# OCCUPATIONAL EXPOSURES OF AUSTRALIAN NURSES METHODOLOGY REPORT





**JULY 2008** 







# Occupational Exposures in Australian Nurses: Methodology Report

# Acknowledgement

This research was commissioned by the Office of the Australian Safety and Compensation Council (the Office of the ASCC), in the Department of Education, Employment and Workplace Relations (DEEWR). This research was undertaken by Dr Tim Driscoll (MBBS BSc (Med) MOHS PhD FAFOM FAFPHM) who also provided this research report. Dr Driscoll is an independent consultant in epidemiology, occupational health and public health. He is a specialist in occupational medicine and public health medicine, being a fellow of the Australasian Faculty of Occupational and Environmental Medicine and the Australasian Faculty of Public Health Medicine.

The author would like to thank Dr Anthony Hogan and Ms Su Mon Kyaw-Myint of the Office of the ASCC and Ms Ged Kearney of the Australian Nursing Federation for their significant contribution to the development of the project. He would also like to thank the staff members of the Office of the ASCC and the ANF who contributed to the development of questions, commented on the draft version of the questionnaire and provided information for the report, and Mr Chris Rowen, from i-Link Research Solutions Pty Ltd, for his help and advice during the project.

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ISBN 978 0 642 32779 6

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# **Glossary**

AMRO Australian Market Research Organisation

ANF Australian Nurses Federation

ASCC Australian Safety and Compensation Council

CATI Computer Assisted Telephone Interview

NIOSH National Institute of Occupational Safety and Health

NOHSC National Occupational Health and Safety Commission

OHS Occupational health and safety

# **Executive Summary**

# **Background**

Under the Australian Safety and Compensation Council (ASCC) Business Plan, the Office of the ASCC is required to develop strategies for occupational disease prevention, refine targets and identify effective interventions for agreed priority diseases, including a national approach for the surveillance of exposure to hazards. In July 2006, the ASCC's Occupational Health and Safety Working Group requested that the Office of the ASCC conduct a series of concept studies that would provide examples of the kinds of data that could result from an occupational disease hazard exposure surveillance project. The study reported in this paper examined several concept issues pertaining to the surveillance project, using nurses as a focus.

Nurses are expected to potentially experience exposure to a wide variety of important physical, chemical, biological, psychosocial or other hazards in the course of their work and are therefore an important occupational group on which to focus in terms of monitoring exposures.

Recently, the United States National Institute of Occupational Safety and Health (NIOSH) has been assessing the feasibility of undertaking further exposure surveillance on a broad scale, and has developed and tested a set of options and survey instruments – the National Exposure at Work Survey. One of these instruments has been developed to target health workers. A trial has suggested that the core module and related modules could be validly completed both on paper and on-line, but that on-line completion gives better completion rates. However, the feasibility of obtaining self-report information on-line in Australia has not been assessed.

The aims of this project were to:

- > Examine issues associated with
  - > Conducting an industry specific study
  - Conducting a surveillance study on-line and evaluating the potential value for money offered by such a method compared to other data collection options;
- > Evaluate the benefits (particularly data quality) of using an existing industry specific hazard exposure surveillance tool;
- > Identify the type and prevalence of occupational exposures of Australian nurses.

This report covers the methodological aspects of the project. The survey results are presented in a companion report.

#### Methods

Potential participants were all members of the Australian Nursing Federation. The survey was conducted completely via the internet. Participants were contacted via email, with a covering letter from the Australian Nursing Federation and an embedded link to allow direct connection to the survey form. The survey was hosted on line by i-Link Research Solutions Pty Ltd.

# **Findings**

The results of this project suggest an on-line approach is a viable method for conducting a survey of occupational exposures. The main strengths of this approach are savings in terms of resources required to recruit participants, follow up non-responders, collect the data and produce a clean data set; flexibility in terms of recruiting more participants; and speed with which the data are available for analysis. The main disadvantages appear to be exclusion of persons without email and internet access (which should be less of an issue depending on the exposures being examined and the approaches available for participant selection); problems with contacting potential participants due to software issues (which should be minimised with the use of more straightforward contact and login procedures); and ethics considerations in terms of supplying contact details of potential participants to a commercial research provider (which should be able to be overcome with more lead-in time, depending on the source of the contact details).

# **Chapter 1: Introduction**

# **Background**

The 73rd meeting of the Workplace Relations Ministers' Council (WRMC) endorsed the Australian Safety and Compensation Council (ASCC) Business Plan. Item 14 of the 2006- 2007 Business Plan refers to National OHS Strategy National Priority 3: Prevent occupational disease more effectively. Under Item 14 the Office of the ASCC is required to develop strategies for occupational disease prevention, refine targets and identify effective interventions for agreed priority diseases, including a national approach for the surveillance of exposure to hazards.

