Public Health England

Protecting and improving the nation's health

Evaluation of interventions in sexual health, reproductive health and HIV services

An introductory guide

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Introduction

It is important to evaluate changes to ensure that we provide the highest quality of care and improve outcomes for people using healthcare, public health and social care services.

This guide provides an introduction to the evaluation of public health programmes and interventions. It is written primarily for practitioners interested in evaluation of interventions in sexual health, reproductive health and HIV services (SH, RH and HIV); however, it contains many general principles that may be applied to other public health areas. To support evaluation of interventions in the commissioning and delivery of SH, RH and HIV services, Public Health England (PHE) has developed the following 3 resources:

1. Evaluation of interventions in sexual health, reproductive health and HIV services An introductory guide – this document
2. Evaluation workbook
3. List of standards and metrics

While these 3 resources can be read as standalone documents, they do complement each other and are best used together as references will be made between the documents.

This guide will be a useful first step for anyone new to the topic of evaluation or those wishing to refresh their knowledge of evaluation approaches. It is essential reading for those wishing to apply an evaluation framework to their project, service innovation or intervention. These resources are suitable for evaluating the implementation of NICE Guidance. Relevant NICE guidance can be found here, and are included in the list of standards and metrics.

The Evaluation Workbook contains proformas and guidance to support effective evaluation of interventions in SH, RH and HIV services, while the menu of output/outcome measures contain a list of standards and metrics that can be used as indicators to use as part of the evaluation of a specific project or intervention.

This guide is designed to provide a basic introduction to the evaluation of SH, RH and HIV services and public health interventions. Clearly there are no ‘golden rules’ and every evaluation has to be tailored carefully to the needs of stakeholders and participants.

No evaluation is perfect and no evaluation answers all questions; however, if planned and executed well, evaluations can inform decision making and contribute to improving the public health evidence base.

What is evaluation and why is it important?

In its simplest form, evaluation is about judging the value of an activity and assessing whether or not it has achieved what it set out to do. Evaluation should not necessarily be seen as a complex academic exercise, but more as a basic part of project management. In most cases evaluation is used to assess the extent to which a project has achieved its objectives. If a project has not achieved its objectives the evaluation will help to identify why that might be and what could be improved. In public health settings, and SH, RH and HIV services, evaluation can be used for a variety of purposes. Examples of interventions are given in Table 1 with potential questions that an evaluation may set out to answer:

Table 1: Examples of public health interventions with potential questions that an evaluation may set out to answer

Intervention	Evaluation questions examples	Potential source of standards/metrics
Using social media to increase the use of Long-acting reversible contraception (LARC)	Did the social media reach the target audience? Is social media effective in increasing knowledge of LARC methods? Does social media increase the number of enquiries received by services?	NICE Quality Standard129 Contraception NICE Clinical Guideline 30 Long Acting Reversible Contraception
Poster campaign in toilets highlighting Hepatitis C	Are the posters being distributed? Are sexual health service users asking about vaccination in greater numbers?	NICE Public Health Guidance 43 Hepatitis B and C testing: people at risk of infection
Condom distribution scheme	Is the project acceptable to young people? Are the condoms reaching populations at greater risk of sexually transmitted infections?	NICE Guideline 68: Sexually transmitted infections: condom distribution schemes
Increasing uptake of STI screening in young men via on-line services	Are young men using the online service? Are services used by young men from one or different geographical areas?	NICE Public Health guideline 3 Sexually transmitted infections and under-18 conceptions: prevention
Point of care testing	Are the key risk groups being tested? Is the intervention testing those who have not tested regularly?	NICE Guidance 60: HIV testing: increasing uptake among people who may have undiagnosed HIV
Increasing partner notification via text messaging	Is text messaging an effective way to reach partners? Do the partnership notification rates increase as a result of using different text content?	British Association of Sexual Health and HIV (BASHH) – Partner notification statement

Moving a GUM in location A and a CASH clinic in location B to an integrated service in location C	Does the move result in a change in activity levels? How accessible is the new clinic location compared to the previous ones? What are the advantages and disadvantages for staff, learning and development, rostering of staff?	Faculty of Sexual and Reproductive Health: service standards for sexual and reproductive healthcare

Distinction between evaluation, audit and research

It is useful to clarify here how evaluation differs from audit and research. Service evaluation determines if the service/intervention does what it aims to do. Audit is concerned with ensuring that the service/intervention is done the right way, whereas research is about discovering how to do something. Table 2 presents an overview of the distinction between the three disciplines

Table 2: Distinction between evaluation, audit and research

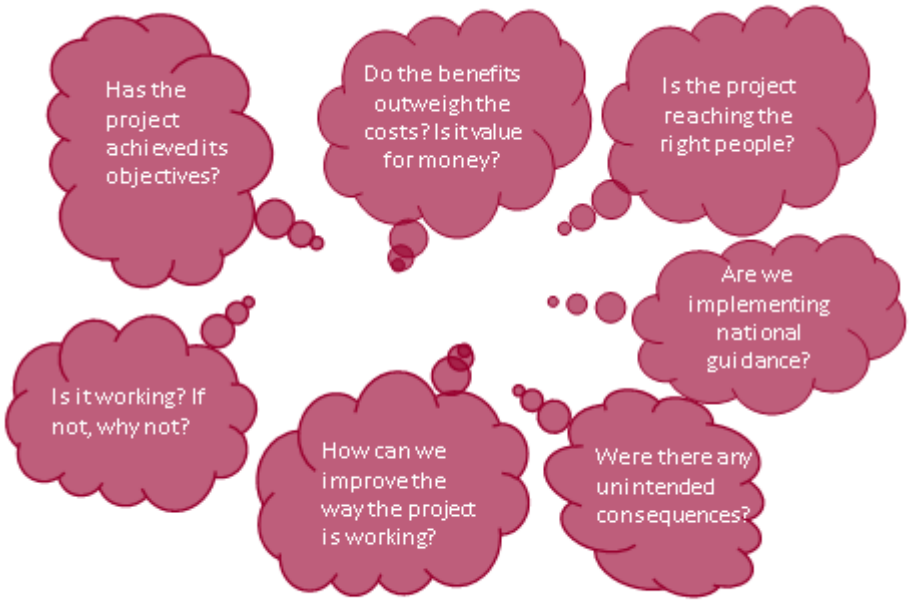
Evaluation	What's happening in a service? What do people think? Provides knowledge and understanding through simple interview or analysis of records Designed to define current situation Measures changes in service, regardless of whether or not standards are available Participants usually those who use or deliver service
Audit	Are we following best practice? Measures the quality of service provided against a standard. Is good practice being delivered? Results are only relevant within the local setting (although audit process may be of wider interest)
Research	What is best practice? Obtains new knowledge Finding out/defining best practice Often aiming to develop or test theory Not always clear who should act upon findings

Why evaluate?

