Book Reviews


Now-a-days there is an increasing level of public and professional concern about water safety due to reported outbreaks of water borne diseases, recognition of new agents of diseases and challenges they present to health. Inadequate drinking water and sanitation are one of the major causes of morbidity and mortality in developing countries. This book provides detailed and practical approaches and methods used in assessing the microbial safety of drinking water. It provides guidance to policy makers, regulators and practitioners in planning and implementation of safe drinking water supply to all.

Chapter 1 gives a brief description of history of water borne diseases and their evolution, particularly with respect to cholera and typhoid fever. The history of concept of indicator organism is also discussed. A clear difference in ‘index’ and ‘indicator’ organism, as mentioned in this chapter, is very important in water microbiology, but not widely known. Use of separate ‘index’ organism for viral and protozoal contamination of water seems to have an essential role in assessing water quality. Microbial parameters for verifying the efficiency of treatment and disinfection, and for detecting post-treatment contamination are discussed with examples. Development of safety plants for drinking water supply and implementation by water suppliers has been included. There are plenty of flow diagrams, illustrating various steps of development of Hazard Analysis Critical Control Point (HACCP) plan and several approaches for risk management in the safety of drinking water.

Briefly, it describes about the quality of the source water, control of the treatment process and integrity of the distribution or storage system. For the most part there are too many different pathogens to monitor and as the majority of pathogens are derived from faecal material the idea of using non pathogenic bacteria as an index of faecal pollution was developed. With the advent of more available techniques and methodologies, a wide range of index and indicator parameters, and pathogens may be monitored.

Chapters 2,4,5 and 6 outline which parameters are most appropriate at each stage and how the wide range of parameters are put to use, as no single microbial parameter is adequate to determine if all steps are working properly in all circumstances. There is discussion on catchment to consumer approach to risk management of the safety of drinking water. There is need for frequent re-evaluation of best approaches and indicator parameters.

Chapter 2 describes a number of microbial and non microbial parameters, which can provide useful information about quality and changes of source water and the effectiveness of treatment process.

Chapter 3 defines primarily about the role of analytical techniques in the assessment of risk. Epidemiological approaches have been used for risk assessment. Quantitative microbial risk assessment (QMRA) is an emerging field that has been discussed in more detail. Microbial and other indicator parameters play an essential role in all the models used in the assessment of risk.

Chapter 4 describes the ways to localize and characterize the sources of faecal contamination in a catchment area and ways to determine the microbial quality of source water of both surface and ground water. These in turn help to collect information to substantiate and support approaches to manage the risk of water borne diseases.

Chapter 5 reviews the different treatment processes available to ensure the production of safe drinking water, and their efficiency. The choice of suitable barrier to
implement largely depends on the source water quality. Treatment steps with relevant pathogen removal or inactivation are described together with possible indicators for measuring performance of the process.

Chapter 6 provides a summary of possible sources of faecal contamination in drinking water. It also describes recognized sampling regimen and use of indicator parameters to detect contamination during storage and distribution both from piped and non-piped system.

Chapter 7 outlines outbreaks of infectious diseases linked to drinking water and the steps to be taken in the investigation of an outbreak of suspected water borne disease. This chapter also describes novel microbiological methods, which should be used in conjunction with traditional methods to get maximum recovery of the causative agents. Several traditional typing methods and modern molecular methods are useful for determining relatedness among strains isolated from various sources. The advantage of typing of a microorganism is described in more detail, with examples of case study. This systematic approach would provide valuable tool for responsible authorities to understand the possibility of water becoming unsafe and early warning of potential public health incidents, enabling a planned corrective response.

The last chapter describes in detail the analytical methods for microbiological water quality testing, which include immunological methods, concentration methods, conventional and molecular methods. This chapter describes the logical sequence of these methods and common approach for various microbial groups. Performance and validation of methods and the statistical methods for choosing sample numbers are examined. In conclusion there is a summary tabulation of the major methods along with their advantages and disadvantages. All recent techniques starting from hybridization, PCR, reverse transcriptase to laser scanning analyzer, DNA-chip array, biosensors, solid-state biochips, have been described in brief with their advantages, economic considerations (cost of infrastructure and consumables) and limitations.

In brief, this is a valuable guidebook for testing drinking water quality and assessing microbial safety, which extends from resource to consumer, and is based on rigorous risk assessment. This also offers guidance on the selection and use of available indicators and implementation of effective national and local approaches of drinking water safety. The book will be of immense use to all health professionals and administrators, who are involved in safe drinking water supply in their countries.

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UNAIDS has published the first report compiling country-specific reports on the actions taken to follow-up the resolution adopted at the Special Session of the United Nations General Assembly in 2001.

