



# GO FIGURE: MAKING THE ECONOMIC CASE FOR HOMEOPATHY

Report prepared for the Faculty of Homeopathy

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**Viewforth Consulting Ltd**

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## Preface

The idea for this study arose from a discussion with the Chief Executive to the Faculty of Homeopathy about research that Viewforth Consulting has carried out in analysing the economic and social impact of higher education, including our work on exploring new ways to assess the social value generated by universities. The discussion was based around how the higher education sector sought and used evidence to support the case for public funding and the methodologies that currently exist for assessment of benefits, including those that go beyond purely financial benefit, extending to broader economic and social wellbeing.

We understood that there was some degree of controversy over whether homeopathy should be provided on the NHS. Hence the idea underpinning this study was to explore the application of a methodologically valid framework for assessing broader economic benefits arising from use of homeopathy, using recognised approaches, techniques and language that are used in other sectors making a case for public funding support. Such a framework would be applicable to any kind of treatment, not only homeopathy, and would be neutral in that it would not be making a case 'for' or 'against' but laying out the conceptual framework within which valid points could be made and evidence assessed. The Faculty of Homeopathy itself, while it commissioned the study, would not have any specific input or seek to influence its development. This struck us as an intellectually interesting piece of work and we proceeded on that basis.

In the course of the study researching the issues surrounding homeopathy and its public funding, we were somewhat taken aback to discover just how heated the arguments about homeopathy have become, to a surprising degree. There has been a focus almost exclusively on the evidence for scientific efficacy and the validity or lack of validity of a wide range of trials and studies. The discussion (even within the context of a serious House of Commons Science and Technology Committee Inquiry) has seemed at times to degenerate into little more than 'soundbites' or 'name-calling' with even respected and educated individuals resorting to intemperate language ("witchcraft", "quackery") to describe things with which they disagree.

Consequently it seems that considerable heat and very little light has been generated surrounding a more fundamental issue of interest to the public at large - whether or not there are benefits to society from homeopathy and hence whether or not public money should be spent on supporting homeopathy. This paper seeks to explore that issue further and to take a different perspective on the issues to see if light can be shed into what has become an increasingly gloomy corner.

Ursula Kelly

## Introduction

This study was commissioned by the Faculty of Homeopathy in Summer 2016. The purpose of this study was to explore the broader economic and social issues involved in the provision of public funding support in the UK for homeopathy. The study proposed to take a new perspective on the debate for and against public funding support by placing homeopathy within a broader economic and social valuation framework that is compatible with current HM Treasury guidelines for evaluation of public investments. The approach to be adopted draws on the fundamental theory of welfare economics and applies recognised economic and social cost-benefit analysis techniques to impute broader value. The study authors have previously applied this approach to assessment of broader benefits and economic value delivered by universities<sup>1</sup>. The study authors themselves are 'neutral' towards homeopathy, i.e. they do not have, or profess to have, any particular view or stance towards or against the use or practice of homeopathy *per se*, but are rather treating homeopathy in the same way that any particular treatment or therapy could be treated in consideration of whether there is evidence for public benefit and hence an arguable case for public funding support.

## Homeopathy in perspective

### What is Homeopathy?

What is Homeopathy? Homeopathy is a form of complementary or alternative medicine (CAM). The House of Commons Science and Technology Committee have described homeopathy as:

*"a 200 –year old system of medicine that seeks to treat patients with highly diluted substances that are administered orally. Homeopathy is based on two principles: "like-cures-like" whereby a substance that causes a symptom is used in diluted form to treat the same symptoms in illness and, "ultra-dilution" whereby the more dilute a substance the more powerful it is (this is aided by a specific method of shaking the solutions , termed "succussion"). It is claimed that homeopathy works by stimulating the body's self-healing mechanisms"*<sup>2</sup>.

The origins of homeopathy have been attributed to principles espoused by Hippocrates and it was created into a system of medicine in the 19<sup>th</sup> Century by a German physician Samuel Hahnemann. It is used widely across Europe and it has been estimated that in the course of a year, approximately 10% of people in the UK use some form of homeopathic remedy or have consulted a homeopath<sup>3</sup>.

Homeopathy is most commonly used in the UK for a range of conditions that may not have responded to conventional treatments including: *"Eczema, depression, anxiety, cough, menopausal symptoms, chronic fatigue syndrome, catarrh, osteoarthritis, irritable bowel syndrome, hay fever,*

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<sup>1</sup> For example; Kelly, U. et al. (2005). *Towards the estimation of the economic value of the outputs of Scottish Higher Education Institutions (HEIs): Report to the Scottish Funding Council*. Glasgow: University of Strathclyde; Kelly, U. and McNicoll, I. (2011). *Through a Glass, darkly: Measuring the Social Value of Universities*. Bristol: NCCPE. Available from:

[https://www.publicengagement.ac.uk/sites/default/files/publication/80096\\_nccpe\\_social\\_value\\_report.pdf](https://www.publicengagement.ac.uk/sites/default/files/publication/80096_nccpe_social_value_report.pdf) as well as many Individual institutional studies high profile projects carried out for the University of Manchester, University College Dublin and others

<sup>2</sup> Science and Technology Committee, *Evidence Check 2: Homeopathy, 4th Report*, February 2010, HC 45 2009-10, para 9.

<sup>3</sup> Professor Kent Woods, Chief Executive , Medicines and Healthcare Products Regulatory Agency (MHRA) in Evidence given to the House of Commons Science and Technology Committee Ev 65 Q182

*upper respiratory tract infection, rheumatoid arthritis, asthma, multiple sclerosis, allergy, fibromyalgia, migraine, Crohn's disease, premenstrual syndrome, chronic rhinitis, headache, vitiligo.*"<sup>4</sup>

### Regulation of Homeopathy

There is no legal regulation covering all homeopathic practitioners however there are a number of professional bodies such as the Faculty of Homeopathy which is the recognised registering body for statutorily regulated healthcare professionals who integrate homeopathy into their practice. The Faculty also delivers national and international training courses in homeopathy for doctors, dentists, pharmacists, nurses, vets and other healthcare professionals. Homeopathic remedies on sale in the UK are regulated for safety purposes by the Medicines and Healthcare Products Regulatory Agency (MHRA), which includes regulating the labelling on products and the claims that are permitted to be made.

### Current position on funding in the NHS

Access to homeopathic treatment has been available on the NHS since its foundation in 1948. However access to NHS –funded homeopathy is not uniform across the UK, but is a matter of devolved decision-making by each individual Primary Care Trust or Health Board. The Department of Health, in its evidence to the House of Commons Science and Technology Committee 2010 'Evidence Check' of Homeopathy<sup>5</sup>, stated that it does not have a formal view or position on homeopathy.

*"Homeopathy is a controversial subject and one on which the Department of Health receives correspondence both for and against in equal volume. The Department does not maintain a position on any complementary or alternative treatments, leaving decisions on their use by the National Health Service, to the National Health Service...The Government expects local providers and practitioners to take into account issues to do with safety, clinical and cost-effectiveness, and the availability of suitably regulated/qualified practitioners..."* (Ev 61 Para 8).

Decisions on expenditure on homeopathy are devolved to the individual Primary Care Trusts (in England) and to equivalent bodies in other parts of the UK. There are currently around 400 GPs in the UK who include homeopathy in their practice<sup>6</sup>.

There were originally a number of Homeopathic Hospitals (e.g. in London, Bristol and Glasgow); some of these have now been closed (e.g. Liverpool) and others now form part of more general 'Centres of Integrative Care' giving access to a range of alternative and complementary treatments, including homeopathy. The main examples are the Royal London Hospital of Integrative Care and the Glasgow Centre for Integrative Care<sup>7</sup> (which is now part of Glasgow Gartnavel Hospital.) NHS; services formerly offered by the Bristol Homeopathic Hospital were subsequently delivered through contract with the non-profit-making Portland Centre for Integrative Care<sup>8</sup>, which also offers private treatment. In Liverpool NHS services have been available through referral to the Liverpool Medical

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<sup>4</sup> British Homeopathic Association (BHA) Website accessed <http://www.britishhomeopathic.org/what-is-homeopathy/conditions-homeopathy-is-used-for/helping-people/>

<sup>5</sup> Science and Technology Committee, *Evidence Check 2: Homeopathy*, 4th Report, February 2010, HC 45 2009-10, para 9.

