Introduction

What is this toolkit for?

The aim of this toolkit is to make evaluation of the health and wellbeing impacts of affordable warmth schemes easier and more effective. Affordable warmth schemes come in many different forms, and to provide flexibility the toolkit does not specify a single, one-size-fits-all process. Instead, we give information, advice, and a set of tools.

Who is the toolkit for?

The toolkit is for local organisations who manage affordable warmth schemes, and their partners. Schemes do not currently need to have a formal relationship with the health sector to be able to benefit from this toolkit. Within local authorities it would be useful for the Director of Public Health and the Director of Housing, and the people they manage.

Why evaluate?

This toolkit focuses on using impact evaluation in order to see if there is a link between an affordable warmth scheme's interventions and health and wellbeing improvements in the recipients of interventions.

This is important for:

- Accountability, for showing that your scheme is contributing to health outcomes.
- Learning, as a basis for understanding how your scheme can contribute more effectively to health outcomes.
- Scheme continuation, by being able to show an association between the scheme and health improvements when bidding for funding.
- Contributing towards fulfilling local authorities' Public Health responsibilities, by understanding the health outcomes of an affordable warmth scheme.
- Providing evidence that the scheme contributes towards the aims of the Joint Strategic Needs Assessment and Public Health Framework.
- Building up a relationship with the health sector.

How should the toolkit be used?

The toolkit is divided into short sections. Each section has links to more detailed information and a number of other resources.

What this toolkit does

This toolkit provides guidance on how to plan and undertake an impact evaluation to understand the effects of an affordable warmth scheme for health and wellbeing.

Impact evaluation looks at whether a programme has made a difference - in terms of achieving the desired outcomes. A health and wellbeing impact evaluation asks specifically about what difference the programme has made to the health and wellbeing of intended beneficiaries.

The toolkit is designed to help you establish an association between interventions and health outcomes, but it will not take you to a level where you can establish that the intervention *caused* the health outcome. For this reason, you should be careful with the language you use in reporting so that you do not over claim effects of the interventions.

This toolkit provides advice on:

- Deciding whether or not to conduct a health and wellbeing impact evaluation
- Planning and designing your evaluation
- Involving the health sector with your evaluation
- Making choices about type of evaluation design
- Choosing the research tools best suited to your evaluation
- What data will you need to collect for a health and wellbeing impact evaluation
- Using ready-made health questionnaires
- Analysing your data
- Other forms of evaluation to consider
- Thinking about ethics, consent and data management
- Reporting with impact
- Signposting to other resources which may be helpful

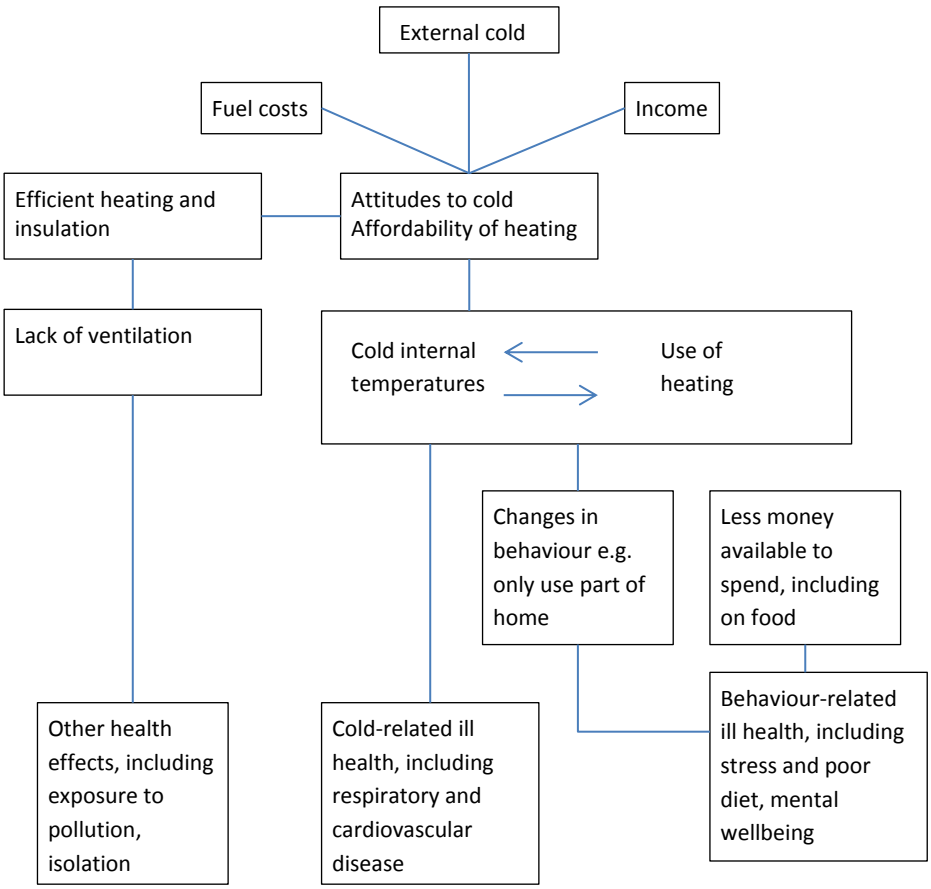
Fuel poverty and health

Fuel poverty and cold homes have direct and indirect adverse health effects which are well recognised in research and policy (see e.g. Cold Weather Plan for England: Making the Case). The government's fuel poverty strategy seeks to cut bills and increase comfort and well-being in the coldest low income homes and to achieve the new statutory fuel poverty target. This vision is one shared by the whole of Government, including local government, by the health services, energy suppliers, charities and community groups.

Whether someone will experience a cold home is impacted by the efficiency of their heating system, how well insulated their home is, whether the person can afford to heat their home and the person's vulnerability to the effects of cold. Low incomes, high fuel costs and a lack of energy efficiency drive fuel poverty.

NICE guideline Excess winter deaths and illness and the health risks associated with cold homes [NG6] sets out the evidence on the impacts of cold homes for health. It identifies certain groups of people living in cold homes as more vulnerable to the associated health problems, including people with existing health conditions, older people (over 65), young children (under 5), pregnant women, people who move in and out of homelessness, people with addictions and recent immigrants and asylum seekers. The guidelines provide an important set of recommendations for health, social care and other practitioners who deal with vulnerable people who may have health problems caused, or exacerbated, by living in a cold home. Figure 1 is adapted from the NICE guidelines.

Figure 1: Factors linking cold homes to excess winter deaths and illness



Locally delivered schemes to tackle the problems of fuel poverty and cold homes, including for vulnerable households, are important in enabling households to achieve health and wellbeing benefits. Table 1 presents a range of types of affordable warmth/fuel poverty interventions intended to lead to improved health and other benefits for households. An actual scheme may comprise a blend of several types of interventions.

Table 1: Typical affordable warmth /fuel poverty schemes

Types of interventions	What is typically offered?
Year-round telephone advice services delivered by third sector bodies, housing associations, local authorities.	Various forms of energy advice e.g. re tariff discounts, debt advice, switching, energy efficiency installations, grants and energy saving behaviours.
Face to face advice or training provision. May include services aimed at frontline workers.	Various - may include home visits, workshops, or specific events. Types of advice similar to above. May include sessions aimed at professionals who work with vulnerable people.
In-home practical help – may be targeted at older people or disabled people e.g. via a 'handyman' service	Practical assistance may be provided with simple measures such as draught proofing windows and doors
GP referrals of vulnerable customers	GPs may have social prescribing schemes through which they refer customer deemed to be vulnerable for energy efficiency advice or efficiency measures. The providers of the prescription may be public health or CCG employees or maybe a third sector provider they are working in partnership with.
Collective switching schemes run by switching services or local authorities	Bringing together a group of people to use their collective buying power to negotiate a cheaper deal from their supplier
Seasonal public health awareness campaigns run by local authority/NHS/other. Also e.g. awareness campaign re. switching	Keeping warm advice and practical help. May include messaging advice services. Switching advice.
Local delivery of national energy efficiency programmes. Also housing association or local authority mass retrofit	Retrofit of energy efficiency installations. May include e.g. boilers, cavity wall or loft insulation.
Multi-agency schemes e.g. to identify vulnerable people.	Sharing information, such as health registers or GP referrals, to target energy advice and assistance.
Creation of 'Warm Zones'	Area-based schemes to target delivery of various energy-efficiency services.

