

Environmentally Sustainable Primary Care

Edited by Sawyer & Tomson

<https://www.routledge.com/Environmentally-Sustainable-Primary-Care-Good-for-the-planet-good-for-practices-good-for-patients/Sawyer-Tomson/p/book/9781032793573>

Quiz 1

1. If somebody moves from being a meat eater to being plant based, which one of the following is the reduction in their dietary carbon footprint?
- A 20%
 - B 25%
 - C 33%
 - D 50%

Answer **D** 50%

The biggest gap is between meat eating and being vegetarian, the additional gain from moving to being vegan is smaller Chapter 1 p3

2. **True or False.** Planning perfect climate actions is more important than getting on and starting something.

Answer: **False**

It is better to get started with something than wait for the perfect approach
Most of us will get this right when asked the question ... but in our lives it is easy not to do anything because we feel that we are not doing the right thing or not doing enough.
There is good evidence that getting started is empowering and links people to community and helps them find how to undertake effective actions.
Chapter 1 p4

3. In 2019, primary care was responsible for what proportion of the NHS carbon footprint?
- A 5-6%
 - B 12-15%
 - C 20-23%
 - D 31-33%

Answer **C** i.e. 23% of the total of the NHS footprint

The allocation of some services used by primary care like lab testing is normally made to secondary care... and of course what is or should be primary care and what is provided by other providers has some soft edges
Chapter 1 p11

4. In the UK, what proportion of the carbon footprint of primary care is due to medication?
- A 15%
 - B 30%
 - C 45%
 - D 60%

Answer **D**

60% of the footprint of primary care is medication. The vast majority of the footprint from medication is due to the creation of the drug rather than transport of packaging which accounts for something like 5-10% each. Special drugs or ones which are less commonly produced or rarely produced in this form are more expensive... liquid preps being a good example.: Chapter 1 p11

5. Looking at the provision of dental services, which of the following is or are true?
- A Provision is better in areas of greater deprivation
 - B Greater private provision is associated with better services for the population as the benefits trickle down the system
 - C The poorer the population, the harder dental services are to access
 - D provision of services is worse in more areas where there is little public provision

Answer **C and D** are True

The Inverse care law applies to dentistry. Tudor Hart's inverse care law says that the people who need healthcare the most are the least likely to receive it and that this effect is greater the more privatised the system of provision is. There is no evidence that trickle down benefits those who are less well off, indeed the evidence suggests the opposite. Chapter 2 p15

6. The biggest carbon footprint in UK dentistry comes from which one of the following?
- A The creation of amalgam and resins for filling
 - B Maintaining the premises and keeping the premises at an appropriate temperature
 - C The travel of patients and staff
 - D The use of single use plastics and other plastics in dental practices

Answer **C**

Patients and staff travelling accounts of about 2/3 of the carbon footprint of dentistry in UK: Chapter 2 p16

7. Which one of the following is the greatest carbon footprint related to an eye test?
- A Travel
 - B Energy use in the optometrist premises
 - C Procurement (including spectacles and lenses etc.) by the practice
 - D Waste and water use by the practice

Answer A

Significantly greater than all the other footprints is the footprint of travel by patients and staff; so the best way to reduce the footprint is avoiding unnecessary reviews. Chapter 4 p47

8. Though every prescriber might want to think that they only prescribe what is necessary, reviews of prescribing suggest that a % of prescriptions are unnecessary. What proportion of prescriptions do studies suggest are not necessary?

- A 2%
- B 7%
- C 10%
- D 15%

Answer C

It is estimated that 10% of prescriptions are unnecessary. (This work did not include the impact of successful lifestyle changes on prescribing.) Overprescribing is a serious problem internationally with complex cultural (both in relation to the culture of doctors and health workers and in relation to cultural expectations in different countries) and systemic causes. Chapter 5 p55

9. **True or false.** Prescribing medications for 28 days is best for those who are on a stable medication mix and who are understood to have good concordance.

Answer False

56-day prescribing is advised for patients whose medication is stable and where there is a positive history of adherence. Chapter 5 p58

10. For a child's prescription which one of more of the following is or are true:

- A Liquid medication is more likely to be acceptable and so is environmentally better
- B It is never appropriate to crush the medication as this normally alters the properties of the drug
- C Orodispersible formulations are best
- D Using KidzMed approaches is better financially, for the environment and for the patient.

Answer D

Liquid medication almost always has a higher carbon footprint than solid formulations. alternatives. Crushing tablets can be a good approach but this depends on the tablet (pharmacists can advise). Orodispersible formulations can be useful but may also have disadvantages. KidzMed project approaches are great for many children. Chapter 5 p 62

11. **True or false.** Considering Hay Fever, which of the following is or are true?
- A Hay fever is commoner in UK now because the average pollen levels are increasing with hotter temperatures,
 - B Warm and wet weather promotes Grass pollen, and trees produce more pollen if the previous summer was hot,
 - C Co- exposure to air pollution and allergens increases the problem,
 - D Clothes left or worn outside when temperatures cool will carry pollen that has settled on them causing the person to have hay fever even on days with low pollen counts

Answers **All True**

Chapter 6 p76

12. **True or false.** Considering disposable menstrual products, which of the following statements is or are true?
- A They are mostly cotton and contain little plastic
 - B They are 90% plastic products
 - C Most menstrual products take about 500 years to break down
 - D They are in the top 10 items found on beach cleans

