

charges to patients (co-payments) as ways to afford a just health service in times of austerity.¹ He had no need to search so far.

A best answer was provided 250 years ago by Adam Smith:

*'The subjects of every state ought to contribute towards the support of the government, as nearly as possible in proportion to their respective abilities; that is, in proportion to the revenue that they respectively enjoy under the protection of the state.'*²

This is what we now call income tax. It was first instituted in 1799 to pay for our wars, but only became in any way socially redistributive in Lloyd George's budget of 1909. It is, of course, means-tested. Means tests are costly to administer, and it seems pointless to do this more than once, except as an effective deterrent to a high proportion of people entitled to benefits. Of 30 countries for which The Organisation for Economic Co-operation and Development data were available in 2005, the UK ranked 11th lowest for personal income tax as a percentage of income, below every other European country except Ireland, Iceland, and Switzerland.³

Unlike any leading politician or most economists today, Adam Smith understood the function of the state as guardian of property. 'Till there be property there can be no government, the very end of which is to secure wealth, and to defend the rich from the poor', he said.⁴ The rich should pay more for every aspect of the state, because without it, our obscenely unequal society would fall apart.

That's the closest one can get to the truth, looking from above. It's much easier to see from below, as most still do in Wales, Scotland, and Northern Ireland. Here NHS care is seen as a progressive and civilising extension of care within families at home. Both are social functions separated so far as possible from the commodity market. They are both motivated by perceived needs rather than opportunities for profit, and are cooperative rather than competitive in nature. Neither can gain in effectiveness or efficiency by remodelling to an industrial or commercial pattern.

In dismissing co-payments as a principle conceded long ago, David Jewell reveals ignorance of history. Charges for prescriptions, spectacles, dentistry, and so on (to Chancellor Hugh Gaitskell, and a cabinet majority who agreed with him) led two ministers and one junior minister to resign from Attlee's government in 1951

(Nye Bevan, Harold Wilson, and John Freeman). They understood that the NHS was founded on solidarity. Without this it can exist only in name. People may be slow to understand this, but when they do, there will be short shrift for such casuistry.

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Is healthy eating for obese children necessarily more costly for families?

The paper by Banks *et al*¹ was music to my ears. As someone who has been jousting with a tendency towards obesity since my teenage years I am not only well aware of the 'healthy food costs too much' argument so beloved by patients, but the counter arguments. The one that seems to confound people most of all is 'why don't you just eat less of what you can afford to buy?' I have not yet had a sensible answer to this: generally there is a knotting of brows for a few seconds as though I were speaking in tongues, before moving on to some other issue.

It seems to me that there are two main problems to be overcome in quashing the 'healthy is expensive' argument. First the cheapness of less healthy options: the often quoted discount ready-made lasagne, for example. Second is the idea that a diet is not healthy unless it contains a liberal sprinkling of exotic fruit and veg. We are surrounded by images of blueberries with our breakfast cereal, pak choi in our '10-

minute' supper, and kiwi fruit at just about any time of day. These images are propagated by magazines and diet clubs alike. Is it any wonder people think they can't afford it?

Last year one of Britain's leading supermarkets introduced menus that cost around £50 per week for a family of four. In some quarters this came under fire for such mundanities as toast for breakfast. There is nothing wrong with toast for breakfast. In many Mediterranean countries (whose diet is seen as the gold standard) it is common to skip breakfast altogether in favour of elevenses, or to take little more than bread and coffee.

By all means try to curb the purveyors of cheap, unhealthy options, but more importantly let us push a sensible, achievable alternative.

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Predictive effect of heartburn and indigestion and risk of upper gastro-intestinal malignancy

Further to our recent publication of two papers in the *BJGP*,^{1,2} we have been asked to evaluate specifically whether dyspepsia is a significant independent predictor of upper gastro-intestinal malignancy (in other words, gastro-oesophageal and pancreatic malignancy) and to consider adding it to the models. These symptoms (heartburn or indigestion) were not included in the original analysis that had focused on more traditional alarm symptoms. We, therefore, undertook an analysis based on the original derivation cohort from the published studies and identified patients with new onset of (a) heartburn or (b) indigestion (other than where heartburn is explicitly

Figure 1. incidence rates of symptoms per 100 000 person years by age and sex in the derivation cohort.

