THE GLOBAL CONTEXT
A review of priority global health issues for the UK

This paper addresses the unstoppable force that is globalisation, and represents a call to policy makers to ignore global forces in health at their peril. Kelley Lee addresses global movements in health, emphasising the need to strengthen global governance. Her paper also explores the consequences of globalisation for health in the UK, including the need for policy makers and health professionals to be made aware of global health issues, the need for national health institutions to adapt to globalising forces, and the consequences for policy and practice of the different levels of government that result from globalisation and devolution.

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POLICY FUTURES FOR UK HEALTH

Edited by Charlotte Dargie

This paper is part of a series written for the Policy Futures for UK Health Project, which examines the future environment for UK health, with a time horizon of 2015. The full series is listed below.

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POLICY FUTURES FOR UK HEALTH

1999
Technical Series

NO 1 THE GLOBAL CONTEXT
A review of priority global health issues for the UK

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Series Editor: Charlotte Dargie

Published by
The Nuffield Trust
59 New Cavendish Street
London W1M 7RD

Telephone: 0171 631 8450
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Email: mail@nuffieldtrust.org.uk
Website: www.nuffieldtrust.org.uk

ISBN: 1 902089 26 X

AUTHOR'S ACKNOWLEDGEMENTS

The following individuals and organisations were consulted for this paper: Professor Ilona Kickbusch, Department of Epidemiology and Public Health, Yale University; Dr Takeshi Kasai, Ministry of Health and Welfare, Japan; Dr Todd Krieble, Ministry of Health, New Zealand; Professor AJ McMichael, London School of Hygiene and Tropical Medicine; Dr Julius Weinberg, Communicable Diseases Surveillance Unit, Public Health Laboratory Service, London; Dr Derek Yach, Tobacco Control Programme, WHO, Geneva; Dr Anthony Zwi, London School of Hygiene and Tropical Medicine.

Kelley Lee

EDITOR'S ACKNOWLEDGEMENTS

The Editor wishes to thank Sandra Dawson, Pam Garside and John Wyn Owen for all their contributions on this series. A workshop was held in Cambridge in January 1999 to review the papers, and was attended by all the authors, the Chairman of the Nuffield Trust, Sir Maurice Shock, Professor John Ledingham, Nuffield Trustee, and members of the Policy and Evaluation Advisory Group (PEAG) who were appointed by the Nuffield Trust and who have acted as the advisory group throughout the project: Mr John Wyn Owen, who is the Group's Chairman; Professor Ara Darzi, Consultant Surgeon and Director of the Department of Minimal Access and Colorectal Surgery at St Mary's Hospital in London, Professor of Minimal Access Surgery at Imperial College of Science, Technology and Medicine; Professor Ann Louise Kinmonth, of the General Practice and Primary Care Research Unit, Cambridge University; Professor Alison Kitson, Director of the Royal College of Nursing Institute; Professor John Gabbay, Director of the Wessex Institute for Health Research and Development; Professor Sheila McLean, Bar Association Professor of Law and Ethics in Medicine, Director of the Institute of Law and Ethics in Medicine, University of Glasgow and Professor Leszek Borysiewicz, Professor of Medicine, University of Wales College of Medicine. I am very grateful to each member for their commitment and time, and thoughtful contributions. I would like, of course, to thank the individual authors of the papers in this series. I would like to thank those involved in the publication process, including Max Lehmann and Patricia McKellar at the Nuffield Trust. Finally, my particular thanks go to Carolyn Newton who was Technical Editor for this series and who worked, with all of us, to an extremely tight timetable.

Charlotte Dargie

FOREWORD

Since its inception the Nuffield Trust has identified individuals and subjects that would impact on health and health care policy in the United Kingdom, with notable examples being *Screening in Medical Care* [1], Archie Cochrane's *Effectiveness and Efficiency: Random Reflections on Health Services* [2], Thomas McKeown's *The Role of Medicine: Dream, Mirage or Nemesis?* [3], David Weatherall's *The New Genetics and Clinical Practice* [4] and Alain Enthoven's *Reflections on the Management of the National Health Service* [5].

In keeping with tradition and reflecting the more complex issues in health and health care policy today, the Nuffield Trust established a Policy and Evaluation Advisory Group (PEAG), supported by the appointment of a Nuffield Trust Fellow at the Judge Institute of Management Studies at the University of Cambridge, to provide a research and intelligence capability for the Trust.

The Policy Futures for UK Health Project stems from the work of PEAG. It involves examining the future environment for UK health, with a time horizon of 2015. The first environmental scan has resulted in a series of 10 technical papers, which cover the following areas[1]:

1. The Global Context
2. The Physical Environment
3. Demography
4. Science and Technology
5. Economy and Finance
6. Social Trends
7. Organisation and Management
8. Workforce
9. Ethics
10. Public Expectations

Each paper in the series is a stand-alone piece, but has also been used by the project to derive an overview report, which focuses on policy assessment in the light of the environmental scan. Entitled 'Pathfinder Report', the overview report is published separately and will be subject to external consultation[2].

The Policy Futures for UK Health Project and the work of PEAG are ongoing. Further reports and publications will appear in subsequent years. The technical papers will also be revisited and different subjects will be tackled.

The strength of the technical series is in providing a context for analysing health and health care policy for the United Kingdom. Each author has produced an independent piece of work that analyses trends and issues in their subject area, focusing on 2015. The papers enable one to read across the issues, in order to provide a general analysis of health and health care policy, which is lacking in the highly specialised debates that dominate the health world today. They have formed the basis for consultation and discussion as part of the Policy Futures for UK Health Project.

