

Sustainability: Homeopathy's Emerging Strength by Researcher, Author and Homeopath Dr Delny Britton PhD RS Hom

[Summary] Whilst a key technological driver across a wide range of industries, the principle of sustainability has yet to be embraced fully by mainstream medicine, one of the biggest businesses on the planet. In this piece we'll examine the healthcare system in terms of its economic, social and environmental sustainability and discover why it cannot continue along its present path. Big challenges and changes lie ahead, and with them the opportunity for homeopathy to play a significant role in healthcare systems of the future.



After years of intensifying efforts by various groups to discredit homeopathy and hamstring practising homeopaths you might be forgiven for thinking homeopathy's days are, if not numbered, then at least reduced to ongoing, demoralising battles to keep the profession alive. Already relegated to the sidelines by the emergence in the 20th century of 'mainstream' medicine, the long term future of homeopathy might now appear even more uncertain. But is it? In this piece I'd like to explain why the reverse is more likely to be true, and why it is not homeopathy but mainstream medicine that faces the most foreboding challenges in the years ahead.

Sustainability – a brief overview

Most people are now familiar with the term 'sustainability', originally used in an ecological context to describe the diversity and productivity of biological systems over time and their capacity to endure. Today sustainability broadly means taking the long-term view of how our actions affect future generations. It means creating an economic system that provides for quality of life whilst ensuring we don't pollute the environment or use up resources faster than the planet can replenish or re-stock them. It is now clear that human activity, especially in the last 100 years, is threatening the health of the environment and posing risks of unprecedented magnitude to future generations. Although we have woken up to the situation rather late the agenda for change has nevertheless arrived and our laws and corporate obligations are starting to reflect this.

Large organisations are becoming more and more aware that sustainability issues have to be considered within the context of doing business, and sustainability is gradually becoming as important a part of annual reporting as financial data. Compliance with regulatory requirements (the Climate Change Act for example) remains the most significant driver of business sustainability, although other factors - such as improving internal processes, appealing to customers' changing values and demonstrating that the organisation is a good corporate citizen - are becoming increasingly important. Most large companies have dedicated teams working hard to make their organisation more sustainable. The triple bottom line (TBL) reporting concept, which considers an organization's social, environmental

and economic impacts and performance (People, Planet, Profit), is one of the most important tools they use to demonstrate their strategies for sustainable growth.

Box: Sustainability's Triple Bottom Line¹

People The cohesion of society and its ability to work towards common goals must be maintained. Individual needs, such as those for health and well-being, nutrition, shelter, education and cultural expression should be met.

Planet The extraction of non-renewable resources should be minimised and not exceed agreed minimum strategic levels. Extraction of renewable resources should not exceed the rate at which they are renewed, and the absorptive capacity of the environment to assimilate wastes should not be exceeded.

Profit Development which moves towards social and environmental sustainability should be financially feasible.

Although now increasingly in evidence across other sectors, the TBL reporting concept has not been widely applied to healthcare. I undertook this exercise in preparation for a sustainability conference² and share some of the findings with you here. Let's start by considering the healthcare system's economic sustainability.

The economic picture

Healthcare spending in the UK, as in all other developed countries, has been growing unchecked for decades. As a proportion of GDP it has risen from 3.5% in 1948 (when the service was instated) to 8.3% today³, and is predicted to rise above 13% by 2020⁴. We currently spend over £100 billion annually on the NHS in England alone. Such levels of spending have contributed significantly to escalating national debt, and Britain is one of several G7 countries warned by the IMF to curb spending on healthcare or risk dire economic consequences⁵.

Despite such high levels of spending, a growing funding gap exists between what the NHS needs and what it might get. A conservative estimate stands at around £20 billion by 2015, which the government is nervously hoping can be made up by improved productivity and efficiency within the service, but some economic experts believe the real figure may be closer to £30 billion⁶.

