

The information and policy on private medical practices

Objective: To observe the scope and role of private medical practice in urban and rural China, where was transferred economic structure from planning economy to market economy. Information provided by the study was support to central government for its health policy reform.

Method: Qualitative and quantitative investigation conducted by authors. Doctors, residents and government officials were surveyed or interviewed. Focus group discussion, key person interview, and questionnaire survey were the major methods of information collection.

Results: Private hospital and clinic in urban and rural China were welcomed by residents for its lower price, friendly doctor-patient relation, and convenience for visit. More satisfy on their income of private doctors than public doctors. Regulation and monitoring on private medical service were urgent opinions of officials and residents. Even there small percentage of service provided by private sector, competition between strong public hospitals and private service would observed significantly. For the different benefits of stakeholders for this private service issue, analysis of stakeholder opinion was valuable for decision-makers of health department, and health service and policy study.

Conclusion: Private medical practice was needed to be focused and regulated by Chinese government. More cost-effectiveness and efficiency issues of public health sector could be found on their 'opponent'. Meanwhile, qualitative study method for health issues could be the another channel to provide WHY questions, especially on health policy analysis.

10079-4 theses regarding the balance between when to act and when to study

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Empirical examples and conceptual considerations

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The ultimate “goals of medicine are to promote health, to preserve health, to restore health when it is impaired, and to minimize suffering and distress”. The word prevention embodies these aims and the world of medicine and public health has seen numerous advances to improve the health of many. However, while research continues to increase our knowledge of how the body works, the question of whether and how community success in preventing or treating disease has been actually achieved is a question of constant debate.

In this paper the relative contributions of preventive and interventive research in yielding community results are examined. Both approaches are means to discover a link in the chain of causation which can be broken. Preventive research, as defined here, aims to identify a determinant A in the environment which causes an undesirable health effect B in the human body. Preventive research ends when the critical nature of A is convincingly established and ways to avoid A are identified. Interventive research, as defined here, aims to understand and manipulate the chain from A to B within the human body. Depending on the circumstances, interventive research will often remain incomplete and, in practice, preventive measures are often used without understanding of the complete chain between A to B. While prevention may thus come from both research approaches, a distinction between the two serves to answer the question “what balance between the two approaches, can maximize community benefits?”. On the basis of empirical examples of real (Poliomyelitis, Lung Cancer, AIDS) and possible scourges (BSE) and conceptual considerations the following theses seem substantiated:

(i) To achieve the ultimate goals of medicine both preventive research and interventive research are needed. (ii) In the past century, diagnostic advances fueled a focus on interventive research and vice versa. But the search for diagnostic advances and the quest for mechanistic understanding are only means to lessen the public health burden of diseases. In fact, the focus on interventive research may have been a major reason for community failure since the 1950s. (iii) In terms of understanding the chain of causation, it is easier to analyze the critical nature of A in the environment than to investigate complex interactions from A to B within the human body. In general, it will take less research to establish *that* A causes B than to elucidate *how* it does so. (iv) In terms of breaking the chain of causation, it is preferable to act on A in the environment rather than to react along A to B within the human body.

It is concluded that a shift to preventive research and earlier action on identified culprits in the environment may be a recipe for more community success: the health of many could be protected and research could move on to other problems.

10233-Nutrition, environment and health: consumer's knowledge and behavior in Switzerland
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The Swiss National Environment and Health Action Plan (NEHAP) aims at improving consumer's awareness of ecological aspects of nutrition to increase the demand for ecologically produced food and thus, to promote sustainable agriculture.

Objectives: To assess changes in knowledge and behavior relating to ecological aspects of nutrition, i.e. seasonality, regionality and organic production between 1998 and 2001 as a part of the evaluation of the Swiss National Environment and Health Action Plan (NEHAP).

Methods: repeated cross sectional surveys based on personal interviews with representative samples of 623 (1998) and 626 (2001) 15 to 74 year old Swiss residents, respectively.

Results: The knowledge of seasonality of 10 home-produced fruits and vegetables remained essentially unchanged: in 2001, 49.0% had a good knowledge on seasonality (≥ 7 correct answers) as compared to 51.2% in 1998 ($p=0.445$). When buying food, seasonality (44.4% in 2001 vs. 44.7% in 1998, $p=0.925$), origin (37.3% vs. 34.2%, $p=0.283$) and way of production (26.6% vs. 24.4%, $p=0.389$) were not considered more often, either. However, a higher proportion reported to buy organically grown food regularly (17.1% vs. 11.9%, $p=0.004$).

