

PAPER IIB

Nasopharyngeal carcinoma (NPC) is a malignant tumour of the nasopharynx, often forming huge fungating masses according to histological type, but with a generally good response to radiation treatment. It has a 2 to 3.5:1 male to female preponderance, and may occur at any age.

The accompanying figure (*see handout overpage*) shows the age-adjusted mortality rate from female breast cancer (diagram A) and from female nasopharyngeal carcinoma (diagram B), in the People's Republic of China. The data have been mapped at county level.

- (a) What is meant by age-adjusted mortality rate? *(5 marks)*
- (b) Outline how you would calculate an age-adjusted mortality rate, giving details of the data you would require. *(5 marks)*
- (c) What do the two diagrams show? *(15 marks)*

The accompanying table (*see handout overpage*) shows the age-adjusted incidence of female nasopharyngeal carcinoma in various ethnic groups, per 100 000 population.

- (d) What does the table show? *(10 marks)*
- (e) What are the possible limitations of the data in the diagrams and in the table? *(5 marks)*
- (f) Combining the information in the diagrams and in the table, suggest what hypotheses might explain the epidemiology of nasopharyngeal carcinoma, and what study designs might be appropriate for investigating the aetiology of this disease. *(10 marks)*

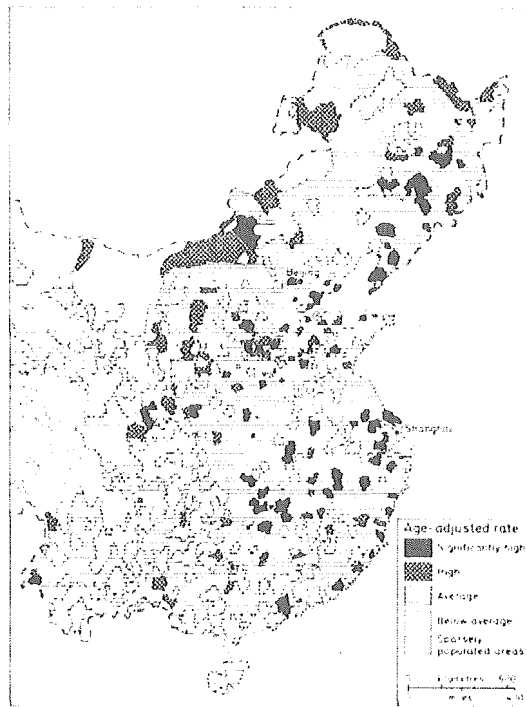


Figure 3.7 (A): Distribution of breast cancer (female breast cancer)

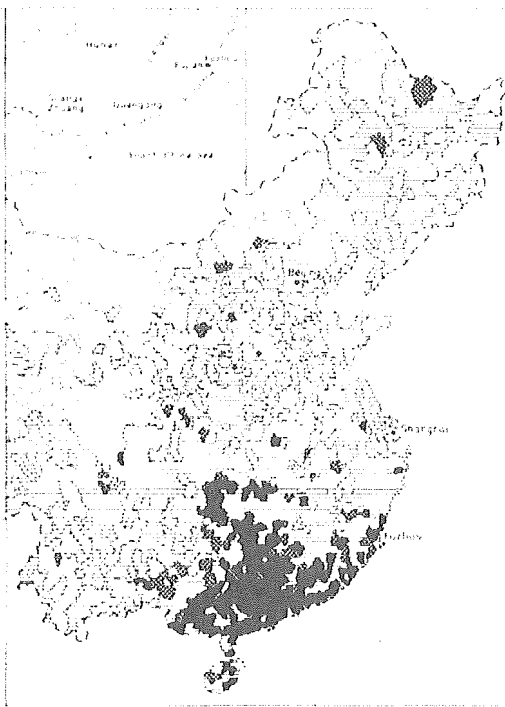


Figure 3.7 (B): Distribution of nasopharyngeal carcinoma in females

Africa:

Bulawayo (<i>African</i>)	<0.1
Cape Province (<i>Bantu</i>)	<0.1
Cape Province (<i>White</i>)	0.62
Johannesburg (<i>Bantu</i>)	1.68
Natal (<i>African</i>)	<0.1
Natal (<i>Indian</i>)	<0.1
Uganda (<i>Kyadondo</i>)	<0.1

Americas:

Canada (Alberta)	0.60
Chile	<0.1
USA (Connecticut)	0.21
USA (Puerto Rico)	0.30
USA (New York State)	0.29

Asia / Pacific:

Hawaii (<i>Caucasian</i>)	1.15
Hawaii (<i>Chinese</i>)	4.68
Hawaii (<i>Japanese</i>)	0.39
India (Bombay)	0.76
Japan	0.19
Singapore (<i>Chinese</i>)	6.88
Singapore (<i>Indian</i>)	<0.1
Singapore (<i>Malay</i>)	2.08

Europe:

