MAPPING OUTCOMES FOR SOCIAL INVESTMENT

This is one of 13 outcomes maps produced by SROI network in partnership with NPC, Investing for Good and Big Society Capital. Each map examines a particular issue area or domain, and aims to document the relevant outcomes and indicators that are currently being measured by charities, government, academics and practitioners working in this field.

This map is not intended to be prescriptive about what you should measure; instead it aims to be a starting point for social investors, funders, charities and social enterprises thinking about measuring outcomes in this domain. Neither is it intended to be definitive or comprehensive: we plan to develop the maps further in future as we learn more about measurement practice in this area.

If you have any feedback or suggestions for how we could do this, please get in touch with Tris Lumley at NPC by emailing tris.lumley@thinkNPC.org.

Outcomes maps in this series

Housing and essential needs
Education and learning
Employment and training
Physical health
Substance use and addiction
Mental health
Personal and social well-being
Politics, influence and participation
Finance and legal matters
Arts and culture
Crime and public safety
Local area and getting around
Conservation of the natural environment and climate change
MEASUREMENT FRAMEWORK: PHYSICAL HEALTH

Definition

In 1946, the World Health Organisation defined health as ‘a state of complete physical, mental and social wellbeing and not merely the absence of disease or infirmity’. This overview, however, explores the identification and measurement of outcomes relating to physical health only – others have been produced which explore ‘Mental Health’ and ‘Personal and Social Wellbeing’. For the purpose of this overview, we define physical health as ‘anything that relates to our bodies as physical entities’ with good physical health being good ‘body health’ where ‘all internal and external body parts, organs, tissues and cells function as they are supposed to’. Whilst another overview explores factors that may have a bearing on physical health, e.g. lifestyle choice (see, for example, ‘Substance Use and Addiction’), here we focus on outcomes relating to the following broad areas: disease and premature death; physical ability and fitness; access to healthcare.

Context

The maintenance of physical health is essential to overall wellbeing and can be achieved by adopting a healthy lifestyle and keeping fit. With age, decline in good physical health is to some extent inevitable, but this decline can be escalated or influenced by a variety of factors. Some could be considered lifestyle choices, such as diet, substance use, or physical activity levels. Others are external factors, such as poverty and homelessness, religion, cultural tradition, education, and access to healthcare.

Some of the biggest killers in the UK, such as cardiovascular disease, liver disease and cancer, are highly associated with lifestyle choices or external factors that can be controlled and managed. Many health-based initiatives therefore aim to encourage healthy lifestyle choice and manipulate external influences in order to improve the health of the UK population.

Cardiovascular disease is a serious health problem within the UK, responsible for around 90,000 deaths each year. Most of these are as a result of heart attacks caused by the leading cause of death in the UK, coronary heart disease (CHD). As well as around 124,000 heart attacks, there are around 152,000 strokes in the UK each year, resulting in over 43,000 deaths. Obesity is a prime determinant of cardiovascular disease, and with rates increasing in the UK over recent years (26% of adults in England were classified as obese in 2010, compared with 13% in 1993) factors effecting obesity, such as poor diet and inactivity, have become growing concerns for health systems. Childhood obesity has also become a prime concern in recent years. In 2010, 17% and 15% of girls and boys (aged 2-15) respectively were classified as obese, an increase from 11% and 12% in 2005.

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1 According to the Office for National Statistics, cancer accounted for 34% of all premature deaths and heart and other circulatory diseases represented 28% in 2009. More than one third of all deaths in the UK are caused by cardiovascular disease. Cardiovascular disease is the term used to describe the four main types of heart problem, which are coronary heart disease; stroke; peripheral arterial disease and aortic disease.

2 NHS statistics
The prevalence of both liver disease and cancer has been rising over recent years. Liver disease causes approximately 2% of all deaths in the UK. In the 40 – 49 year age group, more than one death in ten is caused by liver disease, mostly alcoholic liver disease. Whilst the rate of increase has slowed over recent years, the prevalence of cancer in the UK continues to rise. Cancer Research UK reports that there were almost 160,000 deaths from cancer in 2010 and that more than one in three people in the UK will develop some form of cancer in their lifetime. The key drivers of liver disease are all preventable (alcohol, obesity, hepatitis C and hepatitis B) and it is estimated that almost half of all cancers diagnosed in the UK could be avoided if people made changes to their lifestyle by stopping smoking, moderating their alcohol intake, maintaining a healthy body weight and avoiding sun exposure.

The rate of premature death among both men and women has fallen steadily over the last decade in the UK. However it is much higher within the male population of Scotland than anywhere else in the UK with the North West showing the second highest rates. It is interesting to note that premature deaths vary by social class, especially those from routine or manual backgrounds. This group were twice as likely to die prematurely, especially from cancer or heart disease, compared to those from managerial or professional backgrounds.