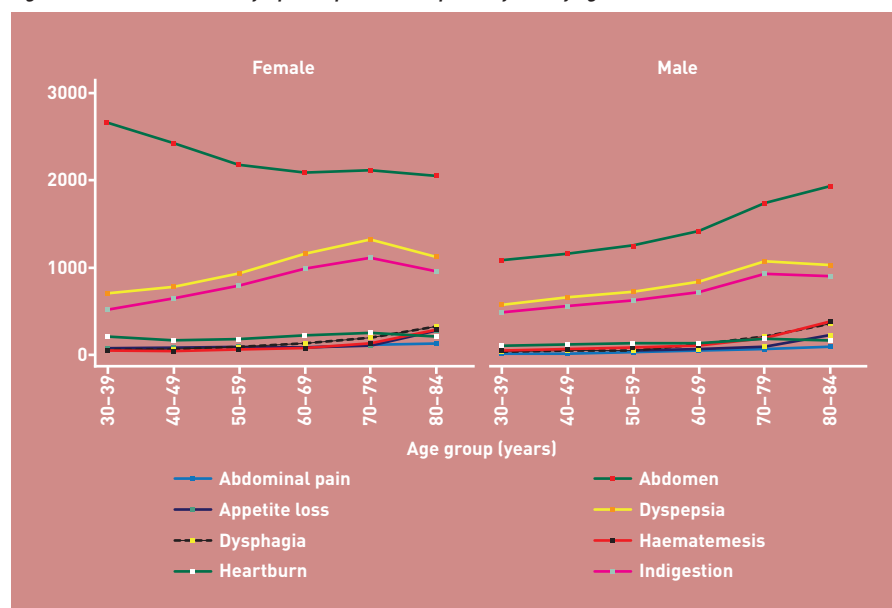


Table 1. Adjusted hazard ratios (95% CI) for pancreatic cancer and gastro-oesophageal cancer in patients with heartburn or indigestion

	Adjusted hazard ratio (95% CI) for pancreatic cancer ^a	Adjusted hazard ratio (95% CI) for gastro-oesophageal cancer ^b
Female		
Heartburn ^c	2.55 (1.34 to 4.85)	2.16 (1.29 to 3.64)
Indigestion without heartburn ^c	3.76 (2.83 to 5.01)	4.30 (3.51 to 5.25)
Male		
Heartburn ^c	2.24 (1.11 to 4.55)	2.95 (2.11 to 4.13)
Indigestion without heartburn ^c	4.64 (3.62 to 5.94)	6.44 (5.64 to 7.36)

^aThe models for pancreatic cancer also included fractional polynomial terms for age which were age² and age³ for females and age¹ for males; smoking status (five levels), type 2 diabetes, chronic pancreatitis, appetite loss, weight loss, abdominal pain, abdominal distension (females), dysphagia (males), constipation (males). The model for males also included interactions between weight loss and the age terms. ^bThe models for gastro-oesophageal cancer included fractional polynomial terms for age. For females the term was age^{2.5}. For males the terms were age², age³. The models for males and females also included smoking status (five levels), dysphagia, abdominal pain, appetite loss, haematemesis, weight loss, anaemia. The model for females also included interactions between the age term and dysphagia, abdominal pain, appetite loss, haematemesis. The model for males included interactions between the age terms and dysphagia.

^cCompared with person without heartburn or indigestion.

mentioned). We determined the age-sex incidence rates. We added both factors to the Cox models and determined the hazard ratios adjusted for the factors in the original models. We tested for interactions between the new variables and age. We evaluated performance of the new models on the original validation dataset using published methods.

Figure 1 shows age-sex incidence rates of each symptom (where dyspepsia represents either heartburn or indigestion). The crude incidence rate for new onset heartburn in patients aged 30–84 years was 130 [95% CI 128 to 133] per 100 000 person

years for males and 196 [95% CI 193 to 199] for females. The incidence rate for indigestion in males was 680 [95% CI 680 to 693] per 100 000 person years for males and 844 [95% CI 836 to 850] for females. Table 1 shows the hazard ratios for heartburn and indigestion in the new Cox models, adjusted for the other factors in the original models (see footnote). There were no age interactions for these symptoms. Both heartburn and indigestion were independently associated with risk of gastro-oesophageal cancer and also pancreatic cancer in both males and females. The adjusted hazard ratios

associated with indigestion without heartburn were higher than those associated with heartburn. For example, females with heartburn had a 2.2-fold increased risk of gastro-oesophageal cancer and a 2.5 fold increased risk of pancreatic cancer. Females with indigestion without mention of heartburn had a 4.3-fold increase in gastro-oesophageal cancer and a 3.8-fold increase in pancreatic cancer. The pattern for males was similar. We therefore retained both heartburn and indigestion in both updated models for males and females. The performance of the updated algorithms on the validation cohort was equivalent to that of the original models for gastro-oesophageal cancer and marginally better for pancreatic cancer. The R^2 , D-statistic, and receiver operating characteristic statistics for gastro-oesophageal cancer were 71%, 3.2 and 0.90 for females, and 71%, 3.2 and 0.92 for males. The corresponding values for pancreatic cancer were 62%, 2.6 and 0.84 for females, and 64%, 2.7 and 0.86 for males.

