

Factsheet

From the DGUV-Information 211-043 „Good practice of evaluating preventive measures in the statutory accident insurance“

Conducting an evaluation: From the planning through the implementation to the results



The basis for every evaluation is an **evaluation concept**. The evaluation concept is developed in consultation with the client and describes the entire evaluation project. The following example of a seminar on the topic “Healthy back in the workplace” shows, which questions are necessary to answer in order to create an evaluation concept. In addition, the implementation of an evaluation as well as the derivation of the results is demonstrated. A detailed description of the entire evaluation process can be found in DGUV Information 211-043 “Good practice of evaluating preventive measures in the statutory accident insurance” (DGUV, 2020).

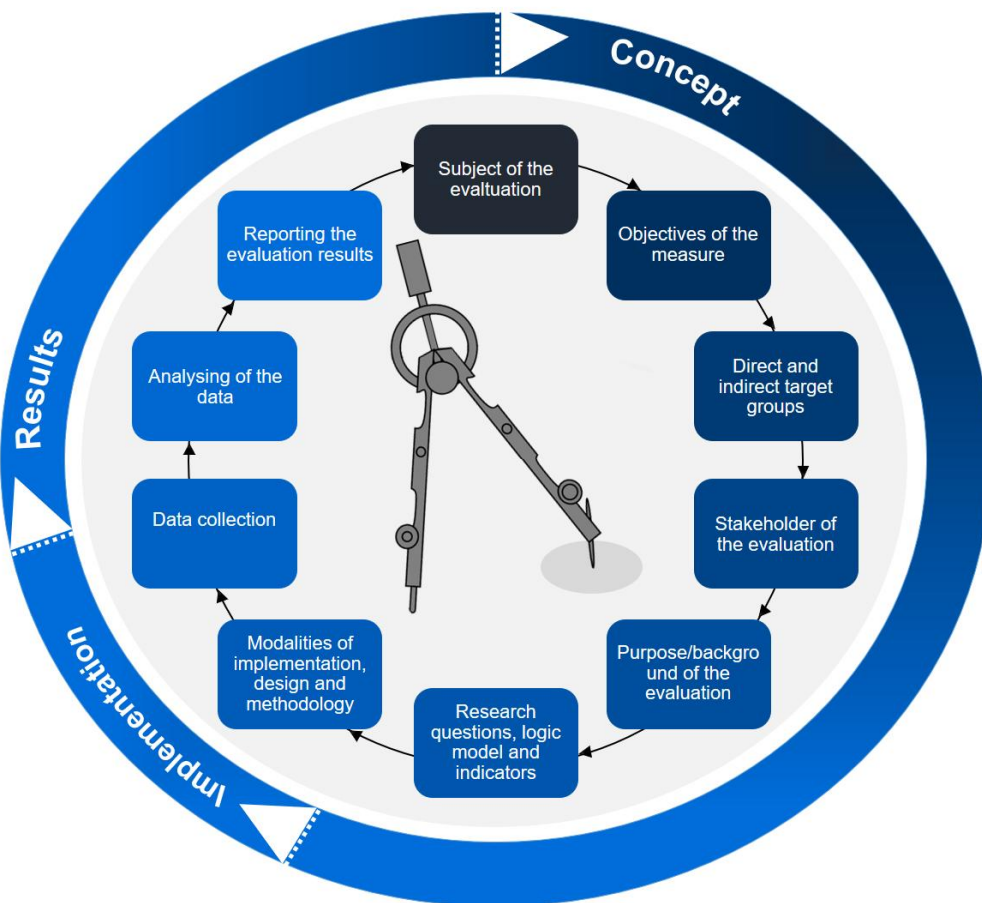


Figure 1: Evaluation circle (DGUV, 2020).

1. Understanding the subject (measure, product, project) of the evaluation

In the first step of the evaluation circle the measure, product or project needs to be captured. Therefore, it is necessary to describe the object as detailed as possible. Feasible questions are: what exactly should be investigated (for example seminar, media, campaign, intervention)? Which individual components is the measure composed of? Which individual topics/contents are being dealt with?

