

Questions, Key Points and Comments

FEEDBACK to Candidates

January 2016 Part A Examination

This set of key points refers candidates to the marking descriptors used by examiners to assess and score answers. The word count of key points has been provided – the majority for Papers I and II range from 300-500. Paper IIA question 1 word count is also shown to illustrate an answer can be provided in approximately 600 words.

Please note these are key points and not model answers. Comments from the Chair of Examiners are included, indicating general points to support candidates preparing for each section for future sittings. They are intended to be helpful rather than prescriptive.

Please note that comments from feedback on the current sitting may also be included in the Chair's comments.

Sections of the syllabus being tested are included and indicate the **main** part of the syllabus being tested. Because questions in Paper IIB are from a limited pool of questions syllabus mapping is not provided. However all questions contain material included within the syllabus.

Candidates are encouraged to review the Frequently Asked Questions (FAQ) (section 12 on -preparing for the Part A examination) and also the Part A syllabus. Both are on FPH website:

http://www.fph.org.uk/frequently_asked_questions_about_the_part_a_exam

<http://www.fph.org.uk/uploads/Sept%202013%20Part%20A%20Syllabus.pdf>

Descriptors for Paper I (from www.fph.org.uk/part_a_examiners)

Dimension	Criteria	Suggested mark allocation
Knowledge base	All or most key points mentioned	+6 to +8
	50% key points mentioned	+4 to +5
	Fewer than 50% key points mentioned	+2 to +3
	None or almost no key points	0 to +1
(Errors of fact)	(Errors of fact, interpretation or significant amounts of irrelevant material).	(-1 to -2)
		Max 8
Structure	Outstanding structure with well organised material.	+1
	Good structure	0
	Poor or absent structure, with little coherence of information.	(-1)
		Max. 1
Application	Excellent use of material or evidence to answer specific question asked and demonstrate excellent critical understanding of the topic.	+1
	Good use of material or evidence to demonstrate a clear understanding of the topic.	0
	Candidate does not answer the question posed. Evidence is poorly focused and demonstrates inadequate understanding of the topic.	(-1)
		Max. 1
Total mark attainable		10

Paper IIA Marking Descriptors		
Mark	Category	Descriptors
41-50	Excellent pass	<ul style="list-style-type: none"> • All of the essential key points mentioned and • Most or all of the additional key points mentioned and • Very well- to excellently constructed answer
31-40	Good pass	<ul style="list-style-type: none"> • Most of the essential key points mentioned and • Some of the additional key points mentioned and • Well- to very well-constructed answer
26-30	Clear pass	<ul style="list-style-type: none"> • Clear majority of the essential key points mentioned and • Averagely- to well-constructed answer
25	Borderline pass	<ul style="list-style-type: none"> • Half of the essential key points mentioned
24	Borderline fail	<ul style="list-style-type: none"> • Almost half of the essential key points mentioned
21-23	Clear fail	<ul style="list-style-type: none"> • Clear minority of the essential key points mentioned
0-20	Bad fail	<ul style="list-style-type: none"> • Small minority, almost none or none of the essential key points mentioned or • Answer illegible or • No answer submitted

Summary statistics for the sitting are included on the [FPH website](#)

Section A

Research Methods

Question 1

A recent observational study suggests a link between the number of places licensed to sell alcohol in city centres and violent crime rates.

a) Discuss four possible epidemiological explanations for this finding. (40% of marks)

b) You are asked to conduct a similar study in a different area. Give three variables, in addition to the number of places licensed to sell alcohol and violent crime rates, which you would collect in your study. Give reasons for your choice for each of the three variables.

(60% of marks)

Key points

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

(a) Possible explanations: half mark for each plus half mark for discussion of each

1. True causal link
2. Chance finding (eg small numbers)
3. Confounding. For example social deprivation associated with higher crime rates
4. Bias. Information bias due to inconsistent recording of results. Selection bias: less violent areas may be less likely to participate.

(b) Information to collect: One mark for each of three types of information chosen with a brief explanation for each, for example, these could be acting as a confounder(s). Note these are examples, but candidates may give other appropriate variables which should be given credit if they are plausible and the candidate has provided a plausible explanation for their inclusion.

1. Nature of places to sell alcohol
2. Use of other recreational drugs
3. Variations in population density (e.g. festival or football match)
4. Socio-economic deprivation
5. Age distribution
6. Time of day/night
7. Sex

Additional points that might improve the answer from "good" to "excellent":

Excellent candidates will give more than three variables in (b) with good explanations for their inclusion.

Word count: 190

Syllabus sections being examined:

1.a. Epidemiology: association and causation; biases and confounding

Examiners' comments

The role of chance was poorly understood. Very few candidates addressed the statistical limitations. True association does not necessarily mean it is causal.

Examiner comments on question 1 & 2:

These were both relatively easy questions so most candidates did well. Exceptional candidates were able to demonstrate understanding of the topic, by applying the theoretical framework in relation to the question. It was difficult to discriminate between very good and excellent answers.

Most candidates passed both questions easily. Some candidates demonstrated a good understanding of the issues and provided coherent arguments in support of their responses.

Some candidates provided brief and concise answers. Whilst in this case these were often adequate for a pass, it did not allow a fuller understanding of the candidate's knowledge.

Chair's comments: generally a very well answered question – well done.

Question 2

Attendance rates at your local hospital accident and emergency department have increased steadily over the past twelve months.

- a) Outline three possible specific explanations for this increase. (30% of marks)

The hospital asks you to evaluate a new 'urgent care unit', to be set up next to the accident and emergency department, to see patients with minor illness.

- b) What are the key steps in the evaluation of a health service intervention? (40% of marks)

- c) Give three measures that you would use to evaluate the effectiveness of the 'urgent care unit', with a brief explanation for your choice of each measure (30% of marks)

Key points

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

- a) Half point for each of three possible explanations with a brief outline (half a point) of why it might explain the rise – up to 3 marks
1. Data error
 2. Population growth
 3. Decreased provision of GP or other community services particularly out of hours
 4. Perceived increased service quality
 5. Patient preferences

- b) Key principles of evaluation

Candidates are expected to outline the key steps in evaluating healthcare services, to assess whether the service meets the objectives.