Finally, the Trust is grateful to the members of the PEAG, to Professor Sandra Dawson and Pam Garside of the Judge Institute of Management Studies and to the authors of the 10 technical papers. A particular thanks due to Dr Charlotte Dargie, Nuffield Trust Fellow at the Judge Institute of Management Studies, the author of the Pathfinder report.

John Wyn Owen CB
July 1999

ENDNOTES

1. *Screening in Medical Care: Reviewing the Evidence* A collection of essays with a preface by Lord Cohen of Birkenhead (Oxford: Oxford University Press for the Nuffield Provincial Hospitals Trust, 1968).
2. AL Cochrane *Effectiveness and Efficiency: Random Reflections on Health Services* (London: Nuffield Provisional Hospitals Trust, 1971).
3. T McKeown *The Role of Medicine: Dream, Mirage or Nemesis?* (London: Nuffield Provisional Hospitals Trust, 1976).
4. D Weatherall *The New Genetics and Clinical Practice* (London: Nuffield Provisional Hospitals Trust, 1982).
5. AC Enthoven *Reflections on the Management of the National Health Service: An American Looks at Incentives to Efficiency in Health Services Management in the UK* (London: Nuffield Provincial Hospitals Trust, 1985).
6. S Williams, S Michie and S Pattani *Improving the Health of the NHS Workforce* (London: The Nuffield Trust, 1998).

Each of the papers in the series is available from the Nuffield Trust.

[2] C Dargie *Policy Futures for UK Health: Pathfinder* (London: The Nuffield Trust, 1999). The Pathfinder Report is for wide consultation and invited comment. You can email your comments to policyfutures@jims.cam.ac.uk. You can also send your comments to Dr Charlotte Dargie, Nuffield Fellow in Health Policy, The Judge Institute of Management Studies, Cambridge University, Cambridge, CB2 1AG. You can also find this Pathfinder Report along with other technical papers in the Policy Futures series at the Nuffield Trust website: http://www.nuffieldtrust.org.uk. Please respond with your comments by Friday 19 November 1999.

ABBREVIATIONS

AIDS	acquired immune deficiency syndrome
BSE	bovine spongiform encephalopathy
DfID	Department for International Development
DoH	Department of Health
DTI	Department of Trade and Industry
EU	European Union
FAO	Food and Agriculture Organisation
FAO	Food and Agriculture Organisation
FAST	Future Automated Screening for Travellers
HIV	human immunodeficiency virus
ILO	International Labour Organisation
MAI	Multilateral Agreement on Investment
Mass.	Massachusetts
MIT	Massachusetts Institute of Technology
MNCs	multinational corporations
NGOs	non-governmental organisations
NHS	National Health Service
nvCJD	new-variant Creutzfeldt-Jakob disease
ODA	official development assistance
OECD	Organisation for Economic Co-operation and Development
ProMED	Programme for Monitoring Emerging Diseases
SCF	Save the Children Fund
UK	United Kingdom
UN	United Nations
UNFPA	United Nations Population Fund
UNHCR	United Nations High Commissioner for Refugees
US	United States (of America)
WHO	World Health Organisation
WIPO	World Intellectual Property Organisation
WTO	World Trade Organisation
WTTC	World Travel and Tourism Council

SUMMARY

Trends

- Globalisation will continue to have complex and multifaceted effects on the United Kingdom (UK) and the health of its population. It is creating both positive and negative effects, and both winners and losers. Understanding and awareness of the specific impacts of globalisation on health in the UK among health professionals, policy makers and researchers remains limited.
- One of the defining features of globalisation is the growth of a global economy. The UK is closely linked to the global economy and, as a consequence, is vulnerable to many of the health risks being created by increased transborder flows of people, goods, services and capital. Pressures to liberalise trade have so far taken precedence over the protection of public health, resulting in the emergence of new threats to health in the UK that are not addressed by the existing health system.
- The two main global demographic changes that are likely to affect health in the UK are the ageing of populations and greater mobility of people across borders. By 2020, the UK will be part of the 'oldest' region in the world, with direct implications for the provision and financing of health services. At the same time, people will continue to be increasingly mobile as a result of work, pleasure and displacement. The UK will continue to be a hub for mobile populations, creating both risks and opportunities for protecting and promoting health.
- Technological change amidst globalisation will bring opportunities for enhancing health training and education via global information and communication systems. However, the absence of regulation over the internet has led, for example, to potentially harmful marketing practices of health-related goods and services by foreign companies. The exploitation of information technologies for health purposes remains relatively unexplored in the UK.
- Debates over the reform of the World Health Organisation (WHO) since the early 1990s, coupled with the emergence of new health needs, has raised interest in the potential need to strengthen global governance for health. While WHO is currently undergoing an internal process of reform under new leadership, wider questions regarding the capacity of national governments and regional and international organisations to address global health issues effectively remain unanswered. The UK can make an important contribution to such questions, and how they are resolved will have direct implications for health in the UK.

Policy issues

- There needs to be much greater awareness of global health issues among policy makers, health professionals and researchers in the UK. This could be achieved through support of a research programme that would, in turn, feed into meetings, media briefings, consultations and policy initiatives.
- Policy initiatives are needed to adapt national health institutions to globalising

forces. This might include a review of public health measures, practices at points of entry, training of health professionals, and the provision of health services to migrant populations.