EXAMPLE

The seminar "Healthy Back at Work" consists of three modules, which take place on three days. The seminar provides theoretical basics and practical knowledge on behavioural and conditional preventative measures to improve the individual back health.



2. Understanding the objectives of the measure, product or project

In the second step, the objectives of the measure, product or project that will be evaluated need to be identified. What were the needs from which the measure, the product or the project developed? Which problem should be solved with the measure? What aims are pursued with the measure, product or project? What should be achieved? Which sub goals are pursued with the measure, the product or the project? What are short-term and what are strategic long-term goals? When should the aims be achieved?

EXAMPLE

Musculoskeletal disorders are one of the main causes of inability to work and therefore attribute to high costs for companies. Aim of the seminar "Healthy back in the workplace" is the acquisition of knowledge on the topic of back health as well as the knowing and application of actions for the prevention of musculoskeletal disorders. The health knowledge, the general well-being and individual back health is to be increased among all participants.



3. Direct and indirect target groups of the measure, product or project

In the third step, the direct and indirect target groups of the measure, product or project need to be identified. Who has direct access to the measure, product or project (for example teachers, managers, experts on safety and health) and who is indirectly affected by the measure (for example through multipliers)? How large is the target group? How exactly is the measure, product or project implemented for the target group/in the company or how should it be implemented? What is the current implementation status? Who else should or could be reached by the measure, product or project (side effects)? How is the target group of the measure, product or project to be reached?

EXAMPLE

Target group of the seminar "Healthy back in the workplace" are employees in jobs that are marked by pressure/burden on the back. The attendees of the seminar are intended to learn about behavioural and conditional preventative measures, how to use them and to get motivated to pass on the information to other colleagues (side effects). The target group is reached by attending the seminar.



4. Stakeholders of the evaluation

The fourth step contains investigating who is to be involved/informed and prematurely included in the evaluation and with whom else communication is necessary. Who commissions the evaluation? Who are the users of the evaluation results?

EXAMPLE

Involved parties could be: the seminar provider, who can decide whether to continue the seminar or to change it according to the results of the evaluation, the department that developed the seminar, the lecturers who use the concept of the seminar, or even the participants.



It should also be considered at this point which samples are available for the evaluation. Can all those involved in the implementation of the measure be included in the evaluation, or must a sample be taken for the evaluation? This depends both on the methods used for the evaluation (see step 7) and on the evaluation questions and the respective framework conditions.

EXAMPLE

In the example of the seminar, a full survey of the complete population can be carried out: All seminar participants can be included in the evaluation.



5. Purpose/background of the evaluation

In the fifth step the question is asked, why an evaluation is done at all. Evaluations always fulfil a specific purpose in relation to the measure or as part of a project. Evaluations are based on specific objectives of the measure and answer of one or more previously defined questions. The objectives of the measure must be operationalized and measurable. The purposes of the evaluation must be clarified before beginning. Questions that are interesting for these steps are:

Why should we evaluate? What caused the decision to conduct an evaluation? What is the background (for example political prescription, decision basis, optimization, etc.)? How or what should the results of the evaluation be used for? Which results/effects are expected from the evaluation?

EXAMPLE

In our example, the evaluation should identify strengths and weaknesses of the seminar concept (formative evaluation). The evaluation thus pursues the purpose of optimization. On the other hand, the effectiveness of the seminar should be determined (summative evaluation). This serves the purpose of legitimacy. Finally, a decision should be made whether the seminar will be continued or not (decision-making function).



6. Identification of research questions, logic model and indicators

The sixth step is to identify what is to get to know by means of the evaluation and thus to answer the following questions: What would you like to learn about the measure, the product or the project by means of the evaluation? What specific questions do you want to be answered with the evaluation? Which statements would you like to review or check by means of the evaluation?

If the aims that are pursued with the evaluation are clear, a logic model is used or possibly developed, which explains how or via which intermediate steps the measure reaches the goal. Indicators indicate whether the measure, product or project has reached the target group and is effective. The indicators show whether milestones that ultimately lead to the desired outcome for the target group have been achieved and whether the project is on the right track or not.