Physical health has such a bearing on wellbeing that poor health can seriously influence a person’s quality of life. Illness and long term conditions can prevent the sufferer from taking part in activities they enjoy or are necessary for day to day life. In extreme cases, poor health can lead to people becoming hospitalised or housebound which removes their freedom and limits the control they have over their lives. As such, while prevention of disease is crucial, another important objective of improvement measures is to increase the quality of life of those with health complaints and disabilities. This involves the provision of appropriate treatment of support to long-term sufferers, reducing the length of recovery for those with temporary health problems, and reducing the time patients spend in hospital and other health-related establishments.

Of course, the physical health of the population can be improved through inclusive access to effective healthcare. This can increase the rate of recovery from disease, improve the quality of life of the terminally ill, increase the functional ability of those with long term conditions, and help identify potentially serious conditions early so that physical health, and therefore quality of life, can be maintained.

Notes about this overview

An outcome is a change that occurs as the result of an activity; it can be positive or negative, intended or unintended. With reference to various existing frameworks, in the table below we have compiled a list of the most commonly measured outcomes in the area of physical health. In addition, we have made suggestions regarding how these outcomes could be measured and referred to some existing tools for doing so.

Our list is in no way exhaustive, and we also acknowledge that outcomes exist within a chain of events and that some of the outcomes listen in this document will lead to further outcomes. For example, change in physical fitness may result in increased personal wellbeing or increased self-confidence. For the purpose of this overview we have focused on the
measurement of the changes we have listed. However, to understand the value of these outcomes and what they mean to those involved, practitioners and investors must look beyond the listed outcomes to see what impact they have on the lives of stakeholders, for this is where the true value exists.

Outcomes are never generic and their significance or value varies according to the stakeholder group. In the table we have highlighted some outcomes that are stakeholder group specific. This is because they were of particular significance in the frameworks we have reviewed. Where outcomes are relevant to a number of stakeholder groups, we have indicated for which groups they might be especially relevant in the ‘stakeholder’ column.

Within this framework, there are also many opportunities for outcomes to fit into a chain of events e.g. ‘Reduced recovery time after illness/injury’ means less time spent in hospital which can result in an improvement in independence, improved overall quality of life and a change in personal well-being.

**Vulnerable groups**

**Children and young people**: Improving and maintaining the physical health of young people is fundamental to reducing future incidents of disease and premature death, as well as the burden on health services. Young people are particularly likely to engage in risk-taking behaviours, or fall victim to circumstances that can be damaging to their health:

- ‘Binge drinking’ is particularly prevalent amongst young people
- Young people are more likely than older people to smoke
- Drug use is particularly prevalent amongst young people
- Unemployment is relatively high amongst young people
- Child poverty is becoming an increasingly concerning issue in the UK
- Childhood obesity is in the UK is rising

**Lower socio economic groups**: Those surviving on low income are less likely than their more affluent counterparts to have a healthy and nutritious diet or to engage in appropriate levels of physical activity. Conversely, they are more likely to engage in behaviours that can damage their health such as smoking or excessive alcohol consumption.

**Older people**: There is a natural decline in health with age, so the aim is to maintain good physical health, and therefore quality of life and functional ability, for as long as possible. Older people are particularly prone to poverty and the effects this can have on health due to poor diet, and issues relating to essential needs, such as housing or shelter.
Smokers: Smokers are more likely to develop serious health conditions, such as cardiovascular diseases and cancer, and to die prematurely.

Overweight people: Obesity has been linked to a number of health conditions, such as liver disease and cancer. Being overweight also negatively affects physical fitness and functional ability.

Key outcomes

• Reduced likelihood of premature death from illness, disease or medical condition (a reduction in the number of people who will die from illness or medical conditions)
• Improved/maintained quality of life (for those with medical conditions/disabilities) (an enhanced life experience for those with medical conditions or disabilities)
• Improved/maintained functional/physical ability (enhanced or maintained independence for those who have difficulty caring for themselves)
• Improved general physical health (an improvement in the rate of physical health)
• Increased access to healthcare (an improvement in the ease of access to healthcare)

Examples of typical interventions

Reducing the risks of cardiovascular disease (CVD):

The British Heart Foundation offers support and advice regarding the prevention of CVD throughout the UK. Services include: Heart Helpline - a free telephone information service; Heart Health Road shows - a free service offering support and advice which travels around shopping centres, supermarkets and workplaces; and Hearty Lives - community programmes

The government operates a comprehensive NHS Stop Smoking Service. Services are available across the NHS in England, providing counselling and support to smokers wanting to quit.
Healthy Eating Initiatives:

Self-assessment tools are available on NHS websites, as well as healthy eating guides and meal plans.

The 5-A-DAY programme was launched in March 2003 as part of the health promotion activity by the Department of Health to encourage people to eat more fruit and vegetables. It aims to increase fruit and vegetable consumption by: raising awareness of the health benefits through targeted communications; improving access to fruit and vegetables; and working with national, regional and local organisations.

