FACULTY OF PUBLIC HEALTH SPECIAL INTEREST GROUP – SUSTAINABLE DEVELOPMENT

Resources on climate change and sustainable development

MODEL ANSWERS TO SPECIFIC PROFESSIONAL DEVELOPMENT QUESTIONS

NB – many questions do not have "answers" but highlight issues for consideration

Resource K2: Sustainable Economy Q1

1. Is there a fundamental tension between improving health and living within the means of the planet?

Suggested list of points that should be covered in an answer

Some would argue that economic growth is essential to improve health in some areas

Others would argue it has been other types of progress that have been associated with economic growth – and health can be improved without growth

Some would argue that there are different types of economic growth and some could support living within the means of the planet

However, absolute de-coupling has not happened so others would argue that an economy not predicated on growth but on different indicators of improvement is most likely to support living within means of the planet

Resource K4: Health Impacts of Climate Change

1. b and d are both true, the others are false.

2. c is the correct answer

Resource K7: Sustainable Food Systems

Answers:

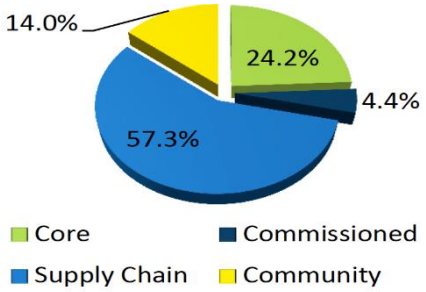
1. B – The farm stage is responsible for 61% (81% if you include deforestation) of all food system GHGE. Transportation, packing and retail combined contribute only 1 – 9% of all food system GHGE.
2. C and D. A – Phosphorous is a non-renewable resource and supplies are expected to be depleted within 50 to 100 years. B – For every 100 calories fed to an animal used to produce food, approximately 7 – 30 are available for human consumption. E – In the UK, approximately 40% of all antibiotics are used for livestock.

Resource K9: NHS Carbon Footprint

Answers:

1a) Approx 6%

1b)



2. The triple bottom line is a term used to describe simultaneous financial, social and environmental return on investment.

Resource K10: Air Pollution and Climate Change

1. How could hotter, drier summers have a negative effect on air quality?

   Increased frequency of wildfires and increasing the concentrations of the secondary pollutant ground level ozone, through photochemical reactions.

2. What are the potential unintended consequences for air quality of achieving net zero?

   a. Increasing emissions from tyre and break wear of low emissions vehicles
   b. Increasing ammonia emissions from anaerobic digestion
   c. Increasing domestic biomass burning
   d. Improving building energy efficiency without consideration of ventilation leading to build up of indoor air pollutants
   e. Changes in atmospheric chemistry brought about by the transition to net zero could increase formation of secondary pollutants (e.g ozone)

Resource A6: Fuel Poverty and Affordable Warmth

Suggested answers:

1. This might include: advice on keeping your home warm efficiently and measures to help keep in the warmth, as well as advice to help people look after their own health (including broader measures to stay well in winter, such as the flu vaccine, and specifics such as asking to be added to the priority services register), looking out for vulnerable friends, neighbours or relatives, and how to access financial support if eligible – see pages 10-11 of the PHE/NHS Cold Weather Plan for more detailed advice on each of these areas.

2. That properties may be far from the gas grid; properties may be older, with more rural properties being solid walled and “off gas”, so harder and more expensive to heat. Solutions to reduce energy costs may be more expensive than in urban areas. Important to seek to ensure that the additional barriers of geography and cost are overcome, to provide equitable energy efficient solutions which address rural health inequalities.

3. Any of: Local housing mix (in terms of energy efficiency and building type); number, demographics and distribution of homes/families living in fuel poverty; home ownership (due to associated impacts on residents' ability to agree to insulation or boiler improvements); existing home improvement/energy advice schemes, whether to target only people with pre-existing health conditions; available budget/funding sources.

4. *Advantages*: more closely related to home energy efficiency and therefore potentially more helpful in tracking progress in relation to improving this; the fuel poverty gap (related to the LHIC definition) allows the depth of fuel poverty to be monitored, not only the prevalence. *Disadvantages:* not significantly affected by changes in energy prices (since these also affect median costs), and therefore does not reflect the significant impact these can have on affordability. For further discussion of this, see https://www.gov.scot/publications/new-definition-fuel-poverty-scotland-review-recent-evidence/pages/7/ and Middlemiss L. A critical analysis of the new politics of fuel poverty in England. Critical Social Policy. 2017 Aug;37(3):425-43.

5. Programme activity and outputs, data on home temperature change, impacts on stress and mental wellbeing, physical health benefits, equity considerations (horizontal and vertical), service access and acceptability, user experience, responsiveness and response times, financial savings, reductions in fuel use and/or emissions, indirect or wider social impacts (e.g. air pollution, reduced food poverty/improved nutrition).

Resource A8: Adaptation to Climate Change

Answers

1. A, B, D & E should all be considered. C is less directly relevant, although the incidence of vector borne diseases will have an impact on healthcare needs, so good quality surveillance may assist with service planning in the future.

2. A, C & D: These will all contribute to resilience in terms of health through either direct or indirect means. B is a mitigation action, aimed at reducing emissions. However this could also have positive impacts on health by contributing to reductions in global warming but may also reduce exposure to pollutants created during energy production (e.g. reduced pollution from coal power stations).

Resource A9: Towards a Net Zero Carbon NHS

Answer to Q1

Four potential areas for action to reduce NHS carbon emissions.

- Patient empowerment and self-care (as well as improving patient experience, this uses resources more efficiently),
- Prevention (promoting health and preventing disease reduces the need for healthcare),
- Lean service delivery (favours effective activities that can improve care and save money)
- Low carbon alternatives