Finland	0.42
Iceland	1.77
Netherlands	0.18
Norway	0.16
Poland	0.26
Slovenia	0.24
UK (Birmingham)	0.25

Table: Incidence of female nasopharyngeal carcinoma per 100,000 population, by ethnic group

KEY POINTS

- (a) The number of deaths occurring in a defined population over a specified period of time (usually one year), with appropriate adjustment for the age structure of the population.
- (b) The usual method used to produce an age-adjusted rate is direct standardisation. The principle behind direct standardisation is the calculation of a mortality (or morbidity) rate for a hypothetical group of people who experience the same age and sex specific mortality (or morbidity) rates as the group you are studying, but who have the same population distribution as a "standard" population distribution. In order to calculate a directly standardised rate, age and sex specific rates need to be available for the study population.
- (c) Female breast cancer
 - no strong regional variation
 - for this reason, used here as a control
 - different mortality rates in different parts of China, but no obvious pattern

Female NPC

- enormous geographical concentration in south-eastern China
 - mortality rates generally decline northwards
 - this suggests an environmental cause
 - possible environmental factors include diet, infective agent, pollution, lifestyle factors such as smoking or alcohol consumption, or a multifactorial aetiology
- (d)
 - Wide variation in the incidence of female NPC (highest: Asia/Pacific, lowest: Africa)
 - this variation seems to be linked to ethnicity, especially Chinese, Malays, Iceland
 - comparative figures for China not given, but could be even higher
 - (e)
 - there are no well functioning cancer registries in Asia (except in Japan)
 - data in table seem to have been drawn from different studies (?different methodologies)
 - rare tumour, so there may be under-recording to different extents in different countries
 - no confidence intervals around the values in the table (hence, no indication of their precision)
 - difficult to compare the relative disease experience of different ethnic groups
 - (f) Different studies are needed to investigate the different environmental factors.
 - race and heredity should be investigated through genotyping and possibly through migration studies;

- dietary habits - investigate through food surveys and case-control studies;
- infective cause - investigate through microbiological techniques;
- other environmental causes, such as smoking habits and alcohol consumption, should be investigated through lifestyle surveys and case-control studies. Such studies should also be used to identify other lifestyle issues that may have a causal influence, such as local medicines or treatments.

The following are additional points which might improve the answer to "good" or "excellent":

Native-born Chinese, particularly those living in the south-eastern provinces of the Republic of China, show the highest NPC incidence in the world, with rates 15–30 times higher than are found in most other populations.

Emigrant Chinese populations continue to show extremely elevated NPC rates (approximately 20-fold in USA) compared to the respective indigenous populations; however this differential diminishes in subsequent generations.

A few other ethnic groups have a somewhat elevated NPC incidence (ethnic Malays, ethnic Inuit in Greenland and Alaska, ethnic Arabs in Tunisia and Algeria).

Current scientific knowledge indicates a multifactorial aetiology for NPC, encompassing the following:

- Race and heredity. A strong association has been found between specific HLA-A gene types and NPC.
- Diet. Cantonese salted fish contains volatile nitrosamines, and in China was found to increase the NPC risk by up to 17 times in consumers of salted fish, compared with non-consumers. However this difference was not as evident in studies conducted in other high-risk regions (Malaysia, Alaska, Tunisia).
- Infection. Epstein-Barr virus has been incriminated as a cause of NPC, but seemingly needs to be "activated" by external factors (e.g., nitrosamines, esters, immunosuppression).
- Other possible causes (exposure to incense fumes, use of Chinese medicines, previous chronic inflammation in nasal and paranasal cavities). Relative risks varying from 1.5–3 have been documented.
- Smoking and alcohol. Both have been definitely excluded as causes of NPC.

COMMENTS

There were some outstanding responses on this paper, but the majority were rather pedestrian, and unreflective. Candidates tended to describe what was obvious in the diagrams and tables, without attempting to derive the appropriate epidemiological inferences.

Many candidates were confused between death rates and standardised mortality ratios. Some did not appear to understand what is meant by a hypothesis of disease causation, and

got muddled up with the null hypothesis. Seven candidates pointed out, rightly, that Epstein-Barr virus has been associated with nasopharyngeal carcinoma. One candidate complained that the city of Singapore was not shown on the map of China!

The best candidates produced concise, thoughtful, structured answers, showing a good grasp of epidemiological terms and concepts and the ability to apply them to real-life, imperfect data.