<sup>6</sup> British Homeopathic Association (BHA) - <http://www.britishhomeopathic.org/>

<sup>7</sup> <http://www.nhs.gov.uk/patients-and-visitors/main-hospital-sites/gartnavel-campus/nhs-centre-for-integrative-care/>

<sup>8</sup> <http://portlandcentrehealthcare.co.uk/service/nhs-homeopathy-bristol/>

Homeopathy Service, which is also a separate non-profit-making organisation<sup>9</sup> providing NHS services through contract and also offering private treatment<sup>10</sup>.

Because of the devolved nature of public spending decisions on homeopathy, there is no easily accessible UK-wide figure on the amount spent by the public sector each year on homeopathy. The British Homeopathic Association estimates £4m per year. The Good Thinking Society has estimated a total across the UK of between £3m - £5m in 2013/14, based on survey of all health authorities across the UK<sup>11</sup>. In the same year (2013/14) total Government (i.e. public) expenditure on Health care came to £142.6 billion (ONS 2015)<sup>12</sup>. Therefore taking the larger figure of £5m as estimated by the Good Thinking Society, this equates to 0.0035% of all public health expenditure.

Although the amount of public funding for homeopathy can be seen to be a relatively small proportion of overall health spend, the provision of *any* public funding support for homeopathy has attracted vocal criticism in recent years, with active lobby groups (such as The Good Thinking Society) campaigning against any level of provision through the National Health Service

## Homeopathy and the House of Commons Science and Technology Inquiry

The 2010 UK House of Commons Science and Technology Review (Evidence Check 2: Homeopathy) is the most recent UK-wide review of public policy towards homeopathy in the UK and the arguments presented within the review remain prevalent and influential. The Committee's conclusions and recommendations (which ultimately recommended against NHS support) continue to be regularly cited as a reason for local health authorities to review their position on homeopathy provision and indeed as evidence they should discontinue provision<sup>13 14</sup>. The review was intended:

*“to determine whether scientific evidence supports government policies that allow the funding and provision of homeopathy through the NHS and the licensing of homeopathic products by the MHRA”.*

The Committee operated by taking a range of written and oral evidence from a number of government departments and Ministers, statutory and professional bodies including, for example, the Department of Health, the British Homeopathic Association, the Royal Pharmaceutical Society of Great Britain, the National Institute for Clinical Evidence (NICE), British Medical Association (BMA)

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<sup>9</sup> Liverpool Medical Homeopathy Service - <http://www.lmhs.co.uk/index.html>

<sup>10</sup> Following a legal challenge from the 'Good Thinking Society', Liverpool PCT carried out a review and public consultation on its contract. In June 2016 a decision was taken to cease funding for Homeopathic services.

<sup>11</sup> Good Thinking Society - <http://goodthinkingsociety.org/projects/nhs-homeopathy-legal-challenge/nhs-homeopathy-spending/>

<sup>12</sup> Office for National Statistics, (2016). *Statistical bulletin: UK Health Accounts: 2013-14*. <http://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthcaresystem/bulletins/ukhealthaccounts/2014>

<sup>13</sup> It should be pointed out that the Evidence Check recommendations were noted but not accepted by Government and have not formed any part of Central Government policy.

<sup>14</sup> There have been a number of subsequent reviews elsewhere e.g. the Australian Government review of natural therapies and within the UK a number of small scale consultations on Homeopathy provision within individual PCTs and Health Boards.

and the Medicines and Healthcare Products Regulatory Agency (MHRA)<sup>15</sup>. Individuals also made submissions.

### Summary of the case made to the Committee for and against Homeopathy

Focussing on the area of the report dealing with the provision of homeopathic services through the NHS, the main arguments presented against public support of homeopathy can be summarised as follows:

- The principles of 'Homeopathy' are nonsensical and have no basis in scientific theory;
- Only some random controlled clinical trials have shown positive results and these are regarded as flawed or too limited to be credible;
- Therefore there is insufficient scientific evidence for its efficacy as a treatment;
- The NHS should only support treatments that are scientifically proven;
- Whilst acknowledging some patients may report benefit from homeopathic treatment, the lack of scientific proof of efficacy means that any benefits arising from the use of homeopathy are purely due to a placebo effect;
- In principle it is wrong to prescribe placebos, because this is potentially damaging to a doctor-patient relationship (i.e. for it to work the doctor is deceiving the patient);
- Any provision at all (however minimal) by the NHS gives 'credence' to homeopathy and is interpreted by the public as meaning that homeopathy has a scientific basis;
- Any NHS money spent on homeopathy would therefore be better spent on other more evidence based therapies or treatments.

Those in favour of public funding support argued that:

- There *is* an evidence base for efficacy, with a number of clinical trials and studies finding Homeopathy to work better than placebos;
- That not knowing *how* homeopathy works does not invalidate these findings;
- That homeopathy has been found to be effective in practice, with evidence from a range of observational studies where the majority of those treated through NHS provision found benefit;<sup>16</sup>
- Homeopathy is often a 'last resort' for patients for whom conventional routes have been exhausted and for whom there are few alternatives available;
- Homeopathy is generally safe with few known side effects;
- There are issues of patient choice involved with a ban on provision, limiting patient choice;
- Homeopathy is relatively cheap and it could be saving NHS money (e.g. in terms of reduced need from the patients for additional or other interventions).

It is not the purpose of this study to evaluate the arguments for and against scientific efficacy, which appear to be a matter of conflicting opinion. Both proponents and opponents of homeopathy point to a range of research and studies to support their particular stance. In his evidence to the House of Commons Science and Technology Committee, Professor David Harper, Director General, Health

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<sup>15</sup> The full list and content of submissions available from Science and Technology Committee, *Evidence Check 2: Homeopathy, 4th Report*, February 2010, HC 45 2009-10, [Online].  
<http://www.publications.parliament.uk/pa/cm200910/cmselect/cmsctech/45/45.pdf>

<sup>16</sup> Such as an extensive longitudinal study of over 6,500 patients at the Bristol Homeopathic Hospital, which found that 70% of follow-up patients reported improved health

Improvement and Protection and Chief Scientist, Department of Health commented on the scientific evidence base:

*“One of the real difficulties that we face is that it is not so much a lack of research or a lack of randomised control trials; it is a lack of agreement between experts working in the field...”*

In the Committee’s final report, it concluded that there was not sufficient scientific evidence to support homeopathy and made firm recommendations that: *“the Government should stop allowing the public funding of homeopathy on the NHS”* (Para 110)<sup>17</sup>.

### Factors underlying the Committee’s conclusions

The Committee indicated its views that the most important elements of the evidence base took into account:

- Scientific plausibility;
- Evidence of Efficacy;
  - Randomised controlled trials
  - Meta-analyses and systematic reviews
- Evidence of Effectiveness;
- Evidence of Cost-Effectiveness.

The Committee firstly explored issues of scientific plausibility and considered issues of efficacy by taking evidence concerning a range of trials and reviews. However in terms of evidence of effectiveness and evidence of cost-effectiveness, the Committee could not fully evaluate these because:

#### *Effectiveness*

- a) The Committee had concluded that there was insufficient scientific evidence of efficacy and hence also concluded that any positive benefits reported by patients could only be due to a placebo effect. *“We proceed on the basis that homeopathy is not supported by evidence of efficacy and is therefore no more than a placebo treatment, albeit a popular one”* (Para. 79). This meant that evidence presented of patient satisfaction or patient health gains (from all of the observational studies and reports presented) could not be given much weight. *“We do not doubt that homeopathy makes some patients feel better. However patient satisfaction can occur through a placebo effect alone and therefore does not prove the efficacy of homeopathic interventions”* (Para. 82).

