

## How to...

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# Evaluate quality improvement in diabetes care

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### Use this guide to:

- Evaluate a quality improvement project yourself in a few simple steps.
- Share your evaluation findings so that they have maximum impact.

### This guide is for:

- Healthcare professionals.
- Project and programme managers.
- Service managers.
- Quality improvement leads.
- Network managers.

# What is evaluation and why is it important?

Being able to evaluate the diabetes care you provide will help you develop a deeper understanding of what works well and where improvements can be made. Evaluation is an essential part of improving quality and when done well, can solve problems, inform decision making and help build the diabetes services of the future.

## Why do evaluation?

Evaluation can identify if a desired change has been achieved. It can help funders and budget holders with deciding whether or not to fund future work. It can give people with diabetes a voice. The key to successful evaluation is being clear about why you are doing it.



### Evaluation myths

#### **Evaluation is complex and time consuming**

Evaluation comes in many shapes and sizes depending on the nature and scale of your project (the term we use in this guide to refer to any quality improvement activity, programme or initiative). At its simplest, evaluation seeks to answer the question, 'did the project achieve what we expected?'

#### **Evaluation must be done by experts**

Anyone can evaluate a project. This could mean the project team (the term we use in this guide to refer to anyone involved in delivering the project, for example healthcare professionals, service managers and administrators), or an external evaluation team.

#### **Some projects are too small to evaluate**

No matter how small the project, evaluation can help you to identify areas for improvement and gain insights you otherwise may not have found.

#### **Only evaluation of successful projects are valuable**

Every project has lessons we can learn from. Acknowledging changes that did not achieve what was expected can be valuable to both the project team and others looking to learn from your work.

## Should we do evaluation ourselves or commission an external team?

There are advantages and disadvantages to carrying out an evaluation yourself or commissioning an external team to do it for you (see appendix for a summary). The approach you use will depend on the complexity of the project, the existing skills within your organisation and the available budget.



This guide is for organisations and project teams who want to carry out evaluation themselves. Use the following steps to guide you through the evaluation process.

## Step 1 Form an evaluation team



Forming an evaluation team who meet regularly can provide the dedicated time, space and momentum needed for an effective evaluation.

It's likely that most of your evaluation team will be members of the project team. Consider involving wider colleagues and those with previous experience of evaluation, for example commissioners and quality improvement leads. Once you have formed the evaluation team, agree who will lead the evaluation.

As a team, consider these questions:

- Why do we want to do an evaluation?
- What specifically are we evaluating and what do we want to learn?
- What are the aims, objectives and timescales of the evaluation?
- What is in scope and out of scope? Are we clear what the evaluation can and can't do?
- What are team members able to provide? (For example people's availability to take part, access to data and background documents).
- What support can we draw on to help us carry out the evaluation? (For example, administrators can help with data collection and entry. Quality improvement, clinical audit or informatics teams can help with the analysis).



### Top tip

Having an independent view can help improve the effectiveness and transparency of evaluation. Consider asking a colleague from another organisation or setting up an independent panel to review the evaluation process and findings.

