficial but sometimes perhaps also harmful. This is indeed the core substance of professional ethics, its fundamental value criteria being beneficence and nonmaleficence. We are to do good and to avoid doing harm. If we see the quality of service performance as our ultimate objective, what then are the issues involved in our professional roles? They can be seen as embodied under the key concept of professional responsibility. This concept has two major aspects, objective and subjective responsibility, as conceptualized by Cooper (24), and it covers accountability, obligation, professional value identification, and conscience. It is also an issue of self-identification, which, in practice, is a merger between how we see ourselves and how we wish to be seen by others. There is also another way of looking at ethics. Griffiths & Lucas (25) have analyzed the distinction between external relations with customers or consumers of businessmen and professionals. In a commercial relationship the cornerstone can be described as duty to the customer. This principle implies that the customer should not be misled, but should instead be helped, to make a rational choice in accordance with his or her needs and values. Although it is up to the customer to decide what he or she wants, it is up to the service provider to supply goods or services reasonably meeting the standards of the commodity or service requested.

In many health professions, an important contrast in this regard is that professionals are committed to the task to the point of actually acting independently of financial rewards. They try to know what, in their judgment, is the best solution as seen from the customer's point

of view. There are obvious practical difficulties in realizing this ideal. This lack of interest in material rewards on the part of professionals is not practiced in real life and certainly is not sustained over a long period of time. Professionals must survive to be able to deliver services. Therefore they must be adequately paid for their work.

The implication is that, in the quality improvement of health and safety management, customers not only expect quality-assured standard assistance from occupational health professionals according to the rules of the market. There is, in addition, the expectation of receiving professional advice tailored to their specific demands. It is in line with the ethos of the professional to satisfy this requirement. As Hasenfeld concluded (4), "a [human service] organizations survival hinges on its ability to take an active stance in formulating its evaluation criteria. In the final analysis, human services are caught in the dialectical dilemma in defining their assessment systems. On one hand, the quest for valid and reliable measures is likely to expose their weaknesses and vulnerabilities. On the other hand it is only through such measures that they can ultimately provide effective services to clients." Important moral pitfalls one should be on guard against when this strategy is pursued are as follows:

- to market a service which one is not capable of delivering or for which one does not possess requisite competence,
- to market a service not needed by the client,
- to market a service assessed by one to be of no value,
- to market a service in which the primary objective is to secure one's own power-base in the market.

It is the hallmark of professional quality to achieve this goal and, at the same time, adhere to and comply with the ethical rules of conduct of occupational health professionals. In occupational health organizations operating in the context of a free health market, implying competition, this may be a very demanding task. There are no scientific rules for how the occupational health professional, acting in a health expert function subservient to the production goals of a company or in a managerial responsibility for a health service organization, is to satisfy the requirements of professional ethics. This is very much a question of being aware of one's own values and adopting a reflective stance towards the values, expectations and demands of the different stakeholders involved. It has been pointed out by, for example, Harrison (26) that the shift among physicians from full self-control towards a mix of managerial and professional autonomy can be viewed as a questioning of the continued role of traditional medical ethics as the central arbiter of physician decision making. In such a context we simply have to make do with what we have. The ethical code

put forward for occupational health professionals by the International Commission for Occupational Health is one such document providing a point of departure in discussions of such dilemmas within and between the cadres of occupational health professions (26).

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