The report is organized in five chapters. The first chapter assesses indicators of global commitment and action indicators. This is followed by assessing national commitment and action indicators for which an AIDS Programme Effort Index has been developed. A set of National Programme and Behaviour Indicators forms the third chapter which is followed by National Impact Indicators. This is followed by a chapter on challenges ahead in achieving the targets and a set of conclusions and recommendations. Annexes with detailed tables set out country-specific data on all the above parameters.

There is no doubt that the degree of political commitment to tackle the epidemic has increased since the UN General Assembly declaration. However, an examination of the tables shows that in the countries at highest risk there is much that still needs to be done. It may be reasonable to assume that many countries (83 of 189) do not consider this a priority or could not report any action. The adequacy of the response appears to be directly related to the economic status of the country or the amount of economic assistance targeted to them.
India does not figure in several of the tables (e.g., Annexes 3, 4, 5, 8, 9, 10, 15, 16 and 17) probably because data are not available. Even where India is listed, the performance is not among the best. We are still in a window of opportunity and the findings of this report should be taken as a challenge to improve our actions to tackle the HIV/AIDS epidemic.

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Mental health policy and service guidance package. Providing tool to improve the mental health of population (8 modules) (World Health Organization, Geneva) 2003. Price: Sw. fr. 120.00 / US $ 108.00

There has been an escalation in the number of people with mental disorders worldwide posing a major challenge to global development. The burden is higher in developing countries which have poor resources to respond to such demands. At a given time, worldwide figures point to 450 million people being affected with mental and brain disorders. No particular group of population is immune to mental illness, the risk however being higher among children and adolescents, abused women, unemployed persons with low or little education, the poor, the victims of violence, migrants and refugees.

Provision for mental health care system is urgently needed. Modern methods of intervention seldom offer clinical cure for mental disorders. There is however, an improvement in the social functioning with improved quality of life besides symptom control and relapse prevention. Programmes for mental health promotion and prevention of mental ill health can mitigate the population of vulnerability to such disorders.

In 2001, 115 WHO member countries organized activities including delivering important addresses by political leaders and adoption of new mental health legislation. The same year World Health Assembly with over 130 ministers responded positively with clear and unequivocal messages. The theme of the World Health Report 2001 was on mental health and its 10 recommendations have been well received by all Member States. As a result of these activities in 2001, a Mental Health Global Action Programme was organized to put strategic directions in place for addressing the findings presented in the World Health Report. Global Action Plan is based on four strategies: (i) focussing and improving information for decision making one should know more about the magnitude of mental disorders around the world and more about the resources; (ii) creating awareness on mental disorders through education and advocacy involving a sense of responsibility of human rights and towards lessening the stigma attached to mental disease; (iii) assisting countries in designing policies and developing comprehensive and effective health services; and (iv) building local potential for public mental health research in poor countries.

The WHO is aware that action plans run the risk of remaining merely theoretical exercises with little impact on mental health, unless vigorous action is initiated. Therefore, the WHO Division of Mental Health has strengthened the work on information and policy by developing WHO Mental Health Policy and service guidance package. This package comprises eight modules which are: (i) The Mental Health Context; (ii) Mental Health Policy, Plans and Programmes; (iii) Mental Health Financing; (iv) Mental Health Legislation and Human Rights; (v) Advocacy for Mental Health; (vi) Quality improvement for Mental Health (vii) Organization of Services for Mental Health; and (viii) Planning and Budgeting to Deliver Services for Mental Health. Each module indicates the purpose of the guidance package, contents of the package for whom it is meant, and method of using the package. The packages are useful to the policy makers and health planners, Government departments of central and state levels, mental health professional groups representing people with mental disorders, representatives or organisations of families, carers of people with mental disorder, advocacy organizations representing the interest of mentally ill people and non-governmental organizations involved or interested in the provision of mental health services.

Each module offers a succinct summary to highlight the message given. Summary of the module The Mental Health Context states ‘Efforts to improve mental health must take into account recent developments in the understanding, treatment and care of people with mental disorders, current health reforms and government policies in other sectors’.
For Mental Health Policy, Plans and Programmes, it is given as ‘A mental health policy and plan is essential to coordinate all services and activities related to mental health. Without adequate polices and plants, mental disorders are likely to be treated in an inefficient and fragmented manner’.

The module Mental Health Financing states, ‘Mental health financing is a powerful tool with which policy-makers can develop and shape quality mental health systems. Without adequate financing, mental health policies and plans remain in the realm of rhetoric and good intentions’.

