

**MFPHM DIPLOMA AND PART I EXAMINATION**

**MOCK PAPER IN NEW FORMAT**

**NOVEMBER 2000**

**DIPLOMA & PART I EXAMINATION FOR MEMBERSHIP OF THE FACULTY OF  
PUBLIC HEALTH MEDICINE**

**Monday 20<sup>th</sup> November 2000: 10:00 – 12:30**

**PAPER IA (MOCK)  
SHORT ANSWER QUESTIONS ON PUBLIC HEALTH MEDICINE**

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**You must answer all six questions**

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*This paper is intended to test knowledge across the broad range of the discipline. Candidates will be heavily penalised if they fail to attempt any of the six questions or give grossly inadequate answers to **any** of them. It is, therefore, essential that candidates **ALLOW SUFFICIENT TIME FOR EVERY QUESTION.***

1. In designing a case control study, what information should be considered in determining the sample size required? How does one decide on the factors by which cases and controls could be matched?
2. Write short notes on **two** of the following:
  - a) Informed consent in clinical trials
  - b) Cluster or group randomisation
  - c) Intention-to-treat analysis.
3. Write short notes on **one** of the following:
  - a) the fetal origins of adult disease (the 'Barker hypothesis')
  - b) the efficacy of nicotine replacement therapy for smoking cessation
4. Describe the epidemiology and control measures, in a named country, for **two** of the following three:
  - a) Tuberculosis
  - b) Rubella
  - c) Rotavirus enteritis
5. Define the major indices of fertility and factors which influence trends in these indices.
6. (Answer **both** parts of the question)
  - a) Describe the strengths and limitations of data on hospital inpatient activity.
  - b) Briefly describe **three** ways in which these data may be used, giving examples where possible of relevance to public health.

**DIPLOMA & PART I EXAMINATION FOR MEMBERSHIP OF THE FACULTY OF  
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**Monday 20<sup>th</sup> November 2000: 2:00 – 3:30**

**PAPER IB (MOCK)  
SHORT ANSWER QUESTIONS ON PUBLIC HEALTH MEDICINE**

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**You must answer all four questions**

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1. Give a brief explanation and an example of the application of any three of the following techniques in health economics:
  - Cost-effectiveness analysis
  - Cost-utility analysis
  - Cost-minimisation analysis
  - Marginal cost analysis
  - Discounting future costs and benefits
2. A Mental Health Users' Group approaches you, as a Public Health practitioner, to express their concern about stigma. They ask for your co-operation in developing strategies to reduce stigma. In short notes, define stigma; state how it affects people; and briefly describe approaches you could suggest to help reduce stigma related to mental ill-health in your local area.
3. What are the obstacles to implementing clinical guidelines?
4. Write short notes on the advantages and disadvantages of adopting three of the following alternatives to general taxation as the sole means of funding health services?
  - a) Hypothecated taxation
  - b) User charges
  - c) Private medical insurance
  - d) Social insurance

**DIPLOMA & PART I EXAMINATION FOR MEMBERSHIP OF THE FACULTY OF  
PUBLIC HEALTH MEDICINE**

**Tuesday 21<sup>st</sup> November 2000: 10:00 – 12:30**

**PAPER IIA (MOCK)**

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**Candidates should answer all parts of this question.**

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*Style, clear grammatical English and legibility will be taken into consideration by the Examiners.  
Answers should be written in a form appropriate to the audience specified in the question.  
Equal marks are allocated to each of the six sections.*

You work within a publicly funded, free at the point of service health system. The local branch of the Alzheimer's Society has written to the Director of Health of your organisation, which has responsibility for deciding the availability of treatments within the health system, citing the attached paper by Rösler M *et al*: "Efficacy and safety of rivastigmine in patients with Alzheimer's disease: international randomised controlled trial" (*BMJ 1999; 318:633-640*) and asking that the drug rivastigmine be made available within secondary care outpatient clinics within your health system.

- 1      What are the key issues you would wish to address in a critical appraisal of this type of paper? Appraise this paper in terms of those issues.
  
- 2      i)      What is your view on the choice of outcomes?  
        ii)     Why might they have been chosen?  
        iii)    Are the outcomes relevant to the morbidities associated with this disease?
  
- 3      Is the way that the data have been presented legitimate, in technical terms and in terms of truly reflecting the impact of this drug?
  
- 4      i)      What are your recommendations and options?  
        ii)     How might any deficiencies in the information available be addressed?
  
- 5      You are to attend a regional meeting of the Alzheimer's Society to explain why funding has been refused except in the context of a randomised controlled trial. Draw up four pages of key points you will use in your presentation (e.g. as overhead projector transparencies or a computer presentation).
  