#### *Cost-effectiveness*

- b) Cost-effectiveness was acknowledged as an important issue in terms of expenditure of public money: *“What is important is how the costs and benefits of particular treatments stack up against each other”* (Para. 83). However the Committee concluded that: *“At a national level it is not possible to evaluate the cost-effectiveness of homeopathy as the cost has not been determined”* (Para 83)

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<sup>17</sup>It went further to say the Government should not allow patients to buy non-evidence –based treatments such as homeopathy with public money (e.g. in the case of personal health budgets – Para. 104), that *“placebos should not be routinely prescribed on the NHS “* (Para. 111). It also stated that it found it *“unacceptable that the MHRA to license placebo products... the MHRA should withdraw its discrete licensing schemes for homeopathic products”* (Para. 152).



Reference was made in the Final Report to an individual Primary Care Trust (NHS West Kent) as having conducted an extensive review on homeopathy and value for money which had “assessed the cost-effectiveness of homeopathy at a local level” and that the PCT subsequently decided against further commissioning of homeopathy. However it should be noted that the NHS West Kent PCT had *not* carried out a cost-effectiveness analysis as part of their review and this had not formed part of their decision making<sup>18</sup>.

#### Evidence of economic benefits and the role of NICE

Some of the evidence presented to the Inquiry suggested that there may possibly be economic benefits in terms of cost savings to the NHS. However the evidence presented in the main tended not to be generalizable and more anecdotal.

For instance, the Northern Ireland Homeopathic Association highlighted the need to take into account the wider social and economic context, drawing attention to a study commissioned by the Department of Health, Social Services and Public Safety (in Northern Ireland) which had not only documented health gains from Complementary and Alternative Medicines but had looked at *“the potential economic savings likely to accrue from a reduction in patent use of primary and other health care services, a reduction in prescribing levels and reduced absenteeism from work due to ill-health...”* (Ev 114 23(i)).

Many contributors highlighted that more economic evidence would be very helpful, with several looking to NICE for this.

*“There is a need for cost-effectiveness evaluation of homeopathy. There is almost none, at this stage, and the whole question about the cost and the impact of homeopathic consultation could be tested in appropriate studies.”* Dr Robert Mathie, Research Development Adviser, British Homeopathic Association (Ev 46 Q 128)

*“Homeopathic remedies should be reviewed by NICE if they are to be used within the NHS to ensure that they give value for money and to ensure that the funding of conventional medicine is not compromised by their use...the cost-benefit ratio for homeopathic interventions should be established...”* (Ev 3 2.04 Memorandum submitted by the Royal Pharmaceutical Society of Great Britain)

The British Medical Association stated that its members: *“would be supportive of a call in the Committee’s final report to request that NICE review and report on the cost effectiveness of homeopathic remedies and for NICE to recommend whether they should continue to be funded by the NHS”*<sup>19</sup>.

The issue was raised during the course of the House of Commons Inquiry as to why NICE had not so far evaluated and issued guidance on use of homeopathy in the NHS. The Department of Health explained:

*“NICE considers particular CAM therapies (where suitable evidence exists) alongside conventional treatments when developing clinical guidelines for specific conditions.... What NICE cannot produce, however, is blanket guidance in complementary medicine, which has been called for in the past...”* (Ev 64, paras 39 and 40).

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<sup>18</sup> The Evidence submitted to the Committee by the NHS West Kent PCT stated that: *“The financial value of homeopathy is small – c. £200,000 per annum, however since clinical effectiveness is not proven it is not possible to conduct a cost-effectiveness analysis”* (Ev 35, 2.3.1). The final decision by West Kent PCT was to discontinue provision of homeopathy because: *“homeopathy services are not a clinical priority when compared with the many competing priorities of the PCT”* (Ev 35, 6.1).

<sup>19</sup> Ev 194

In its own explanation to the Committee, NICE highlighted that as well as concentrating on specific treatments for specific conditions (and not on “*the use of ‘groups’ of therapies, whether complementary and alternative medicines or not*”<sup>20</sup>) it must prioritise its own resources for evaluation according to stated Government and national priorities for the NHS.

NICE indicated “*We have not been asked to, and have not turned down a request to evaluate CAM technologies*”.

The evidence given to the Committee by the Minister for Health made it clear the Government was not planning to ask NICE to carry out such an evaluation:

*“Firstly they have a large queue of drugs that they need to evaluate and there are greater priorities. Secondly there is a somewhat limited evidential base and before evaluating things NICE want to see an evidential base and for the reasons we have already discussed it is not there at the moment. They could decide to spend a lot of public money...establishing that evidential base but it is not a priority for them or for us” (Ev 75 Q 251).*

The issue at point here may possibly be that current levels of expenditure on homeopathy provision on the NHS are sufficiently low so as to make the costs of an extensive NICE evaluation disproportionate.

### The Government Response to the Committee

In the Government’s response to the report it made clear that it did not intend to act on the Committee’s recommendations on funding, rather stating:

*“our continued position on the use of homeopathy within the NHS is that the local NHS and clinicians, rather than Whitehall, are best placed to make decisions on what treatment is appropriate for their patients - including complementary or alternative treatments such as homeopathy - and provide accordingly for those treatments...Primary Care Trusts assess the needs of their populations and commission services, including homeopathic services, to best meet those needs within the available funding...Some PCTs, for example, choose to fund homeopathic services on an exceptional basis for certain individuals. It is not appropriate for the Department of Health to remove the right of PCTs to make these decisions on a case-by-case basis...”<sup>21</sup>.*

It also highlighted that whilst the Committee had “*a strong focus on efficacy as being one of the main criteria by which it would expect NHS decisions to be made*”, the Government also needed to take into account other issues relating to evidence, governance, legal and regulatory frameworks between the Government, NHS bodies as well as patient choice and the relationship between the clinician and patient. Additionally “*Given the geographical, socioeconomic and cultural diversity in England that involves a whole range of considerations including, but not limited to efficacy...*”.

## Current public debate and decisions on Homeopathy

Today, in 2016, overall public discussion and decision making about homeopathy appears to have remained stalled at the point of the 2010 House of Commons Inquiry. A number of more recent reviews and consultations at Health Board and PCT level have taken place, some as a result of legal challenges from organisations such as The Good Thinking Society, who actively campaign against

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<sup>20</sup> Ev 186

<sup>21</sup> Government Response to the Science and Technology Committee, *Evidence Check 2: Homeopathy, 4th Report*, February 2010, HC 45 2009-10, [Online].  
<http://www.publications.parliament.uk/pa/cm200910/cmselect/cmsctech/45/45.pdf>

NHS provision of homeopathy<sup>22</sup>. However the case against and for homeopathy in each of these reviews (which have typically included public consultation and consultation with health providers) remains much the same as those made to the House of Commons Inquiry with the final decisions continuing to be focussed predominantly around the issue of scientific efficacy which appears to carry more weight than other factors. Evidence of patient benefit or satisfaction tends to be discounted (for similar reasons as those given by the House of Commons Committee, viz. while it is agreed that some patients appear to derive benefit from the treatment, this is not evidence of efficacy and hence there can be no justification for funding). There does not appear to be any inclusion of economic evidence within the decision making process. A recent example is the review undertaken by NHS Lanarkshire.

### NHS Lanarkshire Review of Homeopathy Services

The NHS Lanarkshire Review of Homeopathy Services was undertaken in 2012-2014 to: “review the effectiveness of the services provided by the Centre for Integrative Care (formerly known as the Glasgow Homeopathic Hospital) to which NHS Lanarkshire referred patients. The Review included a review of the scientific literature of efficacy and an extensive consultation process with all Lanarkshire General Practitioners (GPs), a survey of a selected sample of patients attending the Homeopathic Clinics, together with a wider public consultation. Of 5954 respondents to the question “Should Lanarkshire refer patients to the Centre for Integrative Care (Glasgow Homeopathic Hospital)?” the overwhelming majority (80.6%) said yes. However respondents included a high proportion from outside Lanarkshire, which could suggest a very strong response bias (i.e. as a controversial issue, the survey attracted many of those with a more general interest in homeopathy, both for and against, rather than only the Lanarkshire public whom the decision would affect). However even if non-Lanarkshire respondents are disregarded, there was still an expressed preference for continued referrals, including among Lanarkshire Health Professionals.