## Step 2 Build a logic model<sup>1</sup>



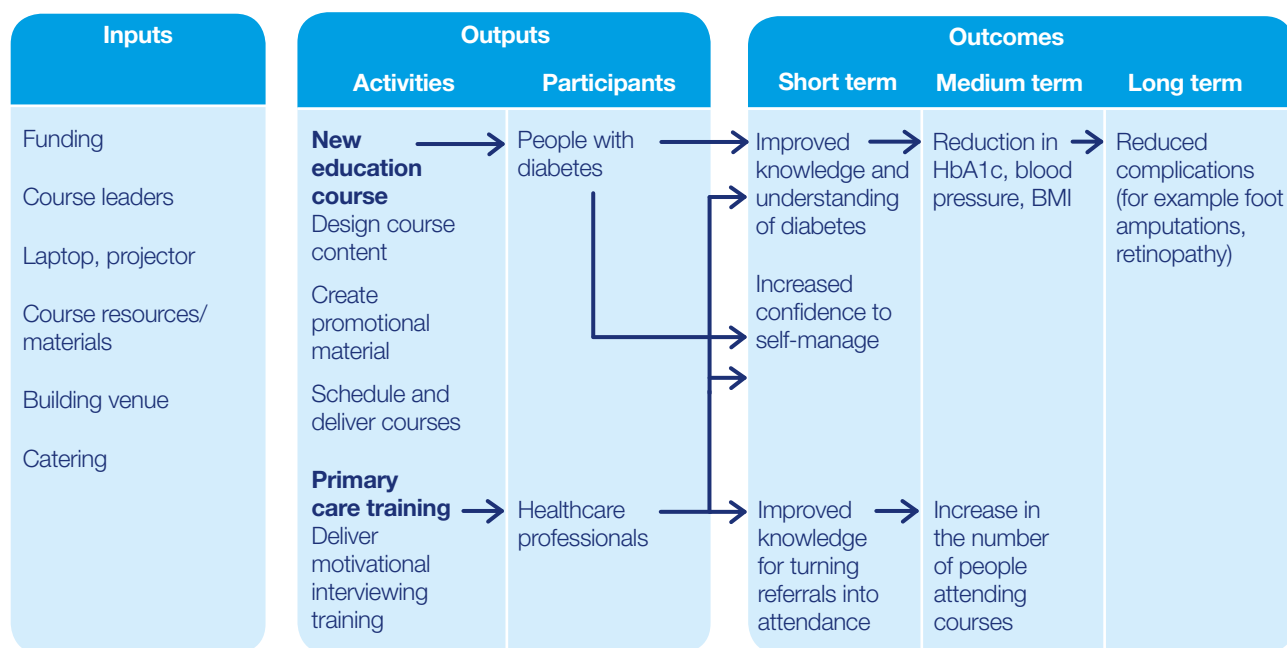
A logic model (also known as a logical framework or theory of change) tells the story of your project in a diagram. It shows a causal connection between the need for your project (the situation), what you do (inputs and outputs) and how this makes a difference for people with diabetes (outcomes).

A logic model is a useful tool for designing, implementing and monitoring the progress of your project. It is also the foundation of the evaluation process. Building a logic model at the beginning of a project helps make sure you're thinking about evaluation from the start.

## Step 2 Build a logic model

### Working example

In this example we're looking at why there is a limited uptake of education courses to support self-management for people with diabetes.



Use the questions below to help build your logic model.

#### The situation

- What is the problem or issue and for whom?
- Why is this a problem? How do we know?
- What do we know about the factors affecting the problem (from research and experience?)

#### Assumptions

- Is it worth doing?
- Is it realistic? Can these activities really deliver those outcomes? Can the outcomes be sustained?
- Can it be done? Do you have enough resources to deliver your activities? Do you have enough commitment from everyone involved?
- Can it be tested? (Will you be able to tell if things are progressing or not?)

#### External factors

- What changing factors might help or hinder your work with, or impact on, the people you want to help?
- Can you do anything about these factors?



Download a logic model template at [www.diabetes.org.uk/professionals/resources/shared-practice/evaluation/evaluation-templates](http://www.diabetes.org.uk/professionals/resources/shared-practice/evaluation/evaluation-templates)

## Step 2 Build a logic model

There is no 'right way' for building a logic model. A simple way to start is to take a large piece of paper or a whiteboard and write the headings of the model. Start filling in the light blue boxes – you can start from the left, or the right, or somewhere in the middle. Use post-it notes so that you can move things around, add and remove them. Use the questions in the white box to help build your logic model.

As you build the model, you might begin to question whether a particular activity can really deliver a particular outcome. You question your logic by exploring the assumptions and external factors behind your activities and questioning the theory about how you will make a difference.

