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**APHIRM**  
TOOLKIT A Participative Hazard Identification  
and Risk Management toolkit



THE

# APHIRM TOOLKIT:

helping workplaces to reduce  
musculoskeletal disorders



**APHIRM Toolkit:**  
**A** Participative **H**azard  
**I**dentification and **R**isk  
**M**anagement Toolkit

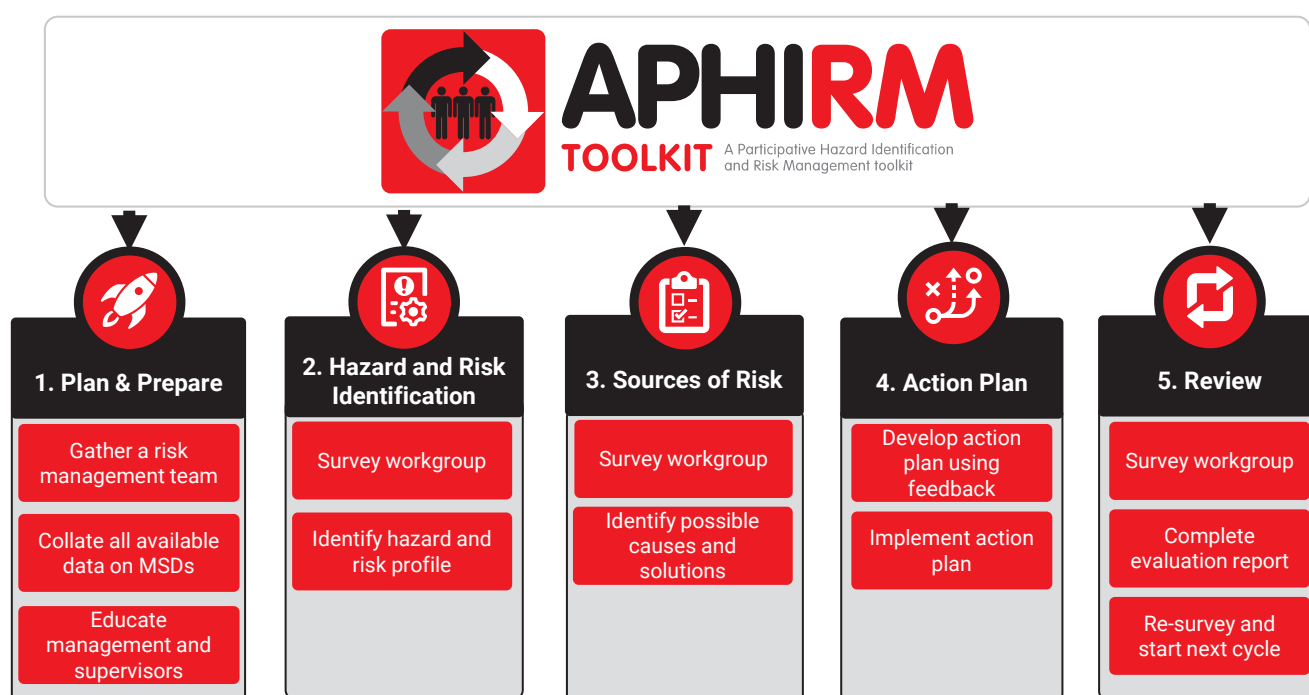
Developed and tested by a La Trobe University team, APHIRM is designed to support your workplace in improving their risk management of musculoskeletal disorders.

# What is the APHIRM Toolkit?

This toolkit is a set of evidence-based procedures and tools for workplace users to manage the risk of work-related musculoskeletal injuries and disorders (MSDs). It is unique in covering both the manual handling and psychosocial hazards that affect risk of MSDs.

Based on a model formulated by the World Health Organisation network of Collaborating Centres in Occupational Health, the toolkit was developed by La Trobe University ergonomists and occupational health psychologists. It applies evidence from extensive international and local research that has established the main work-related causes of MSDs and the key requirements for more effective prevention.

The toolkit is intended for workplace users to implement as part of routine health and safety risk management procedures, following the conventional risk management cycle:



Using a cloud-based software platform, the toolkit enables users to:



Identify the worst hazards  
- i.e. those having the greatest effect on risk  
- separately for each workgroup.