Evaluation is important as it helps to demonstrate the value of an intervention, programme, guidance or policy. If we are to invest time and money in service improvement or public health initiatives, it is important to know that they are having an impact and the investment is worthwhile, but evaluation is not just a simple matter of weighing up costs and benefits. It can also help us address a number of more subtle questions that depend on the type of evaluation being conducted, and the values that various stakeholders attach to the project.

For example, an economist may prioritise an assessment of the costs and benefits, while a project manager may be more interested in assessing the processes involved in the initiative and whether and how it can be improved. Figure1 shows various types of questions that stakeholders may have about the same project.

Figure 1: Examples of stakeholder questions about a project



The results of evaluations can have a number of uses. They can for example, be used to refine a project or service and improve the way it is delivered; they can be used to provide feedback on progress to commissioners, funders or other stakeholders; or they can be published to help other people plan similar projects in the future. The priority attached to each of these uses will have an influence on the type of evaluation that will need to be conducted.

Process and outcome evaluation

The evaluation questions posed in the illustration above are a mixture of 2 of the main types of evaluation: *process evaluation* and *outcome evaluation* (the third type, *formative evaluation,* will be discussed later in this guide). It is important to consider right from the outset what sort of evaluation you wish to conduct.

Process evaluation seeks to explore what is happening within a project. It aims to provide an explanation of how or why intended outcomes of the project were (or were not) brought about. Process evaluation is often conducted while the project is still progressing, and in many cases is intended to feed into the development of the project. Process evaluation sometimes overlaps with *monitoring,* which is the collection of routine data.

So for example, in a condom distribution scheme it is vital to collect information on how many condoms are distributed and whether people use the service once or repeatedly, and record this over time to help understand the uptake. This can help to highlight issues which may be urgently addressed while the programme is ongoing.

Outcome evaluation focuses on the various impacts of the project over time. It assesses the progress of the project against its original objectives and determines whether it has had the intended results. Outcome evaluation tends to focus on impacts that occur after a greater length of time than process measures. Examples of process and outcome evaluation measures for a condom distribution scheme are shown in Table 3.

Table 3: Examples of evaluation measures for a condom distribution scheme

Process evaluation
How many condom outlets have been recruited?
Has the supporting and advertising media been produced?
Condom requests: • How many condoms have been requested/distributed weekly/monthy? • How many repeat requests are made and over what timeframe? • What types of condoms are being requested? • How are the requests changing over time? • Have we made condoms available to target groups or target areas?
Were there any problems with delivery?

Outcome evaluation
Is the condom distribution scheme a well recognised logo or brand?
Has access to free condom distribution improved?
Has condom use increased in target demographic groups (without declining in other groups)?
Has knowledge of (correct) condom use increased?
Long term: • has the rate of incidence of STI decreased? • has the rate of unplanned pregnancies reduced? • Have those at highest risk of STIs been reached?

Potential sources of standards/metrics
NICE Guideline 68: Sexually transmitted infections: condom distribution schemes

The standard evaluation frameworks produced by PHE are mainly concerned with outcome evaluation as they focus on the core data that needs to be collected to show whether a project has had an impact, but process evaluation is an extremely important component of evaluation that should be woven into the planning of every project. Professor Adrian Bauman – an evaluation expert and director of the World Health Organisation Collaborating Centre for Physical Activity, Nutrition and Obesity advises: “do process evaluation always; do outcome evaluation often”. In other words every project should be subject to process evaluation, and if the resources are available, then consider outcome evaluation.

Prioritise process evaluation

<u>Every</u> project should be subjected to process evaluation.

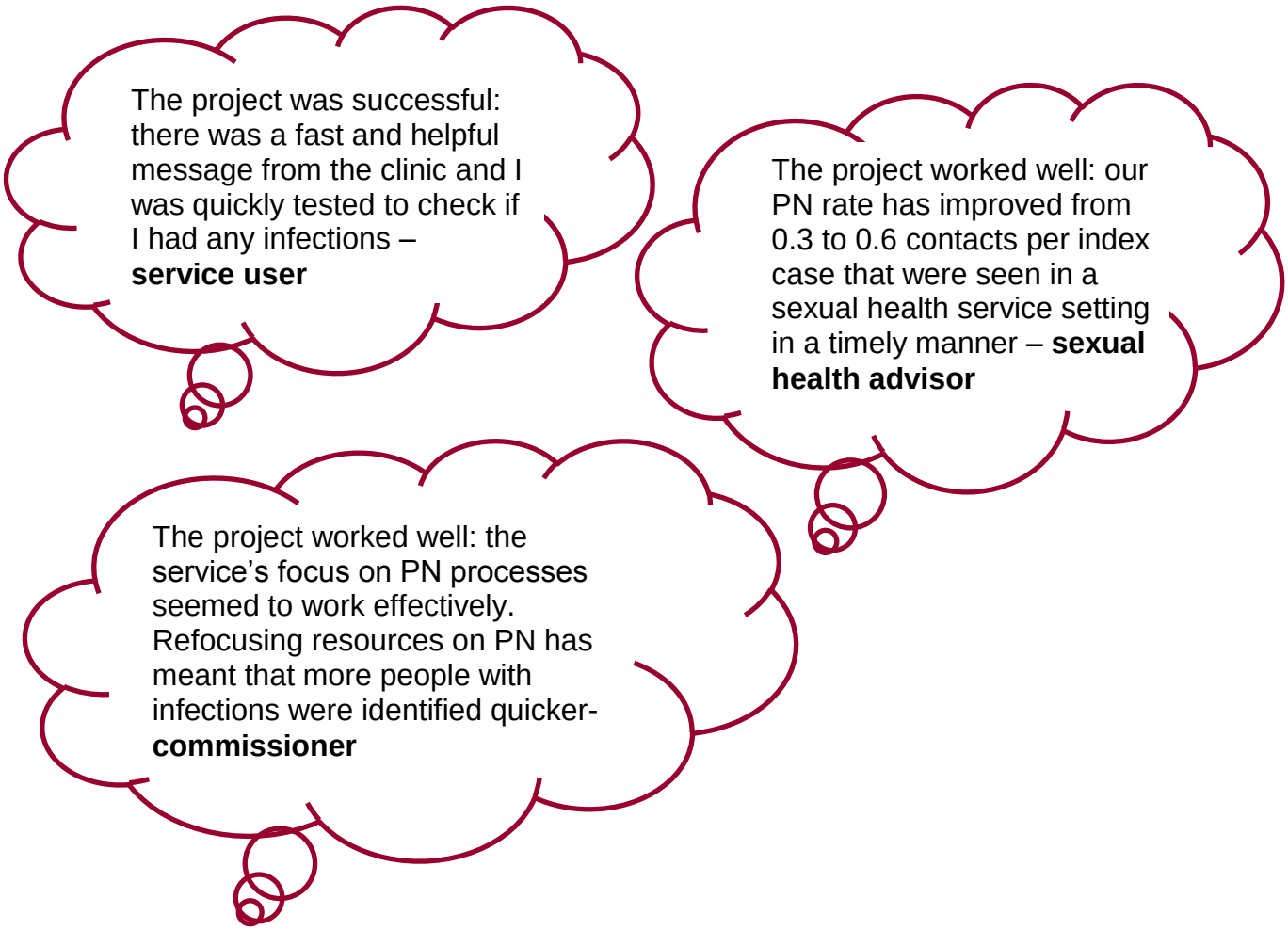
If the resources are available, then consider outcome evaluation