The Change4Life campaign is a public health programme designed to tackle obesity in children. It has recently been expanded to focus on adults to encourage them to increase their physical activity levels.

Current approaches to measurement

In the UK, measurements relating to physical health tend to focus on rates of premature death and access to public healthcare.

The NHS Outcome Framework’s purpose is to tackle health inequalities and promote equality within the NHS by delivering health outcomes to the best of its ability. It aims to provide a national level overview of NHS performance and to act as a catalyst for driving quality improvement and outcome measurement. The NHS Outcome Framework monitors the rates of the prevention of premature death; the enhancement of quality of life for people with long-term conditions; helping people to recover from episodes of ill health; ensuring that people have a positive experience of care.

For the purpose of this domain, the framework has been used to compile indicators relating to the mortality rates of diseases and conditions that are commonly linked with premature death in the UK. The NHS uses Office for National Statistics data regarding mortality rates and mid-year population estimates taking age group and geographic area into account. Data from the Office for National Statistics have been used to calculate national mortality rates, as well as information relating to alcohol consumption and liver disease.

The National Institute for Health and Clinical Excellence (NICE) presents data through the Quality and Outcomes Framework. Tools for measuring the risk of cardiovascular disease (see table below) are used which collect data regarding the proportion of patients at risk whilst taking into account measures, such as social deprivation, ethnicity and family history.
Multiple assessment tools have been referenced within this domain, especially regarding the ‘Improved quality of life’ outcome. Various tools exist to measure people’s ability to conduct daily activities including: the Edmonton Functional Assessment Tool (for use with cancer patients); the Katz Index of Independence in Activities of Daily Living; and the Karnofsky Performance Scale (used to determine appropriateness of hospital referral).

Tools have also been designed to measure overall quality of life and optimism about illness, such as The Revised Illness Perception Questionnaire which measures various aspects of patients’ perceptions regarding their illness treatment, as well as the WHO Quality of Life Scale which is a self assessment tool.

The Australian Lung Foundation’s Pulmonary Rehabilitation Toolkit uses scales, such as the Modified Borg Dyspnoea Scale to assess shortness of breath which can be linked to cardiovascular disease.

Popular tools such as Body Mass Index (BMI) have been used to measure changes in body composition which directly affect physical health. Nutritional data has been drawn from the Family Food module of the Living Costs and Food Survey which collects detailed quantity and expenditure information regarding household food and drink purchases.

Key sources

- The Office for National Statistics: [http://www.ons.gov.uk](http://www.ons.gov.uk)
  - Mortality statistics
  - Living Costs and Food Survey
- NHS Information Centre: [http://www.ic.nhs.uk](http://www.ic.nhs.uk)
  - NHS Outcomes Framework
  - Hospital Episode Statistics
  - Social and Mental Health Indicators
- National Institute for Health and Clinical Excellence
  - Quality and Outcomes Framework
- The Revised Illness Perception Questionnaire (IPQ-R)
Related outcomes

Physical health and related issues have a strong relationship with a multitude of other outcomes for individuals, health services and society as a whole. The following outcomes which are covered in other overviews are therefore highly relevant.

