A response to the draft NHS Carbon Reduction strategy consultation
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(To view the draft strategy click here or go to http://www.sdu.nhs.uk/)

Consultation questions

I Do you think NHS should be a public sector leader as a sustainable and low carbon organisation?

Definitely yes. The sheer scale of the NHS means that it absolutely must take action, and be an **exemplar** for the private sector to follow. Currently there are many examples in the private sector of much better practice - this should not be the case. The NHS is responsible for more climate change than many of the smaller nations of the world.

The NHS's unique role in being the organisation in Britain whose sole purpose is to improve health is gradually taking on the message that **prevention is cheaper than cure** *a la* Wanless (2002). We need to prevent environmental damage now, or future generations (even the middle and old age of current cohorts of children) will be left footing the bill for our folly. Good health can only be fully realised within fairly narrow environmental parameters, therefore it is our duty to ensure that we do not contribute to shifting any of those parameters in the negative direction.

Carbon reduction is vitally important in the short term, but it should not be at the expense of further environmental degradation. We should be thinking about **ecological footprint**, rather than carbon footprint. Part of the challenge for the NHS is educating our staff, patients and visitors about the issue of sustainability.

The NHS needs to challenge views and policies based on "risk management" which are in fact "litigation management". **True risks** in terms of the environment and therefore health should inform practice. To give a few examples:

> (i) disposables – do we really need to wear disposable gloves to take blood? The gloves do not protect against needlestick injury – and yet it is taken as irrefutable truth that this practice is for the protection of staff.

> (ii) lighting levels in corridors at night – examine the carbon footprint of the options balanced against a realistic estimate of the risk of adverse incident. E.g. movement sensors so that lights can be left off when no one is there? Or do the sensors produce an unacceptable amount of carbon in their manufacture? Or should we have light switches and train/encourage staff to switch them off as they pass through?

> (iii) many of the practices in the handling and disposable of medicines are extremely wasteful, but done in the name of patient safety.

It is inevitable that the "market" will react aggressively when their businesses are being threatened. Manufacturers of disposable equipment will lobby fiercely, playing up the hazards, infection risk, etc of a return to reusable equipment. The government will need to be prepared to stand its ground. Staff will not take many of the measures very well, just as the public has not taken increased petrol costs very well, even though this is very positive for the environment.

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[*] Julie is based at Ashton, Leigh and Wigan PCT. This response does not represent the official position of PoHG but we thought it was well worthwhile making it available to our supporters, as a thought provoking commentary on proposed government policy.

II   How important that carbon management becomes core business?

This is the crucial point to making the whole strategy work – it must become core business – just as much as financial accounting is now. The same rigour in performance management as applied to other aspects of the NHS should be applied to reducing carbon (and generally minimising ecological footprint). Therefore we need the full weight of regulation, inspection, audit as pertains to financial management, clinical governance, risk management.

Rather than putting all the expectation on to individual Trusts, we need a **whole system approach**. This has become more difficult with the move to plurality of providers, but still very doable in my opinion. In Ashton, Leigh & Wigan PCT we are attempting to introduce a "health economy wide environmental management system (EMS)". It is envisaged that the commissioner will coordinate and performance manage aspects of the use of resources and their movements through the system. Hopefully this will result in more efficient use of resources, and some financial savings, as well as e.g. a common policy for waste management, etc. It would be my personal aspiration to "manage the carbon flow" around the system.

Many, many hospital sites are campuses for a number of diverse organisations, e.g. the Aintree Hospital site has an Acute Trust of same name (60s tower block and many older ground level wards), and 80s built tertiary Trust (The Walton Centre for Neurology and Neurosurgery) a higher education establishment, lots of community service bases, what was the former Public Health Laboratory (now part of the Health Protection Agency) a Vet!, and possibly others. There is a need for **site management,** with the various organisations working together for economies of scale (e.g. on-site combined heat and power, improved public transport links, joint car parking policy, etc) to minimise the carbon emitted by each one working separately.