- Given devolution in the UK, it will be important to consider how the National Health Service (NHS) can be sufficiently integrated nationally and, in conjunction with regional and international systems, to address global health issues. A review of policies and practices for key measures (e.g. disease surveillance and monitoring, travel health policies), and efforts to ensure standardisation, should be undertaken.
- The importance of health remains underrepresented in policy discussions concerning global trade and investment, transport and other relevant areas that contribute to global health. The Department of Health should be encouraged to draw greater attention to the health effects of decisions taken in other policy areas, and work to ensure that health interests are taken into account within such organisations as the World Trade Organisation (WTO), Food and Agriculture Organisation (FAO), International Labour Organisation (ILO) and World Intellectual Property Organisation (WIPO).
- Globalisation is creating closer and more intensive linkages within and across countries, which makes living conditions in other parts of the world a potential risk to health in the UK. Thus, the UK should continue to support strongly health sector aid focused on building local health capacity, providing basic health needs and, more broadly, reducing poverty. This should be complemented by contributions to discussion and debate on the need to strengthen global governance for health.

No man is an Island, entire of it self; every man is a piece of the Continent, a part of the main.
John Donne *Devotions upon Emergent Occasions* (1624)'Meditation XVII'

Living in rich, technologically advanced nations, we can imagine that we are more or less protected from nature, almost separate from it. Such illusion makes freedom from infection seem normal, health nearly a right. Illness takes the guise of an alien assailant. Like an impudent housebreaker, it makes us indignant, or perhaps we wonder what we did to give it an opportunity. If germs behaved properly, they would respect our intelligence and the usual boundaries of life. We could pursue our affairs without interruption. That view is arrogant and dangerously misleading.
Arno Karlen, *Man and Microbes: Disease and Plagues in History and Modern Times* (New York: Simon & Schuster, 1995)

INTRODUCTION

It has long been recognised that health within the UK is affected by a wide variety of determinants and risks emanating from outside the country's national borders. Medical historians have written extensively of the link between the mobility of human populations, for example, and patterns of disease worldwide. There is also a well-documented history of public health policies and practices aimed at controlling health risks of external origin. Perhaps most prominent have been quarantine measures to control the spread of the black plague in the fourteenth century, and improvements to sanitation and water supplies as a result of cholera pandemics in the nineteenth century [1][2]. These, and many other events in British medical history, are understood within a wider context of change occurring across countries.

As we approach the twenty-first century, the need to understand this broader context has become even more important because of the process of globalisation. Globalisation is leading to an unprecedented degree and intensity of human interaction across the world. It is a distinct phenomenon in the geographical scope of this interaction, the wide range of spheres (e.g. economic, political and technological) it is affecting, and the variety of impacts it is having on human societies. Scholars and policy makers are only beginning to understand this complex process and develop effective responses to it.

This paper briefly examines some of the key factors in this emerging global context that are expected to affect future health in the UK. Globalisation poses

familiar, as well as new, challenges for health and health policy. These challenges are both direct and indirect, and have both positive and negative consequences for a wide range of individuals and groups. The paper begins by defining globalisation in terms of three dimensions of change. It then considers, in turn, selected key features of this globalising context that need to be taken into account in protecting and promoting health in the UK in coming decades - the global economy, global demographic trends, technological change, and efforts to strengthen global governance for health. (The important role of global environmental factors is discussed in paper no. 2 of this series: 'The physical environment'.) The paper concludes with an exploration of some of the policy implications raised by globalisation.

THREE DIMENSIONS OF GLOBALISATION

The global context can be understood as the emerging environment being created by globalisation. Globalisation can be defined as a process of closer interaction of human activity across a wide range of spheres including the economic, political, social, cultural and technological [3]. The precise dating of this process is contested. Some argue that globalisation has been a gradual process over many centuries [4], while others limit it to recent decades [5]. In this paper, globalisation is understood as evolving from the era of 'new imperialism' (1870-1914) and the Industrial Revolution, and accelerating and intensifying from the end of the Second World War. As such, globalisation in the late twentieth century continues to evolve.

The closer interaction characterising globalisation is affecting human societies along three dimensions. The first, the *spatial dimension,* concerns changes to how we experience and perceive physical space. Robertson writes of 'a sense of the world as a single place' due to increased travel, communication and other shared experiences [6 pi]. This has evoked popular imagery of an emerging 'global village' where people have shared interests and identities across vast geographical distances. Paradoxically, globalisation is also attributed to fragmentation of societies resulting in, for example, increased tribalism, nationalism and regionalism. The way in which societies are organised also seems to be changing. Economic activity, in particular, is increasingly conducted across traditional national boundaries with the advent of the 'global factory' (e.g. automotive industry and computers). Finally, there are changes to the way in which space is being defined, with the development of such concepts as cyberspace and virtual reality.

The second dimension of globalisation, the *temporal dimension,* concerns changes to the actual and perceived time in which human activity occurs. In general, there appears to be an acceleration of timeframes. A prominent example is currency trading where US$1.7 billion is traded daily worldwide, two-thirds of which for less than seven days [7]. The speed in which we communicate has also progressively increased following the introduction of the telegraph, telephone, satellites, facsimile and, most recently, e-mail.

Third, globalisation has a *cognitive dimension* that is affecting the creation and

exchange of knowledge, ideas, beliefs, values, cultural identities and other thought processes. This is occurring through a variety of channels including the mass media, think tanks, consultancy firms, international organisations and tourism. One example is the emergence of'global teenagers' who share clothing styles, diets, musical tastes and even slang. Yet globalisation may also be reinforcing differences in how we think about ourselves and the world around us. The growth of Islamic fundamentalism and nationalism in many parts of the world, for example, can be seen as a reaction to the globalisation of Western culture. There is substantial debate, therefore, about whether globalisation is opening up or closing down opportunities for cultural and intellectual development.

In summary, the impact of globalisation on societies is complex and multifaceted. It is creating both positive and negative effects, and both winners and losers. It is these two features of globalisation, its complexity and variable effects, that pose the challenge for researchers and policy makers seeking to develop and implement appropriate policy responses.