Logic models are never perfect. Don't spend too much time refining your model. Once it's good enough start implementing your project. You can then revisit your model and modify it to reflect any changes in your understanding about the logic and assumptions of your project.



### Focus point

#### Are we setting ourselves up to fail?

Building a logic model helps you to define the outcomes that will be measured and evaluated. But improving outcomes can take time. The key question for the project team to consider is 'are we setting ourselves up to fail by promising too much?' Consider learning from others who have done previous or similar work and use our resource library to search for examples of outcomes from other projects.

Visit [www.diabetes.org.uk/shared-practice](http://www.diabetes.org.uk/shared-practice)



### Focus point

#### The action effect method (AEM)

Logic models are one way to tell the story of your project. But there are many other tools that can inform and support the evaluation process. Developed in 2014 by NIHR CLAHRC<sup>2</sup> Northwest London, the AEM is a process that helps teams to identify how project activities connect to an overall aim by examining cause and effect relationships. It also helps to define what needs to be measured and when. AEM is increasingly being used across the NHS to guide the implementation and evaluation of quality improvement projects<sup>3</sup>.

<sup>1</sup> The information in this step has been adapted from the Evaluation Support Scotland guide Developing a logic model, available at: [www.evaluationsupportscotland.org.uk/resources/252/](http://www.evaluationsupportscotland.org.uk/resources/252/)

<sup>2</sup> National Institute for Health Research Collaboration for Leadership in Applied Health Research and Care.

<sup>3</sup> More information available at: <http://qualitysafety.bmj.com/content/early/2014/10/15/bmjqs-2014-003103.full#F3>

## Step 3 Choose an evaluation type



There are many types of evaluation and no strict rules about which to use. Here are two practical approaches you may want to consider:

- **Before and after evaluation**

This type of evaluation compares data from before (called baseline data) and after a project has started. Comparisons to the baseline data are normally made at regular intervals as your project progresses. This can help you to make changes to the project and fix problems as you go so that it is more likely to be successful.

- **Post project evaluation**

This type of evaluation can be seen as a 'summing up' of the overall effect of a project. It is normally carried out at the end of a project, when all the data is available to help the evaluation team to determine whether it has been a success or not. It can also be used to assess the longer term impact of a project, for example by comparing data collected three, 6 and 12 months post project.



### Top tip

Evaluation is a process of comparison. For more information about other evaluation types and what to compare your project with (for example comparator groups or control groups in randomised control trials) see **The Health Foundation's guide**<sup>4</sup>.

## Step 4 Identify data sources and data collection methods



Identifying the right data sources and data collection methods is essential for measuring the outcomes you identified in your logic model (step 2).

Where possible, draw on a combination of quantitative and qualitative data, from both primary and secondary data sources.

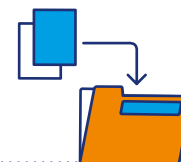
<sup>4</sup>The Health Foundation's guide: [www.health.org.uk/publication/evaluation-what-consider](http://www.health.org.uk/publication/evaluation-what-consider)

## Step 4 Identify data sources and data collection methods

You can use the examples and links in the table below to identify the right data sources and data collection methods for your evaluation.