④FPHのPart II exam

教育課程の4年目に受験することが推奨されている。また原則として、Diploma & Part I examに合格後、3年以内に受験することが義務づけられている。

試験は、レポート提出(written submission)と一般口頭試問(general oral examination)で構成される。前者では、Diploma & Part I examで確認された知識と技術の応用力、後者では、公衆衛生に関する様々な問題を議論する能力と専門家としての自覚(態度)が評価される。

レポート提出では、それぞれの研修生がトピックを設定し、2~4のレポートを提出する。トピックは、従事したプロジェクトに関するものでも、試験用に作成したものでも、公衆衛生活動に関連したものであれば何でも構わないが、以下の4つの内容が網羅されていなければならない。

- ・文献の批判的レビュー… 特定のトピックに関する論文や資料を収集し、批判的にレビューし、結果を解釈する。
- ・ニーズアセスメント… 疫学的手法などを用いて、地域住民の健康状態や保健サービスのニーズを把握し、健康を促進・阻害する要因を同定する。
- ・保健計画の策定… 適切な情報を同定・収集し、それらを用いて健康改善を目的とした保健サービスやその他の活動の計画を策定する。
- ・保健サービスの評価… 健康改善を目的とした保健サービスやその他の活動の効果と効率(投入される資源)を評価する。

一般的には、それぞれの内容につき1つのレポートを提出することが多いが、1つのレポートで最高2つの内容まで含めることが認められている。

レポート提出後、試験の日時が設定され、2人の試験官の前で30分間のプレゼンテーション(レポート発表と質疑応答)を行う。評価の視点は以下のとおりである。

- ・地域特性を考慮して、科学的に、取り組んだ課題とその背景が明確に述べられているか?
- ・レポートの目的や目標が明確に述べられているか?
- ・情報の収集・分析・提示の方法は厳密・適切か?
- ・全ての情報が明確に提示されているか?
- ・レポートの結果が他の調査研究の結果と適切に比較されているか?
- ・改革の実践者としての公衆衛生専門家の役割を踏まえた上で、公衆衛生活動にとってのレポートの意義が明確に述べられているか?
- ・レポートから得られた提言を実施・評価するための計画は適切か?
- ・レポート発表の説得力、首尾一貫性、質は適切か?

一般口頭試問は、レポートのプレゼンテーションの後、同じ2人の試験官の前で30分間実施され、改革の実践者としての公衆衛生専門家の役割を論じる能力、公衆衛生におけるチームワークの必要性を論じる能力、口頭で効果的にプレゼンテーションを行う能力が評価される。

以下に、一般口頭試問の想定設問を示した。これらはFPHのホームページ上で公開されている。設問は、ヘルスプロモーションと疾病予防、感染症の調査とコントロール、環境衛生及び環境関連疾患の調査とコントロール、健康情報の利用と健康改善を目的とした活動の評価、スクリーニング、ヘルスケアの提供、の6領域で構成され、全ての領域からいくつかの設問が出題される。

一般口頭試問の想定設問 (The General Oral Question Bank)

SECTION I (The Promotion of Health and the Prevention of Disease)

- 1.1 What are measurable and meaningful outcomes against which progress in health promotion can be monitored?
- 1.2 How would you try to improve the quality of health promotion activity in the location where you work now or have worked recently?
- 1.3 Discuss the opportunities and limitations of health promotion in a primary care or general practice setting.
- 1.4 What models of prevention of cigarette smoking do you think are the most effective and how would you evaluate them?
- 1.5 How should public health specialists contribute to national and local policy formulation concerning use and misuse of alcohol? What is the evidence for the effectiveness of different strategies?
- 1.6 Your local drug action team has to produce a comprehensive local action plan for the next two years. What would be the key elements of the plan and what performance indicators would be appropriate?
- 1.7 How strong is the evidence linking diet to later disease such as heart disease and cancers? What action, if any, should be taken by public health professionals?
- 1.8 How would you develop a strategy for suicide prevention in the location where you work now or have worked recently?
- 1.9 * Diabetic retinopathy is an important cause of blindness. What advice would you give to commissioners to minimise this condition within their population?
- 1.10 What might the role of public health specialists be in the reduction of death rates from accidents?
- 1.11 Discuss the role of poverty as a determinant of health. What action can be taken by public sector organisations to counteract its effects?
- 1.12 What is the evidence concerning the secondary prevention of coronary heart disease?
- 1.13 What would be the key elements of a public health strategy to prevent morbidity from osteoporosis?
- 1.14 What can be done to reduce the incidence of fractured neck of femur in the elderly?
- 1.15 What can be done to increase the amount of exercise that people take? Is this a desirable thing to achieve?
- 1.16 * What are the potential benefits of close working relationships between those commissioning health care and local authorities? Discuss ways of developing such relationships.

