



Heads of Workplace Safety Authorities

2007-08 National Intervention Campaign: Use of Machine Guarding in Manufacturing

Pre and Post Intervention Survey Results

Appendix 5

March 2009

Surveys distributed and detailed descriptive analysis undertaken by Sweeney Research Pty Ltd
Survey and sampling plan developed by the Office of the Australian Safety and Compensation Council and participating OHS jurisdictions. Detailed statistical analysis undertaken by the Office of the Australian Safety and Compensation Council.

Data collection funded by the Office of the Australian Safety and Compensation Council.

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Background

In 2007-08, the Heads of Workplace Safety Authorities (HWSA) asked the Office of the Australian Safety and Compensation Council (OASCC) to assist with the evaluation of national intervention campaigns being run by workplace authorities in the states and territories. As part of the evaluation of the campaign on machine guarding in manufacturing, the Office of the ASCC commissioned Sweeney Research to administer pre and post intervention surveys.

The pre-intervention survey was conducted in NSW, QLD, WA and SA during March - June 2008. The survey pack comprised two surveys: one for the owner/manager of the business; the other for the employees/workers in the business. The participating jurisdictions provided the OASCC with a list of businesses in the target groups in each jurisdiction. Sweeney Research invited managers/supervisors and their workers to participate in the research. On agreeing to participate, the managers/supervisors were posted the surveys to complete, along with worker surveys to distribute to their employees. Following the self-complete paper surveys which provided a smaller than desired number of completed surveys, it was decided to conduct additional surveys using CATI (computer assisted telephone interviews) to supplement the number of returned paper surveys.

Those managers/supervisors who had agreed to participate in the pre-intervention survey were contacted by Sweeney Research and asked if they would participate in a follow up survey. The follow-up surveys were conducted using CATI between 15 October 2008 and 5 February 2009. Those who agreed to participate completed a 20 minute telephone survey.

This document presents a report on the pre intervention survey completed by 339 managers and 143 workers and the post intervention survey completed by 419 managers. The findings would assist in evaluating the effectiveness of the intervention campaign in achieving the campaign objectives including increasing the rates of installation of machine guards in manufacturing; improving hazard identification and management; and providing businesses with consistent and practical guidance on machine guarding.



Background (cont.)

Because most managers who responded to the paper surveys did not provide the names of their companies, only 63 managers could be identified as taking part in both the pre and post intervention surveys. As a result there were not enough cases available to compare those who did receive an intervention with those who did not receive an intervention. Further, we were not able to match company names provided by survey respondents to the names provided by the jurisdictions. As a result we have used self report in the post intervention survey to identify companies who received interventions during the campaign. Receiving an intervention includes site visits, mailed out information and taking part in a workshop.

The approach taken in comparing only the 63 managers who responded in survey stages 1 & 2 is the most conservative method of analysing the data. Comparisons of the overall responses in stage 1 with the overall responses in stage 2 suggested that there may have been more effects due to the campaign than reported. However, the more conservative approach was adopted so that we can be confident that the changes reported here can be attributed to the campaign.



Research Objectives

The overall aim of the research is...

To determine the effectiveness of the national intervention campaign on guarded machinery in manufacturing.



The specific objectives spanned the following areas...

- § Determine business owners/managers' current levels of awareness of the campaign and the impact of campaign awareness and interventions on managers making specific OHS changes to their business.
- § Determine the impact of the campaign on the following factors that influence workplace safety:
 - the rate of use of machine guards
 - hazard management, that is, policies and operating procedures concerning safe work practice
 - managers' attitudes to health and safety issues
 - managers' knowledge of and compliance with Australian Standards in relation to safety requirements for machines and machine guarding in manufacturing .
- § Determine the usefulness of OHS guidance materials received by managers and how effectively these are communicated to workers.
- § Determine the barriers that impede managers from undertaking safe work practices and reasons for non-compliance with OHS practices.

Executive Summary



Summary

Making changes – campaign effects

- 77% of managers could recall the campaign on machine guarding.
- Of those managers who were aware of the campaign, 47% made a change to workplace safety practice following the campaign.
- Of those who were not aware of the campaign, 33% reported having made changes in the last six months.
- Managers who reported having made changes due to the campaign were significantly more likely to do so if they had a site visit.
- **The most common change that managers reported making was installing a guard.**

Approximately one in four managers (26%) plan to make changes to their workplace safety practices in the next six months. Of the 75% of managers with no plans to implement changes, 34% claim they are already complying with regulations; 24% do not see the need for change, and 22% already have guards in place. **Awareness of the campaign or having received an intervention was not associated with managers' plans to make changes in the next 6 months.**

The findings suggest that **site visits** are an effective intervention in getting managers to **install** guards. However, it appears that the campaign has not influenced planning by managers to improve OHS. This may be because OHS changes are part of broader business planning, such as buying new machines that enable improved safety.

“We are small and the cost of new machinery is quite high for us” (respondent 172).

Use of guards and other controls

The proportion of workplaces with a company policy did not change significantly after the campaign. Receiving an intervention was not associated with businesses putting in place an operating procedure for the use of guards.

There was a 9% increase in use of guards on metal milling machines from pre to post campaign. Significantly more of those who reported receiving an intervention said that most of the time or always they were using guards on metal milling machines. This suggests that receiving an intervention may have resulted in increased use of guards on metal milling machines.

Significantly more of those who received an intervention reported that they provide and insist on the use of safety equipment such as mesh gloves, ear muffs and goggles.

The proportion of employers/managers who report using **Australian Standard AS 1473 Wood processing machinery: safety requirements for finishing machinery increased by 11%** after the campaign. Significantly more of those who received an intervention reported using AS1473 and AS 4024.1 -2006 Safety of machinery series most of the time or always. In both cases those who received material in the mail were the most likely to report that they always or most of the time comply with the standards.

Summary (cont.)

Guidance Materials – usefulness and usability

Around half (48%) of employers/managers recalled receiving guidance material on machine guarding from their workplace authority. Those who were aware of the campaign or received a site visit were significantly more likely to recall receiving guidance materials. Also, those who recalled receiving guidance materials in the mail were significantly more likely to have made changes due to the campaign.

Of those who received the guidance material, 88% believe the information was easy to put into practice. This was consistent across manufacturing areas. A key reason why managers reported it was easy to put the information into practice was the simplicity and clarity of information. For those who did not consider the information easy to put into practice, guards being unsuitable for machine usage was a primary reason. By comparison to the generally positive view of the mailed out information, some managers commented unfavorably about the difficulty of locating information on guarding online:

“Spent ages trying to find something then couldn’t find it again. The website is not clear or user friendly” (respondent 241).

Barriers to effective management of risks in manufacturing

Over half the employees indicated that the dangerous machines they use are also the most commonly used machines in their workplace. The two top reasons that workers provided for guards not being fitted on machines were:

- it is “management responsibility” (41%)
- “only trained operators use the machines without a guard” (16%).

Similarly, with owners/managers:

- “trained operators use machines without guards” (23%)
- it was “the worker’s responsibility to ensure guards are fitted” (16%).

Some care is needed in the interpretation of these findings. We don’t know whether it is because guards can not be fitted to those machines that only trained operators can use them. Alternatively, guards can be fitted to those machines but because the operators are trained, they choose to use the machines without the guards fitted.

It is of concern that **nearly half the employees surveyed thought it was management responsibility to fit the guards**. The audit reports consistently note that companies use ad-hoc and undocumented methods for hazard identification and risk control. It may be that the apparent confusion about whose responsibility it is to ensure guards are fitted when the machine is used is a reflection of this ad-hoc approach.

Summary (cont.)

Barriers to effective management of risks in manufacturing (cont.)

One of the most common reasons for removing guards is to clear jams caused by the guard. This is concerning. It suggests the design of guards may need investigation.

Several employers commented that there needs to be more emphasis on the individual taking responsibility for their own safety – despite manager's warnings, many workers continue to use unsafe practices.

In summary, use of machines in manufacturing is seen by managers and workers as an inherently dangerous activity. The use of guards can reduce the risk substantially. One factor that may lead to guards not being used is that in some cases they cause problems with the operation of the machine.

Perceptions of OHS issues in manufacturing – managers and workers

Workers and managers had very similar views on the frequency of use of dangerous machines in the workplace – 55% of managers and 55% of workers said that the most dangerous machine in their workplace is used most of the time/always. They consider the most dangerous machines to be saws, spindles and panel saws. Press/brakes and guillotines in the metal manufacturing industry are commonly reported as dangerous.

In the audit reports, guillotines and saws were identified as machines with a high frequency of guarding issues. Managers more often report that most of the time or always there are guards on the machines being used by workers. Workers are less likely to report that there are guards on the machines they are using. **This suggests that while managers and workers recognise the dangers, workers do not always use guards to protect themselves.**

While 92% of managers state that most of the time or always they consider health and safety to be more important than getting the job done, only 57% of workers believe that managers consider health and safety more important than getting the job done.

Maintenance

The campaign did not result in managers making changes to their maintenance procedures. 97% of managers said that most of the time or always they regularly undertook maintenance on their machines which is consistent with the inspections. Receiving an intervention made no difference to maintenance undertaken, and there was no change between the pre and post surveys.

Summary (cont.)

Conclusions

- Managers were aware of the campaign.
- Managers responded to interventions by installing new/more suitable guards if these were needed.
- This campaign has been successful in getting businesses to make some specific changes, such as installing guards, or more suitable guards, on metal milling machines. The level of guard on metal milling and other metal working machines increased.
- This campaign has been successful in increasing following of the Australian Standard AS 1473 Wood processing machinery: safety requirements for finishing machinery by 11%.
- There is evidence that mail out of materials is an effective means of getting businesses to increase following of Standards.
- There is limited evidence that the campaign has resulted in increased use of guards generally. There is also limited evidence that the campaign has resulted in increased use of other controls.
- There is no evidence that the campaign has resulted in companies being more likely to put in place operating procedures or policies for use of guards.
- There is no evidence that the campaign has resulted in any changes to managers' attitudes to OHS.
- The campaign does not seem to have influenced ongoing safety practice. While site visits may result in managers making specific one-off changes, they may not be an effective means of achieving sustained change. The organisational change literature suggests that achieving sustained change in organisational practice requires long term engagement, combined with training, support and assistance.
- It is unlikely that one-off campaigns such as this, which focus on dissemination of guidance material and workplace visits, would make a difference to safety culture within workplaces.

Effects of the campaign on making or planning specific OHS improvements



Effects of the campaign on making or planning specific OHS improvements - Summary

Material mailed out to manufacturing businesses and inspector visits were successful in building awareness of the campaign. The most common change made was to install a guard, and it was the most common change intended to be made in the future.

77% of managers could recall the campaign on machine guarding. Managers primarily learned about the campaign by receiving material in the mail (31%) and by visits from inspectors from their work-safe authority (17%).

Of those managers aware of the campaign, **47% claimed to have made a change to workplace safety practice following the campaign.** Managers who reported having made changes due to the campaign were significantly more likely to do so if they had received a site visit. **The findings suggest that site visits are an effective way of getting managers to install guards.**

33% of those who were not aware of the campaign reported having made changes in the last six months. Of those managers not aware of the campaign who did make changes to their workplace safety practice in the last six months: 41% reported that they did so because of a need to improve/upgrade the business; 31% mentioned compliance with safer work regulations; and 9% did so in response to an incident/accident. Of those managers who were not aware of the campaign and who did not make changes in the last 6 months: 35% claimed that there was no need to do so as they were up to date; 26% said that they were currently compliant with regulations; and 22% already had safety guards in place.

One in four managers said that they plan to make changes to their workplace safety practices in the next six months. Of the 75% of managers with no plans to implement changes: 34% claimed they are already complying with regulations; 24% did not see the need for change; and 22% reported that they already have guards in place. **Awareness of the campaign or having received an intervention was not associated with managers' plans to make changes in the next 6 months.**

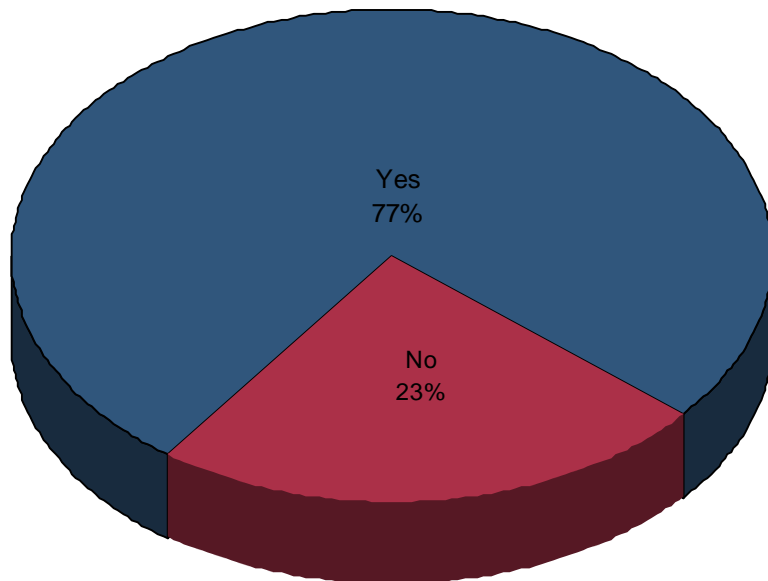
The most frequently reported changes managers say they will make within the month are reviewing and continually updating OHS processes and procedures (82%); taking action to resolve specific maintenance issues (70%); and identifying hazards and risks (60%). More time and resource-intensive changes such as purchasing new machines, moving to new premises, or upgrading machinery have a longer timeframe for implementation. One manager commented that:

"I would like to make my workplace safer by using more modern machinery which is so much safer to use. I have installed modern machines to reduce risks big time in the last two years."

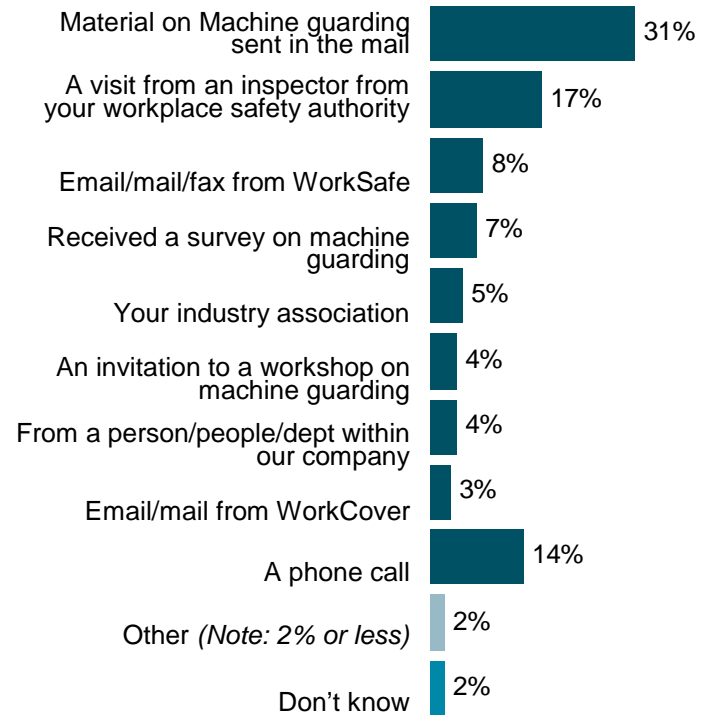
Other managers mentioned the cost of new machinery as an issue and had difficulty in adding guards to existing older machines.

Awareness of campaign on machine guarding

Campaign awareness



Source of campaign awareness

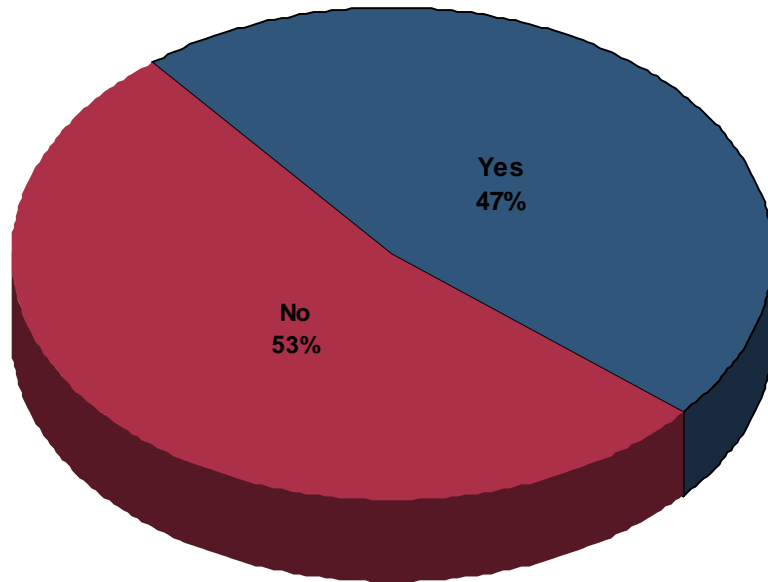


Base: Aware of campaign (n=321)

Base: All employers/managers in stage 2 (n=419)
 Q. Are you aware of this campaign on machine guarding?
 Q. How did you first find out about the campaign?
 Q. Did you receive a visit from an inspector from your workplace safety authority?
 Q. Did you attend a workshop on machine guarding this year?

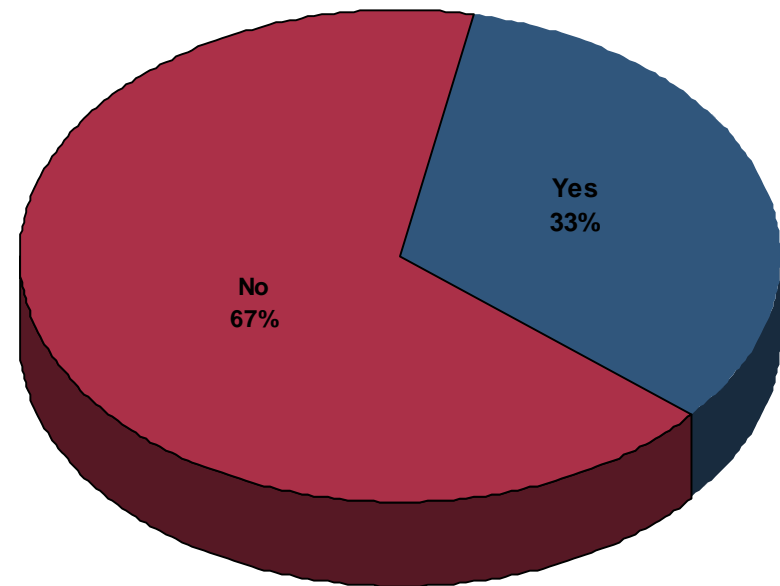
Changes to workplace practices

Incidence of changes made with awareness of campaign



Base: Aware of campaign (n=321)

Incidence of changes made without awareness of campaign



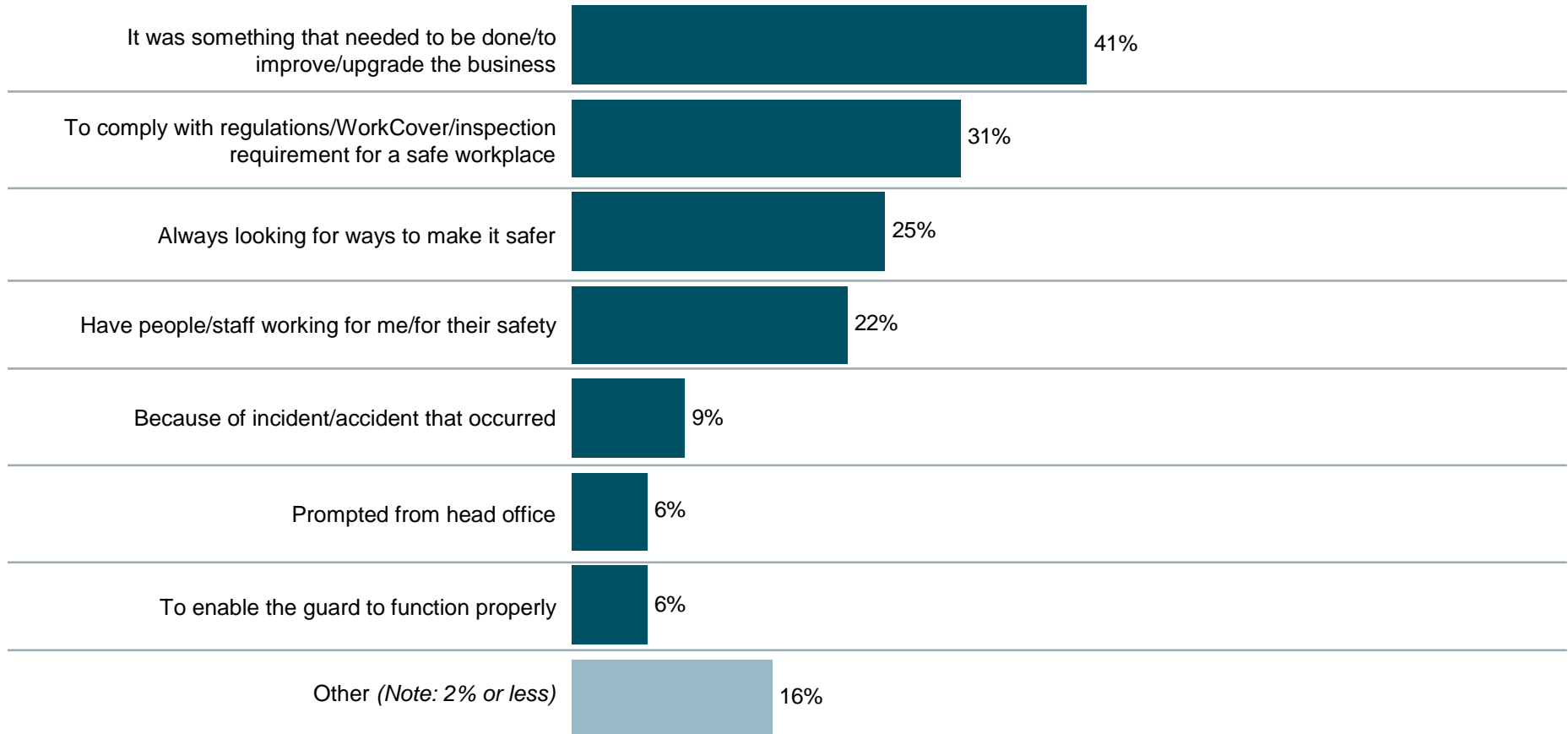
Base: Not aware of campaign (n=98)

Base: All employers/managers in stage 2 (n=419)

Q. As a result of the campaign, have you made changes to your workplace practices, particularly concerning use of machines, guards and maintenance?

