Health System in Dentistry

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Synonyms

Oral health care system; Oral health care services; Dental care delivery system

Definition

The health system can be described on a fairly general level as the "totality of organized social action in response to the occurrence of disease and disability and for averting risks to health" (Schwartz and Busse 2003). Although this definition is broad and likely to meet with a wide measure of acceptance, it is not very useful for operational purposes. A narrower and therefore more practical definition subsumes within the concept of the health system "all institutions and activities directed towards the provision and funding of health benefits to the population" (Hajen et al. 2000). In this less wide-ranging sense, the term "health *care* system" is also used. The "oral health system" can be defined in functional terms as "the combination of organizations, flows of finance, workforce training and structure, laws, regulations and accepted practice which are aimed at improving the oral health of individuals and communities" (Anderson et al. 1998).

History

Health systems have existed ever since people first attempted to protect their health and to treat diseases. Organized health systems in the modern sense, however, are an institution of the last hundred or so years and universal cover is predominantly confined to industrialized countries. In Germany the process of development towards an organized health system began in the second half of the nineteenth century (Tiemann et al. 2003). Nowadays, owing to its quantitative significance the health system is already commonly described as an "industry". Total health spending in Germany in 2005 amounted to 239 billion euro, or 10.7% of gross domestic product. Oral health care is estimated to account for about 1% of GDP.

Basic Characteristics

A "system" is generally understood to mean the totality of interconnected elements that influence each other and are organized for a specific purpose. The system of oral health care thus involves the interaction between dentists and patients, health insurance funds, associations of statutory health insurance dentists, associations of health insurance funds, professional dental organizations, associations and societies, the dental technology industry, health ministries and other government institutions, as well as other bodies. The objectives of the system are enshrined, for example, in the German Dental Association's "Oral Health Goals", which are in turn based on the World Health Organization's "Global Goals for Oral Health 2020":

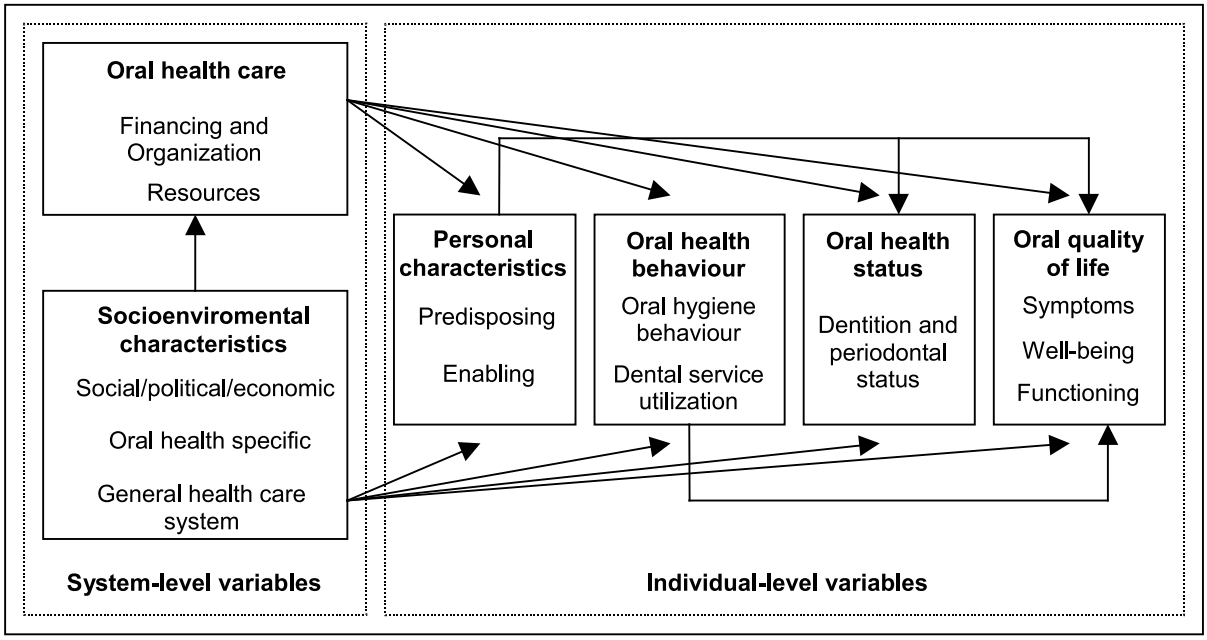
1. Promotion of oral health and reduction of the effects of dental, oral and maxillofacial pathology on general health and on psychosocial development, with particular reference to at-risk groups.
2. Reduction of the effects of dental, oral and maxillofacial pathology on general health at both individual and population level by early diagnosis, prevention and efficient treatment of oral disease.