- 1.17 In what ways could integrated working between government departments improve the health of pre school children?
- 1.18 Outline the evidence for the health benefits of breast feeding for both women and infants. Discuss how public health specialists can influence the wider practice of breast feeding.
- 1.19 * How are Health Action Zones/Social Inclusion Partnerships being used for promotion of health and how would you evaluate their success?
- 1.20 Non-pharmacological management of high blood pressure is recommended in most guidelines, but clinicians rarely use it as a first step in the management of their patients. What are the possible reasons for the current situation and how can it be overcome?
- 1.21 What are the public health issues which arise in connection with asylum seekers and the way they are processed?
- 1.22 Why is transport a key public health issue? What are the main areas of activity for public health?
- 1.23 What is the evidence concerning the effectiveness of health promotion measures? Should we apply the same approach to evidence-based practice that is put forward for clinical interventions?
- 1.24 What problems might you foresee from the more widespread identification and use of pharmaceutical agents that alter lifestyle-related risk factors such as obesity and high cholesterol?
- 1.25 Health promoters say you should eat five portions of fruit or vegetables each day. What do they expect that this will achieve and what is the evidence for it?
- 1.26 Compared to the rest of Europe, teenage pregnancy rate is high in the UK. What steps should be taken to reduce this trend?
- 1.27 What is meant by Health Impact Assessment? How might you as a public health specialist contribute to this process?
- 1.28 What is the value of agreeing targets for tackling inequalities in health? How would you develop a local target for your population?
- 1.29 Is there any point in mass vaccination? It's not as if vaccination has ever really achieved anything. Discuss.
- 1.30 You are telephoned by a parent who says they do not want their child vaccinated with "medical" vaccines, they wish only to use "homeopathic" vaccines as they are seeing a homeopath, but they would like the NHS to pay. What would you do? (also section 2)

- 1.31 The National Audit Office Report Tackling Obesity in England indicates that we are failing to make any real progress in tackling this major public health problem. What do you think is needed?
- 1.32 What are the main implications of the Human Genome Project for Public Health? (also section 4)
- 1.33 What is “salutogenesis” and what are its implications for health promotion?
- 1.34 What are the implications for the development of cancer networks for Public Health?

SECTION II (The Investigation and Control of Communicable Disease)

- 2.1 Describe how you would respond to information about:
- i a case of meningococcal disease in a school
 - ii a case of salmonellosis
 - iii a case of legionellosis
 - iv a case of tuberculosis in an adult
 - v a case of tuberculosis in a schoolchild
 - vi a cluster of gastroenteritis cases in the community
 - vii a major outbreak of diarrhoea and vomiting in a hospital
 - viii three cases of acute hepatitis B in your local hospital
- 2.2 Which categories of children should be offered neonatal BCG? How would you go about implementing your policy?
- 2.3 How would you monitor the effectiveness of the MMR programme of immunisation in a health district?
- 2.4 Discuss the role of the public health specialist in the provision of prophylaxis for contacts of meningococcal infection.
- 2.5 Who might benefit from pneumococcal vaccination? How would you introduce a vaccination campaign into your area?
- 2.6 What would be the arguments for and against the introduction of universal vaccination against Hepatitis B?
- 2.7 ‘Look back’ procedures have been used in recent incidents such as HIV infected health workers and also in blood transfusions contaminated with hepatitis C antigen. What does ‘look back’ involve, how may it be organised, and what are the public health implications?
- 2.8 What are the epidemiological and public health issues involved in MRSA (methicillin resistant staphylococcus aureus) infection in institutions and in the community?

- 2.9 What advice would you give to local schools and parents about the safety of beef and beef products for school meals?
- 2.10 Discuss the role of the public health specialist in multiple drug resistant TB.
- 2.11 What advice would you give to local GPs who are concerned about a possible link between MMR vaccine and autism?
- 2.12 How would you advise a health board / primary care trust concerned about the problem of hepatitis C infections, about the actions it should take?
- 2.13 Why are cases of syphilis increasing in certain cities? How would you control its spread?
- 2.14 A Food Standards Agency has been established in the UK. What role do you expect it to play and how might public health specialists expect to relate to it?
- 2.15 What action would you take if you were notified, whilst on-call, of a case of pneumococcal meningitis in a 65 year old man?
- 2.16 How would you respond to a case of clinically suspected meningitis in a child attending a school where another child had been confirmed as having group C meningococcal disease 4 months previously?
- 2.17 Describe your response to being told that two cases of Legionnaires Disease have been diagnosed in the last week in your district.
- 2.18 Two residents of a nursing home are admitted to the local hospital with pneumonia. Investigations reveal that they are both suffering from multidrug-resistant streptococcus pneumoniae. What action would you take?
- 2.19 How can the healthcare worker be protected against HIV?
- 2.20 A microbiology laboratory report telephoned to you from one of your trust hospitals indicates a blood culture isolate of Salmonella typhi in a patient with a PUO. What additional information will you be seeking and what action would you initiate?
- 2.21 Legionella pneumophila has been identified in water in the cooling tower of the local town hall. How would you approach the management of this potential incident?
- 2.22 A local hospital notifies you that a mother and her baby are sharing symptoms of nvCJD. How would you investigate/manage this situation?
- 2.23 At a reunion, members of a school class discovered that several of their class-mates had been diagnosed with cancer, even though they were still in their early 30s. They asked the Primary Care Trust to help and the DPH asks you to investigate. How would you conduct such an investigation? (also section 3)
- 2.24 As a public health practitioner, how might you contribute to the development, implementation and audit of appropriate antimicrobial policies in primary care?