Healthcare costs are being driven up by a toxic combination of increasingly expensive medical technologies, an aging population and a rising tide of preventable lifestyle illnesses. Capital and operational costs of diagnostic devices such as computed tomography (CT) scanners and magnetic resonance imaging (MRI) units are high, and the increasing number of scans performed each year means that overall expenditure has risen dramatically. In the US medical imaging is now a \$100-billion-a-year industry⁷, and other developed countries are following a similar growth trajectory.

The trend is the same for pharmaceuticals, with both the volume of drugs prescribed (or bought over the counter) and their total cost increasing exponentially worldwide. The NHS now spends around £30 million a day on drugs⁸. In 2008 more than 50 million prescriptions were written for cholesterol-reducing statins and 36 million for anti-depressants. UK sales in 2007 of the painkiller Anadin totalled nearly 27 million packs, a number which - according to its maker, Wyeth Healthcare - would reach over 56 times the height of Mount Everest if stacked on top of each other⁹.

The social perspective

How healthy are we as a result of all this expenditure and all these drugs? Sadly, spending more on our healthcare doesn't necessarily guarantee a longer life, and it doesn't guarantee a healthier one either. People living in the UK's poorest neighbourhoods not only die earlier than those living in affluent areas but can expect to spend far more of their shorter lives (an average of 17 years more) in ill health¹⁰. Apart from the obvious moral implications of such inequalities, the financial implications are serious. NHS costs associated with inequality are now well in excess of £5.5 billion a year according to the 2010 Marmot Review of Health Inequalities, and will rise markedly in future if no action is taken. Obesity is of particular concern as it significantly raises the risk of heart disease, diabetes and premature death.

The Department of Health has responded to the health inequality gap by recommending GPs give out more prescriptions for drugs to control blood pressure and cholesterol levels¹⁰ (a move no doubt intended to keep the health system solvent in the short term). Not surprisingly this 'sticking plaster' approach to health has been roundly criticized by some public health experts, as has the government's decision to ring-fence spending on the NHS at the expense of other sectors such as housing, transport and education – all structural determinants of health⁶. Drugs mask the need to address the root causes of health inequalities and hence prevent us from achieving long-term and sustainable solutions to spiralling levels of ill health. What's more, they frequently lead to health problems of a different kind.

As homeopaths we will all have seen patients suffering from the detrimental effects of conventional drugs. On a national scale the statistics are shocking: more than 250,000 people are admitted to UK hospitals each year suffering from adverse drug reactions (ADRs) and around 10,000 actually die from this cause, according to a 2004 study published in the BMJ¹¹. ADRs are thought to cost the NHS £2 billion per year⁸ (at any one time around seven 800-bed hospitals are occupied by patients with ADRs) and if deaths from hospital acquired infections and surgical and medical errors are added to the equation, the toll (and cost) is even higher.

The ultimate irony is that despite their potential to cause serious harm due to toxicity or misuse, the vast majority of drugs (around 90%) are thought to work in just 30-50% of people according to the vice president of genetics at Glaxo SmithKline, Britain's biggest drug company¹².

Environmental concerns

Pharmaceutical pollution could be described as a 21st century catastrophe, and nowhere is it more publicly visible than in developing countries like India and China where cheap drugs are produced for the massive Western markets of the US and Europe. Its effects have been described as 'Bhopal in slow motion' by some observers¹³.

Swedish researchers working in Hyderabad found high levels of 21 different active pharmaceutical ingredients in 'treated' effluent leaving one waste and sewerage treatment facility. The effluent, laced with antidepressants, anti-hypertensives, antihistamines and antibiotics, discharged into the local river system. Around 45 kg of the antibiotic ciprofloxacin was discharged in the course of one day – equivalent to five times the daily consumption of the drug in Sweden¹⁴. (I leave you to ponder the implications of combining high concentrations of antibiotics with pathogen-filled sewerage - and the future ability of

ciprofloxacin to combat life-threatening infections.) Pharmaceutical contaminants were also detected in village wells in the area and were thought to be the cause of livestock deaths and developmental abnormalities in fish and other aquatic organisms.

