

## Understand Causes of Outcomes and Impacts

- Jane Davidson



? Understand Causes

Outcomes

Impacts



As a profession, we often either  
**oversimplify** causation  
or we **overcomplicate** it!



**senior  
leadership &  
management  
development  
program**



**too soon?**



# check timing of outcomes

v. 1

leadership  
development  
program

immediate/soon  
after learning

enhanced  
knowledge  
& skills

weeks to  
months later

improved  
performance  
as a leader

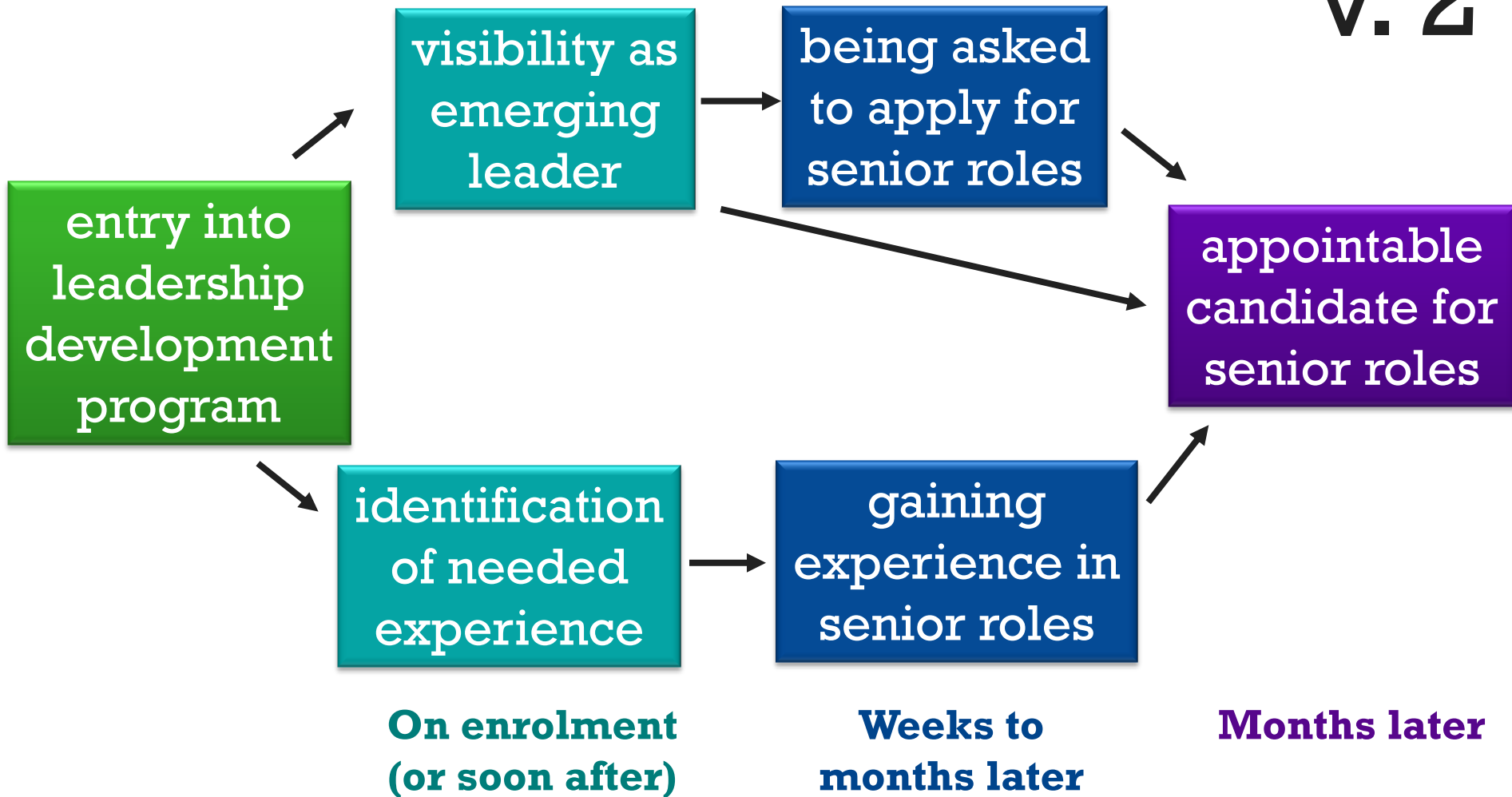
months to  
years later

appointable  
candidate for  
senior roles



# check timing of outcomes

v. 2