- 2.25 A confirmed case of group B meningococcal disease occurs in a 6-year-old child who attends a local school. What public health action is required?
- 2.26 You are telephoned by a parent who says they do not want their child vaccinated with "medical" vaccines, they wish only to use "homeopathic" vaccines as they are seeing a homeopath, but they would like the NHS to pay. What would you do? (also section 1)
- 2.27 You are telephoned about a case of meningitis one Friday evening before half term. A child has been admitted with a headache and a rash. The mother volunteers the information that there was a case of meningitis in the school "a few weeks ago". What would you do?

SECTION III (Environmental Health and the Investigation and Control of Environmental Diseases)

- 3.1 What is the role of public health medicine in chemical contamination incidents?
- 3.2 A chemical spoil-heap is discovered under the playing fields of a local school. As the responsible public health specialist, you are asked to advise the local authority on the medical aspects of the situation. How would you approach the task?
- 3.3 A GP in your area believes that the emissions from a local power station are causing respiratory symptoms in her patients. How would you respond?
- 3.4 How would you respond to a community's concerns about potential open cast mining?
- 3.5 How would you respond to a call from an A & E department that a group of children are under observation for breathing difficulties after exploring the contents of some containers on a building site?
- 3.6 A local newspaper telephones with a story that a community group have reported a lot of cancer in their council housing scheme. They allege these are caused by a high voltage power line. How would you respond?
- 3.7 Your local airport proposes to increase the number of aircraft movements by 20% but local residents are concerned about noise and their health. How would you respond to their concerns?
- 3.8 Your local council seek your department's advice about local concerns regarding heavy traffic congestion and pollution. How do you respond?
- 3.9 It has been suggested that chemicals in some imported foods might be responsible for an outbreak of illness in your area. How would you deal with this, and what action should you take to alert others nationally and internationally?
- 3.10 How would you go about investigating a cluster of lung cancer allegedly related to land pollution in a part of your district?

- 3.11 A local protest group is campaigning for major action to clean up a derelict waste disposal site. The local authority and environmental agency officers would prefer to leave the site alone. How would you assess the relative merits of each position from a public health viewpoint?
- 3.12 A strong smell of petrol has been noticed by a householder in a street bordering a busy airport. What action do you advise the Environmental Health Officers of the local authority to take?
- 3.13 What are the main lessons of the BSE affair in the UK?
- 3.14 The local authority environmental health department finds a very high level of lead in vegetables from a local allotment. You are asked for advice. What would you advise?
- 3.15 What is the evidence that housing affects health status? In the light of your answer how would you advise those responsible for developing policy at the local and national level?
- 3.16 * A local pressure group wishes the primary care trust / health board / NHS board to fund testing for radon gas in all homes. How would you respond to this?
- 3.17 Why do you consider that asthma is becoming more common?
- 3.18 How would you respond to public anxiety following the detection by Environmental Health Officers of high concentrations of silica in dust in a block of sheltered flats for the elderly?
- 3.19 Discuss the major atmospheric pollutants and describe the medical effects and control measures for one of them.
- 3.20 You have just been appraised of a major incident involving a release of a large cloud of gas from a chemical plant with casualties being reported. Describe your response to this.
- 3.21 What are the public health implications of genetic modification of food?
- 3.22 There is strong concern in your district that use of mobile phones constitutes a health hazard. How would you address that concern?
- 3.23 A resident of a housing estate has rung to complain about a factory nearby that is apparently exacerbating her asthma. How would you go about investigating the possible health effects of this factory?
- 3.24 You are informed of a potential problem arising from a toxic chemical which has been detected in a landfill site. The land around the site has been developed into a residential estate. What questions do you put to the chemical company who own the landfill site? What investigations might be required to determine whether the hazard poses a risk to the community?

- 3.25 You are 'on call' for the weekend when the water authority phone to say that a chemical tanker has crashed into the main water reservoir and they request advice.
- 3.26 At a reunion, members of a school class discovered that several of their class-mates had been diagnosed with cancer, even though they were still in their early 30s. They asked the Primary Care Trust to help and the DPH asks you to investigate. How would you conduct such an investigation? (also section 2)
- 3.27 It is Friday evening and you are on-call for public health protection. You are notified by the ambulance service about a chemical tanker fire at an urban motorway service station which they have been asked to attend because of a large number of casualties. What broad areas of responsibility do you have and what would be your first 5 priority actions?
- 3.28 What are the public health implications of waste control?

