

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

**KEY POINTS TO MOCK PAPER  
NOVEMBER 2000**

**PAPER IA**

**A - RESEARCH METHODS**

**Question 1**

*Most or all of the following would be required for a pass:*

The choice of sample size depends on:

- the effect size that is clinically (or epidemiologically) significant, leading to the effect size to be detected
- the likely proportion of the non cases who have the exposure (or risk factor)
- the level of statistical significance to be used (equivalently, the probability of Type I error that is tolerable)
- the desired power (equivalently, the probability of Type II error that is tolerable)
- the number of controls per case
- practical considerations, including the sampling frames and available numbers of cases and controls

Matching should be considered on a factor

- which is a known confounder, and is strongly associated with the exposure (risk factor)
- which has a presumed strong association with the risk of disease (or other outcome variable) [otherwise danger of overmatching]
- for which no analysis will be required of the factor effect on the disease (or other outcome variable)

Most studies match on age and sex only, since they are usually extremely strong confounders, and any imbalance between cases and controls could mask every other association one would like to study.

*The following are additional points that might improve the answer to “good” or “excellent”:*

Matching should not be used blindly for all plausible factors, since this usually reduces study efficiency

- if matching is used, usually it is imperative to use a matched analysis
- if a potential confounder can be measured fairly accurately and is unlikely to be very strongly associated with the exposure and/or outcome, then that variable can be taken into account in the analysis
- if the study will be analysed for the effect of more than one exposure, matching should only be used when it appropriate for all such exposures

**Question 2**

*Most or all of the following would be required for a pass:*

a) Informed consent in clinical trials

- Informed consent is necessary for clinical trials because health care workers have a duty not to harm patients and the patient is generally held to be the best judge of their own welfare.
- Informed consent is necessary for any health care intervention, but is particularly important in clinical trials because the treatments on offer include one or more where the efficacy is not known, and that could result in harm to the patient. This harm could be directly from the unanticipated side effects of the treatment or indirectly by being denied effective treatment for their problem.

- Informed consent can only be given for an adult by an adult himself or herself, and no proxy may give it on their behalf unless decided by the courts (through reason of incapacity). Parents can consent on children's behalf, but under the Children Act a child may be deemed competent to consent to treatment, though it is unclear how this relates to trials.
- Informed consent requires that the patient is aware of the potential risks and benefits of taking the potential treatments on offer and also (usually) the fact that they will be allocated these treatments randomly.
- Informed consent is usually held to include a period for reflection, so written materials are often given.

#### Problems with informed consent:

- It is often not possible to give fully informed consent in emergency situations e.g. following myocardial infarction (MI). It is certainly not possible if the patient has clouding of consciousness. Then some alternative mechanism must be found.
- The act of gaining consent by informing a patient about a trial might itself change the patient's behaviour. This is important in behavioural or educational trials.
- Some trials might see it as unethical to gain consent because it raises false hopes. For example the extra-corporeal membrane oxygenation (ECMO) trial did not feel it was ethical to raise false hopes by informing parents of moribund children of a possible treatment, only to remove that hope by random allocation to the other arm.
- One solution to both these problems is Zelen's design. Patients are enrolled into trials without consent, and are told of the trial if they are randomised to receive the not usual care. This is generally held to be unethical except in special circumstances.
- AIDS trials in an informed and politically active group have extended the notion of what informed consent means. Instead of passively consenting to enter the trial, or not enter it, patients are demanding consent and participation in the design and conduct of the study and the stopping rules.

#### b) Cluster randomisation

- Cluster randomisation means that individuals are randomised as groups, not as individuals into alternate treatments
- The groups have a natural affinity- for example they belong to the same class in school or the same GP surgery or community.

#### Advantages

- Cluster randomisation avoids contamination. Some interventions, particularly health education, can be difficult to deliver to one individual and not another within communities. For example posters are seen by all within the community, also indirect effects of one person interacting with another in a community can lead to dissemination of an intervention that was intended to be given to only some individuals
- Cluster randomisation can be easier for staff, because they are only have to give one type of intervention, instead of changing protocols for different patients.