Develop and implement actions to reduce risk most effectively for each workgroup.



Evaluate the effectiveness of actions taken.



The APHIRM Toolkit is freely available online and can be accessed at [www.aphirm.org.au](http://www.aphirm.org.au)

Training in the use of APHIRM is provided:

- Through comprehensive online resources which support users to get started and through each step of the toolkit
- In person workshops, held at various locations throughout the year, see [www.aphirm.org.au](http://www.aphirm.org.au) to register

# Case Studies

The following case studies are based on interviews with users of the APHIRM Toolkit at four large organisations based in Victoria. These case studies provide practical examples of using the APHIRM Toolkit and highlight some of the benefits and challenges in using the toolkit for MSD risk management.

*The development of these case studies was funded by WorkSafe Victoria.*



## CASE STUDY 1

# City of Greater Dandenong

**Industry:** Local Government

**Size of employer:** >1,000 employees

## Background

The City of Dandenong Health and Safety Team implemented the APHIRM Toolkit with their Community Care Group, who work in clients' homes doing cleaning, household tasks, and personal care. Prior to the use of the APHIRM Toolkit, consultation with the Community Care Group had been challenging due to the remote nature of their work. The APHIRM toolkit provided tools and resources to meaningfully engage with these workers to identify hazards and develop controls to address musculoskeletal disorder (MSD) risk.

The Health and Safety Team wanted to reduce the significant number of MSDs in their Community Care Group (data not available for publication). Previous risk management approaches had not been effective and did not provide opportunities for consultation with workers. The Health and Safety Team were introduced to the APHIRM Toolkit at a safety industry conference and decided to pilot implementation in one area of the organisation.

## The Process

### Stage 1: Plan and prepare

The usability of the APHIRM Toolkit, and its extensive guidance material, was an influencing factor in the adoption of the toolkit. The support material provided in the APHIRM Toolkit, to assist with employee engagement, was helpful and made it an 'easy sell' to staff. To start the process an APHIRM Toolkit risk management team was created. This involved a range of stakeholders, including a community care coordinator, team leader, health and safety representatives, a member from the health and safety team and a member from the return-to-work team.

Senior management support was achieved by using a presentation provided in the APHIRM toolkit, which was delivered to the executive team. The presentation was provided by the

health and safety and return to work personnel who were members of the risk management team. Other coordinators, and health and safety representatives, were also briefed on the APHIRM Toolkit.

*'Management were a bit concerned about the type of questions that we were going to ask the staff because it could open up some cans of worms if you like, but once they saw the questions they were quite satisfied that the whole design of this was great.'*

(Internal health and safety consultant)

## Stage 2: Hazard identification survey

Community care workers were invited to complete anonymous surveys provided in the APHIRM toolkit to identify the physical and psychosocial hazards in their workplace. The community care workers are remote workers who travel to clients' homes to provide care. The remote nature of their work has created some challenges in engaging staff in participating in occupational health and safety surveys and programs. To maximise uptake of the survey, the following actions were undertaken:

- Promotion of the APHIRM Toolkit hazard identification survey to workers during their weekly onsite office visit

- Promotion of the APHIRM Toolkit through newsletters and flyers
- Risk management team working with small groups of Community Care workers to address any questions about the toolkit and the survey

A total of 70 workers completed the survey, an 85% completion rate – a record for any workplace survey within the organisation.

## Stage 3: Sources of risk

Once the survey was completed workers were consulted to identify potential causes for the top 10 physical and psychosocial hazards. The consultation process generated:

- High levels of engagement with the Community Care workers who provided over 680 pieces of feedback on potential

causes and possible solutions for the top 10 physical and psychosocial hazards.

- Open and honest discussions with the APHIRM Toolkit risk management team
- Local Manager support to approve the implementation of the risk controls

## Stage 4: Action plan

The APHIRM Toolkit action plan presents each of the Top 10 hazards identified from the worker survey, the cause of the hazard, and the proposed risk control. The action plan is developed using worker feedback and input from the risk management team. APHIRM Toolkit action plan implementation progress updates were provided to the executive team every two weeks, and the CEO (via the OHS safety committee) every two months.