# match content ...

leadership  
development  
program



identification  
of needed  
experience



gaining  
experience in  
other roles



appointable  
candidate for  
senior roles

... to outcomes

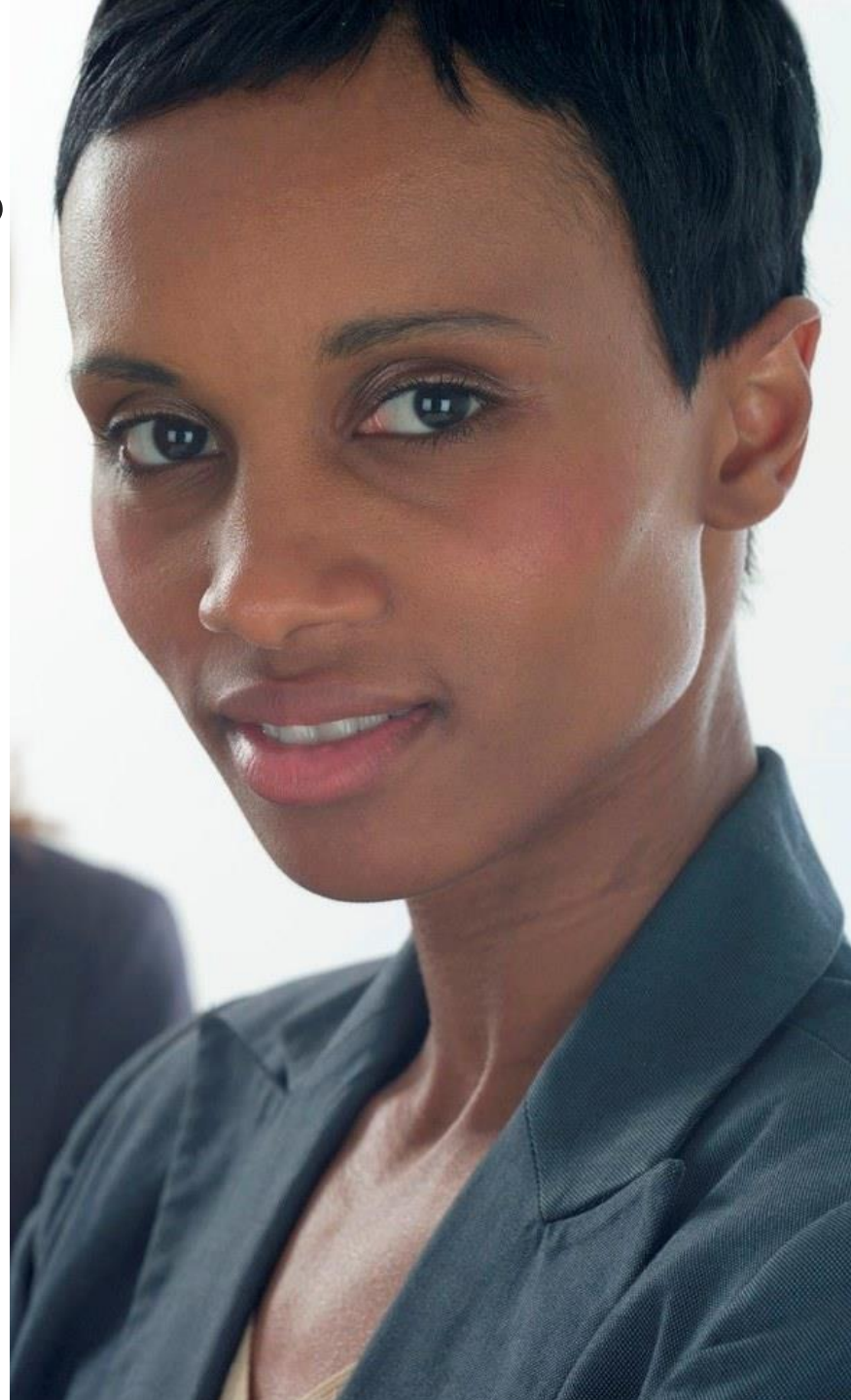


ask participants

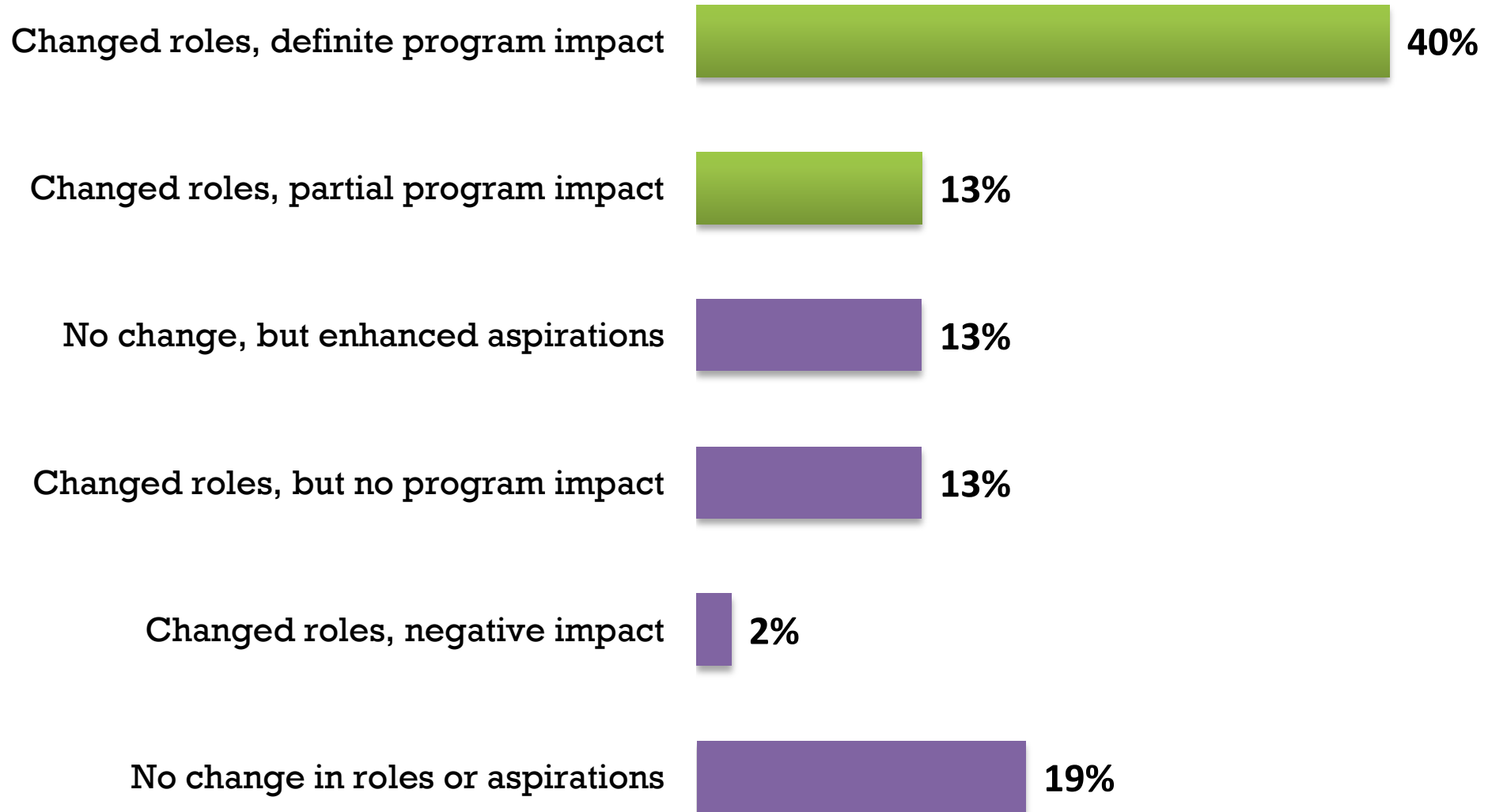
changed job?