#### Disadvantages

- Individuals within communities are more alike one another than individuals across communities. It is difficult to be sure that the results of a cluster trial are not due to baseline differences in the individuals, unless the number of clusters is large.
- A cluster trial involving a certain number of individuals is less powerful than an individual trial with the same number of individuals. The loss of precision or power comes because of the inherent similarity of individuals within natural groups. The degree of similarity, the numbers of individuals

within the groups and the number of groups determine the “design effect” the effect of randomising by cluster and not individuals.

- Many cluster trials in the past have ignored clustering and analysed the results as though they were individually randomised.

c) Intention to treat analysis

Definition

- This form of analysis is applied to clinical trials where patients are allocated to two or more different treatments.
- Regardless of whether the patient allocated to one form of treatment actually takes it, and even if they take the alternative, they are still analysed with the group to which they were originally allocated.
- The other form of analysis is the on-treatment analysis, where only patients who complied with their allocated treatment are analysed.
- Intention to treat analysis is generally the primary analysis, although on-treatment analysis can add some information.

Advantages

- Drop out and non-compliance is not random, and might be different in the two (or more arms). Assuming that treatment has been allocated randomly, the distribution of confounders across the groups are equal at the start of the trial, but are unlikely to be so if only the compliant members of the groups we compared. Only the intention to treat analysis guarantees comparability of the groups. This is a scientific reason for intention to treat analysis.
- The information that we want from the trial is the effect *of offering* treatment, not the effect of taking it. From a patient’s perspective, they want to know the probability of gaining benefit if they start the treatment. This is related not only to the efficacy of the treatment if they comply, but also the probability that they will not be able to comply with the treatment. Intention to treat analysis answers a pragmatic question for the health service.

Disadvantages

- Non-compliance and drop out will reduce the statistical power of the comparison. This can be overcome by increasing the numbers in the trial to account for dropout when doing power calculations, or by only enrolling compliant patients. In some trials this is done by a “wash-in” period to ensure tolerability, but this is not always feasible.

If dropout and non-compliance is substantial, the intention to treat analysis might show no worthwhile efficacy, but whether taking the treatment results in improvement can still be biologically useful. This information will not be provided by intention to treat analysis alone.

## **B - DISEASE CAUSATION & PREVENTION, HEALTH PROMOTION**

### **Question 3**

*Most or all of the following would be required for a pass:*

a) The 'Barker hypothesis'

- what it means (the role of factors in fetal or early life on the risk of developing a range of adult chronic diseases)
- evidence from ecological, individual-level (e.g. Hertfordshire, Sheffield and Preston cohorts) and animal studies.
- main criticisms: selection bias, confounding by socioeconomic status and lifestyle factors,

- inconsistencies within and between studies
- inconsistencies with international data

b) Nicotine replacement therapy

- spray and inhaler under modes of delivery of the nicotine
- RCTs on nicotine chewing gums (2 mg and 4mg) and transdermal patch both highly efficacious. Evidence of the efficacy of gums related to level of dependence on nicotine. 4 mg gums more efficacious in high dependence individuals. Patches less related to level of dependence, therefore in high dependence persons, 4mg gums. For less highly dependent smokers, patches are of similar efficacy but more convenience and less instruction needed for use.
- overall could enable about 15% of smokers to quit.