### Sample of risk controls

- ⚠ **Hazard: High Job demands.** Carers travel to their usual clients within a geographic area to reduce travel time between clients' houses. However, at times they are required to cover other carers clients, which may require travel outside their geographic area reducing the time available with the client. Risk controls introduced include a review of

the rostering system to improve allocation of work and the provision of carers with an extra 15 minutes travel time when working outside their normal area to reduce time pressure.

- ⚠ **Hazard: Emotional job demands:** when clients pass away and staff would like the opportunity to attend funerals or memorials. Although provisions for taking leave to attend funerals or memorials are embedded in the EBA, carers did not typically request leave. Three actions were put in place to ensure carers were aware of funeral leave provisions: 1) contact of carers who have been working with closely with the client; 2) provision of a notice in the weekly newsletter 3) the team leader informed carers during regular meetings.

## Other benefits

The Health & Safety Team were highly impressed with the level of engagement that was generated through the implementation of the APHIRM Toolkit. They propose to utilise a similar approach to improve staff engagement in other areas of the organisation. The risk management team reported high levels of staff morale during the APHIRM Toolkit implementation.

*'Staff might think that they never get heard. This is a toolkit that gives them that opportunity ... to have a voice, to tell us what's wrong, but also tell us what you think should be done to fix it, and that's crucial.'*

(Internal health and safety consultant)

The organisation will undertake their follow up survey in the next few months to identify what the impact of their risk controls has been on Musculoskeletal pain/discomfort.



## CASE STUDY 2

# Blackmores

Industry: Manufacturing

Size of employer: >1,000 employees

## Background

Blackmores is a large natural health company, with manufacturing sites in Melbourne and NSW. The APHIRM Toolkit was implemented in the Melbourne factory. The Environment, Health and Safety (EHS) Manager was seeking a new approach to more effectively manage the increasing numbers of lower back and shoulder injuries in factory operators - one operator recently suffered a serious shoulder injury resulting in a costly workers compensation claim.

## The Process

### Stage 1: Plan and prepare

The business considered themselves to have a mature safety culture and were ready to adopt a new participative approach.

*'...the fact that it really covers the consultation part, ... if we can implement [APHIRM] and people can see the differences they may be more open to approach us and tell us what doesn't work.'*

The EHS manager was keen to adopt an approach which addressed both physical and psychosocial hazards. The resources provided in the APHIRM Toolkit, to assist with collecting feedback from the workers to support the development of actions, was also appealing.

*'[APHIRM] is not diagnostic only. It's not just going to tell you what doesn't work, it's actually going to prompt you to take actions.'*

For this manager the APHIRM Toolkit was different compared to other risk management tools, such as standard risk assessment checklists provided by the insurer and safety walks, which focused only on the identification of a problem without insights into risk control development.

#### Early in the implementation process

The team targeted two departments with the highest number of injuries and claims.

- Gaining senior management support was a priority. Senior managers were sent a customised presentation, using the APHIRM Toolkit resources. Following the presentation, the EHS manager had one-on-one discussions with leaders to address any questions or concerns.
- The General Manager, People & Culture Manager, Production Manager, Engineering Manager, Front Line Managers, Operators and HSRs were invited to join a risk management team to oversee the APHIRM Toolkit implementation.

## Stage 2: Hazard identification survey

One-on-one discussions on the purpose of the APHIRM Toolkit were held with each of the Front-Line Managers who then informed their respective teams. The operators who were part of the risk management team played a key role in communication with their colleagues – promoting participation in the APHIRM Toolkit hazard identification survey and gathering feedback.

*'...they felt really happy that something is happening ... [they thought] ... "OK someone is actually listening to us"'*

A total of 90 workers completed the survey, a 73% completion rate.