Additionally, among those who had a good knowledge of seasonality, a higher proportion also considered it when buying food (52.8% vs. 41.1%, $p=0.004$). Furthermore, we assessed the knowledge of the association between nutritional behavior, agricultural production and environment. In 2001, a higher proportion of participants agreed with the statements that a) greenhouse production is more energy intensive than outdoor production (88.5% vs. 83.2%, $p=0.018$) and that b) frequent meat consumption contributes to the greenhouse effect (32.5% vs. 21.1%, $p<0.001$).

Conclusions: Knowledge of seasonality and consideration of ecological aspects when buying food did not increase significantly despite a number of publicity campaigns on these topics. Nevertheless, organically grown food has become more popular, reflecting probably the increased availability of affordable products in food store chains in Switzerland. There also seems to be a certain increase in awareness of specific environmental impacts of agricultural production and nutritional behavior. In conclusion, environmental health promotion programs such as the NEHAP should focus on influencing conditions to facilitate behavioral changes in addition to the conveyance of knowledge. Despite some progress, there remains a need for action to increase the share of organically cultivated land from the currently 9% to the 30% the Swiss NEHAP aims to reach in 2007.

10695-Implementing Environmental Health Indicators: Challenges for Environmental Epidemiology
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To facilitate preparation and monitoring of policies for the rational management of environmental factors affecting public health, WHO - European Centre for Environment and Health implements an indicator system based on internationally agreed methodology and comparable data. The design objective is improved communication on main environmental health (EH) concerns and related actions in ten policy areas: air (ambient and indoor) quality, housing and settlements, traffic, noise, radiation, waste and contaminated lands, water and sanitation, food safety, chemical emergencies, workplace. The system will also contribute to an integrated assessment of progress in selected issues relevant for sustainable development. A set of “core” indicators has been proposed to assure a uniform assessments across risk factors, coherent reporting from local to national scale and comparability between countries. Feasibility of the proposed EH indicator set was tested in 14 countries using a standardised questionnaire. Evaluated were: availability and quality of the underlying data, completeness over time and harmonisation of data collection, levels of (dis)-aggregation, breakdowns and limitations in data accessibility, capacity for multi-agency networking on the information. Participating countries have also rated the usefulness of the indicators for decision-making within (sub)-national context. Results revealed lack of coordinated strategies in monitoring and data collection, insufficient cooperation among data producers and lack of synergies with ongoing indicator initiatives both at national and international levels. Several indicators, in particular on noise and housing were identified as requiring further developmental work and harmonization of underlying data collection systems. Pilot study protocol was designed and the system implementation starts in selected countries in the Spring 2002. The process aims to prepare and test an indicator-based system ready for implementation in WHO European region following the 4th Ministerial conference on health and environment in Budapest, 2004. Increased “specificity” of using the EH indicators system in decision-making requires solid base of scientific evidence, much of which emerges from environmental epidemiology. Underlying conceptual models of the system need further validation and quantification. Geographical specificity and timeliness, as well as the ability of the system to communicate with policy processes pose also a challenge to the science. The shift from data-driven to user-driven approach and development of policy-oriented presentation methods influences priorities for research and focuses it on most relevant public health issues. Implementation of the system creates opportunity for improving monitoring strategies and information. Environmental epidemiology should provide cost-effective and feasible methods for population-oriented monitoring, information analysis and interpretation.

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Portugal faces a transitional situation in what concerns the understanding and the practical applications of the close relationships between human health and environmental hazards.

Although, in recent years, major progress has been achieved in what concerns access to basic infrastructures such as safe water supply, sewage and urban waste removal systems, the situation is far from being ideal, persisting large asymmetries and problems that should no longer exist in modern “reasonably” developed societies. The cases of universal access to safe water and food, safe removal of industrial, hospital, agricultural and other types of waste, noise control, and air pollution - including the right to healthy indoor air are illustrative.

In addition, integrated policies are practically non-existent and the country has not yet produced a National Environmental Health Action Plan (NEHAP) as the World Health Organization has proposed for the European Region. This fragmented perspective may partially explain why, in the present and recent past, the Portuguese society demonstrates diverging attitudes towards some of the most essential environmental health issues, which, as in other societies, are strongly influenced by cultural values, political struggle, leadership and envisioning. Currently, the role of the scientific community is frequently questioned as it has been severally affected by antagonist positions, often drawn along partisan lines, that have not contributed to the much needed information and progress of the country.