Q. In the last six months have you made changes to your workplace practices, particularly concerning use of machines, guards and maintenance?

Other considerations that prompted changes



Base: Not aware of campaign but made changes (n=32)

Q. What prompted you to make these changes?

Type of changes made by intervention received

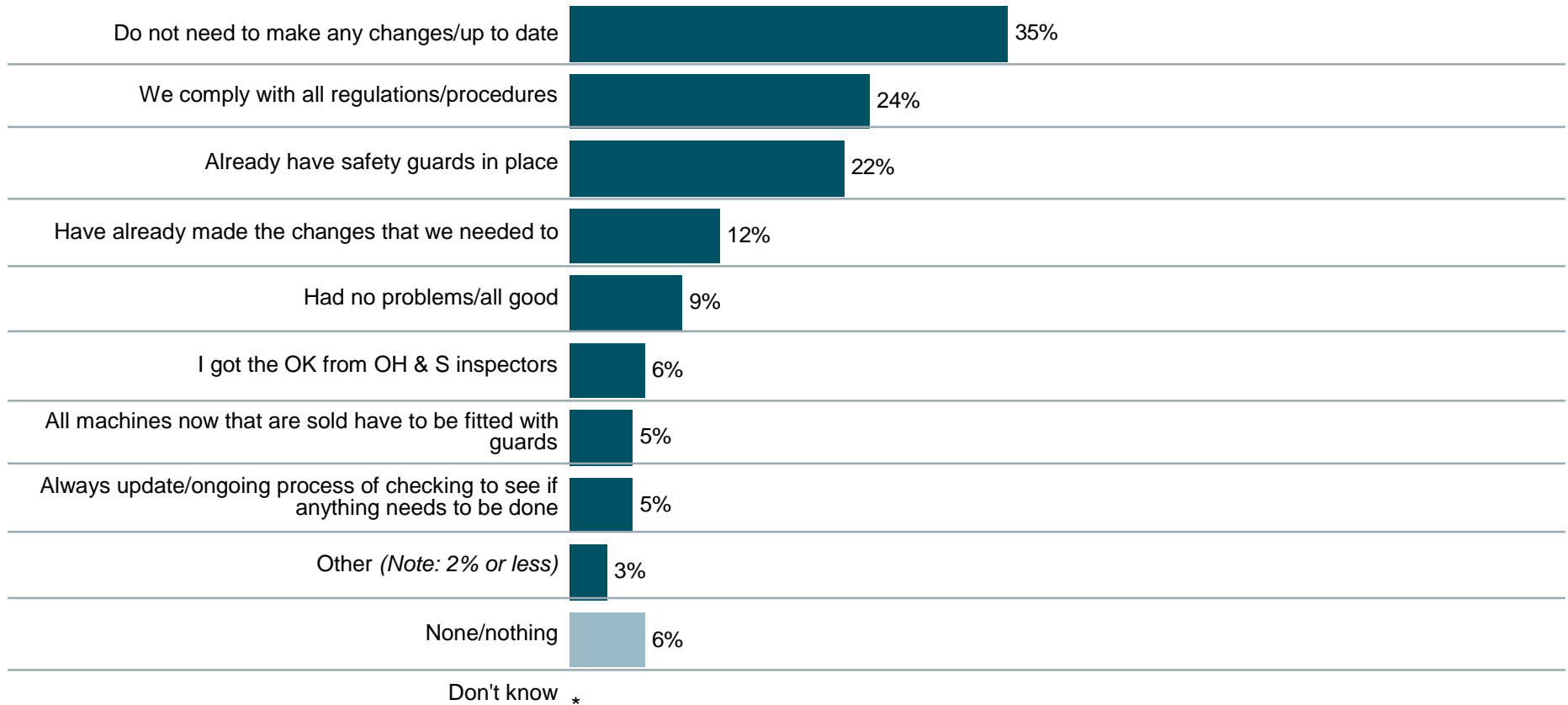
	Total (184) %	Intervention received					
		Material in mail (44) %	Inspector visit (101) %	Survey (6) # %	Workshop invitation (8) # ^ %	Workshop attendance (30) ^ %	Guidance material (103) %
Install a guard, or a more suitable guard, on any of your machines	50	52	62	50	50	33	52
More staff training (e.g., about safe use of machines, use of guards, the importance of maintenance)	13	5	6	17	13	10	12
Develop operating procedures to ensure safe use of machines	13	11	12	-	13	13	11
Specific changes/additions/updates done/made on machinery	13	14	17	-	13	17	17
Develop an action plan to manage safety problems and the risks associated with using machinery	10	7	9	-	25	17	9
Implement an action plan to manage safety problems and the risks associated with using machinery	8	14	7	-	13	10	9
Talk more often to staff about safe use of machines and the importance of using guards	8	2	5	17	-	7	5
Identify hazards and risks relating to machine safety	8	5	3	-	13	10	9
Take action to resolve specific maintenance problems on your machines and guards	5	9	7	-	13	10	8
Improved signage/safety/operating signs placed around the area/on machinery	5	5	4	17	13	13	5
Monitoring/checking/maintaining guards/making sure they are operating/in good working order	5	11	3	-	-	7	4
Purchasing/installing new/safer machines	4	5	2	-	-	3	3
Others (Note: 2% or less)	22	28	24	51	-	16	18

^ Relevant for NSW manufacturers only

Indicative results given small base size

Base: Made changes (n=184)
Q. What changes have you made?

Reasons changes not made



Note: This question allowed multiple responses

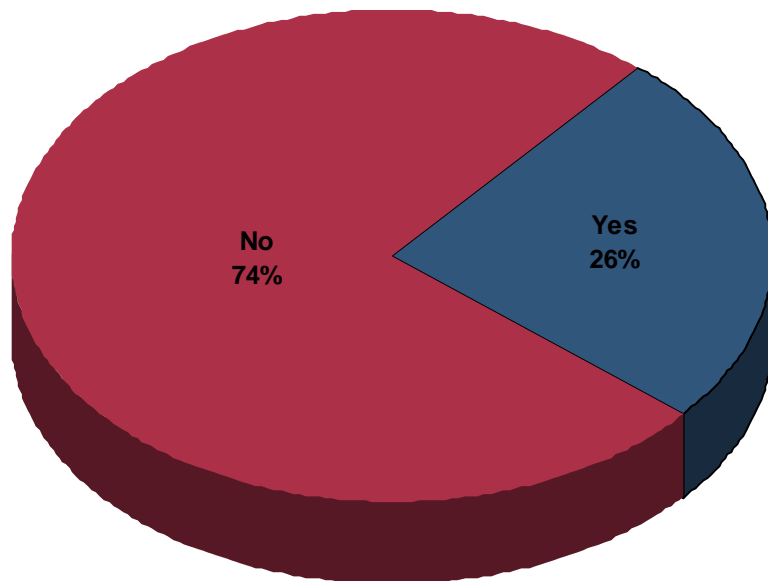
* Denotes less than 0.5%

Base: Have not made changes (n=235)

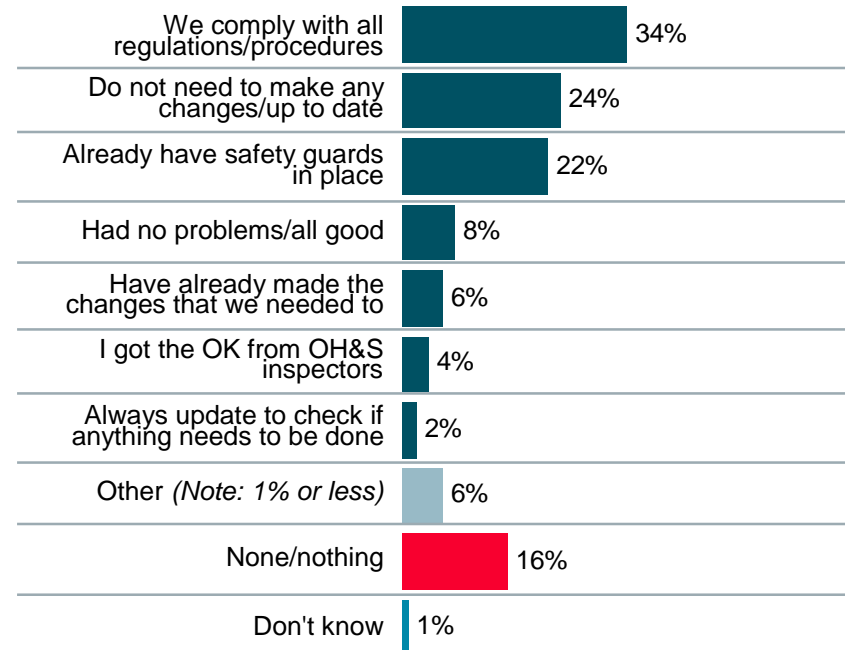
Q. Are there particular reasons why you have not made any changes?

Intention to make changes

Intentions to make changes in the next 6 months



Reasons why no plans to make changes



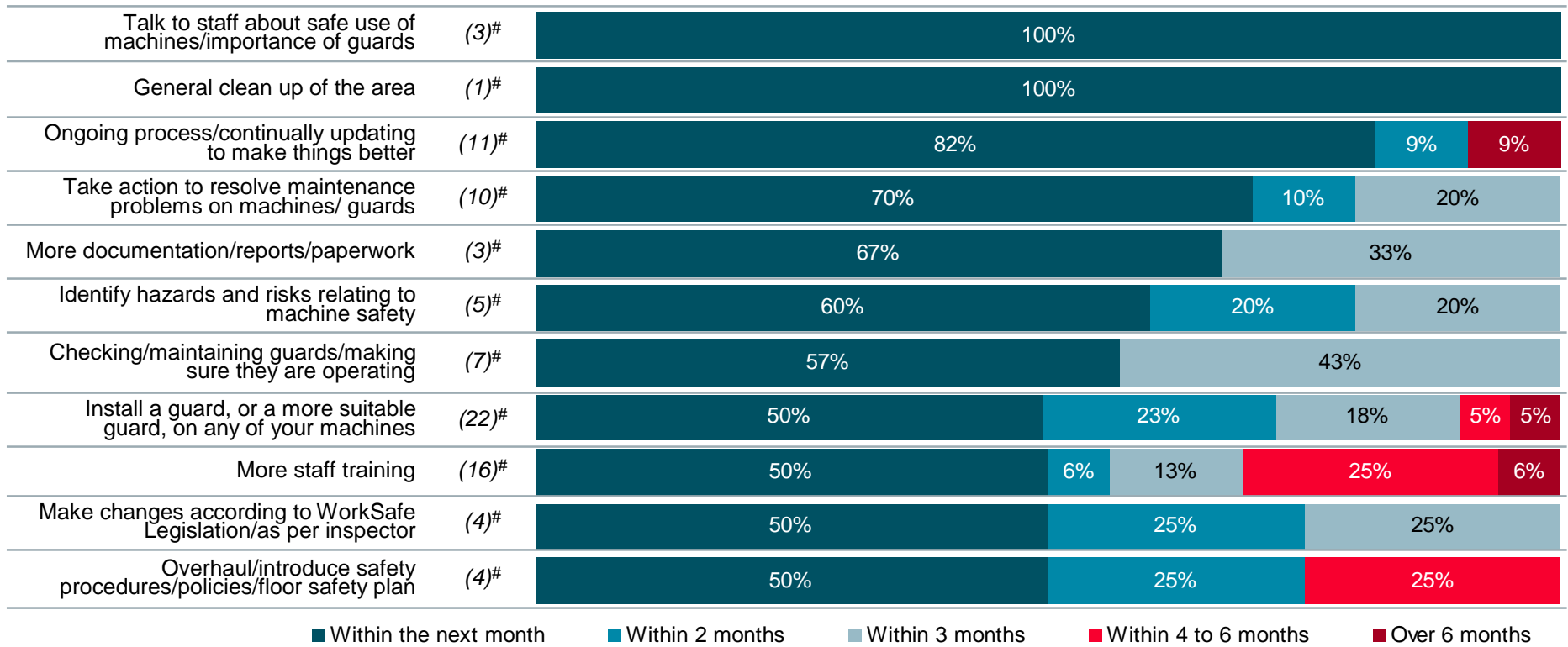
Base: Have no plans to make changes (n=310)

Base: All employers/managers in stage 2 (n=419)

Q. Are you planning on making changes to your workplace practices in the next six months, particularly concerning use of machines, guards and maintenance?

Q. Are there particular reasons why you have no plans to make changes?

Planned changes and timeframe (1)



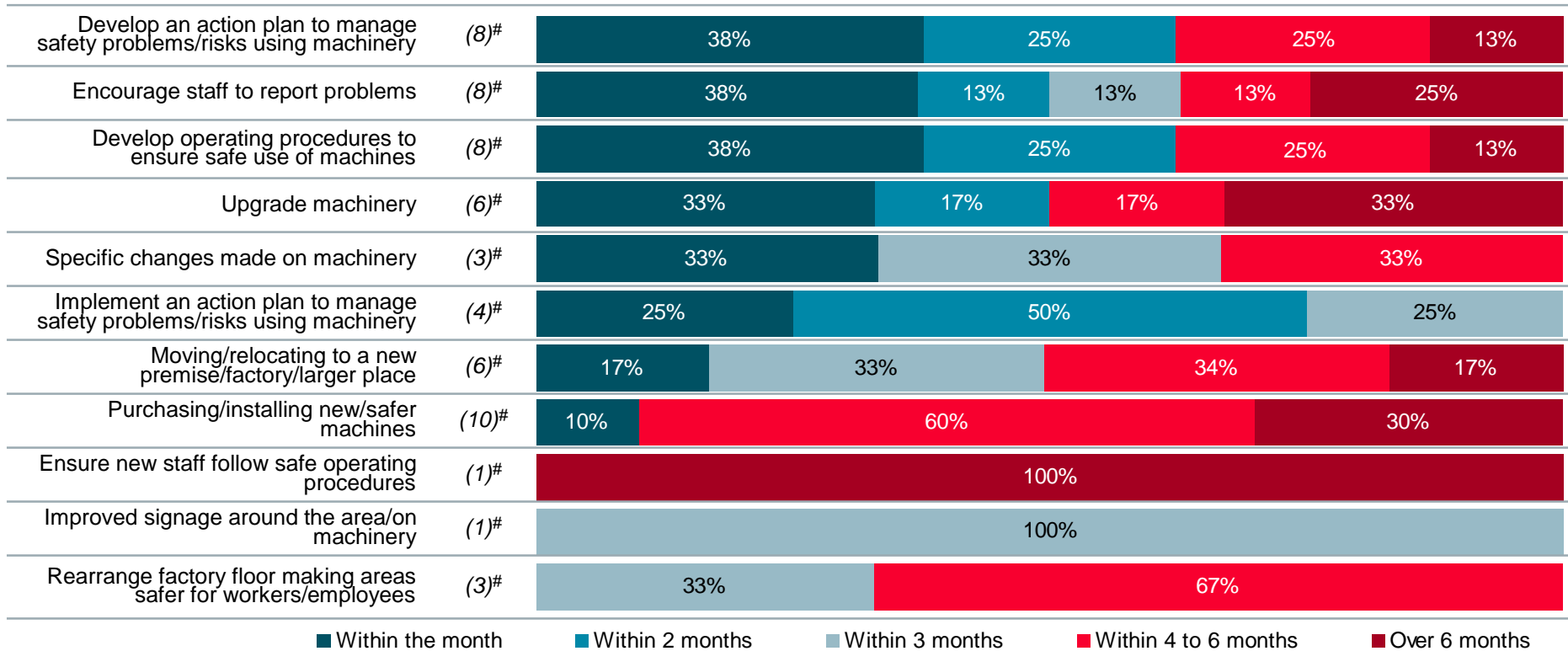
Note: Ranked based on "Within the month"

Indicative results given small base size

Base: Intend to make changes

Q. When do you plan to make this change?

Planned changes and timeframe (2)



Note: Ranked based on "Within the month"

Indicative results given small base size

Base: Intend to make changes

Q. When do you plan to make this change?

Effects of the campaign on the use of guards and other controls, attitudes to OHS and following of Australian Standards



Effects of the campaign on the use of guards and other controls, attitudes to OHS and following Australian Standards - Summary

The proportion of workplaces with a company policy remains the same after the intervention campaign. Most workplaces (88%) have operating procedures for the use of machines and guards. Receiving an intervention was not associated with having a company policy or an operating procedure for use of guards.

There has been a significant increase (9%) in the use of guards for metal milling machines. Significantly more of those who received an intervention report using guards on metal milling machines most of the time or always. This suggests that the intervention may have resulted in increased use of guards on metal milling machines.

Significantly more of those who received an intervention report that they provide and insist on the use of safety equipment such as mesh gloves, ear muffs and goggles. This suggests that the intervention may have resulted in increased provision and instructions for use of safety equipment.

The proportion of managers who state they can influence health and safety performance in their workplace all or most of the time increased slightly following the campaign.

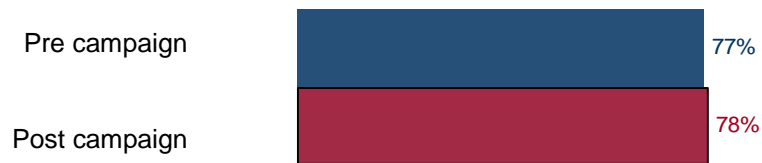
There are few overall differences in manager attitudes to OHS between those who did and those who did not receive an intervention. The proportion of managers who state that operational targets conflict with health and safety was greater for those who received an intervention. It is not surprising that the campaign had limited effects on attitudes as attitudes tend to be highly stable. Given there was only about four months between the pre and post campaign surveys, it is unlikely there would be any changes.

The following of Australian Standards ranges from moderate to low – at least half the owner/managers reported that they never used the standards. For example, 95% of those surveyed reported that they never used the European Standard pr EN 1010 – The design and construction of printing and paper converting machines, and 73% never used AS 2939 - Industrial Robot Systems. However, these questions were only asked of those businesses where the performance standards were relevant – the high proportion of ‘never’ responses most likely reflects those businesses where the standard is not applicable.

The proportion of employers/managers who reported using Australian Standard AS 1473 Wood Processing Machinery: Safety Requirements for Finishing Machinery increased by 11% after the campaign. Significantly more of those who received an intervention reported using AS1473 and AS4024.1-2006 Safety of machinery series most of the time or always. In both cases, those who received material in the mail were the most likely to report that they always or most of the time followed these standards.

Company policy and procedures for guards

% Yes, have company policy – pre and post campaign (n=63)



% Yes, have company policy – post campaign (n=419)

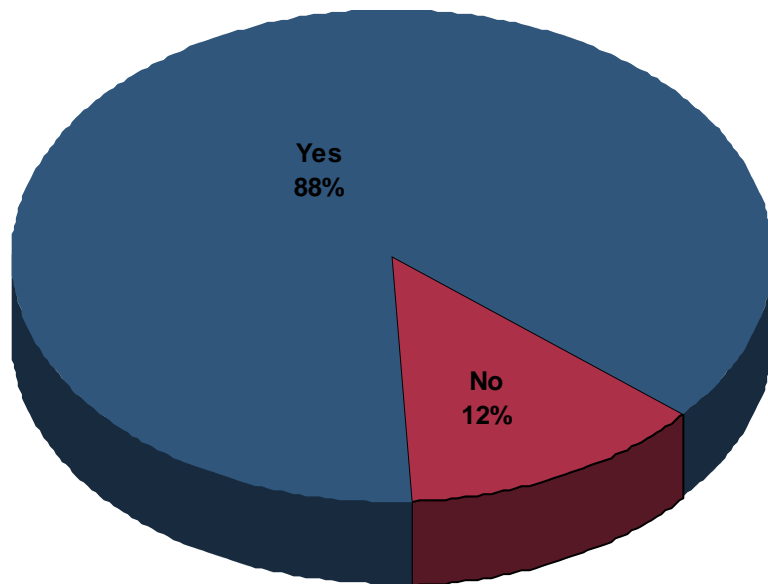
	(n=)	%
Total	(419)	78
Wood	(160)	84
Metal	(227)	74
Wood and metal	(19)#	89
Aware of campaign	(321)	79
Not aware of campaign	(98)	74
Received inspector visit	(172)	80

Indicative results given small base size

Base: All employers/managers and workers in stages 1 (pre campaign) and (post campaign 2) n=63; post
 Q. Is there a company policy about using guards?

Operating procedures for guards and usage of machines

Operating procedures for guards and machines



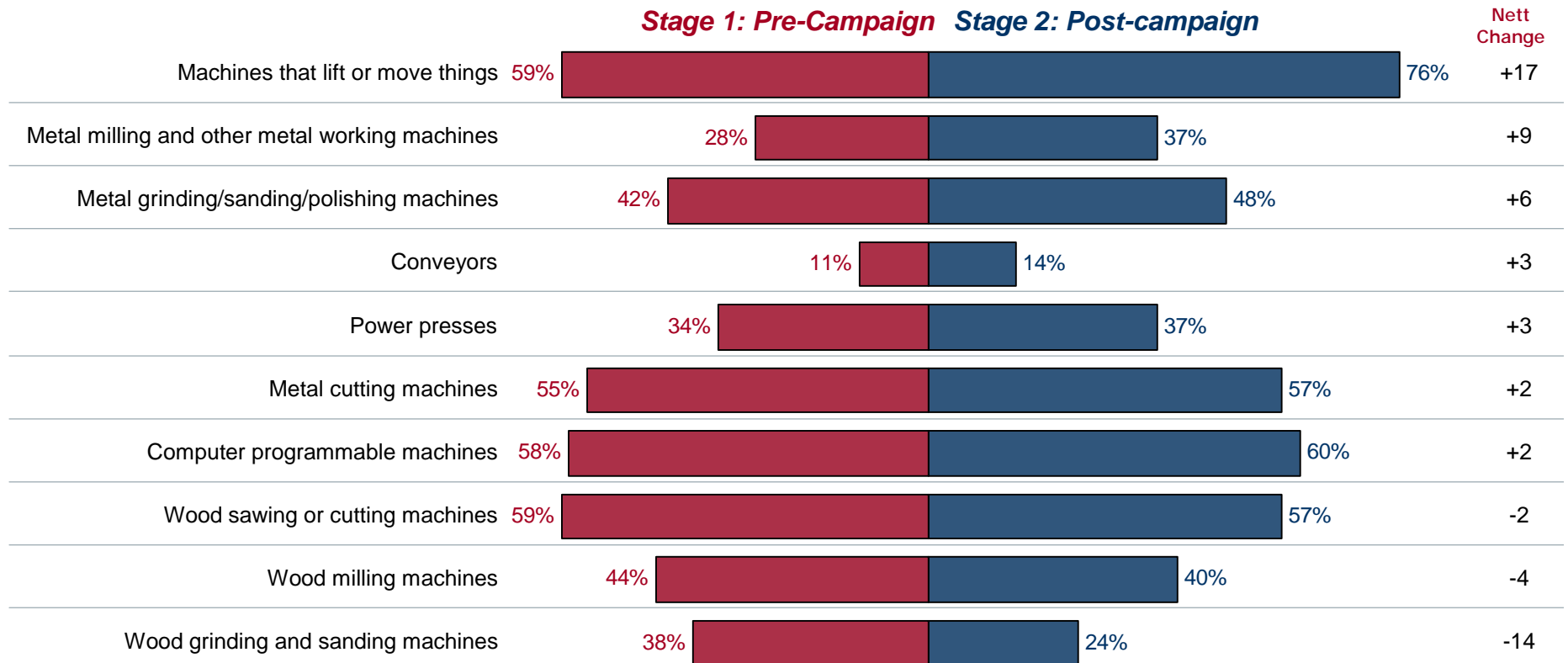
% Yes, have operating procedures – In Detail

	(n=)	%
Total	(419)	88
Wood	(160)	93
Metal	(227)	84
Wood and metal	(19)#	89
Aware of campaign	(321)	90
Not aware of campaign	(98)	83
Received inspector visit	(172)	91

Indicative results given small base size

Base: All employers/managers (n=419)
 Q. Do you have operating procedures about the use of machines and guards?