This toolkit is intended to be flexible for using to plan and conduct a health impact evaluation for different types of schemes and for use by different types of organisations. The above set of examples is not exhaustive.

Other relevant toolkits and guidance to be aware of include:

The Magenta book is the core government guidance for all UK government departments on evaluation. It sets out good practice in designing and managing evaluation, outlines a number of approaches to evaluation, and provides advice on how to interpret and present evaluation results. **Fuel poverty and health: a guide for primary care organisations, and public health and primary care professionals:** This aims to help strategic planners and health professionals, in partnership with local authorities, to design and implement local strategies to reduce fuel poverty.

Abacus Health The Abacus team from Sheffield Hallam University aims to assist Health and Wellbeing Boards in making decisions relating to fuel poverty and excess winter death outcomes. They have produced a commissioning module and a delivery module to measurably reduce fuel poverty.

Avon Primary Care Research Collaborative Evaluation Toolkit This toolkit is aimed at commissioners within the health sector to help plan a robust evaluation. It includes a checklist for planning and an evaluation process flow chart, as well as other templates and tools.

HACT's Standards of Evidence: The HACT (Housing Associations Charitable Trust) and partners have developed standards for producing and using evidence in the housing sector. This may be particularly useful for schemes run by housing associations or in partnership with a housing association. A useful worked example for energy efficiency can be found here.

Deciding whether to conduct a health impact evaluation

Impact evaluations take time and money. Before committing to it, it is worth first stopping to think about your resources [see Resource planning for your evaluation] and whether it is worthwhile conducting an impact evaluation at this time. Things to think about are:

- Is it reasonable to expect that the scheme has made a difference to the health of intended beneficiaries?
- Would an impact evaluation be useful and used? E.g. to help identify opportunities to improve the scheme or to help secure funding in the future?
- Is it feasible to measure or assess impact? Is suitable data available? Are plans in place to collect data? Has suitable pre-intervention data been collected? An evaluation that cannot compare the situation pre and post intervention is of limited value.
- Are there sufficient dedicated resources to project manage and to carry out the evaluation, and an identifiable person with the necessary skills and capacity to engage beneficiaries and to collect and record data systematically?
- Is an impact evaluation the most appropriate type of evaluation for your intended purpose?

Table 2: Decision guide on whether or not to conduct an impact evaluation.

Issue	Question	If answer is 'No'
Reasonable to expect health outcomes	Can the intervention activities be reasonably expected to lead to the intended health outcomes within the timeframe being studied?	Focus efforts on rethinking the intervention to increase its potential effectiveness OR delay evaluation until more appropriate time.
What you want to find out from the evaluation	Do you mainly want to learn what changes in health or wellbeing are associated with the intervention? Or are you also/more interested in learning how the scheme was delivered or why changes were (or weren't) achieved?	Consider whether a different evaluation approach may be more appropriate, such as a process evaluation, to understand how the intervention was delivered. Impact and process evaluations can be delivered together.
Intended use and timing	Are key stakeholders, such as funders, scheme operators (e.g. a Housing Association) and scheme beneficiaries, agreed on value of evaluating at this time?	Do not proceed with evaluation unless can negotiate agreement amongst key stakeholders.
Intended use and timing	Is the timing right to inform important decisions about the programme?	Do not proceed with evaluation unless there are other sound reasons to do so.

Resources	Are there adequate resources dedicated for use in the evaluation, including good quality data and/or time and money to collect more and an individual with the practical skills to engage with beneficiaries and the project management skills to build a data base to record the data?	Attempt to resolve resourcing or data quality issues before proceeding. Consider outsourcing or delaying evaluation. If limits relate to analysis capability, consider proceeding with data collection now, for analysis at a later date.

Planning and designing your evaluation

Planning and designing your evaluation involves thinking about the process of doing the evaluation as a discrete project. It also involves thinking about what changes or benefits you want to measure. It is important to plan for an evaluation at the point of planning your scheme. This will make sure that you can compare the pre and post intervention situation. If you do not plan at this point, it makes it far harder to undertake a good quality evaluation.

In the case that a decision to evaluate is made after the intervention has already commenced or even been completed, it is important to think through what is achievable, particularly if you have missed the opportunity to conduct a pre-interview questionnaire, or to make sure suitable monitoring data is being collected systematically. It may still be possible to do an impact evaluation, but it will be a struggle to catch up and the value of any evaluation will be reduced.

In planning, you need to consider your resources. Your available resources (time, money, skills) will influence your evaluation scope and design. There are resource implications in certain design choices. Data protection, data sharing and ethics issues also have resource implications. 'Resource planning for your evaluation' has some more detailed advice on resource considerations [***see Resource planning for your evaluation***]. It will help you think about:

- What budget is needed for an impact evaluation?
- What scope and methodological adjustments may be needed to fit with your resources?
- What can be delivered within the available timeframe for the evaluation?
- What are some of the resourcing implications of data protection and data sharing and methodological choices?

The RUFDATA approach to evaluation planning is a useful tool to help [***see Resource planning for your evaluation***] in preparing to evaluate. It asks a set of questions which will help frame the evaluation.

Consider the risks to the evaluation. Risks could include short timescales or lack of participation from beneficiaries. List the risks in an evaluation risk register, with a score out of 3 for likelihood (with 3 being most likely) and for potential impact (with 3 being high impact). Multiply the two scores together to get a rating for each risk. The higher the risk rating, the more important it is to have a plan to mitigate the risk. Identify what actions you can take to avoid or minimise the risks. Remember to refer back to your risk register at key points in the evaluation process, including to identify any newly arising risks and to make sure that measures to minimise risks have been actioned.

Who should do the evaluation? Who should oversee it?

An impact evaluation needs somebody to plan it, manage it and needs staff to conduct specific activities [***see Resource planning for your evaluation*** for more on this]. You may decide that the evaluation can be done in-house by a named member of staff, using other staff or volunteers to help with data collection activities. Or you may decide to appoint an external evaluator (e.g. a university

or an evaluation specialist) to do the evaluation – again, this may still involve staff or volunteer time to help with certain tasks. It will also require a named person to oversee and be a point of reference for the external evaluator. If you decide to appoint an external evaluator, you will need to prepare a Terms of Reference (TOR). [See ***What should a TOR include?***]

Evaluation design

The evaluation design identifies the overall purpose, the scope and key evaluation questions of your health impact evaluation.

Purpose

An evaluation can have a range of purposes and so it is important to agree on why you are carrying out the evaluation. This will help to ensure that resources are focused on the correct area and that the desired outcomes are achieved.

Stakeholder priorities

Have you considered the requirements of stakeholders and audiences such as potential funders? Are there specific things that they would like to know regarding the health and wellbeing impacts of your scheme and their importance? [***See Stakeholder assessment***]

- Funders are likely to require an impact evaluation to demonstrate value for money and that that the scheme is achieving outcomes in line with their priorities.
- The scheme manager may want to use the evaluation to justify continuation of the scheme and identify opportunities to improve the scheme. This may include looking at how it can better contribute to certain health outcomes.
- Local health partners, such as a GP practice, may particularly want to understand which health and wellbeing issues the scheme is most strongly linked with.

Engaging with the health sector

Engaging with the health service early in your evaluation design will give you the best chance of evaluating your project in a way that highlights the impact your warm homes intervention is having on health outcomes.

The starting point for doing this is to take some time to understand how commissioning in the health and social care services work. For a helpful diagram that illustrates this [***see Understanding Health and Social Care Commissioning]***.

If you currently do not have a relationship with the health sector, it will take time to build up a relationship. This may well not be possible within the timescale of your evaluation. Other affordable warmth schemes have first engaged with the health sector in terms of referrals, and are building up the relationship to include health data for evaluation.

For this reason we have provided information about engaging with the health sector both to start getting referrals and to get data for evaluation.

Experience has shown that there is a great deal of local variation in terms of the best way to engage. Sometimes going straight to the main commissioning bodies is most successful, and sometimes there may be individual GPs or a practice manager who take an interest in making referrals to an affordable warmth scheme and perhaps helping to provide data for an evaluation. It is very important to try and get advice on who are the key players locally and what the best approach to take might be in your area. For instance, there may be major funding schemes or other opportunities and initiatives in your area which you can take advantage of.