Given appropriate operationalization of the specified aims, for instance on the basis of the ▶ DMFT value for caries or the Community Periodontal Index (▶ CPI) for periodontal status, attainment of the system objectives can be assessed empirically by ancillary evaluative research.

Analysis reveals that the oral health system can be broken down into three components, of which the third is assignable to the individual sector (see Fig. 1). They are:

1. The oral health care system proper (the medical system).
2. The social, political and economic background to the oral health care system (health policy).
3. Patients' individual capabilities and attitude patterns (which are subject to influence by the oral health care system and the socioeconomic background) (health behavior of the general population).

Compared with the health system as a whole, the oral health system exhibits certain particularities: "Most oral care is provided as an outpatient service, and hospital oral health care is very limited. Among the reasons suggested for this are: (a) the elective nature of most dental treatment; (b) the highly individualistic nature of solo dental practice; (c) the relatively restricted use of dental auxiliaries; (d) the chronic rather than life-threatening nature of most dental diseases; (e) the minimal interest in and development of hospital-centered treatment in general dentistry; and (f) the relatively slow advances in oral health sciences compared to medicine" (Holst et al. 2002).



Health System in Dentistry, Figure 1 Oral health system. Source: Chen et al. 1997

Comparative Oral Health Systems Research

The comparative analysis of health systems is concerned with the extent to which indications for the design of a health system can be derived from a comparison of differently structured health systems and from evaluation of experience gained in other countries. For the specific field of oral health care, the Manual of Dental Practice published by the Liaison Committee of the Dental Associations of the European Union (Kravitz and Treasure 2004) constitutes a good general survey of the various national oral health systems.

National differences in the design of oral health systems are largely attributable to the historical and cultural particularities of the countries concerned. Both the structure and organization of the system of oral health care and the level of benefits provided depend on a state's specific "► sociopolitical culture". The transferability of system elements between countries is consequently very limited. The outline of European health systems given in Table 1 reveals a number of common features that allow the systems to be assigned to just a few classes or "models" (Anderson et al. 1998; Holst et al. 2002; Klingenberger 2006).

As a rule, these models are not applied in pure form; that is to say, a given national health system may perfectly well include individual features of a different model and thereby assume a hybrid configuration. The Semashko model of the central and eastern European countries has developed in the direction of the Bismarck model since the "fall of the iron curtain" in 1989. Since all national health systems are faced with similar economic and demographic challenges and a concerted European health policy is proposed for the medium term (under the "Open Method of Coordination"), it is generally assumed that there will be a "► convergence of systems" – i. e. that the various models will develop in the direction of a "mixed system". The mixing of systems is already far advanced in some European states (the countries shown in parentheses in Table 1).

Measuring Health System Performance

An important aspect of comparative health systems research is international comparison of the performance of health systems – that is, the extent to which health goals (including oral health goals) are achieved and the resources required for this purpose. Anyone wishing to compare the performance of health systems faces two problems. First, generally accepted criteria for assessment must be identified (the assessment problem), and, second, the effect of the health system on the performance of other factors must be isolated (the problem