1 mark for each up to 4 marks

1. Plan the evaluation from before the intervention is implemented & conduct the evaluation as an integral part of implementation of the intervention
2. Follow a theoretical model for evaluation (e.g. 'logic model' or Donabedian model)
3. Define key outcome measures before starting – SMART or similar principles
4. Include a 'control' group for comparison where possible
5. Agree the data to be collected and methods for collection and analysis before starting the intervention
6. Agree who will use the results of the evaluation
7. Disseminate results to decision makers and other interested parties
8. Follow all relevant ethical, governance and legal principles

- c) Evaluation measures – Half point for each measure with brief explanation (half a point) for the choice – up to 3 marks
1. Attendance rates at the main A&E department before and after the opening of the urgent care unit.
 2. Attendance rates at the urgent care unit
 3. Re-attendance rates at A&E and the urgent care unit
 4. Regional and national comparator from other A&E units and the urgent care units
 5. Waiting times at A&E and the urgent care unit
 6. Patient satisfaction at A&E and urgent care unit
 7. Staffing and other costs for A&E and urgent care unit

Additional points that might improve the answer from “good” to “excellent”:

Good or excellent answers will give more suggestions and better supporting information in all 3 parts of the question. For part c, better answers will include measures of the effect of the urgent care unit on the broader health system – e.g. GP consultation rates, or effects on nearby A&E, drop-in primary care centres, or out of hours facilities.

Word count: 371

Syllabus sections being examined:

1.c. Approaches to the assessment of health care needs, utilisation and outcomes; and the evaluation of health care: principles of evaluation; study design for assessing the effectiveness of services including measures of process and outcomes.

Examiners' comments

Some candidates referred to a change in environment, e.g. new roads but this is likely to have a very marginal impact.

For evaluation of urgent care centres, some candidates provided information on theoretical frameworks (Donabedian, etc.) but did not go on to explain how they would actually do the evaluation in real life.

[Examiner comments on question 1 & 2:

(as noted above) Most candidates passed both questions easily. Some candidates demonstrated a good understanding of the issues and provided coherent arguments in support of their responses.

Some candidates provided brief and concise answers. Whilst in this case these were often adequate for a pass, it did not allow a fuller understanding of the candidate's knowledge.]

Chair's comments: generally a very well answered question – well done.

Section B

Disease causation and the diagnostic process in relation to public health; prevention and health promotion

Question 3

Six adults suffering from diarrhoea and vomiting have been reported by a local general practitioner. All became ill within two days of attending a wedding reception at a local hotel where lunch was served. How would you investigate this?

(100% of marks)

Key points

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

Preliminary enquires/actions to establish existence of an outbreak. The term 'outbreak' can be defined as 'two or more cases with a common link' or the occurrence in a community of illness, clearly in excess of normal expectance.

Initial investigations and actions:

- Appropriate clinical specimens should be collected by the GP from cases – but do not wait for the laboratory results before proceeding with the investigation as they may take some time to obtain.
- Obtain clinical information – onset, symptoms, diagnosis by consulting the GP and patients.
- An early visit to the hotel kitchens is indicated. Information on any recent staff illnesses should be collected. Details about the foods/drinks served on the buffet at the wedding should be obtained, as well as samples of any remaining foods from the reception for possible microbiological/chemical examination.
- The organisers of the wedding should be contacted, and a wedding guest list obtained, as well as other possible reports of illness.
- The need for a press statement and how to deal with the press/media would be decided at an early stage. The press officer should be alerted.
- If an outbreak is confirmed or strongly suspected, an outbreak control team should be convened.

Convene an outbreak control team: This should be led by a senior public health specialist. Members should include public health specialists and nurses, laboratory personnel, members from the food and environmental hygiene departments, epidemiologists, and probably the press officers.

Construct a case definition. With confirmation of an outbreak and the need to investigate, a case definition needs to be developed as well as the method(s) for case finding. The need for additional environmental/clinical specimens for analysis must be discussed.

Find cases systematically according to case definition. Use line listing to summarise information that would include clinical information, demographic information and exposure information. Construct an epidemic curve.

Develop hypothesis: Perform descriptive analysis in terms of time, place and person. The type of exposure (e.g. point-source, person-to-person spread) may be suggested by the epidemic curve.

Test the hypothesis and perform additional studies as necessary: e.g. case-control study, cohort study. If these are going to be implemented then they should be carried out as soon as possible so that the individuals do not forget what they have eaten.

Implement control measures based on the investigation findings. Decide if there should be a prosecution.

Post-control evaluation: What lessons have been learned? Is there a need to review investigation/control measures at local/national level?

Additional points that might improve the answer from “good” to “excellent”:

The candidate provides a comparison of case-control and cohort studies.

- Case-control study: compare exposures among ill persons and non-ill persons; used when a complete list of potentially exposed individuals is not available; estimate odds ratio; consider causation; beware potential bias in control selection.
- Cohort study: include everyone who has been exposed to the possible risk factors (eating from the buffet) and record their outcomes; used when there is a complete list of potentially exposed individuals is available; measures relative risk.

The answer includes communicating findings to the public if necessary. A press statement/press briefing may be required.

The candidate includes some long-term measure in their answer, for example:-

- Health education to be provided to the food industry;
- Is there a need to review existing laws in order to tighten control of food business?

Word count: 563

Syllabus sections being examined:

2.g. Health protection and communicable diseases: the steps in outbreak investigation including relevant epidemiological methods

Examiners' comments

The investigation of an outbreak was generally well answered. There were very few bad fails and most candidates provided a structured response to the question being asked using a recognisable outbreak investigation structure. Good answers demonstrated excellent understanding of outbreak investigation in their application of an outbreak investigation framework to the specific question being asked about (i.e. an outbreak of diarrhoea and vomiting following a wedding). Poor answers named elements of an outbreak investigation but did not apply them in a logical order nor to the question being asked.