Getting a consensus amongst interested parties on the purpose of the evaluation will help to focus your efforts and make it more likely that they will take notice and act on the evaluation findings.

Scope

The 'scope' defines the scheme elements being evaluated (the entire scheme or certain interventions), the time frame (e.g. from project start date to a fixed date, or a year's period), the geography (all areas where the scheme is delivered or a particular area). The scope may also identify which health issues are being evaluated and/or which groups of beneficiaries.

Refer back to your programme design

You already know your scheme's objectives, and you probably already have a very good idea of the mechanisms by which your scheme is intended to achieve its objectives. Take some time to set this out in a diagram.

For example, a referral process is set up with a GP. The GP (or practice manager) refers a patient. The patient receives a new boiler through the scheme. The patient uses the boiler and heating controls to warm their home. This results in the patient having a warmer and drier home, which in turn reduces the patient's symptoms of asthma.

Figure 2: A simple logic model

Logic models and the theory of change, which are two ways of logically working through the design of a scheme to show and understand how it attempts to achieve its intended outcomes [***see Logic models and theory of change***], can help with this. You may even have used these to design your scheme in the first place. If you didn't think about the potential health and wellbeing changes associated with the scheme, it is worthwhile doing this in thinking about the focus of the evaluation. Consider which physical and mental health needs the scheme may help with and what changes in health the scheme could contribute to, even if these weren't stated as intended benefits of the scheme. These might include improved relationships within the household, improved ability to cope with daily life, and improved diet [***See Diagrams of links between warm homes and health***].

Scheme interventions

Make sure that you are clear on which interventions (and combinations of interventions) are available to beneficiaries so that you can evaluate which interventions – and which combinations of interventions - lead to good health outcomes. This may require some thought to categorise types of interventions and to differentiate between 'light touch' and more 'in depth' interventions. See the section titled 'Recording and classifying scheme interventions'. You may want to focus the evaluation on only certain interventions.

Who is affected?

Think about the different sub-groups of households amongst your scheme's target beneficiaries. Your impact evaluation can identify whether different types of households are benefiting from your scheme or whether certain groups are missing out. For example, it can help you identify whether the scheme is reaching lone parent households with children, and what difference (or not) this is making for parent's mental health or for children's physical health (e.g. asthma). The importance of involving stakeholders in the process of deciding on the focus of your evaluation is vital where you are using a social return on investment approach (SROI) to evaluation of value for money.

You may choose to focus your evaluation on what impact the scheme is having for a particular type of household. For example, you may want your evaluation to consider whether the scheme is helping older low income households to avoid deterioration in their physical health.

Another decision to make is whether you include indirect beneficiaries as well as direct beneficiaries. Direct beneficiaries are those who benefit directly from activities funded by a scheme (say, an adult with a long term health condition), whereas indirect beneficiaries are those who benefit as a result of the improvements made to the direct beneficiaries (say, a carer who does not live in the household). It is important to determine whether the indirect beneficiaries will be included in your evaluation.

Identifying the key evaluation questions

Refreshing the programme design logic, the mechanisms by which beneficiaries are expected to achieve outcomes, the range of interventions offered and the different sub-groups in your target population, you should have a clearer idea on how you want to focus your evaluation.

You can then define your key evaluation questions. These will further focus the evaluation.

Example key evaluation questions focused on health

- Did the affordable warmth programme achieve the intended health outcomes for target beneficiaries?
- How did health outcomes vary amongst different target beneficiary groups?
- Which combination of interventions is most strongly associated with health outcome improvements?
- How effectively did the affordable warmth advice line contribute to improved health amongst frequent GP service users?
- Did the affordable warmth programme represent good value for money?

This toolkit is here to help you evaluate health and wellbeing outcomes. Alongside this there may be other outcomes that you want to evaluate. It is possible to do an impact evaluation that focuses on both health and other outcomes, with a corresponding set of key evaluation questions. But it is important to make sure the focus is clear and you do not try to answer too many questions.

Choosing which type of evaluation design to use

There are a range of different types of evaluation design which can be used in an impact evaluation.

These vary in terms of:

- Purpose
- The circumstances in which they are suitable
- The types of evidence used
- The degree of certainty about whether the outcomes can be attributed to the interventions – and not to other causes.

Within the health sector and in academic circles, there are important philosophical differences in terms of how you can know whether or not an intervention can be linked to an outcome. In practice, it is important to use an approach that will best help you answer your evaluation questions with the available resources.

Table 3: Types of impact evaluation[1, 2]

Types / forms of evaluation	Circumstances	Type of evidence
Pre-post design	The intended outcomes have been identified at programme design stage. Suitable monitoring data has been collected from the start of the scheme.	Scheme monitoring data. Quantitative data gathered using pre- and post-questionnaire (i.e. before and after client receives intervention. May also include qualitative information e.g. scheme documentation / interviews.
Post-intervention only design A post-intervention design should only be used if a pre-post design is not possible. It makes it harder to be certain of what has changed – and whether it can be attributed to the scheme.	The intended outcomes have been identified at programme design stage. Late decision to evaluate and suitable monitoring data has NOT been collected from the start of the scheme to allow use of a pre-post design.	Post-intervention questionnaire. The questionnaire should be designed to capture changes from the 'pre-intervention' situation as well as data on the 'post-intervention' situation.
Case study design[3]	Case study design may be appropriate where: the	A case study approach can include use of both quantitative and

[1] This table is adapted from Westhorp, G (2015) Realist evaluation DECC Workshop slides. Community Matters Pty Ltd

[2] There is additional guidance on impact evaluation provided in the Magenta Book guidance – "Quality in policy impact evaluation". Available from: www.gov.uk/government/uploads/system/uploads/attachment_data/file/190984/Magenta_Book_quality_in_policy_impact_evaluation__QPIE_.pdf

[3] An article on case study design for project evaluation is www.case.edu/affil/healthpromotion/ProgramEvaluation.pdf

Types / forms of evaluation	Circumstances	Type of evidence
	programme design is unique; where there is unexplained variation in impacts, or where you want to understand how impact was achieved by the programme.	qualitative evidence, including observation, to understand change over time and how this happened. It can produce rich evidence for a narrower focus than other forms of evaluation.
Experimental/quasi-experimental pre-post design	Random (in experimental) or non-random (in quasi-experimental) assignment of households to the intervention group or the control group (who receive no intervention).	Pre- and post- questionnaire Validated health questionnaire or purpose-designed questionnaire. May include qualitative evidence.
Designs which include comparison against the counterfactual. This is possible with all the above design types, even for small impact evaluations.	When there is scope for comparison of the impact measures of interest amongst the beneficiary population with a similar population who were not exposed to the programme.	Experimental design: Collect data for a control group Quasi-experimental: Use data for a created comparison group Non-experimental: Logically construct a hypothetical prediction of what would have happened without the intervention, using the baseline data.

In practice, most local organisations are likely to use a pre-post design using a questionnaire administered before (pre) and after (post) the intervention.

Even for small scale evaluations, it is possible to establish a counterfactual, either by using data for a created comparison group (for example, by comparing health impact measures achieved against published data for a similar local area) or by logically constructing a prediction, using baseline data. For more on counterfactuals in impact evaluation, see the Better Evaluation site. Designs where you are confident in your control group or comparison may not need a 'pre-intervention' measure.

If the scheme has been pre-designed as part of a larger study that includes a 'control' group, then an experimental or quasi-experimental pre-post design can be used. It is highly likely that there will be university involvement in such a study, if an experimental approach is used then their involvement may include managing the random assignment of households to the intervention or the control group.

A pre-post approach can also include collection of qualitative evidence, including document review and interviews with project managers and staff, beneficiaries of interventions and other stakeholders, such as health workers. This can be particularly useful in evaluating why an intervention did or did not achieve the intended outcome. It can also be used to understand the context in which a particular intervention achieved health outcomes for target beneficiaries.

A post-intervention only design (that only uses evidence collected after the intervention) can be used as the 'next-best thing' in the situation where the decision to evaluate comes too late to administer a suitable pre-intervention questionnaire, or where suitable pre-intervention monitoring data has not been collected. This approach will provide less reliable data on what change has happened and how far that change can be associated with the scheme or intervention. It is strongly preferably to use a pre-post design whenever possible. ***See Retrospective Questionnaire Example*** for an example of a post-intervention only survey – which includes questions asking participants to

recall the pre-intervention situation. There are important limitations with this reliance on recall of the 'pre' situation.

