

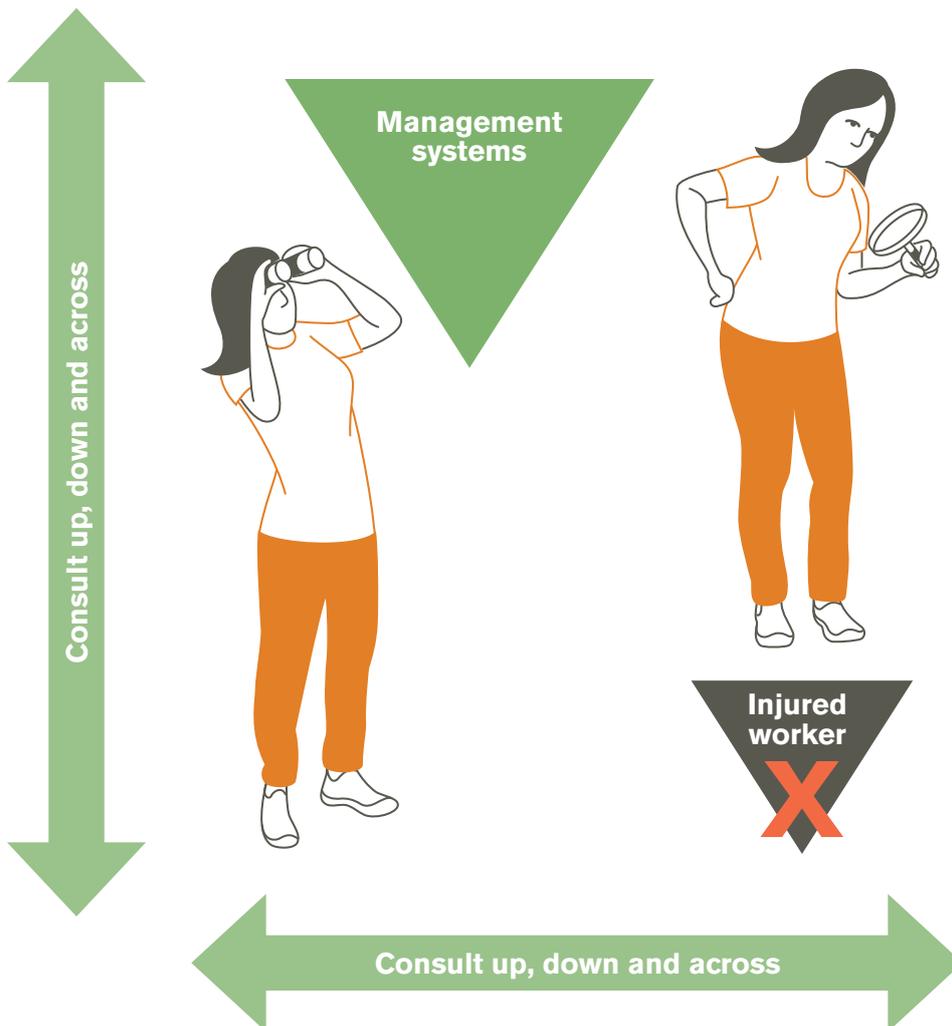
Improving manual handling risk controls after musculoskeletal disorders

Edition 1 – August 2018

This information sheet helps employers improve the effectiveness of their systems for incident/accident reviews to prevent musculoskeletal disorders (MSDs). It is aimed at larger employers who already have a review system in place.

Get the best outcome by ‘reviewing and revising’ the risk control measures, rather than ‘investigating’ the injured person

Look ‘up and out’ not ‘down and in’



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What to do

Use the following self-assessment questionnaire to assess your current status.

Use the explanatory information after the questionnaire to improve the process for sustainable prevention of musculoskeletal disorders (MSDs).

Self-assessment questionnaire

Check whether your current investigation processes are optimal for learning from reports of MSDs.

Scores of 'don't know', 'strongly disagree' or 'disagree' mean the process should be improved. Go to the relevant section on the following pages to learn how to improve this aspect of the investigation.