THE GLOBAL ECONOMY AND HEALTH IN THE UK

The emerging global context for health in the UK is perhaps characterised foremost by the growth of a global economy. This feature of globalisation has received much attention and, indeed, many believe that globalisation and the global economy are synonymous. The defining features *of a global* economy, as distinct from an *international* economy, are geographical scope and organising principles. A truly global economy would integrate all areas of the world into one economic system of production and exchange. Such a system would also organise economic activities according to principles of efficiency (e.g. a global factory), for example, rather than political boundaries [8].

Defined in this way, we can see that there are some features of the present world economy that are global, but many others remain less so. A few sectors, such as automobiles, electronics, clothing and textiles, and food have organised manufacturing, assembly and distribution functions on a world-wide basis. Others, such as the mass media and financial services, are increasingly global. Still others, such as health care services, education and the defence industry[a], remain primarily confined within national borders.

Historically, the UK's status as a leading trading nation, colonial power and island state has led to economic links with many parts of the world. Consequently, the UK is especially integrated with the emerging global economy through foreign investment, capital flows, transportation and communication systems, development assistance and trade. Hence, as economic globalisation

[a]Global production and exchange should be distinguished from the economic activities of essentially nationally-based producers who seek markets in other countries (i.e. international trade) or companies with headquarters in one country and subsidiaries in others (i.e. multinational corporations). Neither are global in the sense that operations remain organised by national boundaries.

intensifies, it is expected that threats to and opportunities for economic wellbeing in the UK will also grow.

The implications of a globalising economy for health in the UK are both direct and indirect. The direct consequences stem from the production and trade of health and health-related goods and services. On the positive side, a global health market offers potential opportunities for many UK suppliers and service providers to expand their overseas markets in coming decades. Large British-based pharmaceutical companies, such as Glaxo Wellcome and SmithKline Beacham, which are world leaders, may be particularly well-placed to take advantage of new economies of scale within a global market. Conversely, health may benefit in the UK from access to foreign suppliers offering new, innovative or cost-effective goods and services. This is perhaps more likely in the medium term for pharmaceuticals, medical equipment and supplies than, say, transborder health care services where regulation, accreditation and financing remain nationally based [9] [10].

On the negative side, there are potential direct threats to health in the UK from a global economy. Goods and services contributing to ill health may be more freely traded, including tobacco[a], alcohol, junk food, prostitution and illicit drugs [12]. Much of this trade has been increasingly dominated by large multinational corporations or organised criminal groups that can elude national regulatory authorities. Liberalised trade of health-promoting goods, such as pharmaceuticals and blood products, could lead to priority given to profit-seeking over the protection of public health. The global marketing of antibiotics in an irresponsible or unregulated manner in both developed and developing countries, for example, has led to antimicrobial resistance [13]. The unregulated global marketing of blood products (e.g. plasma), worth US$5 billion in the late 1990s, without sufficient attention to safety of supply and production, has already led to the spread of hepatitis B and human immunodeficiency virus (HIV)/acquired immune deficiency syndrome (AIDS) worldwide [14]. In relation to health services, the creation of a globalised workplace for health professionals may lead to a further expensive 'brain drain' of UK personnel to other parts of the world, notably North America, Australia and New Zealand. This may lead to future shortages of staff in the UK and the continued need to fill the gap with foreign-trained professionals'[b].

The indirect consequences to health stem largely from the structural features of

aIt is worth noting that UK companies (e.g. Philip Morris and British American Tobacco) are among the largest in the tobacco industry and thus major exporters of health risks. There are currently 1.1 billion smokers in the world (one-third of the global population over 15 years old), 800 million in developing countries. By the mid 2020s the transfer of the tobacco epidemic from richer to poorer countries will be well advanced. While only 15 percent of the world's smokers will be in higher income countries, 22 percent of all deaths in central and eastern Europe will be from tobacco by 2020. Similar death rates will occur in China and India which offer the fastest growing markets [11].

[b]It is currently estimated that a quarter of hospital doctors in the UK qualified outside of the European Union. Many of these are expected to retire within the next 10 years, which will lead to an exacerbation of existing recruitment problems in the NHS [15].

a global economy as it is presently emerging. Foremost is the increased mobility of people, animals, plants and goods and services across national boundaries. Such mobility is increasing the number of potential disease vectors travelling into and out of the UK. Foodborne diseases, for example, are a health risk created by a food industry with worldwide manufacturing, storage and distribution operations [16]. The crisis over bovine spongiform encephalopathy (BSE) is the most prominent example of transborder health risks from food [17] [18]. Other disease threats may come from increased travel to tropical countries resulting in infection by malaria [19] or newly emerging diseases (e.g. multidrug-resistant tuberculosis). Changes in land-use patterns, ecology and climate have also been implicated in raising the threat of emerging and re-emerging diseases [20][21][22].

As well as increased disease transmission, a liberalised global economy may create pressures for reducing institutionalised barriers to transborder health risks. Health policies since the 1980s have been characterised around the world by efforts to shrink the public sector and reduce government spending, including a reduced emphasis on public health. The 'race to the bottom' by countries seeking to attract foreign investment by multinational corporations (MNCs) from a global economy by reducing taxation, labour rights and environmental standards will continue to exert pressure on public health infrastructures [23]. Another feature of the current form of globalisation is inequality of resource distribution and life opportunities within and across countries, and it is expected that this will worsen in coming decades [24]. The link between inequality and ill-health is already well-documented [25][26]. This is expected to mean, for a substantial proportion of the world's population, continued poor and even worsening access to basic health services, clean drinking water, sanitation and food supplies. Coupled with deteriorating public health infrastructures, an increase in health risks locally, then globally, should be expected.