In order to help decide what type of evaluation to undertake, focus on the purpose and the intended audience for the end product. This will be outlined in the next section.

Who wants to know? The importance of understanding the target audience for the evaluation

When planning an evaluation it is critical to think carefully about the target audience for the evaluation. Who are you conducting the evaluation for? What do they need to know? What will they do as a result? What sort of information do they need? Figure 2 illustrates 3 different perspectives on the impact of a project to improve the effectiveness of partner notification.

Figure 2: Differing perspectives on the impact of a project to improve the effectiveness of partner notification



To obtain each of the evaluation results above would need a different method, collecting specific data from each target audience. It is therefore critical that the evaluation is planned from the outset with the target audience in mind, considering whether more than one perspective needs to be addressed, and addressing the different perspectives of each stakeholder. Some more complex projects may consist of multiple parts, these may benefit from evaluation of each of the components separately.

Evaluation and research: different perspectives

Just as stakeholders can come to a project with a variety of different perspectives, the people conducting an evaluation can also have different viewpoints and ways of conducting the evaluation. This guide is mainly concerned with introducing the reader to pragmatic evaluations of practical public health and SH, RH and HIV projects that are being delivered in practice as opposed to a research setting. The focus is therefore on understanding how well projects are being implemented; the extent to which they achieve their objectives and how to modify projects to improve implementation in a real world setting.

The outcome of this type of evaluation is generally used to feed into future projects, or to make the case for increased investment. This contrasts with a scientific approach to research where the emphasis is on contributing to the science of public health through addressing highly specific research questions. In most cases, researchers actually control the intervention itself as well as the measurement of key outcomes. The distinctions between scientific and practice based approaches are illustrated in Table 4.

Table 4: Similarities and differences between practitioner and scientific evaluations of health promotion programmes. Adapted from Nutbeam and Bauman [1]

Function	Practitioner perspective	Scientific/researcher perspective
Funding	Controlled by managers or other stakeholders	Usually grants from academic funders
Purpose of evaluation	To implement and improve programmes	To generate scientific evidence
Research method	Pragmatic Often a mix of quantitative and qualitative methods May include perspectives of users and other stakeholders	Tends towards quantitative methods Use of advanced statistical techniques and methodologies Aim to reduce bias
Level of evaluation	Emphasis on formative evaluation (explained later) and process evaluation Outcome evaluation to provide information to decision makers regarding funding and planning decisions.	Emphasis usually on the project's impacts May extend to outcome evaluation, to provide evidence of project's effect
Research design	Flexible and pragmatic	Tightly controlled
Use of results	To improve (or perhaps abandon) the programme To disseminate to others so they can use them in settings or communities	Publication that contributes to scientific knowledge Dissemination to encourage replication to 'test' in other settings or communities

In reality there are many overlaps between the 2 different perspectives: evaluators may be very interested in publishing academic papers, while researchers frequently measure the impact of 'real-life' projects; however, understanding the distinction between the 2 approaches can help to focus the evaluation more closely on what is most achievable and useful. To conduct a robust evaluation you do not need to be a researcher; you just need to be objective, ask the appropriate questions, and collect the relevant information at the right time.

Seeking help with evaluation

Practitioners may find there is a lack of hands-on help with an evaluation. Some projects rely on external consultants or academic bodies to support their evaluation design and also undertake the evaluation itself. This can be a good option although it is unlikely to be the cheapest. It may be worthwhile finding out if any expertise or support is available locally from a college or university, the local authority or a voluntary group. Such bodies may have students, trainees, volunteers or employees available to help design or implement your evaluation. Such support can contribute to a shared vision of an evaluation and enhance the project.

Practitioners can also contact their local PHE Centre for further advice on the evaluation support available in your local area, either through their local Sexual Health Facilitator or directly through their local Centre. Contact details can be found here.

NICE also provides support through its webpages on how to put their guidance into practice which can be found here. Table 5 presents tools that may be useful:

Table 5: NICE tools

Tool	Description
Baseline assessment tool	All NICE guidelines have a baseline assessment tool, found on the 'tools and resources' page of the guideline, which can be used to evaluate whether practice is in line with the recommendations. It can also help to plan activity to meet the recommendations.
Quality Standard Service Improvement Template (QSSIT) tool	This helps evaluators to make an initial assessment and monitor change overtime of process and outcome measures relating to the statements found in NICE Quality Standards.
Into Practice Guide	Covers topics such as the best ways to assess the extent to which your service is implementing NICE's recommendations - and how to address any gaps if you find out it is not.
Shared learning examples	These show how NICE guidance and standards have been put into practice by a range of healthcare, local government and social care organisations. They often include details of how a project was evaluated.

