

## Evaluating Government OHS Interventions

A one day NOHSC Workshop

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Canberra

### Workshop Exercise

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  - **Appendix B:** Goldenhar et al (2001): *The intervention research process in occupational safety & health: An overview from the National Occupational Research Agenda Intervention Effectiveness Research Team*. *Journal of Occupational & Environmental Medicine* 43(7): 616-622.
  - **Appendix C:** One-Page Summary of OHS Intervention Research Model from (US) National Occupational Research Agenda Intervention Effectiveness Research Team



## WORKSHOP OUTLINE

This workshop exercise presents a way of systematically thinking through intervention development, implementation, and evaluation. It is designed to be a facilitated face-to-face exercise, but can also be applied by individuals who are already familiar with the terms and concepts used. This workshop builds on a shorter exercise developed by Dr Linda Goldenhar (University of Cincinnati, USA), Dr Larry Chapman (University of Wisconsin, USA) and the US NIOSH Intervention Effectiveness Research Team.

You will get the most out of this exercise if before the workshop you read the companion paper entitled *Improving OHS Policy Through Intervention Research* as well as the 2001 paper *The Intervention Research Process in Occupational Safety & Health* by Goldenhar et al (Appendices A & B). *Improving OHS Policy* focuses specifically on OHS regulatory and other policy-level interventions. The *Intervention Research Process* paper introduces you to the model of intervention research and the terms and concepts that we'll use in the exercise, including numerous concrete examples. At a minimum, to prepare for the workshop or for working through the exercise ahead of time, please review the one-page summary of the intervention research model and process in Appendix C. The overview lecture will cover key points, but you'll be better able to work with the terms and concepts used if you've also read the materials.

In outline, the exercise involves three sets of steps:

1. **Identifying the issue, program, or policy you would like to explore** in this exercise and locating where it fits in terms of intervention phase (development, implementation, evaluation, or some combination of phases) and intervention level (individual on up to policy). For most attendees at this workshop, the focus will be on the policy level. But it can be the case your particular interest is in an individual-level intervention (e.g., worker training) that sits within a broader policy framework. It is not required that you take on the whole of a particular policy—a focus on specific parts is acceptable.

2. **Articulating the rationale or theory and goals of the policy of interest, or building a rationale or theory for a new policy:** This means answering the question ‘What is the rationale of the program or policy you are interested in developing, implementing, or evaluating?’ Put another way, this means understanding why or how it is expected that a given policy will result in desirable changes in specific outcomes. Participants are sometimes surprised to find this the most edifying part of the entire exercise, even if they chose to work on something they have been involved with for some time. Here it is important to be specific. It is not enough to say that you want to know if a given policy works. This begs further questions on what it would mean for it to work. For examples, what is/are the outcomes of interest (e.g., compliance behaviour of employers, workers? Changes in exposures or hazards? Changes in Compensation claim patterns?)? How much of a change would constitute success? And so on. Going through this process should help you to refine and clarify what it is you want to learn from the intervention research project you are developing.
3. You will then be ready to go through the five tasks that are common to essentially all intervention research endeavors: gathering background information and/or conducting detailed needs assessment work, developing partnerships with relevant stakeholder groups, choosing projects methods and designs, conducting the field work, and reporting on and disseminating findings.

Let us now turn to the exercise.