In summary, we have identified and quantified two additional symptoms (heartburn and indigestion) that are predictive of both upper GI cancers. We have now included both symptoms in updated models at Qcancer (www.qcancer.org). As with the other symptoms included in the models, it is important to remember that they represent symptoms that have been significant enough for a patient to present to their GP and for their GP to record. Not all patients with such symptoms will have attended their GP and not all such symptoms will be reported or recorded.

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All authors have completed the Unified Competing Interest form at www.icmje.org/coi_disclosure.pdf (available on request from the corresponding author) and declare: JHC is professor of clinical epidemiology at the University of Nottingham and co-director of QResearch® — a not-for-profit organisation that

is a joint partnership between the University of Nottingham and EMIS (leading commercial supplier of IT for 60% of general practices in the UK). JHC is also a paid director and co-founder of ClinRisk Ltd that produces software to ensure the reliable and updatable implementation of clinical risk algorithms within clinical computer systems to help improve patient care. The software which implement the algorithms described in this paper are free for anyone to use under the terms of the GNU lesser GPL3. For those who wish to implement software in a closed source setting, then a license fee is payable to ClinRisk Ltd. CC is associate professor of medical statistics at the University of Nottingham and a paid consultant statistician for ClinRisk Ltd. This work and any views expressed within it are solely those of the co-authors and not of any affiliated bodies or organisations.

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Thirty-minute compared to standardised office blood pressure measurement in general practice

We read with interest the study by Scherpbier-de Haan *et al* regarding the use of the 30-minute blood pressure measurement in dealing with the 'white coat effect' and the accompanying editorial by Wallace and Fahey.^{1,2} Both highlighted the importance of having an office-based alternative to ambulatory blood pressure monitoring (ABPM). This is most topical as practices react to the 2011 National Institute for Health and Clinical Excellence (NICE) unequivocal recommendation that 'ABPM should be implemented for the routine

diagnosis of hypertension in primary care'.³

In the RAMBLER II study, we prospectively examined the use of ABPM in 114 Irish general practices over a 1-year period between 1 April 2009 and 31 March 2010. All practices used the dabl® ABPM expert online software system (www.dabl.ie/en/prod_abpm.aspx), which provides online transmission of ABPM data for instantaneous reporting and storage of data. There were 13 303 ABPM recordings from 11 537 individual patients (47.9% female, average age 57.9 [standard deviation {SD} 14.6] years) with an average of 102 (SD 83, median 84) ABPM recordings per practice per year. With most practices having only one device, this suggests that many devices are being used close to capacity even before the revised NICE recommendation was made.

In 6224 (53.8%) ABPMs, the recommended minimum of 14 daytime and seven night-time measurements were obtained. In 8475 (73.2%) ABPMs, at least 13 daytime and six night-time measurements were obtained. The reasons for this shortfall need to be further examined. Having the recommended number of readings had a small but significant impact on both white coat and diastolic averages but not on systolic averages (data available from authors).

Mean systolic blood pressure (SBP) was 139.4 mmHg (SD 14.7 mmHg) and 121.5 mmHg (6.8 mmHg) for day and night respectively; mean diastolic blood pressure (DBP) was 80.8 mmHg (SD 11.1 mmHg) and 67.1 mmHg (10.7 mmHg) for day and night respectively. Mean blood pressure in the first hour of the ABPM (white coat window) was 158.8 mmHg (SD 21.7 mmHg) and 95.1 mmHg (SD 17.1 mmHg) for SBP and DBP respectively. These figures emphasise the real impact of the 'white coat effect' in routine practice.

This study emphasises the heavy current workload of ABPM devices, the importance of ensuring that the recommended minima of readings are obtained, and the importance of the 'white coat effect' in routine practice.

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Tips for GP trainees working in general medicine

We write to congratulate the authors on writing an excellent piece of work that GP trainees on general medical rotations should find very helpful.¹

Although the article provides good advice on commonly encountered medical problems, we would like to highlight issues relating to pleural problems (point 20: 'Never let the sun go down on an empyema').

Pleural intervention (including thoracocentesis and drain insertion) is associated with a range of potential complications, and each procedure should be performed by competent (or supervised) medical staff. These procedures are best avoided out of hours. We recommend that in most situations you can 'let the sun set' and defer the intervention until the next day.

1. The authors suggest that everyone with pneumonia-associated pleural effusion needs a pleural tap. Diagnostic pleural tap should be guided by clinical need. Up to 40% of pneumonias have associated para-pneumonic effusion (the most common cause of exudative pleural effusion in young patients)² and the vast majority will settle with antibiotic treatment. Pleural tap should be considered in the context of persistent sepsis despite antibiotics.