	<b>Quantitative data</b> (Information collected as or translated into numbers)	<b>Qualitative data</b> (Non-numerical information collected through verbal or free text responses)
<b>Primary data source</b> (Gathered by the evaluation team)	<ul style="list-style-type: none"> <li>• <a href="#">Structured interviews</a></li> <li>• <a href="#">Questionnaires and surveys</a> (paper-based and online)</li> <li>• Evaluation forms</li> <li>• Patient reported outcome measures (PROMS) eg <a href="#">patient activation measure (PAM)</a></li> </ul>	<ul style="list-style-type: none"> <li>• <a href="#">Semi-structured or unstructured interviews</a></li> <li>• <a href="#">Lessons learned workshops</a></li> <li>• <a href="#">After action reviews</a></li> <li>• <a href="#">Patient case studies</a></li> <li>• <a href="#">Observations</a></li> <li>• <a href="#">Focus groups</a></li> <li>• <a href="#">Pictures, photos and videos</a></li> </ul>
<b>Secondary data source</b> (Published by others)	<ul style="list-style-type: none"> <li>• <a href="#">National diabetes audit (NDA)</a></li> <li>• <a href="#">Scottish diabetes survey</a></li> <li>• <a href="#">Diabetes outcomes versus expenditure (DOVE) tool</a></li> <li>• <a href="#">National cardiovascular intelligence network diabetes footcare profiles</a></li> </ul>	<ul style="list-style-type: none"> <li>• Literature reviews</li> <li>• Learning and round-table reports</li> <li>• Social media (Twitter, Facebook)</li> <li>• Newspaper articles</li> </ul>

## Step 5 Create a data collection plan



Once you have identified your data sources and data collection methods, create a short data collection plan (see below). This will help the evaluation team assign and coordinate data collection activities.

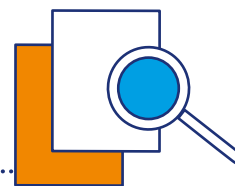
### Working example

<b>Outcome (from logic model)</b>	<b>Data source/ collection method</b>	<b>Person responsible for data collection</b>	<b>Frequency of data collection</b>	<b>Timing of data collection</b>
Improved knowledge and understanding of diabetes	Diabetes quality of life short form questionnaire (DQOL-SF)	Project administrator	At each clinic attendance	For duration of the project
Increased confidence to self-manage	Focus group	Diabetes specialist nurse or quality improvement manager	Once	End of project



Download data collection plan template at [www.diabetes.org.uk/professionals/resources/shared-practice/evaluation/evaluation-templates](http://www.diabetes.org.uk/professionals/resources/shared-practice/evaluation/evaluation-templates)

## Step 6 Collect and analyse the data



The time required for data collection and analysis is almost always underestimated. You can help keep track of data collection activities and limit the impact on the evaluation team's day-to-day work by regularly reviewing your data collection plan (step 5).

Once you have completed data collection, involve quality improvement, clinical audit or informatics teams in analysing the data. Where possible, use a variety of data analysis methods and avoid taking the data at face value – this is your chance to discover the real story behind the data.



### Focus point

#### Tips for analysing and presenting data

- Check raw data for anomalies or missing data prior to performing your analysis.
- Re-perform important calculations, like verifying cells that contain formulas.
- Use simple, well-labelled tables, graphs and run charts to present quantitative data.
- Identify themes in qualitative data and pulling out relevant feedback, including both positive and less positive feedback.
- Create word clouds to analyse the frequency of words in free text responses<sup>5</sup>.
- Present quotes and short extracts from participant interviews (using initials or a pseudonym).

You and your evaluation team should consider these questions as part of your analysis:

- Did your project achieve what we expected?
- What worked? What didn't work?
- Who did the project work for? Did it work in the way we thought it would?
- Did your project reach the right people? What factors affected take up?
- Was our analysis of the need correct? Has it changed?
- Were the activities delivered as planned and to agreed standards?
- Were resources available and used as planned?
- What unintended results were there? (For example unexpected benefits, problems and costs).
- What could we have done differently?
- If the project is working now, will it continue to work in the future? Will it work somewhere else? How can it be spread elsewhere?



You can discover more information about data collection and analysis methods, including the latest resources, training and support at [www.diabetes.org.uk/shared-practice-evaluation](http://www.diabetes.org.uk/shared-practice-evaluation)

<sup>5</sup> Create a word cloud at: <http://tagcrowd.com>



# Step 7 Share your findings



Communicated in the right way, your evaluation findings can help you to take action based on what you have learned and help others to improve diabetes care. They might even help to shape new policies and new ways of working.

People across all parts of your locality and the NHS will be interested in hearing about your findings and there are many ways to reach them. How you share your findings will depend on who the people you want to influence are and their needs and expectations.