career  
advancement?

did the program  
help?

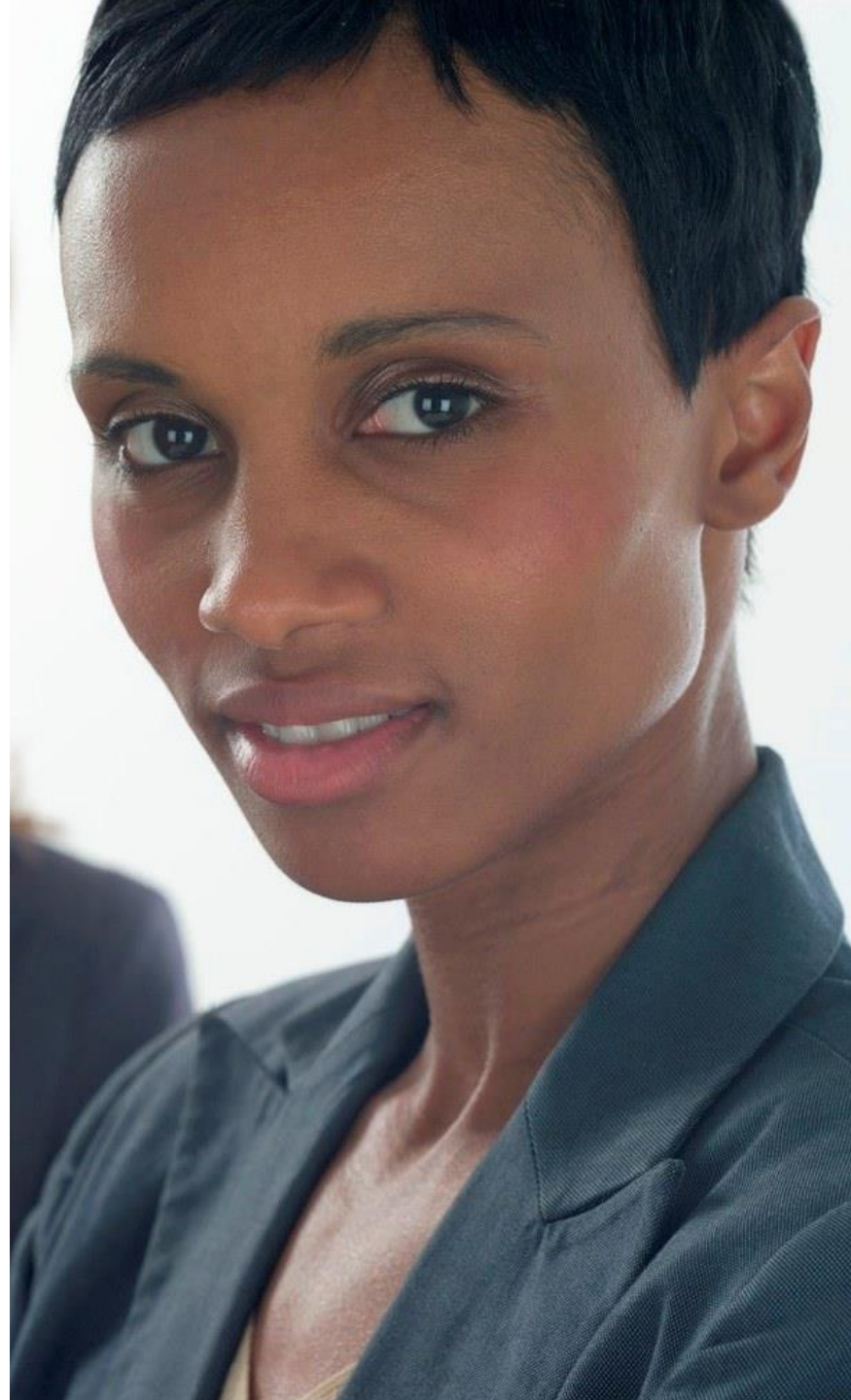


# More than half said the program helped them get a promotion



*“firstly, actually  
**being accepted**  
for the course  
**is rated highly,***

*secondly I understand  
that **my interview**  
**went well** because  
of my ability to relate  
program learnings to  
real life issues.”*



# 3 messages





# 3 messages

1. all outcome/impact evaluation needs causal inference



# 3 messages

1. all outcome/impact evaluation needs causal inference
2. going qualitative doesn't let you off the causal hook!





# 3 messages

1. all outcome/impact evaluation needs causal inference
2. going qualitative doesn't let you off the causal hook!
3. the real “gold standard” is sound causal reasoning!



## ? Understand Causes

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Most evaluations need to investigate what is causing the outcomes and impacts of an intervention. (Some process evaluations assume that certain activities are contributing to intended outcomes without investigating these).

Sometimes it is useful to think about this in terms of 'causal attribution' – did the intervention cause the outcomes and impacts that have been observed? In many cases, however, the outcomes and impacts have been caused by a combination of programs, or by a program in combination with other factors.

In such cases it can be more useful to think about "causal contribution" – did the intervention contribute to the outcomes and impacts that have been observed?



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### Manage Evaluation

Define

Frame

Describe

Understand Causes

Check the results support causal attribution

Compare results to the counterfactual

Investigate possible alternative explanations

Synthesize

Report And Support Use

### Ask a Question

Ask the Forum

### Tasks

#### 1. Check the results support causal attribution

One strategy for causal inference is to check that the data are consistent with what we would expect if the intervention were being effective? This involves not only whether or not results occurred, but their timing and specificity.

#### 2. Compare the results to the counterfactual

Another strategy to assess the impact of an intervention is to compare it to an estimate of what would have happened without the intervention. Options include the use of control groups, comparison groups and expert predictions.

