# NATIONAL HAZARD EXPOSURE WORKER SURVEILLANCE (NHEWS)

# **SURVEY HANDBOOK**





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#### PURPOSE OF THIS DOCUMENT

This document describes the purpose of the NHEWS survey; sources of individual questions and rationale behind questions selected for inclusion in the final survey instrument. It also describes the sampling and analytical strategies for Wave 1 & 2 data collection undertaken in 2008.

#### **BACKGROUND**

The more effective prevention of occupational disease is a priority area under the National OHS Strategy 2002-2012. The Australian Safety and Compensation Council (ASCC) agrees that in order to more effectively prioritise and measure national occupational disease prevention activities, accurate data on the nature and extent of current exposures to workplace hazards is required.

The priority occupational diseases under the National OHS Strategy 2002-2012 are: work related mental disorders; work related musculoskeletal disorders; occupational noise induced hearing loss; occupational cancers; occupational dermatitis; work related respiratory disorders; work related cardiovascular diseases; and work related infectious and parasitic diseases.

Under the ASCC 2006-07 Business Plan a national hazard exposure surveillance strategy was developed to help, over time, provide better data on hazards, which without appropriate controls, could contribute to the development of one or more of these priority occupational diseases.

This strategy included the:

- More systematic collection, analysis and reporting of nationally representative self report exposure data on the nature and extent of occupational exposures to hazards, and on controls provided by workplaces to reduce the health risks associated with these hazards.
- More systematic collection, analysis and reporting of measured exposure and observation data which would be used to validate self report data and determine levels of compliance with OHS requirements.
- Development and maintenance of a National Hazard Exposure Assessment Database (AHEAD) to facilitate the storage and access to hazard exposure data collected by ASCC stakeholders and others.

This handbook refers to the development of the nationally representative self report exposure survey the **National Hazard Worker Surveillance** (**NHEWS**) survey which form part of the this strategy.

The NHEWS survey and instrument were developed by the Office of the ASCC, in collaboration with representatives from the Victorian WorkCover Authority and other expert advisors in 2006-07.

#### **NHEWS SURVEY AIMS**

Provide nationally representative self report data on:

- 1. the prevalence and nature of exposures to priority occupational disease causing hazards; and
- 2. workplace controls reported by workers which are provided to reduce health risks associated with these hazards.

#### **PURPOSE OF DATA**

This data will be used to estimate likely exposures of workers and to cross-validate these estimates with measured exposures where available. This data will also be used to profile workers who are exposed to these hazards and identify differences from workers who are not exposed. Importantly use this data to determine what employment and demographic factors predict extreme personal exposure and the provision of workplace controls. This will provide information to guide decision makers in developing occupational disease prevention initiatives.

NHEWS will provide information on each of the boxes in Figure 1 will be available from survey data.

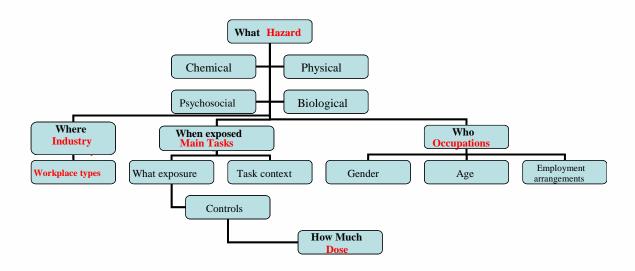


Figure 1. Data elements within the survey

#### **Development Process**

The NHEWS survey instrument was developed in the following stages:

Review of existing international and Australian hazard exposure instruments

- 2. Development of a first draft of the instrument based
- 3. Review of the draft instrument against international best practice
- 4. Refinement of instrument following review by academics and stakeholders
- 5. Cognitive testing of draft instrument
- 6. Pilot testing instrument and data collection method (n=250)
- 7. NHEWS instrument refined based on outcomes of cognitive testing and piloting phases
- 8. Wave 1 of the NHEWS survey March 2008 with 1900 workers from priority industries using CATI<sup>1</sup>
- 9. Minor refinement of NHEWS instrument
- 10. Wave 2 of the NHEWS survey May to July 2008 from 2600 workers from priority and non-priority industries.
- 11. Subject to ASCC approval data collection will occur every two years following the baseline year 2008.

This handbook refers only to the NHEWS survey instrument designed for use with computer assisted telephone interview methodology. The Office of the ASCC has also developed online and paper based versions of the instrument, handbooks for these will be developed as required.

#### CATI SAMPLING PLAN

#### **Population**

The population of interest for this survey was all those living in Australia who were in paid employment, and who worked in the last week<sup>2</sup>.

#### Sample selection

Subjects were randomly selected from this population using random digit telephone dialling. The findings from this survey will therefore be able to be generalised to national populations within known confidence limits.

#### Sample size

The sample of 1900 workers for Wave 1 was drawn from eligible workers from the following five priority industries: Transport & Storage; Health & Community Services; Construction; Manufacturing; and Agriculture, Forestry and Fishing.

The sample of 2600 workers for Wave 2 was drawn from eligible workers from both priority and non priority industries.

On a national level, a sample size of 1900 means that results will be accurate within +/- 2.2%, at the 95% confidence level. A sample size of 2600 will be

<sup>&</sup>lt;sup>1</sup> Computer Assisted Telephone Interviewing

<sup>&</sup>lt;sup>2</sup> Refers to the week preceding data collection

accurate within +/- 1.9% at the 95% confidence level if results are analysed at a national level.

Where data from both waves is combined the total sample is therefore 4500 and that results will be accurate within +/- 1.5%, at the 95% confidence level if analysed at a national level.

#### Reliability of estimates: Relative standard errors

The results from this survey are expected to differ somewhat if data have been collected from all the workers from these industries (i.e. the whole target population). This is because in any sample survey, the results of the survey will be subject to sampling errors. The sampling error is a measure of the variability that occurs by chance because a sample, rather than the entire population, is surveyed.