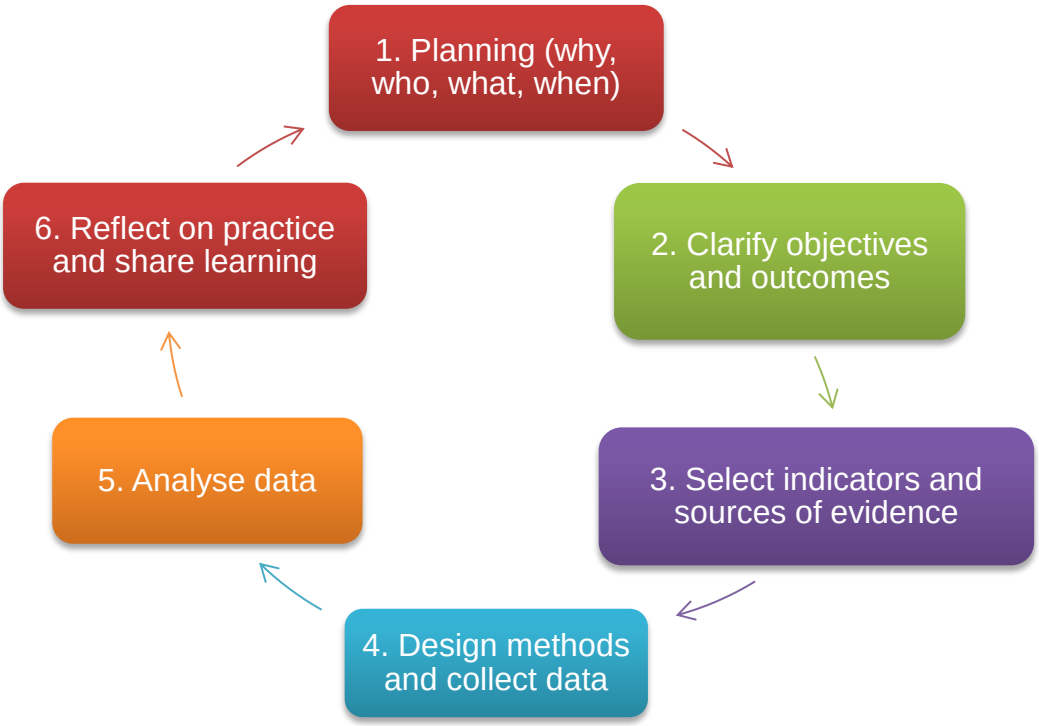
Other guidance on evaluation methodologies can be found at the Enhancing the QUAlity and Transparency Of health Research (EQUATOR) network webpages here.

It is recommended that evaluation partnerships are established with all stakeholders involved in the project. With this approach, project managers and evaluators work together in a true partnership that aims to evaluate a project and make sure it continuously improves as learning is fed back into its development.

Evaluation: a step-by-step guide

This section will outline a step-by-step guide to planning, designing and conducting an evaluation. The process is based on the project development cycle developed as a tool to facilitate project planning, as presented in Figure 3.

Figure 3: Project development cycle



Step 1: planning

All good projects rely on careful planning. A key activity at the planning stage is to set out the 'bare bones' of the project in a short document. This should include:

- a description of the health issue to be addressed
- the prevalence of this issue and whether it affects certain socio-demographic groups disproportionately (sometimes called 'descriptive epidemiology')
- the aims and objectives of the project
- the evidence base for the approach to be taken
- if there is little evidence, the theory or idea upon which the approach is based
- the stakeholders to be involved
- the resources available
- what is going to happen when
- what is going to be measured

See page 34 for an evaluation checklist.

Evaluation should be considered long before the project begins

It is all too common practice for evaluation to be forgotten in the race to get a project off the ground. This often means that there is no agreement on what should be measured, and the opportunity to collect baseline data before the project has any sort of impact may have been missed forever. If at a later date a commissioner then asks for information about the project's achievements, this can be difficult to demonstrate. It is also hard to relate back to what was originally planned and how the project was intended to progress. By setting this all out 6 to 12 months before the project begins, evaluators can then collect information and data on the situation prior to the project, and demonstrate more robustly the difference that the project has made. In some instances, baseline data may already be available, such as service activity data; this will shorten the lead in time.

A critical aspect of the planning phase of an evaluation is to attempt to define what each stakeholder hopes to gain from the project and what outcomes they value. Ask each person or group of people to think about how they would define a successful project, and then use this as a basis for planning the evaluation. For example, are you intending to demonstrate improvements in health inequalities? Are you able to collect the data needed to demonstrate success to each of the stakeholders? If not, what modifications need to be made?

The elevator test

Use the elevator test to think ahead to where you want to be when the project is complete. Imagine you find yourself in a lift in three years' time with your boss, who asks: "How is that project going?" You have one minute to impress. What would you want to say?

Example one: "We reached 88% of the target audience with our messaging and recruited 467 women over two years. Sixty five per cent of them found the information useful or very useful, with half of them attending a sexual health service for the first time."

Example two: "We've just held the last of the focus groups and these have shown that the men found the course to be highly motivating and empowering, and seemed to fit in well with their lives. Most of them had made changes to the way they use alcohol and drugs before and during sexual activity".

These two statements are clearly very different, and would require quite different approaches to evaluation.

Resources

A critical part of project planning is securing adequate resources to enable the evaluation to happen. There is no general consensus on an appropriate scale for evaluations. The World Health Organization suggests at least 10% of the total project budget should be dedicated to its evaluation,[2] others, however, have pointed out that in some cases this type of guideline figure is inappropriate.[3] Resources could be in the shape of a dedicated budget, or merely securing time from existing staff to undertake the evaluation. Having adequate resources for an evaluation results in a greater choice about which elements of a project can be evaluated.

Step 2: setting objectives

One of the most critical aspects of good project planning is the setting of clear aims and objectives. One of the main functions of evaluation is to establish whether objectives have been achieved, so setting clear objectives from the start has a major influence on the evaluation. Also, without clear objectives projects are likely to stray off track and lose focus. Aims and objectives may have to be re-written several times before they are right and can be agreed by all partners.

Aim	**Objectives**
This is a general statement that describes the overall intention of the project. The aim can often be relatively vague, as it describes generally what the project hopes to achieve rather than what will be done.	These are much more specific than the aim, and set out what is going to be undertaken, and precisely what you hope will be achieved. Most projects can be summarised in a maximum of one aim and between three and five objectives. If a project has more than five objectives it may lack focus.

The objectives set for a programme should be SMART:

Specific	what precisely do you want to achieve? What is the precise or specific behaviour, achievement or outcome that you hope to change? Can this be presented in numeric quantitative terms?
Measureable	are you able to measure whether the objective has been achieved?
Achievable	are the objectives achievable given the resources available?
Relevant	are the objectives the most important things you could be focusing on?
Timely	when should the objectives be met?