In our presentation we will illustrate how, over the last decade, the Laboratory of Community Health of the Instituto de Ciências Biomédicas de Abel Salazar (ICBAS) has tried to contribute to promote integrated, multidisciplinary training and analysis of environmental issues more likely to affect the health of the Portuguese. Cooperation with national and international institutions is one of the main features of the activities.

Our examples, covering research and policy implications, will focus on three main issues:

1. Childhood lead poisoning is recognized as the single most common and preventable pediatric disorder of environmental origin. Prior to our studies no data was available for Portuguese children, and both the community and the health sector did not recognized it as a problem. Data from ongoing research on prenatal exposure and children aged between 1 and 5 years will be presented, illustrating its changing Epidemiology.

2. Exposure to dioxins and furans (TCDDs/TCDFs) – In 1999 and 2000, two modern energy recovery urban waste incineration facilities, located near Lisboa and Porto, started operating. As part of the overall environmental monitoring, it has been possible to develop public health surveillance programs, which include biological monitoring. It should be added that in 1997, 37 hospital incinerators were regularly operating in Portugal. As I am preparing this abstract, the first structured evaluation of TCDDs/TCDFs for Portuguese populations (human blood and milk) is being completed. A first set of data is already available for the regions of Lisboa and Porto. Complete data together with available relevant environmental data will be presented.

3. Involuntary exposure to tobacco smoke – The importance of Environmental Tobacco Smoke (ETS) exposure is currently largely ignored by the Portuguese health and environment authorities and the community in general. Despite being increasingly recognized as a major cause of ischaemic heart disease, lung cancer, upper respiratory disorders, which include asthma and middle ear otitis, with risk levels well above other pollutants of concern, the current policies are based on voluntary arrangements, which have clearly proved to be ineffective. Currently, we are developing research lines aiming at controlling exposure to this widespread but controllable agent focusing on biological monitoring and indoor air quality.

10831-Brominated Flame Retardants: Policy Implications of the Emerging Science
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Brominated flame retardants are used in a variety of applications to reduce the flammability of computers and other electronic devices, upholstered furniture, and other products. Among the widely used brominated flame retardants are the polybrominated diphenyl ethers (PBDEs). Numerous recent studies have found that PBDEs are found at increasing levels in sewage sludge, sediments, fish, marine mammals, birds and bird eggs, and human adipose tissue, blood serum and breast milk. Toxicologic evidence on PBDEs indicates a potential for neurodevelopmental toxicity and endocrine disruption. Due to concerns for persistence and bioaccumulation, restrictions on the production and use of pentabromodiphenyl ether (pentaBDE) have been adopted in Europe. The mounting concerns regarding pentaBDE and the other PBDEs raise a number of issues for policy development in the United States, which will be considered in this presentation. These include: the extent of information needed prior to considering regulatory action; the long-term risk implications of persistent and bioaccumulative toxins; the risk-risk tradeoffs between flammability concerns and the potential human health and ecological effects of PBDEs; and the costs and risks of substitution to flame retardant alternatives. Past and current risk management approaches for other persistent and bioaccumulative substances, including dioxins, PCBs, and perfluorooctane sulfonate (PFOS, or "Scotchgard") can provide useful lessons as regulators, producers and users of PBDEs develop their responses to the emerging science on PBDEs.

The views expressed in this presentation are those of the authors, and do not necessarily represent those of the U.S. Environmental Protection Agency.

10955-How Useful is Environmental Epidemiology? Development of California's Ambient Air Quality Standards for Particulate Matter

