The SROI Network

OUTCOMES MAP

PHYSICAL HEALTH

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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[1], 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.[2] 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 y 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
  - o Mortality statistics
  - o Living Costs and Food Survey
- NHS Information Centre: http://www.ic.nhs.uk
  - o NHS Outcomes Framework
  - o Hospital Episode Statistics
  - o Social and Mental Health Indicators
- National Institute for Health and Clinical Excellence
  - o 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

Key Outcomes	Specific Outcome	Indicators	Existing Measures	Sources & Use	Stakeholders (tagging)	Notes
Reduced likelihood of premature death from illness, disease or medical condition	Reduced likelihood of premature death from illness, disease or medical condition	Overall mortality rate	The Office of National Statistics (ONS) collates mortality rate data which can be broken down by age group, geographic area and cause of death	Data is available through the ONS website: http://www.statistics.gov.uk/hub/population/deaths/mortality-rates	- Health Services - Individuals	
		Age-standardised mortality rate	The ONS calculates age-standardised mortality rate annually	Data is available through the ONS website: http://www.statistics.gov.uk/hub/population/deaths/mortality-rates	- Health Services - Individuals	
		Infant mortality rate	The ONS collates infant mortality rate data	Data is available through the ONS website: http://www.statistics.gov.uk/hub/population/deaths/mortality-rates	- Health Services - Individuals	
	Reduced likelihood of death from cardiovascular disease	Under 75 mortality rate from cardiovascular disease	The NHS Collects data regarding the mortality rate from cardiovascular disease	NHS Outcome Framework: Information sources from the Office for National Statistics (ONS) mortality data and ONS mid-year population estimates.	- Health Services - Individuals - Smokers	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.

| | | Score on tools to measure risk of cardiovascular disease | 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:

http://www.nice.org.uk/nicemedia/live/13520/55454/55454.pdf | -Health Services
-Individuals | ASSIGN is a Scotland only assessment tool.

The National Centre for Health and Clinical Excellence provides guidelines on how to use the tools mentioned:

http://www.nice.org.uk/nicemedia/live/13520/55454/55454.pdf |
| | | Number of people with newly diagnosed angina | NICE collects data regarding angina diagnoses | This data is available from NICE through the Primary Care Quality and Outcomes Framework. | -Health Services
-Individuals
-Older people | 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. |

		Number of hospital stays related to cardiovascular disease in the UK	The NHS records details of all admissions to NHS hospitals in England	This data is available via Hospital Episode Statistics (HES): www.heslonline.nhs.uk	-Health Services -Individuals -Smokers	
		Annual number of Percutaneous Coronary Intervention (PCI) procedures conducted in the UK	The British Heart Foundation collects data via the British Heart Foundation Health Promotion Research Group regarding rates of PCI procedures.	This data is available in a British Heart Foundation report, 'Coronary Heart Disease Statistics 2012'	-Health Services	
		Annual number of Coronary Artery Bypass Graft (CABG) procedures conducted in the UK	The British Heart Foundation collects data via the British Heart Foundation Health Promotion Research Group regarding rates of CABGs	This data is available in a British Heart Foundation report, 'Coronary Heart Disease Statistics 2012'	-Health Services	
	Reduced likelihood of death from respiratory disease	Under 75 mortality rate from respiratory disease	The NHS collects data regarding number of under 75s dying from respiratory disease	NHS Outcome Framework: Office for National Statistics (ONS) mortality data and ONS mid-year population estimates.	-Health Services -Individuals -Smokers	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.

		Rate of deaths due to chronic lower respiratory diseases	The Office for National Statistics released a report collecting data relating to the rate of deaths due to respiratory diseases.	Office for National Statistics, Deaths Registered in England and Wales in 2011, by cause: http://www.ons.gov.uk/ons/dcp171778_284566.pdf	-Health Services -Individuals -Smokers	
		Number of years of life lost due to mortality from asthma	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.	Data is available at the NHS Information Centre website: https://indicators.ic.nhs.uk/download/NCHOD/Specification/Spec_23H_027CR_10_V1.pdf	-Health Services -Individuals	
		Number of hospital stays related to asthma disease in the UK	The NHS records details of all admissions to NHS hospitals in England	This data is available via Hospital Episode Statistics (HES): www.heslonline.nhs.uk	-Health Services -Individuals -Smokers	

| | | 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:

http://www.pulmonaryrehab.com.au/index.asp?page=22 | -Health Services
-Individuals
-Smokers | 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. |
| | Reduced likelihood of death from liver disease | 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
-People with substance misuse problems | |

		Mortality rate due to Hepatitis C	The Health Protection Agency has collected data regarding Hepatitis C in the UK	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. http://data.parliament.uk/DepositedPapers/Files/DEP2012-1428/PQ121471.pdf	-Health Services -People with substance misuse problems	
		Average number of alcoholic units consumed each week Maximum daily amount of alcohol (in units) consumed last week Proportion of population drinking more than recommended 21 units for men and 14 units for women	The General Lifestyle Survey includes questions on alcohol consumption amongst adults Data relating to these indicators are calculated on the basis of response to questions regarding the frequency of consumption of various alcoholic drinks Data can be broken down by geographic area and respondent demographics	Statistics and reports are published by the Office of National Statistics: http://www.ons.gov.uk/ons/rel/ghs/general-lifestyle-survey/index.html 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.	- Young people - Pregnant women - Health services	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.