	Don't know	Strongly disagree	Disagree	Agree	Strongly agree
<i>The purpose of investigations</i>					
The goal of investigations is to identify higher order prevention strategies.	<input type="checkbox"/>				
The focus of investigations is on the risk control measures, not the immediate circumstances of the incident or the injury sustained by a particular worker.	<input type="checkbox"/>				
<i>Understanding MSDs from a systems perspective</i> (see Figure 2: a systems thinking model of MSD)					
The investigation involves a review of risk controls that analyses the workplace systems. For example, how a management decision like purchasing equipment can impact on the incident.	<input type="checkbox"/>				
People from all levels across the organisation (eg workers, health and safety representatives (HSRs), supervisors, purchasing department, human resources (HR), occupational health and safety (OHS) managers, senior managers, executives) are involved in investigating MSDs and designing recommendations to prevent future incidents – consultation up, down and across.	<input type="checkbox"/>				
<i>Encouraging early reporting</i>					
Employees are encouraged to report pain, discomfort or any injury associated with a task or working conditions, regardless of whether treatment is required, and conditions of work that may result in pain, discomfort or injury.	<input type="checkbox"/>				
All reports are acted upon and feedback is given to those involved.	<input type="checkbox"/>				

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	Don't know	Strongly disagree	Disagree	Agree	Strongly agree
Collecting data during reviews					
Data is collected on a wide range of contributing factors (refer to the systems thinking model for MSD in Figure 2), including factors influencing the success or failure of risk control measures.	<input type="checkbox"/>				
A range of data sources are accessed during investigations (eg hazard notifications, previous similar incidents, existing risk assessments, interviews, equipment manuals, task observations and assessments, rosters and best practice guidelines).	<input type="checkbox"/>				
Analysing your data					
A systems thinking model such as the one in Figure 2 is used to analyse the data by cross referencing the model, the hierarchy of risk control and the current risk control measures.	<input type="checkbox"/>				
The analysis describes the multiple factors and the interactions between them that contributed to the MSD, rather than focussing on 'direct causes' or 'the root cause'.	<input type="checkbox"/>				
Designing appropriate prevention strategies					
Recommendations typically focus on changing the actual work and are higher order risk controls; they do not focus on a particular person, on more training or raising awareness.	<input type="checkbox"/>				
Recommendations include consultation across the levels of the model – up, down and across.	<input type="checkbox"/>				
Potential barriers to implementing changes are identified and managed.	<input type="checkbox"/>				
Evaluation and communication					
There is a formal monitoring and evaluation process for new risk control measures, which includes consultation with workers and objective measurements of success.	<input type="checkbox"/>				
Findings and recommendations from investigations are shared throughout the organisation and implemented in other work processes as appropriate – up, down and across.	<input type="checkbox"/>				

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Explanatory information for the self-assessment checklist

MSDs represent a major burden on individuals, organisations and the healthcare system in Australia. When MSDs are reported, employers have a duty to review and revise risk control measures under the *Occupational Health and Safety Act 2004 (Vic)* (OHS Act) and Occupational Health and Safety Regulations (OHS Regulations).

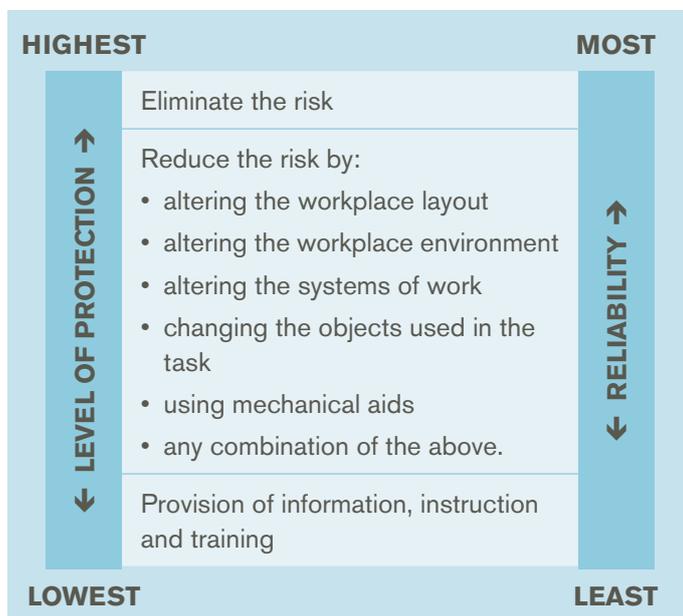
The following describes how to assess the workplace's current process for MSD accident/incident reviews. It gives guidance on how to improve the process and learn from these reviews.