The relative standard error (RSE) provides a measure of an estimate's reliability. RSE is calculated based on standard error and total sample size and it differs according to the variable of interest. The relative standard error is a useful measure in that it provides an immediate indication of the percentage errors likely to have occurred due to sampling, and avoids the need to refer also to the size of the estimate. The smaller the relative standard error, the more precise is the estimate. The larger the sample size, the smaller is the relative standard error.

#### Sample quotas

To ensure a representative sample and to disproportionately sample by industry, quotas by sex within industry within state was set for Wave 1 of the NHEWS survey.

Quotas by gender for non priority industries were applied for Wave 2 of the survey.

#### Sample frame

Sampling was based on random digit telephone dialling.

#### Strategies to ensure representativeness

One eligible respondent from each household was randomly selected by the CATI program based on first names of household members. There was no replacement of selected respondents within households. This means that once a household member was randomly selected by the CATI program, the interviewer could not select another household member.

If the selected respondent was not available at the time of first contact, at least 10 follow-up calls, at different times of the day and the week, were made in an attempt to reach and interview the selected respondent.

#### Weighting

The distribution of the survey sample across state, industry and gender is not the same as the distribution of the population of interest. A weight will be assigned to each respondent in order to adjust the contribution of respondents to reflect the population distribution in estimates. Weighting will allow for better comparison of estimates between the sub-populations used in the weighting process, namely state, industry and gender. Weighting is not expected to impact on the analysis of predictors of exposures and controls which is detailed in the Analysis Plan below.

#### **HUMAN ETHICS CLEARANCE**

The NHEWS research design and survey instrument was submitted to the University of Sydney Human Research Ethics Committee. The approval reference number is: 02-2008/10506.

The research design and instrument met the National Statistical Clearing House guidelines.

The research design and instrument were also in accordance with the Australian Market and Social Research Society (AMSRS) guidelines. The research company which undertook the CATI is a member of the AMRSRS and met all privacy and other guidelines.

The Office of the ASCC will manage the storage and analysis of the associated dataset to ensure privacy and other data management obligations are met.

#### **ANALYSIS PLAN**

The data will be used to estimate the prevalence of exposure to specific hazards at a national and a broad industry level and the predictors of extreme exposures and provisions of controls.

Over 2008-09 data analysis will be undertaken to determine and describe:

- Prevalence of exposures and provision of controls nationally and by industry
- At risk populations those groups of workers with extreme personal exposures: by key industry, occupational & demographic factors
- Predictors of provision of workplace exposure controls: by key industry, occupational & demographic factors
- Predictors of pain & fatigue: by key industry, occupational & demographic factors
- Exposure and control patterns for selected hazards to inform the national regulatory review process.

Reports will be provided to members and where approved then published.

#### LIMITATIONS

The survey will not have a sufficient sample size to provide information by industry and occupation at the lower classification levels (e.g. ANZSIC four digit industry levels). Comparison by state and territories will be undertaken but at members request these will only be provided to the relevant state or territory agency.

The current sample size for the survey will be sufficient to inform preventive action, i.e. it will produce a profile of workers with exposure to specific hazards and will enable targeting of intervention approaches by occupation, industry, company size, age, gender, etc. However, to monitor trends and to evaluate effectiveness of prevention strategies, it is envisaged that a much larger sample is needed. This larger sample size is needed to ensure changes detected within different waves of data are not just by chance or due to slight changes in survey methodology, content or population.

For exposures which are not highly prevalent, larger sample sizes will be required to monitor trends in exposure.

The survey relies on workers' self-reported perception of their exposure to hazards. Workers' self-reported exposures are reasonable estimates of their perceptions of their exposure, they will be subject to calibration based on comparison of self-report results versus results from observational (measured) studies. Over the next two years a series of observation studies which concurrently collect NHEWS self report data will be undertaken. Where required worker estimate will then be weighted to adjust for inaccuracies in exposure estimations.

#### ACCESS TO NHEWS DATASET BY OTHER RESEARCHERS

The NHEWS dataset may be made available to other researchers subject to licence requirements being met including:

- o research is undertaken by a recognised and reputable research agency
- o an analysis plan is submitted and deemed to adequately address the data limitations prior to research commencing
- o data integrity and privacy guidelines are met
- data set would only include national results (unless permission is provided for state and territory data to be presented, from the relevant state or territory)
- o draft research reports are reviewed by the Office and sent to members for comment before publication
- where the NHEWS survey instrument is used by the researcher the deidentified results of this study are to be shared with the national body for inclusion in the Australian Hazard Exposure Assessment Database (AHEAD)
- o all data provided by the researcher to the national body is to be in accordance with the AHEAD protocols for coding and storage, and

o the ASCC is appropriately acknowledged in all research publications.

#### SURVEY GENERAL DESCRIPTION

This survey covers nine different themes. Some of the questions are follow-up questions based on a positive response to an initial gate-keeping question on exposure to a particular type of hazard. Therefore, most respondents did not need to answer all of the questions. Only respondents who reported exposure to a specific hazard were asked a further set of questions relating to this hazard and what controls, if any were provided. The survey was designed to be completed in under 20 minutes in line with the Australian Market Research Guidelines.

The nine themes covered in the survey along with data items and sub constructs are described in the table below.