Use of guards



Note: Based on "Always/Most of the time"

Base: All employers/managers who completed Stages 1 and 2 (n=63) (Note: Only applicable if machine is used at workplace)

Q. Can you tell me whether you always, most of the time, about half the time, sometimes or never use guards on the following machines?

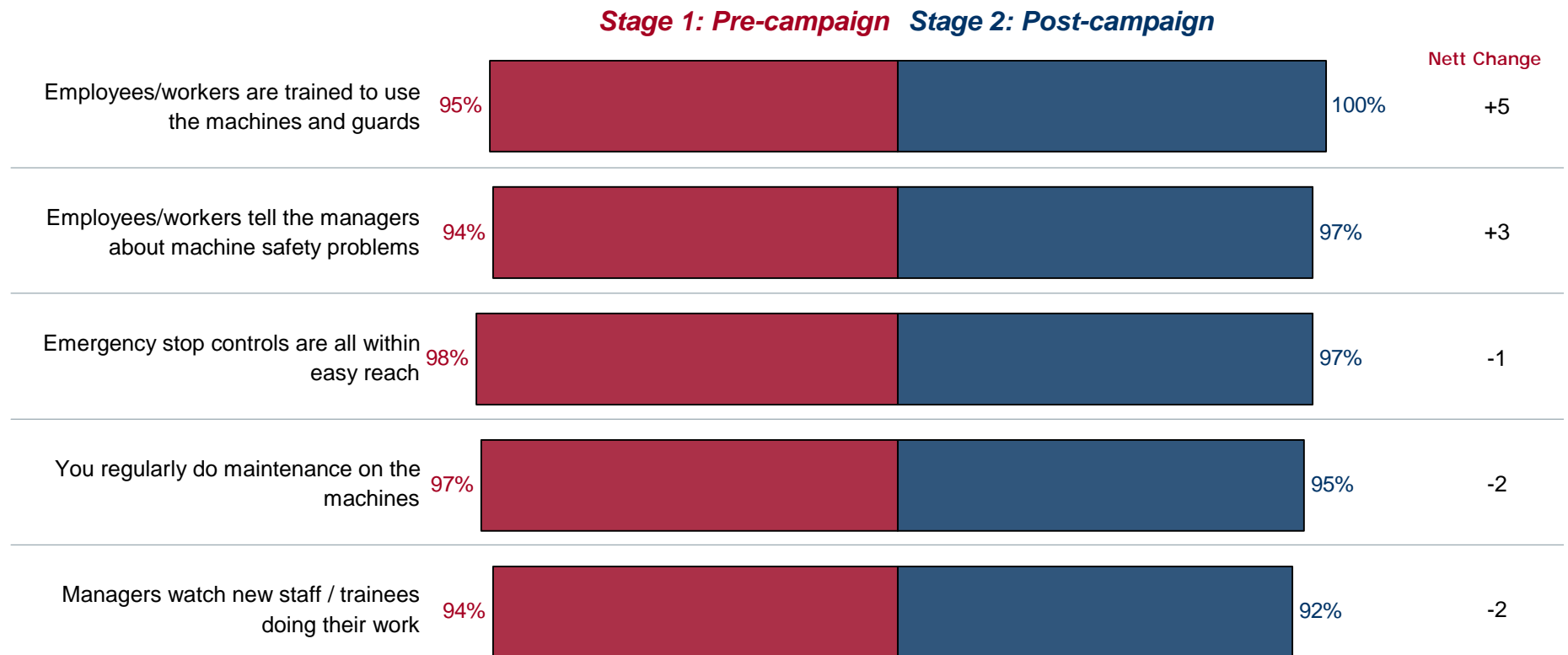
Use of guards on machines by whether received an intervention

Machine Guard used	No Intervention %	Intervention %
Power Presses	89.9	83.6
Metal cutting machines	96.9	99.3
Metal milling and other metal working machines (inc. lathes, drills, etc.)	76.7	86.3
Metal grinding, sanding and polishing machines	97.5	97.8
Punch and shear machines	100	100
Lathes used in Metal manufacturing	100	96.6
Saws used in metal manufacturing	94.4	88.9
Benders	85.7	87.9
Press brakes	95.5	99.2
Wood sawing or cutting machines	84.1	84.4
Wood milling machines (inc. planers, thicknessers, routers, etc.)	93.7	96.7
Wood grinding and sanding machines	74.5	77.5
Saws (all used in wood manufacturing)	98.8	96.2
Routers	79.6	79.7
Edge benders	90.9	93.7
Conveyors	100	100
Computer programmable machines (may include any of the above machines)	87.5	86.5
Machines that lift or move things	96.6	96.5

Statistically significant increase.

Numbers show % reporting most of the time or always use guards.; Base: All employers/managers post campaign (stage 2) n=419
Intervention includes those managers who had a site visit, attended a workshop (NSW), or received guidance materials in the mail

Use of other controls (1)

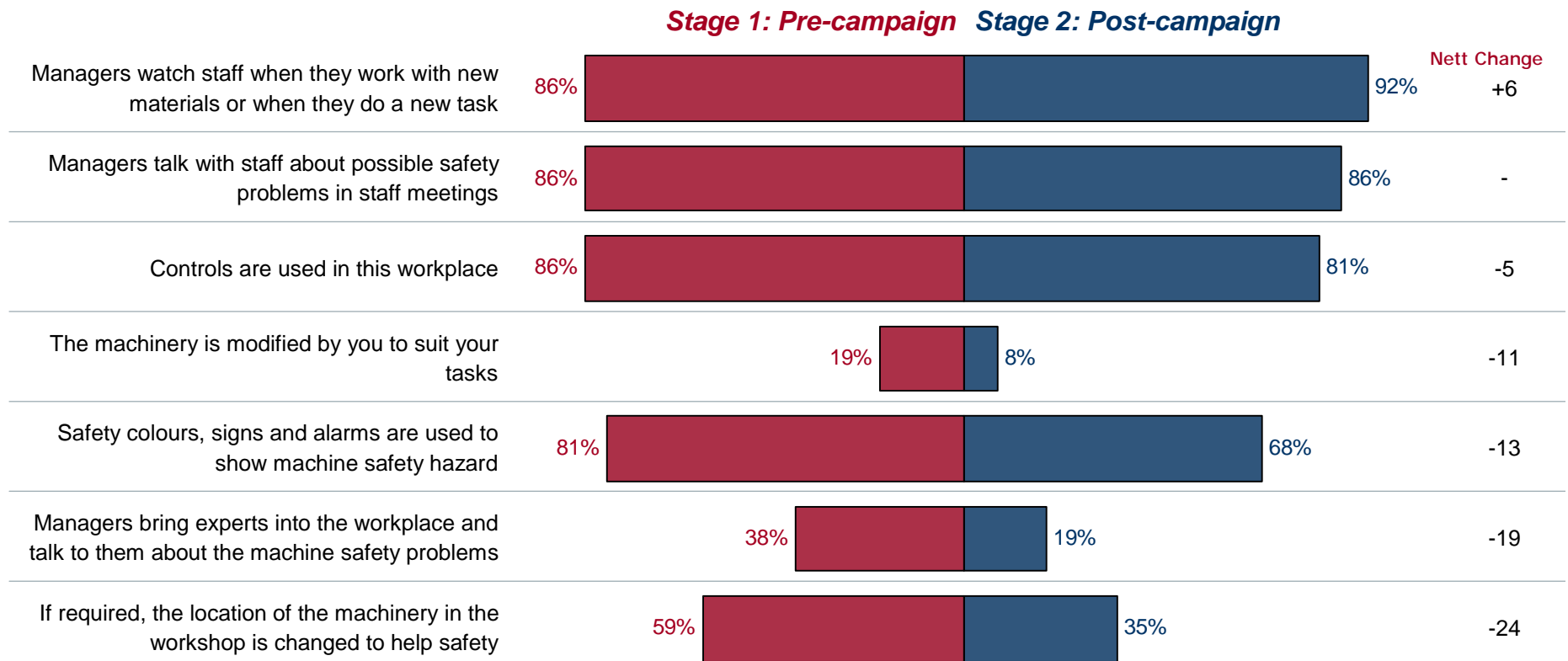


Note: Based on "Always/Most of the time"

Base: All employers/managers who completed Stages 1 and 2 (n=63)

Q. I'm going to read out a range of options about workplace safety, and would like you to tell me whether you always, most of the time, about half the time, sometimes or never do/practice the following...?

Use of other controls (2)



Note: Based on "Always/Most of the time"

Base: All employers/managers who completed Stages 1 and 2 (n=63)

Q. I'm going to read out a range of options about workplace safety, and would like you to tell me whether you always, most of the time, about half the time, sometimes or never do/practice the following...?

Use of other controls by whether received an intervention (1)


Control used	No Intervention %	Intervention %
Employees/workers are trained to use the machines and guards.	97.3	97.8
Managers watch new staff/trainees doing their work.	89.2	88.7
Managers watch staff when they work with new materials or when they do a new task.	88.6	85.5
Managers talk with staff about possible safety problems in staff meetings.	82.3	87.8
Managers bring experts into the workplace and talk to them about safety problems.	22.2	27.1
The machinery is modified by you to suit your tasks.	13.4	13.3
If required the location of the machinery in the workshop is changed to help safety.	38.4	38.8
You identify safety issues and hazards.	95.1	99.2
You regularly do maintenance on the machines.	97.6	98.8
Employees/workers tell the managers about machine safety problems.	97.6	96.9
Controls such SafeWork instructions, isolation & lock out procedures or job safety analysis are used in this workplace.	93.9	95.7
Emergency stop controls are fitted to all machines.	98.2	98.4

Numbers show % reporting most of the time or always use control Base: all managers in stage 2 (n=419)

Intervention - includes those managers who had site visit, attended a workshop (NSW), or received guidance materials in the mail

Use of other controls by whether received an intervention (2)

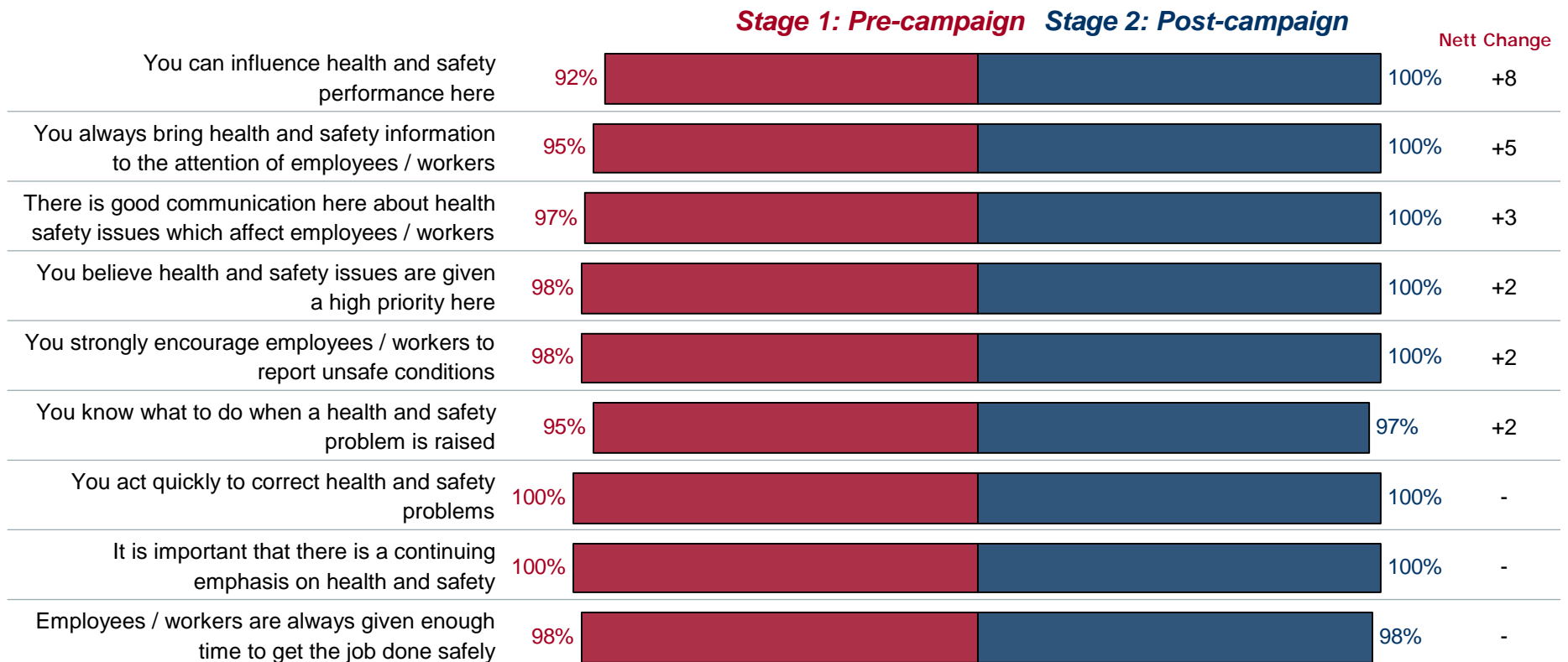
Control used	No Intervention %	Intervention %
Emergency stop controls are all within easy reach.	99.4	98.8
You provide and insist on the use of safety equipment such mesh gloves, ear muffs and goggles.	68.9	76.1
Safety colors, signs and alarms are used to show machine safety hazard.	98.8	99.6
You have a company policy about using guards on machines and encourage staff to use it.	87.8	91.0
You encourage staff to develop the right mental attitude about using the machinery (such as using safe practices and watching out for others).	98.2	97.3
You keep the workshop neat and tidy.	99.4	97.3
You use a set of operating procedures for safe use of machines including the use of guards and machine maintenance.	89.6	91.4
You ensure staff follow standard operating procedures.	95.1	96.5
You install guards on all your machines.	95.1	96.5
You insist that guards are used on your machines	97.8	98.8

 Statistically significant increase.

Numbers show % reporting most of the time or always use control Base: all managers in stage 2 (n=419)

Intervention – includes those managers who had a site visit, attended a workshop (NSW), or received guidance materials in the mail

Attitudes to OHS (1)



Note: Based on "Always/Most of the time"

Base: All employers/managers who completed Stages 1 and 2 (n=63)

Q. I am going to read out a range of statements about what you, as a manager, may do about health and safety issues at your workplace? Can you tell me whether you always, most of the time, about half the time, sometimes or never do the following?

Attitude to OHS following the campaign by whether received an intervention (1)

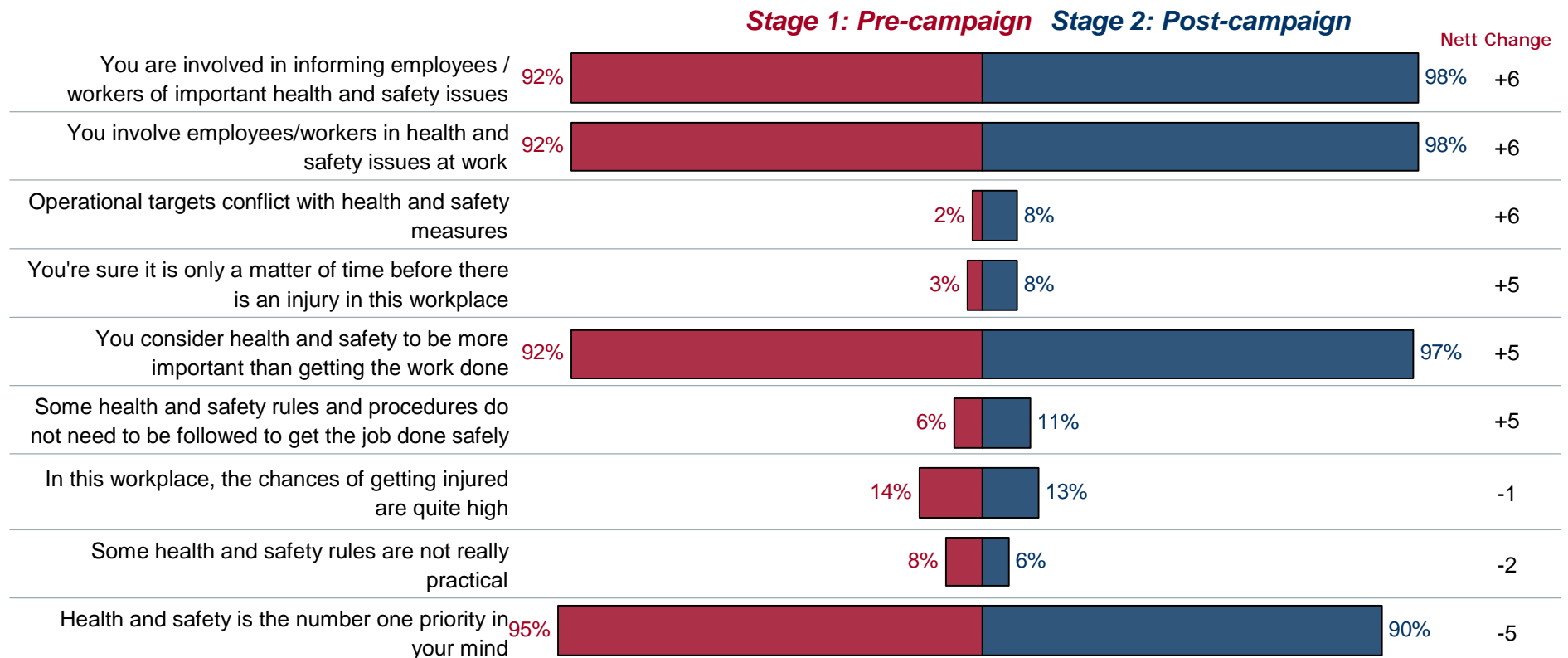
Attitude to OHS	No Intervention %	Intervention %
You involve employees/workers in health and safety issues at work.	94.5	94.1
Health and safety is the number one priority in your mind.	92.7	91.8
It is important that there is a continuing emphasis on health and safety.	98.7	99.2
You're sure its only a matter of time before there is an injury in this workplace.	12.2	11.4
In this workplace the chances of getting injured are quite high.	14.0	10.2
Operational targets conflict with health and safety measures.	3.0	7.1
Employees/workers are always given enough time to get the job done safely.	95.3	98.3

Numbers show % reporting most of the time or always

Base: all employers managers in stage 2 (n=419).

Intervention – includes those managers who had a site visit, attended a workshop (NSW), or received guidance materials in the mail

Attitudes to OHS (2)



Note: Based on "Always/Most of the time"

Base: All employers/managers who completed Stages 1 and 2 (n=63)

Q. I am going to read out a range of statements about what you, as a manager, may do about health and safety issues at your workplace? Can you tell me whether you always, most of the time, about half the time, sometimes or never do the following?

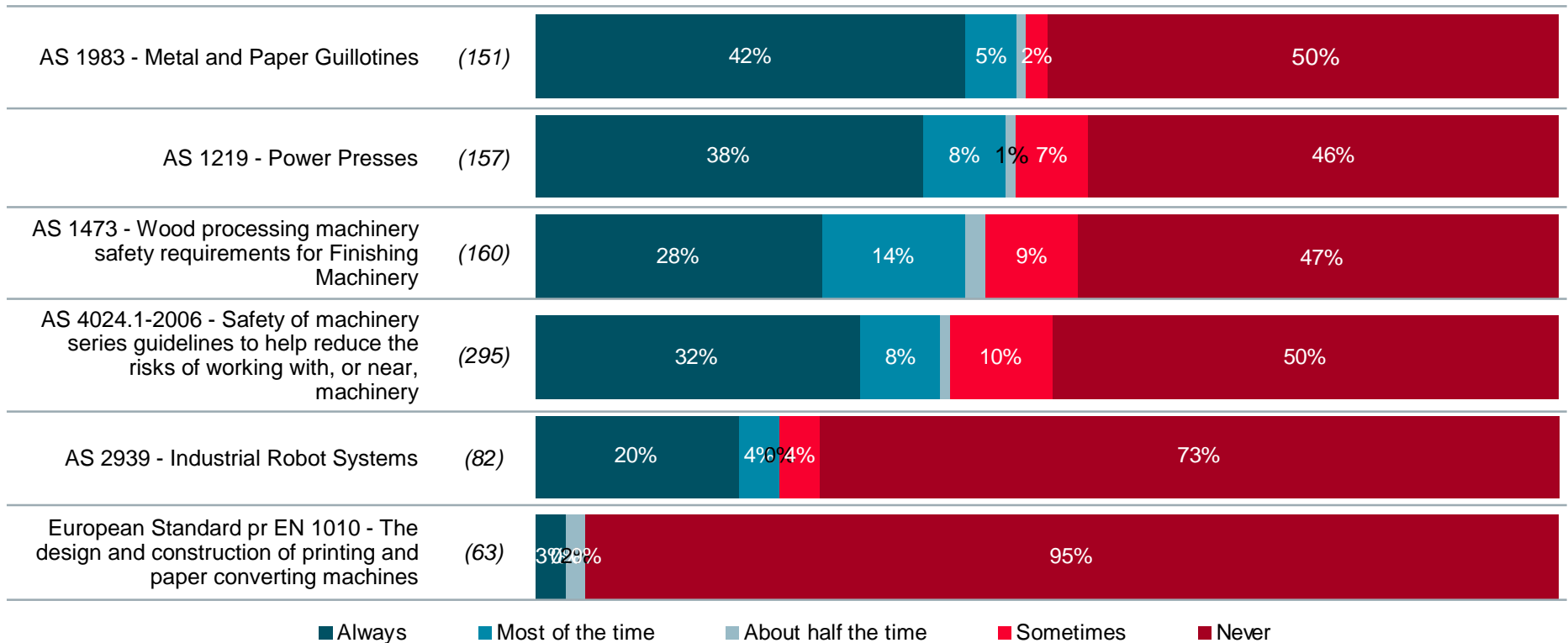
Attitudes to OHS following the campaign by whether received an intervention (2)

Attitude to OHS	No Intervention %	Intervention %
You know what to do when a health and safety problem is raised.	95.7	97.6
You act quickly to correct health and safety problems	100.0	98.8
You always bring health and safety information to the attention of employees/workers.	97.6	98.0
There is good communication here about health and safety issues which affect employees/workers.	97.6	95.7
You consider health and safety to be more important than getting the work done.	97.6	95.7
You believe health and safety are given a high priority here.	97.3	98.7
Some health and safety rules and procedures do not need to be followed to get the job done safely.	11.0	9.8
Some health and safety rules are not really practical	6.1	8.6
You strongly encourage employees/worker to report unsafe conditions.	97.6	98.8
You can influence health and safety performance here.	97.6	96.4
You are involved in informing employees/workers of important health and safety issues	93.9	95.3

Numbers show % responding most of the time or always. Base: All employers/managers in stage 2 (n=419).