There needs to be an honest recognition that being sustainable is not about pursuing the lowest cost option, and will inevitably **cost more**. However, costs can be saved in some areas. The NHS has a huge resource base, but tough decisions will have to be made about what goods and services can no longer be used. Being sustainable means living more frugally, so for instance not having offices heated to 22 degrees in the winter – which will not be popular with staff used to wearing light tops all year round. Water coolers are another luxury, with well designed plumbing delivering fresh mains water which hasn't run for hundreds of metres beside hot water pipes, perfectly acceptable drinking water can come from a tap without requiring being cooled. Air conditioning should be completely phased out. Excess heat from machinery be it a scanner or a server, should be passed though heat exchange mechanisms so that the heat is captured for space heating and to heat water.

Employment is one of the issues not necessarily considered in sustainable development discussions. **Employing local people** to perform tasks which would otherwise be mechanised or outsourced to the developing world, for instance folding letters and leaflets and filling envelopes is more sustainable than buying a large, expensive, heat-producing and noisy machine to do the same function. The costs are different - the machine requires capital outlay (in my experience easier to get than revenue), and electricity to run. The job (probably less than 1 full-time equivalent) costs in revenue, and most NHS Trust try to keep staff costs low. The external costs of not providing a job i.e. another person on benefits are borne from the public purse, but not the NHS.

Building energy use

1   Will measures proposed help reduce carbon emissions from building use?

Wider application and enforcement
The measures described will help, but are in themselves insufficient to achieve the scale of carbon reduction required. Applying the success of the Carbon Trust's NHS Carbon Management Programme will be very helpful, but it needs to apply in all NHS organisations. As stated in the draft strategy, reducing CO_2 emissions is not just an Estates issue, so organisations which do not have much estate

compared to acute Trusts, (e.g. PCTs and ambulance Trusts) must also apply these lessons, and there needs to be a requirement upon them to do so.

More rigorous requirements for new builds
The adoption of BREEAM is excellent, but only applies to new builds – when we have a large existing estate in which to carry out our business. We need to build fewer new buildings – and I suggest that a full options appraisal of the possibility of refurbishing existing stock should be a requirement. Often new builds can be more efficient, yet use a greater net amount of energy. For example older wards achieved ventilation by opening windows. Modern wards have electrical (or electronic) ventilation/air conditioning systems. Much of the "energy saving" technology such as movement sensitive light controls, water flow controls at hand washing sinks, still use energy to operate and in their manufacture – when in theory the same effect could be achieved by humans if only they could be trained to use energy and other resources sparingly.

2   What further measures?

Efficiency measures are only likely to hold the increasing demand for energy. The NHS needs to micro-generate electricity. Each site will differ and needs an appraisal of the options for micro-generation. Combined heat and power is one existing model in some Acute Trusts – this provides a way of dealing with some waste streams on site too, therefore reducing the amount which has to be transported off-site (further reducing carbon emitted). Ground source heat pumps seem an excellent option for healthcare building, as they provide a low level background heat (if used underfloor) therefore eliminating the need for radiant sources of heat, such as radiators, with their attendant risks of burns, injuries caused by falling against them, providing ligature points for patients at risk of self-harm and providing a "safe haven" for Cryptosporidium spores.

How buildings are used is another area where there is a potential for carbon reduction, and all round increase in efficiency of utilisation. Four theatres which operate 2 hours longer each day saves building and equipping a further theatre, yet achieves the same increased productivity as if another theatre were opened. Expensive and carbon hungry diagnostic facilities (e.g. MRI scanners) could also be used 12 hours of the day, and weekends. The increased capacity could be provided for staff costs alone, and all the embedded carbon in the manufacture and transport of the "other" machine would be avoided.

Travel

3   Will measure proposed help your NHS organisation reduce carbon emissions from travel?

No, the measures are wholly inadequate.