Summary given for Mental Health Legislation and Human Rights states, ‘All people with mental disorders have the right to receive high quality treatment and care delivered through responsive health care services. They should be protected against any form of inhuman treatment and discrimination’.

In Advocacy for Mental Health, the summary highlights, ‘Advocacy is an important means of raising awareness on mental health issues and ensuring that mental health is on the national agenda of governments. Advocacy can lead to improvements in policy, legislation and service development’.

Quality Improvement for Mental Health states ‘A focus on quality helps to ensure that scarce resources are used in an efficient and effective way. Without quality there will be no trust in the effectiveness of the system’.

The module Organization of Services for Mental Health states, ‘Mental health care should be provided through general health services and community settings. Large and centralized psychiatric institutions need to be replaced by other more appropriate mental health services’.

The summary of Planning and Budgeting to Deliver Services for Mental Health highlights, ‘Rational planning and budgeting can help build effective mental health services. Methods are now available to help determine physical and human resource requirements necessary to deliver high quality mental health services’.

The central message that the package delivers is the integration of mental health services into mainstream health, and it emphasizes deinstitutionation with moving away from the monolithic closed mental institutions towards general hospital, community and primary care and the legislative measures and advocacy strategies to uphold the dignity and basic human rights of mentally ill people. Each module offers a glossary of important terms used in the text. The document details examples of mental health services in many countries. Comments on the appalling status of mental institutions in some country are mentioned.

The WHO has contributed towards the understanding of mental health needs of developing countries offering guidelines towards the organization of appropriate services. Other complex issues such as human rights legislation, advocacy, quality etc., related to mental health have been pointed out. This package has been brought out very effectively and is elegantly designed. How much of the package materials will be utilized by the policy makers, planners and others to whom these have been addressed to remains to be seen.

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During the past two to three decades, the perspectives of nutrition have been totally transformed with several paradigm shifts. The present book is the brain child of the WHO Regional Committee for Europe to enable WHO to implement its first food and nutrition action plan for European Region (ER). The book consists of four major sections: (1) Diet and disease, (2) Food safety, (3) Food security and sustainable development, and (4) Policies and strategies with an initial overview and final conclusion with each of these sections being supported by recent and relevant literature.

The first chapter of the book starts with an illuminating walk through mortality and morbidity due
to diet related chronic diseases as well as deficiency disorders which are still encountered in certain parts of Europe (eastern). The vast differences in the region in intake of fruits, vegetables, fish and milk fat and the nutritional problems are well illustrated with mortality data on cardiovascular diseases (CVD), coronary heart disease (CHD), cancers, neural tube defects and prematurity. Evidences presented indicate that causally and chronologically the demographic, nutritional and epidemiological transition can be interlinked where urbanization, food supplies and dietary patterns move in parallel directions. The authors clearly trace the path and the shift from pure cereal/legume-based food and fruit/vegetables based diets to processed foods, foods of animal origin, refined foods (sugars), alcohol and salt accompanied by changes in physical activity due to mechanization and prevalence of several degenerative disorders. Country case studies reflect on health care costs in different countries of ER, attributing variations in mortality due to CVD to social inequalities and poverty, diet induced risk factors particularly of saturated and trans fatty acids (due to hydrogenation), Omega 3-fatty acids and sudden cardiac deaths due to arrhythmias. Role of vegetables and fruits versus pharmacological supplement of antioxidants (largely ineffective) and dietary approaches to stop hypertension (DASH) trials, are addressed in addition to harmful effects of processed foods and red meat, and the epidemic of cancer and of overweight and obesity in relation to energy balance and its consequences, with specific reference to abdominal distribution of fats, implications of childhood obesity and physical inactivity and most of other issues. The insights provided and the nuanced analysis on the structural, social and cultural dimensions, costs and accessibility to both food and exercise suggest that choices are governed by these important issues.

Chapter 2 discusses food safety and control which are of interest to public, politicians and government officials in Europe. The region has witnessed rising incidence of food borne diseases, new hazards in food chain and its sweep across border due to globalisation of the food trade. Both biological and chemical contaminants, their effects particularly on children and the aged groups, extent and magnitude of problems in different countries have been projected as evidences for developing surveillance and strengthening national reporting systems. Disease burden due to food borne episodes have been presented in relation to economics and political consequences. Risk assessment has been stressed as the most scientific method of qualititating health risks and ethical issues. The need for food control systems to improve food technology and to promote global trade as central to public health warrants the attention of all concerned. WHO apparently has a special role to play by way of advocacy, assistance for developing integrated food safety systems, developing scientific tools to measure problems in food chain and management of food borne risks and risks communication.