In the absence of collection of 'pre' intervention data an alternative option is possible for evaluation of some impacts. The 'post' intervention situation can be compared to a control group who have not received an intervention. This approach is known as a counterfactual evaluation. A counterfactual group must be established by taking a comparison group that is identical to the treatment group, except from the fact it is not subject to the intervention.

Counterfactual evaluation may be prospective or retrospective. Prospective evaluation begins during the design of the intervention and involves collection of data at the baseline point and after the intervention for both the treatment group and the control group. Retrospective evaluations involve collection of data only after the intervention has taken place. For some validated questionnaires that may be published norms allowing a counterfactual evaluation.

Box 1: Some key terms used in evaluation

Counterfactual: What would have happened in the absence of the scheme (or intervention) being evaluated. A good impact evaluation will include recognition that most outcomes are affected by a range of factors, not just the scheme or intervention being evaluated. By comparing the results achieved against those you would expect if the scheme, you can test the extent to which the scheme was responsible for the change.
Survey: A survey is a method of social research and encompasses any measurement procedure that involves asking questions of respondents. Use of a questionnaire as a method of data collection is one means of conducting a survey, but there are other forms of surveys, such as those using interviews.

Sampling: in quantitative research, involves selecting a representative set of units (e.g. individuals or households) from a population. There are different way of sampling, including probability (random) sampling and non-probability (non-random) sampling.

Population: The population of interest, is the set of all units (individuals or households) being investigated and about whom you wish to draw conclusions. For example, all the households who received interventions as part of your scheme delivery.

Random sampling is when the probability of any unit being included in the sample is known and equal. This is mainly used in quantitative methods. If you have a complete list of all the households participating in your scheme, you can select a random sample for inclusion in your study. This allows you to conduct statistical analysis to draw inferences about all the households involved in the scheme (your population of interest). If you don't have a complete list of households involved, it will weaken the sample to population representativeness. Guidance on generating a random sample is provided here, including use of an online random sample generator.

Non-random sampling is used when either:

- For real-life reasons, it is difficult to achieve a random sample; e.g. if you only have consent to re-contact a limited proportion of the households involved.
- Or when you deliberately select participants with particular characteristics or experiences. For example, you want to include households who received a particular combination of interventions delivered by your scheme. Or you want to include households which include children aged under-five.

S**ampling bias** describes the case where certain sections of the population are more likely to be included in a population, thus skewing results. **Non-response bias** can arise in follow-up surveys, where the respondents (who do complete a questionnaire) differ in meaningful ways from non-respondents (who don't complete a questionnaire).

Sample size: This refers to the number of people included in the sample. In general, the larger the number of people included in the sample, the more representative it will be of the population. However, you need to balance this against cost issues. The findings of a small, well-balanced sample can be more useful than the findings from a larger but less well-balanced sample.
An online sample size calculator, such as this one from Survey Monkey, can be useful for calculating sample sizes required for different sizes of populations and confidence levels for use in random sampling. The calculators provide simple guidance but if you have access to a statistician it is preferable to ask their advice.
Qualitative research uses different approaches to **sampling** and does not rely on representativeness or size of sample. Qualitative samples are usually small in size. Sampling is usually based on selection criteria, so that the sample includes cases (individuals or households) that are characteristic of the population (or population subgroup) of interest. The sample should also include a diversity of cases that reflect the variation that exists amongst the population of interest (e.g. in terms of their age or housing situation).

Questionnaire: A questionnaire is a method of data collection. It involves a set of written questions used for collecting information. Sampling decisions (see above) about who is asked to complete the questionnaire are important, as this will affect the quality and usefulness of the data collected using a questionnaire. If

Pre-post design: This is a shortened version of pre-test post-test design, sometimes also referred to before/after design. It is a design where measurement data is collected before and after an intervention. The design means you are able to see the effects of an intervention on a group. In a classic pre-post design, participants are assigned (ideally on a randomized basis) to an intervention group or a (non-intervention) control group. This means that you can measure actual changes for scheme participants. Even where you don't have a But, you will be limited in your ability to know how far any change recorded was due to the scheme intervention and not due to other factors.

Different standards of impact evaluation using a pre-post design

The design of your evaluation will strongly influence your ability to make confident claims that reported health and wellbeing outcomes are associated with the scheme. This will depend on what resources you are able to draw on and your chosen design, including whether you are able to include health data for individuals and whether you are able to compare results against a counterfactual.

The ideal pre-post evaluation will have pre-and post- intervention data from questionnaires administered face to face for a representative sample of cases, will include a suitable counterfactual and will include analysis of health data for those cases, either accessed via a health partner or analysed by a health partner. This is more likely to be possible where you have an established relationship with the health sector or by involving a university with established NHS links.

If you cannot obtain data from health partners, a good standard of evaluation can be obtained by administering a validated health assessment tool (questionnaire) pre and post intervention to your sample, which will allow you to identify a change in health over time. Done correctly this will give a good standard of evaluation. However, there is a resource requirement in administering the questionnaire twice for every household in your sample - and also in analysing the data. For analysis, if you don't feel confident doing this in-house you could commission external support or bring in analytical support through existing relationships, for example with a university or health researcher. Where you can, use volunteers, students or partners to undertake data collection, data entry or other tasks.

If, for practical or financial reasons, a pre-/post- questionnaire can't be used, a compromise could be to administer a questionnaire only once, after the intervention. This will significantly limit your ability to confidently report that a health outcome is associated with the intervention, as you will be asking questionnaire respondents to remember what their health was like at a point in the past, rather than asking them twice how they felt on that day.

The table below summarises the resourcing requirements associated with different data collection methods. In practice, the scheme-specific circumstances and chosen evaluation design will mean that each evaluation may be a hybrid of these various 'levels'.

Table 4: Indicative levels of evaluation and their resourcing requirements

Resource requirement	Data	Capability required	Relationships required	Usability of evaluation findings
Low (one phase only)	Post-intervention only data collection.	Administer questionnaire in one home visit after intervention delivered	External relationships not required, although external analytic support would be useful.	Limited usability as hard to be sure changes reliably reported and if reported changes are due to intervention.

Resource requirement	Data	Capability required	Relationships required	Usability of evaluation findings
Medium (spread over two phases)	Pre-and post-intervention data collection.	Administer questionnaire in two home visits before and after intervention delivered	May require volunteer or partner input to share tasks. Likely to require external analytic support.	Evaluate changes achieved and indicate which reported health and wellbeing changes associated with interventions.
High	Either of 1 or 2, with data from health service.	Collect NHS number from client, along with consent to access data and ethics approval.	Relationship with health partners required for data access. Analytic support from health or academic partners also required.	In addition to (2) above, may be able to link recorded public health outcomes with interventions.

Whichever form of data collection you decide to use, if you do not have resource at this stage to analyse the data, it may still be worth collecting the data with a view to finding resource later to help with the analysis.

Case Study: Derbyshire Healthy Home Programme

The Derbyshire Healthy Home Programme is working with a number of GP practices across Derbyshire to identify vulnerable householders living in fuel poverty with cold sensitive health conditions. The scheme works on the basis of GPs address matching housing and benefit information to lists of patients with cold sensitive health conditions. Anyone found to be in all categories is sent a letter suggesting they contact the programme for assistance. Due to data protection issues GPs are unable to directly share information on appropriate households with the scheme coordinators.

The programme is starting working with The Springs Health Centre in Clowne to evaluate the impact of affordable warmth interventions on a group of 12 patients.

The evaluation project will capture anonymised information about specific interactions with the NHS over the last 12 months and compare this level of interaction throughout the following 12 months after the project has provided affordable warmth solutions.

During this period, energy consumption will be monitored to ensure that residents are not under-heating their home.

It is hoped that the following NHS interactions will be measured:

1. A&E visits where a patient has been into hospital and out again in a day
2. District Nurse visits
3. Pharmaceutical and medication prescriptions
4. Calls to the falls Care Line service
5. Planned daytime hospital admissions
6. Unplanned overnight stays in hospital from:

- A&E, or
- Out of hours service
- Ambulance dispatches

7. Doctor out of hours callouts

Which type of tool should we use to collect information for a health impact evaluation?

There is a variety of tools that can be used to collect information.