**Question 4**

a) Tuberculosis

*Most or all of the following would be required for a pass:*

- Major cause of death and disability in many parts of the world.
- Initial infection often unnoticed (90-95%).
- 5% (or 50% of people with HIV) initial infection progresses to pulmonary TB or extra pulmonary involvement.
- Endogenous reactivation or exogenous re-infection may cause progressive pulmonary TB. Untreated carries 50% 5 year mortality. Appropriate chemotherapy nearly always results in cure.
- Tuberculin skin test with positive reaction of approximately 10mm (however clinical judgement needed).
- Presumptive diagnosis of active disease made by finding acid fast bacilli in sputum.
- A positive sputum smear justifies chemotherapy. Diagnosis confirmed by culture and drug sensitivity determined.
- Industrialised countries sharp decline plateaued in 1980s and then increased where high HIV or immigration of people with higher prevalence. Morbidity rates increase with age and social deprivation.
- Reservoir human. May be other animals e.g. cattle.
- Transmission by airborne droplets and unpasturised milk. Risk of infection directly related to degree of exposure.
- Incubation period of between 4-12 weeks for primary lesion.
- Effective chemotherapy eliminates communicability within a few weeks in household settings.
- Children with primary TB generally not infectious. Theoretically risk remains as long as viable tubercle discharged in sputum.
- Prevention and control by case finding and treatment, education, better environment and BCG.

- Isolation (at home unless severe) for pulmonary TB. Not required when sputum negative, not coughing and known to be on adequate chemotherapy.
- Investigates contacts and find source.

b) Rubella

*Most or all of the following would be required for a pass:*

- Mild febrile disease with diffuse punctate and maculo-papular rash.
- Children usually few or no symptoms. Adults usually mild lasting 1-5 days.
- Importance is ability to produce Congenital Rubella Syndrome. Occurs in up to 90% of infants born to women infected in trimester, 10-20% by 16 week and rare with infection after 20 weeks.
- Fetuses infected early at greatest risk of intrauterine death and congenital malformations of major organ systems.
- Severe and moderate recognisable at birth, mild may take months or years to become apparent.
- Laboratory diagnosis needed to differentiate rubella infection from others. Four fold rise in antibody or rubella specific IgM.
- Occurs world wide and is endemic. In non immunised populations it is primarily disease of children. In immunised populations adolescent and young adults infections more important.
- Reservoir is human.
- Spread by droplets or direct contact.
- Incubation period 14-23 days.
- Infectious 1 week before and at least 4 days after rash, highly infectious. Infant with CRS may shed virus for months.
- Susceptibility general after loss of maternal antibodies. Active immunity by infection (permanently) or immunisation (probably lifelong).
- Prevention and control by education and immunisation
- Prevent contact with non immune pregnant women.
- Investigation of contacts to identify pregnant women.

c) Rotavirus enteritis

*Most or all of the following would be required for a pass:*

- Sporadic or seasonal gastroenteritis of infants and young children. Often severe causing vomiting, fever and watery diarrhoea. Secondary cases in adults may occur and subclinical infection common.
- Identified from stool or rectal swab.

- Very common and important cause of hospitalisation of infants. Often though infection may be asymptomatic.
- Reservoir is human
- Transmission by faecal-oral route with possible contact or respiratory spread.
- Incubation period of 24-72 hours.
- Infectious during acute stage of disease and whilst shedding virus. Usually not detectable after eight days. Symptoms last 4-6 days.
- Prevention and control by enteric precautions. School and work exclusion (48-72 hours).

## C - HEALTH INFORMATION

### Question 5

*Most or all of the following would be required for a pass:*

Demonstrate an understanding that fertility rates refer to live births as opposed to “fecundity” which refers to conceptions.

\* Crude birth rate

The number of live births, expressed per 1,000 total population per annum, is the annual crude birth rate. Although often quoted, it is a poor indicator of fertility because included in the denominator are males, children and post-menopausal women.

\* General fertility rate

A better denominator is used in the general fertility rate, which is calculated by expressing the number of live births per annum per 1,000 women in the population of the child-bearing age (by convention this is 15-44 years).

\* Age-specific fertility rates

Because there are differences in levels of fertility amongst women of different ages within the child-bearing years, an even more precise measure of fertility is obtained by calculating the number of births to a specified age group, per annum per 1,000 women of the same age group. For example, the fertility rate for women aged 20-24 years is calculated by taking the number of live births occurring to mothers aged 20-24 years and expressing them per 1,000 women aged between 20 and 24 years.