The outbreak investigation answers were generally well structured and inspired confidence that candidates had an understanding of the basic theory ready to undertake practical communicable disease control training. However, for some, steps in managing a

gastroenteritis outbreak were not well linked and the logic of many answers could not always be easily followed.

Question 4

A public health organisation plans to set up a programme to increase physical activity levels in the population by increasing the proportion of the population who walk or cycle to school and work. Describe the key features of a programme designed to do this.

(100% of marks)

Key points

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

Provide information: (recommended routes, benefits of walking and cycling) that is easy to access (website, printed material, apps, public notices) and accessible in different formats (large print, Braille, easy to read) and in relevant languages for the local community.

Development of personal skills: cycle proficiency training; training to be able to follow a map to navigate a route on foot; provide opportunities for confidence building.

Strengthening community action: organise a 'walking bus' to school; recruit and train walk leaders; cycle equipment hire schemes (eg bikes for hire at railway stations); train and motivate healthcare professionals to use their contacts with patients to promote the benefit walking and cycling to increase physical activity.

Creating a supportive environment: footpaths / pavements for pedestrians; way markers and signposts; safe crossing points across roads for pedestrians (zebra crossings, Pelican crossings); traffic calming on roads to restrict speed; 20mph zones; layout of road junctions to accommodate cyclists; cycle lanes on roads; walking and cycling only routes that are more direct and /or faster than roads; walking and cycling only routes that go through green spaces; bike racks to leave bikes securely at public transport stops; a public transport network that connects with walking and cycling routes.

Building healthy public policy: provide incentives to leave the car at home and walk or cycle to school and / or work (work place reward schemes, tax incentives); provide disincentives to use a car to travel to school or work (restrict parking space, car parking charges, introduce charges to drive a car in designated zones e.g. the congestion charge in London); make it easy to use public transport for part of a journey and complete it walking or cycling.

Monitoring population impact: use of population surveys to regularly record data about physical activity, including the percentage of the population meeting recommended guidelines on physical activity through walking and / or cycling.

Evaluation of the programme: regular review of whether the programme is achieving its objectives.

Additional points that might improve the answer from "good" to "excellent":

- Use a recognised health improvement programme framework to outline a systematic, population programme
- Illustrate their answer with examples of good practice

Word count: 372

Syllabus sections being examined:

2.i. Disease prevention, models of behaviour change: approaches to individual behaviour change; methods of development and implementation of health promotion programmes; involvement of the general public in health programmes; health impact assessment of social and other policies.

Examiners' comments

The features of an active travel programme was generally answered less well. There were some excellent answers that applied a recognisable health improvement framework to the specific question being asked and covered individual, community, environmental and policy elements of an active travel programme including named examples of best practice. There were a number of poor answers that simply listed elements of health promotion theory without application to the question being asked and had no logical structure.

A few candidates provided excellent answers by applying a health improvement framework to the specific question and demonstrating real understanding. However, there was a tendency for candidates to focus too much on needs assessment and the process of programme development without adequately illustrating key features of the programme.

Too few candidates were able to apply health promotion theory to a specific example. This is a very important area of knowledge given the escalating rates of lifestyle related diseases globally. Some candidates also missed the significance of 'key features' in the wording of the question and used a programme development structure for their answers with the result they included very few features of the programme and did not cover enough of the key points

General comments: Candidates tended to only articulate key words and theory without adequately elaborating on the ideas. This casted doubt on their actual understanding of the subject. Some only gave generic answers without relating their answers to the actual scenario.

Try to ensure you relate the answer to the scenario given and use an appropriate structure for the question being asked.

Section C

Health Information

Question 5

Life expectancy and healthy life expectancy are measures that are calculated using a life table approach. Describe the information that you would require to calculate:

- a) Life expectancy (20% of marks)
- b) Healthy life expectancy (20% of marks)

Explain how life expectancy and healthy life expectancy can be used to describe the health status of a population and how this changes over time.

(60% of marks)

Key points

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

- a) Life expectancy
- Age specific mortality data
 - Age specific population estimates
- b) Healthy life expectancy
- An age specific measure of health status or disability
 - This measure should be weighted for the level or degree of disability
 - Data from the WHO Global Burden of Disease (GBD) study and the WHO Multi-Country Survey Study (MCSS) are used to make independent estimates of severity-adjusted prevalence by age and sex for survey countries

The measure of health status or disability should ideally contain several categories, so that the time lived at each age in the life table can be adjusted by the weighted level or degree of severity. Candidates who only describe a dichotomous (two category) measure such as the presence or absence of disability will not attract the full mark for this question.

Candidates may also use the alternative term “health-adjusted life expectancy” instead of “healthy life expectancy”.

Explain how life expectancy and healthy life expectancy can be used to describe the health status of a population and how this changes over time

- Life expectancy is a measure of “adding years to life” and healthy life expectancy is a measure of “adding life to years” (WHO). Healthy life expectancy can illustrate how many years of life are being spent in poor or good health
- Both measures can be used to rank and compare countries or areas within a country
- Both measures can be used to show differences in health between women and men

- Life expectancy does not describe the individual diseases or injuries affecting the population, and so high or low values of life expectancy have to be interpreted by examining age and disease-specific mortality rates
- “Compression of morbidity” occurs when healthy life expectancy increases as a proportion of life expectancy (e.g. people are living longer and are in good health)
- “Expansion of morbidity” occurs when healthy life expectancy decreases as a proportion of life expectancy (e.g. people are living longer due to a reduction in fatal illnesses but remain in poor health)

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

- Life expectancy will differ depending on the use of current (period) mortality rates or historic (cohort) mortality rates. As mortality rates are generally declining, the actual life expectancy for a population cohort will normally be higher than its life expectancy calculated using current mortality rates
- An awareness that mathematical modelling of age specific mortality data can be used to illustrate the impact on life expectancy from changing risk factors (e.g. smoking)
- An explanation that achieving future compression of morbidity will require differential risk reduction among groups with the poorest health
- A discussion or description of the issues that may be relevant to populations with very low or very high life expectancy (e.g. adaptations for disability, or social care)

Word count: 474

Syllabus sections being examined:

3.a. Methods of population estimation and projections: life tables and their application.