The third chapter has fundamental aspects of food and nutritional security which impinge on human health, dignity and sustainability in production with repercussions on the ecosystem. The chapter has dealt with the convoluted interrelationships of food/nutrition, production and ecological degradation and environmental health. The editors point at the fact that food security must be replaced by nutrition security and have given detailed accounts of local initiatives needed with emphasis on community action, national strategies (country specific), co-ordinated approaches among diverse ministries/departments/policies. While policies support global trade and modern farming and expanded food production, it has its own repercussions on viability of small food business and totally leads to privatization. The hidden costs of agriculture create environmental problems which must be a lesson for developing countries which are already struggling to raise the nutritional status.

These indirect costs are due to excessive use of fertilizers, pesticides, deforestation, degeneration of soil and water and air pollution (oxygen depletion), high treatment costs, biodiversity losses and damage to health which are a burden to the society and health services. Perishable foods such as fish, fruit and vegetables have limited availability and financial support. Animal-derived products lead to a shift in agricultural land for livestock use. A shift thus has reflected on nutritional quality and health related problems. Further distribution, pricing policy, processing, advertising and market issues add to health problems. This chapter has interesting and illuminating facts on the biodiversity and the biochemical diversity (nutrients and phytochemicals),
fat composition of animal meat, processing and nutrition quality, highlighting the quantity versus quality dimension in every aspect and the decline in health and ecosystems. Reduction in food transport and change in farming have been suggested to curtail demands on natural resources. The chapter narration is lively and has science-based data which should serve as an eye opener for countries in transition. The book has collected the vicissitudes of food and nutrition scenario during the last few decades and woven into the analysis of strategies and practices which have adverse impacts on the health scenario with positive suggestions for better future.

The fourth and the last chapter’s main focus is on policies and strategies and provides a frame work within which Member States can address nutrition and food security, safety and sustainable development (social and environmental) which can stimulate rural economics as well. The emphasis of the chapter is on integrated policies, intersectorial co-ordination and on commitment to public health of all citizens.

After unfolding a synoptic picture, disadvantages of discordant and advantages of concordant policies have been outlined. The editors feel that EU is the biggest importer and exporter of food in the world and hence its policies on nutrition related aspects will affect all countries. Their taxation, pricing policies and subsidies conflict with health goals of decreasing animal food and fat and increasing vegetables/fruits intake in all segments of population.

The Swedish recommendation to phase out aid to dairy products, limit the school milk measures to low fat milk and introduce measures of fruits and vegetables in school programmes, redistribution of agriculture support to favour horticulture produce and to develop a plan to phase out tobacco subsidies, is expected to have a salutary effect on several chronic problems. While consumption of olive oil is good, EU policies to promote olive production has resulted in severe soil erosion and a decline in water availability. The food safety, environmental sustainability and excess production, must run in parallel direction without harmful interactions.

The existing policies (in all regions) on nutrition, food safety and security have been discussed, with clear considerations for the future with emphasis on key elements of success and obstacles to development and implementation of concordant policies. The population-based nutrient recommendations, food-based dietary guidelines at national level, and how to adopt it to country’s needs have been clarified. Food legislation, labelling and food control policy and risk analysis, HACCP approaches and how to go about the complex and exciting job of agreement is dealt with in an enlightening and lucid manner pinpointing to the interplay of the good, adverse and destructive influences on appropriate issues.

The book highlights the crucial role of planning processes to bring about uniformity for developing countries to shape their policies and programmes encompassing nutritional and food security, ecological balance and sustainability with beneficial impacts on social and economic development. The well presented country case studies, the valuable guidance given in the form of relevant tables, charts, annexures and literature and the critical analysis of facts is very educative and informative. Though a large volume of literature is available on the issues discussed in the book it is a comprehensive treatise on related aspects of food and nutrition and the editors have taken pain to deal with every aspect. It is a significant addition to books on nutrition and food security, safety, sustainability and their impact on nutrition and health with emphasis on policies and will interest scientists, industrialists in food trades, policy and decision makers.

In conclusion it is a comprehensive regional publication of WHO which underlines the need for an uncompromising pursuit of the context in the analysis of the complexities of dietary intakes of populations. The book makes a reappraisal of food and nutrition scenario with suggestion for remedial measures for better public health in EU Region and is certainly a valuable asset to existing literature.

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Source and finished drinking waters are vulnerable to microbial pathogen contamination from a variety of sources of human and animal fecal wastes and from the introduction and proliferation of nonfecal pathogenic microbes. Throughout most of the modern history of drinking water supply, concerns about pathogenic microbes have focused on enteric bacteria of human fecal origin.