A good place to start is to capture your findings in an evaluation report. Use the following as a guide to structure your report<sup>6</sup>:

<b>Title</b> <ul style="list-style-type: none"><li>• Short, captivating title that describes what is being evaluated.</li></ul>
<b>Executive summary</b> <ul style="list-style-type: none"><li>• Brief overview of the project that was evaluated and the main findings and recommendations.</li></ul>
<b>Introduction</b> <ul style="list-style-type: none"><li>• Summary of the need for the project and brief information on the context where the project took place.</li><li>• Description of the project that was evaluated and what it was intended to achieve and how.</li><li>• Brief summary of the evaluation plan, who did it, timeframes, funders (if relevant).</li></ul>
<b>Background</b> <ul style="list-style-type: none"><li>• Previous evidence, research and relevant policy and practice context.</li></ul>
<b>Method</b> <ul style="list-style-type: none"><li>• Description of sample, data sources, and qualitative and quantitative data collection and analysis methods used.</li><li>• Limitations and caveats.</li><li>• Changes in method and reasons why (if relevant).</li><li>• Summary and diagram of your logic model (or alternative tool used).</li></ul>
<b>Results</b> <ul style="list-style-type: none"><li>• Presentation of charts, tables, diagrams.</li><li>• Unintended results (unexpected benefits, problems, failures, costs).</li><li>• Details about missing data.</li></ul>
<b>Discussion</b> <ul style="list-style-type: none"><li>• Summary of key findings.</li><li>• Review of the assumptions and external factors in your logic model.</li></ul>
<b>Recommendations and lessons for the future</b> <ul style="list-style-type: none"><li>• Summary of key lessons for the future.</li><li>• List specific recommendations.</li></ul>
<b>Acknowledgments</b> <ul style="list-style-type: none"><li>• Recognition of people who have contributed to the evaluation.</li></ul>
<b>Appendices</b> <ul style="list-style-type: none"><li>• Glossary (if technical terms are used).</li><li>• List of participants.</li><li>• References.</li><li>• Further charts, tables, diagrams (if relevant).</li></ul>

## Step 7 Share your findings



You can download an evaluation report template at [www.diabetes.org.uk/professionals/resources/shared-practice/evaluation/evaluation-templates](http://www.diabetes.org.uk/professionals/resources/shared-practice/evaluation/evaluation-templates)



### Top tip

Be transparent about all your findings, including those that are less positive. Evaluations that show a bias towards emphasising success and ignoring failure can lack credibility and undermine all the hard work of the project and evaluation teams.

### Make sure your findings have maximum impact

- Set up some dedicated time and space for the project team to reflect on the findings. How can you make best use of the findings? Can you make changes to your project? Can you influence funders and budget holders for funding to continue the project?
- Meeting with senior leaders to discuss your findings and influence future organisational decision-making. (Provide a high-level briefing or slide deck in advance).
- Creating an easy read version of your report for people with diabetes and the public, avoiding technical terms and jargon.
- Present at local diabetes patient groups and public events<sup>7</sup>.
- Present at local, regional and national diabetes networks<sup>8</sup>.
- Present or displaying a poster at local and national conferences.
- Publish an article in a journal<sup>9</sup>.
- Publish a press release or news story.
- Upload your report to your staff intranet and organisation's website.