The creation of the World Trade Organisation (WTO) in 1995, and current negotiations for a Multilateral Agreement on Investment (MAI), to further reduce barriers to globalised production, trade and capital flows reflect the continued priority being given to trade over health interests. The WTO ruling against the European Union (EU) on the import of hormone-treated beef, for example, has placed the burden of proof on health officials to show that concerns for health are based on clear scientific evidence. Current worries over genetically modified food have raised similar debates regarding the balancing of economic interests with public health considerations. Without greater representation of health issues in such high-level negotiations to create mechanisms for preventing adverse health effects, national health systems will be faced with the far more difficult task of dealing with the indirect health consequences of liberalised trade [27]. An example of such an initiative, with clear public health implications, is a proposal by the World Travel and Tourism Council (WTTC) to support the future expansion of travel and tourism by, *inter alia,* easing congestion at international border crossings. This would be achieved through a system known as FAST (Future Automated Screening for Travellers) currently being piloted, which would use biometric identification, computerised processing and automated entry

to expedite passport control [28]. While the proposal promises to speed the movement of people across national borders, it does not take account of the potential public health risks created by such as system.

Finally, health in the UK may be affected indirectly by the highly interdependent structure of a global economy that is collectively vulnerable to financial crisis. Problems arising in the economy of one country or region can affect that of other countries or regions. The recent economic crisis in Asia, for example, has had widespread effects in Eastern Europe, Latin America and, increasingly, North America and Western Europe[a]. The UK economy is highly dependent on foreign trade and capital flows. Thus, ups and downturns in the global economy can mean similar movements in the UK. This, in turn, will impact on the domestic capacity of the government to finance the health system publicly.

DEMOGRAPHIC AND EPIDEMIOLOGICAL TRENDS

While the changing demographic profile of the domestic population will be a key factor influencing future health in the UK (see paper no. 3 in this series: 'Demography'), it is also important to understand demographic trends in the global context. The world's population is changing in size, composition and behavioural patterns. Most notable is continued population growth, albeit at a slower rate, and despite declining fertility rates in most parts of the world, with 90 percent occurring in the developing world. The world's population will continue to grow by 80 million annually well into the next century, and is expected to reach between eight and 12 billion by 2015 [30]. Populations are also becoming more urbanised, many adopting more sedentary 'modern' lifestyles, changing traditional diets, and being exposed to environmental hazards amidst rapid industrialisation. Epidemiological assessments carried out by WHO suggests that the world's major health problems early in the next century will be diseases of the circulatory system, cancers, infectious and parasitic diseases and external causes such as violence [31].

There are at least two specific features of the world's population that are likely to impact more directly on future health in the UK. The first is the ageing of the world's population. Given changing fertility patterns and increased life expectancy (rising to an expected average of 72 years by 2020), there will be a substantial increase in the size of the elderly population worldwide during the next century. In the next 25 years, it is estimated that the number of people over 65 in Organisation for Economic Co-operation and Development (OECD) countries will increase by 70 million, while the number of working-age people will rise by only five million [32]. Globally, there will be more than one billion people aged 60 and over by 2020, 710 million of them in developing countries. Within the next quarter century, Europe is projected to be the 'oldest' region of the world, with elderly people to comprise 24 percent of the population by 2020 [33]. The expected impact on health in these countries will be a changing epidemiological profile towards an increase in chronic and debilitating diseases,

[a] Tor example, British Airways earns more than 20 percent of its sales or profits from the Asian market [29].

noncommunicable diseases, mental health and visual impairment. This will be coupled with increased demands on health care services and pressures on the capacity to finance health care with a shrinking working-age population. A key challenge for the coming decades, therefore, will be to provide quality as well as quantity of life for a greater number of elderly people.

A second demographic trend is migration patterns. As described above, the movement of people within and across national borders will continue to increase for a wide range of reasons including immigration, displacement[a], work, study and tourism. All are highly relevant to the UK. Tourism, for example, is a substantial and growing sector of the British economy [36], and British higher education institutions are likely to remain popular with foreign students from around the world. There is also expected to be a continued rise of a transnationally mobile professional class, including health professionals, travelling on a routine basis for business and pleasure. Furthermore, migrants originate from, and travel to, a more diverse range of countries and regions. In Europe, migration from Eastern and Central Europe have increased significantly since the end of the Cold War and is expected to continue in coming decades. During the 1970s and 1980s, outflows of people from Warsaw Pact countries numbered 10,000 annually. In 1989 this increased to 1.2 million people. Between 1988 and 1992, 2,065,900 people applied for asylum in 10 European countries, including the UK - half of these from other European countries [34] (as quoted in [35]). Deteriorating economic conditions, including high unemployment, and the passage of a new passport law in 1991 in the former Soviet Union, is likely to result in a continued increase in migration [37]. In other parts of Europe, the resurgence of nationalism and resulting conflict (e.g. in Serbia) will create greater instability and displacement of people. UK membership in the EU, and the latter's expansion of membership to other countries in the region, will also encourage greater mobility of populations. Further afield and in the longer term, globalisation is predicted by some as continuing to contribute to political and economic instability, coupled with environmental degradation (e.g. food and water scarcity and pollution) that will force people to migrate. Overall, the World Bank estimates that, while migration will not have a notable effect on population growth rates in the developing world, migration to Europe will almost double the expected growth rate of the population from 0.11 to 0.21 percent annually [38].

The UK will continue to be a major hub in the world's transportation network, notably for travel by air via Heathrow and Gatwick airports. This has been supplemented by the development of new routes linking the UK to continental Europe by sea and rail (e.g. Channel Tunnel) which will serve as conduits for an increasingly mobile population within Europe and beyond. Thus, as the OECD reports, '[c]learly, the international migration space is expanding' [39 p2] (see table 1.