## Stage 3: Sources of risk

- Middle management and operators met separately for the initial APHIRM Toolkit implementation meetings, to discuss feedback and draft potential actions to address the hazards identified through the employee survey.
- Managers were committed to exploring engineering controls, and not relying on personal protective equipment. The operators' experience was used to clarify issues so that managers could use their knowledge to develop solutions:

*'...really good that this conversation was moving both ways and I [EHS Manager] was kind of like the connector and they [Operators] were the connector between myself and the senior management and their colleagues.'*

- The EHS Manager used the information from the APHIRM toolkit to develop interim risk controls for hazards whilst waiting for longer-term engineering upgrades.

## Stage 4: Action plan

The APHIRM Toolkit focusses on employee consultation to identify the main hazards and collect feedback about causes and possible solutions for these hazards. This information is used to inform the development of risk controls. Some examples from Blackmores include:

### Sample of risk controls

- ⚠ **Hazard: Repetitive movement** due to regular hand sieving loads of powder weighing up to 70 kilograms. An electric mill is being installed and operators trained in its use which will eliminate the hazard.
- ⚠ **Hazard: Sustained awkward postures** as operators were required to hold buckets under machines to collect tablets (approximately 10 kg) every 10 – 15 minutes, and then empty these into bins. A

new machine will direct the tablets directly into the bin so the operators will not need to handle the product thus eliminating the hazard.

- ⚠ **Hazard: Poor workplace relationships** with operators reporting a lack of appreciation by management, and lack of recognition of their hard work, along with poor communication from managers. Teams reported missing their team barbeques which were cancelled due to COVID lockdowns which they felt contributed to a lack of social connections. The reintroduction of team events such as celebratory dinners, which includes managers and operators, were one strategy implemented to address this hazard.

## Other benefits

The opportunity for two-way communication between management and operators was an unexpected benefit of the using APHIRM Toolkit.

*'So for me it was more like a voice of the employees ... I think it was really beneficial for them because for some of them it was probably the first time they were at a meeting in a smaller room with the general manager and they could, you know, discuss what they think we should implement'*

APHIRM Toolkit provided insight into hazards that that senior management would not have identified without consultation of shop floor operators.

*'I would say another benefit is probably prioritization. So something that I may think is important may not necessarily feel that way for them...particularly for psychosocial hazards...so those little things that you wouldn't even think about'.*

## CASE STUDY 3

# De-identified Organisation

**Industry:** Health care sector (Pathology)

**Size of employer:** 3,700 employees

## Background

The case study is a national organisation who conducted a pilot implementation of the APHIRM Toolkit at four sites. The health, safety and wellbeing team recruited an external OHS consultant to assist them in addressing the large number of MSDs (mainly shoulders, elbows, and hands) occurring in their workers (specific details not available). A few sites reported high workers compensation claim rates and lost time injuries relative to their other sites.

## The Process

### Stage 1: Plan and prepare

The external OHS consultant briefed the executive management team on the APHIRM Toolkit. The team expressed some initial reservations on implementation of the toolkit. The OHS consultant collaborated with senior leaders of People & Culture and Safety, who were supportive of using the APHIRM Toolkit and want to use an evidence-based tool for MSD prevention.

#### Early in the implementation process

Endorsement of the APHIRM Toolkit by the executive team was crucial to the success of the implementation. The health and safety team engaged the executive management team through using the presentations provided in the APHIRM toolkit to:

- Emphasise the evidence-based benefits of the APHIRM Toolkit
- Highlight the important role in assisting to meet legislative obligations in relation to participative risk management strategies and hazard identification

- Educate the executive team on the important role of psychosocial hazards in MSD risk prevention

*'...so it's about getting the senior management to understand what psychosocial hazards mean first before they're going to buy into anything.'*

#### Selection of workgroups

Following executive approval to implement the APHIRM Toolkit:

- Sites identified as having low morale, or the site manager had requested assistance in managing MSDs, were selected to implement the APHIRM Toolkit. Regional managers in each of the states worked closely with local site managers. The health & safety team recruited a broad range of people into the risk management team to oversee the implementation of the APHIRM Toolkit.