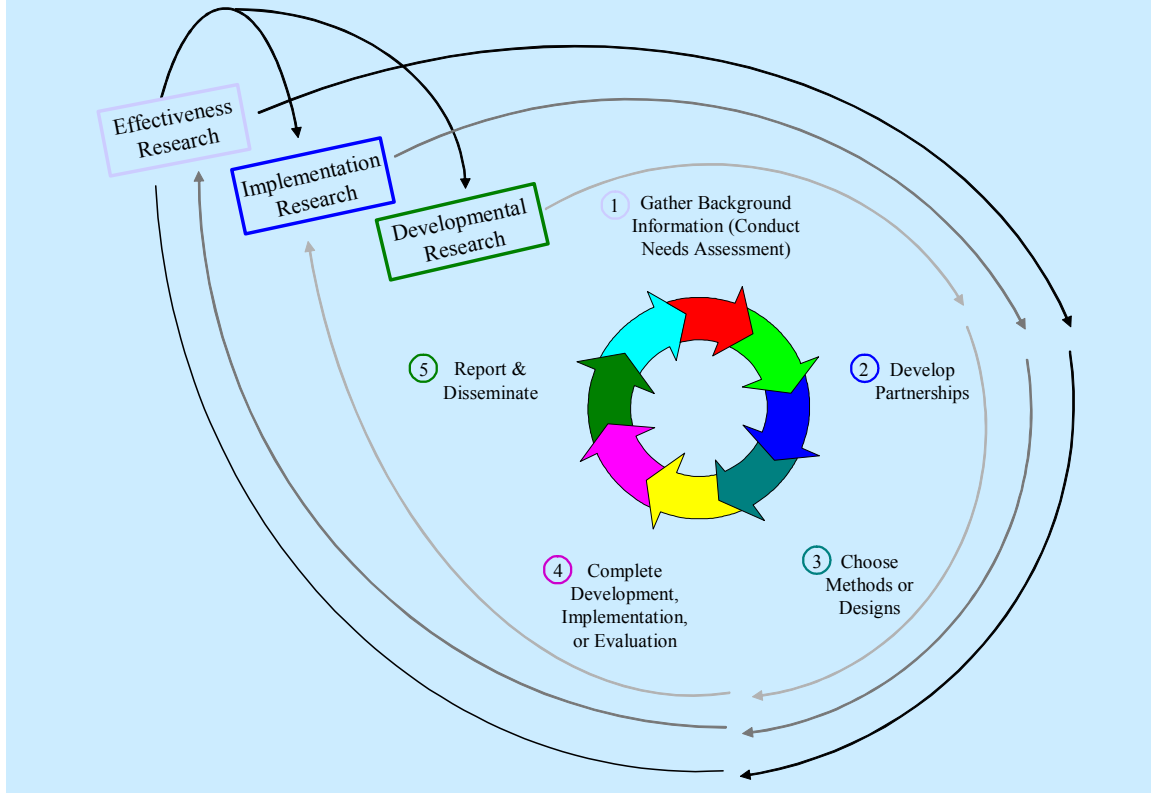
## **Deciding On the Focus of the Exercise**

Identifying an issue, program, or policy you would like to explore in this exercise, and locating where it fits in terms of intervention phase (development, implementation, evaluation, or some combination of phases) and intervention level (individual on up to policy). To assist your thinking, refer to the two the pictorial representations of the OHS intervention research model on the following pages.

Issue, program, or policy, with description in dot points:

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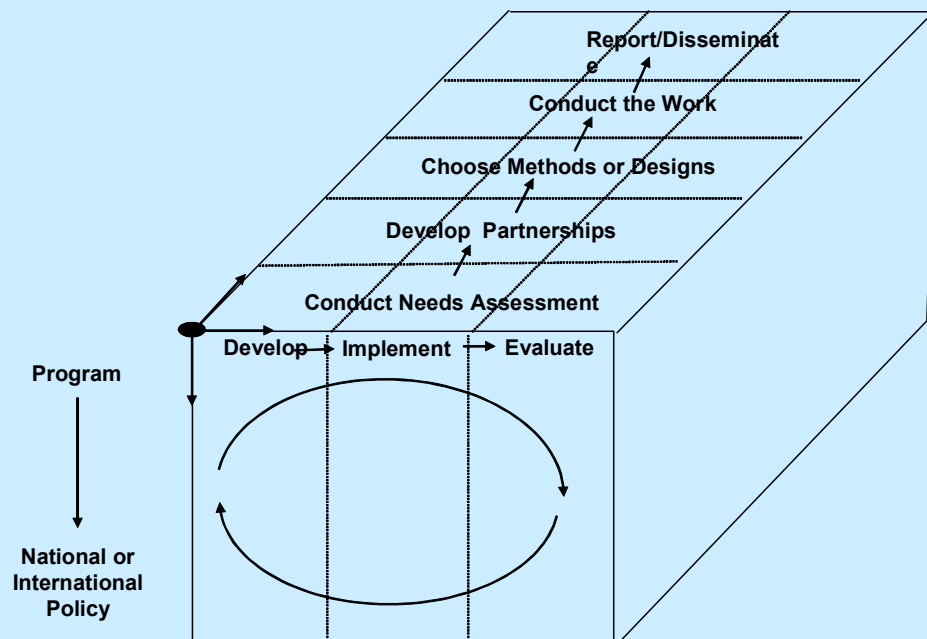
## Intervention Research In Occupational Safety& Health: A Conceptual Model



## Notes

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## Intervention In Occupational Health - A Conceptual Model