This guidance is based on research^{1,2} about accident causation and learning from incidents, the risk factors associated with MSDs and current practices in Australian organisations.

The purpose of MSD investigations

MSD investigations should improve prevention strategies in the workplace by leading to a better understanding of the source of risk causing the MSD. This should then lead to improved implementation of risk controls which are higher in the hierarchy of control (see Figure 1) – which will also result in more sustainable prevention of MSD.

Figure 1 - Effectiveness and reliability of controls



A review will not be as effective if it focuses on issues such as assigning blame or protecting the organisation - as this may lead to an unwillingness of others to participate.

As well as focusing on the work involved in a particular MSD, it can be useful to focus on a task or work area associated with recurring incidents. All relevant workplace parties can then contribute information to the review, not just the injured employee.

Using terms such as 'review of risk control measures' or 'review', rather than 'investigation', may also assist. This shifts the focus from the injured person to the risk control measures and work system.

Taking a systems approach to understanding causes of MSD

There is considerable evidence that MSDs are caused by multiple, interacting factors in the work system, within the organisational system and from external sources. Reviews of risk controls therefore need to extend their focus beyond the person performing the task to examine the system as a whole – look 'up and out' at the system, not 'down and in' at the person.

A systems thinking model of MSDs is outlined below in Figure 2 and can be used to underpin reviews. It illustrates that the decisions and actions of everyone within the system contribute to MSDs (eg workers, HSRs, supervisors, purchasing, OHS managers, HR, finance, senior managers, regulators, government) not just the injured worker. The model describes the factors that contribute to MSDs, which includes those associated with tasks and factors that influence the success or failure of risk control measures. The interactions between these factors need to be identified during reviews to understand MSDs and develop appropriate prevention strategies.