Table 1. Survey themes and data items and sub constructs included in the survey

Themes	Data items/ sub constructs
Demographics	Age, sex, level of education, English speaking skills, salary
Occupational characteristics	Industry, occupation, main tasks, main business of employer, employment and employee status, company size
Working arrangements	Day of the week worked, work hours, work schedule, hours worked last week
Physical and chemical hazards	Vibration, noise, gases, dusts, fumes and vapours, working position, posture, hazardous substances, skin sensitisers, wet work, physical demands
Biological hazards	Infectious substances
Psychosocial hazards	Job demand, workload, support, job control, decision authority, skill discretion, workplace bullying, job security
Control measures	Controls provided at work
Symptoms	musculoskeletal discomfort or pain
	Stressfulness of work

Questions included in this survey have been selected from the following international surveillance and worker surveys:

- European Working Condition Survey
- National Exposures at Work Survey (NIOSH, USA)

- Danish Work Environment Cohort Study Survey
- Swedish Workplace and Environment Survey
- Nordic Skin Questionnaire
- Job Content Questionnaire
- Working Life in New Zealand Study Survey,
- Victorian WorkCover Authority Worker Survey, and
- Workplace Health and Safety Queensland/Health and Safety Executive psychosocial survey.

Some hazard-specific items, such as those on vibration and wet work, have been provided by expert Australian researchers in these specific fields, based on their review of the literature on existing surveillance items for these hazards or through empirical work. A few of the items have been formulated by staff of the Office of the ASCC.

Some modifications have been made to items obtained from other sources (i.e. to non-ASCC questions). The most common modifications entailed altering response categories to better capture both the duration and frequency of exposures.

Please note that all sections of the survey except screening and demographic questions are specific to the respondent's main job, which is the job in which the respondent works the most hours.

#### Structure of questions

The self report questions for physical hazards are structured as follows:

- Does the respondent have exposure to the hazard of interest (e.g. dust, vapour) and if so, how long?
- If the respondent reported exposure to the hazard of interest, ask the worker to name the hazard if known e.g. benzene

The self report questions for psychosocial and musculoskeletal hazards are based on:

- Psycho-social hazards measure
  - HSE stress indicator measures based on the Karasek demand support control model
- Musculoskeletal risks
  - EU Working Conditions Survey and the Swedish Environment working survey

#### SPECIFIC QUESTIONS - SELECTION AND PURPOSE

The following sections describe why each item or groups of items relating to a specific construct were selected for use in the national survey and the type of information that can be obtained from each question. Where possible, items that have already been demonstrated to be predictive of health

outcomes have been selected. For demographic information, Australian Bureau of Statistics (ABS) questions have been used where possible, to enable sample verification against population parameters and comparisons with other Australian data.

An earlier draft of the questionnaire was subjected to skirmish testing. This is a technique whereby the questionnaire is 'tested out' on easily accessible respondents (in this case, staff within the Office of the ASCC) to check for any major issues before more formal testing (i.e. cognitive testing and piloting) commences. The skirmish test looked at the flow and understanding of the questions, especially the understanding of definitions and terms, how answers were formulated, the possible range of answers, the level of knowledge required to answer the questions, flaws in design and awkward wording. The limitation of this particular skirmish testing was that the literacy level of respondents who participated were likely to be higher than workers in several of the high priority industries.

The survey was also cognitive tested with 11 workers from several industries who were of a low literacy or non-English speaking background. Cognitive testing involves a face-to-face interview with actual workers from each of the industries. It provided the opportunity to test the wording of each question such as whether all respondents interpret the survey items in the same way and to detect the ease of answering each survey item.

The survey was then piloted by Victorian WorkCover Authority in 160 workers using the computer assisted telephone interview (CATI) method. This assisted in revising the survey length and errors or problems in CATI programming was corrected for the main fielding of the survey. The pilot testing also provided the opportunity to examine the adequacy of information and briefing provided to the interviewers to conduct the survey. Issues and concerns identified during cognitive testing and piloting were addressed before fielding of the main survey commenced in 30 January 2008.

The survey questions in this document are grouped according to survey themes. Please consult the actual copy of the National Hazard Exposure Worker Surveillance Survey (NHEWS) instrument for the actual ordering of survey items and CATI programming.

#### SCREENING QUESTIONS AND QUOTAS

Q. Gender. [INTERVIEWER TO RECORD]

# Male ......01 Female ......02 Source of Question Victorian WorkCover Authority Why are we using All international surveys have a question on gender. This allows comparison of exposures by gender as well as

it? determines the representativeness of the survey sample

in terms of gender. It will help ensure respondents meet gender quotas if applied. It has also been reported in the literature that there are differences in exposure profiles

by gender.

Will tell us Respondent's gender

Q. Last week, did you do any work at all in a job, business or farm?

Yes	01	CONTINUE WITH SURVEY
No	02	THANK & CLOSE
Don't know	98	THANK & CLOSE
Refused	99	THANK & CLOSE

Source of Ouestion

ABS Labour force survey

Why are we using it?

This question is considered suitable for use as a screening question to capture persons who worked last week. Some hazard specific questions are relating to exposures in the last week so it is vital that the survey respondent worked last week. This will also allow comparison with data from ABS national surveys.

Will tell us

The target group for this survey is people in paid employment aged 15 or over, who worked last week. People 15 and over are selected as a target group to be consistent with the ABS definition of working age population. This question helps identify the survey target group.

Q. Did you earn money from this work?

Yes		01	CONTINUE
No		02	THANK & CLOSE
Don't know		98	THANK & CLOSE
Refused		99	THANK & CLOSE
Source of Question	ASCC		

Why are we using

it?

The screening question for people who worked last week was taken directly from the ABS Labour Force Survey. However, it did not provide information on whether it was paid work and

may capture, for example, someone who is a hobby farmer. The current question enables the interviewer to select people who were in paid employment.

Will tell us

People who worked last week who were in paid employment.

Q. Which of the following industries do you work in? Is it (...READ OUT INDUSTRIES...) or is it something else? **Single response**.