Examples of SMART and not-so-SMART objectives are illustrated in Table 6.

Table 6: Examples of SMART and not-so SMART objectives
Aim: to reduce late diagnosis of HIV

SMART objectives	Comments
1. Establish multi-agency project group, chaired by the Director of Public Health 2. Establish reporting lines to the Health and Well-being Board 3. Audit all local patients diagnosed late in the past two years to identify common themes 4. Audit uptake of HIV testing in each sexual health clinic by practitioner 5. Summarise the guidance and evidence base for local practitioners and present to local project group by [date]	Each objective sets out one clear action. Where possible they are specific (eg criteria need to be in line with national guidance). Action words are used eg conduct; publish; train. Final objective sets clear measurable outcomes by dates
'not-so-SMART' objectives	**Comments**
1. Explore local practice 2. Draft a document setting out how to reduce late diagnosis 3. Hold seminars for local stakeholders	Vague, unclear, with lots of room for movement. Vague words such as explore and draft. These objectives could be achieved in a week, or conversely could take a lifetime

Potential source for standards/metrics: NICE Quality Standard 157: HIV testing: encouraging uptake

Logic models

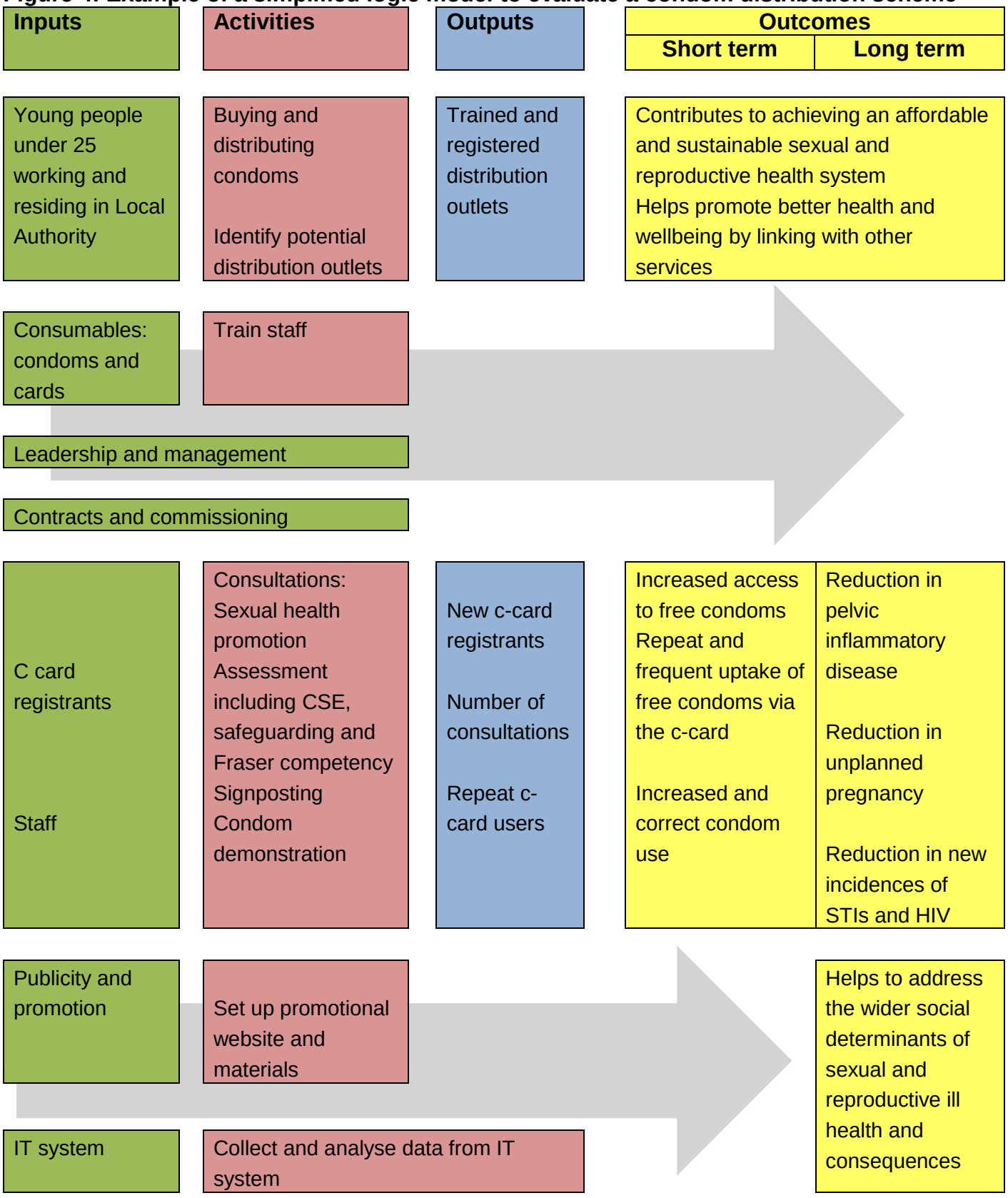
It is also helpful at the beginning of a project to draft a logic model. A logic model is a simple planning tool that describes the relationship between each element in a project or intervention and the likely direction of change. A logic model is sometimes also referred to as 'logical framework' and is linked to a 'Theory of Change'. A Theory of Change defines long-term goals and then maps backward to identify necessary preconditions. It explains the process of change by outlining causal linkages in an initiative, ie its shorter-term or intermediate steps leading to longer-term outcomes. The identified changes are mapped showing each step in logical relationship to all the others, as well as chronological flow.

It is helpful to undertake a process of stakeholder engagement to develop a consensus on how you think an intervention will achieve (a range of) intermediate and long-term outcomes. This includes an explicit statement of the activities that will bring about change; the results you expect to see for the community and its people; and the theory or assumptions underpinning the design of the programme. A strength of this approach is that it can be used to keep participants moving in the same direction by providing a common language and point of reference, improving communication between stakeholders and coherence.

By using a theory of change approach, you can develop your own logic model, or logical framework. This is a representation of an intervention's theory of change in a simple, diagrammatic form. It provides a logical roadmap that anticipates how each project element will work, what the result will be and how the sequence of elements will lead to the expected outcomes. Outcomes may be subdivided in short and long term outcomes. This enables the evaluator to focus on collecting data to measure indicators at each stage and relate these measures to the overall project plan. It also allows the evaluator to question the assumptions inherent in the project plan.