\* Total period fertility rate

The total period fertility rate is a convenient summary of all the age-specific rates. This rate is the sum of the age-specific fertility rates, in this case expressed as live births per woman of a single age, rather than per 1,000 women. It measures the average number of live-born children per woman which would occur if the current age-specific fertility rates applied over the entire 30 years of the reproductive span. It therefore takes account of differential fertility within the different reproductive age groups, while providing a convenient summary measure in a single figure. It enables comparisons to be made between countries and within the same country over time. The replacement of the British population requires a total period fertility rate of 2.1, not 2.0 as might at first be expected because it is necessary to allow for deaths which occur before the reproductive years are reached.

\* Cohort measures of fertility

All indices of fertility so far described have referred to births at a specific period of time, most often a single year. However, births in any given year occur to a cross-section of women, married at different ages and with differing numbers of previous children. Temporary fluctuations in 'period' indices, may simply reflect the timing of child births within a reproductive lifespan, without any important change in the number of children women will have by the time they have come to the end of their reproductive years.

A cohort of women is a population of women who were born in a particular year (generation or birth cohort) or married in a particular year (marriage cohort). Studies of fertility, following such cohorts of women, observe the occurrence and timing of births in their reproductive lifetime. The cohort fertility rate (which gives the completed family size for women born around the same time) provides a much more stable basis for commenting on trends and predicting future levels of fertility than do measures based on a specific period of time. The cohort fertility rate has the disadvantage that it cannot properly be calculated until the cohort concerned has passed out of the childbearing years.

Factors that influence trends:

- \* Economic prosperity level. Employment.
- \* Marriage/cohab patterns
- \* Sexual mores and practices
- \* Contraceptive usage
- \* Factors affecting physiological reproductive capacity. Infections in inflammatory condition. Sperm count.
- \* High unintended loss of life during early life (neonatal and infant deaths). Provide pressure to increase fertility rates to ensure sufficient children survive into adulthood.

Three major factors:

- \* Contraceptive availability
- \* Level of affluence
- \* Working women.

(Termination of pregnancy rates may be indicative of availability of other contraceptive methods or cultural/national preferences (Japan, Russia) and require to be interpreted in these contexts if regarded as influencing fertility).

### Question 6

Dependent on the country and system, but likely to cover most of the following:

*Most or all of the following would be required for a pass:*

#### Strengths

- Data on all admissions are routinely collected and available
- All admissions coded according to the same classification (such as ICD and OPCS in England)

#### Limitations

- In theory data on all admissions are collected, but in practice, completeness of coding of main diagnosis and intervention may be variable
- Quality of coding of diagnosis and intervention is of concern (done by local coding clerks within hospitals)
- Data provide minimal data for use in case mix adjustment if seeking to examine clinical outcomes

- Data may relate to finished consultant episodes (FCEs) not patient admissions

### Uses

- i. Monitoring activity [UK specific]

Information of the number of admissions and length of stay by speciality and hospital

- ii. Planning health care

Information on age, sex, diagnosis and number of admissions, LOS, and number of procedures over a period of time

- iii. Health needs assessment

Examination of population based rates of interventions by district of residence can provide information on levels of care provided e.g. rates of coronary artery by-pass grafting.

- iv. Assessing quality and outcomes of care

e.g. mortality rates in hospitals following surgical intervention

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

Clear demonstration of real understanding of inpatient data e.g. points such as:

- Linkage via unique patient identifier theoretically possible
- Limitations relating to variable inclusion of outpatient attendance and lack of linkage to other data sets

Practical real examples of the use to which data can be used

## **PAPER IB**

### **D - MEDICAL SOCIOLOGY, SOCIAL POLICY, HEALTH ECONOMICS**

#### **Question 1**

##### Cost-effectiveness analysis

Relates cost to outcomes where outcomes are measured in some natural unit like length of life, tumour size, pain score, or pregnancy rates. Useful for comparing between treatments whose costs and effectiveness are different, but is restricted to comparisons between interventions that can be measured in the chosen units e.g. Finding the most efficient way of treating blood pressure when different drugs directed at that objective have different costs and outcomes. Useless for comparing between very different types of healthcare activity where units of outcome are different.