Examiners’ comments: Most candidates were able to provide a comprehensive response to all parts of the question. Those achieving high scores provided a clear description about the two measures in the first part of the question, and a wide-ranging and discursive explanation of how these measures could be used. A few candidates could not describe the information required to calculate life expectancy, despite the clear hint about use of the life-table approach within the wording of the question.

Chair’s comments: consider practising constructing a life table using age-specific mortality rates for your local area. You could go on to model changing these rates to see how this affects life expectancy at different ages.

Section C

Health Information

Question 6

Measurement of mental health and mental wellbeing presents a number of challenges not encountered in other areas of public health practice. In relation to mental health in a named country of your choice:

- (a) Describe the sources of routine data which can be used to measure mental health and mental wellbeing.

(40% of

marks)

- (b) Discuss the limitations of these data sources when used for this purpose.

(60% of

marks)

Key points

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

- (a) Examples of sources:

England, Wales and UK based

- Public Health England's knowledge and intelligence function has established a wellbeing and mental health stream, including a new Mental Health Intelligence Network
- Public Health England provides a range of mental health information for local areas, grouped into different themes: e.g. Community Mental Health Profiles, Common Mental Health Disorders, Suicide Prevention Profile, Severe Mental Illness Profile
- Health Survey for England data sets: a series of annual surveys designed to measure health and health related behaviours in adults and children. From 2010 surveys include the Warwick-Edinburgh Mental Wellbeing Scale (WEMWBS) to measure mental wellbeing, and the General Health Questionnaire (GHQ) to identify mental illness
- Understanding Society: surveys 40,000 UK households each year on social, economic and attitudinal issues, with 20,000 people providing health information. Included SWEMWBS in 2012
- The England and Wales Office for National Statistics runs a very significant programme on measuring wellbeing starting with a national debate about the nature of wellbeing. Some data on wellbeing have been made available at local level
- Mental Health and Learning Disabilities Data Set
- Improving Access to Psychological Therapies (IAPT) Data Set

Scotland based sources:

- Mortality from suicide and injury underdetermined is available from the Health and Social Care Information Centre
- Scottish Health Survey (SHeS): based on private households and set up to provide a detailed picture of the health of the Scottish population, includes WEMWBS and the

GHQ from 2008 onwards

Candidates from Scotland may also refer to:

- Scottish Suicides Information Database (ScdSID) – containing linked information on suicides in Scotland including mental health admissions, general hospital admissions, prescribing, method of suicide and demographics etc.
- SALSUS – Scottish Schools Adolescent Lifestyle and Substance Use Survey includes information on attitudes to schools, mental wellbeing, relationships and other aspects of mental wellbeing as well as patterns of smoking, drug and alcohol use
- NHS Health Scotland National Mental Health Indicators
- Scottish Public Health Observatory Mental Health Indicators

Hong Kong based sources:

- Census and Statistics Department,
- Hospital Authority and the Mental Health Association (since 1954) of Hong Kong,
- The Clinical Psychological Service of the Social Welfare Department, Early Assessment Service for Young People with Psychosis (EASY) Programme.

(b) Limitations

- Mortality data, a mainstay of measurement, does not adequately capture the prevalence or incidence of mental illness nor the disability it causes. Mortality data is useful for exploring excess deaths due to suicide and trends over time. More research is needed into the contribution poor mental wellbeing and mental illness makes to overall mortality
- Prevalence data relies on diagnosis, which is dependent upon access to health services. It is believed that less than half of those with clinical levels of mental illness receive treatment. Self-report of symptoms of mental illness is influenced by the stigma associated with it. Measuring recovery outcomes is an important outcome for mental health services but this remains a challenge due to the complexity of mental health conditions and the subjectivity of recovery
- Mental wellbeing has only recently been measureable with valid and reliable measures. The most popular scales of mental wellbeing in the UK are the Warwick-Edinburgh Mental Well-being Scale (WEMWBS) and the short version (SWEMWBS)
- Mental wellbeing is not a diagnosis - representing one end of a continuum - and so prevalence statistics are not available. However, recent work in the UK has established population mean scores for mental wellbeing at a national level and in some local areas

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

- Candidates give a logical and coherent approach to the question
- Candidate can demonstrate a clear understanding of the drawback of current surveillance system and provide suggestion how to improve it

Word count: 620

Syllabus sections being examined:

3.b. Health information: sickness and health; sources of routine mortality and morbidity data; routine notification and registration systems for births, deaths and specific diseases.

Examiners' comments: most candidates had little difficulty in answering all parts of the question to a satisfactory standard. Good answers showed an understanding of the different types of mental health problems and how these various disorders are measured by routine sources. However, several candidates simply listed a care sector (e.g. primary care, or hospital) without describing what sources of routine data are associated with these care providers.

General comments: common pitfalls here were candidates who did not appear to have read the question carefully enough as they did not include mention of mental well-being within their answers.

Also, do consider gaining experience seeing information systems in operational use so you can see how information on patients is captured, stored, processed and disseminated.

Section D

Medical sociology, social policy and health economics

Question 7

The Organisation for Economic Co-operation and Development (OECD) has defined globalisation as the increasing internationalisation of markets for goods and services, the means of production, financial systems, competition, technology and industry.

Critically discuss the impact of global influences on the provision of health and social care in a named country. Include political, economic and social considerations in your answer.

(100% of marks)

Key points

Brief description of the named country.

Equal marks to be given for each of political, economic and social considerations.