	Reduced likelihood of death from cancer	Proportion of deaths as a result of cancer	Cancer Research have analysed the proportion of all deaths as a result of cancer.	Cancer Research has used data from the Office for National Statistics Mortality Statistics: Deaths registered in 2010, England and Wales 2011 London: National Statistics http://www.cancerresearchuk.org/cancer-info/cancerstats/mortality/age/uk-cancer-mortality-statistics-by-age	-Health Services -Individuals
		Mortality rate from cancer between 20 and 50 years	Cancer Research has collated data regarding the number of cancer related deaths that occur between the ages of 25-50	Cancer Research has used data from the Office for National Statistics Mortality Statistics: Deaths registered in 2010, England and Wales 2011 London: National Statistics http://www.cancerresearchuk.org/cancer-info/cancerstats/mortality/age/uk-cancer-mortality-statistics-by-age	- Health Services - Individuals

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		Under 75 mortality rate due to all cancers	The NHS collects data regarding the mortality rate from all cancers.	NHS Outcome Framework: Information sources from the Office for National Statistics (ONS) mortality data and ONS mid-year population estimates. https://indicators.ic.nhs.uk/download/NCHOD/Specification/Spec_11D_072CR_10_V1.pdf	-Health Services	
		Proportion of those with diagnosed breast cancer surviving five years after diagnosis	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.	NHS Outcome Framework: Information sources from the Office for National Statistics (ONS): https://indicators.ic.nhs.uk/download/Outcomes%20Framework/Specification/NHSOF_1.4.iv_I00662_S_V2.pdf	-Health Services -Individuals - Women	

		Proportion of those with diagnosed lung cancer surviving five years after diagnosis	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.	NHS Outcome Framework: Information sources from the Office for National Statistics (ONS): https://indicators.ic.nhs.uk/download/Outcomes%20Framework/Specification/NHSOF_1.4.vi_I00664_S_V2.pdf	-Health Services -Individuals -Smokers	

| | | Proportion of those with diagnosed breast cancer surviving one year after diagnosis | 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. | NHS Outcome Framework: Information sources from the Office for National Statistics (ONS):

https://indicators.ic.nhs.uk/download/Outcomes%20Framework/Specification/NHSOF_1.4.iii_I00661_S_V2.pdf | -Health Services
-Individuals
-Women | |
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		Proportion of those with diagnosed lung cancer surviving one year after diagnosis	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.	NHS Outcome Framework: Information sources from the Office for National Statistics (ONS): https://indicators.ic.nhs.uk/download/Outcomes%20Framework/Specification/NHSOF_1.4.v_I00663_S_V2.pdf	- Health Services -Individuals -Smokers	
Improved/ maintained quality of life	Improved/ maintained overall quality of life	Score on self-assessment survey tools designed to measure overall quality of life	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 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/	-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

	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.html?survey=Labour+Force+Survey NHS Outcomes Framework: Labour Force Survey, Office for National Statistics https://indicators.ic.nhs.uk/download/Outcomes%20Framework/Specification/NHSOF_2.2_I00707_S_V3.pdf	-Health Services -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 | -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. |
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		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 from the National Indicator Set - 2009-10	Social Care and Mental Health Indicators: http://www.ic.nhs.uk/pubs/socmhi09-10	-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 http://www.nhs.uk/scorecard/Pages/IndicatorFacts.aspx?MetricId=4&OrgType=5	-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.

	Reduced recovery time after illness/injury	Time taken to increase (reduce) score on survey tool designed to measure health	Various tools exist that are appropriate for use in different circumstances, including: - Short Form 36 Health Survey (SF-36) - Short Form 12 Health Survey (SF-12) - Health Utilities Index - The Duke Health Profile	SF-36 and SF-12 are available through license here: http://www.sf-36.org/ The Health Utilities Index is available here: http://www.healthutilities.com/ The Duke Profile is available here: http://healthmeasures.mc.duke.edu/images/DukeForm.pdf	-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 Using these indicators would involve pre- and post- testing using the selected measurement tool.
		Time taken to increase (reduce) score on survey tool designed to assess ability to conduct daily activities	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	-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: - Short Form 36 Health Survey (SF-36) - Short Form 12 Health Survey (SF-12) - Health Utilities Index - The Duke Health Profile	SF-36 and SF-12 are available through license here: http://www.sf-36.org/ The Health Utilities Index is available here: http://www.healthutilities.com/ The Duke Profile is available here: http://healthmeasures.mc.duke.edu/images/DukeForm.pdf	-People with longstanding illnesses or disabilities -Health services -Individuals -Families	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
	Improved physical fitness	Level of physical activity	Various tools have been developed to measure the level of physical activity undertaken, including: - General Practice Physical Activity Index - Baecke Physical Activity Questionnaire - Framingham Physical Activity Index Other tools have been designed for specific stakeholder groups, including the Physical Activity Scale for the Elderly (PASE)	The General Practice Physical Activity Index is available through the Department of Health here: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_063812 Questions included in the PASE are available here: http://www.framinghamheartstudy.org/share/protocols/bmd1_7s_protocol.pdf	-Health Services -Individuals	