It is also helpful to use logic models when evaluation was not part of the initial planning. Using logic models to break down the aims, inputs, activities, outputs and outcomes of a project can be a simple and useful way to plan an evaluation. By creating a logic model you will also be explaining why you think the intervention will work. A simplified example of a logic model for condom distribution scheme is shown in Figure 4.

Figure 4: Example of a simplified logic model to evaluate a condom distribution scheme



The difference between inputs, activities, outputs and outcomes

- Inputs describe the resources that are required for example budget, time, staff, premises
- Activities describe in detail the components of the intervention and what you expect to be delivered. By describing the components, you can consider ways in which you might measure whether the intervention has been delivered as you intended, for example establishing a website from wich someone can order test kits
- Outputs are things that are delivered or the activities that have been carried out. This includes people attending sessions or interventions. Do not get these confused with outcomes
- Outcomes are the changes that you hope will occur as a result of the outputs. These can be short term – such as a change in knowledge or attitudes, or longer term such as changes in behaviour or health status

The evaluation workbook, the second of our three resources, can be used to walk through the development of a logic model of your intervention and will provide a structure for writing reports of completed evaluations.

Step 3: selecting indicators

The next step in the planning process is to think about what you might need to measure to assess the impact of your intervention: indicators

Indicators can be the measures of the final desired outcomes of a public health intervention, as well as any of the intermediate objectives leading to this final outcome (as set out in the project's logic model under inputs or outputs). For longer terms outcomes, the agreed set of national priority indicators has been published as the Public Health Outcomes Framework (PHOF).[4] The PHOF is a large set of agreed national indicators that will help increase understanding of how the health of the public is being improved and protected. The PHOF provides a clear national framework for programme planning. It can be very helpful to relate local level initiatives to these national indicators as far as possible.

Process indicators then need to be selected to measure progress along the way to making a difference to the headline indicators. Process indicators should assess the processes taking place as the project is implemented. It is important to make sure adequate emphasis is given to process indicators – to ensure that the programme is being implemented as planned.

Evaluations will also give others insight about the success of your project or intervention. Part of the purpose of your evaluation should be to share best practice. It is important that others can apply the learning in their setting; and in turn evaluate the intervention themselves. To enable comparisons, evaluations of similar interventions or projects should use the same indicators. It is therefore important that indicators are clearly defined. This may seem obvious but it is surprisingly easy for different people to have slightly different definitions of the same indicator. This can have significant consequences. For example "uptake of a test" may be measured in slightly different ways which alter its meaning a great deal. See Table 7 for an example of the impact of changing a definition.

Table 7: Impact of different definitions of an indicator

A local authority wishes to focus on Public Health Outcomes Framework indicator 'Chlamydia detection rate / 100,000 aged 15 to 24' by increasing screening uptake in a contraceptive clinic. In this example, 1000 people attend the clinic, some have repeat appointments so there are 1100 attendances at clinic. Of those individuals, 900 are offered a test and 800 take the test. Below are different definitions of uptake and the effect on their measurement:		
Number of tests Number of attendances	Number of tests Number of people attending	Number of tests Number of people offered a test
800/1100 = 73%	800/1000 = 80%	800/900=89%

Process vs outcome indicators

Process indicators measure what happened as part of the project, but do not really report any impacts on the attendees; however, they are an essential part of the evaluation. In this example the measures are of patients receiving the new intervention. Process evaluation therefore should be undertaken as the intervention is progressing, and fed back to the project management team, who can then make adjustments to the delivery of the project to ensure it remains on track.

Short-term outcome indicators might be measurable quite quickly (at the end of a session or programme), for example a change in knowledge, and relate to the next stage in the logic model. Medium-term outcome indicators then relate to outcomes such as behaviour changes (in this case changes in re-testing habits) while the long-term outcome indicators usually focus on a measurable health outcome.

Sources of data for indicators

Data for indicators can come from a variety of sources, including:

- existing sources of information - these can include project attendance registers; GP practice data; local authority data; national surveys; data from hospital episodes statistics; local data such as the active people survey or locally commissioned surveys
- new information collected for the evaluation - via surveys; questionnaires to service users; interviews; focus groups; case studies; visits to projects and so on

Indicators can be both direct and indirect measures:

- direct measures can be observed and are not open to interpretation, such as contacts with services or responses to media
- indirect measures rely more on interpretation, such as attitudes about a service, or self-assessment safer sex behaviour

As the third part of this suite of tools we have provided a list of standards and metrics which are used in sexual health, reproductive health and HIV. This tool contains some official measures of clinical and service standards which can be used to provide a consistent way of measuring any effect or change. It also contains links to key standards and publications such as those from BASHH, FSRH, and NICE. Using this resource will enable your evaluation to be comparable with evaluations in other areas by ensuring that this compares like for like.

The most important check when selecting indicators is to think: “Does this set of indicators help me evaluate the intervention?” Refer back to the intervention’s objectives and check that the indicators are focused on the objectives.

Step 4: design methods and collect data

Once the key indicators have been agreed for the project, the next step is to decide on the type of evaluation that you are going to carry out, and then how to collect the data.

Types of evaluation
There are three principal types of evaluation: formative, process, and outcome evaluation.

Formative evaluation
The purpose of formative evaluation is to define what is likely to be effective in a project. It is carried out long before any project commences, and involves researching, developing and testing the materials and methods that you intend to use in the project. It is often undertaken in close consultation with the target audience and involves discussions and feedback about the key elements of the project.
Formative evaluation can include any of the following approaches:

- needs assessment research
- target group mapping or profiling
- pre-testing of materials
- piloting
- focus group discussions
- informal discussions with target group members
- exploration of barriers and motivators
- readability tests

"Understanding the needs of the target audience and using formative research to develop appropriate and accepted intervention methods and materials is an essential first step in designing an effective intervention."
Don Nutbeam and Adrian Bauman. Evaluation in a Nutshell (2006)[1]

Process evaluation
As previously stated, this is a critical and often under-emphasised aspect of evaluation. Process evaluation describes what happens when a project takes place. It focuses on describing and investigating the process of implementation, especially to explore whether the project has been implemented as planned. Every project should conduct some degree of process evaluation as it is the essential first step in understanding how and why a project was effective/less effective.
Process evaluation can involve a wide range of methods:

- checking attendance data to ensure the project is reaching the target audience
- collecting evaluation forms or customer surveys after an event
- discussions with participants of the project about their satisfaction with the service
- analysis of project documentation to see whether the project is being delivered as planned

Process evaluation can help us to understand why a change took place, and can provide some insight and context to outcome evaluation. Outcome evaluation will simply show that a change has taken place, but will not explain the mechanisms behind the change. See Table 8 for an example.

