
 METHODOLOGIC ISSUES

The evaluation of community based injury prevention activity: the UK perspective

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The problem

Difficulties associated with the evaluation of community based injury prevention activities are well attested.^{1,2} These relate especially to the application of scientific rigour to the evaluation of fieldwork programmes, which can span a wide range of activities, methodologies, and desired effects. True scientific outcomes—expressed as changes in accident rates—remain largely elusive.³

There are five main obstacles:

- The necessary data and even the data collection systems themselves are rarely available. Although many data are collected about accidents, they can be difficult to obtain, exist only in unsuitable formats, or are incompatible with data from other sources. Without intervention-specific data at the front and back end of an intervention programme, a scientific evaluation is seriously compromised.
- Scientifically credible evaluation in this field is, almost invariably, time consuming and costly. Resources are rarely available to support the level of sophistication needed, and may well be disproportionate to the cost of the programme itself.
- The necessary skills are often not available or are not properly linked to the programme. Researchers usually lack fieldwork skills and fieldworkers usually lack research skills.
- It can be difficult to isolate the effects of a particular intervention programme in community settings. Many other things are likely to affect attitudes and behaviour towards safety. Thus hazard levels will vary according to a multitude of factors, unrelated to the programme being evaluated.
- There can be many links in the accident prevention chain. Tracking the effects of any single activity through to the accident statistics would be a complex affair even if all the other factors above could be successfully addressed.

The need for credible evaluation of outcome and effectiveness is not disputed. However, the 'state of the art' often leaves fieldworkers, and their managers, in a difficult position. This is compounded by the current fashion in public sector agencies to focus on quantitative indicators in performance management. The danger here is 'ensuring that the measurable does not drive out the immeasurable...'.^{4,5} Simply because a programme or activity is

difficult (or impossible) to measure does not, in itself, mean that it lacks value.

A more prosaic approach

At its most simple, evaluation is about *making judgments*, something we all do much of the time. The main differences between our commonplace judgments and 'evaluation' are:

- A commitment to be *rigorous and informed* about the subject of our judgments;
- That evaluation is a *public or shared activity* — where all the people involved can share information and argue about ends and means;
- That evaluation is undertaken for a *purpose*, though this itself can be extremely varied.

For fieldworkers and middle managers — often lacking access to epidemiologists and other academics — evaluation needs to be something that they can do for themselves. This means that the whole exercise must be kept in proportion; the effort to be put into evaluation should be decided pragmatically, bearing in mind the scale of the project, how experimental it is, and how much it will cost in money and people's time.

Two further points need to be made in this context. Firstly, there can be many legitimate reasons for wishing to evaluate injury prevention projects. But there is one overriding operational justification — to improve the services or activities involved. If evaluation is not allowed to influence the 'what' and the 'how' of future activity, there is little point in the exercise.

Secondly, managers of injury prevention activity will not only be interested in the direct or indirect effects of the work on the target audience — 'programme evaluation'. They will also want to know what lessons may be learned about *how* these programmes have been implemented — 'process evaluation'.

Programme evaluation

The difficulties of establishing and measuring cause and effect in much accident prevention work have been referred to. It can often be impossible to 'prove' that a particular project or activity has reduced the rate at which injuries of interest occur. In working with local agencies, the Child Accident Prevention Trust, for example, has developed a practical tool for approaching programme evaluation within these constraints.⁶ This adapts an existing

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approach to the measurement of work performance.

A common evaluation framework in use has three main components — *inputs*, *outputs*, and *outcomes*. This allows examination of the relationship between what was put into a project (inputs), what was produced as a result (outputs), and how this has or has not changed the world (outcomes). For injury prevention work, the inputs and outputs part of this construct work well enough; problems arise for the outcomes part. This does not render evaluation impossible, but its focus may need to shift to the direct effects of intervention, rather than to what might be hoped for in a wider sense. This is sometimes called the use of ‘proxy’ or *intermediate indicators*. We prefer the term *impact evaluation*.