At least two points from the list below, explained clearly, for each of political, social and economic would be required for a pass:

Political

- Limited manoeuvre for countries to be different e.g. must comply with EU and/or World Trade Organisation rules on freedom of movement of people or capital.
- Promotion of free trade may make it more difficult for countries to restrict access to legal products (e.g. tobacco or alcohol) on health grounds.
- Public expectations of health and social care are increasing. Patients in each country will expect world-class provision and outcomes.
- Greater impact of globalisation in countries where healthcare is predominantly state funded.

Economic

- Global market for professional staff e.g. doctors who train in low income countries then move to work in high income countries
- Multinational companies increasingly will provide healthcare in more than one country.
- Pharmaceutical companies are reluctant to charge different prices in different countries, which makes new medicines very expensive in low income countries.

Social

- Impact of global information e.g. raised expectations
- Changing social structure
- Raised expectations re health, lifestyle, wealth
- Medical/health tourism
- Social unrest

- International trafficking in people (women) and contraband and their social implications
- Socio economic inequalities more evident
- Changing cultural expectations of medicine – western medicine displacing traditional practices
- Changing diet with western influence - rise in chronic diseases of affluence

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

- Use of relevant examples from their named country
- Understanding of the interdependence of political, economic and social considerations
- Potential impact on the provision of health and social care of the Trans-Pacific Partnership and the Trans-Atlantic Trade and Investment Partnership

Word count: 289

Syllabus sections being examined:

4.c. Equality, equity and policy: health effects of international trade; global influences on health and social policy; critical analysis of investment in health improvement, and the part played by economic development and global organisations.

Examiners’ comments: Answers tended to be better when the essay was structured around the question posed and gave equal prominence to the three areas to be considered: political, economic and social. While there were no excellent answers, passing answers showed that the candidate had an understanding of political, economic and sociological concepts and made the effort to describe the relevant concepts in detail, applied these concepts to the question and wrote in a clear style. Many answers mentioned the impact of the internet, and most mentioned the impact of migration. Good answers dealt with both positive and negative issues. Poorer answers focused almost entirely on negative consequences.

In asking for a named country better candidates wove that into the context of the answer and used it to elaborate the points the candidate was making.

Many candidates mentioned the Transatlantic Trade and Investment Partnership (TTIP), which is relevant to the question, but generally rather more detail/understanding of it would have improved those answers.

General comments: Structuring an answer so each area of a question (in this case: political, economic and social) is dealt with in a separate section allows you to convey your knowledge to the examiner much more effectively. Better answers are written clearly, are well organised and make sense (they may have been proof-read – though that can be difficult given time pressure). Using an essay plan often helps with structuring your answer, so whilst it takes up a little time planning, answers have improved structure and clarity which helps score better marks.

This question specifically asked for an essay – so it is better to avoid using bullets in this form of question.

Section D

Medical sociology, social policy and health economics

Question 8

'Society's responses to disability affect the disabled individual as much as their impairment does.'

Discuss this proposition critically in essay form using named sociological theories.

(100% of marks)

Key points

From the key points listed below the following would be required for a pass:

Definition of disability and impairment;

To compare and contrast the medical and social models

Discussion in detail of at least one other point e.g. exclusion from participation, segregation, discrimination and the effects of legislation

At least one named sociological theory, correctly described

- Traditional definitions of disability and impairment, e.g. WHO (1980)
 - Impairment: any loss or abnormality of psychological, physiological or anatomical structure or function
 - Disability: any restriction or lack, resulting from an impairment, of ability to perform any activity in the manner or within the range considered normal for a human being
 - Handicap: a disadvantage for a given individual, resulting from an impairment or disability, that prevents the fulfilment of a role that is normal depending on age, sex, social and cultural factor for that individuals
- Medical, or personal tragedy, model – sees disability as an individual's problem due to limitations on their body or mind.
- Under the medical model, policy makers and service providers focus on efforts to 'compensate' for 'what's wrong', e.g. special education, special transport, segregated care.
- Disabled people experience lack of control in health and welfare systems.
- The medical model can affect the way a disabled person thinks about themselves, i.e. not 'normal' or not able to participate in society – feelings of social isolation and oppression.
- Social model (e.g. Oliver, Barnes, Finklestein) developed by disabled people themselves in response to denial of opportunities.
- Under the social model, disability is understood as the unequal relationship within society
- Disabled people excluded from participation in society due to physical, organisational and attitudinal barriers.
- Effects of segregation, e.g. if in segregated education may have lower academic qualifications so difficult to progress in higher education; segregation in employment keeps disabled people apart from wider society and often in low paid jobs.

- Discussion of discrimination and the impact of legislation, e.g. the Disability Discrimination Act and Equality Act in the UK.
- If impairment is a constant in the relationship between a disabled person and society then the social, political and physical environment requires restructuring.
- Relatively straightforward to address physical and organisational barriers but attitudes more difficult to change.
- Use of appropriate examples to illustrate their arguments.

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

- Concept of disability as a form of social oppression and the consequence of internalised oppression which can make disabled people less likely to challenge their exclusion from society.
- The differences between integration and inclusion, e.g. in education or employment
- Role of disability activists in direct action.
- Reference to research (e.g. SCOPE) that illustrate that employers discriminated against disabled job applicants.
- Move from institutional care to personalisation and how that impacts on society’s response.
- Use of language and its appropriateness, e.g. handicapped, the disabled, victim, sufferer, people with disabilities, disabled person.
- Cultural representations of disability and how these have changed.
- Other definitions, e.g. Union of the Physically Impaired against Segregation (1976) or UK Disabled Peoples Council.
- Role of eugenics, genetics, inherited conditions and euthanasia.
- Social model is an outdated concept that ignores complexities, e.g. Shakespeare.

Word count: 515

Syllabus section being examined:

4.a. Concepts of health, wellbeing and illness, and the aetiology of illness: impairment, disability and handicap; concepts of health and wellbeing; the role of social and cultural factors in the aetiology of illness and disease.