##### Cost-utility analysis

Relates costs to outcomes where outcomes are measured in units of "utility" - typically quality of life scores, quality-adjusted life years, or disability-adjusted life years. Useful for comparing across very different disease areas by using a common measure of outcome. Helps address the "allocative efficiency" issue, where health care purchasers are trying to maximise population health gain from a fixed budget across vastly different treatment and disease areas e.g. Cost per QALY league tables to guide purchasing decisions, or comparing cost-utility of cancer therapy versus chiropody versus hip replacements. Limited by relatively weak techniques for measuring utility.

##### Cost-minimisation analysis

Relates costs to outcomes where costs are different but the outcomes are identical e.g. Deciding between branded or generic drug.



## Marginal cost analysis

Principally important in making the distinction from average costs. Looks at the cost of the next unit of activity e.g. In an expanding orthopaedic demand situation, the cost of the next few hip replacements may be at marginal cost (mostly consumables) because the fixed costs are already covered. But there comes a point when the next hip replacement triggers a "stepped" cost (steep increase) because a new ward might have to be opened or a new member of staff taken on. Another good example is in deciding optimum frequency of repeat tests in a screening programme - what is the added cost per additional screen and what is the added yield in terms of cases detected? The marginal cost per case usually climbs dramatically with each successive test (whereas the average cost may not - marginal cost is the key indicator but often overlooked by uninitiated policy makers!).

## Discounting future costs and benefits

Technique in health economics for allowing for the fact that society and individuals place a lower value on costs or benefits when they materialise in the future rather than the present. Standard rates are used (typically 6% per year).

e.g. 1: Assessing the choice between investing a sum in health promotion which might yield benefits for many people in 20 years' time, or the same sum in treating heart disease now with immediate benefits for a few.

e.g. 2: Comparing between two interventions of similar total cost, one of which involves a lot of early expenditure and the other where costs are spread out over several years, such as assessing the economic arguments for patients with life-threatening unstable cardiac rhythm receiving implantable defibrillators now at great cost, or continuous drug therapy at less immediate cost but greater cumulative cost over the next twenty years.

## **Question 2**

Sample answer:

Stigma is "a social reaction which spoils normal identity" (Goffman): stigmatising conditions are those which set people apart. Good candidates will relate the concept to ideas of norms and deviance, and to labelling. A better answer would mention the distinction between "discrediting" and "discreditable" attributes, but this would not be essential for a pass.

The description of how stigma affects people should state the additional burden stigma can add to the original impairment. This could be done either by linking it into the WHO model of impairment/disability/handicap, or by discussing primary and secondary deviance (Lemert). A good answer would also mention the affect on relatives, carers and friends. Some mention of the effect of stigma on interactions with professionals would also be expected.

Good candidates might also mention some symbolic interactionism in their discussion. Some recognition of how people deal with stigma should also be included, probably by referring to Goffman's short-term strategies (passing/covering/withdrawal) or by talking about the interaction of social values and self-concept (Anspach).

In discussing stigma reduction, the answer should include reference to population strategies, media work, work with high risk groups including relatives and carers, and work with professionals. Good answers will refer to the limited evidence for effectiveness of stigma-reducing work identified in the HEA's review of mental health promotion effectiveness, and will place it in the context of the HEA's mental health promotion framework, or a similar national document.

Throughout the answer, practical examples will add value.