The stages are presented diagrammatically (figure). In many accident prevention initiatives, it is impact evaluation that is possible and useful, whereas outcome evaluation may be impossible.

Process evaluation

For practitioners and their managers, it is crucially important to understand and learn from the lessons of ‘process’ — how things were done, who was involved, what organisation was required, etc. Again, this can be complex because many factors can be involved, and many of these factors are not easily comparable. For example, the success of an accident prevention initiative could be affected by key changes in personnel, support (or withdrawal of support) from senior management, availability of resources, the presence or absence of local networks, organisational restructuring, the strength of personal relationships, etc.

One way of sorting out the factors involved is to borrow a diagnostic tool from organisational consultancy. This identifies four elements that together make up an organisation (or a department, section, unit, or project team). Holding these elements together is what *management* is all about. The four elements are:

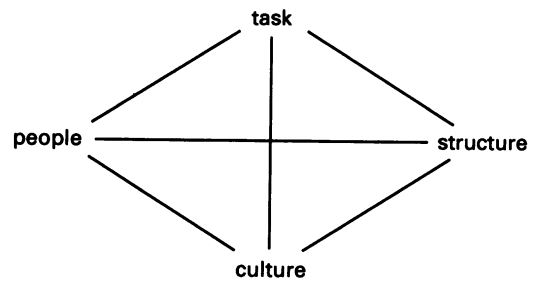
The task — what is it that the project is trying to do and achieve;

The structure — the ways in which people and the work are organised; how communication takes place, information distributed, and decisions made;

The people — who are they; what skills and experience do they have; how much energy and enthusiasm; do they have the support and the tools necessary to work well;

The culture — what values are expressed in the work; how do people treat each other; how do they treat their users; what is the atmosphere like?

These elements can be presented diagrammatically, illustrating their relationship to one another. For example, a change in the *people* may have an effect on the *culture*; improvements in *structure* may make the *project* more effective; expanding the *task* may require *people* with different backgrounds. The diagram looks like this:



Some practical pointers

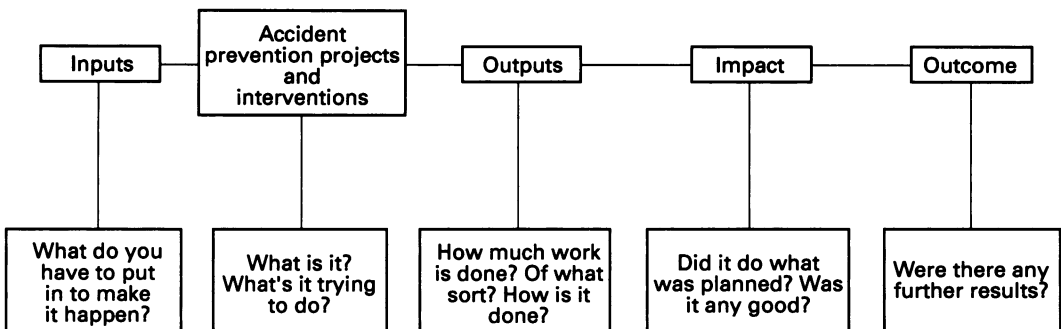
When approaching injury prevention evaluation in this way, there are some practical pointers for evaluation design:

(1) BUILD EVALUATION IN FROM THE BEGINNING

A useful evaluation is more likely if it is integrated from the very start — with the planning of the work. There is a dynamic relationship between planning — looking forward — and evaluation — looking backwards. The model of ‘goal centred evaluation’, emphasising this link, is a useful tool here.

(2) START FROM WHERE YOU ARE

In deciding how ambitious an evaluation can or should be, it is helpful to start from where one is, and work outwards from this point. In



A way of approaching the evaluation of accident prevention projects and interventions (and a guide to the jargon).

practical terms the evaluation should first be centred around the actual activity involved, rather than on what is held to be a desirable ultimate effect of the activity. For example, providing training for health visitors could be presented like this:

training programme aimed at → health visitors → who use the results with parents → who apply the results to their childcare practice → which affects the risks to their children → which means fewer accidents . . .