Manufacturing	01	
Transport & storage	02	
Construction	03	
Agriculture	04	
Forestry	05	
Fishing	06	
Health service	07	
Community care service	08	
Other [SPECIFY]	09-97	THANK & CLOSE
Don't know (DO NOT READ)	98	THANK & CLOSE
Refused (DO NOT READ)	99	THANK & CLOSE
Source of Question	ABS census	
Why are we using it?	This is a modified version of the industry question used in the ABS census, and it will allow identification of people who are in the national priority industries. During the pretesting of the survey, it was found that self-employed persons and contractors had trouble responding to the original ABS question where the person was asked to describe the industry of their employer. The modification of this question overcomes the problem encountered by self-employed persons and contractors.	
Will tell us	It will provide information the respondent.	on the industry of

#### **EMPLOYMENT**

Q. In your main job held last week, did you work for an employer or did you work in your own business or did you work as a contractor? **Single response**.

For an employer	01	
Own business / self-empl contractor	loyed /02	
Don't know	98	
Refused	99	
Source of Question	ABS Labour Force Survey	
Why are we using it?	Estimate of persons who are self-employed; this will enable analysis of exposures by whether or not a person is self-employed. This questions also enables a follow up question, Q7, to be asked to persons who work for employers.	
Will tell us	Whether the survey respondent is self- employed, contractor or an employee.	
Q. Are you employed as a permanent, temporary, casual or fixed term employee? Single response. INTERVIEWER NOTE: Fixed term means limited contract.		
Permanent	01	
Temporary/casual	02	
Fixed term	03	
Don't know	98	
Refused	99	
Source of Question	ASCC	
Why are we using it?	For persons who work for an employer, information is needed on their employment arrangement. Precarious employment has been reported in the literature to have an impact on occupational health and safety.	
Will tell us	The respondent's employment arrangement (excluding self-employed persons and contractors).	

Q. Including yourself, about how many people are employed by your company at this location, including full-time, part-time or as a casual? Is it...**Read out. Single response. INTERVIEWER NOTE**: Encourage best guess.

Less than 5	01
5 to 19	02
20 to 199	03
200 or more	04
Don't know	9998
Refused	9999

Source of Question Adapted from Victorian WorkCover Authority

(VWA), the Workers survey

Why are we using it? This question has been used by VWA in the past

with Australian workers and no problems have been reported. This question is very similar to the question used in the European Working Conditions Survey, approximately how many people, in total, work in your local workplace?, which has reported reliability and validity. This will enable analysis of whether there are differences in exposures by company size. Rather than keeping this question as an open response, respondents are provided categories based on the ABS classification of business size.

This will allow comparison of workplace

exposures by business size.

Will tell us Business size

Q. What is your occupation? Record full job title.

#### [RECORD OPEN RESPONSE]

Don't know	98
Refused	99
Source of Question	ABS Labour Force Survey.

Why are we using this?

This question is used by ABS to code a person's

occupation to ASCO. This question together with

information on main tasks would enable

classification of occupation. These questions are very similar to NZ census questions which have

reported validity and reliability.

What should this tell us? Occupation of survey respondents.

Q. What are the main tasks that you usually perform? What else? **INTERVIEWER NOTE:** What do you do in your job? Focus on main tasks only.

#### [RECORD OPEN RESPONSE]

Don't know	9998
Refused	9999

Source of Question ABS Labour Force Survey

Why are we using this? Information on a worker's main tasks would

enable a more accurate classification of occupation. In addition, main tasks would provide some information on exposures and contribute in longer term to a job exposure

matrix.

What should this tell us? Main tasks of respondent

Q. How many hours did you *actually* work in <u>your main job</u> last week? When calculating the hours you have worked, please add any overtime worked and deduct any time off such as time spent having lunch breaks. **Record hours.** 

#### [RECORD HOURS]

Don't know	98
Refused	99
Source of Question	Adapted from ABS Labour Force Survey
Why are we using it?	This question is considered an appropriate question to determine the person's actual working hours in the past week across for his/her main job.
Will tell us	Actual working hours in the past week in respondent's main job. This is particularly important as some of the other questions in the survey are based on exposures in the last week.

 $\Omega$ 1

Q. Did you have more than one job last week?

res	01
No	02
Don't know	98
Refused	99
Source of Question	ASCC
Why are we using it?	To collect information on poople with multiple ich

Why are we using it?

To collect information on people with multiple job holdings and to enable the interviewer to clarify to the respondent who had more than one job that

the respondent who had more than one job that majority of questions in the survey are related to their main job, the job in which they worked the most hours. Multiple jobs would also affect total

working hours.

Will tell us People with multiple job holdings

Q. How many hours did you *actually* work in <u>all your jobs</u> last week? Deduct any time off but count any extra hours worked or overtime.

#### [RECORD HOURS]

Voc

Don't know	9998
Refused	9999
Source of Question	ABS Labour Force Survey
Why are we using it?	Although the focus of the questionnaire is on main job, this question is considered an appropriate question to determine the person's actual working hours in the past week across all jobs.
Will tell us	Actual working hours in the past week across all jobs.

	ob' or 'job') held last week, which of the ork arrangements? Read out. Single response.
Mainly regular or fixed hours	01
Mainly on call	02
Mainly shift work	03
Mainly rostered work	04
Don't know (DO NOT READ)	98
Refused (DO NOT READ)	99
Source of Questions	ASCC
Why are we using these?	This question provide information on work schedule of survey participants. As with long working hours, non-standard work schedules are of concern due to their impact on worker health and safety.
What should these tell us?	The work schedule of survey respondents.
Q. Which days of the week did ye	ou work last week in your ('main job' or 'job')?
Monday	01
Tuesday	02
Wednesday	03
Thursday	04
Friday	05
Saturday	06
Sunday	07
Don't know (DO NOT READ)	98
Refused (DO NOT READ)	99
Source of Question	Adapted from ABS Labour Force Survey
Why are we using it?	This question provides the tool to determine participant's working arrangements in terms of

days of the week worked. Will tell us Information on working arrangements and (in combination with other questions, see below) whether the person works a Monday to Friday working arrangement or has other arrangements. Q. Thinking of your ('main job' or 'job'), last week did you work most of the time at night- that is between 10 pm and 6 am? Yes .....01 No .....02 DK ......98 Refused .....99 Source of Question **ASCC** Why are we using it? This question provides further information on respondent's work schedule and whether they work the night shift. Night shift work has been identified as an area of concern for occupational health and safety. Will tell us Whether the respondent works between 10 pm and 6 am. **EXPOSURE TO WORKPLACE HAZARDS SUN EXPOSURE** Q. On a typical day at work last week, how long did you work in direct sunlight, with or without protective lotions or clothing? INTERVIEWER NOTE Record hours. Can record decimal points. If respondent is unsure, record 0 in both boxes. Clarify whether respondent is talking about typical daily exposure or average weekly exposure. Record hours in a typical day ..... Record hours in a typical week .....98 Don't know