Examiners’ comments:

Answers tended to be better when the essay was structured. Candidates who provided correct definitions for impairment, disability and handicap performed better. Better answers were written clearly and had been proof-read by the candidate. Some candidates mentioned theorists or theories that were not relevant to answering the question. Some theorists were not named or names were mis-spelled.

Many answers given were too brief and did not show sufficient depth of understanding. Better answers proposed ideas to mitigate the situation.

Section E

Organisation and management of health care, and health care programmes

Question 9

(a) With reference to tobacco control, describe one difference between strategy and policy
(20% of marks)

(b) With reference to a framework of your choice, what actions would you take to improve tobacco control?
(80% of marks)

Key points

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

a).Strategy: a high level plan designed to achieve a reduction in smoking and improvement in health outcomes. It includes a statement of where we want to be and how.

Policy: is an agreed set of measures that contribute to meeting the strategy and will include legislation – for example on premises selling tobacco, controls on imports, smoke free public places, smoking in cars; HR policies - work place smoking, time off for smoking cessation appointments; taxation.

b) One way to approach this question would be to base an answer on the following framework, which is advocated by WHO and can be summarised under the acronym MPOWER. Answers using other frameworks, for example based on health promotion theories or supply / demand reduction models, could also be used as the basis for an acceptable answer, for example the Nuffield ladder of public health interventions.

M - Monitor tobacco use and prevention policies. Assessment of tobacco use and its impact must be strengthened.

P - Protect people from tobacco smoke. There is good evidence that second-hand tobacco smoke is harmful, and smoke-free policies should be advocated. Smoke-free policies in the workplaces of several industrialized nations have reduced total tobacco consumption among employees by an average of 29%.

O - Offer help to quit tobacco use. Among smokers who are aware of the dangers of tobacco, three out of four want to quit. Most smokers benefit from help and support to overcome their dependence. Countries' health-care systems should provide treatment for tobacco dependence.

W - Warn about the dangers of tobacco. Graphic warnings on tobacco product packaging deter tobacco use. Pictorial warnings should cover at least 30% of the principal surface area. Prevent the use of misleading and deceptive packaging terms such as 'light' and 'low-tar' - none of which actually signify any reduction in health risk.

E - Enforce bans on tobacco advertising, promotion and sponsorship.

About half of the children of the world live in countries that do not ban free distribution of tobacco products. National-level studies before and after advertising bans found a decline in tobacco consumption of up to 16% following prohibitions.

R - Raise taxes on tobacco.

Price elasticity factor - increasing tobacco taxes by 10% generally decreases tobacco consumption by 4% in high-income countries and by about 8% in low- and middle-income

countries. A 70% increase in the price of tobacco would prevent up to a quarter of all tobacco-related deaths among today's smokers.

International Organisations on Tobacco Control

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

Would be given to those who could clearly demonstrate his/ her understanding on how the country has implemented measures, and what the limitations are or main gaps for further improvement.

Acknowledgement of the time it takes to implement change but also how given political pressure, things can happen quite quickly.

Word count: 487

Syllabus sections being examined:

5.d. Policy and strategy development and implementation: difference between policy and strategy; principles underpinning the development of policy options and the strategy for their delivery; strategy communication and implementation in relation to healthcare; major national and global policies relevant to public health.

Examiners' comments:

This question was generally well answered with most candidates choosing an appropriate framework and using this to structure their answer well. Differences between strategy and policy were generally articulated well, though there were differing interpretations of which constitutes which (policy is an agreed set of measures to meet a strategy). Candidates were given a mark for describing a difference.

Those candidates who used their framework to expand their argument performed well. Most chose the WHO MPOWER framework and argued it well. The use of levels of action – society, community and individual also allowed candidates to perform well. A small number of candidates added reference to change management theory and applied this well.

In contrast, those who used the 'where are we now, where do we want to be and how do we get there' approach did not generally lend itself to a good answer with one exception, other answers lacked the detail around a tobacco control strategy.

A minority of candidates named a framework but then did not use it to guide their answers

Chair's comments: generally well answered when candidates adopted an appropriate framework (a minority named a framework but then did not use that to help them answer the question).

Section E

Organisation and management of health care, and health care programmes

Question 10

Discuss the main advantages and disadvantages of using targets as a tool for improvement of health services. Use examples from a named country to illustrate your answer.

(100% of marks)

Key points - marks to be distributed equally between advantages and disadvantages

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

Essential: Advantages

- Targets can provide a clear focus on outcomes e.g. reduction in the prevalence of disease correlates with target attainment such as with influenza vaccination or measles/ MMR immunisation programme, or reduction in mortality with a population screening coverage, e.g. breast or cervical screening.
- Provide a common agenda with shared objectives for professional and managerial endeavours: possibility of team cohesion, individual/team/organisational rewards and sanctions. This is particularly important if it is a complex process that you are implementing e.g. a breast screening service.
- Provide a means of accountability for governments (national, local, other) and are a prominent part of national strategies, e.g. NHS / public health outcomes framework, , QOF, Referral to Treatment Target, Cancer waiting times or equivalents from other healthcare systems.
- (Problem in HK, lack of explicit target shared among different providers has hindered the coordinated efforts in service improvement).
- Enable audit against the targets at both individual and service level to enable identification of areas for service improvement.

Essential: Disadvantages

- Focus clinicians and organisations on the 'measurable' and the masking of clinical priorities e.g. waiting lists and the prioritisation of those waiting longest over those with urgent clinical need, not enough follow up services for screening programmes, shifting of focus away from other important measures for infectious disease prevention such as hygiene practices.
- Aspects of care which are important but difficult to measure may not appear as targets; in the UK, sexual health is an example of this. Same for HK ; for infectious diseases: the measurement of hygiene practices and other infectious disease control measures.
- A target may oversimplify and mask complexity making valid comparisons difficult e.g. debate over use of post operative mortality statistics that ignore case mix; different degree of susceptibility, complication rates and vaccine efficacy among different groups of influenza vaccine recipients.
- monitoring targets can be costly e.g. GP contract, lack of good infrastructure for collecting practices in private healthcare sectors in Hong Kong, hospital targets require staff, computerised systems, data entry costs etc.