#### 3. Investigate possible alternative explanations

A third strategy is to identify other factors that might have caused the impacts and see if it is possible to rule them out.

## Check the results support causal attribution

One of the tasks involved in understanding causes is to check whether the observed results are consistent with a cause-effect relationship between the intervention and the observed impacts.

Some of the options for this task involve an analysis of existing data and some involve additional data collection. It is often appropriate to use several options in a single evaluation. Most impact evaluations should include some options that address this task.

### Options

#### Gathering additional data

- **Asking Key Informants to Attribute Causality:** providing evidence that links participation plausibly with observed changes.
- **Modus operandi:** drawing on the previous experience of participants and stakeholders to determine what constellation or pattern of effects is typical for an initiative.
- **Process tracing:** focusing on the use of clues (causal-process observations, CPOs) to adjudicate between alternative possible explanations.

#### Analysis

- **Check dose-response patterns:** examining the link between dose and response as part of determining whether the program caused the outcome.
- **Check intermediate outcomes:** checking whether all cases that achieved the final impacts achieved the intermediate outcomes.
- **Check results match a statistical model:** comparing results with a statistical model to determine if the program caused the outcome.
- **Check results match expert predictions:** making predictions based on program theory or an emerging theory of wider contributors to outcomes and then following up these predictions over time.
- **Check timing of outcomes:** checking predicated timing of events with the dates of actual changes and outcomes.
- **Comparative case studies:** using a comparative case study to check variation in program implementation.
- **Qualitative comparative analysis:** comparing the configurations of different cases to identify the components that produce specific outcomes.
- **Realist analysis of testable hypotheses:** Using a realist program theory (what works for whom in what circumstances through what causal mechanisms?) to identify specific contexts where results would and would not be expected and checking these.