Refused

.....99

Source of Question ASCC

Why are we using it? Occupational cancer is one of the priority

occupational diseases. Indicators of sun

exposure will provide information people who are

at potential risk of skin cancer.

Will tell us How long the respondent works during work in

direct sunlight

#### **NOISE LEVELS**

Q. On a typical day at work last week, how long did you work in loud noise? **INTERVIEWER NOTE**: Loud noise is noise so loud that you would have to raise your voice to be heard to speak to people who are at one arm's length away from you. Clarify whether respondent is talking about <u>typical daily</u> exposure or <u>average weekly</u> exposure.

Record hours if more than ......an hour a typical day

Record hours if more than ......an hour over a typical week

Don't know ......98

Refused ......99

Source of Question Adapted from Victorian WorkCover Authority

Why are we using this?

The question is very similar to a noise exposure

question used in international surveillance surveys which is reported to be valid and

reliable. It is also predictive of health outcomes.

However, response categories used in international surveys do not provide as comprehensive measure of time of exposure compared to this question. This question would enable calculation of time weighted averages of noise exposure. A positive response to this question equates to noise exposure at or above 85 db (A), and if this exposure is for 8 hours, exposure will exceed the noise standard.

exposure will exceed the hoise standard.

What should these tell us? Prevalence of at risk noise exposure and duration

of exposure.

#### **BIOMECHANICAL DEMANDS AND VIBRATION**

Q. On a typical day at work last week, how often did you...? Was it never, rarely, sometimes, often or all of the time? Read out. Rotate order.

	Never	Rarely	Some- times	Often	All the time	Don't know	Refused
Carry or lift heavy loads	01	02	03	04	05	98	99
Make the same hand or arm movements over and over again	01	02	03	04	05	98	99
Work with your body bent forward	01	02	03	04	05	98	99
Work in a twisted or awkward posture	01	02	03	04	05	98	99
Work with your hands raised above your head	01	02	03	04	05	98	99
Work while sitting down	01	02	03	04	05	98	99
Squat or kneel while you work	01	02	03	04	05	98	99
Push or pull, using some force	01	02	03	04	05	98	99
Work standing in one place	01	02	03	04	05	98	99

Source of Question

EU working conditions survey, Swedish Working Environment Survey, NIOSH survey and ASCC

Why are we using it?

Very similar questions are covered for physical demands in international surveillance surveys. Questions which have not been modified would also allow comparison with EU, Swedish and NIOSH exposure data. These set of questions have been comprehensively tested for validation by comparing responses to these questions against actual work conditions and the correlations were found to be very good. At least some of the questions have been reported in the literature as predictive of health outcomes. Using a combination of EU and Swedish questions would also enable this survey to cover a broader range of physical hazards.

Q. As a result of the physical demands of your job last week, how often did you experience...? Was it never, rarely, sometimes, often or all of the time? **Read out. Rotate order.** 

	Never	Rarely	Some- times	Often	All the time	Don't know	Refused
Tiredness	01	02	03	04	05	98	99
Pain in your back or your neck	01	02	03	04	05	98	99
Pain in your shoulders or arms, wrists or hands	01	02	03	04	05	98	99
Pain in your hips, legs, knees or feet	01	02	03	04	05	98	99

Source of Question	Adapted from Swedish Working Environment Survey and ASCC
Why are we using it?	To determine whether as a result of physical demands in the workplace, respondents are experiencing any musculoskeletal symptoms and fatigue
Will tell us	Whether the respondent is experiencing musculoskeletal pain and fatigue due to work related physical demands.

Q. On a typical day at work last week, how long did you work with tools, equipments or in vehicles that vibrates? **Record hours or minutes.** Clarify whether respondent is talking about <u>typical daily</u> exposure or <u>average weekly</u> exposure.

Record hours if more than an hour a typical day	
Record hours if more than an hour over a typical week	
Don't know	98
Refused	99
Source of Question	Adapted from Marion Burgess (Vibration exert ADFA)

Why are we using this? Vibration is a workplace exposure which could

> lead to temporary or permanent disability depending on levels of exposure. Most international surveys have a one item question on vibration such as vibrations from any hand tools or machinery, all of the time, almost all of the time etc. This does not give adequate indication of the extent of exposure or risk of subsequent disease from this type of exposure. This question will provide a clearer indication of the duration of exposure to vibration. It is

very similar to a single item measure of vibration used in international surveys, which

will allow comparison between surveys.

Will tell us The proportion of people in the survey exposed to vibration and the duration of this exposure.

Q. What were the main vibrating tools, equipments or vehicles you used? Anything else? INTERVIEWER NOTE: Only record main tool, equipment or vehicle used.

#### [RECORD OPEN RESPONSE]

Will tell us

Don't know	98
Refused	99
Source of Question	ASCC
Why are we using it?	There are two kinds of vibration exposure, hand-arm vibration and whole-body vibration. Internationally, there are separate exposure limits for the two types of vibration. The health effects from the two types can also be different. This question will give information on the type of vibration the

The tool, equipment or vehicle that the

survey respondent usually uses.

person is exposed.

#### **AIRBORNE HAZARDS**

Q. On a typical day at work last week, how long did you work in a place where your work or other people's work created dust or made the air dusty?