Intervention – includes those managers who had a site visit, attended a workshop (NSW), or received guidance materials in the mail

Following Australian Standards

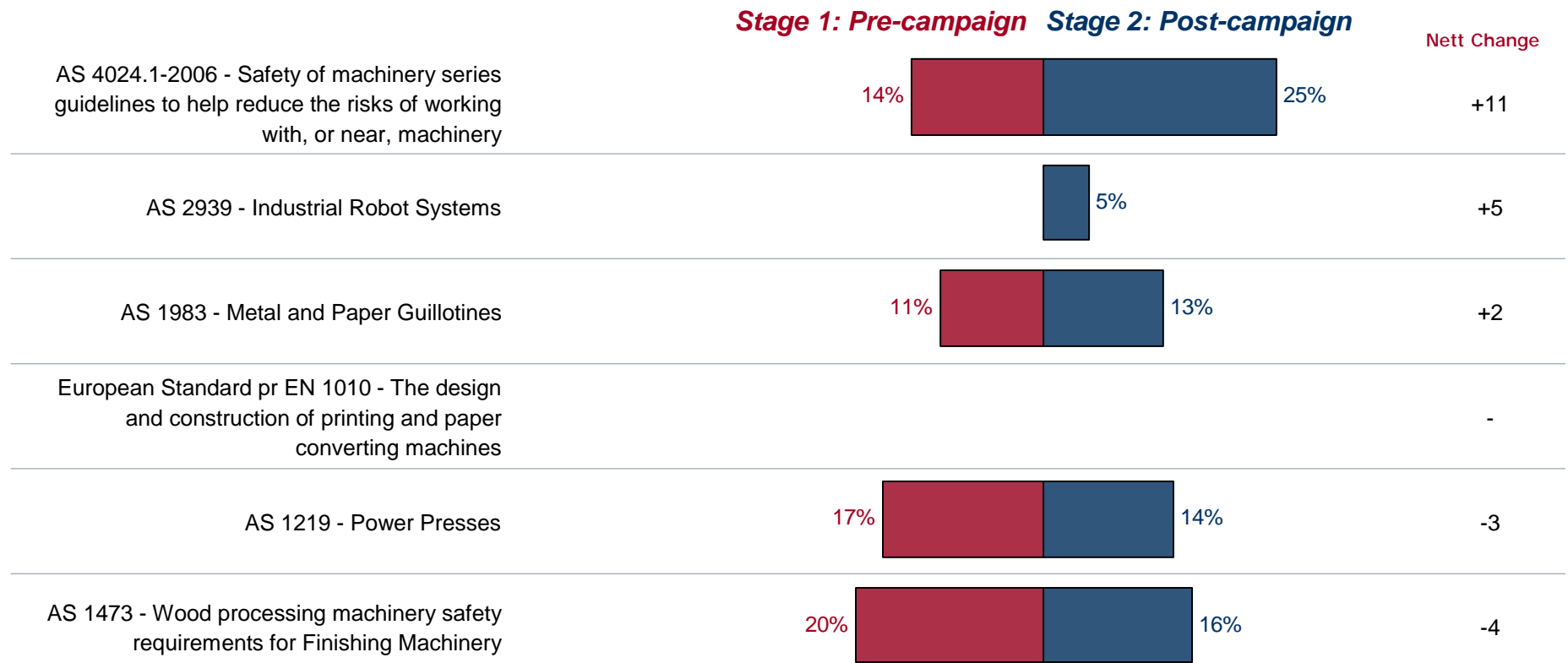


Note: Ranked based on "Always/Most of the time"

Base: All owner/managers (Note: Only applicable if Australian Standard is relevant at workplace)

Q. When you are making decisions about the operation of machines or machine guards, how often do you follow the following Australian standards?

Following Australian Standards after campaign




Note: Based on "Always/Most of the time"

Base: All employers/managers who completed Stages 1 and 2 (n=63) (Note: Only applicable if Australian Standard is relevant at workplace)
 Q. When you are making decisions about the operation of machines or machine guards, how often do you follow the following Australian standards?

Following Australian Standards by intervention & by intervention type received

Australian Standard	No Intervention	Intervention
AS 1473 - Wood processing machinery safety requirements for Finishing Machinery	29.7	50
AS 2939 - Industrial Robot Systems	28.9	18.2
AS 1219 - Power Presses	50.7	41.9
AS 1983 - Metal and Paper Guillotines	53.7	41.7
European Standard pr EN 1010 - The design and construction of printing and paper converting machines	7.4	0
AS 4024.1-2006 - Safety of machinery series guidelines to help reduce the risks of working with, or near, machinery	38.1	42.0

Australian Standard	No Intervention	Site visit	Workshop (NSW)	Mail-out
AS 1473 - Wood processing machinery safety requirements for Finishing Machinery	29.7	44.4	51.4	53.4
AS 2939 - Industrial Robot Systems	28.9	11.1	14.3	26.3
AS 1219 - Power Presses	50.7	35.9	0	55.0
European Standard pr EN 1010 - The design and construction of printing and paper converting machines	7.4	0	0	0
AS 4024.1-2006 - Safety of machinery series guidelines to help reduce the risks of working with, or near, machinery	38.1	40.8	19.4	49.3

 Statistically significant increase.
 Numbers show % reporting most of the time or always follow standard.
 Base: all employers/managers in stage 2 (n=419).
 Although the percentages for other standards change these standards are used by very few respondents and the differences are not significant.

Usefulness and usability of guidance material



Usefulness and usability of guidance material - Summary

Around half (48%) of employers/managers recalled receiving guidance material on machine guarding from their workplace authority. Those who were aware of the campaign (58%) or those who received a site visit (66%) were significantly more likely to recall receiving the guidance materials. Also those who recalled receiving guidance materials in the mail were significantly more likely to have made changes due to the campaign.

Of those who received the guidance material, 88% believe the information was easy to put into practice. This was consistent across manufacturing areas. The key reasons it was easy to put the information into practice was that the information was easy to follow and simple to apply. The main reason it was difficult to put into practice was that it was impractical because guards are not suited to their machines. Interestingly, 9% said they didn't need to put it into practice because they got the OK from the inspector.

Mailed out information was positively received by managers and seen as useful and able to be put into practice. It is also appreciated by employees, with one saying:

We need to be updated more about health and safety issues and send things to us in the mail about new things.

60% of owners/managers reported their staff can apply the information on machine guarding “very well” and 39% “fairly well”. Key reasons were: “managers police the issue to ensure staff do the right thing”, “staff simply comply” and “staff are trained to do the right thing”.

Compared with the generally positive view of the mailed out information, a number of managers commented unfavorably about the difficulty of locating guarding information online. For example:

“Spent ages trying to find something then couldn't find it again. The website is not clear or user friendly” (respondent 241).

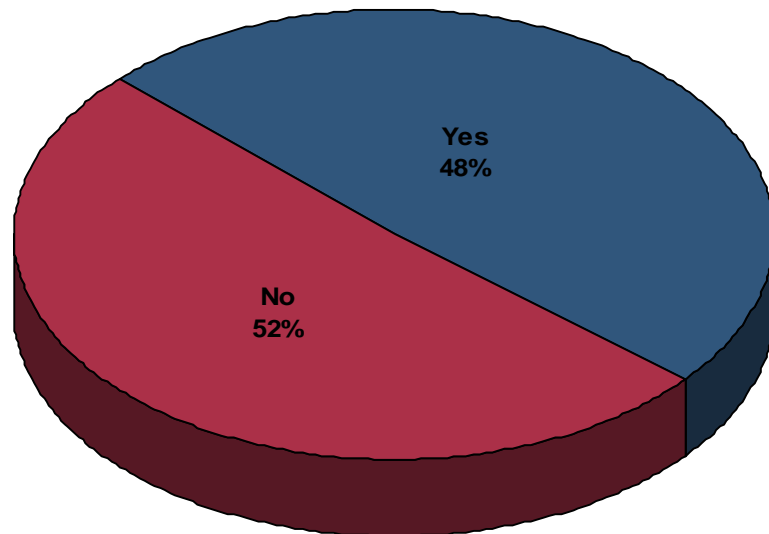
There was difficulty finding information specific to guards for particular machines. For example:

“they gave us a website and I couldn't get the specific guard for the specific machine – it [the site] was not user friendly to get around” (respondent 216).

“if there is a list of manufacturers who make guards I would like to know” (respondent 371).

Guidance material on machine guarding

Received guidance material on machine guarding



% Yes, have received guidance material – In Detail

	(n=)	%
Total	(419)	48
Wood	(160)	53
Metal	(227)	44
Wood and metal	(19)#	53
Aware of campaign	(321)	58
Not aware of campaign	(98)	16
Received inspector visit	(172)	66

Significantly more
 Significantly less.

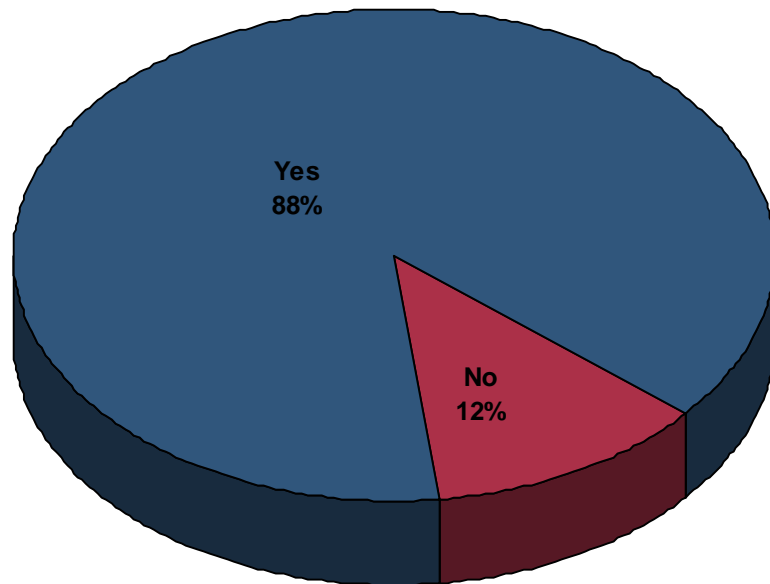
Indicative results given small base size

Base: All employers/managers in stage 2 (n=419)

Q. Did you receive any guidance material on machine guarding from your workplace authority this year?

Ease of putting guidance material into practice

Easy to put information into practice



% Yes, easy to put information into practice – In Detail

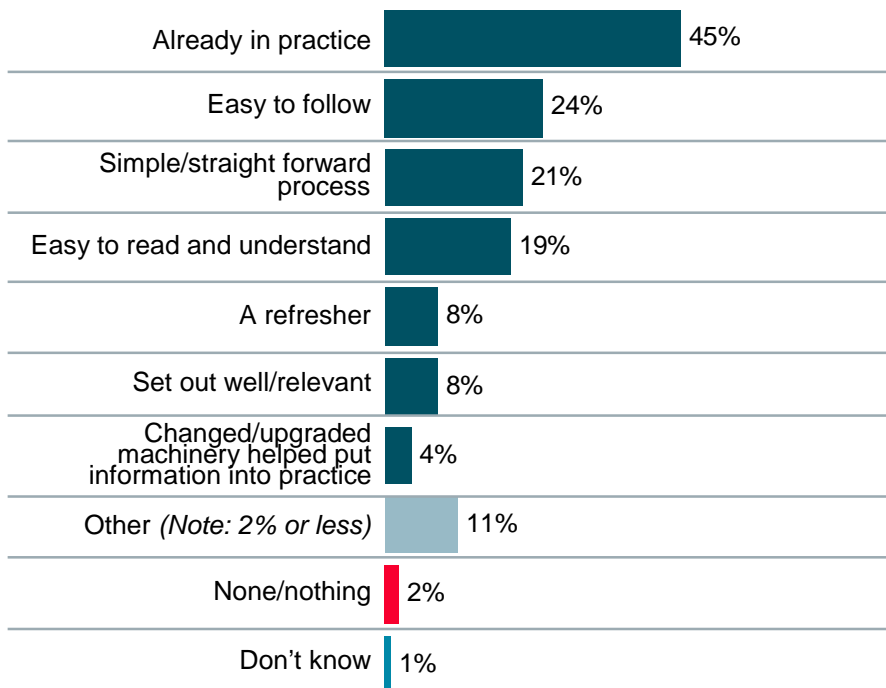
	(n=)	%
Total	(203)	88
Wood	(85)	92
Metal	(100)	84
Wood and metal	(10) [#]	90
Aware of campaign	(187)	89
Not aware of campaign	(16) [#]	81
Received inspector visit	(114)	89

[#] Indicative results given small base size

Base: Received guidance material (n=203)
 Q. Was the information you got easy to put into practice?

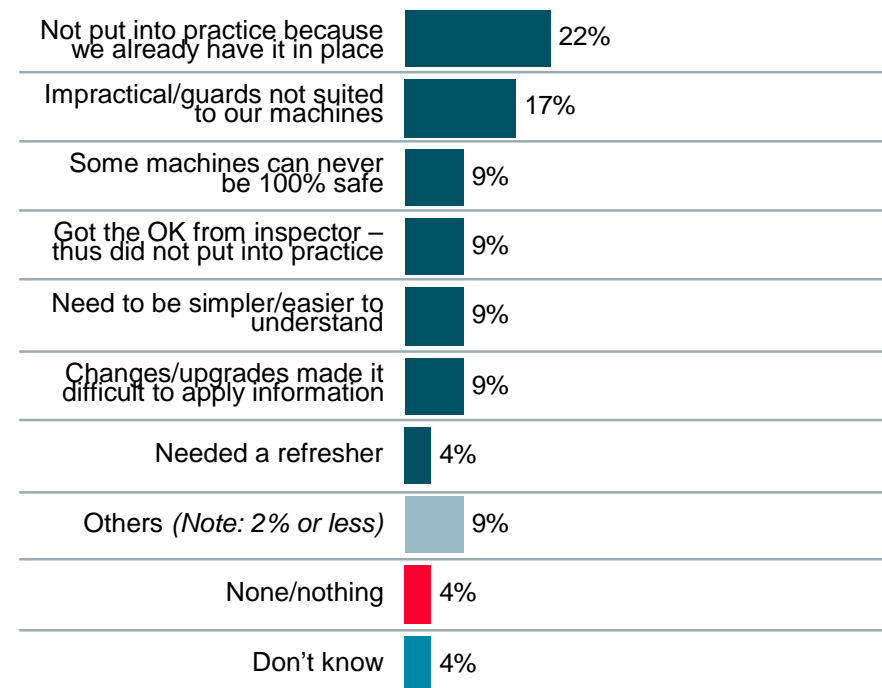
Reasons for ease of putting guidance material into practice

Reasons easy to put information into practice



Base: Consider information easy to practice (n=179)

Reasons not easy to put information into practice



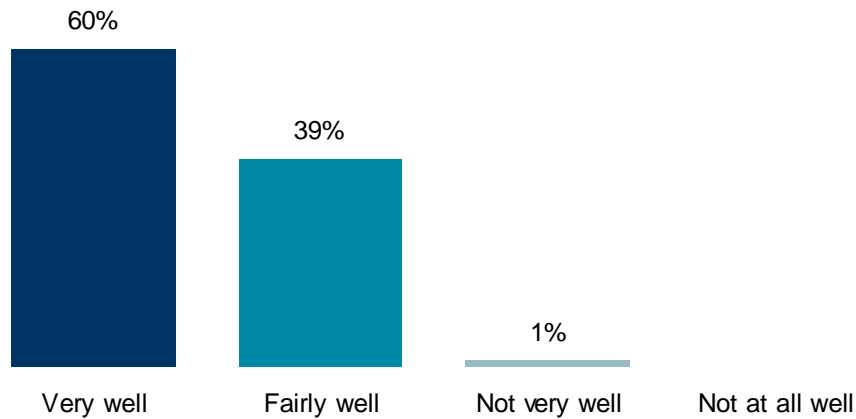
Base: Consider information not easy to practice (n=24) #

Indicative results given small base size

Base: Received guidance material (n=203)
 Q. Why do you say that?

Applicability of information on machine guarding

How well staff apply information



% Yes, very/fairly well – In Detail

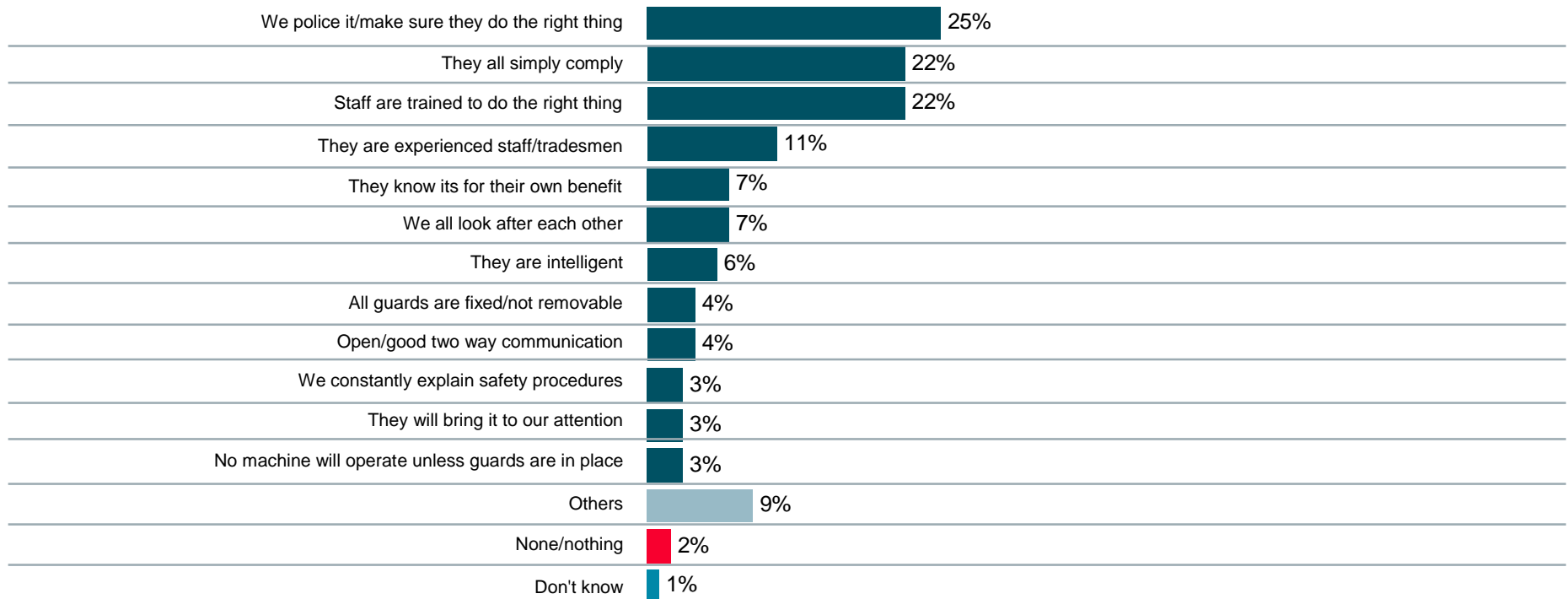
	(n=)	%
Total	(407)	99
Wood	(157)	99
Metal	(219)	99
Wood and metal	(19)#	100
Aware of campaign	(311)	99
Not aware of campaign	(96)	100
Received inspector visit	(165)	99

Indicative results given small base size

Base: All owner/managers in stage 2 (n=407) (excludes DKs)
 Q. How well do you think staff are able to apply the information they get on machine guarding?

Reasons staff are able to apply (or not apply) information

Reasons why staff are able to apply information



Base: Staff are able to apply information 'very/fairly well' (n=403)

Base: All owner/managers in stage 2 (n=419)

Q. Why do you say that?

Barriers to effective management of risks



Barriers to effective management of risks – Summary

Over half the employees indicated that the dangerous machines they use are also the most commonly used machines in their workplace. Dangerous machines tend to be used slightly more in the metal industry than the wood industry.

The two top reasons that workers provided for guards not being fitted on machines were:

- that they see it as “management responsibility” (41%)
- “only trained operators use the machines without a guard” (16%).

Similarly, owners/managers reported that:

- “trained operators use machines without guards” (23%)
- “the worker’s responsibility to ensure guards are fitted” (16%).

The disparity between worker and manager views on the responsibility to ensure guards are fitted is notable.