Travel Plans (Sustainable)
There are Travel Plans and Travel Plans. The original NSF for Coronary Heart Disease required all NHS organisations to have a "Green Travel Plan" by 1998 … it didn't happen. There needs to be something stronger than "will be expected to produce and publish a Sustainable Travel Plans". It should be mandatory and there should be a specification of the areas to be covered. If not, there will just be a lot of rhetoric about how they will encourage staff to car share, and they will provide showers.

Ashton, Leigh & Wigan PCT has a Board approved travel plan, and since 2006 we have at the Headquarters building (where the greatest concentration of staff work):
- Installed a shower (very seldom used)
- Provided very secure cycle parking (only has about 5 users in total, most days there are no bikes in it)
- Surveyed interest in pool cars or pool bikes (very little)
For the PCT generally we have:
- Had a 20p per mile cycle travel allowance added to the travel claims (very few claims to date)

- Produced "healthy ways to …" leaflets for the 7 new health centres which have opened in the last 5 years
- Offered a free one-day bus pass (no one took up the offer)
- Provided a "bike doctor" at 2 sites for one afternoon each (no one brought their bike in to be fixed)

The green travel plan has had a minimal impact, despite considerable staff time, and not insignificant new investment.

The requirements to provide data on the ERIC returns are welcomed. These will allow baseline carbon emissions from all travel to be calculated and targets set for reduction:
- Patient travel
- Staff travel to work and "business miles"
- Visitor travel

Fleet running on "green" fuels – which is not clear if it means biofuels, or cleaner diesel - is a distraction. The emphasis should be on more fuel efficient vehicles, and principally on reducing miles travelled.

Intra-trust transport mileage of notes, lab specimens, etc should also be recorded.

The greater promotion of tele and video-conferencing is also welcomed. Despite the wide availability of this technology, it is very little used – except by the Health Protection Agency – who frequently use it very effectively for outbreak and other incident meetings.

The tendency to large centralised multipurpose primary health buildings has meant that fewer people can walk to their local GP, so it has become the norm in many practices for most patients to arrive by car. All these cars require somewhere to park, which often means that the little bit of green space (carbon sequestration) is given over to tarmac (which doesn't absorb the extra rainfall which climate change is predicted to bring about in this country). There needs to be a trade-off between location and range of services offered. Moving care "out to the community" often means relocating a service which was formerly in the hospital to a clinic based in a particular neighbourhood, rather than to several clinics dotted about the area to reduce the need to travel. The only thing this changes is the location. And in all likelihood to a location less well served by public transport than the hospital. So the proposed measure to quantify the patient, visitor and staff travel mode is to be welcomed, but I suspect the skills to quantify are not out there, and I would suggest that a "virtual" specialised unit be set up to do this, staffed by people with the appropriate expertise.

4   What further measures?

An absolutely essential area to address is **travel expense** reimbursement. I was very disappointed to see that when the Agenda for Change new travel rates came out last year, they had not changed the structure from the old Whitley Council terms and conditions. So within the NHS we continue to reward greater production of carbon by paying more for engine size > 1500cc. This is a perverse incentive. A further practice I have witnessed is that of staff making pointless journeys just to "get their mileage up". The travel reimbursements are seen as a perk. Rather should we provide reimbursement for those who use public transport or active travel modes. The bicycle rate is typically 20p per mile, about half that of the car rate, and of course journeys walked are not reimbursed at all.

A further area which is not within NHS control, but certainly within the Government's control, is public transport. The lamentable state of public transport in the borough of Wigan is one of the main reasons why 92% of PCT staff comes to work by car. Our colleagues who work in London benefit hugely from the investment which has been made in public transport in the last decade and also because the buses in London are **regulated**. A regular, reliable bus service, which is attractive, and well marketed, would increase bus patronage. A further issue is ticketing – in the borough of Wigan one must pay for each leg of the journey. The discounted tickets are operator specific – there are no "Oyster" cards in this borough. The fact that the public transport is so poor means that people are more likely to run a car,

even on a fairly low income – and therefore the marginal cost for each journey is lower than the public transport equivalent.