SECTION IV (Using Health Information and Evaluating Activities Aimed at Influencing Health)

- 4.1 * If you worked in a primary care trust / health board / NHS board and had uncovered five treatment areas where you felt cost-effectiveness was questionable, how would you decide in what order to tackle them?
- 4.2 Discuss the evidence about how clinical guidelines improve patient care. What is the role of public health medicine in their production and implementation?
- 4.3 How might a public health specialist improve the health of a local population with regard to the identification and management of raised blood pressure?
- 4.4 Describe how you would evaluate the effectiveness of minimally invasive surgery.
- 4.5 What mechanisms are there for ensuring that research evidence on clinical effectiveness influences clinical practice?
- 4.6 How might the 1998 Data Protection Act on security and confidentiality of personal health data affect the practice of public health?
- 4.7 As a public health specialist how can you ensure that acceptability and access to services are considered alongside cost effectiveness in health care provision in your area?
- 4.8 A general practice with 10,000 patients asks you for ideas for assessing their own clinical effectiveness. What would you suggest?
- 4.9 How would you go about assessing whether your local ophthalmic services for children meet national recommendations?
- 4.10 How would you investigate an apparently high mortality rate from oesophageal cancer in your district?

- 4.11 How would you evaluate the cost effectiveness of a new medical assessment unit recently established in one of your local hospitals?
- 4.12 What is the potential for extending training and facilities for cardiopulmonary resuscitation and defibrillation outside hospitals, with the intention of reducing mortality from myocardial infarction?
- 4.13 How would you evaluate the following competing bids for funding: an increase in coronary angioplasty with stenting on the one hand and an increase in the use of ACE inhibitors for the control of heart failure on the other, in the same population?
- 4.14 * What steps would you recommend to ensure that research findings are used by purchasers of health care?
- 4.15 * What routine sources of data are available to describe variations in health at electoral ward level?
- 4.16 * How useful are primary care morbidity data in needs assessment?
- 4.17 * What are the behavioural and organisational obstacles to the development and implementation of evidence based guidelines? How might you overcome some of these?
- 4.18 * In assessing need at a community level, how useful are small area statistics?
- 4.19 * Describe routine information sources which can contribute to the assessment of the outcome of healthcare. What local action could you take to improve their validity?
- 4.20 * What types of information would you seek in evaluating psychiatric services provided to residents of a health board / primary care trust / NHS board?
- 4.21 A local group of GPs is dissatisfied with services available for back pain. How as a public health specialist would you contribute to tackling this problem?
- 4.22 * Can we use routine information to assess the effectiveness of health interventions? And if so, how?
- 4.23 Your local hospital has set up an acute admission avoidance scheme. It allows community nurses and other staff to treat people at home within an hour of receiving the request and to stay with them for up to 48 hours. You have been asked to evaluate the impact of the scheme on acute admissions. How would you go about it?
- 4.24 What are the possible reasons contributory to the poor long term management of high blood pressure? Why is this problem particularly important to tackle in patients with diabetes mellitus?

- 4.25 How would you evaluate the impact on the local population of a Healthy Living Centre consisting of primary care health centre, leisure centre and child assessment centre?
- 4.26 * What are the implications of the NHS Information Strategy for monitoring the health of the community?
- 4.27 What contribution to improving cancer services can be made by a cancer registry?
- 4.28 How would you develop an evaluation framework to assess the effectiveness of providing monitoring of Warfarin anticoagulant at general practice rather than hospital level?
- 4.29 * What do you understand by the term "social capital" as used in Health Action Zones? How might this be useful in the work of the public health specialist with local communities? Are there other outcome measures you might look for in assessing Health Action Zones?
- 4.30 * What advice would you give Primary Care Trusts or local development groups / local health care cooperatives on types of data to collect for a chronic disease register (e.g. stroke, diabetes) aimed at improving secondary prevention?
- 4.31 What are the main implications of the Human Genome Project for Public Health? (also section 1)
- 4.32 How would you set about evaluating equity in community health services in your district?
- 4.33 What characterises "systematic reviews" and why do we need them in healthcare? (also section 6)
- 4.34 The multidisciplinary team for breast cancer in a Cancer Network in your Primary Care Trust is refusing for any information about their patients to be sent to the regional Cancer Registry. What are the potential implications of such a decision and how should the Primary Care Trust respond?
- 4.35 Are there satisfactory alternatives to the randomised controlled trial as a methodology for evaluating the impact of a public health measure?

SECTION V (Screening Programmes)

- 5.1 How would you carry out an audit of your local Down's Syndrome screening programme?
- 5.2 What would you recommend as the most appropriate cholesterol screening policy for a district and for GPs in a district?
- 5.3 Discuss the implication of a population screening service for prostatic cancer.