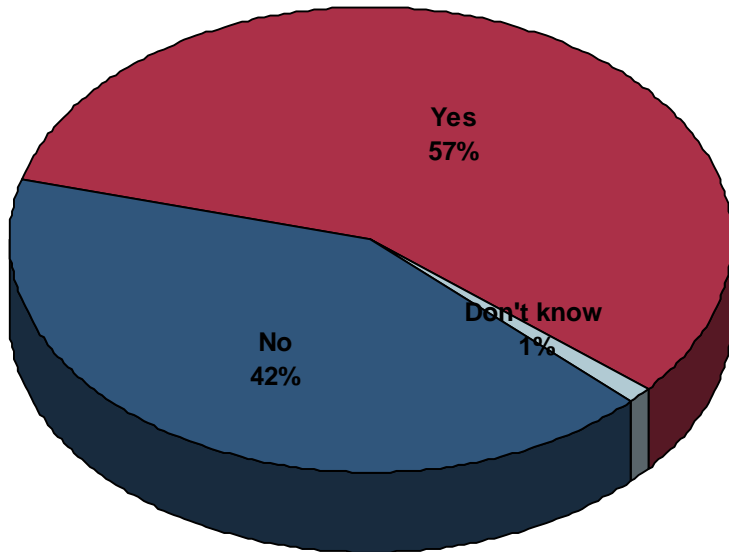
Managers and workers gave similar reasons why guards may be removed:

- materials won’t fit if the guard is applied
- it’s hard to get the material through
- slows down production
- saw dust build up getting caught in the machine
- blocks the operator’s view of the machine
- to clear jams caused by guards
- guards getting in the way of material.

While only 19 workers provided a response to this question, their answers indicate that material not fitting and dust building up are the main reasons why guards may be removed. **The reasons for removing guards are a cause for concern. These reasons suggest that the design of guards needs investigation.**

Most managers and workers report that the guard covers the dangerous part of the machine and it is in place when being used most of the time/always. Owners/managers mentioned that the guards in place would protect the operators from injury as they cover all dangerous parts of the machine and are in place when the machine is being used. However, it is notable that 20% of workers and 25% of managers indicated that most of the time or always it would be possible to injure yourself operating the machine even with a guard.

Dangerous machines commonly used: Worker



	n=	% Yes	% No	% DK
Total	(143)	57	42	1
Manufacturing Area				
Wood	(66)	53	47	-
Metal	(68)	60	38	1
Wood & Metal	(6*)	50	50	-

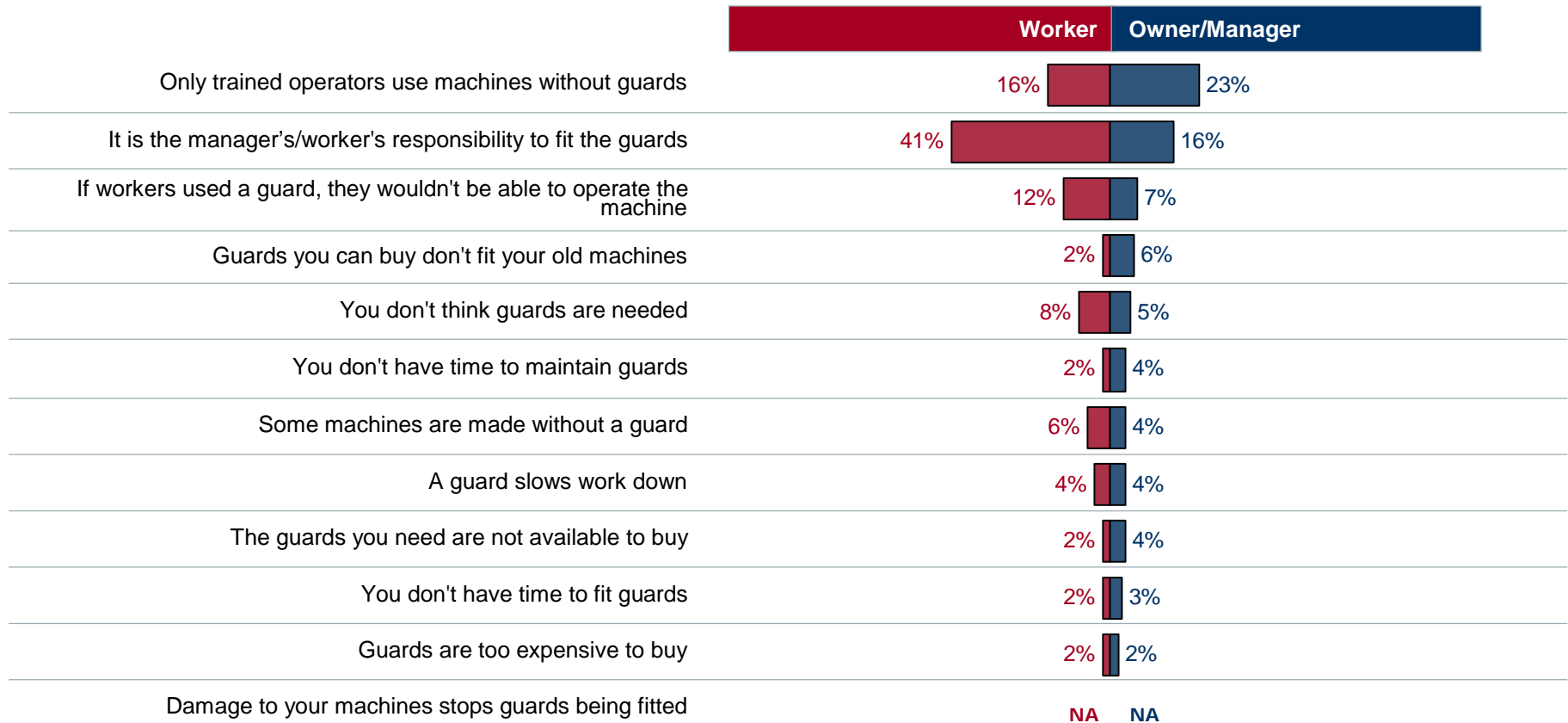
Base: All workers (n=143)

Q20. Is the dangerous machine above also the most commonly used machine in this workplace?

* Indicative results given small base size

Reasons for not using/not fitting guards: Owner/Manager vs. Worker

% Most of the time/Always



Base: All owners/managers in stage 1 (excludes NAs/DKs)
 Q13. Why might guards not be used or fitted to the machines?

Base: All workers (excludes NAs/DKs)
 Q13. Why might guards not be used or fitted to the machines?

Reasons why guards not used (1) – by type of machine

§ Seeing that there is no need for guards is the primary excuse given for not using/installing guards on selected machines.

	Machines							
	Power presses (26) [#] %	Metal cutting (4) [#] %	Metal milling (33) %	Metal grind/ sand/ polishing (5) [#] %	Wood milling (3) [#] %	Wood grinding/ sanding (9) [#] %	Conveyors (7) [#] %	Computer program- mable (5) [#] %
Guards are not needed	35	-	24	20	33	33	43	20
If workers used a guard, they wouldn't be able to operate the machine	19	-	21	20	67	11	43	20
Guards slow down production	4	25	3	-	-	-	-	20
Guards get in the way of the material	4	-	3	-	-	-	-	-
Some machines are made without a guard	8	25	9	-	-	22	-	20
Doesn't need a guard is manual/small/hand held/not perceived a hazard	19	-	6	-	-	11	29	20
Difficult to use machine with guard on it/not practical	8	-	18	20	-	-	-	-
Not fitted with a guard - various reasons	8	-	12	20	-	-	-	-
Only trained operators use machines without guards	-	50	9	20	-	-	-	-
Damage to your machines stops guards being fitted	-	-	3	-	-	-	-	-
You don't have time to fit guards	-	-	3	-	-	-	-	-
Can't fit a guard on it	-	-	6	-	-	22	-	-
Guard blocks the operator's view of the machine	-	-	-	20	-	-	-	-
Guards are too expensive to buy	-	-	-	-	-	11	-	-
Can't fit a guard on a forklift	-	-	-	-	-	-	-	-
The guards you need are not available to buy	-	-	-	-	-	-	-	-
Guard doesn't work the way it should	-	-	-	-	-	-	-	-
Other	12	50	12	20	-	11	14	20
Don't know	4	-	-	-	-	-	-	-

Note: Only includes machines where it is reported that guards are not used

[#] Indicative results given small base size

Base: Do not use guard on machine

Q. Could you please tell me why you don't use a guard on this machine?

Reasons why guards not used (2) – by type of machine

	Machines that lift/move (55) %	Punch and shear machines (7) [#] %	Lathes for metal (29) [#] %	Saws for metal (6) [#] %	Benders (27) [#] %	Press brakes (10) [#] %	Routers (18) [#] %	Edge benders (5) [#] %
Guards are not needed	51	14	24	50	26	20	56	60
If workers used a guard, they wouldn't be able to operate the machine	-	29	31	17	41	30	11	-
Guards slow down production	-	-	-	-	-	-	-	-
Guards get in the way of the material	-	14	-	-	4	10	6	-
Some machines are made without a guard	15	-	10	-	7	10	17	-
Doesn't need a guard is manual/small/hand held/not perceived a hazard	2	29	7	17	11	30	11	-
Difficult to use machine with guard on it/not practical	-	-	10	-	4	-	-	-
Not fitted with a guard - various reasons	2	14	10	-	4	-	-	-
Only trained operators use machines without guards	-	-	10	-	-	-	-	-
Damage to your machines stops guards being fitted	-	-	-	-	4	-	-	-
You don't have time to fit guards	-	-	3	-	-	-	-	-
Can't fit a guard on it	5	-	-	-	-	10	-	-
Guard blocks the operator's view of the machine	-	-	-	-	-	-	-	-
Guards are too expensive to buy	-	-	-	-	-	-	-	-
Can't fit a guard on a forklift	49	-	-	-	11	-	-	-
The guards you need are not available to buy	-	-	-	17	-	-	-	-
Guard doesn't work the way it should	-	-	-	-	-	-	6	-
Other	4	29	3	-	-	20	-	20
Don't know	-	-	-	-	-	-	-	20

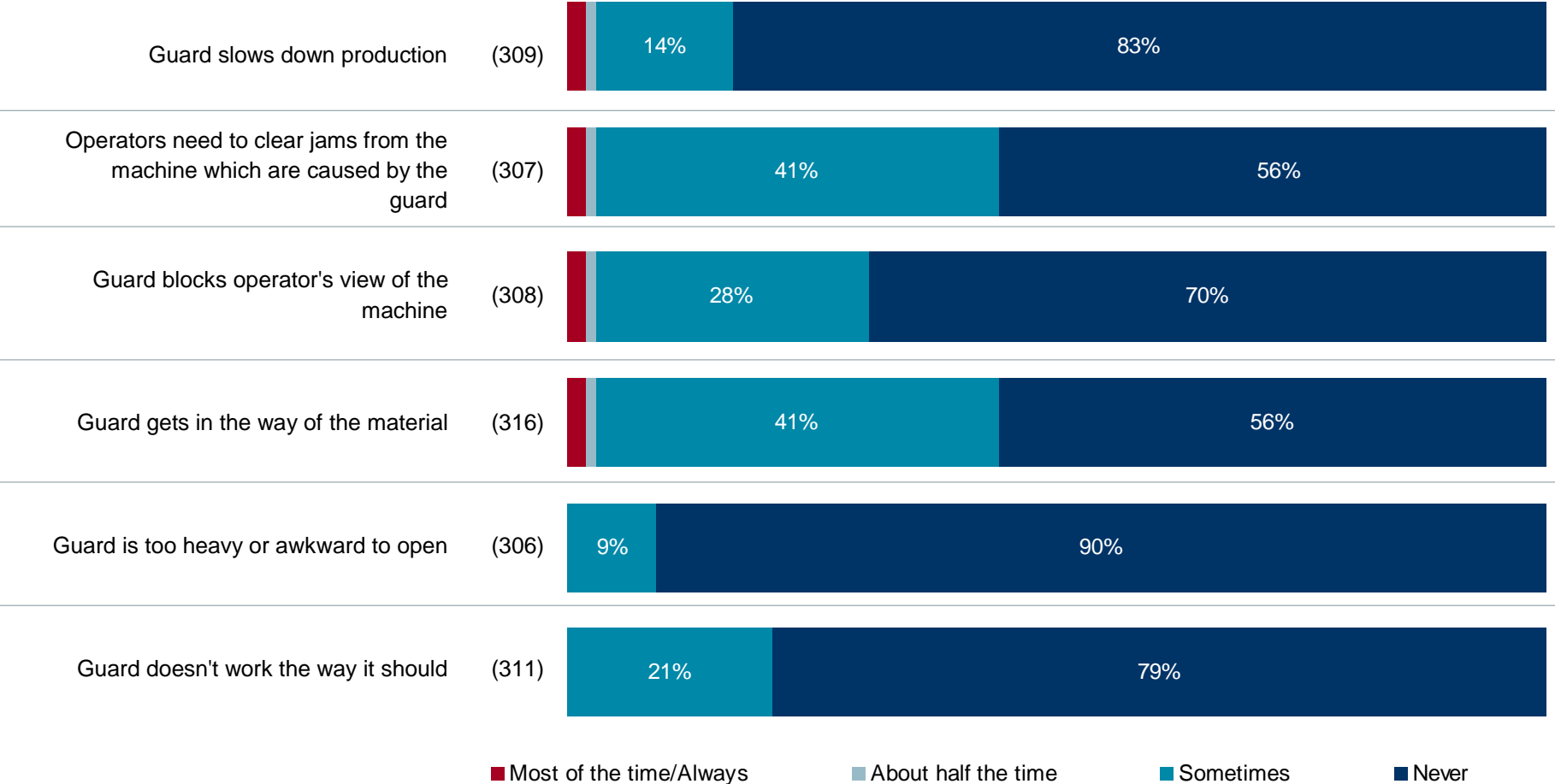
Note: Only includes machines where it is reported that guards are not used

[#] Indicative results given small base size

Base: Do not use guard on machine

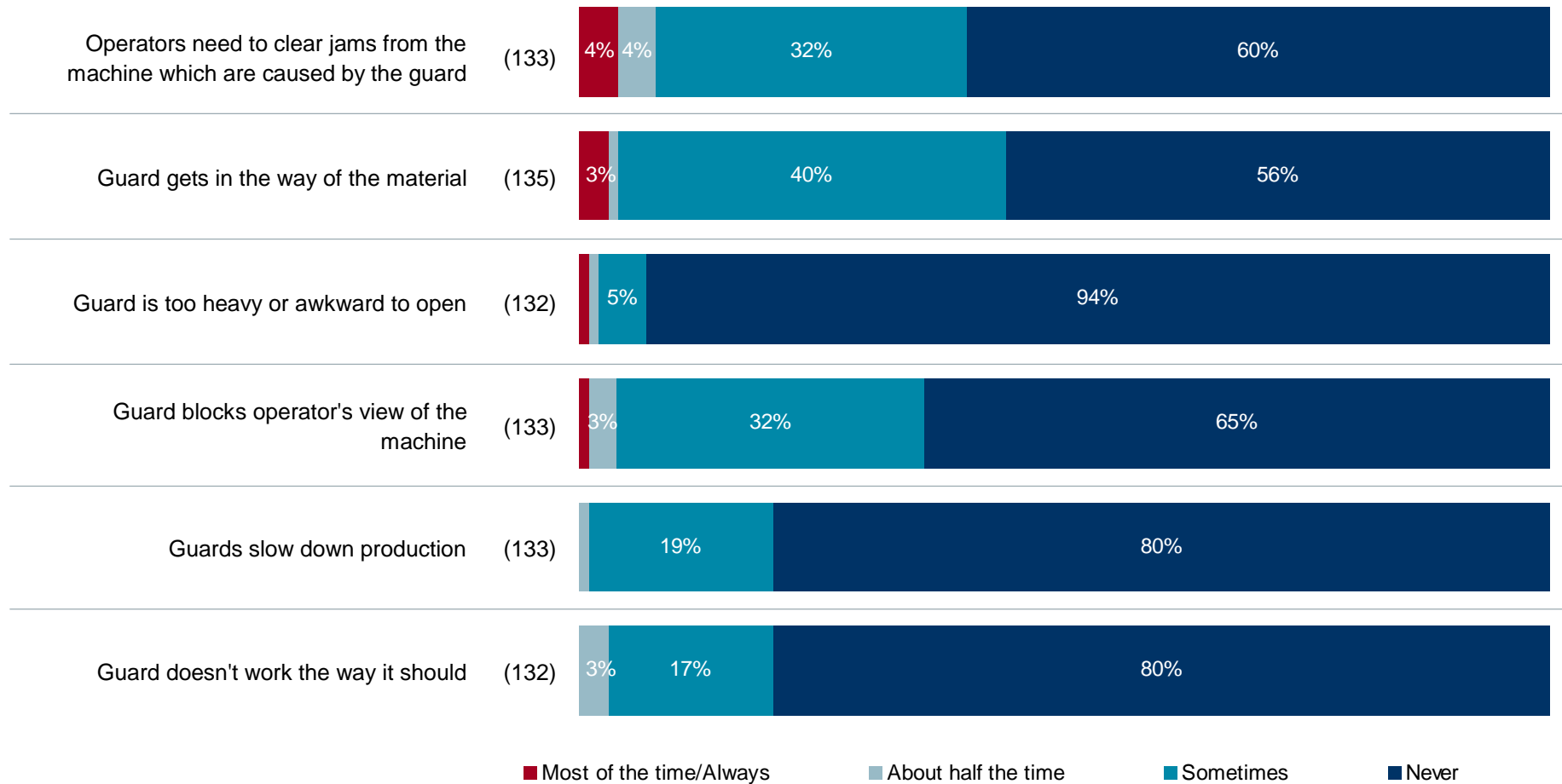
Q. Could you please tell me why you don't use a guard on this machine?

Reasons for removing/moving guards: Owner/Manager



Base: All owners/managers in stage 1 (excludes NAs/DKs)
 Q15. If the supervisor or operator removes or moves guards to operate the machines, please indicate why.

Reasons for removing/moving guards: Worker



Base: All workers (excludes NAs/DKs)

Q15. If the supervisor or operator removes or moves guards to operate the machines, please indicate why.

Reasons for removing/moving guards: Workers and owners/managers

Workers

<i>% Total mentions</i>	Total (19)*
Material won't fit if guard is applied	26
Clear dust build up	11
Need to change cut off wheels	5
No reason	5
Don't know	32

Owners/Managers

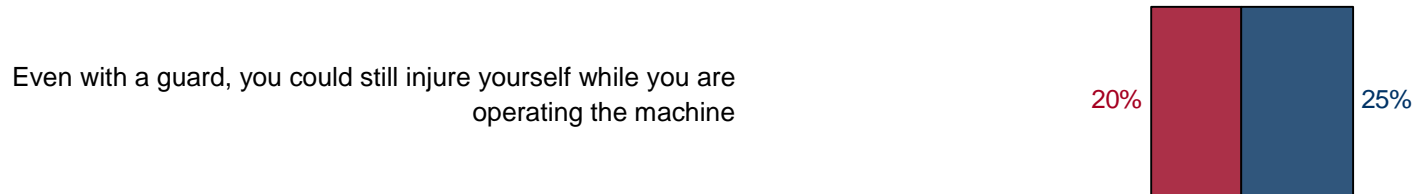
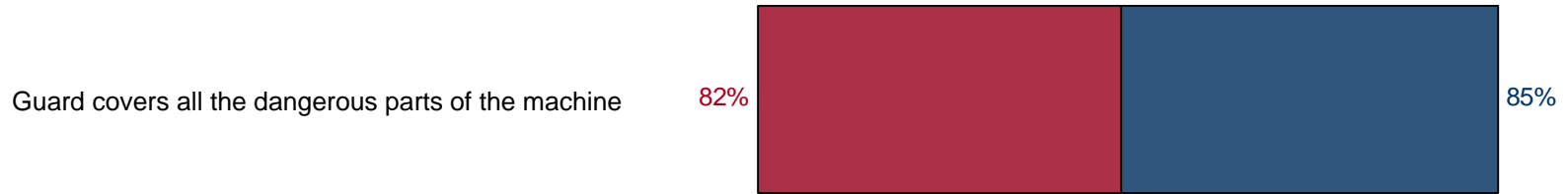
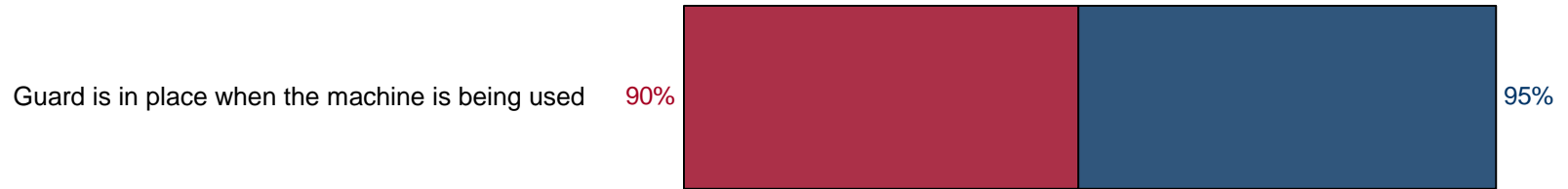
<i>% Total mentions</i>	Total (24)*
Hard to get materials through	25
Saw dust can get caught in machine	13
Maintenance needs to be done	8
Table saw for close cutting	4
No reason	8
Don't know	4

Base: Removed guards half the time or more often (n=19) *
 Q16. Please give examples of the machine and why you have to move or remove the guard

* Indicative results given small base size

Effectiveness of guards for dangerous machines: Owner/Manager vs. Worker

% Most of the time/Always



Base: All owners/managers in stage 1 (excludes NAs/DKs)
 Q20. Does the guard on the most dangerous machine protect the operator from injury?

Base: All workers (excludes NAs/DKs)
 Q19. Does the guard on this dangerous machine protect you from injury?

Managers' and workers' views on OHS issues in manufacturing



Managers' and workers' views on OHS issues - Summary

On average these workers are exposed to **loud noise** in the workplace for **4.1 hours a day** (mean). When compared with the National Hazard Exposure Worker Surveillance (NHEWS) Survey¹ conducted by the Office of the ASCC in 2008 (the same questions were asked), workers in wood and metal manufacturing are exposed to about the same loud noise as the general Australian working population (mean of 4.67 hours a day) but less loud noise than workers in the manufacturing industry overall (mean of 5.9 hours a day).

The two controls most used are ear plugs and ear muffs. It is notable that managers are more likely than workers to report greater use of other controls, such as providing training and rotating jobs. Comparisons between managers and workers are based on data from the pre interview survey.