Tools to collect quantitative data (data you can count)

Where you want to measure what difference a scheme has made, tools that allow you to collect data that can be counted are extremely useful. They are essential if you want to 'put a number on it' or attribute a financial value to the outcomes.

Questionnaires

It is often impractical to issue a questionnaire to everyone in the population of interest and so it is important to consider fully the sampling process that you will use to target the questionnaire. Getting a representative sample of people to answer your questionnaire is vital ensuring high quality, useful results.

Questionnaires are a very useful tool that allows you to collect information that can be counted, including information on people's attitudes and their perceived health (how good or bad they think their health is) using a scoring system.

E.g. In general, would you say your health is:

Excellent (1)	Very Good (2)	Good (3)	Fair (4)	Poor (5)

By asking this same question pre and post intervention, it is possible to observe if there is a change in how recipients score their health. This is more accurate than doing a post-questionnaire only, where the recipient is asked post-intervention to remember what their health was like pre-intervention.

Questionnaires include a number of questions to ask beneficiaries and may involve some questions that have been validated and some which have not. A validated question is one which has been used and tested over time in terms of its ability to generate reliable and valid findings. ***See validated health questionnaires*** for examples.

Some questions in a questionnaire, or indeed the whole questionnaire, may have been purpose designed specifically to collect the information needed to answer the evaluation questions. When designing such questions it is a good idea to test questions out on a small sample first of all to check their accessibility to the target audience. ***See Booster Fund Questionnaires***, for an example.

Validated health questionnaires
There are some health questionnaires developed by researchers which have been validated, meaning that they have been tested and found to produce reliable results when used on different populations.

We have reviewed the available validated heath questionnaires and have found two that would be most suitable for looking at the health impacts of affordable warmth schemes: these are the EuroQol EQ-5D-5L and the Short Form Health Survey (SF-36). These are described in more detail in ***Validated health questionnaires***.

If your scheme covers specific health conditions or you want to use a more in-depth survey, you may want to review some of the other relevant validated questionnaires. Other validated health questionnaires are also described in ***Validated health questionnaires.***

In practice, you may find that you need to develop a purpose-designed questionnaire that includes questions from a validated questionnaire and additional questions which are specific to your affordable warmth scheme. If you do this, make sure that you refer to the user guidance for the validated questionnaire, in terms of question order.

Questionnaires can be administered in-person or over the phone or-line. In-person questionnaires are generally more effective, and for some client groups, administering the questionnaire over the phone or on-line will not be appropriate. However, telephone and online questionnaires are more economical than in-person questionnaires which require home visits.

It is also important to design your questionnaire so that it is accessible by all groups, as this helps to ensure there is no coverage bias. Particular groups that it may be important to take account of are those with learning difficulties, such as dyslexia, or people with sight difficulties. It may be helpful to consult organisations with experience of working with these groups for advice on making questionnaires as accessible as possible. Simple measures, such as the use of a font known as Read Regular or sans-serif fonts that do not have lines at the end of characters and are known to be easier to be read, can help with accessibility for dyslexic people.

Monitoring data

The monitoring data for the scheme, covering the different interventions and the recipients, is another important source of quantitative data. Monitoring is the routine and systematic collection of data to check scheme progress against plans. The monitoring data can be used in evaluation. Evaluation activity may include additional data collection (e.g. post-intervention questionnaire or project staff interviews) to answer evaluation questions.

Where you use both monitoring data and data from a questionnaire in an evaluation, you will need to think about how you combine the data from both sources, so that you are able to match up monitoring data with questionnaire data for the same households.

Tools to collect qualitative information

Where you want to understand why or how a project has achieved a health impact, tools to collect qualitative information are useful. However, quantitative methods can also include questions about how an intervention worked and questions that allow analysis of why interventions worked.

Qualitative information can also be used to help inform interpretation of quantitative findings.

Interviews

Interviews with the scheme manager or staff can be used to understand contextual questions, such as barriers to achievement of hoped-for health outcomes for beneficiaries. Interviews with beneficiaries can be used to gather more in-depth understanding of what difference an intervention makes for beneficiaries. For example, an interview can explore how living in a cold home affected their mental health and how an intervention has helped them cope. An example of a semi-structured interview guide can be found in ***Qualitative research – example interview guide***.

Focus groups

Focus groups can be used to explore with a group (e.g. a group of advice line workers or a group of people living in private rental homes) their thoughts, including differing and shared views and experiences. For example, this could explore how particular advice messages have proven helpful in enabling householders to change their practices to reduce problems of damp – and to explore what can make it hard to respond to advice appropriately.

Further information on qualitative and quantitative data collection methods [see ***Evaluation – data collection and analysis methods***]

Case study: creation of a database for monitoring and evaluation of 'Warm and Safe Wiltshire' project.

From project set-up, the Warm & Safe Wiltshire partnership planned to evaluate the health and wellbeing impact of their project. They realised an immense amount of data needed to be collected, including sensitive personal data. This included: data on property type and tenure; client specific data; financial data including benefit payments; health conditions; measures installed; and referrals made and outcomes of those referrals. A suitable database needed to be found.

Steps taken to put in place a suitable database

The Wiltshire public health team did not have its own dedicated database, so initially a property database was used to record cases. In working with adult social care, it became apparent that their client database, Care First, provided that vital link to other health services needed by Warm and Safe clients.

Key considerations

New pages were added to the Care First database to collect the right information to monitor outcomes, as well as to provide an easy-to-use system for giving advice over the phone. The Warm and Safe partnership used the Centre for Sustainable Energy's existing energy advice database as a template.

Value as part of the project delivery

Now, healthcare and cold homes information is joined up and stays with the client. Warm and Safe Wiltshire can make direct referrals within the system to healthcare providers, who can see what

activity has been carried out. Customers can self-refer via the social care website.

Importance in helping to build evaluation into the process
It is absolutely vital to think about what information you will need to evaluate the project right at the set up phase, as it is much harder to change once set up. By setting up a cold homes section within the social care database, there will be more opportunities in the future to link cold homes interventions into health outcomes.

What data will you need to collect for a scheme health impact evaluation?

Much of the data you need you will be able to collect yourself, or you may already have collected as part of the scheme delivery and monitoring. You may also want to use data provided by health partners.

Types of data you will need include:

- Data on scheme interventions e.g. type of advice given; energy saving installations made
- Data about scheme beneficiaries and their homes e.g. household size; tenure type; property SAP rating
- Beneficiaries' subjective experience e.g. data on people's views, attitudes and behaviours outcomes that may be early indicators of possible longer term health benefits.
- Health data: this can include data you can collect yourself and data provided by health partners.

The timeframe of the evaluation of your scheme may mean that it is not realistic to establish whether the effect has had a measurable change on someone's general health or on the size of their fuel bill. However, it may be possible to collect data on short term indicators of change, which may be associated with longer term health improvements. These may include subjective data on e.g. whether they feel able to cope with cost of fuel bills.

Recording and classifying scheme interventions

A scheme may have a number of possible interventions. For example, it may offer several types of insulation, heating improvements, advice, and referrals to other services.

You should think carefully about how you classify interventions – for example, advice could range from a leaflet with generic advice to a home energy audit, and so it would be useful to break 'advice' down into different types of advice. This data should be recorded as part of the scheme's monitoring data. It is important to ensure that project staff are briefed on what data they need to record as part of the project's monitoring data. It would also be useful to record information about the condition of the property prior to any intervention. Before beginning the project it is also important to establish a database to record the intervention details in.

It could be useful to sit down with your project team so that advisors who do home visits and talk to people on the phone can generate a list of all the different types of advice that could be given. These should be categorised so that you can gather enough detail without having an unmanageable number of categories. Example categories are:

- Dealing with fuel debt
- Behavioural advice
- Using heating controls
- Getting the most out of a newly installed measure

- Switching energy supplier
- Benefits check

In the case of advice you should also record whether the advice was given on the phone, in the individual's home, or at an outreach event.
You may already be gathering information on intervention type for your funders, and if so your list should be compatible with that, but you will probably need more detail in the list of interventions you use for the evaluation.

For installed measures and referrals, generating a list of interventions is probably quite straightforward.

Different interventions will be combined depending on the needs of the client, and the individual interventions should be recorded, as well as the date of the intervention. It is better for the advisor / caseworker to record the intervention as it may be more difficult to get the same level of specific intervention information from the client in a post-intervention interview / questionnaire.