- Difficulties in identifying appropriate targets and consensus building. Targets inappropriately selected or selected without adequate engagement could adversely affect practices and adoption e.g. process targets selected for care of patients approaching the end-of-life could be a great challenge since the need and priority of each patient is highly individualised.

Candidates from Scotland are likely to mention examples from Scotland in their answer:

Health Improvement for the people of Scotland – improving life expectancy and health life expectancy

Efficiency and Governance improvements – continually improve the efficiency and effectiveness of the NHS

Access to Services – recognising patient’s needs for quicker and easier to use NHS services

Treatment Appropriate to Individuals – ensure patients receive high quality service that meet their needs

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

- Targets work best when closely correlated with a clear and measurable clinical outcome
- Selection of targets requires consensus building, taking into account evidence, feasibility and acceptance etc., may set short, intermediate and long term targets
- Means of demonstrating to public that priorities have been identified and met
- Means of educating the public about the importance of the problems
- Are a practical expression of research expressed in evidence based guidelines e.g. target blood pressures for diabetics, call to needle time for thrombolytic drugs
- Ensure organisational transparency and public scrutiny
- Can be used to evaluate/ benchmark services and performance/ contract monitoring
- Can be a means of standardising care and avoiding the ‘postcode lottery’
- May result in perverse incentives or ‘gaming’
- Costs may exceed outcome benefits
- Can be used to promote competition and hence improve outcomes (advantage) or can encourage competition at the expense of collaboration and hence lead to poorer outcomes (disadvantage)
- Can be used to motivate staff and teams
- Can lead to loss of motivation in the case of targets that are missed or are too hard to reach

Supporting evidence:

- Management theory on the use of targets as means of ensuring organisational development and maturity
- Understand and demonstrate the importance of targets in project planning
- Critical understanding / contextual relevance
 - The use of quality assurance mechanisms within the health care system as a means of achieving targets

Word count: 693

Syllabus sections being examined:

5.c. Management and change: critical evaluation of a range of principles and frameworks for management change; the design and implementation of performance management against goals and objectives.

Examiners' comments

Whilst most answers were structured, lack of detail or simplistic answers meant many did not score as highly as they could otherwise have done. Better candidates used examples to illustrate their argument. Some candidates could list features of a target, but then failed to discuss advantages and disadvantages.

Chair's comments: again those candidates who planned their answer seemed to do better by presenting their arguments in a more coherent fashion.

Paper IIA

A paediatrician in your locality writes to your public health department stating that there has been a recent increase in the number of children below vaccination age admitted to hospital with whooping cough and draws your attention to the paper referred to below.

Wang K *et al.* Whooping cough in school age children presenting with persistent cough in UK primary care after introduction of the preschool pertussis booster vaccination: prospective cohort study. *BMJ* 2014;348:g3668 doi: 10.1136/bmj.g3668

Note to candidates: This paper has been reduced in length by removing:

- The Abstract
- Elements of the discussion including the strengths and limitations, and implications for vaccination policy
- What is already known on this topic
- What this study adds

Question 1

Using a critical appraisal approach, **in approximately 600 words**, draft a summary of the key findings and the strengths and limitations of this study.

(40% of marks)

Question 2

What information is conveyed by the confidence intervals shown in Figure 2?

(10% of marks)

Question 3

The paediatrician cites this paper as evidence that adolescent booster vaccination is an effective method of reducing the number of pertussis cases and this would be likely to reduce cases in very young children who are most at risk of severe illness. He therefore asks that your locality introduces a programme of adolescent pertussis vaccination. Draft a letter of response.

(25% of marks)

Question 4

As a result of a national increase in cases of pertussis, your locality is selected to form part of a programme of research. You are asked to lead on the investigation of the epidemiology and socioeconomic burden of pertussis in adolescents and adults. Whom would you invite to a meeting to discuss the design and conduct of this study and what items would you cover in your agenda?

(25% of marks)

Key points

Question 1 (40% of marks)

Findings:

The findings show that a significant burden of illness associated with pertussis remains among school age children who present in UK primary care with persistent cough, even after implementation of the preschool pertussis booster vaccination and despite high levels of vaccination coverage. Pertussis is still prevalent among school age children who present with persistent cough in primary care and can still manifest as clinically significant cough in fully vaccinated children.

Furthermore, the risk of pertussis more than triples in children who received the preschool pertussis booster vaccination seven years or longer before presenting in primary care with persistent cough.

As burden of illness has been identified as a key area in which data are needed to inform modelling of the likely cost effectiveness of a national adolescent pertussis booster programme, these findings will help to inform consideration of the need for an adolescent pertussis booster vaccination in the UK although more research is needed.

Strengths and limitations:

Strengths:

This was a large prospective cohort study of an appropriate sample size (as evidence by the sample size in the methods).

It was probably population based given it covered 22 general practices in one area.

The use of oral fluid to determine anti-pertussis toxin IgG titres is less invasive than blood samples which therefore aided recruitment of children.

They used clear thresholds to define evidence of recent infection based on the IgG titres.

They used a validated instrument to assess cough severity (although see below for its limited use).

Exclusions were clear and encompassed children with conditions which may have given them a persistent cough for other reason, although for children with asthma a judgement was made about this by the clinician.

To avoid confounding of raised oral fluid anti-pertussis toxin IgG titres by recent administration of the preschool pertussis booster vaccination, they also excluded children who had received a booster less than one year before presentation in primary care.

The similarities observed between temporal variations in pertussis positivity rates in the study cohort and the corresponding data from England and Wales show that the findings are likely to be generalisable on a national scale.

The study findings clearly show a sharp increase in the risk of pertussis seven years after receipt of the preschool pertussis booster vaccination; the trend suggests a decline in immunity over time which is what you would expect.

Limitations:

Some children who met the study eligibility criteria may not have been invited to take part in the study.