- **Related outcome**: Housing and essential needs
- **Related outcome**: Crime and safety
- **Related outcome**: Substance use and abuse
- **Related outcome**: Employment and training
- **Related outcome**: Mental health
- **Related outcome**: Personal and social wellbeing
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<th>Key Outcomes</th>
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<td>Reduced likelihood of premature death from illness, disease or medical condition</td>
<td>Reduced likelihood of premature death from illness, disease or medical condition</td>
<td>Overall mortality rate</td>
<td>The Office of National Statistics (ONS) collates mortality rate data which can be broken down by age group, geographic area and cause of death</td>
<td>Data is available through the ONS website: <a href="http://www.statistics.gov.uk/hub/population/deaths/mortality-rates">http://www.statistics.gov.uk/hub/population/deaths/mortality-rates</a></td>
<td>- Health Services - Individuals</td>
<td>Notes</td>
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<td>Age-standardised mortality rate</td>
<td>The ONS calculates age-standardised mortality rate annually</td>
<td>Data is available through the ONS website: <a href="http://www.statistics.gov.uk/hub/population/deaths/mortality-rates">http://www.statistics.gov.uk/hub/population/deaths/mortality-rates</a></td>
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<td>Infant mortality rate</td>
<td>The ONS collates infant mortality rate data</td>
<td>Data is available through the ONS website: <a href="http://www.statistics.gov.uk/hub/population/deaths/mortality-rates">http://www.statistics.gov.uk/hub/population/deaths/mortality-rates</a></td>
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<td>Reduced likelihood of death from cardiovascular disease</td>
<td>Under 75 mortality rate from cardiovascular disease</td>
<td>Under 75 mortality rate from cardiovascular disease</td>
<td>The NHS Collects data regarding the mortality rate from cardiovascular disease</td>
<td>NHS Outcome Framework: Information sources from the Office for National Statistics (ONS) mortality data and ONS mid-year population estimates.</td>
<td>- Health Services - Individuals - Smokers</td>
<td>Deaths from cardiovascular disease, classified by underlying cause of death (ICD-10 I00-I99), registered in the respective calendar year(s). The data are based on the original causes of death recorded on the death certificate rather than the final amended causes.</td>
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<tr>
<td>Score on tools to measure risk of cardiovascular disease</td>
<td>NICE collects data regarding the proportion of hypertension patients by using recommended assessment tools QRISK, Framingham, JBS2 and ASSIGN. This data is available from the National Institute for Health and Clinical Excellence (NICE) through the Primary Care Quality and Outcomes Framework: <a href="http://www.nice.org.uk/nicemedia/live/13520/55454/55454.pdf">http://www.nice.org.uk/nicemedia/live/13520/55454/55454.pdf</a></td>
<td>-Health Services -Individuals</td>
<td>ASSIGN is a Scotland only assessment tool. The National Centre for Health and Clinical Excellence provides guidelines on how to use the tools mentioned: <a href="http://www.nice.org.uk/nicemedia/live/13520/55454/55454.pdf">http://www.nice.org.uk/nicemedia/live/13520/55454/55454.pdf</a></td>
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<td>Number of people with newly diagnosed angina</td>
<td>NICE collects data regarding angina diagnoses This data is available from NICE through the Primary Care Quality and Outcomes Framework.</td>
<td>-Health Services -Individuals -Older people</td>
<td>It is important to note that since the indicator provides the number of patients ‘with newly diagnosed angina’, patients are added to the register retrospectively once a diagnosis of angina has been confirmed following further tests. Therefore, there may be a number of patients who present their GP with symptoms suggestive of angina who are referred for exercise testing and/or specialist assessment but who are not added to the register because their test results did not confirm angina.</td>
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<td>Number of hospital stays related to cardiovascular disease in the UK</td>
<td>The NHS records details of all admissions to NHS hospitals in England</td>
<td>This data is available via Hospital Episode Statistics (HES): <a href="http://www.heslonline.nhs.uk">www.heslonline.nhs.uk</a></td>
<td>Health Services - Individuals - Smokers</td>
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<td>Annual number of Percutaneous Coronary Intervention (PCI) procedures conducted in the UK</td>
<td>The British Heart Foundation collects data via the British Heart Foundation Health Promotion Research Group regarding rates of PCI procedures.</td>
<td>This data is available in a British Heart Foundation report, 'Coronary Heart Disease Statistics 2012'</td>
<td>Health Services</td>
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<td>Annual number of Coronary Artery Bypass Graft (CABG) procedures conducted in the UK</td>
<td>The British Heart Foundation collects data via the British Heart Foundation Health Promotion Research Group regarding rates of CABGs</td>
<td>This data is available in a British Heart Foundation report, 'Coronary Heart Disease Statistics 2012'</td>
<td>Health Services</td>
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<td>Reduced likelihood of death from respiratory disease</td>
<td>Under 75 mortality rate from respiratory disease</td>
<td>The NHS collects data regarding number of under 75s dying from respiratory disease</td>
<td>NHS Outcome Framework: Office for National Statistics (ONS) mortality data and ONS mid-year population estimates.</td>
<td>Health Services - Individuals - Smokers</td>
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<td>Deaths from respiratory disease, classified by underlying cause of death (ICD-10 J00-J99), registered in the respective calendar year(s). The data are based on the original causes of death recorded on the death certificate rather than the final amended causes.</td>
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<td>Metric</td>
<td>Source</td>
<td>Source Details</td>
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<td>Rate of deaths due to chronic lower respiratory diseases</td>
<td>The Office for National Statistics</td>
<td>Office for National Statistics, Deaths Registered in England and Wales in 2011, by cause: <a href="http://www.ons.gov.uk/ons/dcp171778_284566.pdf">http://www.ons.gov.uk/ons/dcp171778_284566.pdf</a></td>
<td>Health Services -Individuals</td>
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<td>-Smokers</td>
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<tr>
<td>Number of years of life lost due to mortality from asthma</td>
<td>The NHS produces a Compendium of Population Health Indicators, which aims to compare the relative importance of different causes of premature death within a particular population and has recorded the years of life lost due to asthma.</td>
<td>Data is available at the NHS Information Centre website: <a href="https://indicators.ic.nhs.uk/download/NCHOID/Specification/Spec_23H_027CR_10_V1.pdf">https://indicators.ic.nhs.uk/download/NCHOID/Specification/Spec_23H_027CR_10_V1.pdf</a></td>
<td>Health Services -Individuals</td>
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<tr>
<td>Number of hospital stays related to asthma disease in the UK</td>
<td>The NHS records details of all admissions to NHS hospitals in England</td>
<td>This data is available via Hospital Episode Statistics (HES): <a href="http://www.hesonline.nhs.uk">www.hesonline.nhs.uk</a></td>
<td>Health Services -Individuals</td>
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<td>-Smokers</td>
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</table>
| Reduced likelihood of death from liver disease | Mortality rate from liver disease | The NHS Collects data regarding the mortality rate from liver disease | The NHS Collects data regarding the mortality rate from liver disease | NHS Outcome Framework: Information sources from the Office for National Statistics (ONS) mortality data and ONS mid-year population estimates. National End of Life Care Network-Deaths from Liver Disease | Health Services -Individuals -Smokers | Health Services -People with substance misuse problems |}