What you record about your intervention also depends on how much resource you have to analyse the data. For example, if you will only be producing aggregate results for the scheme as a whole, you will only need to describe the number and type of each intervention. But if you want to find out which interventions are most effective, you will need a record of the interventions each client received so that you can link the intervention and the outcome.

The referrals that you make to other services will also have an impact on outcomes for the client and so these should be recorded. If it possible to get information about the outcome of the referral from your partners, this would be useful.

Data about scheme beneficiaries

Data you can collect yourself

This data will be obtained by administering a questionnaire to the client (**usually**) in their own home. Ideally this will take place once pre-intervention and once again post-intervention, but if you have limited resources you may choose to administer one questionnaire following the intervention.

You are likely to have collected some information about scheme beneficiaries as part of your monitoring. You may need to collect information via a questionnaire to fill any gaps or to undertake analysis for specific types of beneficiaries. Remember that there are data protection requirements for any personal data you collect as part of the evaluation. Only collect information that you need to answer your key evaluation questions. Similarly, you will need to check that suitable permissions are in place for re- use of personal data previously collected as part of the scheme records.

The personal information you need to collect on individual and household characteristics will help you understand the impact for different groups of target beneficiaries. Below we identify personal data you are likely to need to collect in order to undertake a health impact evaluation:

- Client NHS number. This is needed if you want to access health data. However, this will only work if CCGs give permission, data protocols are accepted and ethics committees agree to this.
- Age, sex, ethnicity of individual (and of other household members?)
- Whether household includes anyone with a disability

- Household size, household type (for use in LIHC fuel poverty calculation)
- Number (and age) of dependent children
- Number of people aged 65 or over; number of people age 75 or over
- Tenure type
- Household income (This can be difficult to collect. Asking about means tested benefits may be a suitable proxy for use in LIHC calculation)
- Receipt of benefits, particularly means-tested benefits (for use in LIHC fuel poverty calculation)
- Employment status
- Household falls within low income, high cost definition of fuel poverty [see Figure 3: Fuel poverty measure]
- Information about debt
- Interventions received by beneficiaries
- Other social problems experienced by the household relevant to health and wellbeing

Data about the homes of scheme beneficiaries

You are likely to have collected relevant data as part of the scheme monitoring.

- Postcode: this is particularly useful as a lot of secondary data can be accessed with this information;
- Condition of the home and heating system
- Dwelling SAP rating from household energy performance certificate (ratings of D, E or F can be used as a proxy of 'high energy costs' for use in LIHC calculation)
- Temperature and humidity measurements
- Fuel bill information and ability to pay bills

Figure 3: Fuel poverty measure

Fuel poverty measure

If you want to evaluate the scheme's contribution to reducing fuel poverty, you will need to collect data corresponding to the chosen fuel poverty measure - low income high costs (LIHC) or 10% indicator. The LIHC definition of fuel poverty has been the official definition of fuel poverty in England since 2012. Northern Ireland, Scotland and Wales continue to use the 10% indicator.

The LIHC indicator finds a household to be fuel poor if it has an income below the poverty line (including if meeting its required energy bill would push it below the poverty line); and has higher than typical energy costs. ***The low income high cost definition of fuel poverty*** provides further detail about the LIHC definition of fuel poverty and how to calculate it for individual households.

The 10% indicator finds a household to be fuel poor if it needs to spend more than 10% of its income (measured before housing costs) on energy in the home.

Beneficiaries' subjective experience and reported behaviours

Data on beneficiaries' subjective experience can be useful where it is not realistic to see a change in health related to the intervention received, where the 'post-intervention' questionnaire is conducted within just a few weeks or months of the intervention. It can help identify how a scheme may contribute to health e.g. where help to switch to a lower cost tariff means someone is less worried about their fuel bills and so enjoys improved mental health. This data can be collected using quantitative or qualitative methods.

- Resident views on ability to pay bills
- Resident practices relating to bill payment
- Resident perceptions on housing standard, warmth, damp
- Resident behaviour practices related to heating and damp
- Questions on attitudes to comfort levels in home
- Resident experiences of acting on advice e.g. tariff switching advice

'Telling your story once'
Clients with complex needs may feel burdened by being asked to tell their stories repeatedly to professionals from health, housing, social care or other service providers, including recounting upsetting personal details over again. In discussing with partners, it is worth checking whether they are moving towards 'Telling your story once', so that accounts collected for one purpose can be shared with other professionals, minimising the burden on users. An example of this is the 'Golden Key' initiative in Bristol.

The Bedford scale is a commonly-used seven point scale for measuring subjective feelings of warmth or comfort levels.

+3	Much too warm
+2	Too warm
+1	Comfortably warm
0	Comfortable neither warm nor cool
-1	Comfortably cool
-2	Too cool
-3	Much too cool

Retrospective questionnaire example includes other questions for measuring subjective experience relating to affordable warmth interventions in a questionnaire.

Health data

Examples of the types of data included here are:

- Simple health questions, asked pre and post interventions
  - Simple subjective health assessment questionnaire
  - Wellbeing questions
  - Anxiety / depression
  - Self-assessment health rating
  - Simple condition-specific questions
- Days off school or work (in a specific time period pre and post-intervention)
- Number of visits to health facilities over 12 month period

Data provided by health partners

The health service (and in particular GPs) holds very extensive patient data. However, there are significant challenges to getting hold of clinical outcome data. Any data will be anonymised and in most cases there will need to be a formal involvement of academic researchers or specialist researchers working in the health service.

Where a health partner has agreed to collaborate with you, you may also be able to include data which has been collected by the health service for purposes other than the evaluation. Examples of the kinds of data that could be provided by health partners listed below. All of these would be for a specific time period pre and post-intervention:

- Hospital admissions/readmissions, both planned and unplanned
- Number of primary care visits
- Number of prescriptions

To date, Wigan (see case study in box) and Oldham Councils have both succeeded in getting agreements in place with the Clinical Commissioning Group to share health data for evaluation purposes. These evaluations are both ongoing at the time of publication of this toolkit.

Collaborating with the CCG to use health data in an evaluation

There are limited examples of local authorities and health bodies sharing data for research purposes, building on referral relationships with health sector partners. Wigan Council is one of the most advanced in this approach.

They are working with the local Clinical Commissioning Group (CCG) [see **Understanding Health and Social Care Commissioning**]. The scheme collects the NHS number of clients with their consent. An anonymization process is carried out by the Council's Public Health Analyst on the numbers so that the individuals cannot be identified, but records of their use of health services pre and post-intervention can be accessed by the CCG, using the anonymised codes. The CCG will not pass the raw data over to the Council, rather they will analyse it internally.

This approach has developed from a long standing relationship between the CCG and the Council, and the two bodies share the same office building which increases the interaction between them. Joint commissioning, for example through the Better Care Fund focused on older and disabled people , may increase opportunities in the future for collaboration with the health sector.

If you do manage to establish a working relationship with an organisation in the health and social care sector, you will need to enter into data sharing and data protection agreements. It is likely that the health partner will not give you the raw data, but will retain it for analysis internally. The evaluation will therefore be a collaboration between yourselves and the health partner.

When working with health partners there will be additional data management and protection requirements. In the case of referrals, the health partner will be passing on names and addresses, and possibly lists of patients on particular risk lists. This requires good data protection systems to be in place, and the health partner will be able to provide you with data sharing frameworks which you must agree to and comply with. Two example frameworks can be found in **Examples of data sharing frameworks for referrals**.

Another important document to complete is a Privacy Impact Assessment, which will check that systems are in place to prevent patients' privacy being breached.

If you are not able to get data from the CCG within the timescale of your evaluation, you may be able to access data from GP practices .This route provides a way of getting started and could lead on to further opportunities to access data more widely. If the survey is well designed and targets the

population of interest well then although the number if beneficiaries covered may be small, this data may still be possible to use to draw conclusions about the population.

Analysing your data

Once you've collected all your data, you can now analyse it to answer your evaluation questions. The approach to analysis will depend on what type of evidence you have collected. This will broadly divide between qualitative data (e.g. from interviews or focus groups), and quantitative data (e.g. from questionnaires).

Quantitative data analysis

The analysis of numerical data from pre/post-intervention questionnaires allows you to report changes in outcome indicators, before and after the scheme intervention. More advanced analysis can allow you to look at changes for different sub-groups.