Record hours if more than an hou	r a typical day	
Record hours if more than an hou	over a typical week	
Don't know		98
Refused		99
Q. What were the <u>main</u> types of d else? <b>Probe fully</b> .	ust at your workplace last	week? Anything
[RECORD OPEN RESPONSE]		
Don't know		98
Refused		99
Q. On a typical day at work last w there were gases, vapours, smoke	9	k in a place where
Record hours if more than an hou	a typical day	
Record hours if more than an hou	over a typical week	
Don't know		98
Refused		99
Q. What were the <u>main</u> types of fu workplace last week? Anything el		moke in your
[RECORD OPEN RESPONSE]		
Don't know		98
Refused		99
Source of Questions	Adapted from Victorian W Authority	/orkCover

Why are we using these? These set of questions capture exposure to

different types of airborne substances and is similar to the single item question which had been used in EU survey with reported validity and reliability and is predictive of health outcomes. It is believed that these

set of questions would provide

comprehensive information on airborne exposures where there is little information

currently available.

What should these tell us? Exposure to different types of airborne

substances and duration and frequency of

exposure.

#### **BIOLOGICAL HAZARDS**

Q. On a typical day at work last week, how long did you work in places where there were biological materials, such as blood, urine, animal flesh or laboratory cultures?

Record hours if more than an hour a typical day				
Record hours if more than ar	n hour over a typical week			
Don't know		98		
Refused		99		
Q. What were the main types of biological materials at your workplace last week? Anything else?				
[RECORD OPEN RESPONSE]				
Don't know		98		
Refused		99		
Source of Questions	Adapted from EU			
Why are we using these?	EU question on exposure to infe which is reported to be valid an predictive of health outcomes. questions are used as they prov comprehensive information on o	d reliable and Subsequent set of vide more		
What should these tell us?	Exposure to biological hazards	and duration of		

Exposure to biological hazards and duration of

exposure.

#### **WET WORK**

Q. On a typical day at work last week, how many times did you wash your hands with water, including when using the bathroom? **Record number of times** washed hands either with or without soap.

### [RECORD NUMBER] DK .....98 Refused .....99 Source of Question Occupational Dermatology Research and Education Centre, Melbourne Why are we using this? Hand washing of more than 20 times a day is a risk factor for contact dermatitis which is a priority occupational disease. What should this tell us? This question provides information on a major risk factor for contact dermatitis. Q. On a typical day at work last week, excluding time spent hand-washing, how long did you have your hands immersed in or covered by any liquid (including water) with or without gloves? Record hours if more than an hour a ...... typical day Record hours if more than an hour over a typical week Don't know .....98 Refused .....99 Source of Question Adapted from Nordic skin questionnaire, Occupational Dermatology Research and **Education Centre** Why are we using this? Exposure to wet work for 2 hours or more a day is a known risk factor for contact dermatitis, a priority occupational disease. The Nordic skin questionnaire which has been used extensively worldwide and it is available in a number of languages. A variation of these

questions has been piloted in a survey of Australian workers and they are considered to reliably estimate the level of exposure to wet work in the workplace.

Will tell us The proportion of people exposed to wet work

and the frequency of their exposure.

Q. What liquids did you have your hands covered by last week? **INTERVIEWER NOTE:** Record verbatim, for example glue, oil, lard, petrol etc. If respondent had their hands in water ask: 'what substances if any did you use while you were working in water last week?'

#### [RECORD OPEN RESPONSE]

Nothing	97
DK	98
Refused	99
Source of Question	ASCC
Why are we using these?	To obtain information on wet work involving fluids other than water
What should these tell us?	Information contact with fluids other than water and duration of exposure

#### SKIN CONTACT WITH SUBSTANCES

Q. On a typical day at work last week, how long did you work with chemical such as cement, cleaning products, disinfectants, solvents, resins, paints, pesticides or other chemical substances? **Record hours or minutes.** 

Record hours if more than an hour a typical day	
Record hours if more than an hour over a typical week	
Don't know	98
Refused	99
Source of Question	Adapted from Victorian WorkCover Authority
Why are we using this?	This question is similar to questions used in EU and Swedish surveys. However, this question allows for a more comprehensive list of examples which would allow survey respondents to better identify and report the

product they use more accurately. Both EU

and Swedish survey questions have reported reliability and validity and information from the EU survey has been reported in the literature as being a predictor of health outcomes.

Will tell us Skin contact with chemical substances and

duration of the exposure.

Q. What were the main types of chemical products or substances you worked with last week? Anything else? **INTERVIEWER NOTE**: record specific type of chemical or product.

#### [RECORD OPEN RESPONSE]

Don't know	98
Refused	99
Source of Question	Adapted from the Danish Work Environment Cohort Study
Why are we using it?	This is the only survey reviewed which asks about specific types of substances a person has skin contact with.
Will tell us	The most common substances for skin contact.

#### **PSYCHOSOCIAL HAZARDS**

Q. I now am going to read out some ways people might feel at work. Generally speaking, please tell me if this describes your *current workplace* never, rarely, sometimes, often, or all the time. Read out and rotate order. If respondent says, 'in the last week?, say, 'no we are talking more generally now.'