The potential implications for health of migrating populations to and from the UK

[a] It is estimated that 20 million people are officially identified as refugees living in countries other than their own [34] (as quoted in [35]).

are diverse. If fertility rates within the UK remain relatively low, immigration will be needed to sustain a viable workforce amidst an ageing population. Much of this workforce is likely to come from the developing world where many countries will be experiencing a temporary 'bulge' in working-age populations [30]. An increased demand for trained health professionals for the ageing UK population, in particular, may require even greater recruitment from abroad than at present. A change in ethnic makeup of the UK population, due to global migration patterns, may also represent changes in health needs and priorities (e.g. sickle cell anaemia and tuberculosis[a]). The health status of undocumented migrants living in the UK may need to be given particular attention on both humanitarian and public health grounds. Finally, the increase in human migration can raise the transborder risk of disease transmission, particularly for diseases that are asymptomatic.

TECHNOLOGICAL CHANGE

One of the key driving forces of the globalisation process has been technological change. The development of new technologies has occurred at a startling rate in the second half of the twentieth century, bringing widespread changes to societies and lifestyles. The impact of technological change on health at the domestic level is described in paper no. 4 in this series: 'Science and technology'. This rapid pace of change on a global scale is expected to continue into the next century[b], and is likely to affect health in the UK in a variety of ways.

Foremost will be the continued importance of information and communication technologies that will continue to expand in capacity and decline in cost. Already, such technologies have enabled individuals and groups to interact more rapidly and cheaply across national boundaries for a number of purposes (e.g. the financial sector, mass media and transportation). In the coming decades, the information industry is expected to expand actively into the health sector, given the latter's economic significance in most economies. Transborder applications may include:

- surgical procedures via video link-up to, for instance, battlefields
- outsourcing of billing and insurance administration
- clinical 'benchmarking'[c] using standardised and online patient records
- computerised patient records for frequent travellers
- an integrated global infectious disease surveillance and monitoring system
- training of health professionals through simulators and distance-based learning [41].

Health care delivery should also change as a result of greater access by the public

[a]In 1995, there were 6,176 reported cases of tuberculosis in the UK, the majority of them occurring in the South Asian immigrant population [40 p67].

[b]It is estimated that the capacity of microchips doubles in density and speed every 18 months [41].

[c]Clinical benchmarking concern the identification of best practice by clinicians using collated databases of health outcomes.

to, for example, health information databases, helplines and patient support groups located around the world[a]. This should contribute to the trend towards self-diagnosis and treatment. Many of these applications are only in the developmental stage, largely by US companies (e.g. SRI International, Bell Atlantic, 3M) and will initially be available to selected individuals. However, the UK will have an opportunity to adopt many of these applications in the next century, representing potentially considerable cost savings, improved clinical outcomes, more flexible and patient-centred care, and gains in the use of quality, comparative data (e.g. research). There are thus implications for how the UK develops its own health-related information and communication systems, and their compatibility with any globally connected systems.

It should be noted that health-related information, goods and services available through such technologies as the internet also have potentially harmful effects. The global mass media, for example, can promote both healthy and unhealthy lifestyles. A good example is the growing use of the internet to market health-related products worldwide which has led to a plethora of products being sold with dubious and even potentially harmful effects. Misleading medical claims on the internet were recently investigated by the Office of Fair Trading in collaboration with 60 similar agencies worldwide. Controlling such material under the Medicines Act (1968) and existing fair trade laws, however, is difficult given that many sites are based outside the UK Instead, the focus has been placed on increasing access by the public to accredited information, such as clinical guidelines and peer-reviewed research, to counter dubious claims [44]. Thus, globalised health information and communication raises implications for strengthening health education by public authorities in the UK.

It should also be noted that, while globalisation may be leading to a greater sharing of ideas, knowledge and practices about health across borders, the importance of cultural context for health may also prove a barrier to globalising forces. For example, recognition of the possible value of 'alternative medicine' (e.g. Chinese medicine and homeopathy), and greater sensitivity to traditional healing practices in many countries, may challenge the globalisation of Western biomedicine worldwide. Differences in underlying values about health and health care also influence patterns of health-seeking behaviour, criteria for rationing health services and health care financing. Hence, the potential effects of global technological change on health will need to take account of the diversity of cultural contexts that shape health within and across different countries.

Continued access to other types of health-related technologies that are affordable and appropriate will be important for the future of heath in the UK This includes

[a] One example of increasing access to health information by the public is the creation of two websites concerning the crisis surrounding BSE and new-variant Creutzfeldt-Jakob disease (nvCJD). A UK government website distributes the proceedings of the BSE Inquiry including transcripts of witnesses, biographical profiles of key participants and basic scientific information [42]. A US-based website brings together coverage of BSE-related stories from the popular and scientific press around the world, scientific research papers, and observations by members of the public [43].

technologies for prevention, diagnosis, therapy and rehabilitation. The international Human Genome Project, for example, will have profound implications for screening practices and disease prevention. An increasing proportion of biotechnology research, however, is conducted within the private sector which, characteristic of the emerging global economy, is increasingly concentrated in a small number of large companies. There are concerns that research priorities are set according to anticipated economic return (e.g. Viagra) rather than magnitude of health impact on human populations (e.g. malaria and tuberculosis). UK- specific needs may not necessarily be met by a globalised biotechnology industry. To ensure that technological developments will meet the health needs of the UK, a strong publicly-funded research programme will be needed to complement private-sector initiatives.