A start can be made by evaluating the training programme itself. It should be possible to find out what the health visitors did as a result of the training and it may even be possible to find out what effect this had on the parents. However, being able to go right down the chain to assess whether the training programme led to fewer accidents is a complex and time consuming aspiration. It may be desirable, but it is often just not possible.

(3) DECIDE WHAT YOU WANT TO EVALUATE

A limited amount of time may be available for evaluation; therefore its focus should be established. These decisions may be pragmatic. For example, it may be important to influence unconvinced managers, or to focus on that part of the work that consumes the most resources, as well as those aspects considered most important in their potential for reducing accidents.

(4) BE CLEAR WHO IS TO BE AFFECTED BY THE EVALUATION

Answers here may affect the way in which the evaluation is set up and conducted. Especially important is to identify who might be expected to *change* as a result of the evaluation — they are more likely to cooperate with change efforts if they have been involved from the start.

(5) AGREE ON SUCCESS

This can help in the planning of the work and in avoiding later misunderstandings. For example, without agreeing criteria for success, two different but legitimate responses to attracting 100 people to a safety exhibition might be — ‘it was brilliant, I only expected 50’ to ‘it was pathetic, I expected 250’ — same facts, but different ideas of success.

(6) AGREE HOW SUCCESS WILL BE MEASURED

Respectable evaluation involves *measuring* the effects of the work, rather than merely *asserting* that changes have taken place. Measures can be quantitative, qualitative, or both.

(7) DECIDE HOW TO COLLECT THE INFORMATION NEEDED

Systems and procedures need to be agreed that will allow the right information to be collected and permit work to be monitored as it takes place. Central to this is *writing things down* — people’s memories are notoriously inaccurate!

(8) AVOID THE ‘CLOSED CIRCLE’

A difficulty with the goal centred approach to evaluation is that the same people set the goals and assess whether they have been met. A balanced evaluation will seek and incorporate the views of others who are not actually involved in the work programme. The two most important such groups are:

- Users or consumers — those who are supposed to be better off as a result of the programme;
- Others drawn from professional peer groups — who can bring an informed, independent view to the evaluation. This can be especially useful when considering judgments about process, about which users may be unable to comment.

Conclusion

It is not argued that the techniques and aspirations described in this paper substitute for properly designed, scientific evaluations of injury prevention programmes. However, while the academics and experts debate about compatible data sets, the elimination of confounding variables and suchlike, injury prevention practitioners lack the evaluative tools necessary to judge whether their programmes were worth doing and how they might be improved, if repeated. The approaches presented here might go some way to meeting the difficulties of their dilemma.

- 1 Towner E, Jarvis S, Dowswell T. *Reducing childhood accidents. The effectiveness of health promotion interventions: a literature review*. London: Health Education Authority, 1993.
- 2 Towner E, Jarvis S, Dowswell T. *Reducing childhood accidents. The effectiveness of health promotion interventions: a review of research methodologies*. Newcastle upon Tyne: Northern and Yorkshire Regional Health Authority, 1994.
- 3 Towner E, Jarvis S, Dowswell T. *Reducing childhood accidents. The effectiveness of health promotion interventions: an annotated bibliography*. Newcastle upon Tyne: Northern and Yorkshire Regional Health Authority, 1994.
- 4 Audit Commission. *Performance review in local government — a handbook for auditors and local authorities; action guide*. London: Audit Commission, 1988: 5.
- 5 Flynn N. Performance measurement in public sector services. *Policy and Politics* 1986; 14: 389–404.
- 6 Approaches to Local Child Accident Prevention Projects. *A practical approach to evaluation*. (One of a pack of material, ALCAPP.) London: Child Accident Prevention Trust, 1991.