56% of managers and workers responded that most of the time or always the machines used in the workplace are dangerous. **Dangerous machines** tend to be used slightly more in the metal industry than the wood industry. The machines considered to be most dangerous include **saws, spindle moulders and panel saws. Press/brakes and guillotines** in the metal manufacturing industry were also commonly reported as dangerous. These were the machines identified by inspectors as having recurring guarding issues.

Managers more often report that there are guards on the machines compared with workers. Owner/managers and workers indicated that most guard types are effective or very effective and had similar views on the effectiveness of different types of guards. The only notable difference was that presence sensing devices were rated as more effective by managers than workers. Managers are slightly more likely than workers to believe that a guard is mostly or always going to protect the worker from injury.

Owner/managers and workers have a broadly similar view as to whether there is a company policy on the use of guards. It is notable, however, that 15% of workers did not know if there was a company policy. The three main policies were: guards are there so use them/must be used at all times; leave guards in place; and don't operate machines without guards.

¹ NHEWS Survey can be accessed at http://www.safeworkaustralia.gov.au/NR/rdonlyres/A86582B6-F3B9-42F8-AE48-EB46CA92AB46/0/NationalHazardExposureWorkerSurveillanceREVISED_March09.pdf

Managers' and workers' views on OHS issues – Summary (cont.)

Managers and workers agreed that the main controls used other than guards were: workers are trained to use the machines and guards; safety equipment (such as mesh gloves, ear muffs, goggles) is used; emergency stop controls are all within easy reach; and workers tell the managers about machine safety problems.

Nearly half the owner/managers stated they have designed or built a guard for machines on their site. Owner/managers in the metal industry were more likely than those in the wood industry to have designed/built a guard. Although most workers had not designed or built a guard for the machinery at their site, around a quarter have done so. Those workers in the metal manufacturing industry were more likely to have built or designed a guard.

Attitudes of managers and workers to OHS are generally similar. On one item, however, the views differ substantially:

- 92% of managers consider health and safety to be more important than getting the job done
- 57% of workers state that management considers health and safety to be more important than getting the job done.

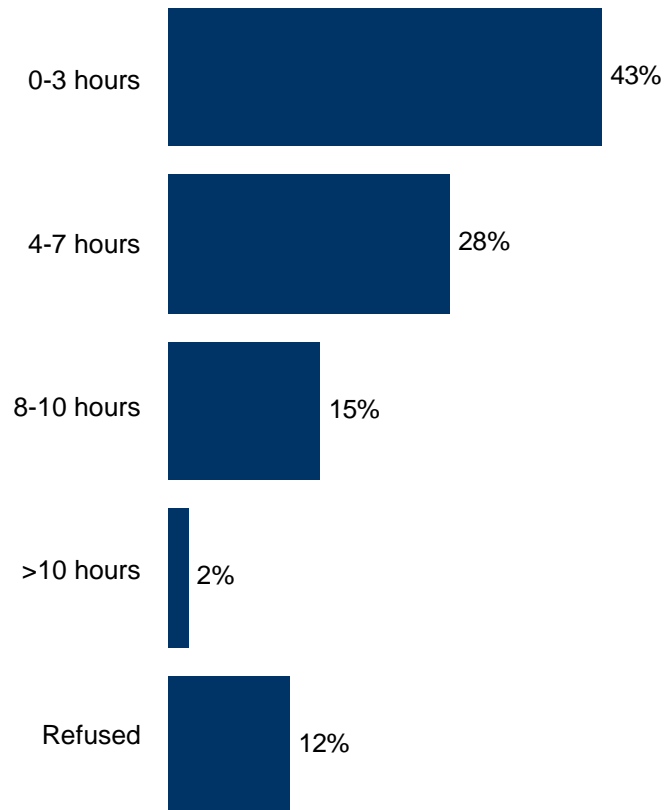
The views of three respondents are particularly interesting, highlighting that it is not only attitudinal issues but design and operating procedures or workplace culture which can have a big impact on safety:

The majority of accidents I've seen or heard of are caused by the worker disobeying a safety ruling. Employers are fined but I'm yet to hear of an employee being fined for being stupid with safety. Until the onus is placed back on the employee for their own safety, there will be accidents. Some machines e.g. press, centre lathe, milling machines that are being used for jobbieg work can only be operated without a guard. In these cases operators must be fully trained to do the role without endangering themselves e.g. safety glasses, mandatory, no fingers near working parts (employer respondent 25).

[A] culture of 'slackarseness' is the biggest threat to OH&S here. The employees are the worst offenders; management have good intentions but lack the skills & knowledge. Safety co-ordinator (me) has the skills & knowledge but lack authority. Attitude is the biggest cause of accidents here (employee respondent 2).

From what I've seen in the industry the best guard is a worker with the right mental attitude - one that respects machinery and uses safe practice in all tasks. The worker with wrong attitude will eventually crush a finger or hand, even with a guard fitted from complacency. We once employed someone who had done so previously at another business on a press 'fully guarded'. Moving beyond guards there's probably not a week that goes by without me saying something to our worker of 27 years, sometimes about minor matters - like safe lifting practices or getting him to tell the driver of a delivery truck to move it so our worker can get forklift access in a more safe uncramped area of the yard (employer respondent 72).

Length of time working in loud noise: Worker



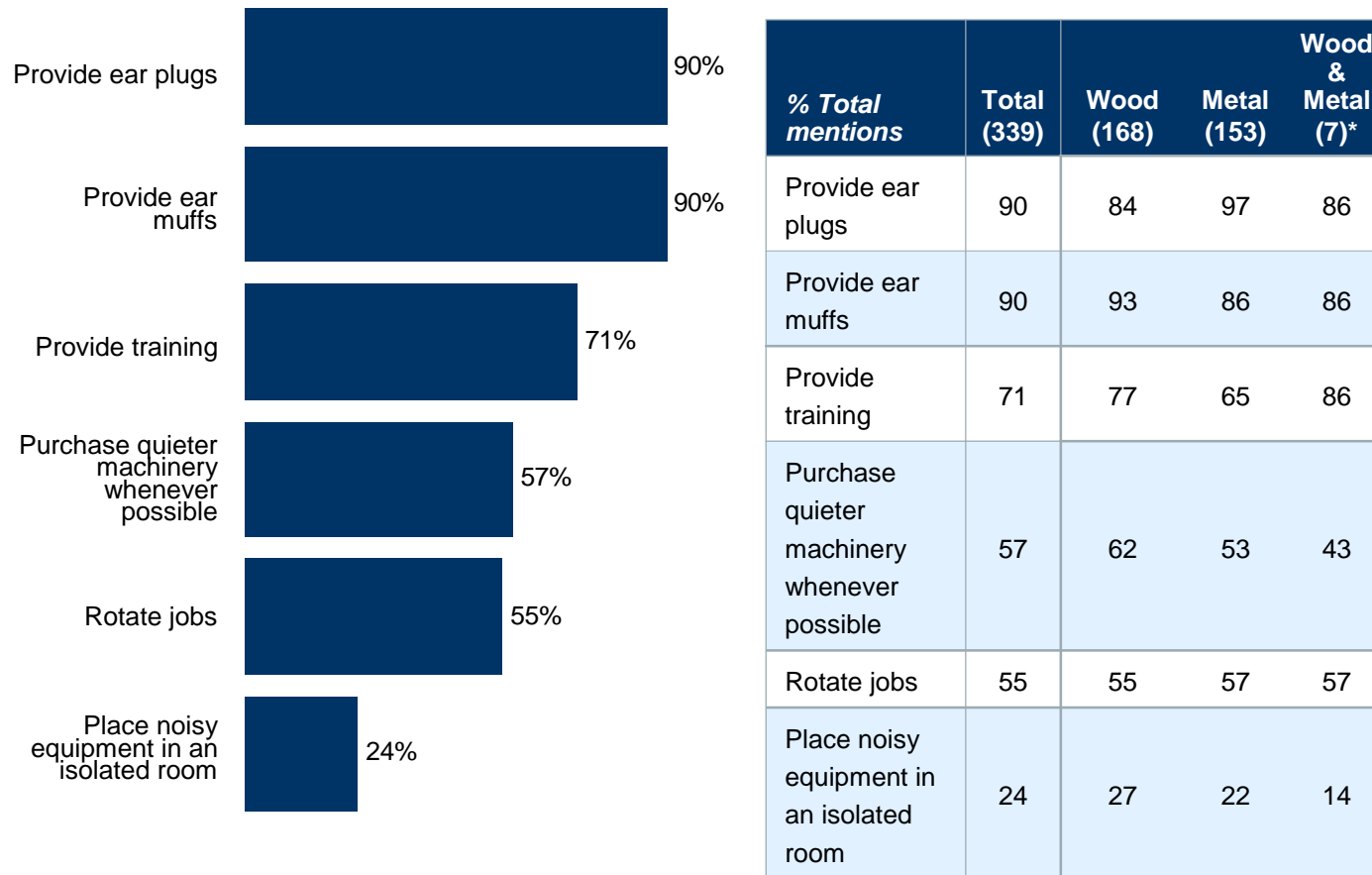
	n=	Mean (hours)
Total	(143)	4.1
Manufacturing Area		
Wood	(66)	4.1
Metal	(68)	4.2
Wood & Metal	(6*)	3.8

Base: All workers (n=143)

Q24. On a typical day at work last week, how long did you work in loud noise?

* Indicative results given small base size

Controls for loud noise: Owner/Manager

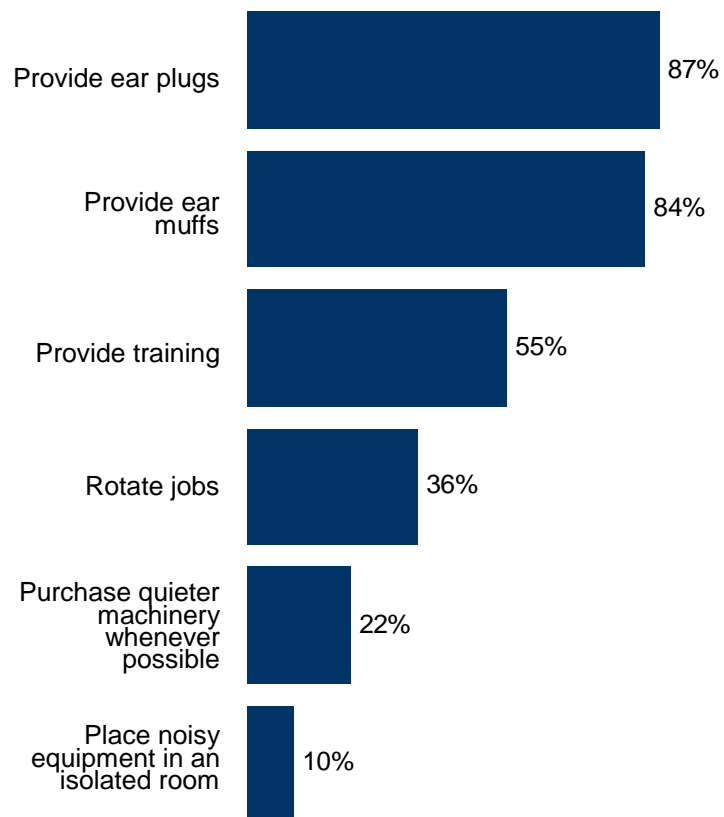


Base: All owners/managers in stage 1 (n=339)

Q24. Do you do any of the following to prevent workers' hearing being damaged by loud noise?

* Indicative results given small base size

Controls for loud noise: Worker



<i>% Total mentions</i>	Total (143)	Wood (66)	Metal (68)	Wood & Metal (6)*
Provide ear plugs	87	76	96	100
Provide ear muffs	84	86	79	100
Provide training	55	56	53	67
Rotate jobs	36	36	35	33
Purchase quieter machinery whenever possible	22	24	18	67
Place noisy equipment in an isolated room	10	9	9	33

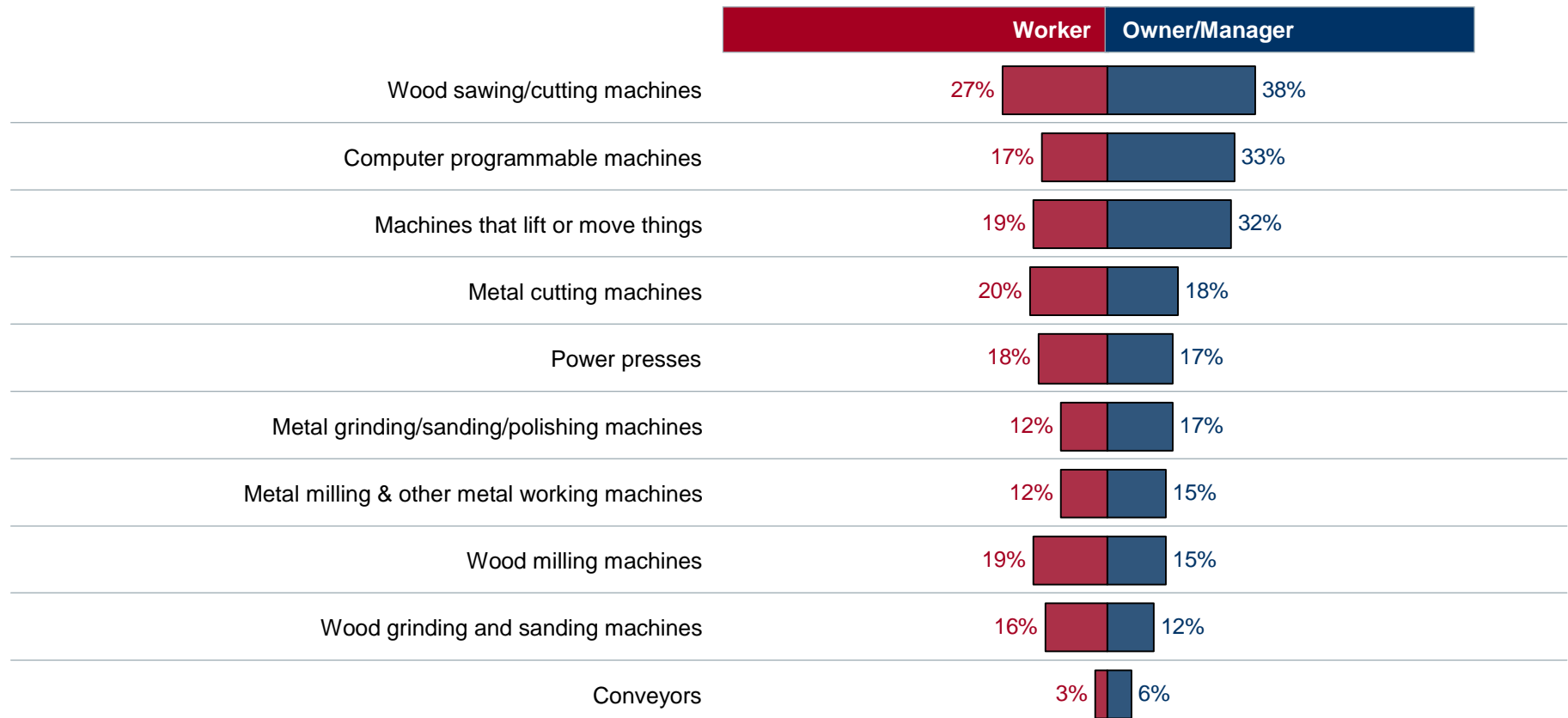
Base: All workers (n=143)

Q25. Does your employer do any of the following to prevent hearing being damaged by loud noise?

* Indicative results given small base size

Machines regularly used: Owner/Manager vs. Worker

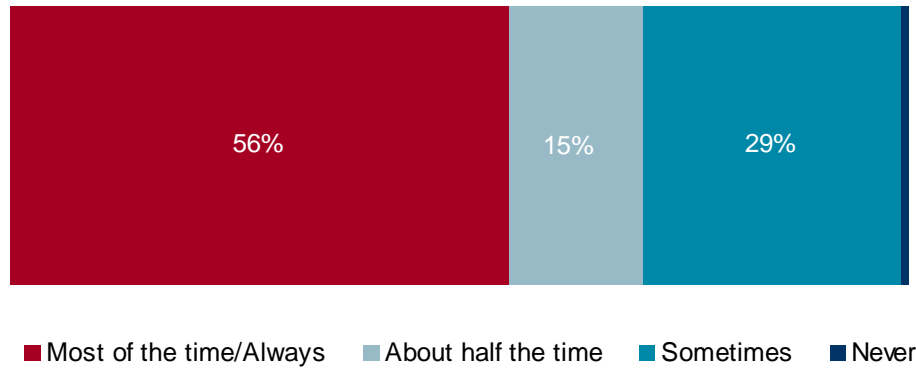
% Most of the time/Always



Base: All owners/managers in stage 1 (n=339)
 Q9. Thinking about your machine operators last week...did they work with...?

Base: All workers (n=143)
 Q9. Thinking about your job last week...did you regularly work with...?

Usage frequency of dangerous machines: Owner/Manager

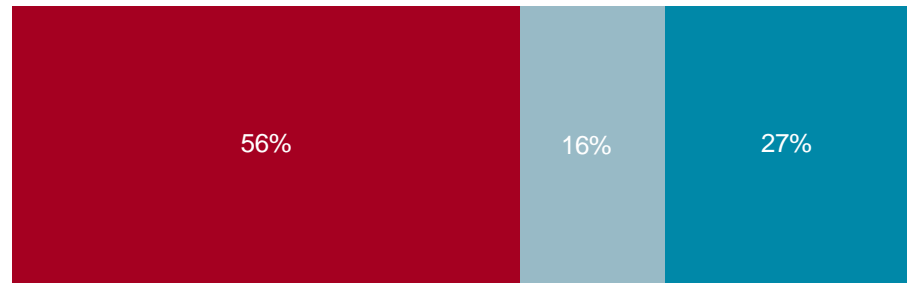


	n=	% Most of the time/ Always
Total	(322)	53
Manufacturing Area		
Wood	(162)	56
Metal	(143)	55
Wood & Metal	(7*)	57
Workplace Location		
Small/large country town	(80)	50
Middle/large city	(108)	64
Metropolitan area	(132)	52

Base: All owners/managers in stage 1 (n=322) (excludes NAs/DKs)
 Q21. How often is the above dangerous machine used in the workplace?

* Indicative results given small base size

Usage frequency of dangerous machines: Worker



■ Most of the time/Always ■ About half the time ■ Sometimes ■ Never

	n=	% Most of the time/ Always
Total	(142)	56
Manufacturing Area		
Wood	(66)	48
Metal	(67)	63
Wood & Metal	(6*)	50

Base: All workers (n=142) (excludes NAs/DKs)

Q21. How often is the above dangerous machine used in the workplace?

* Indicative results given small base size

Dangerous machines in the workplace: Owner/Manager

<i>% Total mentions</i>	Total (339)	Wood (168)	Metal (153)	Wood and metal (7)*
Panel saw	14	26	-	29
Spindle moulders	11	23	-	-
Saws	9	13	4	-
Angle grinder/grinders	7	1	14	-
Table saw	6	13	-	14
Press	6	-	13	14
Guillotine	5	-	10	-
Forklift	4	1	7	14
Saw	4	4	3	14
Lathe	3	-	7	-
All machines	3	2	5	-
Computerised cutters/rover	2	2	2	-
Bandsaw	2	1	3	-
Rip saw	1	3	-	-
Dropsaw	1	1	2	-
Folder various	1	-	2	-
Bench saw	1	-	1	14
Don't know	2	2	3	-

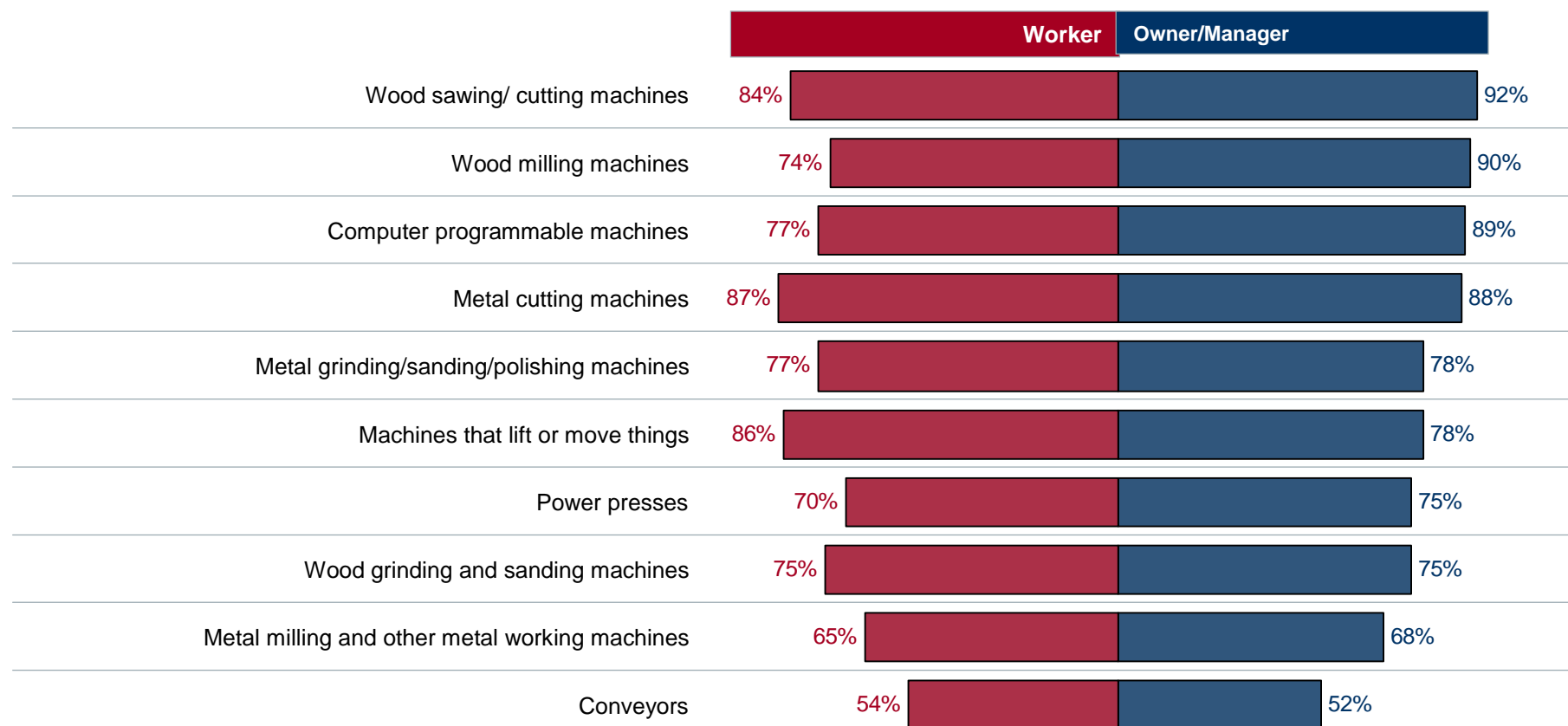
Base: All owners/managers in stage 1 (n=339)

Q19. What is the most dangerous machine in your workplace?