## Notes

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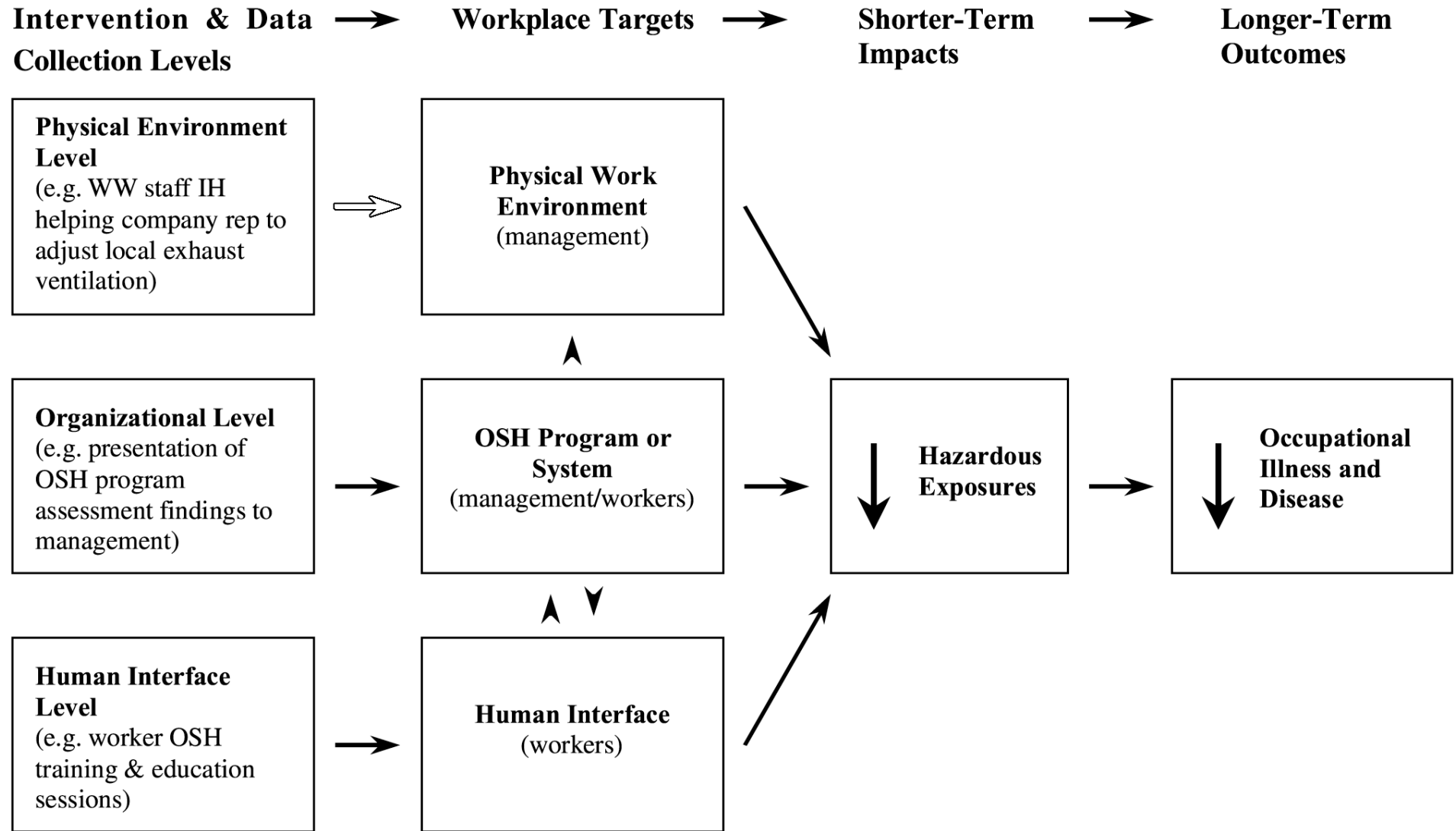
## **What is the rationale of the program or policy you want to develop, implement, or evaluate?**

This can be answered in narrative form, but may be easier to do pictorially. To do it pictorially, start on the left side of a page with program or policy inputs, which then are expected to have some effect on intervening variables, and in theory successful implementation would lead to desirable impacts and outcomes. In short, ask yourself how the program or policy is supposed to work from start to finish. The more detail you can provide here, the easier it will be to come up with appropriate endpoints for evaluation. Refer to the example on the next page of a simplified model of an OHS management system's desired effects on hazardous substance exposures and associated risks of work-related illness and disease.