Table 8: Example: using social media to increase awareness of prevalent syphilis

Objective	using social media to communicate an increase in syphilis cases to key risk group
Result of outcome evaluation	change in syphilis cases seen in the GUM clinic
Questions a process evaluation could help to answer	did the adverts get written, agreed and sent out on time? the of times of day that messages were available the demographics of those targeted by the messaging the demographic and geographic coverage of the media what other initiatives were underway at the same time

Process evaluation can also help to separate projects that are not effective from those that were simply not delivered properly. For example, a sexual health project or intervention may have the best possible materials, trainers, theory and delivery methods, but if it is not advertised well and no one attends the sessions, it is unlikely to succeed. Process evaluation thus has to take place while a project is progressing with the results feeding back into the project. In the example above, as well as providing context and explanation for the negative results, process evaluation will enable project implementers to adjust elements of the project to increase its chance of success.

Process evaluation tends to address the following elements:[1]

- **exposure**
  Were the target audience exposed to the project?
  Did they understand what was being asked of them and what was being offered?
- **participation**
  Who took part in the project? How many people attended? Were the participants from the target audience? Did the project reach the intended socioeconomic groups?
- **delivery**
  Was the project delivered as planned?[1]
- **context**
  Were there background issues that affected the uptake of the project?

When planning a project always set out to undertake thorough process evaluation, before going on to assess whether the resources exist to undertake an outcome evaluation.

[1] Please note: a logic model is still required for a process evaluation. In this case the 'outcome' in a logic model may be one of these elements listed (exposure, participation, delivery and context). For example the logic model for a process evaluation of an educational intervention might define 'training completion' as an outcome, while the 'outcome' of the educational intervention itself is behaviour change!

Outcome evaluation

This is perhaps the most commonly understood type of evaluation: assessing whether or not a project has had the intended outcomes. Outcome evaluation focuses on the various impacts (or outcomes) of a project over time. Using the logic model outlined on page 19, it assesses whether there are observed changes in any or all of the agreed indicators, and attempts to measure these as far along the logic model as possible. Whether the evaluation assesses short-term or longer-term outcomes depends on the time available. It can take years to be able to measure some health outcomes such as changes in teenage conception rates, whereas changes to various behaviours, increased chlamydia screening in sexual health services, can take place over a much shorter timeframe. The main challenge with outcome evaluation is being able to say with confidence that any changes observed were likely to be a direct result of the project and were not due to other factors. It will not always be possible to overcome this challenge. However, appropriate evaluation design can help to address this issue. This is explored in the next section.

Designing a pragmatic evaluation

The design of an evaluation is critical as it makes a difference to the confidence we have in the final results - and consequently to the conclusions that may be drawn from these results. The design affects the extent to which we can be confident that the outcomes of the project were a result of the programme or intervention – and not due to chance or other factors beyond our control. For example, economic conditions can influence travel and socialisation patterns, and the weather can influence attendance at promotional events. Evaluations using ‘agile’ or rapid cycle methodologies apply an iterative, incremental method of incorporating evaluations in a highly flexible and interactive manner while implementing interventions or service changes.

Pragmatic evaluations are those that tend to select the most appropriate evaluation methods and approaches according to the resources available. In many cases this might involve some form of compromise to address the needs of different stakeholders and deliver the programme and evaluation within the time and budget available. There is much debate about appropriate methods for pragmatic evaluations, particularly the use of control groups. Bodies such as The National Institute for Health and Care Excellence (NICE) and Nesta have published evidence hierarchies that give differing emphasis to particular study types. What is clear, however, is that for the evaluator there are two main points to consider:

- first, agree a strong programme of process evaluation - without this you will not know whether or not the project was implemented as planned and reached its intended target audience
- then agree the strongest possible evaluation design, depending on resources available

There are no ‘right’ or ‘wrong’ evaluation designs, but a stronger evaluation design increases the confidence with which conclusions can be drawn from findings. In particular a strong evaluation can indicate that a project’s outcomes are a result of the project/intervention and did not occur by chance or due to some external factors.

Can you compare outcomes from a project with data from any sort of comparison group or population? This will make the results more robust.

A planned, prospective evaluation is more likely to be accurate in assesssing a project’s effectiveness or impact. This is because there is prior agreement on what should be measured, and it offers the opportunity to collect baseline data before the project has any sort of impact.

Collecting data

Data can often be drawn from existing surveys or data sources such as routine attendance data or local level surveys. In most cases, however, an evaluation will need to collect new data. An evaluation is likely to include a mixture of methods for collecting the different types of information it needs, combining objective data with data from surveys, underpinned by qualitative data that investigate the processes and context in more detail. Data collections should have clear definitions and data should be collected consistently. Consideration should be given to the Caldicott principles of information governance[2]. A significant level of clinical data is collected on sexual and reproductive health in England. This is collected by PHE as part of their ongoing surveillance of STIs and infection control programme management or by NHS Digital (NHSD) as part of its ongoing monitoring of health service activity. Data which give information about the uptake of specific NICE recommendations are collected and published on the NICE Uptake Database. These data are of high quality and can be applied to a variety of evaluations.

[2] Caldicott Principles, revised 2013: https://www.igt.hscic.gov.uk/Caldicott2Principles.aspx

Collecting quantitative data

Some of the data for an evaluation is objective and can be measured directly – such as tests carried out. Most data however cannot be observed or collected directly and will need to be indirectly collected. The most common method for indirect data collection is via questionnaire or survey completed by programme participants or by an interviewer. Interviewer data can be collected face-to-face using traditional pen and paper or via the telephone. Nowadays participants tend to self-complete questionnaires online or by smartphone app. It is important to seek expert advice on questionnaire design as there are many issues that can affect the quality of collected data and subsequent ease of analysis. For example open-ended questions can yield valuable qualitative information but are difficult to analyse.