	<b>YES</b>	<b>No</b>	<b>Undecided</b>	<b>Total</b>
<b>Lanarkshire Resident Service Users/former users</b>	230	33	2	265
<b>Lanarkshire Residents Non users/never users</b>	227	193	3	423
<b>Lanarkshire Health Professionals</b>	73	65	6	144
<b>Totals</b>	<b>530 (63.7%)</b>	<b>291 (35%)</b>	<b>11 (1.3%)</b>	<b>832</b>

Source: Report on Public Consultation Exercise, NHS Lanarkshire Review of Homeopathic Services

A majority of respondents were female (63%)<sup>23</sup> and evidence to the Board highlighted that the majority of referrals made by GPs were for older women (80% of referrals were for women and 75% of referrals were for people aged over 45).

<sup>22</sup> Including the most recent review in Liverpool (concluded June 2016). Another review in Bristol has been taking place and in Scotland a number of Health Boards (Highlands, Lothian and Lanarkshire) have decided to stop funding referrals to the Glasgow Centre for Integrative Care.

<sup>23</sup> Evidence to the Board highlighted that the majority of referrals made by GPs were for older women (80% of referrals were for women and 75% of referrals were for people aged over 45). Information was also gathered on ethnicity of referrals and respondents.

There were extensive additional text responses (5050 free text responses) giving reasons for and against the referral for homeopathy, including:

For:"

- Patient Choice;
- No side effects of remedies;
- Not needing to go to hospital;
- Homeopathy works;
- Cost effective.

Against:

- No basis in science;
- Waste of time and money;
- Homeopathy has never been proven to work;
- Homeopathy is "useless".

The Area Health Groups responding to the questionnaire specifically highlighted the need for economic evidence for informed decision making:

*"There are no financial costs provided regarding referrals in the consultation document. There are no financial costs provided for comparative services available via NHS Lanarkshire.... These comparators provide evidence-based interventions, which make it difficult to draw a fair comparison as to value for money...There were no clinical outcome measures provided regarding the CIS in the consultation document... Some concern was expressed that withdrawal of the CIS pathways may increase the burden on existing Psychological Services within NHS Lanarkshire..."* NHS Lanarkshire Psychological Services & the Area Psychological Services Forum.

*"Although we are not convinced of a scientific basis for continuing to fund homeopathic services, our advice is that in considering its decisions, NHSL should consider the possibility that resource utilisation in Lanarkshire may be greater than the direct saving from continuing to fund the service... Patients who presently attend the Glasgow Service may make more GP visits, A& E visits and more demand on pain and psychological services if the service in Glasgow is not available. A judgement on the net gain or loss should be considered..."* Area Clinical Forum & Allied Health Professional Advisory Committee.

However, as with the 2010 House of Commons Committee, the final conclusions of the Board did not include any economic rationale. In noting the response to the Consultation, the Board took the view that: *"the survey shows that homoeopathy is popular with patients and people. It does not answer the questions of the effectiveness of homoeopathy or other services offered by CIC"*<sup>24</sup>. In December 2014 the NHS Lanarkshire Board decided:

*"NHS Lanarkshire should cease new referrals of Lanarkshire residents to the CIC as of 31 March 2015 on the basis of the lack of clinical effectiveness evidence for homoeopathy, and other health interventions noted in this paper, delivered by the CIC"*<sup>25</sup>.

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<sup>24</sup> National Health Service (NHS) Lanarkshire Board Papers, 2014. 'Item 3: Homeopathy Services'. 9 December 2014 <http://www.nhslanarkshire.org.uk/boards/2014-board-papers/Pages/December.aspx>

<sup>25</sup> National Health Service (NHS) Lanarkshire Board Papers, 2014. 'Item 3: Homeopathy Services'. 9 December 2014 <http://www.nhslanarkshire.org.uk/boards/2014-board-papers/Pages/December.aspx>

## Considering economic and social value generated by Homeopathy – building an evidence base

### Existing economic evaluations of Homeopathy

There have been a number of studies which examined economic aspects of homeopathic treatments, with many focussing on trying to assess their cost-effectiveness. We found 2 systematic reviews of economic studies undertaken, one in 2012 (Herman et al.)<sup>26</sup>. Another in 2014 (Viksveen et al.). Both reviews found a number of studies which identified cost-savings and evidence of cost-effectiveness in particular cases. (Viksveen et al.)<sup>27</sup>. The first review (Herman et al.) did not solely cover homeopathy but included a wide range of complementary therapies. The second review (Viksveen et al.) focussed solely on homeopathy. In most cases the studies were looking at the evidence for cost-effectiveness of treatments for a specific ailment, rather than looking at homeopathy overall. Viksveen et al. concluded that the identified evidence of the costs and potential benefits of homeopathy “*seemed promising*” but noted that several studies had methodological weaknesses, commenting: “*It is not possible therefore to draw firm conclusions based on existing economic evaluations of homeopathy*”.

### The National Institute for Health and Care Excellence (NICE) approach to economic evaluation

The normal body for evaluating and making recommendations on the use of particular drugs or medical technologies within the NHS is The National Institute for Health and Care Excellence (NICE).

NICE was originally established in 1999 as the National Institute for Clinical Excellence. It has evolved into the National Institute for Health and Care Excellence, providing independent advice and guidance on treatments and technologies used in the NHS as well as now also providing public health guidance and is responsible for developing quality standards in social care.

It is a non-departmental public body (NDPB) with the Department of Health as its sponsor Department. NICE Guidance formally only covers England, although there are agreements for use of NICE products or guidance in Scotland, Wales and Northern Ireland. The cost-effectiveness of treatments and technologies is an important component of NICE evaluation and NICE has developed standardised methodologies for assessment. This includes using the measurement of ‘Quality Adjusted Life Years’ (QALYS) as a comprehensive indicator of health outcomes within an evaluation of cost-effectiveness. The use of QALYS enables comparisons of economic value to be made across different areas of health care and for different treatments or technologies. QALYS Seek to capture both quantity and health-related quality of life gained through use of a particular treatment. QALYS are calculated through analysis involving a standardised generic outcome questionnaire<sup>28</sup>.

There have also been concerted efforts within the UK to measure health outcomes from homeopathic treatment, going beyond simple measures of ‘patient satisfaction.

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<sup>26</sup> Herman, P.M. et al. (2012). Are complementary therapies and integrative care cost-effective?: A systematic review of economic evaluations. *British Medical Journal Open*. [Online]. 2(5), doi: 10.1136/bmjopen-2012-001046. However this study covered a wide range of complementary therapies and not solely homeopathy

<sup>27</sup> Viksveen, P., Dymitr, Z. and Simoens, S. (2014). Economic evaluations of homeopathy: A review. *European Journal of Health Economics*. [Online]. 15(2), doi: 10.1007/s10198-013-0462-7

<sup>28</sup> NICE ‘reference case’ prefers use of the EuroQol EQ-5D Health Questionnaire

Previous studies of homeopathy have used a health outcomes questionnaire such as the GGHOS<sup>29</sup>. The 2008 Five Hospitals study<sup>30</sup> piloted the common use across the 5 Homeopathic Hospitals of a common outcomes measure instrument (Outcome Related to Impact on Daily Living (ORIDL). However the reported health outcomes or health gains have not been incorporated into any economic assessments.

### Need for a different perspective on valuation of Homeopathy

The stalled debate in the UK makes it clear that without a change in how evaluation of the worth of homeopathy is undertaken and how the evidence is presented, any case for public funding of homeopathy is destined to fall at the hurdle of proving scientific efficacy. Clearer evidence of the benefits generated by homeopathy is needed and these benefits need to be evaluated and presented in ways that will be recognised as methodologically valid and will be accepted by Government and public funding bodies.

One potential way to do this is to ‘take a step back’ from the specifics of homeopathy and take a more ‘global’ view of how economic and social value is generated and can be measured. We explore how this might be possible with the application of an economic and social cost-benefit analysis framework, drawing on the fundamental theory of welfare economics and using methodologies and tools that are recognised by the Treasury.