EXAMPLE

For the evaluation of seminars, the four-level model from Kirkpatrick (1956) is used very often as a logic model. The questions and indicators can be derived on the basis of this model. Here are a few possible indicators based on this evaluation model:

- *Reaction level: satisfaction with the measure*
- *Learning success level: knowledge gain, acceptance and willingness to apply the measures*
- *Behavioural level: qualitative and quantitative application of measures, restrictive framework conditions*
- *Overall result: well-being of the participants, frequency of back problems, working conditions in the company and key operational figures (for example absence from work due to inability to work)*

7. Modalities of implementation: Design and methodology

In the seventh step, practical questions about the possibilities of carrying out the evaluation need to be clarified. Is there a budget for the evaluation? Which methodology or which mix of methods may be best suited to reach the target group (for example paper/online questionnaire, personal interview, etc.)? Is it possible to carry out pre-tests, surveys at several measurement times, or to set up a control group? In addition, it must be decided on the best way to reach the target group in the evaluation.

Evaluation designs describe the process of data collection and assessment in a design plan. They provide information about which subjects receive when and how a certain measure and when the indicators are assessed. Depending on the evaluation purpose, target groups, the questions to be answered and the availability of control groups, different evaluation designs are possible. The conclusions that can be drawn from the evaluation results for verifying the effectiveness of a preventive measure depend on the evaluation design chosen. Depending on the type of evaluation design, the informative value differs greatly.

When planning an evaluation, the question of suitable assessment methods and instruments plays a central role. The methods describe the systematic approach to gaining knowledge. Empirical social research uses many different methods of data collection. A distinction is made between quantitative and qualitative methods. There are a lot of comprehensive overviews of various quantitative and qualitative data collection methods in evaluation research, including possible applications, as well as the advantages and disadvantages of the methods.



EXAMPLE



For the evaluation of qualification measures, the method of written questioning has proven itself. All seminar participants receive a questionnaire immediately before and after the seminar as well as three months later (before-after measurement plus after-measurement without control group). In this case, predominantly quantitative data is collected for all four levels of the model from Kirkpatrick (see step 6).

8. Data collection

In the eighth step, the data collection is done. For the impact study and process evaluation it is crucial that the data is not merely collected at the end of the project, but also before or during the implementation. Useful questions are: How can data be collected, that can document

the implementation of the measure, product or project and which can be used for the process evaluation? Is there already information on who needs the results of the evaluation by when?

EXAMPLE





In order to better interpret the results of the statistical tests, it will be documented during the process how the preventive measures (= the execution of the seminar) have expired. For example, how many of the registered seminar participants actually attended the seminar. In addition, data will be collected on the general conditions of the seminar (for example if there has been influence by external factors). The results of the seminar evaluation should be available until the next annual planning, so that changes in the seminar concept can be realized in time.

9. Analysing of the data

In the ninth step, the data analysis is planned. Generally, when analysing quantitative data, the average and frequency is calculated using a statistics program. Beyond this, it can be seen if there has been a significant change between the times of measurement (static tests on average differences). Qualitative data is analysed regarding its content.

Example





The written questionnaire will be analysed at the three measured time points with regard to the defined indicators (see above). Ideally, there should be an increase in knowledge after the seminar. A successful transfer into everyday business life occurs when the number of measures applied in everyday business increases, the well-being of the participants improves, the overall back problems are reduced and the working conditions in the company improve (statistical comparisons of the three measurement times). If the results are not as predicted, the accompanying process evaluation may provide an answer (for example did the lecturer actually give a lecture on the subject of a fit back or was there a significant distraction from the outside during the seminar, like noise?).

10. Reporting the evaluation results

In the tenth step, the results must be presented to all concerned parties in a clear manner (for example in a workshop with stakeholders, in an evaluation report...). The questions, that have been developed, must be answered. Using the results, together with the stakeholders, procedures and advice on future action is to be developed. The evaluation report also contains reflections about how the evaluation and its process could be improved.

EXAMPLE



The results of the seminar evaluation will be presented in a power-point-presentation. These results will also be shared with all involved parties (for example certain department, seminar managers) in a results workshop.

Reference List

DGUV Information 211-043 "Good practice of evaluating preventive measures in the statutory accident insurance" (2020) Deutsche Gesetzliche Unfallversicherung e.V. (DGUV), Berlin.

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