One of the most important issues to consider when using a subjective measurement tool such as a questionnaire is whether or not its reliability and validity have been tested. Such tools should be tested to ensure that they measure the same thing each time they are used and that they accurately reflect the 'truth' of what they are measuring. Questionnaires are also stronger if they have been validated with the population group in question. It is better to use a validated questionnaire than to invent your own questions as your results will be more informative and comparable to other studies. There are a variety of high quality, validated survey questions such as those used in the British National Surveys of Sexual Attitudes and Lifestyles (NATSAL) which provide clear, well defined questions for collecting data on sexual and reproductive health behaviour.

Collecting qualitative data

Qualitative data can be invaluable to provide insight into the workings of a project. It is particularly valuable for process evaluation and for providing context and explanation for quantitative outcomes.

Qualitative information is usually collected through semi-structured, face-to-face or telephone interviews or focus groups, however qualitative data can also be collected through more creative methods such as video, photographs, drawing, storytelling or role play. Again, it is important to seek help from someone experienced in qualitative methods and analysing qualitative data before you begin to collect data. A list of data collection 'dos and don'ts' is given in Table 9.

Table 9: Data collection: some dos and don'ts

Do	Don't
Collect data to reflect your aims and objectives	Start the project without collecting baseline data
Collect data on at least the essential criteria in the menu of metrics	Try to collect data on everything[Error! Bookmark not defined.]
Use a validated questionnaire if possible	Choose a questionnaire first and then decide what to measure
Test any questionnaire with the target audience	Collect lots of data and then don't analyse it or report it[Error! Bookmark not defined.]
Make sure you have the systems in place to collect the data from project participants, at the right time	

Ethics

Service evaluation is unlikely to require formal ethics approval. However, consideration should be given to issues that may have an impact on the rights, safety, dignity and well-being of actual or potential participants in a study.[6]

For example, considerations should be given to some very basic questions:

- will the data be confidential and anonymous?
- will the questions and terminology offend or upset people?
- will your data collection methods allow respondents to give you additional information that they consider important?
- do the questions and approaches respect people's backgrounds, literacy, and experiences?
- what will you do if someone discloses something that gives cause for concern?
- have participants given consent to the data being collected?

In some circumstances you may require formal approval from an Ethics Committee. More detailed guidance on ethical issues is available from the Research Ethics Guidebook.[8] In the NHS, ethical considerations are governed by the National Research Ethics Service (NRES), part of the Health Research Authority. The NRES manages a formal process of approval for research in the NHS. Most research involving NHS patients must be formally approved by a research ethics committee before it can begin. Guidance is available on the NRES website.[7]

If a university is involved in an evaluation, they will often require the project to be approved by the University ethics committee (regardless of whether or not it is being considered by the NRES).

Step 5: analysis

The next step in the evaluation process is to analyse the data you have collected. The type of data you have collected and type of evaluation you are undertaking will determine when analysis should be conducted. For example, with process evaluation, it is important to analyse the data as the project progresses so that you are able to inform the development of the project. With outcome evaluation, analysis of the data is usually undertaken towards the end of the project or at a specified review date.

This guide can only provide a basic introduction to the issues of analysis. It is recommended that you seek expert assistance in data analysis at an early stage in the process regardless of the type of data you are collecting. A data analysis expert will want to discuss some key issues about your data such as:

- what type of data are you collecting? Qualitative or quantitative? If quantitative, are the data categorical or are the data continuous? Do you have pre-intervention and post intervention data? What is the sample size?
- what level of analysis is required? Are statistical tests required and if so, which tests are appropriate (confidence levels, t-tests)?
- will the data need to be summarised or manipulated to communicate the results? How do you want the data to be presented? Bar charts? Pie charts? Scatterplots?
- what are the limitations of what the data can tell you? Can you be confident in the results?

Some of these issues depend on the target audience for the evaluation report. Who do you hope will read your report? Do you know how they like to see information presented? Do they prefer to see quantitative data or quotes from qualitative data, or both?

Qualitative data can provide an extremely important component of an evaluation, but it requires skilled researchers to collect and analyse it properly. It is essential to analyse qualitative data so that it summarises the themes that emerged from the data, and not simply to pick quotes or extracts that support a single viewpoint.

Overall, when analysing data it is critical to keep the evaluation objectives in mind. What question are you trying to answer? What can you say with confidence from the data? What question are you trying to answer? Keep this in mind rather than analysing and writing up everything that looks interesting.

Step 6: reflection and sharing

The final stage of the evaluation process is to reflect on the findings and share them with key audiences – especially the participants in the project. Depending on the purpose of the evaluation, findings can feed into the decision-making processes regarding the direction of an intervention or project. Table 10 gives examples of dissemination methods.

Table 10: Examples of evaluation dissemination methods

Purpose of evaluation	Example of dissemination activity
Process evaluation of an ongoing project	• paper or report to the project managers • making recommendations for changes
Assessing whether a pilot project reached its target audience	• presentation to project advisory board • talk to project participants to feed back results • YouTube clip
Assessing the cost-effectiveness of a project	• draft paper for finance committee • consider paper for academic journal • tweet results with link to reports

As well as communicating with the stakeholders involved in the project, it is always worth considering whether what you have learned from your evaluation will be of interest to a wider audience. Could you write up your findings or experiences for a journal or present them at a conference?

In most cases it will be necessary to produce an evaluation report. This should contain the key elements of the evaluation, ideally agreed with the evaluation advisory group at an early stage:

- summary
- background and context
- aims
- methods
- project delivery details – outputs and outcomes
- results
- case studies, successes, lessons learnt, challenges
- conclusions and recommendations
- appendices

You may not be able to report every aspect of your data in a concise report, however you need to make sure you do not ‘cherry-pick’ the data by choosing only positive findings. In many cases we can learn as much from what did not work as what was successful.

Finally, consider sharing your findings by completing a standardised evaluation report that is included in the Evaluation Workbook. Completed evaluation reports can be shared on PHE’s library platform, a section of which has been developed to assist practitioners to share standardised summary information from evaluations. The workbook contains the email address where completed evaluation of **any** interventions in SH, RH and HIV services can be sent to. It will help us to better understand the types of interventions across the country and to ensure that best practice is shared.

Evaluation checklist

Aim of project and how it works	✓
What is the purpose of the evaluation?	✓
Who is the intended audience?	✓
Who needs to be involved?	✓
What are the main evaluation questions?	✓
What indicators will you measure?	✓
How you will collect information (method)?	✓
How you will assess the information (analysis)?	✓
Plan for who does what, by when and how, and budget	✓
What ethical issues might there be?	✓
What sort of end product do you want?	✓
What you will do with the results (who are they for, what will you say, what next)?	✓

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