<p>| Score on test to assess quality of breathing | There are a number of tools available to assess dyspnoea or ‘shortness of breath’. These include: Modified Medical Research Council (MMRC) Dyspnoea scale Modified Borg Dyspnoea scale | Tools are available through the Australian Lung Foundation’s Pulmonary Rehabilitation Toolkit: <a href="http://www.pulmonaryrehab.com.au/index.asp?page=22">http://www.pulmonaryrehab.com.au/index.asp?page=22</a> | Tools are available through the Australian Lung Foundation’s Pulmonary Rehabilitation Toolkit: <a href="http://www.pulmonaryrehab.com.au/index.asp?page=22">http://www.pulmonaryrehab.com.au/index.asp?page=22</a> | Some measures of dyspnoea are useful for clinical assessment (e.g. the MMRC Scale) and can provide a baseline indication of the patient’s status. However, these scales are not particularly sensitive to interventions such as pulmonary rehabilitation. | Health Services -Individuals -Smokers | Health Services -People with substance misuse problems |</p>
<table>
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<tr>
<th><strong>Mortality rate due to Hepatitis C</strong></th>
<th><strong>The Health Protection Agency has collected data regarding Hepatitis C in the UK.</strong></th>
<th><strong>This data is from the Office for National Statistics (England and Wales); Health Protection Scotland, in association with the Information Services Division and Northern Ireland Statistics and Research Agency.</strong></th>
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</thead>
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<tr>
<td><strong>Average number of alcoholic units consumed each week</strong></td>
<td><strong>The General Lifestyle Survey includes questions on alcohol consumption amongst adults.</strong></td>
<td><strong>Statistics and reports are published by the Office of National Statistics:</strong> <a href="http://www.ons.gov.uk/ons/releghe/general-lifestyle-survey/index.html">http://www.ons.gov.uk/ons/releghe/general-lifestyle-survey/index.html</a></td>
</tr>
<tr>
<td><strong>Maximum daily amount of alcohol (in units) consumed last week</strong></td>
<td><strong>Data relating to these indicators are calculated on the basis of response to questions regarding the frequency of consumption of various alcoholic drinks.</strong></td>
<td><strong>Data is used by government and local authorities to assess and develop alcohol-related strategies. Various health-related charities refer to this data in communication and for strategic decisions.</strong></td>
</tr>
<tr>
<td><strong>Proportion of population drinking more than recommended 21 units for men and 14 units for women</strong></td>
<td><strong>Data can be broken down by geographic area and respondent demographics.</strong></td>
<td><strong>- Young people</strong></td>
</tr>
<tr>
<td><strong>- Health services</strong></td>
<td><strong>- Pregnant women</strong></td>
<td><strong>- Health services</strong></td>
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</table>

Due to social acceptability bias, it is likely that the survey underestimates alcohol consumption. However, the structure of the questionnaire is designed to minimise this. To protect their privacy, particularly when they are being interviewed in their parents’ home, young people aged 16 and 17 complete the smoking and drinking sections of the questionnaire themselves, so that neither the questions nor their responses are heard by anyone else who may be present.
<table>
<thead>
<tr>
<th>Reduced likelihood of death from cancer</th>
<th>Proportion of deaths as a result of cancer</th>
<th>Cancer Research have analysed the proportion of all deaths as a result of cancer.</th>
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- Health Services - Individuals