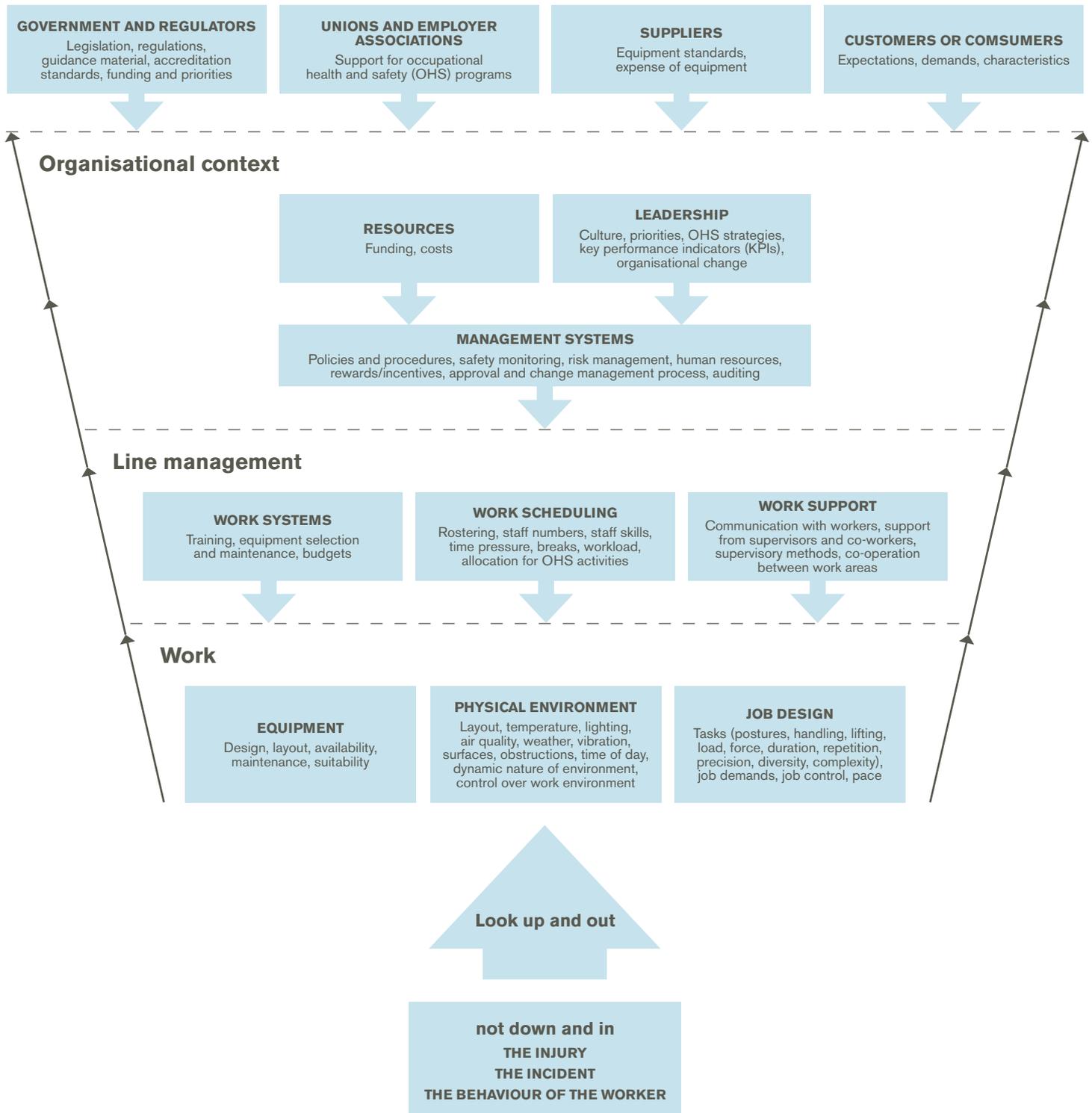
¹ Dr Goode, N, Prof Salmon, P, Dr Newnam, S, Prof Dekker, S, Stevens, E, Dr van Mulken, M, 2016, *Learning the lessons from WMSDs: a framework for reporting and investigation*, ISCRR report #105-0216-R01, https://www.iscrr.com.au/__data/assets/pdf_file/0010/643843/Learning-the-lessons-from-WMSDs.pdf

² Rasmussen, J 1997, *Risk management in a dynamic society: a modelling problem*, *Safety Science*, volume 27, issues 2-3, pages 183-213.

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Figure 2 - A systems thinking model for MSD (adapted from Goode et al, 2016¹)

External influences



¹ Dr Goode, N, Prof Salmon, P, Dr Newnam, S, Prof Dekker, S, Stevens, E, Dr van Mulken, M, 2016, Learning the lessons from WMSDs: a framework for reporting and investigation, ISCRR report #105-0216-R01, https://www.iscrr.com.au/__data/assets/pdf_file/0010/643843/Learning-the-lessons-from-WMSDs.pdf

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All those involved in performing the task, supervision, planning and management should therefore contribute to reviews. It is critical that OHS expertise be brought to the review of risk control process by including the OHS manager and HSR/employee. The injured worker is unlikely to have a complete understanding of the work system, or have the power to change it. Senior managers who are directly involved in reviews will develop a better understanding of the causes of MSDs, and can then change or influence the conditions within the organisation that directly or indirectly contribute.

Encouraging early reporting

The thresholds for reporting MSDs should be as low as possible, regardless of whether treatment is required in order to optimise learning. Employees should receive training on the importance of reporting pain and conditions of work that may result in pain, discomfort or injury. Done well, the organisation should receive many more reports about hazards than actual injuries.

To encourage and maintain early reporting, make reporting easy, respond to all reports and provide feedback.

Initiatives could include:

- regular discussions around what to report
- early intervention resources (eg free treatment, wellbeing programs, workstation reviews)
- multiple pathways for reporting (eg verbal, telephone, mobile devices).