	Never	Rarely	Some- times	Often	All the time	Don't know	Ref- used
I am pressured to work long hours.	01	02	03	04	05	98	99
I have unachievable deadlines.	01	02	03	04	05	98	99
I have to work very fast.	01	02	03	04	05	98	99
I am unable to take enough breaks.	01	02	03	04	05	98	99

	Never	Rarely	Some- times	Often	All the time	Don't know	Ref- used
I have to neglect some tasks because I have too much to do.	01	02	03	04	05	98	99
It's hard for me to juggle work requests from different people.	01	02	03	04	05	98	99
I have to keep track of more than one thing at a time.	01	02	03	04	05	98	99
My work needs my undivided attention.	01	02	03	04	05	98	99
I can decide when to take a break.	01	02	03	04	05	98	99
I have some say in what work I do.	01	02	03	04	05	98	99
I have some say in how I get the job done.	01	02	03	04	05	98	99
I was sexually harassed.	01	02	03	04	05	98	99
I was bullied.	01	02	03	04	05	98	99

Q. Could you please tell me whether you strongly agree, agree, disagree or strongly disagree with the following statements..? **Read out. Rotate order.** 

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't know	Ref- used
I get the help and support I need from my fellow workers.	01	02	03	04	05	98	99
My fellow workers respect me.	01	02	03	04	05	98	99
My fellow workers are willing to listen to my work related problems.	01	02	03	04	05	98	99
I have some say over the way I work.	01	02	03	04	05	98	99

	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Don't know	Ref- used
I am worried about losing my job.	01	02	03	04	05	98	99

Q. And using the same scale, do you strongly agree, agree, disagree or strongly disagree with the following statements..? Read out and rotate order.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly disagree	DK	Ref- used
I can talk to my supervisor about something that has upset me at work.	01	02	03	04	05	98	99
My supervisor encourages me at work.	01	02	03	04	05	98	99
My supervisor supports me through emotionally demanding work.	01	02	03	04	05	98	99
I have the information I need to do my job.	01	02	03	04	05	98	99
I have the equipment I need to do my job.	01	02	03	04	05	98	99

Source of Questions Health and Safety Executive Indicator tool and ASCC

Why are we using these?

These items are originally chosen to allow comparison with Workplace Health and Safety Queensland psychosocial data which are also based on the HSE indicator tool. The tool is based on the demand control and support model of stress.

A number of ASCC's own questions are added to the occupational stress section to obtain information on job impediment,

workplace bullying and violence.

What should these tell us?

Exposure to psychosocial hazards.

Q. You mentioned that you have experienced [bullying or harassment] at work in the past month. Was the person who did this your supervisor, a co-worker, a customer or patient, someone who worked for you or someone else? Multiple response.

Supervisor		01
Co-worker/s		02
Customer		03
Patient		04
Patient's family member		05
Someone who worked fo	or you	06
Other (SPECIFY)		07
Don't know		98
Refused to disclose		99
Source of Question	ASCC	
Why are we using this?	This question is will be asked to resexperienced bullying and/or harass provide information on the source of violence or bullying and would help approaches (e.g. OHS vs. police act similar to the item in the WHSQ psy	ment. This will of workplace direct intervention tion). This is very
What should this tell us?	Information on who was the source violence and bullying	of occupational
Q. In general, how stre	essful do you find your job? Would y	ou say it is?
Not stressful at all		01
Mildly stressful		02
Moderately stressful		03
Very stressful		04
Extremely stressful		05

Source of Question Bristol Stress and Health at Work study<sup>3</sup>

Why are we using this? This question was added to wave 2 of the NHEWS survey, to determine what proportion of the works

survey, to determine what proportion of the workers found their work stressful. Health and Safety Executive (UK) has also used this question in their annual survey

of psychosocial working conditions in Britain.

Information from this question was also used to inform

HSE's stress management standards.

What should this tell us?

Proportion of workers who find their work stressful.

#### **CONTROL MEASURES**

Note: The wording of the control measure questions varies slightly depending on whether the person works for an employer or whether the person is self employed. CATI programming was based on the respondent's answer to the following question:

In your main job held last week, did you work for an employer or did you work in your own business or did you work as a contractor?

Q. (If self employed, say 'Do you': If employee, say 'Does your employer') do any of the following to prevent health problems caused by exposure to direct sunlight or sunburn? Anything else? **Read out. Multiple response. INTERVIEWER NOTE:** Do not prompt for other responses but record if the respondent provides information voluntarily.

Provide sunscreen	01
Provide protective clothing	02
Provide hat	03
Provide sunglasses	04
Reorganise work outside peak UV hours	05
Other specify	06

<sup>&</sup>lt;sup>3</sup> Smith, A, Johal, S, Wadsworth, E, Davey Smith, G, and Peters, T (2000). The Scale of Occupational Stress: The Bristol Stress and Health at Work Study. HSE Contract Research Report 265/2000, HSE Books, Sudbury.

Nothing	97
DK	98
Refused	99
any of the following to prevent heari	f employee, say 'Does your employer') do ing being damaged by loud noise? Anything e. INTERVIEWER NOTE: Do not prompt respondent provides information
Provide ear muffs	01
Provide ear plugs	02
Provide training	03
Rotate jobs	04
Place noisy equipment in an isolated	room05
Purchase quieter machinery whenev possible	er06
Other specify	07
Nothing	97
DK	98
Refused	99
Q. (If self employed, say 'Do you': If end the following to prevent this kind of particles in the following to prevent this kind of particles in the following to prevent this kind of particles in the following th	t for other responses but record if the
Provide lifting equipment	01
Provide trolleys	02
Change layout of the job	03
Change the size and shape of loads	04
Provide training	05
Other specify	06

Nothing	97
DK	98
Refused	99
equipment or in vehicles that vibrate?	roblems caused by working with vibrating ANYTHING ELSE. <b>Read out. Multiple</b> not prompt for other responses but record
Provide gloves	01
Provide vibration dampeners	02
Provide vibration absorbing seats	03
Provide vibration absorbing seats	04
Provide training	05
Other specify	06
Nothing	97
DK	98
Refused	99
things in the air that could damage you	g in dust, fumes, gases, vapours or other r health? Anything else? <b>Read out.</b> JOTE: Do not prompt for other responses
Provide masks	01
Provide respirators	02
Provide ventilation systems	03
Reduce the time spent in places where dust, smoke, fumes or gases	e there are04
Other (specify)	05
Nothing	97