### Recognised approaches to evaluating public policy and funding: The ‘Green Book’ and ‘Magenta Book’

The more extensively that any evaluation can be rooted in official data and use officially recognised techniques, the more likely a credible case can be constructed. Hence the framework we suggest is designed to be compatible with the approaches recommended in the HM Treasury Green Book. This is a best practice guide for all government central departments and agencies, which all departments are expected to use. It is a ‘handbook’ on economic appraisal and evaluation for project and programmes, with advice and guidance on technical approaches. The Magenta book is its ‘sister guide’ which focuses in more detail on approaches to programme and project evaluation.

The Green Book approach to economic valuation is based on fundamental applied ‘welfare economics’<sup>31</sup> and the principles of cost-benefit analysis. It gives recommendations and guidance on how economic, financial, social and environmental assessments can be made and combined. The Green Book is used across central government. It is an essential best practice reference for project and programme evaluation for any organisation in receipt of, or seeking, public funds as it gives clear guidance on the appropriate methodological approaches and degree of rigour expected when considering publicly funded projects. The Green Book approach to cost-benefit analysis is also fundamentally the same as that of the World Bank, International Monetary Fund and the OECD.

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<sup>29</sup> Developed by Glasgow Homeopathic Hospital

<sup>30</sup> Thompson, E.A., Mathie, R.T., Baitson, E.S. et al. (2008). Towards standard setting for patient-reported outcomes in the NHS homeopathic hospitals, *Homeopathy*. [Online]. 97(3), 114-121, University of Glasgow E-prints, Available: <http://eprints.gla.ac.uk/4837/1/48371.pdf>

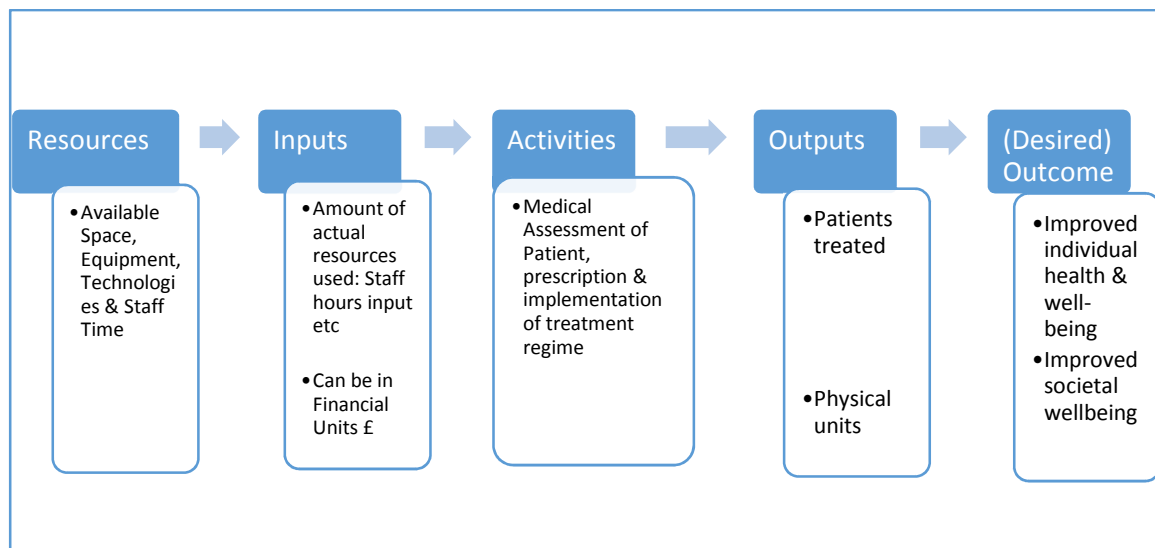
<sup>31</sup> Welfare economics is a ‘branch of economics that focuses on the optimal allocation of resources and goods and how this affects social welfare. Welfare economics analyses the total good or welfare that is achieved at a current state as well as how it is distributed’ (Investopedia n.d.)

There are a range of supplementary guidance books of additional relevance to particular Government Departments<sup>32</sup>. This includes the Supplementary Guidance: *NICE Guide to Methods for Technology Appraisal*. The NICE Guide is primarily intended for organisations e.g. Pharmaceutical Companies or Manufacturers considering submitting evidence on specific health products to the Technology Appraisal Programme of the Institute. The principles underlying the NICE Guidance are similar to those promulgated by the Green Book and includes the use of QALYS in assessments of health interventions. As we have earlier noted, evaluation of homeopathy is not currently a high priority for the Government or for NICE; however adhering to the principles of NICE methodologies where possible is likely to be helpful.

### Identifying the elements needed for economic analysis using an ‘Impact Map’

A key element of this approach to economic assessment process is the construction of an ‘impact map’. This is sometimes described a ‘logic model’ or ‘theory of change’ model. The impact map is a way to identify the different elements in a process, to identify ultimate objectives and to trace through the steps in the process towards achieving those objectives. It is most often used to map out a route for a project or programme as it helps to show the ‘pathway to impact’ – what resources will be used, to undertake which activities, to deliver what outputs, which will contribute to achieving the final outcomes.

#### A logic map for a health intervention



The impact map is fairly straightforward at a conceptual level. As it is typically used for project and programme planning a logic-mapping approach may potentially be well suited for analysis of a generic ‘group’ of therapies where the input costs tend to be associated with a broad programme (e.g. to fund a clinic offering a range of services) rather than for treatment of a specific single ailment. The framework can of course be used to think about a single ailment; however it could be argued that part of the difficulty that homeopathy appears to have faced in the ‘evidence of effectiveness’ stakes for public funding purposes is that it has been expected to provide extensive sets of evidence, with large cohorts of patients, for the results of each and every individual treatment of a wide range of ailments.

Homeopathy is a highly personalised system of medicine with over 3000 potential ingredients that could be used. Arguably in the real world, especially when NHS Homeopathy is operating on a

<sup>32</sup> The ‘Green Book’ - <https://www.gov.uk/government/collections/the-green-book-supplementary-guidance>

modest scale (the typical clinic may only have a handful of patients for any single condition in a year), it may never have enough critical mass to generate that kind of evidence. It may be more appropriate to examine it 'in the round', especially when one is looking at the broader health and social benefits associated with the therapy.

### Populating the impact map

Populating most of the elements of the logic map for a specific clinic or service would be relatively straightforward. Some elements (e.g. costs) may be in monetary units, some others (e.g. patient numbers or consultations) may be in physical units.

**Inputs** - The PCT or clinic itself should be able estimate the costs of provision.

**Activities**- These would simply be descriptors of the types of work undertaken

**Outputs** - Records are also likely to be normally kept on the outputs - numbers of patients treated or numbers of consultations delivered etc.

**Outcomes** are known to be more difficult to measure and particularly in finding a consistent way to do so. Previous studies of homeopathy have used a health outcomes questionnaire such as the GGHOS<sup>33</sup>. The 2008 Five Hospitals study<sup>34</sup> piloted the common use across the 5 Homeopathic Hospitals of a common outcomes measure instrument (Outcome Related to Impact on Daily Living (ORIDL)).

As ultimately the final desired outcomes of a health intervention (of any kind) is for improved health & well-being *of society* as a whole as well as the improved health and well-being of the individual, there are additional impacts beyond health related benefits that should also be considered. The mapping diagram below shows some of the possible elements.