Car parking charges must cover the cost of providing and staffing the car park. If not the money destined for patient care is going to subsidise the unsustainable transport of those members of our society who can travel by car, over those who cannot because they can't afford to run a car, or are medically disqualified from driving, or otherwise unable to drive. Greater consideration needs to be made of "social needs transport" for getting those who are unable to use public transport to access healthcare. Staff parking charges could be related to carbon emission rating of the vehicle – but this would require a "smart card" system. A pilot project could be tried at one or two sites to test its practicability.

Reducing the need to travel is another area to be pursued. The feasibility of more office-base staff working from home should be explored. Telephone and on-line patient support is being explored in Ashton, Leigh & Wigan PCT. NHS Direct have been commissioned to receive calls and sign post services for the new community weight management service, and one of the options is a computer-based self directed programme. A similar on-line support for mental health problems has been operating for about 3 years. We are soon to launch the Met Office's Weather Watch for patients living with COPD - a telephone call provides a preventive service, without a health professional having to visit their home.

Procurement

5   Will the measures proposed help your NHS organisation reduce carbon emissions from procurement?

The measure will go some way to helping the PCT reduce its carbon footprint, but I suspect not far enough. In a PCT there are often no procurement professionals – I believe very few people would say that they undertake procurement. It is assumed that the acute Trusts and PASA "do" the procurement. And yet the PCT actually procures a great number of items, e.g. stationery, IT equipment, furniture, disposable cups, stirrers, drink cartridges, and increasingly disposable instruments.

An example, the PCT's community podiatry service serves a population of 300,000 and sees 90,000 patient a year. Nails are cut 54,000 times in one year. Because of the way the new guidance is being interpreted disposable nail nippers are used. This costs £250,000, extrapolating this for England = £40,000,000. But worse is the environmental cost:

- energy and raw materials for manufacture of instruments and packaging
- 1,000,000 kg stainless steel waste, treated as hazardous
- fossil fuels used and CO_2 generated in transporting the instruments, from Pakistan were they are manufactured.

This is a procurement issue, as a result of recent policy change.

6   What further measures, guidance, etc…?

PCTs "procure" health services from a wide range of providers, primary, secondary and tertiary, NHS and independent sector. There is great potential for commissioner to include **"social clauses" and "environmental clauses"** in contracts. It would be very helpful if some model clauses were available for incorporation in contracts.

The Department of Health and other government departments are very keen on **social enterprises**. These often are community-based, often use local people who have previously been excluded from the workforce, and tend to have environmental aims. Some consideration should be given to how the NHS may be able to support local social enterprises, which would be more than the social and environmental

clauses mentioned above. Perhaps giving them guaranteed contracts, or seconding NHS staff to ensure that the services or goods that they are supplying are up to standard.

Pharmaceuticals – prescribers "procure" medicines, dressings, appliances, nutritional supplements, etc. Medicines management professionals in PCTs may have some powers of persuasion, but little control over this. What control they exert is around reducing the ever-increasing cost of prescribing, considerations of the sustainability of the products themselves is not even on the radar. Not strictly speaking a carbon issue, but some pharmaceuticals can include the exploitation of endangered species, e.g. in the manufacture of Taxol. The impacts of pharmaceuticals – manufacture, transport, disposal are not quantified, but likely to be significant to the overall NHS carbon footprint. There are no **"carbon scores"** between products. It would be very interesting to see how clinicians react to for instance, anti-hypertensive A which produces a net drop in systolic blood pressure of 10mmHg ands emits 1kg of CO_2 for each year of treatment vs anti-hypertensive B which produces a 6 mmHg drop but only causes 500g of CO_2 each year.