Interpretation, including inferential analysis (with statistical analysis), enables you to identify with what degree of confidence you can report that the change is associated with the intervention. Statistical analysis is only possible where you use probability sampling, so that the sample is representative of the population of interest (e.g. all beneficiary households).

There are different levels of quantitative analysis that can be used.

Descriptive statistics:

Provide a basic tabular summary of the sample size and response rate for all beneficiaries.

Table 5: Example of table showing number of respondents.

	Total number of beneficiaries	Pre-intervention questionnaire completed	Response rate (%) (pre-intervention)	Post-intervention questionnaire completed	Response rate (%) (post-intervention)
	9,068	9,061	100	6,015	66

This information on response rate – including the differences between pre and post intervention response rates - is important to understand how sampling bias may limit generalisability, i.e. your ability to draw conclusions about the population of interest (i.e. everyone who has received the intervention).

If there is a high non-response rate post-intervention, you should think about how this affects how well the sample reflects the population.

Then provide a summary of the characteristics of your sample, in tabular or bar chart format. This might include:

- Geographic location
- Age of respondents
- Disability status
- Tenure of respondents
- Occupation of respondents
- Household size
- Number of dependent children in household

This will enable you to consider how far the sample reflects the target population for your scheme, including different sub-groups within the target population.

Report overall outcome indicators for all respondents, comparing the pre and post intervention situation, as illustrated in Table 6.

Table 6: Tabular comparison of pre- and post- response to questions

	Pre-intervention (%)	Post-intervention (%)	Difference (%)
Percentage of respondents who report switching the heating off to save money	21	11	-10
Percentage of respondents reporting problems with their day to day activity	12	11	-1

For an evaluation to understand how the impacts have varied for different types of households, further analysis can be used to show impact data by household characteristic, including percentage change between pre and post intervention.

Tables and charts enable you to present data succinctly. These can be supported by short summaries to explain what are the key findings identified.

Analysis may look at how impacts vary by different combination of interventions, to help identify which combination of intervention are most strongly associated with changes in health impact indicators.

Standardised health questionnaires are supported by specific guidance on how to analyse the results, including the Euroqol User Guide. This includes guidance on administering the tool and on analysing and presenting the results.

Other sources of information on analysing your findings which may be helpful include:

- Homeless Link 'Picture the Change: Data analysis toolkit'
- Evaluation Support Scotland (2013) Evaluation support guide 3.1: Analysing information for evaluation
- London Sustainability Exchange (2014) Energise London Monitoring and Evaluation Toolkit

Qualitative data analysis

There are different ways of analysing data, and there are software packages that can be used to help, though it is possible to use more manual methods, or common word processing or spreadsheet packages to help organise the data. [***Evaluation – data collection and analysis methods***] presents a framework approach to analysis, as recommended in government guidance on qualitative research[4].

[4] HM Treasury (2012) Quality in qualitative evaluation: a framework for assessing research evidence (supplementary Magenta Book guidance).

This approach provides a systematic and transparent way to analyse your data that is well-suited to evaluation. However, if you are more familiar and experienced with other approaches to analysing qualitative data, it is worth sticking with an approach that works for you. Whatever approach you take though, it is worth thinking about the questions below on quality in qualitative evaluation.

Qualitative approaches are not an easy alternative to quantitative evaluation. The main challenge with qualitative data analysis is simply the amount of time it can take and –relatedly – the amount of material you need to digest and make sense of. It is normal to feel 'overwhelmed' as part of the process of making sense of qualitative data, as you try to make sense of and identify patterns and meaning in the data. If you feel that the sheer amount of data is too much, it might be worth involving a university or external consultant.

Quality of qualitative evidence

Your ability to make claims that the findings from qualitative elements of your evaluation are applicable to the wider population of interest (e.g. the population of households that your scheme serves) or to other comparable contexts will relate to the reliability of the research design. There are a number of questions that you should think about which can help others to understand how the evaluation was approached.

- Was the sample design selected without bias? Does it fairly represent the target population, including different sub-groups within the target population? How did non-responses or selected participants dropping out of the sample affect how well it reflected the target population?
- Were the interviews or other field work activities carried out in a consistent fashion? Were participants able to respond fully about their experience relating to the focus of the evaluation study?
- Was the analysis carried out in a systematic way? Did more than one person check the analysis and the consistency of how the information was interpreted?
- Does the body of evidence strongly support the evaluation findings?
- Did the design allow different perspective on how and whether the scheme was associated with health outcomes to be identified? [5]Data analysis training

If you plan to conduct the analysis yourself, it may be worth investing in some training. Possible providers, who may offer discounted rates for charities or organisations with a low turnover, include:

National Centre for Research Methods – Training database for research methods training courses

Social Research Association

Cathie Marsh Institute for Social Research

[5] These questions are adapted from Ritchie, J. & Lewis, J. *Qualitative research practice: a guide for social science students and researchers*. Sage: London.

Other forms of evaluation

Process evaluation

This toolkit concentrates on assessing the change in health after an intervention and so focuses on impact evaluation. Impact evaluation is looking at what happened *as a result* of what you did.

You may also wish to evaluate processes in your scheme – looking at what you did and how this could be done better next time[6]. For example, how well is the referral process working, how smooth is the 'customer journey'. The divide between a process and an impact evaluation is not clear-cut and impact evaluations may include an element of process evaluation. In some value for money approaches (such as SROI – see below), process evaluation can lead to the identification of other impacts than can be valorised.

A process evaluation can be useful to undertake alongside or in follow-up to a health impact evaluation to help identify how programme design could be changed to contribute more to health outcomes.

Valuing health benefits using cost benefit analysis or other economic approaches.

Cost benefit analysis (CBA) is an approach used to compare the total monetary costs of a scheme with the monetary costs of is benefits[7]. It can be used to evaluate a completed project in quantifiable and monetised terms. This is distinct from a cost-effectiveness analysis which compares the monetary costs of the scheme with the value of the outcome, which are not measured in monetary terms. One widely used outcome in cost-effectiveness analysis is quality adjusted years of life gained (QALY).

CBA assumes that a monetary value can be estimated and placed on all the non-market costs and benefits of a scheme. This can include 'costs avoided', e.g. avoided treatment costs. More information about these techniques can be found in HM Treasury, Public Service Transformation Network and New Economy guidance.

Social return on investment (SROI) is an approach gaining increasing currency, which is based on CBA but which seeks to incorporate a wider concept of value, to fully recognise the social impacts of an intervention. This approach is consistent with interest in 'value for money' that an intervention can offer not only in terms of health savings for the NHS, but also wider benefits for the public sector and for society. This approach places a strong emphasis on participation of stakeholders in determining the focus of an evaluation on the types of impacts a scheme is having for a particular sub-set of clients e.g. people with long term health conditions. An SROI approach can generate both qualitative reporting of value as well as monetised value.

[6] For more information on planning a process evaluation, see chapter 8 of HM Treasury (2011) The Magenta Book: Guidance for Evaluation.

Box 2: Value for money of affordable warmth schemes for health and wellbeing

Better Value in the NHS is a report by the Kings Fund (2015) is a report concerned with productivity in the NHS and how more care can be delivered within the same budget. It calls on doctors, nurses and other staff to use evidence to find better ways of delivering care and support services, particularly for patients with long term conditions and older people, at lower cost.

It suggests that value for money means delivering not just savings in NHS spending but also in terms of benefits to the wider public sector and society more widely, including by working more effectively with community-based services to support people with long-term conditions.

An evaluation of the value for money of an affordable warmth scheme would need to measure the health and wellbeing outcomes achieved for people at risk of health-related effects of cold homes, the scheme's contribution to delivery of NHS-identified health outcomes, in relation to the costs of delivering the scheme. Social return on investment is one technique for doing this.

Cost-offset approaches have been used to estimate cost savings to the NHS of retrofit interventions to improve the energy efficiency of cold homes, using estimated values for avoided housing risks to health and estimated years of life gained[8,9]. Such approaches are not suitable for looking at the wider value for money of a scheme.

[8] BRE '*A retrospective health impact assessment of housing standards interventions in Derby*' www.bre.co.uk/filelibrary/pdf/casestudies/Derby_retro_Final_report.pdf

[9] Liddell, C. (2008) '*Estimating the health impacts of Northern Ireland's Warm Homes Scheme 2000-2008*' http://uir.ulster.ac.uk/26080/1/FPcostbenefitsfinal.pdf

Ethics – ethics approval, informed consent, data protection and data sharing

In planning an evaluation, you need to think about the balance between the potential benefits and potential harm from doing it. There are potentially important benefits for fuel-poor households and for the wider public good from a well-designed and well-executed evaluation. A well-thought through evaluation should give rise to minimal harm.