## E - ORGANISATION & MANAGEMENT OF HEALTH CARE

### Question 3

*Most or all of the following would be required for a pass:*

- Practice guidelines are systematically developed statements to assist practitioner and patient decisions about appropriate health care in specific clinical circumstances. They can change clinical practice and affect patient outcome but their effectiveness depends on how they are developed, implemented and monitored.
- Guidelines are more likely to be effective if they take into account local circumstances, are disseminated by an active educational interventions, and implemented by patient specific reminders relating directly to professional activity. They should be firmly based on reliable evidence of clinical and cost effectiveness and recommendations should be explicitly linked to the evidence.
- Obstacles to implementation therefore include:
  - an inadequate evidence base
  - poorly structured guidelines
  - absence of local ownership through involvement in their production
  - poorly co-ordinated dissemination strategy
  - failure to link marketing of guidelines to educational initiatives
  - accessibility of guidelines when required in the clinical context
  - lack of resources from audit or academic detailing
  - professional resistance: audit, fatigue, priority overload
  - Priority should be given to the development of local guidelines when nationally produced, vigorous guidelines exist. The new National Institute of Clinical Excellence should provide these.

### Question 4

All alternatives may include a discussion in terms of moral hazard.

#### a) Hypothecated taxation

Candidates should define hypothecated tax as a component of general taxation, usually based on income, that is levied for a particular purpose. Good candidates will recognise that the current National Insurance scheme was started by Lloyd George in 1911 as a form of hypothecated taxation.

The advantages are:-

- The electorate are generally willing to pay if they can see what they are getting for their money
- There is an identifiable link between the money paid and the service received
- The scheme is progressive that is those who earn more pay more
- Nobody is excluded from the service because they cannot pay – service is still free at the point of delivery
- Allows preventive services to be funded

The disadvantages are:-

- Because the service is free it encourages over-use and it will not reduce demand
- Over-use may be exacerbated if people want to get back what they have paid in
- In time it may not increase funding if contribution from general taxation is withdrawn as hypothecated tax increases
- May require a separate and complicated administration
- Difficult to resist demands for further fragmentation of general taxation (e.g. for education, social security).

## b) User charges

Candidates should recognise that there are two forms of user charges – those that top up funding from other sources (general taxation or various insurance schemes) and those that cover the entire cost of treatment. They should also recognise that the former exists in the NHS e.g. prescription charges, charges for dental treatment, charges for eye examinations.

Advantages are:-

- Demand may be reduced because people think before spending money on health care
- People do not spend money on food or heating while in hospital, so charges do not penalise people if they are used as top-up

Disadvantages are:-

- People who most need service cannot afford to pay (inverse care law)
- Many people will cover themselves with private insurance leaving those who cannot afford charges doubly disadvantaged
- Where full user charges exist (e.g. US) the proportion of GDP spent on health is high, but the public health benefits are questionable.
- There tend to be a large number of exemptions requiring funding from general taxation (e.g. elderly, chronic sick, certain conditions).
- People with stigmatising conditions, or those where insight into their health problems may be lacking (such as HIV, GU infections, psychotic mental illness) may be deterred from seeking help.
- Preventive services may lose out in funding terms to acute/curative services

## c) Private medical insurance

Candidates should recognise that private insurance is run by companies, usually for profit, and that contributions are paid by individuals.

Advantages are:-

- Weighting of premiums according to use means there is a deterrent effect on demand.
- Countries offering this system spend a high proportion of GDP on health care
- The costs of every aspect of care are made more explicit
- Insurance companies may manage care to ensure only effective forms of treatment are used

Disadvantages are:-

- Those who need insurance most cannot obtain it e.g. poor, chronic sick
- Employers often offer this as a benefit, leading to double disadvantage for unemployed
- May increase demand as people seek to get what they pay for
- Preventive services may lose out in funding terms to acute/curative services
- There still needs to be a system to cover those who cannot be insured
- There still needs to be a system to cover public health and preventive programmes
- Not all the money that is paid in goes on health care – profit motive.
- People have to seek prior approval for spending, even in emergency situations
- People will shop around until they get what they want – demand may increase among some sectors.

## d) Social insurance

This means that insurance is compulsory, and premiums are underwritten by the state for high risk and non-employed groups. Employers and employees make contributions which are compulsory. National Insurance is a form of social insurance, although in practice is part of general taxation. People generally have to pay for services then make a claim afterwards, and re-imburement may not be complete.