<table>
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<tr>
<th>Mortality rate from cancer between 20 and 50 years</th>
<th>Cancer Research has collated data regarding the number of cancer related deaths that occur between the ages of 25-50</th>
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- Health Services - Individuals
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<tr>
<th>Indicator</th>
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<td>Under 75 mortality rate due to all cancers</td>
<td>The NHS collects data regarding the mortality rate from all cancers.</td>
<td>NHS Outcome Framework: Information sources from the Office for National Statistics (ONS) mortality data and ONS mid-year population estimates. <a href="https://indicators.ic.nhs.uk/download/NCHO_D/Specification/Spec_11D_072CR_10_V1.pdf">Link</a></td>
<td>- Health Services</td>
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<tr>
<td>Proportion of those with diagnosed breast cancer surviving five years after diagnosis</td>
<td>The NHS has attempted to capture the success of the NHS in preventing people from dying once they have been diagnosed with breast cancer. Data for this indicator is from the cancer survival statistical bulletins published annually by the Office for National Statistics (ONS). It is the age standardised relative survival that this indicator is concerned with for the national indicator.</td>
<td>NHS Outcome Framework: Information sources from the Office for National Statistics (ONS): <a href="https://indicators.ic.nhs.uk/download/Outcomes%20Framework/Specification/NHSOF_1.4.iv_I00662_S_V2.pdf">Link</a></td>
<td>- Health Services - Individuals - Women</td>
</tr>
<tr>
<td>Proportion of those with diagnosed lung cancer surviving five years after diagnosis</td>
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<td>The NHS has attempted to capture the success of the NHS in preventing people from dying once they have been diagnosed with lung cancer. Data for this indicator is from the cancer survival statistical bulletins published annually by the Office for National Statistics (ONS). It is the age standardised relative survival that this indicator is concerned with for the national indicator.</td>
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<td>-Health Services -Individuals -Smokers</td>
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<tr>
<td>Proportion of those with diagnosed breast cancer surviving one year after diagnosis</td>
<td>The NHS has attempted to capture the success of the NHS in preventing people from dying once they have been diagnosed with breast cancer. Data for this indicator is from the cancer survival statistical bulletins published annually by the Office for National Statistics (ONS). It is the age standardised relative survival that this indicator is concerned with for the national indicator.</td>
<td>NHS Outcome Framework: Information sources from the Office for National Statistics (ONS): <a href="https://indicators.ic.nhs.uk/download/Outcomes%20Framework/Specification/NHSOF_1.4.iii_i00661_S_V2.pdf">https://indicators.ic.nhs.uk/download/Outcomes%20Framework/Specification/NHSOF_1.4.iii_i00661_S_V2.pdf</a></td>
<td>-Health Services -Individuals -Women</td>
</tr>
<tr>
<td>Improved/ maintained quality of life</td>
<td>Improved/ maintained overall quality of life</td>
<td>Score on self-assessment survey tools designed to measure overall quality of life</td>
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<td>Proportion of those with diagnosed lung cancer surviving one year after diagnosis</td>
<td>The NHS has attempted to capture the success of the NHS in preventing people from dying once they have been diagnosed with lung cancer. Data for this indicator is from the cancer survival statistical bulletins published annually by the Office for National Statistics (ONS). It is the age standardised relative survival that this indicator is concerned with for the national indicator.</td>
<td>NHS Outcome Framework: Information sources from the Office for National Statistics (ONS): <a href="https://indicators.ic.nhs.uk/download/Outcomes20Framework/Specification/NHSOF_1.4.v_l00663_S_V2.pdf">https://indicators.ic.nhs.uk/download/Outcomes20Framework/Specification/NHSOF_1.4.v_l00663_S_V2.pdf</a> - Health Services - Individuals - Smokers</td>
<td></td>
</tr>
</tbody>
</table>

Various tools exist that are appropriate for use in different circumstances, including:
- Nottingham Health Profile
- WHO Quality of Life Scale
- Quality of Life Index

The WHO Quality of Life Scale is available here: [http://www.who.int](http://www.who.int)

Various adapted versions of the Quality of Life Index have been created, for example for arthritis patients. More details are available here: [http://www.uic.edu/orgs/qli/](http://www.uic.edu/orgs/qli/)

-People with longstanding illnesses or disabilities
-Health services
-Individuals
-Families

The Quality of Life Index contains a Health and Functioning subscale which would be particularly useful in the context of measuring physical health.