Ethics approval

Where you are involving the NHS or using NHS data you may need to think about ethics approval requirements. There is a simple flow chart in **Ethical considerations and data protection in evaluation**. The SRA (Social Research Association) have also produced ethical guidelines on ethical considerations for social researchers[10].

Informed Consent

When interviewing beneficiaries, administering a questionnaire or collecting an NHS number in order to access health service records, you need to make sure that the client has given informed consent. This includes the provision of clear information in written, verbal and/or pictorial form to participants and the provision of time for reflection and questions. When gaining consent from children, or vulnerable adults (with mental health problems or learning difficulties), arrangements must be made to ensure the relevant information is provided in a form which the participant can understand. Participants should be clear what the data will be used for and provide their consent for this use. It should also be made clear to them that they can refuse the interview or specific questions, and that refusal will not affect the services they receive under the scheme.

Things to take into consideration when obtaining informed consent from the client:

- Does the client have adequate skills in English to understand or do you need to arrange for an interpreter and/or provide materials in a different language?
- Are there reasons why the client may not be able to provide informed consent (e.g. dementia)?
- Does the client understand that they can refuse to answer one or all of the questions, and that this will have no effect on the services they receive?
- Does the client understand what their answers will be used for?
- Does the client understand how long the information will be stored for?
- If the data may be passed on to others, does the client understand what those other parties will do with the data?
- Does the client understand the extent of anonymity they will receive in any reporting?
- If any data being collected will be used to obtain further data in health records, does the client understand and consent to this?

[10] http://the-sra.org.uk/wp-content/uploads/ethics03.pdf

If for any reason the client is not capable of understanding these points, you may have to limit the amount of data you collect from them, or terminate the interview. If you have specific client groups who will struggle with this, give some thought to whether you could pare down the interview or use of the data to reflect the extent of the informed consent you will receive from this group.

An example consent form can be found in ***Booster Fund Questionnaires.***

Data protection and data sharing

You need to make sure that the systems you have for storing and analysing the data allow you to keep to the agreement you have made to the client. The Research Ethics Guidebook includes a page on data storage and data security, which includes planning who will have access to the data and planning how they will access the data. As part of running the scheme you will already have processes in place and an understanding of how to keep personal data secure, so the best thing to do here is to review the processes you already have to make sure they are fit for storing the evaluation data. You should also define how long the data will be kept for and provide a time period after which the beneficiary can ask for their data to be removed .You should also make sure that everyone who is working with the data has an understanding of the requirements of handling the data.

You must also be clear on whether data will be anonymised to ensure that individuals, organisations or businesses cannot be identified. A person's identity can be disclosed by either direct identifiers (names, addresses, postcodes, telephone numbers or pictures) or indirect identifiers (information on workplace, occupation or exceptional values of characteristics such as salary or age). The client should also be informed about how the findings of the evaluation will be reported.

For further information on ethical considerations, including links to ethical guidelines, see **Ethical considerations and data protection in evaluation**. Data sharing is covered in the section on engaging with health partners.

Reporting with impact

When deciding how best to disseminate findings, consider:

- Who is the target audience?
- What is the most important information for this audience?
- What is the best way of communicating with this audience?

The target audience will vary depending on the specifics of the project and your organisation but could include: the health service, local authorities, potential funders, project partners, internal staff, project participants, and the wider public.

Identifying the target audience

You probably already have a good idea of who you want to reach, but it is worth going back to your list of stakeholders [**see Resource Planning for your evaluation**] to make sure you don't miss anyone out.

Dissemination materials

There are many different ways available to share evaluation findings. These include:

- Formal reports
- Executive summaries
- Presentations
- Webpages
- Newsletters
- Posters
- Public meeting
- Conferences
- Maps, graphics etc.

When deciding on the strategy to employ you should keep in mind the communication channels typically used by the target group, their level of technical expertise and how much time they have to look at the materials.

The funding organisation, as well as the delivery organisation, is likely to require a draft report and presentation of the findings, and a final report, setting out the findings to the key evaluation questions.

Senior staff in the funding and scheme delivery organisation may require a summary document that presents the key findings in a visual format, supported by a fuller report.

For the wider public a key graphic or an illustrated case study might be more appropriate. Easy read versions which use visuals to illustrate each key finding can make evaluation findings accessible to a wider audience, including people with learning disabilities. An example can be seen here.

Furthermore the medium used needs to be taken into account; an article in a newsletter should be brief and suitable for the layman whereas at a conference it may be more appropriate to go into more depth.

In context

In the context of an evaluation into the health and wellbeing benefits of an affordable warmth programme there could be some specific considerations. After performing a stakeholder analysis it might be decided that the goal is to share the success of the project with residents, to attract further funding and to inform project partners and colleagues. Each of these groups might require a different strategy to ensure optimal engagement. For residents a presentation at a community meeting might have the biggest impact. For potential funders and executive summary containing detailed statistics, financial modelling or cost benefit analysis might be most appropriate. In the case of project partners and colleagues an article or webpage outlining the findings could be the method of choice.

When reporting you should bear in mind, and be honest, about the limitations of the findings. If you only have a small sample, say so, and be clear that your evaluation shows correlation rather than causation.

Further resources

- A guide on disseminating evaluation findings by the National Evaluation of Sure Start (NESS) - web link
- A guide to help ensure the use of evaluation findings by the National Center for Chronic Disease Prevention and Health Promotion – web link
- Picture the Change Toolkit – Homeless Link. This is a toolkit on presenting information in a graphic or visual format to help present your evaluation findings in a simple format and in a way that gets your message across to different people. It includes links to free tools to help get you started.

- The English housing survey 2013 – report on energy efficiency – web link

Resources

The full list of additional resources in the toolkit is below. This is followed by links to a selection of external web-based resources that you may find helpful.

Links to additional documents in this toolkit

Resource planning for your evaluation

What should a TOR (Terms of Reference) include?

Stakeholder assessment

Understanding health and social care commissioning

Logic models and theory of change

Diagrams illustrating links between warm homes and health

Retrospective Questionnaire Example

Validated health questionnaires

Fuel Poverty and Health Booster Fund Questionnaires

Qualitative research example interview guide

Evaluation - data collection and analysis methods

Examples of data sharing frameworks for referrals

Ethical considerations in evaluation

Example Evaluation Report Structure

The low income high cost definition of fuel poverty

Below are links to resources produced by other organisations that provide useful all-round guidance on evaluation:

- **Energise London Monitoring and Evaluation:** This is a document produced by the London Sustainability Exchange and it includes 13 key sections: 'Introduction'; 'what is monitoring and evaluation'; 'language of Monitoring and evaluation (including outputs/outcomes)'; 'monitoring'; 'data'; 'data collection' (including advice on methods and social return on investment calculations); 'managing your data'; 'evaluation'; 'reporting'; 'step-by-step practical guide'; 'common mistakes and top tips', 'case studies' and 'resources' (including practical considerations)'. The sections are concise and include clear information with diagrams and photographs.
- **Charities evaluation service:** This is a user friendly website which includes a tab titled 'tools and resources' under which further links are provided to 'terms and definitions'; 'planning for monitoring and evaluation'; 'outcomes and outcome indicators'; 'evaluation methods'; 'evaluation for funders'; 'quality management resources' and 'performance improvement: A handbook for mentors' and further links are found under each of these headings also. The website also includes links to evaluation training events and 'think pieces' with handy hints.

- **Evaluation support Scotland:** This is another user friendly website which includes a tab titled 'evaluation' which includes an overview of why evaluation may be necessary and an evaluation pathway with four stages. Stage 1 is 'setting outcomes'; 'stage 2: collecting information'; 'stage 3: analysing and reporting'; 'stage 4: learn from your findings'. Each stage includes a link to further resources including practical guides and creative aids which may help in the process, such as a 'big picture route map' which is a cartoon map for sketching evaluation pathways on. This website also has links to workshops and events and includes plenty of information links included, which may take some time to explore fully.
- Better Evaluation This website has a large number of resources to help with planning an evaluation, including options, approaches, and resources.