Common factors that discourage reporting include:

- failing to respond to reports
- requiring approval from line manager
- poor access to forms
- long or confusing forms
- receiving no feedback on actions
- difficult to use reporting software.

Collecting data during reviews

The systems thinking model of MSDs (Figure 2) illustrates the types of factors that need to be considered during reviews. To capture data on all these factors, utilise a broad range of data sources, such as interviews with areas that may impact directly or indirectly on the task, workshops with staff, discussions, documentation, risk assessments and previous reports of similar incidents. Consult up, down and across to capture all people and areas in the organisation that may impact on the success or failure of risk controls.

Ask participants in the review to reflect on how each of the factors in each of the levels may have contributed to the success or failure of the risk control measures. Discussions can be framed around 'Most of the time we complete our work safely. What are the success factors that allow work to be done safely? What are the barriers?' Focus on the task or work system, rather than the injured worker - looking 'up and out'. Avoid creating a timeline or identifying who or what went wrong as this encourages a focus on 'down and in'.

Analysing your data

The aim of the analysis is to identify the multiple factors, and the interactions between them, that are contributing to MSDs from the data collected.

Start by describing the task/s and work design, the work systems and current risk control measures that are the focus of the review. This will provide context for the findings. Use the systems thinking model (Figure 2) to analyse the data. Create a diagram of all the contributing factors at each level identified from the data; then link the factors together to show how they impact on one another.

Ask all those involved in the review for feedback on the diagram. The diagram will help better understand the factors contributing to MSDs and additional factors may be identified.

Once the model has been used a few times, aggregate the findings across multiple reviews. Evidence of recurring factors may be useful when putting together a business case to obtain funding for prevention strategies.

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Designing appropriate prevention strategies

Have a formal process for designing recommendations based on the data analysis. Involve participants from across the organisation, including the workers who perform the task/s, HSRs and those with the power to make changes.

During initial discussions, start by identifying many potential recommendations, rather than focusing on a single 'fix' for each contributing factor.

To select the most appropriate recommendations, list the advantages and disadvantages. Include potential interactions between recommendations and existing risk control measures, potential barriers to implementation and strategies to address the barriers. Use the hierarchy of control (Figure 1) to assess which options will best control the risk.

The final set of recommendations should target the factors that create hazardous conditions (eg within the organisational context and line management), apply across the organisation and include plans for monitoring the changes.

Recommendations that focus only on retraining or raising awareness of procedures are likely to be ineffective at preventing MSDs.

Evaluation and communication

There must be an evaluation following the implementation to review the effectiveness of revised risk control measures. Include monitoring actual changes (eg talking with affected workers, HSRs and staff, audits and observations of practice) and safety performance indicators (eg safety climate surveys and hazard and injury reporting). These should be clearly defined in organisational policies.

Monitoring the quality of revised controls can help ensure the potential for learning is maintained over time. Those involved in evaluating revised controls should meet regularly to reflect on their practices, and receive mentoring and feedback on the quality of the reports.

Communicating the findings from reviews, revised risk controls and evaluations is instrumental in supporting changes and ensuring workers continue to report

MSDs. All those involved in the review, and everyone they may potentially impact, should be informed of the findings. The findings from the evaluation should be shared throughout the organisation to highlight the outcomes of reviews. The need to implement similar controls in other parts of the organisation should also be considered.

Other opportunities to enhance learning include sharing lessons learnt from reviews with areas of the organisation undertaking similar tasks and future reviews of similar situations or other organisations within the same sector or industry. To support learning, reviews and evaluating findings should be stored in an accessible, searchable database.

Further information

Go to [worksafe.vic.gov.au](https://www.worksafe.vic.gov.au) for more guidance, including:

- Hazardous manual handling: Review and revision of risk control measures (aimed at medium-sized employers)
- Manual handling: improving the review and revision of risk control measures (general guidance for any employer performing a review)
- Compliance code: Hazardous manual handling.

Advisory service

Phone toll-free: 1800 136 089

Email: info@worksafe.vic.gov.au

WorkSafe Agents

Agent contact details are all available at [worksafe.vic.gov.au/agents](https://www.worksafe.vic.gov.au/agents)