Advantages are:-

- Funding of health services tends to be removed from the political arena

- A system of payment and retrospective claim may limit demand
- Payment by employers may act as incentive to health and safety if they are penalised for ill health
- Non-profit so all money paid in goes on either admin or health care.

Disadvantages are:-

- May not limit demand as there is an element of getting what you have paid for
- May deter employers from taking on sick or disabled employees
- A high proportion of demand is not covered (elderly, unemployed, chronically sick, children) and therefore substantial amount of state underwriting remains.
- Claims scheme may be complicated and deter genuinely sick from seeking help, particularly in conditions such as HIV, psychotic mental illness (see above).
- Social insurance is not as progressive as general taxation and may be regressive if the sickest groups have to pay highest premiums.
- Responsibility for funding preventive and public health services is unclear
- High earners may be allowed to opt out in favour of private schemes which depletes the social insurance scheme of funds.
- Patients may shop around and see several doctors until they get what they want, increasing demand without increasing benefit

## PAPER IIA

Please note that examiner key points are not available, but pp639-640 of the article referred to in the question ("Efficacy and safety of rivastigmine in patients with Alzheimer's disease: international randomised controlled trial" (*BMJ 1999; 318:633-640*)) contain commentaries which should be helpful in constructing a model answer.

## PAPER IIB

**Tables that will be required (calculated from material included with question) to complete question**

Annual Cost per head of population (65+) for mental health services

	Loc A	Loc B	Loc C	Loc D	Loc E	Authority Total
Acute Inpatient/OP	60	87	54	59	64	65
NHS continuing care	9	17	8	108	10	25
Day Hospitals	33	18	30	16	24	25
Community	13	12	11	10	12	12
Joint purchasing	27	28	22	0	38	25
total	142	162	125	193	148	152

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/10000 pop	5.5	4.5	4.8	3.8	5.0
Average Number of beds used by each locality					
	Loc A	Loc B	Loc C	Loc D	Loc E
Acute/100,000 pop	109	158	98	102	114
Continuing care/100,000 pop	20	38	18	212	23

To score well candidates are expected to produce a brief (2-3 sides maximum) paper that sets out the key points below in a coherent fashion. The relevant information from the tables above should be included in tabular form to illustrate the conclusions the candidates draw from the data. It would be expected that the population over 65 in each locality would be chosen and that the resources would be calculated per head of population over 65 to enable fair comparison between localities.

Paper should point out that:

The need for services will be greater in the localities with the higher numbers of people over the age of 65 which are localities B and E. However per 1000 total population locality D will have the highest need as a higher proportion of its population is elderly. The projections show that this situation is likely to continue and locality D will have increased needs in the future per 1000 population. Issues relating to the elderly should therefore be a high priority for locality D.

There is not an equitable distribution of resources spent on the elderly and staffing levels and beds show a similar disparity. There is a much higher spend per head in locality D due to high spend on continuing care. D has lower day hospital/community services and no joint purchasing. B has a relatively high spend on acute beds. The candidates might comment that Social services resources are not included and may compensate for some of the inequity. The continuing care beds in locality D are also more expensive than the continuing care beds in other localities.

Locality D is correct to claim that it has a high proportion of elderly within the locality and may seem by those who work in the area to be under-resourced due to lower community staff and day hospital resources. However it has a much higher spend on services for the elderly mentally ill due to its high spend on continuing care.

In order to increase the levels of community services provided the differential use of beds could be looked at. This is especially true in locality D where there are probably opportunities for developing joint funded beds and decrease the use of continuing care beds.

Releasing resources is always difficult and often requires changes in practice and retraining of staff. Presumably there is a reason for there to be high use of continuing care beds in this locality – lack of social service funded accommodation, clinical practice etc? There would need to be a great deal of joint work required to take these issues forward. There is also likely to be resistance from the local community as “bed cuts” in whatever form are usually seen as negative. There are also the issues surrounding payment – a health service bed is free and a social services bed is means tested. The candidate may be aware of the expected/just-published guidance on NHS responsibilities for nursing care.