STRENGTHENING GLOBAL GOVERNANCE

During the past two decades, global health has seen changing epidemiological and demographic profiles [45], a shifting balance between the public and private sectors, an increased diversity of actors in health policy and increased pressure on health resources. This culminated in the 1990s with substantial debate over the future of international health co-operation and the need to strengthen and reform existing institutions, notably WHO. Above all, there has been a recognised need to shift from *international* to *global* health co-operation in the next century, led by a strong and effective system of global governance [46]. Global governance for health can be defined as 'the exercise of political, economic and administrative authority' [47 p9] to manage health matters within and across countries. As Rosenau writes:

> Governance...is a more encompassing phenomenon than government. It embraces government institutions, but it also subsumes informal, non-governmental mechanisms whereby those persons and organizations within its purview move ahead, satisfy their needs, and fulfill their wants. [48 p4]

Achieving such a system for global health offers a framework for addressing the policy implications raised in this paper, and remains a key challenge for policy makers in coming decades.

In a broad sense, future health in the UK and other countries will be affected by the creation of a strong or weak system of global governance for health. Given the globalising forces described above, health threats and opportunities arising in one part of the world increasingly have consequences for other parts of the world. How should governments and other relevant stakeholders respond to them? What institutional mechanisms, resources and policy-making processes are needed? Are national health systems sufficiently structured, resourced and authorised to deal with these global health issues individually? How can they work collectively together? Does there need to be a global health authority?

An obvious example is infectious disease control whereby an integrated system of global surveillance and monitoring would be as strong as its weakest chain.

Weak links are likely to be found in poorer countries whose capacity can be strengthened through health development assistance. Another example is the health problems caused by global warming, which can only be prevented by global co-operation including regulation of greenhouse gas emissions. In other words, many expected causes of ill-health in the UK will lie beyond the capacity of an individual country to address and must be addressed at the global level.

The UK can ensure that national health priorities are included on global health policy agendas by active participation in regional and global initiatives. In Europe, Article 152 of the European Union Treaty encourages collaboration and co-ordination among member states on policies for disease prevention, and Article 129 of the Maastricht Treaty introduced EU competence in public health. The Treaty of Amsterdam will extend this competence to include an increased emphasis on improving public health, preventing illness and disease, and removing sources of danger to human health. All of these will have direct implications for the UK's capacity to deal co-operatively with regional health needs.

Beyond Europe, UK health interests are represented in different international organisations by various ministries:

- WHO: Department for Health and Department of International Development (DfID)
- World Bank: Treasury
- UN Children's Fund (UNICEF): DfID
- United Nations Population Fund (UNFPA): DfID
- UN Environment Programme: Department of the Environment
- Food and Agriculture Organisation (FAO): Ministry of Agriculture, Food and Fisheries
- UNHCR: DfID and the Home Office.

The UK has been a major funder of the activities of these, and other, health-related organisations, as well as a provider of technical staff to support specific programmes (e.g. WHO's Roll Back Malaria). The success of these organisations at protecting and promoting health at the global, and by extension the local, level will depend on institutions in member countries working to complement their efforts. The proposed creation of a Food Standards Agency, for instance, to enforce the Food Safety Act (1990) should take into close account the WHO/FAO Food Standards Programme and Codex Alimentarius Commission. The impact on health of other international organisations, such as the WTO, is only beginning to be understood and will need to be taken into much greater account in the making of future UK health policy.

Such co-operation is likely to need extension beyond government institutions in order to address many transborder health issues. Many British-based non-governmental organisations, such as Oxfam, Save the Children Fund (SCF) and Marie Stopes International, have major health programmes abroad. Academic institutions, such as the Liverpool School of Tropical Medicine and London

School of Hygiene and Tropical Medicine, have programmes linked to global health initiatives. Professional bodies, like the British Medical Association, have joined forces with counterparts in other countries - for example, to challenge the tobacco industry.

Overall, the fate of such emerging global policy debates in coming decades will depend on the creation of an effective system of global governance for health. What form this system will take (e.g. international agreement or a global regulatory body), the weight of authority it should be given, and how it will be financed will be key subjects of debate in coming decades. Yet how well global health issues are addressed by policy makers in the health sector, as well as within other sectors, will have direct consequences for future health in the UK Challenging the creation of a stronger system of governance are likely to be vested interests seeking to minimise 'interference' with the expansion of global production and trade, or private concerns likely to be financially affected by the adoption and enforcement of stronger regulations (e.g. tobacco, pharmaceutical, food). Such interests are also strongly represented in the UK and a vocal advocate of public health interests will be needed to balance such interests with public health needs.

CONCLUSIONS AND POLICY IMPLICATIONS

This paper has argued that the future of health in the UK cannot be separated from the wider global context. The process of globalisation is creating a more complex policy environment, characterised by a closer interaction of health determinants and risks within and across national boundaries. The potential health consequences of these emerging changes include a number of policy implications.

Recognition

There needs to be greater awareness and understanding among policy makers, practitioners, researchers, the private sector and the general public about the global dimensions of health. There must be greater recognition that health risks and determinants are increasingly transborder, flowing into (e.g. malaria and tuberculosis) and out of (e.g. BSE/nvCJD and tobacco) the UK, and that the link between local and global health is increasingly difficult to separate. There is also a closer sharing of many health risks across countries. As a result, past and current practices and institutions may not be appropriate or sufficient to address them effectively. There needs to be a high-level review in the UK of this changing global context, supported by empirical research, to inform any necessary policy change.