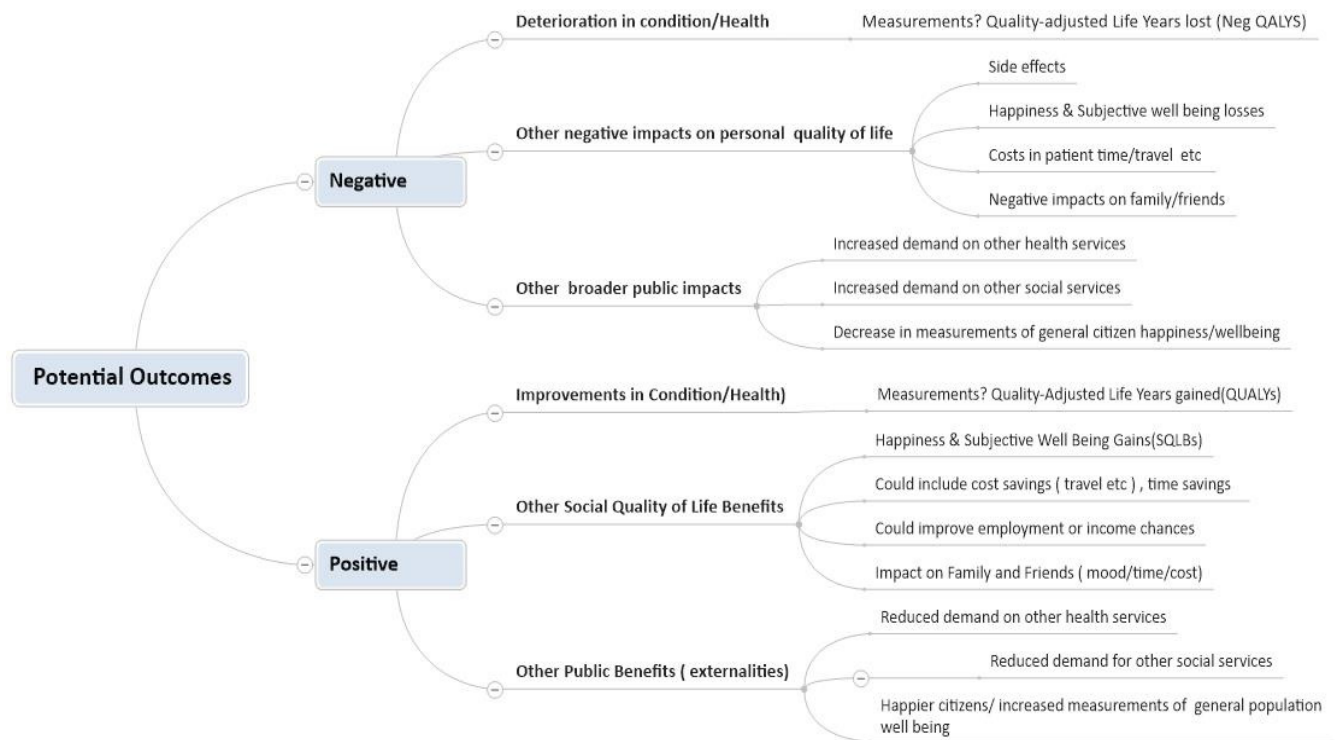
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<sup>33</sup> Developed by Glasgow Homeopathic Hospital

<sup>34</sup> Thompson, E.A., Mathie, R.T., Baitson, E.S. et al. (2008). Towards standard setting for patient-reported outcomes in the NHS homeopathic hospitals, *Homeopathy*. [Online]. 97(3), 114-121, University of Glasgow E-prints, Available: <http://eprints.gla.ac.uk/4837/1/48371.pdf>



## Additional outcomes to be considered (positive & negative)



Some of those additional factors that NICE take into consideration in its assessment of outcomes include:

*“lifestyles and the choices that matter to patients and carers (for example, impact on daily activities, work, hobbies, social life, relationships) – the psychological health of patients/carers (for example, mood, anxiety, distress) – the emotional health of patients/carers (for example, well-being, impact on relationships) – the balance between quality of life and length of life – the various treatment choices that matter to patients and carers – the impact on the lives of family members and carers, costs to the patient (financial and other) associated with the technology (including time, transport costs, carer costs)”<sup>35</sup>.*

## Cost-Benefit Analysis – assessing the economic and social value of the treatments delivered

With a populated impact map, a cost benefit analysis could be undertaken. A cost-benefit analysis examines the value of the inputs and the outputs of an intervention so that the costs and benefits can be compared. It considers the costs and benefits in monetary terms. If an output does not have a monetary value – as in the case of NHS healthcare, where the patient does not pay for treatment, a ‘shadow-pricing’ exercise can be conducted in order to impute a value. The shadow-pricing exercise is looking for the closest approximation to the ‘economic efficiency price’ which reflects the overall economic value of the output.

<sup>35</sup> National Institute of Health and Care Excellence (NICE), 2013. *Guide to the methods of technological appraisal*. [Online]. Available from: <https://www.nice.org.uk/process/pmg9/chapter/foreword>

There are a range of methods that can be used to impute value. These include 'Stated Preference' techniques such as 'Willingness To Pay' (asking someone what they would be willing to pay for something if they had to do so); 'Willingness to Accept' (what they may be willing to accept in exchange for something); and 'Revealed Preference' Techniques such as finding a parallel market price – what someone is actually paying for a similar good or service elsewhere, or hedonic pricing, which infers a price indirectly. (An example of this is where a 'price' can be put on education delivered by a particular school through studying the relative house prices in the catchment area).

The economic value of the outputs can then be calculated as the **volume of outputs x economic unit price**.

#### Economic Benefit

The value that is derived in this way is a legitimate measure of broader economic value. This value can then be compared with the costs to derive the economic cost/benefit ratio. If the economic value is greater than the costs incurred there is a positive economic gain to society.

#### Social Benefit

The net economic benefit however may not capture the overall social benefit of the intervention. Social Benefit can be interpreted as how far the outputs of the project are aligned with 'social preferences' or achieving socially desirable results. In the case of this impact map, the overall desired outcomes are a reflection of the 'socially desirable results'. An acceptable way to estimate the degree of alignment with socially desirable results is through the development and application of a weighting system. In the general policy world, the weights are frequently related to issues of fairness, equity and income distribution. For instance if an intervention is intended to be targeted to benefit women or people in a more economically deprived area, then the proportion of outputs that achieved that goal (female patients treated, economically disadvantaged patients reached) would be given a higher weighting than the others. In relation to a health intervention, weightings could also be devised to take account of reported health outcomes. The weightings are then applied to the economic valuation to give the final social valuation. If the social value is greater than the social costs, there is a positive social gain<sup>36</sup>.

#### Example: Economic valuation of Liverpool Homeopathic Services 2014/2015

This is an exploratory study, based on exploring application of the concepts of broader economic and social valuation to Homeopathic Services and hence there was no data collection or specific case studies envisaged within the scope of this study. However some data was publicly available from the recent Consultation exercise on Liverpool Homeopathic Services, undertaken by the Centre for Public Health at Liverpool John Moores University (Final Report published in June 2016). This enabled a broad brush illustration of the process that could be applied for economic and social valuation of Homeopathic Services.

#### Background to the Liverpool Consultation Exercise

According to the Final Report on the Consultation, in the year 2014/15, the Liverpool Clinical Commissioning Group commissioned Homeopathic Services to the contract value of £30k per year. Patients were normally referred by their GP and offered an initial assessment with up to four further

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<sup>36</sup> In this circumstance the relevant 'social costs' will typically be the financial input costs but should also include as far as possible the shadow-priced equivalent of any non-financial input costs e.g. if there was volunteer time helping to run a clinic, the volunteer time is a cost to society and so should be counted in the 'social cost' input side.

follow up appointments permitted. The main reasons for referral were: Skin diseases; arthritis/osteoarthritis; menopause; depression; anxiety and chronic back pain.

Forty one Liverpool practices were recorded as using the homeopathic services. In the year April 2014–April 2015, 31 practices made referrals - 13 practices only referred once, 19 practices referred 2 – 3 times, 6 referred 4-5 times, 2 referred 6 times and 1 referred 9 times.

In 2014, there had been a public consultation on the overall Cheshire & Merseyside Commissioning policy (which covers 12 different Clinical Commissioning Groups). While the overall policy was agreed that complementary therapies would not be routinely commissioned unless recommended by NICE guidance, Liverpool CCG decided to retain its provision of access to homeopathy, acupuncture and remedial massage since ‘Patient Feedback was positive’<sup>37</sup>.