- 5.4 * The effectiveness of the national breast cancer screening programme has recently been questioned. What do you consider are its strengths and weaknesses? What actions do you consider necessary at primary care trust / health board level?
- 5.5 Is routine screening of the elderly likely to be of value in your locality?
- 5.6 What is the evidence that visual screening of children at school entry is likely to be worthwhile in your locality?
- 5.7 What is the role of a public health specialist in ensuring the effectiveness of cervical screening programmes?
- 5.8 What in general terms are the psychological implications of screening? Why are they important?
- 5.9 * What advice would you give your health board / primary care trust / NHS board about the desirability of introducing a familial breast cancer screening service?
- 5.10 * Your cervical cancer screening programme has failed to detect a number of cancers. How would you go about investigating the effectiveness of your local programme?
- 5.11 Chlamydia trachomatis is the most common cause of curable sexually transmitted infection in the UK. Are there grounds for population screening?
- 5.12 * Who should be responsible for policies on antenatal screening for Down's syndrome? The Department of Health, each health board / primary care trust / NHS board or each obstetric unit?
- 5.13 Should we now be offering population screening for colorectal cancer?
- 5.14 Do you think that sigmoidoscopic screening of men over 65 years old for colorectal cancer should be implemented in a health district?
- 5.15 Why has the current cervical screening programme not been more effective in reducing the incidence of cervical cancer? What recommendations would you make to improve the programme?
- 5.16 Offer a public health perspective on the issue of screening for cystic fibrosis.
- 5.17 Is screening for coronary heart disease risk factors in general practice worthwhile?
- 5.18 * You are a public health adviser to a PCT / health board, leading on community preventive services. The local acute trust wants the support of the PCT / health board in setting up a screening service for cystic fibrosis. Explain how you would advise the PCT / health board to respond.
- 5.19 What factors determine the length of screening interval in a screening programme? What do you think the screening interval should be in the NHS breast screening programme or NHS cervical screening programme?
- 5.20 What considerations do you think apply to the implementation of screening for women with a family history of breast cancer?

- 5.21 There is an increasing pressure to introduce new screening programmes, for example for colorectal, ovarian and prostate cancers. How would you decide which screening programmes should be introduced? [possible supplementary question: Do you think the recent introduction of HIV and hepatitis B antenatal screening programmes fulfil the criteria?]
- 5.22 * A clinical consultant has written to your NHS board / health board / primary care trust asking that a screening programme for aortic aneurysm be established. What advice would you give your NHS board / health board / PCT?
- 5.23 * Outline your views in relation to the issue of screening for osteoporosis. How might you tackle the issue of service provision in relation to osteoporosis at PCT / health board / NHS board level?
- 5.24 What is the purpose of screening immigrants to the UK and what problems are there with current arrangements?
- 5.25 What factors should you take into account when considering whether or not to implement a screening programme? Perhaps you could start theoretically and then illustrate your points with some practical examples.
- 5.26 Does the current national advice on informed choice for Prostate Specific Antigen testing amount to opportunistic screening for prostate cancer?
- 5.27 What recent developments have there been in national screening programmes, particularly in the context of the NHS Plan?
- 5.28 Should there be a National Prostate Cancer Screening Programme?

SECTION VI (The Provision of Health Care)

- 6.1 What role should public health play in promoting local choices in maternity services?
- 6.2 How would you assess the local level of provision of intensive care beds?
- 6.3 How would you evaluate emergency contraceptive services in your area, and how would you promote their development if necessary?
- 6.4 * What advice would you give to a NHS board / health board / primary care trust to guide it in implementing the discharge back into the community of elderly hospitalised patients who no longer require a hospital bed?
- 6.5 * How could evidence based medicine be incorporated into plans for purchasing or commissioning health care?
- 6.6 How would you lead an exercise on developing a strategy for rheumatology services in your district?
- 6.7 How can public health specialists contribute to decision making about the move of secondary care procedures into primary care settings?

- 6.8 What might the input be from a public health specialist to a GP proposal to introduce in-house pathology testing?
- 6.9 How would you review and promote sexual health services in your district?
- 6.10 What key standards would you like to include in a specification for the care of people with breast cancer in your area in order to improve mortality and morbidity?
- 6.11 How do you consider the average district general hospital will differ in twenty years time from its counterpart today?
- 6.12 There has over the last twenty years been a 40% reduction in the availability of acute and geriatric hospital beds. What are the public health implications of this change?
- 6.13 Are bigger hospitals better? How strong is the evidence that concentrating and specialising hospital services leads to improved patient outcomes? How could you seek to improve the evidence for the future?
- 6.14 What is the place of community hospitals in a modern health service?
- 6.15 How would you manage the introduction of new and expensive drugs, such as beta interferon and donepezil, into the health service?
- 6.16 What health care is needed for people with learning disabilities? How would you explore this issue?
- 6.17 What role should public health specialists play in developing clinical governance arrangements in primary and hospital care?
- 6.18 Your local cancer centre has asked if it can begin to prescribe a new drug for treatment of advanced bowel cancer. How would you go about assessing the value of this drug and who would you involve?
- 6.19 * How would you attempt to implement the reallocation of health care resources from the affluent to the disadvantaged in a primary care trust / health board / NHS board area?
- 6.20 * What are the barriers to partnership working with local authorities? How can these barriers be overcome?
- 6.21 Following a series of high profile failures to admit patients for intensive care, you are asked to review the operation and capacity of a major intensive care unit. How would you proceed?
- 6.22 * The local trust has long waiting lists for surgery, long waiting times to see a surgeon, and the overall hospitalisation rates for surgery are 15% higher than the national average. How would you investigate this issue and advise the NHS board / health board / primary care trust about possible intervention strategies?
- 6.23 What services are needed to meet the health needs of older people.