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Reacting to what has historically been the worst regional air pollution in the United States, California has since 1970 developed some of the most stringent ambient air quality standards in the world. The scientific foundations for these standards are periodically reviewed, and the regulations revised, if necessary, to protect public health. Recent legislation in California requires that all ambient air quality standards be reviewed to assess the extent to which they protect public health, particularly in relation to infants and children, taking into account the unique susceptibilities and activity patterns of this subpopulation. During this review we found that California's ambient standards for PM₁₀ (particulate matter with median aerodynamic diameter of 10 microns or less) did not adequately protect public health, and we subsequently developed recommendations for revision of the California standards by the Air Resources Board. This process involved publication and circulation of draft recommendations (including the addition of standards for PM_{2.5}), solicitation of written comments from all interested parties, and rigorous scientific peer review in a public setting. During 2001-2002 we formulated recommendations for annual and 24-hour ambient air quality standards for PM₁₀ and PM_{2.5}. An analysis of the public health benefits of attaining these recommended standards suggests a potential reduction of an estimated 6,500 deaths annually. Unlike ambient standards for gaseous pollutants, the PM standards are based almost entirely on epidemiological studies, and therefore are subject to the strengths and limitations of the latter. Epidemiological studies have demonstrated consistent associations between exposure to ambient particulate matter and increased morbidity and mortality. The nature of the underlying data, however, created several challenges that had to be overcome in this application of epidemiology to policy-making. This presentation will provide an overview of how we addressed some of the important issues, including: (1) the lack of a clear threshold in many of the studies linking daily mortality with changes in ambient PM; (2) potential confounding by meteorological factors and co-pollutants; (3) the consistency and coherence of the results; and (4) the relative toxicity of fine versus coarse particles. Finally, our results will be contrasted with those of other regulatory/scientific agencies throughout the world that have addressed these issues in the past few years.

10983-Evaluating scientific evidence in a policy context is different from evaluating evidence in a research context: considering consequences of error in risk assessment

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Information generated by environmental health scientists, including epidemiologists and exposure assessors, is critical to achieving public health goals. Risk assessment utilizes exposure assessments, toxicological studies, and epidemiological studies to predict relationships between exposures to chemicals and adverse health effects for populations. Risk assessments, even as they utilize scientific data, are most often intended to answer policy questions. The process is subject to substantial uncertainty. In recent years, in part to attempt to address the uncertainty of results of risk assessments, increasing emphasis has been placed on incorporating “good science,” or principles of scientific reasoning, into analyses such as risk assessments that are used for policy decisions. However, such approaches often fail to recognize that the implications of reviewing evidence in a policy context differ from the implications of reviewing evidence in a purely scientific context. This is because failures to detect relationships between exposures and adverse effects can lead to deleterious effects in exposed human populations. This analysis considers the potential for error as a component of risk assessment in case studies for three chemicals. The results suggest that consideration of the magnitude of potential errors can be represented in a structured manner that can assist in the interpretation of uncertain results and better allow for the use of risk assessments in a variety of policy approaches, including those that emphasize the precautionary principle.

11103-Developing National Standards to Reduce Exposures to Harmful Substances Contained in Indoor Decorating and Construction Materials in China

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ABSTRACT

The numbers of airtight buildings with HVACs as well as indoor decorations have been increased markedly in China since 1990s due to the rapid economic growth. This resulted in increasing concerns on indoor air pollution.

Before 2001, China regulated a few harmful substances contained in indoor decorating materials such as paints, chipboards and medium hardboards. In 1994, China Environmental Lab 2001, which initially proposed the national standard with the title of 'Code of harmful substances in indoor decorating materials' (GB 50325-2001) was updated and published as 'Indoor Decorating Criteria Building Engineering' (GB 50325-2001) and stipulated the limits of harmful substances in six types of indoor decorating materials. Including concrete wood-based panels, developed wood-based panels, the local standards for wood and granite products, 'Electrolytic products (DB 31/T 549-98, Shanghai) on leather and wallpaper' (GB 18580-2001, GB 18582-2001, GB 18583-2001), 'Hygienic Norm of Formaldehyde in Wood-Based Panels and Hygienic Norm of Indoor Coating Materials issued by the Ministry of Health.

GB 50325-2001 also stipulated the limits of harmful substances in building materials and decorative materials including (1) inorganic nonmetal building materials and decorative materials such as sand, rock, brick, cement, commodity, concrete, prepared structures, and new style wall bricks; (2) wood-based panels and decorated wood-based panels; (3) paints such as water-based and solvent-based paints; (4) adhesives such as water-based and solvent-based adhesives; and (5) water-soluble treatment agents such as fire retardants, waterproof agents and antiseptics.

This paper reviews the development of standards for harmful substances contained in indoor decorating materials in China, specifying the scopes, objectives, administration authorities, and implementation plans for these standards.

KEYWORDS

Decorating material, Indoor pollution, Policy, China

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