Change in body composition	BMI	BMI is calculated using the following equation: $$BMI = \frac{Weight\ (kg)}{Height^2\ (m^2)}$$ 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	-Health Services -Children -Individuals	The proportion of GP patients considered overweight according to their BMI is also monitored.
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: http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/datasets/	-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: http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/method/

		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: http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/datasets/	-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: http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/method/	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
		Fruit and vegetable consumption	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: http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/datasets/	-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: http://www.defra.gov.uk/statistics/foodfarm/food/familyfood/method/

		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	-Health Services -Individuals -Families	
Increased optimism about illness (links to a change in mental health)	Increased perception of control over illness	Score on tool to assess patients' perception of the control they have over their illness	The Revised Illness Perception Questionnaire (IPQ-R) measures various aspects of patients' perceptions regarding their illness and treatment	Academic paper available here: http://fmhs-webprd.fmhs.auckland.ac.nz/som/psychmed/petrie/_docs/2002_IPQ-R.pdf Questionnaire available here: http://www.uib.no/ipq/	-People with longstanding illnesses or disabilities -Health services -Individuals -Families	
	Increased level of optimism about illness	Score on tool to assess patients' optimism about their illness	The Revised Illness Perception Questionnaire (IPQ-R) measures various aspects of patients' perceptions regarding their illness and treatment	Academic paper available here: http://fmhs-webprd.fmhs.auckland.ac.nz/som/psychmed/petrie/_docs/2002_IPQ-R.pdf Questionnaire available here: http://www.uib.no/ipq/	-People with longstanding illnesses or disabilities -Health services -Individuals -Families	

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	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: http://www.healthfirst europe.org/uploads/ Modules/Newsroom/ Patient%20Survey%2 0Report.pdf	-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: http://www.optioninstr ument.com/	-Health Services -Families -Individuals	

| | | Reduced waiting times for medical treatment | Emergency medical vehicle response times | The Department of Health compiles and publishes various data regarding the performance of the ambulance service. This includes vehicle response times. | Data for England is published here:

http://mediacentre.dh.gov.uk/2012/11/02/statistical-press-notice-ambulance-quality-indicators-monthly-update-for-england-3/

Relevant frameworks include 'Ambulance Systems Indicators' and 'Ambulance Clinical Outcomes'. | -Health Services
-Individuals | Performance statistics on ambulance services in other countries of the UK can be found at:

Wales: http://wales.gov.uk/topics/statistics/headlines/health2012/120307/?lang=en

Scotland: http://www.scottishambulance.com/Performance/Default.aspx

Northern Ireland: http://www.niamb.co.uk/docs/corporate_info.html and http://www.niamb.co.uk/docs/corporate_info_trust.html |
| | | Reduced waiting times for medical treatment | Hospital Accident and Emergency waiting times | The Department of Health compiles and publishes various data regarding Accident and Emergency departments. This includes average waiting times. | Data is available here:

http://www.dh.gov.uk/en/Publicationsandstatistics/Statistics/Performancedataandstatistics/AccidentandEmergency/index.htm | -Health Services
-Individuals | |

		Treatment waiting list length	The Department of Health publishes data regarding: - Hospital outpatient waiting times for 1st outpatient appointments following GP referral Hospital inpatient waiting list information on patients who are waiting to be admitted for treatment	Data is available here: http://www.dh.gov.uk/en/Publicationsandstatistics/Statistics/PerformancedataandstatisticsHospitalWaitingTimesandListStatistics/index.htm	-Health Services -Individuals	
		Straight line distance to nearest hospital	-	The Co-operation and Competition panel used this measure in the following analysis of which factors influence patient choice of NHS hospital: http://www.ccpanel.org.uk/content/publication_documents/Working_Paper_4_1.pdf	-Health Services -Individuals	

	Increased rate of GP registration	Proportion of population registered at a General Practice	The Office of National Statistics compiles and publishes various statistics on General Practice	Various data is available here: http://www.statistics.gov.uk/hub/health-social-care/specialist-health-services/general-practice-services	-Health Services -Individuals	

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