Adaptation

A variety of policy initiatives might begin to adapt national health institutions to the global context. This could begin with a review of existing public health measures and the extent to which they take account of transborder health risks. Such a review would include looking at legislation (e.g. the Public Health Act), health services and resource reallocation. Health services available at points of entry into the UK, for example, need careful review for their effectiveness and appropriateness. The increased volume of traffic and relaxation of border controls

among EU countries by land/rail, air and sea, in particular, pose new challenges for protecting public health. Liberalisation of trade within the EU also suggests the need to review the inspection of goods (e.g. food products), animals and plants transported across borders, given potentially increased health risks. The availability of health services to overseas visitors who are ordinarily resident in the UK has recently been clarified by a new health circular in England, HSC 1999/018. Changes in policies regarding refugees and temporary residents, however, need to be considered in light of the public health need, rather than political pressures. Changing health needs also raise implications for the knowledge and skills of health professionals. Global health issues need to be integrated into the curriculae of health professionals, as well as others responsible for transborder health issues (e.g. customs officers, health inspectors, immigration control, animal quarantine and import/export licensing). Establishing effective means of monitoring and enforcement of relevant public health measures will also be vital.

Integration

Related to the above, the NHS needs better integration, in terms of policy, both internally and with regional and global institutions. On a policy level, as Flynn writes, there is a 'need to develop a co-ordinated public health policy which links European and national agendas' with shared responsibility for protecting the health of European citizens [49 p6]. Once this is achieved, systems for carrying agreed policy priorities forward would be needed. One existing gap, for example, is a comprehensive health information system (e.g. disease surveillance and monitoring) which is fully integrated with other national, regional and global initiatives, and capable of rapid response to health emergencies [50]. In the past, the system has been ad hoc, at best, and reliant on the overstretched resources of WHO or assertiveness of the US Centres for Disease Control. Recent efforts have sought to strengthen global systems for dealing with emerging and re-emerging diseases, such as the ProMED initiative[a], but many gaps remain. Motarjemi and Kaferstein find a similar problem with the surveillance of foodborne diseases, with reported incidence only an estimated 1 to 10 percent of real incidence because of poor collecting and reporting systems [51]. To begin redressing this problem, Kickbusch suggests that a 'global web for health' would be essential, co-ordinated by WHO perhaps, but integrating national health institutions, WHO collaborating centres, the private sector and other partners [52 p2]. Central to such a web would be networks of interests and information that would enable global health issues to be tackled collectively.

Other agendas

There is a need to ensure that health considerations are higher on the policy agendas of other sectors which have direct and indirect consequences for health.

[a] The Programme for Monitoring Emerging Diseases (ProMED) was inaugurated in 1993 at a conference that was co-sponsored by 60 experts in human, animal and plant life. Proposed by the Federation of American Scientists, the aim is to create a global system of early detection and time response to disease outbreaks. An electronic mail conference was established in 1994 and, through SatelLife and HealthNet, offers access to participants in developing countries and remote areas.

Foremost will be ongoing global trade and investment negotiations which have hitherto given limited attention to health issues. There should be greater understanding of trade issues and how they impact on health in the UK by Department of Health (DoH) staff,, as well as understanding of health issues by the Department of Trade and Industry (DTI) and other relevant ministries. The DoH may wish to respond proactively to trade initiatives in future, making representations at the DTI and other relevant national and even international organisations. A cross-ministry working group may even be established to consider global health issues. Encouraging closer co-operation between WHO and WTO could also be beneficial for protecting and promoting health. Measures to strengthen global standards and regulation in the production and trade of health-related goods and services (e.g. blood products, food) will also need to be addressed. Health officials will need to emphasise the health and economic benefit of maintaining a well-regulated system of global trade, rather than one where 'health scares' (e.g. BSE) result in a decline in consumer and investor lose confidence.

Development aid

There is a clear need for the UK to continue to support health development through its aid policy, especially in countries in greatest need. Historically, British has allocated about 5 percent of total official development assistance (ODA) to health development. Much of this aid has been given to former colonial territories and for disease control [53]. More recently, DflD has shifted priority to a greater emphasis on poverty reduction in the developing world. Even greater attention may need to be given to populations in greatest need in terms of health status indicators and health systems capacity. A strong emphasis on 'capacity building' would complement the creation of an effective global health system built on a network of functioning, well-informed and adequately resourced national health systems. Without such capacity in the developing world, such a global system would be as strong as its weakest link.

Governance

Sixth, and finally, there is need for the UK to support the strengthening of global governance for health by continuing to support the work of regional and international organisations through public funding, technical expertise and political commitment. There is widespread agreement that there is a need for collective efforts on a wide range of health issues. How this is achieved effectively in the next century may require substantial reform of existing institutions and working practices. Undoubtedly this will lead to considerable debates over decision-making powers, authority, resource mobilisation and priority setting. The UK, through the DfID and the DoH, has actively contributed to this international debate in the 1990s through support for research [53][54] and high-level policy discussion. There will be important opportunities for the British government, as well as British non-governmental organisations (NGOs), charitable foundations, academic institutions and others, to contribute further to this debate.

TABLES

Table 1 Asylum applications and admissions to the UK, 1987-96

	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
Asylum applications	5,863	5,739	16,775	38,195	73,400	32,300	28,000	42,200	55,000	34,000
1951 Convention status	460	980	3340	1,590	800	1,900	2,860	1,400	2,200	2,765
Humanitarian status	2,230	2,290	5,840	3,600	2,950	21,700	15,480	5,450	6,780	7,790
Rejections	786	624	1,095	855	5,390	35,480	18,550	20,915	26,220	38,485
Resettlement arrivals	440	720	720	650	490	620	510	260	70	20

Source: UN High Commissioner for Refugees *The State of the World's Refugees: A Humanitarian Agenda* (Oxford: Oxford University Press, 1997) Table 2

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