Health System in Dentistry, Table 1 Delivery models

Bismarck model (government-regulated social insurance system)	
• Oral health care is mainly financed through compulsory social insurance, with the option of voluntary private insurance • Contributions from employees and employers, usually as a fixed percentage of earned income; these contributions are pooled and disbursed by independent sickness funds • Provision relies mainly on private dental practitioners • Benefits cover most restorative dental care • There are also private insurance schemes in which patients pay their dentist directly and are reimbursed from the insurance company • Cost-sharing generally consists of the consumer's payment of a fixed percentage of expensive porcelain or gold restorations and fixed prostheses	*Countries*: Austria, Belgium, France, Germany, Luxembourg, Netherlands, (Switzerland)
Beveridge model (government-organized and tax-financed national health system)	
• Financing of oral health care used to be predominantly provided out of general and/or specific taxation, collected by central or regional government • Oral health care services are traditionally provided by publicly owned and managed institutions • Price and treatment profile regulation • Universal access to oral health care, but usually with defined levels of patient co-payments for treatment • Small but rising market share of voluntary insurance schemes	*Countries*: Denmark, Finland, Sweden, United Kingdom, (Norway), (Portugal), (Spain), (Italy), (Greece), (Ireland), (Iceland)
Semashko model (mixed system of Bismarck [financing] and Beveridge [provision])	
• Oral health care is mainly financed by compulsory social insurance • Comprehensive oral health care is provided free of charge to the whole population • Dentists are salaried public employees who operated from local or company-based polyclinics or hospital dental departments • Oral health facilities are publicly owned and the distribution of personnel, clinics, treatment and materials is planned • A small proportion of expensive services – mainly prosthetic services – is covered by patient-co-payment • Some private practice exists in several CEE countries, entirely paid for by patients on a fee-for-service basis	*Countries*: Central and eastern European countries (CEE)

of attribution) (Hajen et al. 2000). To permit the comparison of different health systems, the World Health Organization has developed an "overall health system performance" index, which takes account of the following five criteria of the performance of a health system (World Health Organization 2000):

- level of health (life expectancy)
- openness of the health system (accessibility)
- fairness of funding (distribution of burdens) and access to services (equity)
- status of medical care
- satisfaction of the population with the health system and individual satisfaction with one's state of health.

However, the World Health Organization's methodology has been criticized as unscientific. All multidimensional analyses are at risk of not comparing like with like – i. e. of failing to solve the assessment problem mentioned above. Statements about the performance of health systems should thus concentrate preferentially on detailed analysis of individual fields of care. A good example from the oral health care sector is the Euro-Z project, an empirical comparison of the prices of dental treatments in seven European countries (Kaufhold et al. 2001) ▶ (oral) health system performance.

Conclusion

The analysis of health systems is subject to a number of methodological problems, in consequence of which caution must be exercised in interpretation of the results. Yet health systems analysis can offer important early indications of feasible approaches to reform and of emerging trends. In the specific field of dentistry, a trend is becoming apparent, regardless of the particular system applied, for the proportion of expenditure accounted for by public funding to be reduced and for relatively more reliance to be placed on private ▶ models of finance. In the future, too, a greater role will be played by private service provision in the field of oral

health care. An early steering of health policy along lines based on the results of health systems analysis is desirable.

Cross-References

- ► Convergence of Systems
- ► CPI (Community Periodontal Index)
- ► DMFT-Index
- ► Models of Finance
- ► Oral Health Behavior
- ► (Oral) Health System Performance
- ► Sociopolitical Culture

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Health System Forms

Synonyms

Similar trends of health care systems reform

Definition

The basis of convergence theory is the hypothesis that industrial states with different forms of organization face comparable challenges and must accordingly develop similar solutions. The pressure of comparable problems, it is held, gives rise to similar requirements of adaptation and thereby results in an approximation of institutional, political and economic structures and strategies. A comparative study of health policies in the OECD member states concluded that "the most remarkable feature of the health care systems reform is the degree of emerging convergence". Transnational problems and trends in health care can be attributed to, for example, economic causes (mass unemployment or globalization), technical factors (innovative medical technology and consequent new treatment methods) and issues of population structure (demography and epidemiology).

Health System Indicators

Definition

Indicators of the performance of ► health systems are defined by effectiveness, appropriateness, efficiency, responsiveness, accessibility, safety, continuity, capability, and sustainability. Health system characteristics include the extent to which the system delivers good quality health actions to improve the health of the population. This is the most general term for health indicators, including indicators of health care provision, utilization, health care financing, and health policy.