True answers **B and C**

90% of most menstrual pads are plastic. Most menstrual products take about 500 years to break down in landfill. The commonest objects on beach cleans according to <https://www.britishscienceassociation.org/news/top-10-items-washing-up-on-uk-beaches-revealed-for-british-science-week> are Plastic rope/small net pieces (37%), Plastic or foam fragments (29%), Plastic food wrappers (7%), Plastic bags (5%), Plastic bottles (4%), Fishing lures and lines (4%), Container caps (3%), Fabric pieces (2%), Plastic jugs or containers (1%), Straws (1%), Chapter 6 p 80

13. Avoiding overprescribing is dependent on patients in Primary Care being offered approaches based on good evidence which is applicable to their situation. A review of NICE guidelines relevant to primary care looked at what percentage of recommendations were based on evidence derived from populations typical of primary care and found the figure was
- A 88%
 - B 63%
 - C 45%
 - D 38%
 - E 21%

Answer **D**

The vast majority of NICE recommendations are based on populations which are not typical of those found in primary care. Older studies may have a bias towards white and male populations as these were easier to recruit, many studies continue to have poor representation of the range of social classes and ethnicities because these populations can be less available to those carrying out their research. Most patients in primary care

will also have more than one condition whereas guidelines have tended to focus on single conditions. Chapter 7 p 91-2

14. **True or false. Over prescribing** In those over 75 years old, which of the following are true?
- A Frailty is an inevitable part of ageing and there is no prevention
 - B Reducing polypharmacy in those who are old and frail is beneficial
 - C NICE recommendations for management of hypertension are to aim for a target BP of below 140/90
 - D The optimal BP (i.e. with the lowest mortality) in this age group is 165/85
 - E Somebody with a Rockwood or Clinical Frailty score of 5 is classified as having moderate or severe frailty

Answers True : **B, C, D**

There is a conflict between the optimal BP according to NICE and the BP in those over 75 which is linked to the lowest mortality. A Rockwood/ Clinical Frailty scale score of 6 or more is moderate or severe Frailty. Chapter 7 p100-102

15. **True or false.** While some diseases are purely genetic, many chronic diseases are caused by a mix of environmental and genetic factors. Some environmental factors are best addressed by governments or society (e.g. air pollution) and some environmental factors are possible to address as an individual. Which of the following are True?
- A 16% of Western European deaths can be attributed to genetics
 - B The ability of an individual to change their lifestyle is linked to their power and rank
 - C 15% of leukaemia is inherited from parents
 - D Changing the behaviour of a population or the risk to a whole population is likely to be more effective than working on individual choices

True **A, B, D**

Though Leukaemia is an abnormality of DNA causing a blood cancer most of these changes happen after conception and estimates suggest that about 3% of leukaemia is inherited. Though it is more effective to work on populations this is a reason to pressurise health systems and governments to act and not a reason to avoid conversations with individual people about what they can change and how they can do this. It may be helpful to simplify things as 'What works best for this disease = NICE'; 'What works best for this person = lifestyle'. Chapter 8 p110-111

16. Across the UK, what proportion of GP surgeries are built on flood plains? (Answer this question for your country in UK! The proportions are different!)
- A 3%
 - B 5%
 - C 7.5%
 - D 10%
 - E almost 20%

Answers depend on where you work/ relate to!

The last UK government data suggested that the figures were England 7.5%, Scotland 7.6%, Wales 18.2% and NI 10.5 % Chapter 10 p 138

17. According to Mike Berners Lee, how much life is lost for the whole community for each mile travelled across a town or city in an average diesel car?
- A Ten seconds
 - B One minute
 - C Three minutes
 - D Six minutes
 - E Twelve minutes

Answer **E**

12 minutes or an hour of life lost per 5 minute short urban trip in a diesel car... Chapter 11 p161

18. In 2019, how many people died globally due to exposure to particulate matter (PM 2.5) according to WHO?
- A 0.7 million
 - B 3.7 million
 - C 6.7 million
 - D 12.1 million

Answer **C** 6.7 Million

97% of the urban population of Europe was exposed in 2021 to PM2.5 levels which are above WHO standards. Rural outdoor air quality is generally better, although it can be poor at certain times of the year – e.g., due to forest or bushfires. Chapter 13 p197

19. What proportion of all water on the planet is accessible for human use as freshwater in ponds, lakes and rivers?
- A 0.03%
 - B 0.3%
 - C 3%
 - D 30%

Answer **A** Chapter 14 p 208

20. What proportion of the world's population faces a significant flood risk?
- A 3%
 - B 13%
 - C 23%
 - D 33%

Answer **C**

Chapter 14 p 208

21. Which one of the following is **not** in the top six global crops providing plant derived energy?
- A Oilseed rape
 - B Wheat
 - C Maize (or corn)
 - D Potato
 - E Soybeans

Answer **A**

Oil seed rape though commonly grown in UK is not globally important as a energy producing crop. The two of the top 6 which were not included in the question are rice and sugarcane. Chapter 15 p 221

22. **True or false.** Behaviour change is crucial (as well as societal change). Which of these statements about behaviour change are true?
- A It is important to be absolutely balanced and scientific detailing all the negatives as well as outlining positives
 - B Humans, because they are good at being logical, respond best to facts and logical explanations
 - C Social norms are important so doing stuff with other people is key so that they can belong
 - D It is more effective to use the language of the people you are talking with than to use the right technical terms
 - E 'Positive deviants' are dangerous and to be avoided

Answer True **C and D**

In *How to talk about climate change* the suggestion is made that when talking about climate change it is appropriate to use a ratio of 3 parts positive to one part negative. This is not an invitation to lie or hide facts but to look for and work with the positive routes forwards rather than getting buried in negatives. 'Positive deviants' take action even if nobody else is and can lead through this bravery and commitment even if they don't necessarily want to be leaders.

Chapter 17 p246-8