- Initially, some teams were sceptical about engaging in the APHIRM toolkit process. However, once they realised the APHIRM Toolkit provided an opportunity to provide feedback on a wide range of workplace issues, the team were happy to contribute:

*'They were very defensive (at the start of the process) and I think somewhat a little bit angry...but 12 months down the track, they are a chatty bunch now and happy to tell you anything.'*

## Stage 2: Hazard identification survey

To promote completion of the hazard identification survey, a wide range of communication channels were used which included:

- Posters were developed with a short clear message and displayed across participating sites, as many staff don't have regular access to email or online communication
- Providing messages focussed on the opportunities for staff to 'have their say' in the risk management process through survey completion
- Provision of staff incentives to encourage completion of the APHIRM Toolkit hazard identification survey
- Provision of work time to complete the survey.

A total of 92 from a total of 132 workers completed the baseline survey (70% response rate). At follow up, 77 from a total of 114 workers responded (70% response rate).

## Stage 3: Sources of risk

At the completion of the survey, staff were provided with an opportunity to provide feedback on the factors contributing to the physical and psychosocial hazards identified through the APHIRM Toolkit survey. Staff reported this process made them feel their opinion was important and assistance was available to address the identified hazards.

## Stage 4: Action plan

The APHIRM Toolkit action plan presents the Top 10 hazards identified from the staff survey most related to increased MSD risk. The action plan is developed using worker feedback and input from the risk management team. A sample of control actions are provided, which were developed using the APHIRM toolkit procedures in collaboration with staff representatives and management.

**⚠ Hazard: High job demands:** which related to problems with IT equipment, internet problems were causing delays in finishing work, resulting in time pressure at the end of the workday. A new router was purchased which resulted in improved internet access.

**⚠ Hazard: Low job control:** which related to a lack of flexibility in working hours. Staff were frustrated with the rostering system and often unhappy with their rosters. To address this hazard, the manager met with staff and explained the constraints around rostering and the challenges in meeting individual staff requests. Although this did not change the roster systems, the explanation improved communication between the manager and the team. Team members began to communicate with each other to swap shifts rather than change the roster.

⚠ **Hazard: High job demands:** in particular workload and pace of work was raised as staff felt overloaded due to the high numbers of clients in the reception area. The problem was exacerbated by reception staff who accepted 'walk-in' clients without scheduled appointments. To address this issue, reception staff were engaged in a pre-shift huddle to review appointments for the day and plan strategies to manage the workflow more effectively. Receptionists were directed to check with team leaders

before accepting walk-ins.

⚠ **Hazard: Poor organisational change management:** in particular changes to their jobs was raised by staff who reported a lack of consultation and little influence in their roles. To address this hazard, a two-way communication system was introduced in which staff were consulted about all changes to work processes and tasks and provided with explanations on the rationale for the change.

## Other benefits

- One of the key benefits reported by the organisation was that the APHIRM Toolkit enabled them to manage physical and psychosocial hazards together using the one tool.
- Implementation of the APHIRM toolkit improved communication between colleagues and between staff and management, and helped to rebuild connections between staff and management, enabling staff to feel they were being heard. OHS staff reported that the changes made during the APHIRM implementation had a positive effect on staff culture and morale with a significant decrease in staff turnover.
- Highlighted knowledge gaps in leader capability, in how to identify and manage psychosocial hazards, supporting the need for targeted training of managers.
- The APHIRM toolkit provided an understanding and guidance on identifying and managing psychosocial hazards contributing to MSDs in their workplace.
- APHIRM Toolkit provided guidance and resources to help meet the organisation's obligations for consultation.

*'...it was a really great experience and like, you get to know the team really well and it also, and I say this a lot when I'm describing this project, I became besties with the manager.'*

## CASE STUDY 4

# Bucher Municipal

Industry: Manufacturing

Size of employer: >400 employees

## Background

Bucher Municipal is a refuse vehicle manufacturing business with nine sites across Australia, with 153 employees in Victoria. The organisation implemented the APHIRM Toolkit in their Melbourne sites.

Bucher Municipal had high costs associated

with workers' compensation claims due to MSDs and injuries relative to industry averages. The Health, Safety & Environment (HSE) Business Partner wanted to address their high MSD claims cost through adopting a more comprehensive approach to MSD prevention.