Away from such manufacturing centres, pharmaceuticals are now a widespread source of chemical pollution and have infiltrated aquatic ecosystems around the globe. Trace amounts of numerous different human and veterinary medicines can now be detected as far afield as the Arctic, while drinking water in major cities around the world is contaminated by low concentrations of sex hormones, antibiotics and antidepressants - all of which have the potential to interfere with complex biological functions. All bioactive chemicals that are ingested or applied to the skin (painkillers, antibiotics, chemotherapeutic agents, hormones *etc*) ultimately enter the water system, either through lavatories or through bathing and showering. Currently there are no municipal sewage treatment plants in the UK capable of removing pharmaceutical compounds or other unregulated contaminants from wastewater.

Less visible are the impacts associated with the health sector's massive carbon footprint. The NHS produces 21 million tonnes of CO₂ each year in England alone, making it the largest public sector contributor to global warming and climate change¹⁵. (There is a bitter irony in this statistic when you consider the potentially devastating health consequences of climate change - for example increases in skin cancer and cases of food poisoning and water-borne diseases as well as deaths from heatstroke, air pollution, forest fires and flooding.)

The Climate Change Act of 2008 (CCA) requires the UK to reduce its total carbon emissions by 34% (compared to 1990 levels) by 2020 and a massive 80% by 2050. The CCA introduced a new power for the Secretary of State to direct 'reporting authorities' (organisations with functions of a public nature) to prepare reports showing how their efforts to reduce emissions to target levels are being monitored and managed.

Whilst the NHS's Sustainable Development Unit (SDU) for England is working exceptionally hard to reduce the service's CO₂ emissions and make it more sustainable, it is questionable whether the emission reductions required by the CCA can be achieved, particularly as many factors (more buildings, increased use of drugs and energy-intensive technology, rising levels of chronic illness *etc*) are currently driving up the NHS's greenhouse gas output.

Peak oil

The combined stresses on our economically, socially and environmentally unsustainable healthcare system are now enormous. Ultimately it is the system's massive use of (and dependence on) oil that could prove the nail in the coffin. Peak Oil – the 'Hydrocarbon Twin' to Climate Change¹⁶ - is the other greatest challenge facing humanity at the beginning of the 21st century. It is the point in time when the global production of oil reaches its maximum, after which the rate of production begins a permanent decline. Once the peak is reached the gap between supply and demand begins to steadily widen and the price of oil accordingly starts to rise sharply.

In 2007 the last British government maintained the world's oil and gas resources were 'sufficient to sustain economic growth for the foreseeable future'¹⁷, yet information released last year under the Freedom of Information Act shows that it secretly spent six months assessing the likely impacts of declining global oil supplies on economic prosperity and security¹⁸. The conclusions reached were not comforting.

Optimistic forecasters currently maintain the global decline will begin in 2020 or slightly later, yet some experts believe that we have already passed the peak (see for example the interview with Dr Fatih Birol, chief economist for the International Energy Agency¹⁹).

Whether now or in eight year's time, the short-lived Petroleum Age appears to be coming to an end and for a society utterly dependent on oil this means enormous changes in the coming decades. Oil shortages will reduce the prospects for growth in both the developing and developed worlds; it will affect what people eat, how they travel, the costs of all raw materials and products made from them, employment, the value of money, perhaps even the value of life itself.

Box: Some key indications that we are close to the peak^{16,20}

- World oil production plateaued in 2005 despite a very high price environment.
- Discoveries have fallen since their peak in 1965 & the average size of newly discovered fields is falling too.
- As the trend in discoveries continues to fall, large oil companies are buying up smaller ones in order to sustain their reserves and maintain share prices.
- Some oil companies are buying back their shares and appear to be planning for their own contraction.
- Oil from tar sands, a vastly inferior source (and with serious environmental impacts), is increasingly being expected to make up the shortfall as conventional oil production begins to decline.
- China & India are stocking up on oil reserves. Generally, industrialized nations commit to using their reserves only during emergencies.