A comprehensive guide to measuring health using questionnaires and surveys is available here: [http://a4ebm.org/sites/default/files/Measuring%20Health.pdf](http://a4ebm.org/sites/default/files/Measuring%20Health.pdf)
| Improved functional independence | Rate of employment of people with long term conditions | Data regarding employment rates of those with long term conditions is collected via the Labour Force Survey | Data is published through the ONS: http://www.ons.gov.uk/ons/guide-method/surveys/list-of-surveys/survey=Labour+Force+Survey
-Families
-Individuals
-Local community/residents | Change in functional independence |
| Score on tools to assess ability to conduct activities of daily life | Various tools exist to measure people’s ability to conduct daily activities, including:  
Edmonton Functional Assessment Tool – for use with patients with cancer  
Katz Index of Independence in Activities of Daily Living  
Karnofsky Performance Scale – often used to determine appropriateness of hospital referral | These tools are available through the National Palliative Care Resource Centre:  
http://www.npcrc.org | These tools are applicable to different stakeholder groups. It is important a tool appropriate to the assessee is selected. |
<p>| Level of social services care accessed | The government monitors the number of adults of all ages per 100,000 population that are assisted directly through social services that have been assessed/care planned. This includes those supported through services via grant funded organisations. Social Care and Mental Health Indicators: <a href="http://www.ic.nhs.uk/pubs/socmhi09-10">http://www.ic.nhs.uk/pubs/socmhi09-10</a> | Social Care and Mental Health Indicators from the National Indicator Set - 2009-10 -Health Services -Families -Individuals -Local community/residents |
| Reduced time spent in hospital (links to patients feeling happier/less anxious at home leading to independence being maintained for longer) | Average time spent in hospital per person | Length of stay indicators are based on the analysis of Hospital Episode Statistics (HES) data. The Information Centre for Health and Social Care <a href="http://www.nhs.uk/scorecard/Pages/IndicatorFacts.aspx?MetricId=4&amp;OrgType=5">http://www.nhs.uk/scorecard/Pages/IndicatorFacts.aspx?MetricId=4&amp;OrgType=5</a> | -Health Services -Families -Individuals -Local community/residents |
|  |  | HES data refer to consultant episodes (the continuous period during which the patient is under the care of one consultant) and admissions or “spells”. The data are filtered so that the indicator includes only admissions where the patient was aged 19 years or older. |</p>
<table>
<thead>
<tr>
<th>Reduced recovery time after illness/injury</th>
<th>Time taken to increase (reduce) score on survey tool designed to measure health</th>
</tr>
</thead>
</table>
| Various tools exist that are appropriate for use in different circumstances, including: | SF-36 and SF-12 are available through license here: [http://www.sf-36.org/](http://www.sf-36.org/)
The Health Utilities Index is available here: [http://www.healthutilities.com/](http://www.healthutilities.com/)
| - Short Form 36 Health Survey (SF-36)  
- Short Form 12 Health Survey (SF-12)  
- Health Utilities Index  
- The Duke Health Profile | - People with longstanding illnesses or disabilities  
- Health services  
- Individuals  
- Families |
| A comprehensive guide to measuring health using questionnaires and surveys is available here: [http://a4ebm.org/sites/default/files/Measuring%20Health.pdf](http://a4ebm.org/sites/default/files/Measuring%20Health.pdf) |

Using these indicators would involve pre- and post-testing using the selected measurement tool.

<table>
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<tr>
<th>Time taken to increase (reduce) score on survey tool designed to assess ability to conduct daily activities</th>
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<td>Various tools exist to measure people’s ability to conduct daily activities, including:</td>
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<tr>
<td>- Edmonton Functional Assessment Tool – for use with patients with cancer</td>
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<td>- Katz Index of Independence in Activities of Daily Living</td>
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<tr>
<td>- Karnofsky Performance Scale – often used to determine appropriateness of hospital referral</td>
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<tr>
<td>These tools are available through the National Palliative Care Resource Centre: <a href="http://www.npcrc.org">http://www.npcrc.org</a></td>
</tr>
</tbody>
</table>
| - Health Services  
- Families  
- Individuals  
- Local community/residents |
| These tools are applicable to different stakeholder groups. It is important a tool appropriate to the assessee is selected. |