### Approaches

Some approaches combine these different elements of explanation:

- **Contribution Analysis:** assessing whether the program is based on a plausible theory of change, whether it was implemented as intended, whether the anticipated chain of results occurred and the extent to which other factors influenced the program's achievements.
- **Collaborative Outcomes Reporting:** mapping existing data against the theory of change, and then using a combination of expert review and community consultation to check for the credibility of the evidence.
- **Multiple Lines and Levels of Evidence (MLLE):** reviewing a wide range of evidence from different sources to identify consistency with the theory of change and to explain any exceptions.

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### Resources



Broadening the range of designs and methods for impact evaluations



Purposeful program theory: effective use of theories of change and logic models



Designing and Conducting Health Systems Research Projects: Guide



Development Impact Evaluation Initiative



Models of Causality and Causal Inference

1 2 3 NEXT »

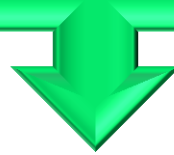
Suggest a Resource

### Ask a Question

Ask the Forum

1

Check the results support causal attribution



we used

**modus operandi**

**timing of outcomes**

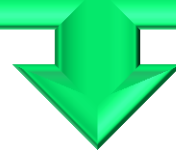
**intermediate outcomes**

**match content to  
outcomes**

**ask key informants**

1

## Check the results support causal attribution



we used

**modus operandi**

**timing of outcomes**

**intermediate outcomes**

**match content to  
outcomes**

**ask key informants**

process tracing

comparative case studies

dose-response patterns

fit with a statistical model

fit with expert predictions

statistical control of  
extraneous variables

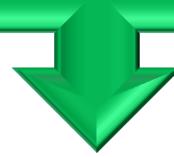
realist analysis

qualitative comparative  
analysis



2

Compare the results to the counterfactual



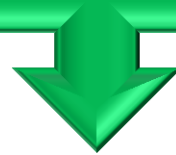
we used

**ask key informants**

**expert-estimated  
counterfactual**



## Compare the results to the counterfactual



we used

**ask key informants**

**expert-estimated  
counterfactual**

statistically created  
counterfactual

logically constructed  
counterfactual

regression discontinuity

sequential allocation

control group

matched comparisons

judgemental matching

instrumental variables

difference in difference  
(or double difference)

qualitative comparative  
analysis

3

**Investigate possible alternative explanations**



**we used**

**general elimination  
methodology &  
modus operandi**

**searching for  
disconfirming  
evidence**

**asking key  
informants**

3

## Investigate possible alternative explanations



we used

**general elimination  
methodology &  
modus operandi**

**searching for  
disconfirming  
evidence**

**asking key  
informants**

force field analysis

process tracing

RAPID outcomes  
assessment

ruling out technical  
explanations

statistically  
controlling for  
extraneous variables

## Understand Causes

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Most evaluations need to investigate what is causing the outcomes and impacts of an intervention. (Some process evaluations assume that certain activities are contributing to intended outcomes without investigating these).

Sometimes it is useful to think about this in terms of 'causal attribution' – did the intervention cause the outcomes and impacts that have been observed? In many cases, however, the outcomes and impacts have been caused by a combination of programs, or by a program in combination with other factors.

### Tasks

#### 1. Check the results support causal attribution



*Download a summary of the tasks, options, and approaches associated with **understanding causes of outcomes and impacts**.*


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Check the results support causal attribution

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# BetterEvaluation

*Sharing Information to Improve Evaluation*

betterevaluation.org

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## Further resources

<http://betterevaluation.org/plan/understandcauses>

**Jane Davidson**

<http://RealEvaluation.com>

[jane@RealEvaluation.com](mailto:jane@RealEvaluation.com)