However the Liverpool CCG received a Judicial Review Pre-Action letter on behalf of the ‘Good Thinking Society’ which challenged the decision to continue to commission a homeopathy service. The Liverpool CCG therefore held a further consultation specifically surrounding its homeopathic services. This was conducted by the Centre for Public Health at Liverpool John Moore’s University and consisted of:

- a) A survey (paper and online) made openly available to the general public;
- b) A consultation event (open to the public).

The survey had an overall return of 743 responses, 323 of which were from the Liverpool CCG area. In surveys of this nature there is a high likelihood of response bias (both for and against) in the survey and in those electing to participate in the consultation event. Hence it is difficult to draw any firm conclusions from the survey findings or from the comments made at the consultation event. Some wanted funding to stop, some wanted it to carry on as it was and some wanted the service to be expanded. The arguments expressed for and against were broadly the same ones as had been presented to the House of Commons Committee (see page 5). Patient feedback (i.e. from those who had been patients of the service) was almost uniformly positive (see the information reported on NHS Liverpool CCG website, indicating views of 86 patients surveyed)<sup>38</sup> but this did not seem to have been conducted within any recognised evaluation framework and hence did not appear to carry much weight in the final decision. There did not seem to be any economic analysis carried out. In June 2016 the Liverpool CCG decided to discontinue its provision of homeopathy services.

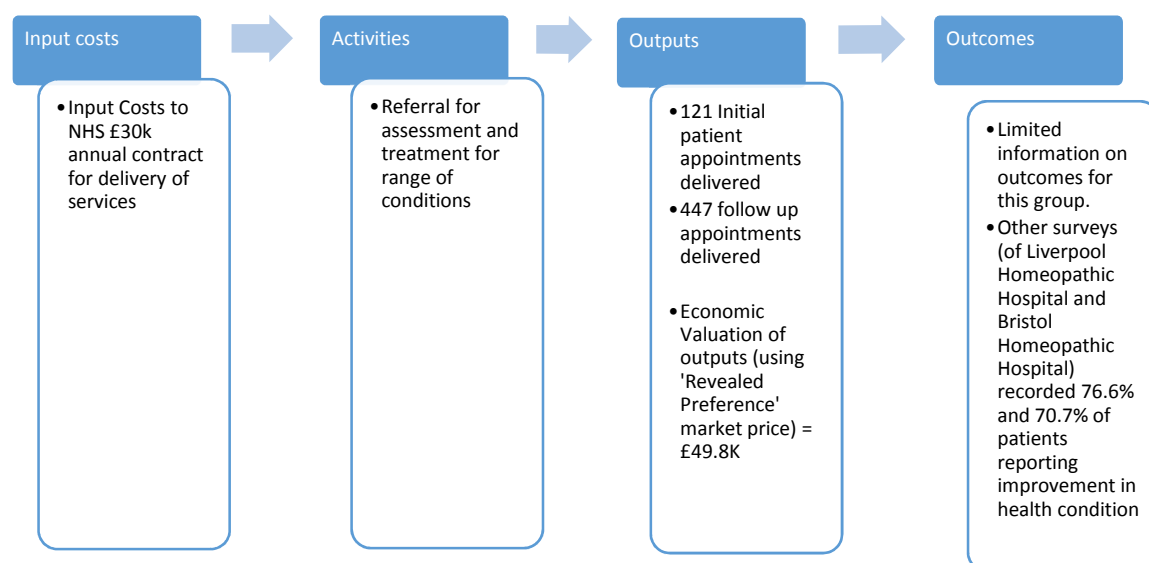
We can examine the Liverpool case within the broader cost-benefit framework – the costs involved are quite clearly stated and the outputs are measured and defined. We do not however have outcomes data in the following example:

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<sup>37</sup> From Memo to the CCG Governing Body 9<sup>th</sup> December 2014, quoted in the Final Consultation Report, June 2016. See Madden, H. et al. *NHS Liverpool CCG Homeopathy Consultation: Independent analysis and report*. [https://secure.membra.co.uk/Attachments/homeopathyconsultationfinalreportjune2016\\_20166711216.pdf](https://secure.membra.co.uk/Attachments/homeopathyconsultationfinalreportjune2016_20166711216.pdf)

<sup>38</sup> Liverpool Clinical Commissioning Group (2015) - <http://www.liverpooltalkshealth.info/homeopathy/documents/448/download>

## Liverpool Homeopathic Services supported by NHS Liverpool CCG in 2014-2015 <sup>39</sup>



The stated cost to the NHS was £30k. The outputs included 121 initial appointments and 447 follow up appointments. From examination of other services such as the Portland Integrative Care Centre (which delivered NHS homeopathic services in Bristol), an initial appointment normally lasts 1 hour and a follow up appointment lasts 30 minutes.

An internet search gave example market prices for homeopathic consultations and assessment from a medically qualified homeopath between £110-£160 for an initial consultation and typically £70-£80 for a follow-up consultation.<sup>40</sup> These were used for the 'shadow-price'.

### Economic valuation

	Numbers of Consultations delivered	Economic Price	Economic Value (Average)
<b>Initial Consultation ( 1 Hour)</b>	121	£110-£160 (£125 average)	£16,335
<b>Follow-up Consultations ( £70)</b>	447	£70-£80 (£75 average)	£33,525
<b>Total Economic Value</b>			£49,860

The prices applied here for valuation show a 'revealed preference' measure of 'Willingness To Pay' in that these are the example prices people are paying for similar homeopathic consultations elsewhere. From this it can be seen that the shadow-priced *economic* value to society of the service delivered in this case is higher than the costs to the NHS. Therefore without undertaking any further

<sup>39</sup> Data on costs and outputs provided by NHS Liverpool CCG s part of the review process. Taken from Madden, H., Oyston, J. and Gee, I. (2016) *NHS Liverpool CCG Homeopathy Consultation: Independent analysis and report*. Available from:

[https://secure.membra.co.uk/Attachments/homeopathyconsultationfinalreportjune2016\\_20166711216.pdf](https://secure.membra.co.uk/Attachments/homeopathyconsultationfinalreportjune2016_20166711216.pdf)

<sup>40</sup> Portland Integrative Care cited £160/£80 <http://portlandcentrehealthcare.co.uk/service/private-homeopathy-brisol/> Nelsons Homeopathic Pharmacy cited £110/£70 <http://www.nelsonspharmacy.com/nelsons-clinic/therapies-prices>

quality or social preference weighting, the *economic* benefits generated can be seen to be greater than the costs and there is an overall economic gain.

This is an **output** valuation and the price people are willing to pay is a reflection of their own expected benefit from the treatment and could be considered as also subsuming wider expected personal benefits such as positive impacts on their family/friends etc. Therefore there is no need to consider any wider personal-related benefits as they are already accounted for in the economic price, (One would assume that if the expected personal benefits are not eventually forthcoming, people would not go back to the Homeopath.) There may still be broader social benefits (or dis-benefits) that are not captured in the economic price.

### Social Value weighting

Social preference weights could be applied to the economic value to obtain a social valuation. There was insufficient information on the outcomes to devise a full weighting system for this example.

We assumed the broad desired outcomes to be:

- a) Improved individual health and well-being (already accounted for in the revealed preference valuation)
- b) General societal health and well-being (not necessarily accounted for).

At a very simple level, and purely for illustrative purposes to explain the concept, we have taken the ‘reported improvement’ rate from the observational study carried out at the Bristol Homeopathic Hospital<sup>41</sup> to make an adjustment to the economic value to reflect an impact on general societal well-being. The reported improvement rate was 70.7%. That is to say around 70% of patients over the 6 year study (involving 6544 patients) reported positive health outcomes. If one assumes that means that 30% of patients did NOT experience positive outcomes that could be considered a negative result from a societal point of view (since it is not meeting the entirety of the desired outcome criteria) and one could then adjust the economic value *downwards* accordingly.

Economic Value	“Effectiveness in achieving desired outcomes”	Quality-adjusted Economic Value ( or Social Value)
£49,860	70%	£34,902

In this example there is still a net social gain to Society (Net Social Benefit) of £4,902 as the cost to the NHS had been £30k.