## The Process

### Stage 1: Plan and prepare

After receiving some information about the APHIRM toolkit from WorkSafe Victoria, and attending a toolkit training workshop, the HSE Business Partner was impressed with the underlying research which informed development of the APHIRM Toolkit. Following the training, the HSE Business Partner planned to implement the toolkit in three departments across two Melbourne sites. Due to staffing constraints the business engaged consultancy support from the Centre for Ergonomics & Human Factors at La Trobe University.

#### Getting started

- The senior executive team were briefed on the APHIRM Toolkit, using the presentation provided within the toolkit resources. The team were highly supportive of the process and provided approval to the HSE Business Partner to commence implementation.

*'The Production Manager was very engaged in the process, which was critical, and very quickly saw that it was of a benefit for their team.'*

- Key stakeholders were invited to join a risk management team to oversee the implementation of the toolkit. The team included the Production Manager, team supervisors, health and safety representative, engineer, and the HSE Business Partner.
- Regular weekly safety meetings included time specifically dedicated to the APHIRM Toolkit implementation to ensure the process was on the agenda and being taken seriously.

## Stage 2: Hazard identification survey

Bucher Municipal were able to maximise worker participation in the hazard identification survey through promotion by team supervisors at toolbox meetings. Promotional materials were placed on notice boards to encourage workers to have their say and improve their safety. The hazard identification survey, and the subsequent feedback process which asks workers' for their opinions on the causes of hazards and potential solutions, provided some new insights into potential safety issues that the business was not aware of.

*'As opposed to just asking someone directly, their opinions and their ideas, I think the way the survey is constructed, it elicited better responses than you would otherwise get...it just allowed us to think differently about manual handling issues and hazards.'*

Response rates of nearly 60% at the first survey and 80% at the second survey were achieved, indicating good employee engagement with the process.

## Stage 3: Sources of risk

Workers were invited to provide feedback at the completion of the survey on the top 10 hazards that were identified which enabled them to develop good rapport and teamwork in the APHIRM risk management team. The team used the resources in the APHIRM toolkit to examine

each of the identified hazards and develop effective controls. Supervisors, managers and engineers contributed to the development of engineering controls. The toolkit provided a regular forum for communication between workers and management.

## Stage 4: Action plan

### Sample of risk controls

Effective controls for the physical and psychosocial hazards identified in the hazard survey, were developed using the APHIRM toolkit. Some examples of effective controls implemented at Bucher Municipal, are listed below.

- ⚠ **Hazard: Poor environmental conditions** related to the pushing of a heavy hydraulic cylinder into position on a large vehicle. A modification bracket was engineered and built for the crane to enable the large hydraulic cylinder be placed with a crane, rather than requiring an operator to move it manually, eliminating the high physical load.
- ⚠ **Hazard: Poor support** with limited management consultation. One strategy introduced was the Production Manager

introduced weekly visits to the floor to gather employee feedback to improve understanding of the identified issues.

- ⚠ **Hazard: Poor environmental conditions** due to working with arms over head and climbing up a ladder to install a cylinder onto the door of the vehicle. To reduce the risks associated with this task, the component was redesigned so it could be assembled on a bench (at waist height) put on the door which is then lifted by a crane into place. This task redesign reduced a falls risk and the need to work with arms over head. The loads are greatly reduced but not eliminated, although workers report less force required than before the risk controls were implemented.



## Other benefits

- The APHIRM Toolkit provided the business with insight into the psychosocial aspects of the work that had not previously been part of their musculoskeletal (MSD) risk management program.
- The consultation with workers resulted in high levels of engagement in the development of risk controls to address the hazards. A positive impact was that due to simplification of some tasks, workers reported reduced fatigue levels.
- Using the toolkit provided a system of regular monitoring of the action plan through the APHIRM software.