Western mainstream medicine proliferated in the 20th century due to an abundant supply of cheap oil. From direct content such as drugs, tubing, catheters, syringes, gloves, sterile (plastic) packaging and high-tech equipment like CT and MRI scanners to transport of food, medical supplies, linen, staff and patients (both regular and emergency services) it is now dependent on it for its continued functioning and development. Oil has permitted complexity to develop within the healthcare system - more procedures, more specializations – and society in turn has come to expect a linear expansion of this social and technological complexity. But as oil supplies and the economies dependent upon them contract, and the commodity becomes increasingly expensive, the range of healthcare services available will inevitably shrink.

Box: 'No matter what happens, this is the century in which we must learn to live without fossil fuels.' David Goodstein. *Out of Gas* (2004).

The challenges of meeting local healthcare needs in a post-peak scenario – with possible limited access to medicines, transport and energy sources – are huge. The impacts on the current system will depend on the rapidity of oil scarcity and the amount of preparation for the event, but short term effects are likely to include decreased and unequal access to services as well as rationing. Expectations will have to change radically which will prove very difficult for many to adjust to, and care givers and decision makers will face tough challenges year by year. In the longer term a more informal, sustainable and community-based healthcare system will need to evolve that encourages greater personal responsibility for health, emphasises the structural determinants of health (housing, food, education, employment *etc*) and makes extensive use of low- and zero-carbon healing modalities.

Homeopathy: a sustainable asset

Viewed through the lens of sustainability the value of homeopathy in healthcare systems of the future is obvious. Homeopathy has a very small carbon footprint; it is resource efficient, inexpensive, non-polluting and without harmful side effects. Potentizer machines for producing higher dilutions save on bottles while standardizing the production of each remedy, but such potencies could also be made in the community setting (albeit slowly) by hand²¹.

A population skilled in the basics of homeopathic prescribing for acute conditions would become more resilient in the face of supply shortages of drugs and services. The specialist knowledge of fully trained homeopaths would be necessary for more complicated and chronic conditions (infections, wounds, depression, asthma *etc*), allowing limited energy resources to be directed to mainstream A&E services and other areas in which mainstream medicine is most valuable.

Transition Town groups - communities working to build resilience in response to peak oil, climate change and economic instability - appear to view herbalism as the most obvious low-carbon, post-peak successor to mainstream drugs and treatments. While there will be a need for all such tried and trusted therapies, the impressive sustainability credentials of homeopathy and its effectiveness in managing a broad range of conditions warrant dynamic promotion. If your town has signed up to the Transition Initiative consider joining the group to put the case for homeopathy.

Other sectors (transport, housing, manufacturing *etc*) are beginning to think innovatively in terms of renewable and sustainable technologies yet the healthcare sector seems resistant to the need to explore low- and zero-carbon healing modalities in preparation for a powered-down future. As far as homeopathy is concerned there is still the hurdle of acceptance to overcome: clinicians and PCT managers hold fast to the belief that insufficient evidence exists for its effectiveness. This argument is becoming increasingly untenable, however, particularly after the publication in November last year of an English translation of the Swiss Health Technology Assessment report on homeopathy. The report exhaustively reviews the scientific literature in homeopathy and concludes that homeopathic medicines are both effective and cost-effective²². A recently announced £1.8 million EU funded study into whether homeopathic treatment can reduce the use of antibiotics in livestock farming is likely to have further significant implications for the healthcare and pharmaceutical industries.

If the predictions are right and oil prices begin to soar within the next decade, many heads will need to be pulled out of the sand to face the reality of an impending post-petroleum world. For the healthcare sector business as usual will not be an option: climate change says we *should* change: peak oil means we *must* change. The medical profession urgently needs to assess sustainable options, whilst homeopaths should perhaps take a break from defending their therapy and acquaint themselves with one of its great strengths.

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