- 6      During discussions at the meeting after your presentation, a member of the Society insists that her family has managed to avoid admitting her father to a nursing home because they have been buying rivastigmine privately. How would you respond?

**DIPLOMA & PART I EXAMINATION FOR MEMBERSHIP OF THE FACULTY OF  
PUBLIC HEALTH MEDICINE**

**Tuesday 21<sup>st</sup> November 2000: 2:00 – 3:30**

**PAPER IIB (MOCK)**

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**Candidates should answer all parts of this question.**

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*Style, clear grammatical English and legibility will be taken into consideration by the Examiners.  
Answers should be written in a form appropriate to the audience specified in the question.*

The attached data relate to mental health services for adults over the age of 65 in an area with a population of about 500,000 people, which has 5 localities (A-E).

You act as scientific secretary to a local multi-agency group with a remit to improve the health of older people with mental health problems, and to ensure that there is equitable provision of services. The group hopes to use these data to help it reach some decisions about the future of local services. They ask you to use the relevant data to prepare a paper which answers the following questions. They wish to consider the paper at the next meeting.

1. Which localities have higher need for services for older people with mental health problems and why?
2. Is there an equitable distribution of resources across the localities of the authority?
3. Locality D claims that it has a high proportion of elderly people in its population and that it does not have an equitable share of resources. Do you agree?

The group wishes to consider options for future development priorities. They are particularly interested in developing community teams for older people with mental health problems. Although “pump priming money” is available there will be a requirement to realise resources from current services.

4. Using the data provided suggest service areas that could be investigated further in terms of potentially releasing resources in the future.
5. What problems do you foresee in taking this work forward?

*(Under examination conditions you would be provided with a variety of material in order to answer the questions set. Data manipulation and interpretation may form part of this process, and you will be provided with a basic calculator with sufficient functions for these purposes. You are neither required nor permitted to bring a different calculator into the examination)*

*Information to be included with Paper IIB*

Tables 1A and 1B:- Population profile – male, female and total

A – numbers of people

	Loc A	Loc B	Loc C	Loc D	Loc E	Authority Total
Male	58500	69,000	64,000	38,500	63,500	295,000
Female	61500	71,000	66,000	41,500	66,500	305,000
Total	120,000	140,000	130,000	80,000	130,000	600,000

B – percentage of population

	Loc A	Loc B	Loc C	Loc D	Loc E	Authority Total
Male	48.8%	49.3%	49.2%	48.1%	48.8%	49.2%
Female	51.3%	50.7%	50.8%	51.9%	51.2%	50.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Tables 2A and 2B:- Population profile – age breakdown

2A - numbers of people

	Loc A	Loc B	Loc C	Loc D	Loc E	Authority Total
0-14	21300	24700	23100	14000	22900	106000
15-64	77000	91000	84000	50000	83000	385000
65+	21700	24300	22900	16000	24100	109000
Total	120000	140000	130000	80000	130000	600000

2B – percentage of population

	Loc A	Loc B	Loc C	Loc D	Loc E	Authority Total
0-14	17.8%	17.6%	17.8%	17.5%	17.6%	17.7%
15-64	64.2%	65.0%	64.6%	62.5%	63.8%	64.2%
65+	18.1%	17.4%	17.6%	20.0%	18.5%	18.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 3 – Projected population increase 2000-2010 for over 65s

	Loc A	Loc B	Loc C	Loc D	Loc E
Projected population increase	12.1%	12.3%	11.8%	13.1%	12.2%

Table 4 – Total annual cost to NHS of services for older people with mental health problems

Type of service	Loc A	Loc B	Loc C	Loc D	Loc E	Authority Total
	£,000	£,000	£,000	£,000	£,000	£,000
Acute Inpatient/OP	1,302	2,114	1,237	944	1,542	7,139
NHS continuing care	195	413	183	1,730	241	2,762
Day Hospitals	716	437	687	256	578	2,674
Community	282	292	252	160	289	1,275
Joint purchasing (Social services and health)	586	680	504	0	916	2,686
total	3,081	3,937	2,863	3,088	3,567	16,536

Table 5  
Staff and bed resources by locality

Community Psychiatric Nurses providing services for the over 65s					
	Loc A	Loc B	Loc C	Loc D	Loc E
Number	12	11	11	6	12
Average Number of beds used by each locality					
	Loc A	Loc B	Loc C	Loc D	Loc E
Acute	24	38	22	16	28
NHS Continuing Care	4	9	4	34	6