* Indicative results given small base size

Guards on machines: Owner/Manager vs. Worker

% Most of the time/Always

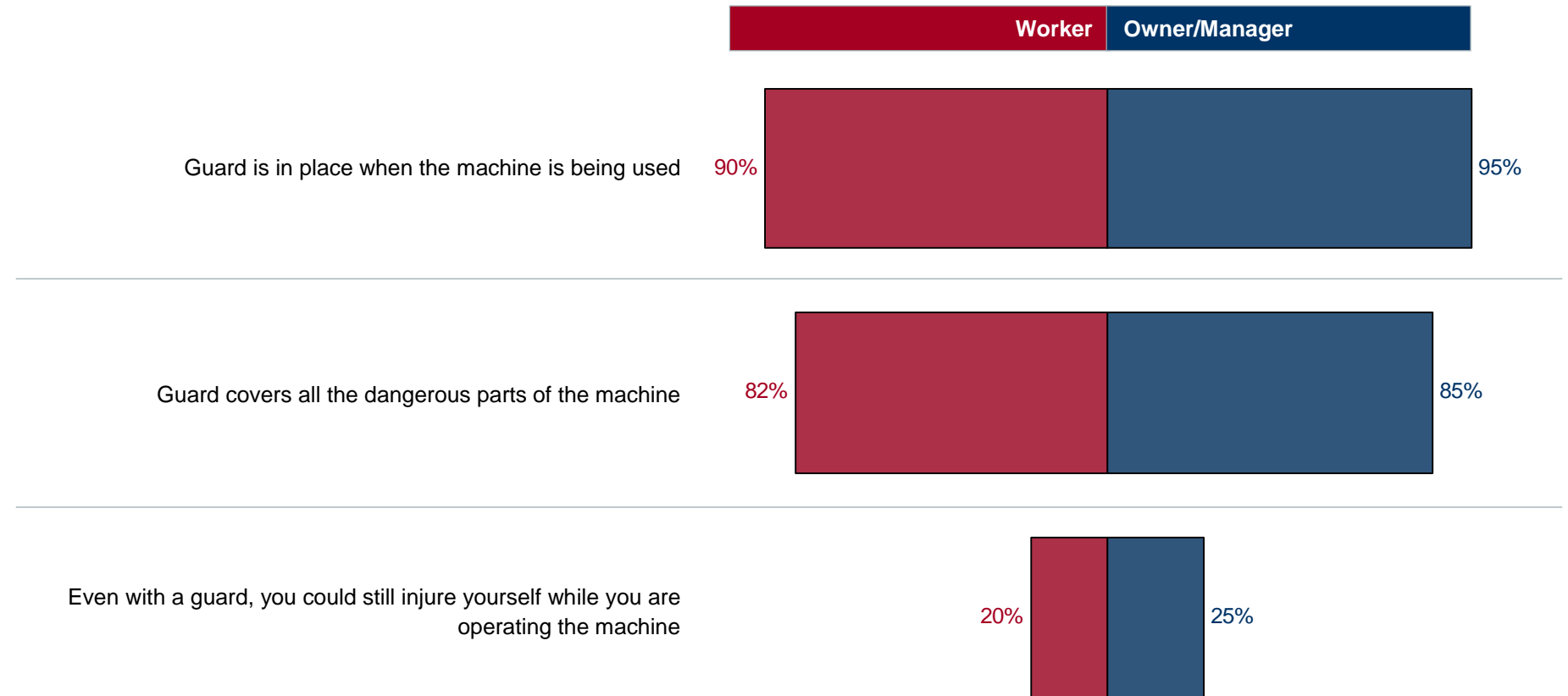


Note: Only applicable if machine is used at the workplace
 Base: Owners/managers in stage 1 with respective machines used at workplace
 Q10. Are there guards on the following machines when they are being used?

Note: Only applicable if machine is used at the workplace
 Base: Workers with respective machines used at workplace
 Q10. Are there guards on the following machines when they are being used?

Effectiveness of guards for dangerous machines: Workers vs. Owner/Manager

% Most of the time/Always

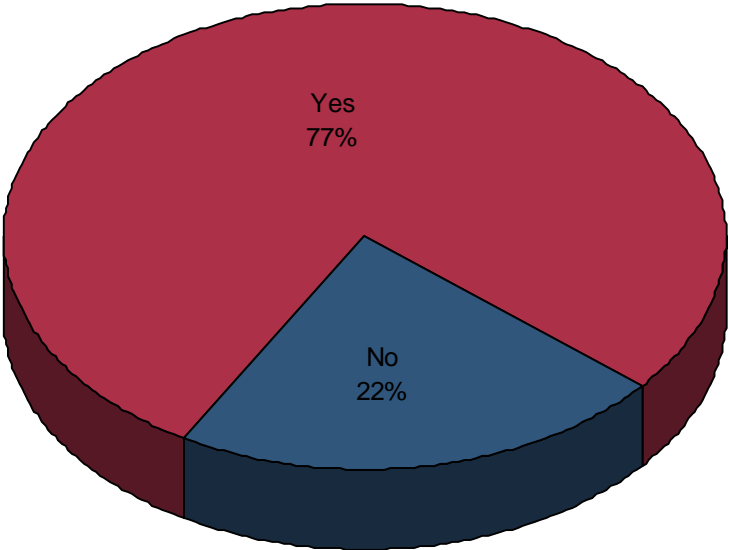


Base: All owners/managers in stage 1 (excludes NAs/DKs)
 Q20. Does the guard on the most dangerous machine protect the operator from injury?

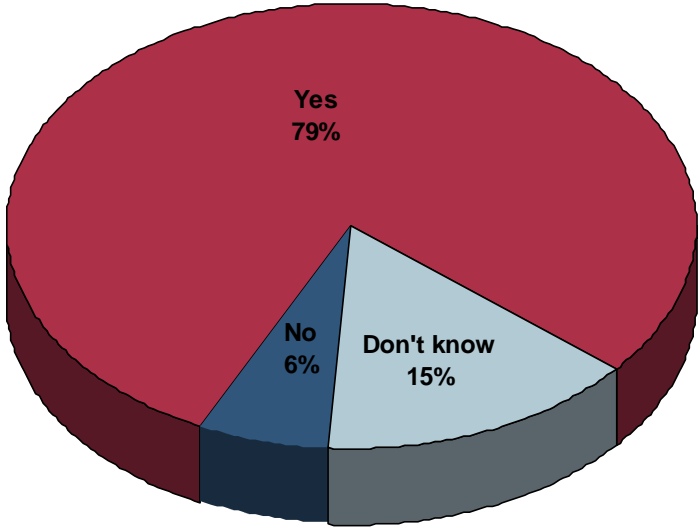
Base: All workers (excludes NAs/DKs)
 Q19. Does the guard on this dangerous machine protect you from injury?

Company policy for guards

Owner/Manager



Worker

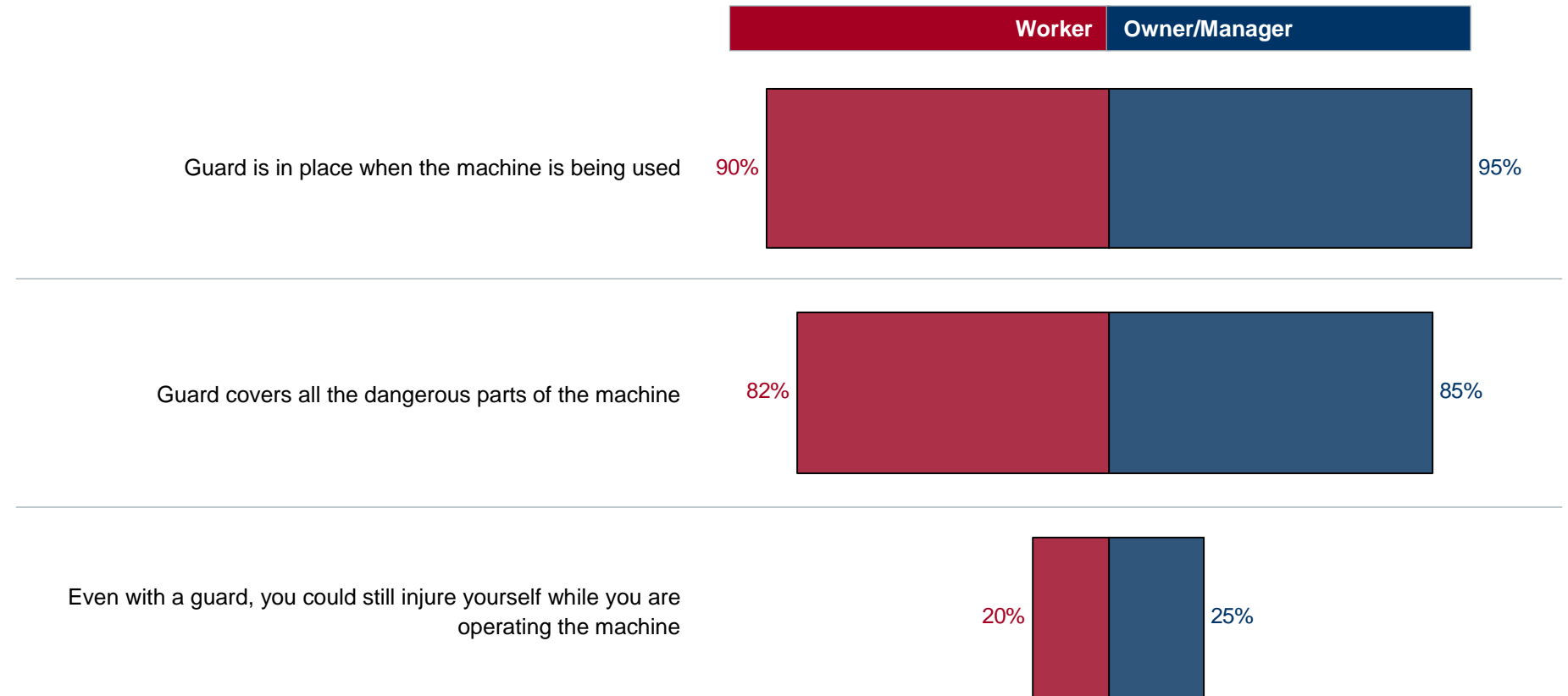


Base: All owners/managers in stage 1 (n=339)
Q17. Is there a company policy about using guards?

Base All workers (n=)
Qxx Is there a company policy about using guards

Effectiveness of guards for dangerous machines: Worker vs. Owner/Manager

% Most of the time/Always

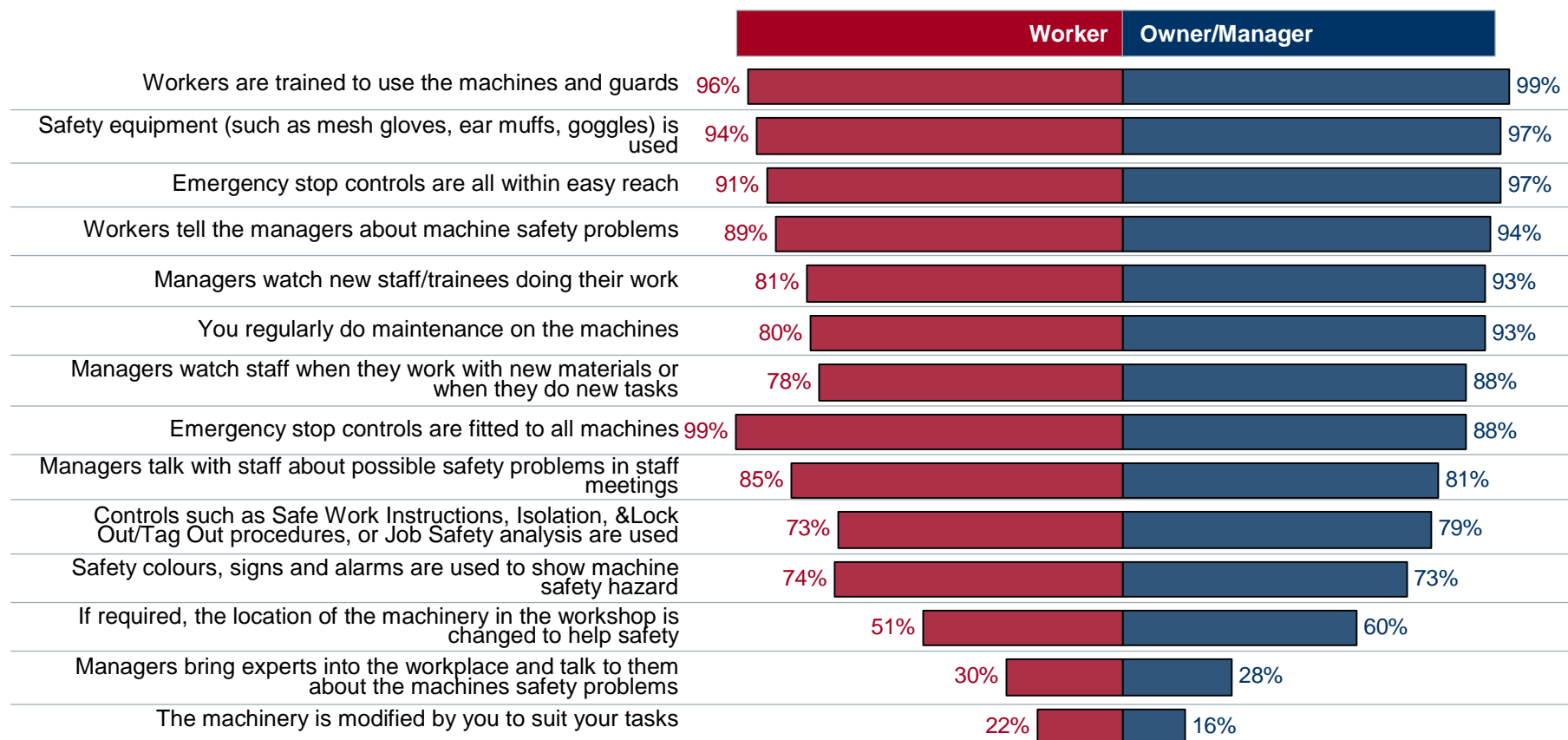


Base: All owners/managers in stage 1 (excludes NAs/DKs)
 Q20. Does the guard on the most dangerous machine protect the operator from injury?

Base: All workers (excludes NAs/DKs)
 Q19. Does the guard on this dangerous machine protect you from injury?

Other safety precautions: Worker vs. Owner/Manager

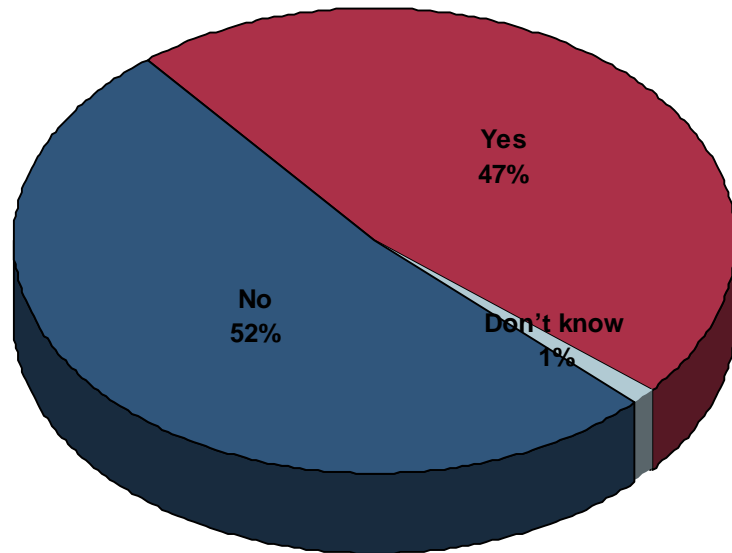
% Most of the time/Always



Base: All owners/managers in stage 1 (excludes NAs/DKs)
 Q12. As well as guarding on machines, do you use or do other things to ensure safety?

Base: All workers (excludes NAs/DKs)
 Q12. As well as guarding on machines, do you use or do other things to ensure safety?

Building/designing guards onsite: Owner/Manager

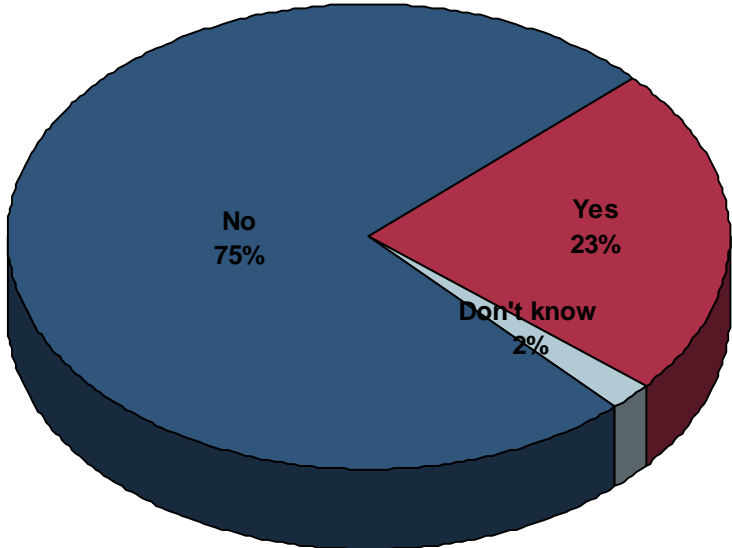


	n=	% Yes
Total	(339)	47
Manufacturing Area		
Wood	(168)	39
Metal	(153)	59
Wood & Metal	(7*)	14
Workplace Location		
Small/large country town	(86)	38
Middle/large city	(112)	46
Metropolitan area	(139)	54

Base: All owners/managers in stage 1 (n=339)
 Q22. Have you ever designed or built a guard for a machine at your site?

* Indicative results given small base size

Building/designing guards onsite: Worker



	n=	% Yes	% No	% DK
Total	(143)	23	75	2
Manufacturing Area				
Wood	(66)	18	80	2
Metal	(68)	25	72	3
Wood & Metal	(6*)	67	33	-

Base: All workers (n=143)
 Q22. Have you ever designed or built a guard for a machine at your site?

* Indicative results given small base size

Attitudes to OHS - Managers and workers (1)

<i>% Always/most of the time</i>	Managers	Workers
[You/management] act quickly to correct health and safety problems	99	95
[You/ your manager] always bring health and safety information to attention	93	84
[You/management] consider health and safety to be more important than getting the work done	92	57
There is good communication here about health safety issues which affect [workers/employees – you]	95	89
[You/management] know what to do when a health and safety problem is raised	97	96
[You are/You] strongly encouraged employees to report unsafe conditions	97	95
You believe health and safety issues are given a high priority here	87	93
You can influence health and safety performance here	92	77
Some health and safety rules and procedures do not need to be followed to get the job done safely	12	10
Some health and safety rules are not really practical	8	9

Base: All owners/managers in stage 1 (n=339) All workers (n=143)
 [text in brackets shows alternative forms used in manager and workers surveys]

Attitudes to OHS - Managers and workers (2)

<i>% Always/most of the time</i>	Managers	Workers
It is important that there is a continuing emphasis on health and safety	96	95
You are involved in informing [employees/workers – management] of important health and safety issues	92	99
You [involve employees/workers in / are involved with] health and safety issues at work	91	72
Health and safety is the number one priority in your mind	88	85
Employees/workers are always given enough time to get the job done safely	95	90
In this workplace, the chances of getting injured are quite high	6	10
Operational targets conflict with health and safety measures	5	7
You're sure it is only a matter of time before there is an injury in this workplace	2	3

Base: All owners/managers in stage 1 (n=339) All workers (n=143)

[text in brackets shows alternative forms used in manager and workers surveys]

Pre & Post Campaign Survey Sample Details



Manufacturing workplaces - Summary

Pre and post intervention sample

In the pre intervention phase, a 27% response rate was achieved for the mail-back surveys among employers (compared with 13% response rate for employees). We could not determine true response rates for the CATI component of the pre intervention survey as a refusal could mean that respondents completed a paper version of the survey. In the post campaign stage, the overall response rate was 32%.

The sample profile for managers was similar across stages 1 and 2. It is notable that those included in both stages appear to be broadly comparable to the overall sample. These findings suggest that the group of 63 managers whose responses were compared in the pre and post campaign surveys are broadly comparable to the overall group of managers surveyed.

The workplace

Owners and managers reported that the main occupations of workers in their workplace included cabinet makers, joiners and sheet metal workers. Occupations of those surveyed from the manufacturing industry varied, but common occupations included cabinet making, sheet metal workers, carpenters and boiler makers. The majority of workers have a Year 10 or equivalent certificate and/or a trade certificate or qualification.

The main tasks undertaken by workers included metal fabrication, kitchens and cabinet making, installing kitchens/kitchen cabinets, metal/steel fabrication, supervising the workshop and machine operating.

Most workplaces have up to 20 machines. Metal manufacturing workplaces tend to have more machines in the workplace (up to 100 machines) than the wood industry.

The majority of businesses employ up to 10 workers. The majority of workers are permanent and full time. 57% of respondents supervise other staff. 99% of workers work fixed hours and between 30 and 45 hours a week. Most respondents live in a metropolitan area (more than 500,000 people), followed by a middle sized city (up to 100,000 people). Both workers and managers are mainly male and aged over 40 years.

Managers see their main responsibilities as ensuring systems are in place to manage risk, setting policy about use of guards, ensuring maintenance is done, approving purchase and installation of guards and making recommendations on these matters.

There was a relatively even distribution of wood and metal businesses in the sample but few wood/metal businesses.