### **Notes**

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## **Intervention Research Tasks**

- Gathering background information and/or conducting detailed needs assessment work;
- Developing partnerships with relevant stakeholder groups;
- Choosing projects methods and designs;
- Conducting the field work; and
- Reporting on and disseminating findings.

Each of this is worked through in turn below.

## **Intervention Research Task 1:**

### **Gather background information / Needs Assessment**

**Activity:** Given that you've already described a specific focus, you know a fair bit about the program or policy at hand. Please outline in dot points the key things you know already:

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What is it that would be most valuable for you to learn more about? (in order for you to develop, implement, or evaluate the program or policy in the best possible way):

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Outline how you might address identified gaps in relevant background information through further needs assessment work (e.g., interviews of key informants, review of existing records).

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## Intervention Research Task 2: Develop partnerships

**Activity:** Please, come up with a list of five people or organizations that you would try to involve as stakeholders (not necessarily the subject of the study, but have an interest in it). More or fewer might be appropriate depending on the context. Next, describe the rationale for involving them. Check yourself: have all relevant stakeholder groups been covered?

If not, why not?

People or organizations	Reasons to involve
1. _____	_____
2. _____	_____
3. _____	_____
4. _____	_____
5. _____	_____

## Intervention Research Task 3a: Choose methods/designs

### (a) Who to Recruit

**Activity:** Come up with three or more important eligibility criteria to guide you in deciding which organisations/workplaces, employer groups, employees, or employee groups you would like to study. Your stakeholder group should be involved in this to optimize your chances of success.

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_

## Intervention Research Task 3b: Choose methods/designs

### (b) Study Design

**Activity:** Come up with two or three study designs that will allow you to learn what you want from the proposed program or policy. Designs include case study, cross-sectional (at one point in time) telephone survey, longitudinal (following a group over time) with or without a comparison group, pseudo-experimental (two groups receive different intervention, but not assigned randomly to intervention condition), experimental (start with a single homogenous group, then randomly assign people/workplaces/etc. to different intervention conditions), and more. Think about feasibility and expense (roughly speaking the designs listed are in order of increasing difficulty and expense).

1. \_\_\_\_\_

2. \_\_\_\_\_

3. \_\_\_\_\_


### **Intervention Research Task 3c: Choose methods/designs**

- (c) Develop Interventions (if not already existing) & Data Collection Strategy on Measurable Outcomes

**Activity:** For interventions, try to cover at least two levels in the hierarchy of controls (ranges from interventions on the source of the hazard, the path from hazard to target/worker, to worker). The further upstream (towards the source of the hazard), the greater the preventive potential. For guidance on measurable outcomes, go back to the rationale/model/diagram of your program or policy at the beginning of the exercise. Which among those you've outlined are most important, which are most amenable to measurement? How will you collect/obtain this information (e.g., by phone, by observation, etc.)? What are the strengths and limitations of each measure being considered?

(See Prevention Frameworks outline on next page to help stimulate your thinking, then fill in table on following page)

## Prevention Frameworks

Effectiveness	Prevention Level	Prevention Target	Hierarchy of Controls
Most Effective 	Primary	Control at the Source of Hazard	Elimination Substitution Use Reduction
	Primary	Controlling Dispersion	Engineering Controls (eg., local exhaust ventilation, process enclosure) Exposure Assessment Administrative Controls (eg., workplace policies and procedures)
	Primary	Control at the Worker	Safe Work Practices Personal Protective Equipment Biological Monitoring for absorption of a toxicant
	Secondary	Control at the Worker	Pre-clinical medical exams/screening Biological monitoring for effects of absorbed toxicants
	Tertiary	Control at the Worker	Diagnosis Therapy Rehabilitation Compensation
Least Effective			



## Developing Interventions (where applicable), and Selecting Measurable Outcomes

Proximity to Hazard Source	Intervention	Measurable Outcome, and Data Collection Method	Strengths and/or Limitations of Measure
Proximal (near)			
Distal (far)			

## Intervention Research Task 4: Conduct the Work

**Activity:** Anticipate one or two realistic challenges to conducting the work proposed. These might include changes in participating worksites or intervention mid-stream, ethical dilemmas, or political/economic changes.

1. \_\_\_\_\_

2. \_\_\_\_\_

## **Intervention Research Task 5: Report/Communicate/Disseminate Findings**

**Activity:** Outline a reporting/communication/dissemination strategy that will maximize the impact of your work. Are all relevant stakeholder groups included? If not, why not? You may need different strategies for different stakeholders.

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