This is a known limitation of studies that recruit participants opportunistically from primary care settings during periods of heightened disease activity (extra mark for this).

The impact of the potential biases that might arise from non-consent was not addressed as there was no information about non-consent although it would have seemed a reasonable thing to collect, even if it was just the numbers and age of the children.

The investigators were unable to adjust for the potential confounding effects of asthma, allergic rhinitis, or presence of household smokers in the analysis because of their low prevalence among study participants.

They were also unable to explore the possible confounding effects of vaccination against other conditions which may produce respiratory symptoms as they were unable to collect the necessary detailed information.

Whilst they used a validated instrument to assess the severity of cough they only collected data on six children and it is not clear how these were selected.

The study did not compare risk of pertussis between children exposed to whole cell vaccines during their primary series and those who received only acellular vaccines (extra mark for this).

The results may have been influenced by confounding factors, such as changes in age-related exposure to pertussis and herd immunity, and the effects of a booster up to three years previously.

They attempted to look at the difference between 3 component and 5 component vaccines, but with insufficient power to do so.

Word count: 651

Question 2 (10% of marks)

Figure 2 shows 95% confidence intervals (95% CIs) around the estimates of the proportion of laboratory confirmed cases of pertussis over time comparing the study cohort from Thames Valley with England and Wales data.

Confidence intervals give the limits which are estimated such that for a certain percentage of the time (95% of the time in the case of 95% CIs) the true value of the proportion of confirmed cases of pertussis will lie between the two limits.

Some candidates may give the alternative frequentist interpretation (rather than the Bayesian interpretation as above) based on repeating the estimation 100 times with 95% of the values falling in the 95% CI range.

The width of the confidence interval indicates the number of cases upon which the estimated value of the proportion is based. Narrow confidence intervals indicate that the figures are based on larger numbers than when the confidence intervals are

wide. This is illustrated in Figure 2 where, is it not surprising that, the confidence intervals for the Thames Valley cases, which will have been based on many fewer cases, are much wider than the confidence intervals for the England and Wales data which will have been based on much larger numbers of cases and are therefore narrower.

In the comparison of the figures (given in Figure 2) between the two groups, when there is an overlap of the confidence intervals this indicates that the difference between the two groups is not statistically significant at $P < 0.05$. Whereas, when there is no overlap of the confidence intervals between the two groups, then the difference between the two groups is statistically significantly different at $P < 0.05$. Comparing the results in Figure 2, for some of the time periods the results between the two groups are not statistically significant (for example the first period - 2011 Q1) and for some of the time periods the results are statistically significant (for example 2012 Q1).

Word count: 316

Question 3 (25% of marks)

The letter needs to be written in an appropriate style for a response to fellow professional.

Point out that programme of adolescent pertussis vaccination having an effect on admissions of pre-vaccination age children is an assumption which is not made in the paper. The paper is evidence of pertussis burden in fully vaccinated school age children.

It is not known how cost effective an adolescent booster vaccination programme would be.

Further research is needed to examine the epidemiology and socioeconomic burden of pertussis in adolescents and adults and to develop dynamic economic evaluation models based on national data.

Opportunity to feed into national groups to be considered but the decision would be most appropriately taken at a national level.

Offer to meet to discuss further.

Word count: 125

Question 4 (25% of marks)

Invite (10%)

- health economist
- representative of primary care
- secondary care paediatrician/physician
- pharmacist responsible for community provision
- representative of local education department
- representative from the local authority/SE department
- representative from Public Health (as well as the Lead person)

- academic with expertise in this area – epidemiologist most likely from a local University, preferably with expertise in infectious disease
- representatives of a relevant local voluntary or service user group (preferable to have two such ‘lay’ reps)

Agenda (15%)

Welcome and introductions

Purpose of the meeting

Background description of problem nationally and locally from information obtained by candidate (the ‘lead’):

Mention of use of adolescent pertussis vaccine in other countries

Use of vaccine in pregnant women in UK (extra mark for this)

The goal of the research and how this might be achieved

Discussion of problem from perspectives of those invited

Discussion of possible ways forward to examine local epidemiology and how socioeconomic burden can be measured

Benefits and risks of proposed possible ways forward, including the financial implications of each – indication of where the funding might come from.

Confirm agreement of the group to continue to work on this problem

Develop the terms of reference – part of which will be to define the roles and responsibilities of the group members

Prepare a list of actions

Agree the frequency of meetings and the date of the next meeting

Word count: 229

Area of syllabus being assessed: Paper IIA assesses syllabus area 6

Examiners’ comments

Most candidates had prepared well for the ‘strengths and limitations’ section of question 1. Question 2 was reasonably basic, but several candidates did not fully answer the question. Answers to question 3 were often adequate or good in terms of content but did not really reflect how one would write a letter in real life, with some having a somewhat patronising tone, and others were simply far too long. Few candidates mentioned cost effectiveness of the proposed vaccination programme either within their answer to qu. 1 or 3. Few also mentioned that oral fluid testing is less invasive than blood testing.

Some candidates mixed strengths and limitations together or failed to make these clear.

Chair’s comments

Overall, whilst there were relatively few outstanding scores or very low scores, a high proportion of candidates passed this section, well done.

Avoid including your name in the letter(s), and do ensure you have adequate time to complete each question.

Paper IIB

Examiners' comments

Generally these questions were well answered, with a high pass rate seen across almost all questions though many candidates answered the last question relatively briefly, presumably due to lack of time. Many answered the calculations clearly and well and received high marks.

Key issues in weaker answers were around running out of time, not answering the question posed, or writing irrelevant material. Good answers were clear and concise.

Chair's comments

As for questions in IIA, a high proportion of candidates did well and passed this section: well done.

Questions from Paper IIB are not released on the FPH website, however specimen questions exist on FPH website. Candidates should prepare by knowing key definitions and being able to critically analyse and succinctly summarise tables of data (e.g. from journal article study results sections). Candidates are advised in particular to review the epidemiological and statistical requirements listed in the Part A syllabus.