*'...we probably were slow to start the process and get into that rhythm [meeting regularly to implement APHIRM]. I think it's important to get in early with the rhythm and keep it rolling because once you start that then the ideas actually start to flow a lot better...'*

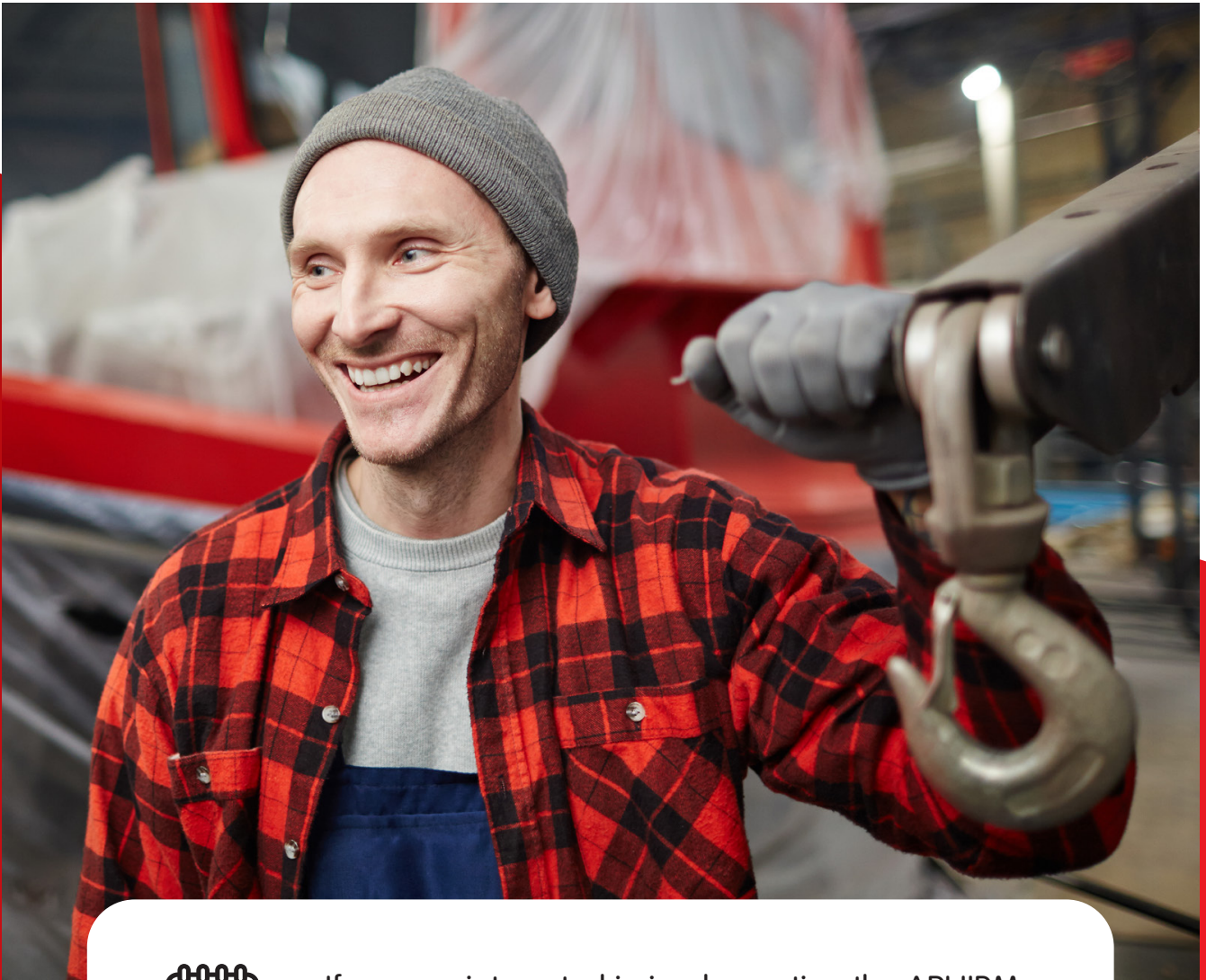
- Musculoskeletal pain / discomfort was reduced in two of the three workgroups involved in the process. The organisation expect further reductions in their hazards and musculoskeletal pain as they continue implementing actions they have developed as part of the APHIRM process.



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If you are interested in implementing the APHIRM toolkit in your own organisation, please visit [www.aphirm.org.au](http://www.aphirm.org.au)



For APHIRM training workshops please register your interest via [www.aphirm.org.au/upcomingevents](http://www.aphirm.org.au/upcomingevents)