Using these indicators would involve pre- and post-testing using the selected measurement tool.
| Improved general physical health | Improved general physical health | Score on self-assessment survey tools designed to measure health | Various tools exist that are appropriate for use in different circumstances, including: | SF-36 and SF-12 are available through license here: [http://www.sf-36.org/](http://www.sf-36.org/)
The Health Utilities Index is available here: [http://www.healthutilities.com/](http://www.healthutilities.com/)
The Duke Profile is available here: [http://healthmeasures.mc.duke.edu/images/DukeForm.pdf](http://healthmeasures.mc.duke.edu/images/DukeForm.pdf) | - People with longstanding illnesses or disabilities
- Health services
- Individuals
- Families |
| Improved physical fitness | Level of physical activity | Various tools have been developed to measure the level of physical activity undertaken, including: | The General Practice Physical Activity Index is available through the Department of Health here: [http://www.dh.gov.uk/en/PublicationsandStatistics/Publications/PolicyAndGuidance/DH_063812](http://www.dh.gov.uk/en/PublicationsandStatistics/Publications/PolicyAndGuidance/DH_063812) |
Questions included in the PASE are available here: [http://www.framinghamheartstudy.org/share/protocols/bmd1_7s_protocol.pdf](http://www.framinghamheartstudy.org/share/protocols/bmd1_7s_protocol.pdf) | - Health Services
- Individuals | These surveys measure a wider definition of health than just physical and include questions related to social and mental wellbeing. A comprehensive guide to measuring health using questionnaires and surveys is available here: [http://a4ebm.org/sites/default/files/Measuring%20Health.pdf](http://a4ebm.org/sites/default/files/Measuring%20Health.pdf) |
| Change in body composition | BMI | The BMI is calculated using the following equation: 
\[
    \text{BMI} = \frac{\text{Weight (kg)}}{\text{Height}^2 (\text{m}^2)}
\]
Overweight people are defined as having a BMI of 25 to 30. | The BMI of the UK adult population is estimated using data collected through the Health Survey for England. Child data is collected through the National Childhood Measurement Programme: [http://www.dh.gov.uk/en/PublicationsandStatistics/Publications/PublicationsPolicyAndGuidance/DH_133671](http://www.dh.gov.uk/en/PublicationsandStatistics/Publications/PublicationsPolicyAndGuidance/DH_133671) | -Health Services -Children -Individuals | The proportion of GP patients considered overweight according to their BMI is also monitored. |
<p>| Improved nutritional status | Percentage of household food energy derived from saturated fatty acids | The Family Food module of the Living Costs and Food Survey collects detailed quantity and expenditure information on food and drinks household purchases and itemised lists of food and drink eating out purchases for use by Defra | Data are available from the Office or National Statistics or DEFRA: <a href="http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/datasets/">http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/datasets/</a> | -Health Services -Individuals -Families | Data presented here are rolling three-year weighted averages of the percentages. The three-year weighted averages are derived by weighting the estimates for each year by the sample size. For more details see the methodological note available at: <a href="http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/method/">http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/method/</a> |</p>
<table>
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<tr>
<th>Data枌et</th>
<th>Availability</th>
<th>Methodology</th>
<th>Notes</th>
</tr>
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<tbody>
<tr>
<td>Fruit and vegetable consumption</td>
<td>The Family Food module of the Living Costs and Food Survey collects detailed quantity and expenditure information on food and drinks household purchases and itemised lists of food and drink eating out purchases for use by Defra</td>
<td>Data are available from the Office or National Statistics or DEFRA: <a href="http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/datasets/">http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/datasets/</a></td>
<td>Data presented here are rolling three-year weighted averages of the percentages. The three-year weighted averages are derived by weighting the estimates for each year by the sample size. For more details see the methodological note available at: <a href="http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/method/">http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/method/</a></td>
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<td>The Family Food module of the Living Costs and Food Survey collects detailed quantity and expenditure information on food and drinks household purchases and itemised lists of food and drink eating out purchases for use by Defra</td>
<td>-Health Services -Individuals -Families</td>
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</table>
| Nutritional status | Clinicians use various measures to assess nutritional status, including:  
- Weight  
- Stature (length or height)  
- Head circumference  
- Arm measures  
- Anthropometrics  
For the Elderly, the Mini Nutritional Assessment – Short Form (MNA-SF) can be used.  
The MNA-SF is available here: [http://www.mna-elderly.com/forms/mna_guide_english_sf.pdf](http://www.mna-elderly.com/forms/mna_guide_english_sf.pdf)  
- Health Services  
- Individuals  
- Families |
<p>| Improved perception of ease of access to healthcare | Response to question regarding how easy it is to access relevant healthcare | The ‘Perceptions of Healthcare’ survey gathered data from patients in 12 European countries on a range of healthcare perspectives. The following question is included: “On a scale of 1-10, how would you rate [the convenience of obtaining the healthcare you need] these days if a rating of 10 means excellent and 0 means very poor”. | A summary of findings can be found here: <a href="http://www.healthfirsteurope.org/uploads/Modules/Newsroom/Patient%20Survey%20Report.pdf">http://www.healthfirsteurope.org/uploads/Modules/Newsroom/Patient%20Survey%20Report.pdf</a> | People with longstanding illnesses or disabilities | Health services | Individuals | Families |
| Improved access to healthcare | Increased level of patient involvement in decision making | Score on tool to measure extent of patient involvement in clinical decisions | OPTION is tool that has been developed to measure the extent to which clinicians involve patients in decision making | The full tool is available for download here: <a href="http://www.optioninstrument.com/">http://www.optioninstrument.com/</a> | Health Services | Families | Individuals |</p>
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<tr>
<td>Treatment waiting</td>
<td>The Department of Health publishes data regarding:</td>
<td>Data is available here:</td>
<td>-Health Services</td>
</tr>
<tr>
<td></td>
<td>Hospital inpatient waiting list information on patients who are waiting to be admitted for treatment</td>
<td></td>
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<tr>
<td>Straight line distance to nearest hospital</td>
<td>- The Co-operation and Competition panel used this measure in the following analysis of which factors influence patient choice of NHS hospital:</td>
<td><a href="http://www.cccpanel.org.uk/content/publication_documents/Working_Paper_4_1.pdf">http://www.cccpanel.org.uk/content/publication_documents/Working_Paper_4_1.pdf</a></td>
<td>-Health Services</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>-Individuals</td>
</tr>
<tr>
<td>Increased rate of GP registration</td>
<td>Proportion of population registered at a General Practice</td>
<td>The Office of National Statistics compiles and publishes various statistics on General Practice</td>
<td>Various data is available here: <a href="http://www.statistics.gov.uk/hub/health-social-care/specialist-health-services/general-practice-services">http://www.statistics.gov.uk/hub/health-social-care/specialist-health-services/general-practice-services</a></td>
</tr>
</tbody>
</table>
Appendix

Suggested methodology

Research:
- Consult colleagues and existing internal research
- Desk/internet research for shared measurement in area, and academic, service delivery and policy literature.
- Interviews with sector experts (approx 2 per issue area)
- Follow-up research: academic, service delivery and policy literature
- Populate framework