- 6.24 In your area there has been pressure to develop services for people with physical handicap. Describe how you might propose conducting a Needs Assessment and how this could be used to bring about the provision of health care.
- 6.25 You are asked to advise on the health care needs of a group of refugees who have arrived in the district. How would you proceed?
- 6.26 What measures would you consider could be put into place to more effectively plan for the next period of “winter emergency pressure” ?
- 6.27 * Discuss the NHS board / health board / primary care trust role in clinical governance and what your approach would be to developing clinical governance in primary care.
- 6.28 The Medical Director of a local trust asks your advice because she suspects that one of the six surgeons in his trust has a high death rate in his patients. What do you advise?
- 6.29 How can clinical governance be used to improve the quality of care for patients? What is the role of public health in developing clinical governance across the health community?
- 6.30 Clinical governance will require massive injection of new money.” Do you agree with this? How can progress be made within existing resources?
- 6.31 Section 47 of the National Assistance Act 1947 revised 1951. You are the on-call public health specialist for your district and you are called on Friday afternoon by a social worker who informs you that a 76-year-old female resident in your district is living in squalid conditions and is refusing to accept assistance from social and health services. What would you do?
- 6.32 Your Primary Care Trust asks you to devise a multi-agency strategy to prevent falls and reduce resultant fractures in older people. Older people who have fallen should receive effective treatment and rehabilitation and, with their carers, receive advice on prevention. What actions would you take?
- 6.33 What characterises “systematic reviews” and why do we need them in healthcare? (also section 4)
- 6.34 How should NICE guidance decisions be implemented in your Primary Care Trust?

7. 公衆衛生専門家の研修生を取り巻く環境

(1) 研修生の位置づけ

公衆衛生専門家の研修生 (trainee) は、研修生という「職位」の NHS 職員として位置づけられており、職位が低いとためそれほど多くはないものの、教育課程 (5 年間) を通じて生計を立てていけるだけの給与が支給されている。DoH はその財源として、公衆衛生専門家の養成のための予算を確保している。具体的な流れは、以下のとおりである。

- ①毎年、州ごとに、養成する公衆衛生専門家の研修生の数を設定する。これは、中央政府の州事務局の公衆衛生部門が策定する州レベルの公衆衛生専門家のマンパワー需給計画に基づいており、人口やニーズ、研修生の受け入れ組織（NHS 組織、Local Authority、LHPU など）の数や認定された学術指導者・教育指導者の数などを考慮して設定される。
- ②各州の StHA ごとに研修生の数を割り当てる。設定基準は①と同様であるが、詳細については中央政府の州事務局の公衆衛生部門が調整を行う。
- ③研修生の数に応じて、DoH から StHA に予算が配分される。ただし実際には、StHA に併設されている Workforce Development Confederations (WDCs) が予算の管理・執行を行う。
- ④研修生は StHA の職員として雇用され、StHA（実際には WDCs）から給与が支給される。

上述したように、研修生は教育課程の 2~4 年目に受け入れ組織でプロジェクトに従事するが、この場合の研修生の立場は StHA からの出向職員となる。

研修生の受け入れ組織にとっては、教育指導の負担が大きい反面、マンパワー不足を補うことができるというメリットもあるため、積極的に研修生を受け入れる組織も少なくない。

(2) Workforce Development Confederations (WDCs)

2001 年、保健医療専門職のマンパワーの確保を目的として設立された。イングランドに 28 の WDCs があるが、それらは全て StHA に併設されている。

主な業務は、マンパワー養成に対する経済的支援であるが、それ以外に、マンパワー需給計画の策定、雇用の促進（職場復帰のための再教育システムの構築、海外からのマンパワーの受け入れなど）などを実施している。また WDCs は、保健医療専門職の教育内容や資格認定には全く関与していないが、教育機関（大学、大学院など）や資格認定団体との連携の下で活動している。

マンパワー養成に対する経済的支援は、以下のように分類される。

- ①医師を除く学士課程の費用（学生への奨学金など）
- ②医師の学士課程における臨床実習の費用（臨床実習の受け入れ組織に対する補助金など）
- ③学士取得後の専門家教育の費用（研修生の給与など）

公衆衛生専門家の研修生の給与は③から支給される。これらは全て DoH から配分された予算によってまかなわれている。

WDCs は、NHS 組織、Local Authority、教育機関（学生の健康管理部門）、刑務所（囚人の健康管理部門）、軍隊（軍人の健康管理部門）などに会員になってもらい、研修生の受け入れや雇いを促進するための取り組みを実施している。

都市部の WDCs では、研修生が、住居費の高さなどの理由で、専門家の教育課程の修了後、他の地域に転出してしまい、専門家が地域に定着しないという問題を抱えている。つまり管轄地域のマンパワーの需給状況に基づいて予算を確保し、マンパワー養成に対する経済的支援を行っても、地域のマンパワー不足の解消に貢献しないという問題である。