Many of the ways in which the large pharmaceutical companies operate, clocking up thousands, if not millions of "air miles" is totally unnecessary in the light of modern technology. It would seem a relatively straightforward thing to use our huge customer base to put pressure on the pharmaceutical firms to desist from this practice.

Manufacturers of nutritional supplements put a lot of pressure on nurse prescribers and GPs who have patients in nursing homes to prescribe the supplements, which of course suits the nursing home owners, as it saves them the expense of sourcing and preparing adequate nutritious food, and preparing it in a way attractive to their patients who may have little appetite, and/ or difficulty eating the standard fare. It is recommended that discussions be held with the Commission for Social Care Inspection (CSCI) or the successor body to see what pressure could be brought to bear to make the homes source fresh local food

Waste

7   Will the proposed measures help your NHS organisation reduce carbon emissions from waste?

The proposed targets are excellent, but need to be made mandatory. In addition it needs to be understood that every organisation, not just acute trusts need to drive down the waste produced. For PCTs this includes working with independent contractors to help them reduce waste produced.

8   What further measures, guidance…?

There needs to be a strong push from the centre that disposable cups are out. It's a very poor substitute to recycle plastic cups – much better to wash and reuse crockery. Very strong guidance should go out to dissuade trusts from buying "disposable" cubicle curtains which I have seen advertised as an infection control measure. There is more of a culture of not bothering to clean items, but to throw them out and buy new. Another example I have seen is the slide sheets used to manoeuvre patients around in bed. I was told that these were single patient use. Of course there has been an improvement of the cleanliness of hospitals in recent years. There is much to be said for having permanent well trained and motivated cleaners on each ward or department, and having clear processes for decontaminating equipment, which in many cases is simple washing in soap and water and leaving to dry. Such staff can have it incorporated into their job to empty the various recycle waste streams into the appropriate receptacles. If office waste were sufficiently segregated, there would be little need to have a bin in every office by every desk, so the net work should not be greater.

There is much that could be gained from an objective assessment of the risk of infection from various object and processes. Such risk assessment should be carried out by qualified scientists, and this should inform Department of Health policy. See the example of the disposable instruments used in

podiatry under procurement – this is also the case with most instruments used in primary care, e.g. minor surgery sets, vaginal speculae.

Wasteful use of resources can occur if the right things are not packaged, e.g. if no sterile cotton wool balls are available, a dressing pack must be opened for its cotton wool – and the rest of the pack is simply discarded. This is related to procurement, but is also about custom and practice.

This brings me to the point about **processes** as well as materials.
For instance it may be custom and practice to change one sheet per day, whether it is soiled or not. The individual professions should be encouraged to review their practices and explore the ways they can identify to use less energy and produce less waste. This should be encouraged through the Royal Colleges, and other staff organisations.

Other

Prioritisation within health also has great potential to affect its carbon footprint. Costs are assigned to cost centres, so for instance the catering department will have budget within which it has to purchase and prepare food. Buying local vegetables is desirable, but will often be more expensive and require more staff to prepare them (this has been found in schools which have increased the nutritional quality of the food served). Organisations will have to prioritise carbon reduction, which won't be easy when there are so many other priorities.

I have illustrated this point in the table below:

Issue	Reduces carbon	Increases carbon
Care of very ill housebound person	Carer provides "low tech" hands on care	Assistive technology Some pharmaceuticals
Obesity	Policy and infrastructure support for walking and cycling	Care of person with diabetes, bariatric surgery, etc, etc
Provision of drinks for visitors, patients and staff	Real crockery and cutlery, washed by a person with aid of dishwasher.	Vending machines, disposable cups
Vegetables	Locally-grown, and seasonal. Used fresh to preserve vitamin content.	Buying in from sources further afield, esp. if air transport involved. Frozen food.

The carbon reduction options often produce more local jobs. Of course this makes it more expensive, as cheap labour from abroad is not used. It also uses revenue rather than capital.