Ideally and for maximum credibility, a weighting system should combine all the factors considered relevant (positive and negative) and also be based as far as possible on outcome benefits measured using a recognised method or instrument, such as that employed by NICE (for QALYS). In terms of deriving a measure for general well-being, adaptation of the current government measurements for national wellbeing<sup>42</sup> would be worth considering.

Thus a weighting system could be devised based on:

- Recorded health outcomes using a recognised instrument such as the EQ-5D;

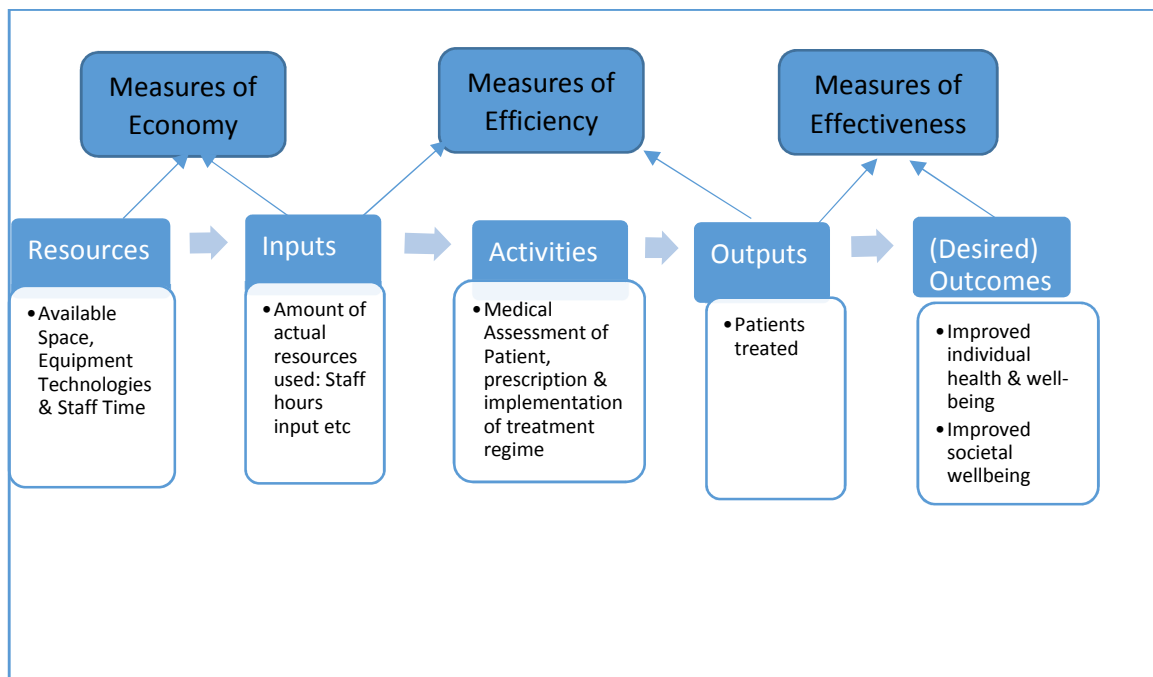
<sup>41</sup> Spence, D.S., Thompson, E.A, Mathie, R.T. and Barron, S.J. (2005) Homeopathy treatment for chronic disease: A 6- year, university-hospital outpatient observational study, *Journal of Alternative Complementary Medicine*. [Online]. 11(5), pp.793-8. Available from: <https://www.ncbi.nlm.nih.gov/pubmed/16296912>

<sup>42</sup> Office for National Statistics, 2016. *Measuring national well-being: Domains and measures*. [Online]. Available from: <https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/datasets/measuringnationalwellbeingdomainsandmeasures>

- Recorded other perceived benefits , as far as possible using a recognised instrument such as the new national approaches to measuring Subjective Well-being;
- Other social preferences or priorities (e.g. if the treatments are reaching particular high priority groups).

### Measures of economy, efficiency and effectiveness

An additional advantage of constructing an impact map and populating each stage with the relevant information is that it provides baseline data for a range of potentially useful performance measures which can be used in various circumstances to show 'value for money'. This is shown in the diagram below where a fully populated map enables the derivation of a range of different measures of economy, efficiency and effectiveness.



*Adapted from 'Assessing the impact of Spatial Interventions' Office of the Deputy Prime Minister HMSO 2004*

There are three main types of measures possible:

**Measures of Economy:** These relate to issues such as efficient procurement, minimising the costs of inputs (staff, equipment, technologies etc.) and managing these within the resources available.

**Measures of Efficiency:** These relate to the quantity of outputs (for example, numbers of patients treated) delivered for the inputs made. They can include **Technical Efficiency** (achieving the maximum amount of patients treated or appointments delivered for a given amount of input resource) and **Cost Efficiency** (Output in terms of volume or value/Costs of production).

**Measures of Effectiveness:** These relate to the degree to which the outputs are perceived to (e.g. numbers of patients treated) contribute towards the final desired outcomes (Improved individual health & well-being, improved societal well-being, etc.).

Outputs can be given a weighting or 'quality adjustment' to reflect their perceived contribution to outcomes. This is **Cost-utility analysis**. (This is what is done by NICE for the calculation of Quality Adjusted Life Years or QALYS).

## Conclusions

*“Better metrics do not of themselves deliver better outcomes. You can’t fatten a pig by weighing it. But if you don’t have some means of weighing it you may find yourself unable to persuade others that it is as fat as you believe”* Mulgan, 2011<sup>43</sup>

*“I believe that the primary problem here...is where there is a reluctance to provide a particular form of care, is the lack of good evidence on effectiveness. The first priority must be to provide sound evidence of effectiveness and...the economist’s perspective may offer some help...”* Buxton, 2000<sup>44</sup>

The Homeopathy profession has reached an impasse in terms of being able to demonstrate the value of homeopathy and reasons for its continued public funding in sufficiently convincing terms for the public funding bodies concerned. Despite the issue at stake being one of whether or not homeopathy is worth spending public money on, none of the reviews of homeopathy that have taken place in recent years have included consideration of economic benefit or broader social benefit. This appears to be mainly because the discussions about homeopathy have become locked into an unproductive circular debate over the scientific evidence for efficacy, the terms of which debate preclude consideration of any other kinds of evidence that could genuinely be relevant to the issue of public expenditure.

In this paper we have tried to suggest a possible way forward, by focussing the measurement of broader economic and social benefit using methodological approaches that are legitimate and recognised by the major funders and evaluators. In particular we would recommend that more consideration is given by the profession to the adoption of a common approach to measuring health related outcomes and wider social quality of life outcomes. Ideally this would be as close as possible to the health outcome measures used by NICE (currently the EQ-5D), adapted if necessary. This may be difficult to implement but could in itself could help break the gordian knot as outcomes measured using the same instrument as NICE, or another sufficiently similar which allows the calculation of Quality Adjusted Life Years, could then also utilise the cost-effectiveness ratios and related monetary thresholds for the value of each QALY in order to make comparisons with other kinds of health intervention. However at the very least, a common approach to outcome measurements could enable the derivation of agreed weights for application to an economic valuation or for weights that could legitimately be used to develop other ‘effectiveness’ measures.

Recasting the debate into a broader economic value context, referencing recognised methods of economic valuation, could help provide some of the hard economic evidence to feed into any future PCT or Health Board Reviews and also to encourage a wider public and political understanding. Using principles of welfare economics and the application of cost benefit techniques is a legitimate and recognised approach to issues of public funding and public policy; using methodologies and instruments as close as possible to those recognised and used by government (including NICE , the Treasury and ONS) would increase credibility and could help improve perceptions of homeopathy among policymakers.

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<sup>43</sup> Mulgan, G., 2011. Effective supply and demand and the measurement of public and social value. In: Benington, J. and Moore, M.H. eds. *Public value theory and practice*. London: Palgrave Macmillan, pp 213-224.

<sup>44</sup> Buxton, M. (2000). Assessing the cost-effectiveness of homeopathic medicines: Are the problems different from other health technologies? *British Homeopathic Journal*. 89, Suppl. 1:S20-2. Doi:10.1054/homp.1999.0374

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## Appendix 2 – Indicative Bibliography

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