<sup>6</sup>Adapted from:

The Health Foundation guide, Evaluation: what to consider, available at: [www.health.org.uk/publication/evaluation-what-consider](http://www.health.org.uk/publication/evaluation-what-consider)  
SQUIRE guidelines, available at: [www.squire-statement.org/index.cfm?fuseaction=page.viewPage&pageID=471&nodeID=1](http://www.squire-statement.org/index.cfm?fuseaction=page.viewPage&pageID=471&nodeID=1)

<sup>7</sup> More information about presenting with impact available at: [www.diabetes.org.uk/presenting-with-impact](http://www.diabetes.org.uk/presenting-with-impact)

<sup>8</sup> More information about networks available at: [www.diabetes.org.uk/Professionals/Resources/shared-practice/Networks/](http://www.diabetes.org.uk/Professionals/Resources/shared-practice/Networks/)

<sup>9</sup> More information about writing and submitting articles available at: [www.diabetes.org.uk/Professionals/Resources/shared-practice/Journals/](http://www.diabetes.org.uk/Professionals/Resources/shared-practice/Journals/)

# Appendix<sup>10</sup>

Evaluation approach	Advantages	Disadvantages
<b>Internal evaluation</b>	<ul style="list-style-type: none"> <li>• Likely to be cheaper.</li> <li>• May allow greater control over the process.</li> <li>• Allows immediate changes to the project design, through access to regular data monitoring.</li> <li>• Can be more inclusive, encouraging involvement of wider range of people across organisation.</li> <li>• Can help project team and wider organisation to develop new knowledge and skills.</li> <li>• Internal team have a deep understanding of the project.</li> </ul>	<ul style="list-style-type: none"> <li>• May require more skills, experience and resources than your organisation has (project management, IT skills, data analysis).</li> <li>• May be conflict in prioritising evaluation over other, day-to-day work commitments.</li> <li>• May be harder for internal team to develop and retain a degree of independence from the project.</li> <li>• Internal team may have a vested interest in the success of a project (this may affect reporting of results).</li> </ul>
<b>External evaluation</b>	<ul style="list-style-type: none"> <li>• External team expected to have skills and expertise in evaluation techniques.</li> <li>• May enhance the reputation of the findings with funders and peer reviewers.</li> <li>• External team may have the experience to work more efficiently and effectively.</li> <li>• Findings may be more nuanced and perceptive, by bringing together the evaluation and existing theory and evidence base.</li> </ul>	<ul style="list-style-type: none"> <li>• Likely to be more expensive and time-consuming as external team need time to understand the context and the aims and objectives of the evaluation.</li> <li>• External team need time to develop their understanding of tacit knowledge (that which is not formally collected and can be more readily observed from practice).</li> <li>• External team may arouse some suspicion and resentment among participants who may feel spied on.</li> </ul>
<b>Joint working (combination of internal and external)</b>	<ul style="list-style-type: none"> <li>• May allow a greater degree of control than an external evaluation (without the time commitment of a full internal evaluation).</li> <li>• External team remain on hand to offer advice (for example on the preparation and presentation of findings).</li> </ul>	<ul style="list-style-type: none"> <li>• Likely to be more expensive and time-consuming than an internal evaluation.</li> <li>• Division of roles and responsibilities between internal and external teams may become unclear.</li> </ul>

<sup>10</sup> Adapted from The Health Foundation guide Evaluation: what to consider, available at: [www.health.org.uk/publication/evaluation-what-consider](http://www.health.org.uk/publication/evaluation-what-consider)

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Some of the information in this guide has been adapted from the following resources:

Evaluation Support Scotland. (2016). Developing a logic model. Available at:  
[www.evaluationsupportscotland.org.uk/resources/252/](http://www.evaluationsupportscotland.org.uk/resources/252/)

The Health Foundation. (2015). Evaluation: what to consider. Available at:  
[www.health.org.uk/publication/evaluation-what-consider](http://www.health.org.uk/publication/evaluation-what-consider)



You can download this guide at [www.diabetes.org.uk/shared-practice-evaluation](http://www.diabetes.org.uk/shared-practice-evaluation)

You can download our other guides at [www.diabetes.org.uk/how-to-guides](http://www.diabetes.org.uk/how-to-guides)



You can get more information about evaluation or share your evaluation findings by emailing [sharedpractice@diabetes.org.uk](mailto:sharedpractice@diabetes.org.uk)

**[www.diabetes.org.uk](http://www.diabetes.org.uk)**

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