Response Rate – pre and post intervention for employers and workers

PAPER SURVEYS		Pre Intervention	Post Intervention
Number of phone numbers provided		2026	N.A
Number of employers agreeing to participate (after phoning)		625	N.A
Number of paper surveys sent	Employer	625	N.A
	Employee	1012	N.A.
Sub-Total Surveys Sent		1637	N.A.
Number of surveys returned (including <i>response rates</i>) (Note: Most businesses were sent 3-4 employees surveys)	Employer	170 (27)	N.A.
	Employee	134 (13)	N.A
Sub-Total Surveys Returned (including <i>response rates</i>)		303 (18)	N.A
CATI SURVEYS			
Number of phone numbers available		853	1291
Number of CATI surveys completed	Employer	169	419
	Employee	9	N.A
Response rate - (Note: Unable to determine true response rates for the pre intervention survey. A “refusal” could mean they completed the paper version)		Employer 27% Employee 13%	32%
Sub-Total CATI surveys completed		177	419
TOTAL SURVEYS COMPLETED (CATI and Paper Combined)	Employer	339	419
	Employee	413	N.A

Manager sample profile (1) – by stage

	Stage Completed		
	Stage 1 (339) %	Stage 2 only (350) %	Stages 1 & 2 (69) %
Overall Manufacturing Area			
Wood	50	37	42
Metal	45	55	51
Wood and metal	2	4	6
Other	3	4	1
Gender			
Male	88	88	87
Female	11	12	13
No answer	1	-	-
Age Group			
<40 years	27	32	26
41-50 years	39	38	38
>50 years	32	28	36
Refused	2	2	-
Mean age (years)	46.7	45.2	47.0

Manager sample profile (2) – by stage

	Stage Completed		
	Stage 1 (339) %	Stage 2 (419) %	Stages 1 & 2 (63) %
Role			
Owner	63	52	55
Manager	26	35	26
Supervisor/team leader	7	7	10
OHS representative	1	6	9
Other	3	-	-
Location			
Rural area/small country town	13	11	13
Large country town	12	12	12
Middle-sized city	19	20	20
Large city	14	12	9
Metropolitan area	41	45	46
No answer	1	-	-
Overall Number of Workers			
<5	36	30	23
6-10	28	24	32
11-20	19	20	19
More than 20	16	25	26

	Stage Completed		
	Stage 1 (339) %	Stage2 (419) %	Stages 1 & 2 (63) %
Overall Number of Workers (Cont.)			
No answer	1	-	-
Mean no of workers	20.3	30.4	23.7
Full Time Workers			
None	43		
<5	26	37	33
6-10	18	23	29
11-20	12	17	17
More than 20	1	24	20
Mean full time workers	18.7	25.1	20.1
Part Time Workers			
None	70	76	71
<5	25	22	28
6-10	1	-	-
11-20	-	1	-
More than 20	1	*	-
No answer/refused	4	1	-
Mean part time workers	0.7	1.3	0.5

* Denotes less than 0.5%

Manager sample profile (3) – by stage

	Stage Completed		
	Stage 1 (339) %	Stage 2 (419) %	Stages 1 & 2 (63) %
Casual Workers			
None	75	75	70
<5	18	19	28
6-10	2	3	1
11-20	*	1	1
More than 20	*	1	-
No answer/Refused	4	1	-
Mean casual workers	0.7	1.6	1.1
Contractors			
None	79	82	80
<5	14	15	17
6-10	1	2	4
11-20	1	*	-
More than 20	-	*	1
No answer/Refused	4	1	-
Mean contractors	0.6	0.9	0.6

	Stage Completed		
	Stage1 (339) %	Stage 2 (419) %	Stages 1 & 2 (63) %
Labour Hire Workers			
None	88	90	88
<5	7	6	9
6-10	*	2	1
11-20	*	1	-
More than 20	*	1	-
No answer	4	-	-
Mean labour hire workers	0.3	0.7	1.2
Other Workers			
None	94	92	88
<5	1	7	10
6-10	-	*	1
11-20	1	1	-
More than 20	*	1	-
No answer/Refused	4	*	-
Mean other workers	0.2	0.8	0.3

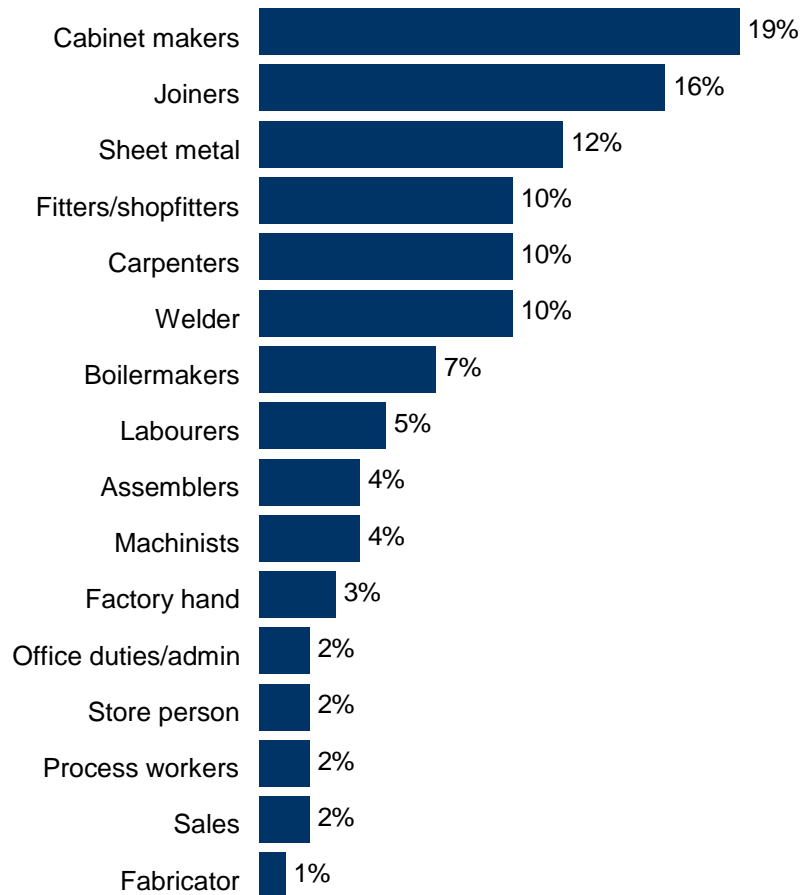
* Denotes less than 0.5%

Worker sample profile: Stage 1 only (2)

	Total (143) %		Total (143) %
Supervisory roles		Location	
No supervisory roles	14	Rural/small country town	13
Supervise other employees / workers	57	Large country town	16
Supervise apprentices	29	Middle-sized city	29
Work Arrangements		Large city	6
Mainly regular or fixed hours	99	Metropolitan area	35
Mainly on call	1	Refused/No answer	1
Average Work Hours (Mean = 41.58 hours)			
Less than 30 hours	3		
30-39 hours	39		
40-45 hours	36		
Over 45 hours	21		
Refused/No answer	2		

* Indicative results given small base size

Employee occupation: Owner/Manager

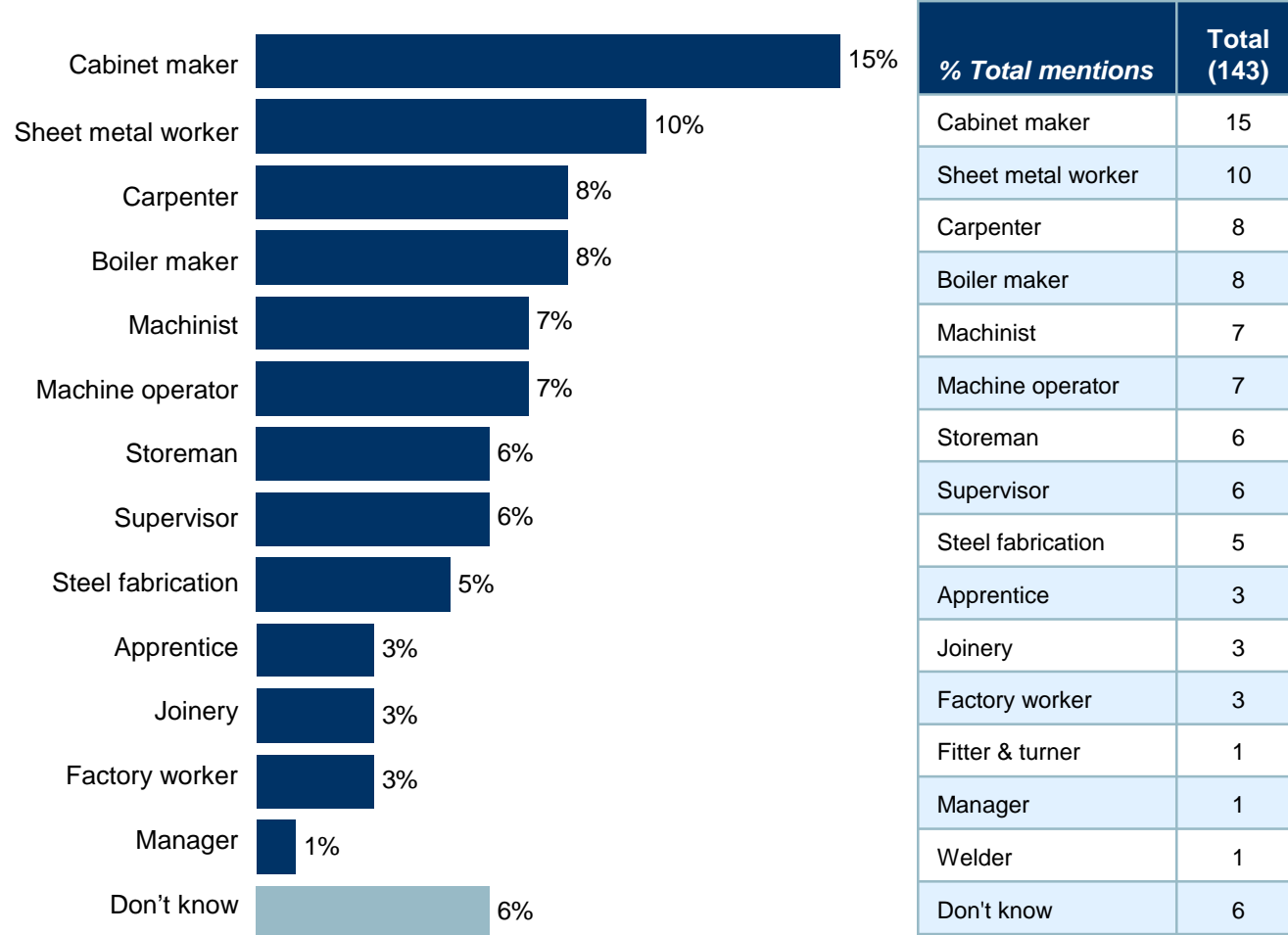


<i>% Total mentions</i>	Total (339)
Cabinet makers	19
Joiners	16
Sheet metal	12
Fitters/shopfitters	10
Carpenters	10
Welder	10
Boilermakers	7
Labourers	5
Assemblers	4
Machinists	4
Factory hand	3
Office duties/admin	2
Store person	2
Process workers	2
Sales	2

Base: All owners/managers in stage 1 (n=339)
 Q5. Please name the main occupations of your workers?

* Indicative results given small base size

Employee occupation: Worker



Base: All workers (n=143)
Q5. What is your occupation?

* Indicative results given small base size

Main tasks of employees: Owner/Manager

% Total mentions	Total (339)
Metal fabrication	20
Kitchens	20
Cabinet making	14
Joinery	10
Wood/Timber	10
Steel distribution	8
Manufacturing	6
Manufacturing windows and doors	6
Roof trusses	6
Wall frames	5
Steel fabrication	3
Motor body building	2
Repairing various machinery	2
Engineering	2
Staircase manufacturing	2
Aluminium, various tasks	2
Truss manufacturing	2
Bench tops	1
Machining various	1
Air conditioning	1
Guttering	1
Fascia	-
Don't know	1

Base: All owners/managers in stage 1 (n=339)
 Q2. Please describe the main activities done on this site

* Indicative results given small base size

Main tasks of employees: Worker

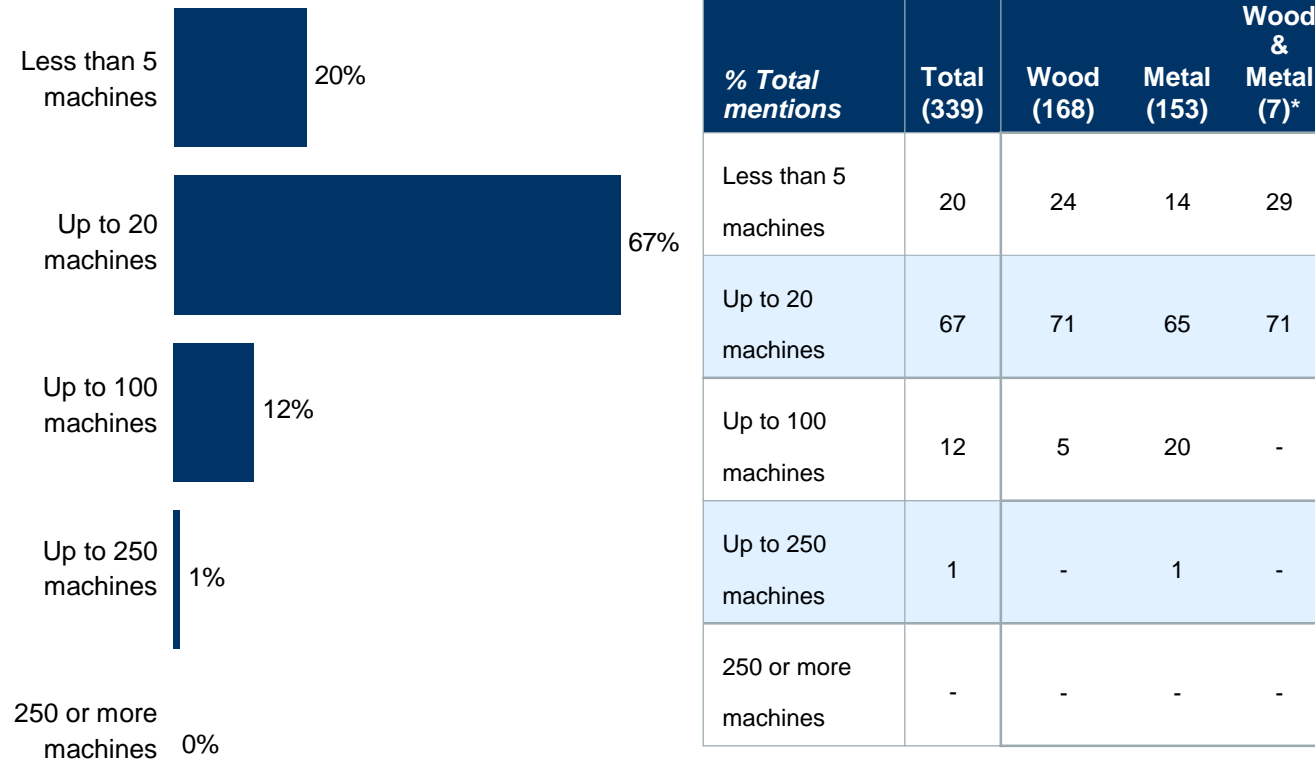
% Total mentions	Total (143)
Kitchen cabinets/kitchen installs	13
Metal/steel fabrication	12
Supervise workshop/production/allocate jobs	10
Machine operating	9
Welding	9
Building/fitting/saw/cutting	8
Assemble	8
Organise job preparation/allocate work to each employee	6
Wood cutter/machinist	6
Cutting steel	6
Folding metal/bending	5
Edging	4
Manufacturing of windows & doors/joinery	4
Deliveries/despatch goods	4
Material handling	3
Stair manufacturing	3
Construction	2
Labourer/general hand	1
Duct work	1
Reception/administration/accounting	1
Don't know	6

Base: All workers (n=143)

Q6. What are the main tasks that you usually do?

* Indicative results given small base size

Number of machines in workplace: Owner/Manager

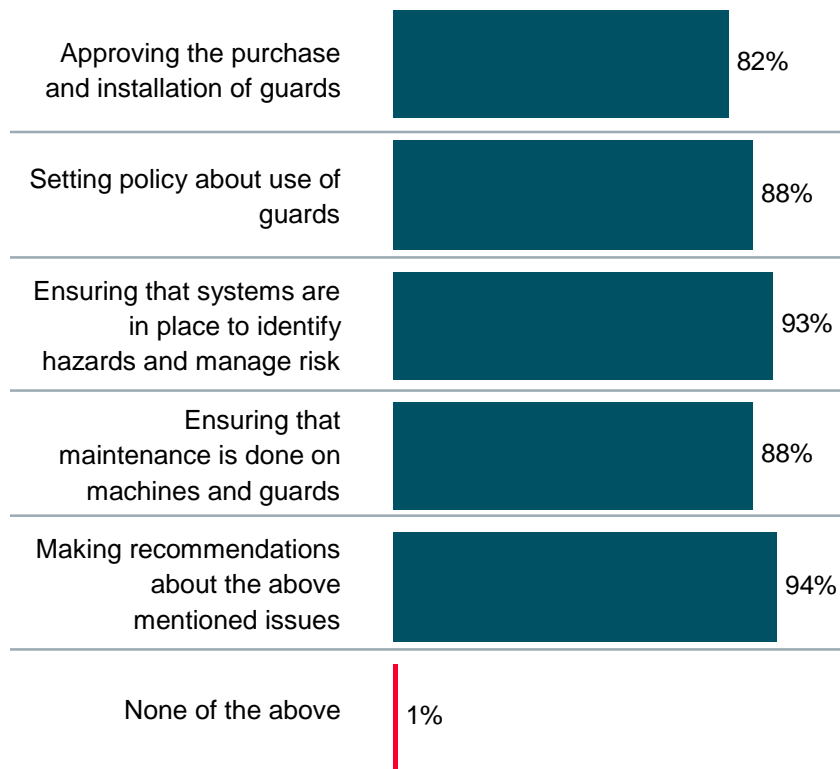


Base: All owners/managers in stage 1 (n=339)
 Q6. How many machines are in your workplace?

* Indicative results given small base size

Managerial responsibility

Owner/manager's workplace responsibility



Owner/manager's responsibility – In Detail

	Total (419) %	Manufacturing Area		
		Wood (160) %	Metal (227) %	Wood & Metal (19) # %
Approving purchase/ installation of guards	82	84	81	79
Setting policy about use of guards	88	88	88	89
Ensuring systems are in place	93	93	93	89
Ensuring maintenance is done	88	91	88	89
Making recommendations	94	95	94	89
None of the above	1	1	1	5

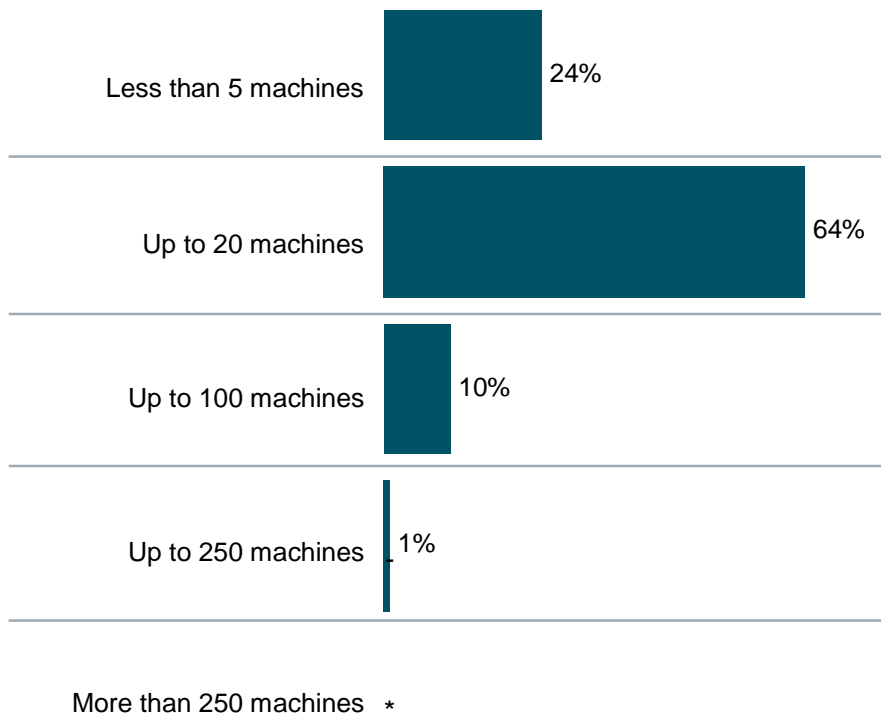
Indicative results given small base size

Base: All owner/managers (n=419)

Q. In your workplace are you responsible for...?

Number of machines in workplace

Number of machines in workplace



Number of machines – by manufacturing type

	Total (419) %	Manufacturing Area		
		Wood (160) %	Metal (227) %	Wood & Metal (19) # %
< 5 machines	24	31	19	21
Up to 20 machines	64	67	65	63
Up to 100 machines	10	2	14	16
More than 100 machines	1	-	3	-

Indicative results given small base size

Base: All owner/managers (n=419)
 Q. How many machines are in your workplace?

Additional comments



Respondents were invited to write or provide additional comments when they had finished the survey. The comments received have been summarised according to subject matter. The major type of comment, given by 7% of those who made a comment, reflect the acknowledgement that occupational health and safety is an ongoing process that needs to be taken seriously.

Additional comments

	Total (419) %	Manufacturing Area		
		Wood (160) %	Metal (227) %	Wood & Metal (19) # %
It's an ongoing process and there's a need to look at it seriously to make sure we meet regulations/standards/legislation	7	6	7	-
Already in place/implemented	3	3	4	-
Need to educate people more	2	3	2	-
It's important to keep staff/employees safe	2	3	2	-
Dealing with OH&S is difficult in a small business (e.g., expensive/no OH&S person/time taken away from the business)	2	3	-	5
Can go overboard/too far/over enforced/can be impractical	1	2	1	-
More information/more detailed/clear/free info	1	1	2	-
Issues related to Inspectors	1	1	1	-
Employees need to be responsible also/not just employers	1	1	-	-
It is very time consuming	1	1	-	5
Getting workers/employees to follow/comply with OH&S procedures/regulations	1	1	1	-
Some people are from the old school and don't like changes	1	1	-	5
Inform/remind management about the importance of OH&S/to be supportive	1	1	1	-
Other (Note: 0.5% or less)	2	5	3	-
None/nothing	82	81	82	89
Don't know	-	1	-	-

Indicative results given small base size

Q. Is there anything you would like to add about machine guarding or OHS issues in your workplace?