Don't know	98
Refused	99
Q. (If self employed, say 'Do you': If early of the following to prevent health publications biological materials? Anything else? ROINTERVIEWER NOTE: Do not prompt respondent provides information volunt	ead out. Multiple response. for other responses but record if the
Provide gloves	01
Provide masks	02
Provide labelling and warning signs	03
Provide protective clothing	04
Provide safety goggles	05
Provide safety cabinets	06
Provide training	07
Provide ventilation systems	8
Other (specify)	09
Nothing	97
Don't know	98
Refused	99
Provide gloves	01
Provide barrier cream	02
Provide moisturiser	03

Prov	vide labelling and warning sigr	ns	04
	it the time you have your hand er liquids	ds in water or	05
Prov	vide training		06
Oth	er (specify)		07
Not	hing		97
DK			98
Ref	used		99
of the produ Do no	self employed, say 'Do you': e following to prevent health placts or substances? <b>Read out.</b> of prompt for other responses mation voluntarily.	roblems caused by Multiple respon	y exposure to chemical se. INTERVIEWER NOTE:
Prov	vide Gloves		01
Pro	vide protective clothing		02
Prov	vide labelling and warning sigr	ns	03
Prov	vide washing facilities		04
Prov	vide training		05
Oth	er specify		06
Not	hing		97
Dor	n't know		98
Ref	used		99
	What kind of gloves do you no ponse.	rmally use? <b>Do n</b>	ot read out. Multiple
Cot	ton gloves		01
Disp	oosable latex		02
Disp	oosable vinyl		03

Disposable nitrile	04
Leather	05
Surgical latex	06
Surgical Nitrile	07
Reusable neoprene	08
Reusable rubber	09
Reusable PVC	10
Other (SPECIFY)	11
DK	98
Refused	99

Q. (If self employed, say 'Do you': If employee say, 'Does your employer') do any of the following to prevent people from becoming too stressed at work? Anything else? Probe fully. Read out. Multiple responses accepted. INTERVIEWER NOTE: Do not prompt for other responses but record if the respondent provides information voluntarily.

Have anti-stress and anti-bullying policies		01
Provide training on how to manage stress		02
Provide counsellin	ng services	03
Other specify		04
Nothing		97
DK		98
Refused		99
Source of Questions	Adapted from Victorian WorkCover Authority	
Why are we using these?	Most international surveillance surveys lack information on control measures. VWA has used a similar question in the past and found that workers from across a range of industries are able to recognise and identify controls in their workplace and they have no trouble answering this type of question. To get a complete picture of a person's	

exposure, existing control measures need to be taken into account.

Will tell us

The level of compliance and awareness of a particular hazard and existence of effective controls. This also gives an indication of the safety climate in a person's

workplace.

#### **DEMOGRAPHICS**

Q. Do you speak a language other than Er	nglish at home?		
Yes	01		
No	02		
DK	98		
Refused	99		
Q. INTERVIEWER TO RECORD FACILITY IN THE ENGLISH LANGUAGE			
Understands English very well / fluently	01		
Understands English quite well	02		
Understands English quite poorly	03		
Understands English very poorly	04		
Q. Which language other than English do you speak at home? Single response Record language most often spoken at home.			
Italian	01		
Greek	02		
Cantonese	03		
Arabic	04		
Vietnamese	05		
Mandarin	06		
Other (SPECIFY)	07		
Don't know	00		
	98		

Workplace compliance campaigns need to cater to language and

these?	cultural needs of	workers.
Q. What is the h	nighest year of primar	y or secondary school you have completed?
Year 12 or equiv	valent	01
Year 11 or equiv	valent	02
Year 10 or equiv	valent	03
Year 9 or equiva	alent	04
Year 8 or below		05
Did not go to sc	hool	06
Don't know		98
Refused		99
Q. Have you cor	mpleted any educatior	nal qualification, including a trade certificate?
Yes		01
No		02
Don't know		98
Refused		99
Q. What is the le		alification you have completed? <b>Do not</b>
Trade certificate	9	01
TAFE Associate	Diploma	02
TAFE Advanced	Diploma	03
Bachelor's degre	ee	04
Master's degree	:	05

ABS Census 2006 and ASCC

Source

Why are we using

PhD	06	
Other (specify)	07	
Don't know	98	
Refused	99	
Source of Questions	ABS Census 2006	
Why are we using these?	To obtain information on educational level of respondents	
Will tell us	Educational qualification of respondents to assist in targeting health and safety information	
Q. Are you current	ly attending a school or any other educational institution?	
Yes, full time	01	
Yes, part time	02	
No	03	
Don't know	98	
Refused	99	
Source of Questions	Modified from ABS Census 2006	
Why are we using these?	To obtain information on whether respondent is studying part time or full t while working.	
What should these tell us?	This will identify respondents who are studying and working at the same ti	
Q. What is your age	?	
[RECORD NUMBER	]	
Don't know	98	
Refused	99	
Source of	ASCC	

#### Ouestion

Why are we using

it?

To obtain a continuous age variable and to ensure respondents meet age quotas if applied. This will also

provide information for better targeted prevention activities if there are differences in exposures by age (for example, psychosocial exposures have been reported to vary by age).

It also serves as a screen for current participation in

education questions.

Will tell us

Survey participant's age at the time of survey

Q. Into which of the following ranges does your personal pre-tax income fit? Read out. Single response.

Under \$30,000		01
\$30,000 to \$49,999		02
\$50,000 to \$74,999	9	03
\$75,000 to \$99,999	04	
\$100,000 to \$149,9	999	05
\$150,000 or over		06
Don't know		98
Refused		99
Source of Question	Sweeney Research	
Why are we using it?	are we using This question is included as an indicator of seniority of respondent's occupation within the industry. The salary figures are intended for comparison between	

between different industries.

Will tell us

Annual pre-tax income of respondent (in ranges)

respondents within the same industry. This is because salary ranges are not directly comparable