In July 2006, the ASCC's Occupational Health and Safety Working Group requested that the Office of the ASCC conduct a series of concept studies that would provide examples of the kinds of data that could result from an occupational disease hazard exposure surveillance project. The study reported in this paper examined several concept issues pertaining to the surveillance project, using nurses as a focus.

Nurses are expected to potentially experience exposure to a wide variety of important physical, chemical, biological, psychosocial or other hazards in the course of their work. Australian studies have considered hazardous occupational exposure of nurses, either focusing on nurses or considering them along with other occupational groups. These studies have examined hazards such as sharps and associated infections <sup>1-6</sup>, violence <sup>7-10</sup>, and psychological stressors <sup>11-13</sup>. Nurses are therefore an important occupational group on which to focus in terms of monitoring exposures.

In the United States, the National Institute of Occupational Safety and Health (NIOSH) has been conducting exposure surveillance in various forms for several decades, with major general workforce surveys conducted in the 1970s and early 1980s. Recently, NIOSH has been assessing the feasibility of undertaking further exposure surveillance on a broad scale, and has developed and tested a set of options and survey instruments – the National Exposure at Work Survey <sup>14</sup>. One of these instruments – The National Exposures at Work Employee Core Module - has been developed to target health workers, with links to other related modules that cover specific exposures. A trial has suggested that the Core module and related modules could be validly completed both on paper and on-line, but that on-line completion gives better completion rates <sup>15</sup>. However, the feasibility of obtaining self-report information on-line in Australia has not been assessed.

# **Project aims**

The aims of this project were to:

- > Examine issues associated with
  - > Conducting an industry specific study;
  - Conducting a surveillance study on-line and the potential value for money offered by such a method vis-à-vis other data collection options;
- > Evaluate the benefits (particularly data quality) of using an existing industry specific hazard exposure surveillance tool; and, as a useful by product;
- > Identify the type and prevalence of occupational exposures of Australian nurses.

# Coverage and structure of the report

This report covers the methodological aspects of the project. The survey results are presented in a companion report<sup>16</sup>. Detailed analyses of specific areas will be presented in later reports. The current report has five chapters. The Introduction provides information on the background to the project. Chapter 2 describes the methods used to obtain information. Chapter 3 presents findings related to the survey process, Chapter 4 presents a summary and conclusion and Chapter 5 provides a list of references. Other relevant information is presented in the appendices.

# **Chapter 2: Methods**

# Summary of the survey method

The survey was conducted completely via the internet. Participants were contacted via email, with a covering letter from the Australian Nursing Federation and an embedded link to allow direct connection to the survey form. The opening page of the web site asked for the participant to enter their email address and then wait for a return email to be sent to them. This return email contained a link to the survey that was specific to the participant, and allowed the participant to complete the form at more than one sitting. This was thought to be important because the survey was reasonably long, and it was anticipated that the survey would take between 20 and 30 minutes to complete. The survey was hosted on line by i-Link Research Solutions Pty Ltd.

# Recruitment of participants

Participants were members of the Australian Nursing Federation. The Federation covers all States and Territories in Australia. Members are approximately 55% of Australian registered nurses, with membership from all categories and levels of nurses, and coverage of all sectors – aged, community, public and private. The majority (60% – 65%) of Federation members are public sector employees, which reflects the employment distribution for all nurses in Australia. The only known area in which Federation members probably have a different distribution to all nurses is in terms of gender – 10% to 15% of Federation members are male (depending on the jurisdiction), compared with 9% of the general nursing workforce.

The Office of the ASCC requested involvement of approximately 1,000 subjects in the survey. Since the on-line recruitment approach had not been tried in this context previously, it was not clear what participation rate could be expected. It was expected that the Federation would have email details for at least 10,000 members and, since there were minimal costs involved in including extra persons in the survey, it was decided to include up to approximately 10,000 persons, with weighting towards the larger jurisdictions. Where the jurisdiction had more members than the number to which they had been asked to send email invitations, members to whom emails were sent were selected randomly from the members' database held by each jurisdiction. This selection process was undertaken by the database staff in each jurisdiction. Where the jurisdiction had about the same number of members as the number to which they had been asked to send email invitations, emails were sent to all members. The project officer did not have any knowledge of the name or contact details of any of the persons approached by the ANF.

Emails with an embedded letter about the study from the Australian Nursing Federation were sent to participants. The email also contained a copy of the Participant Information Sheet, which provided more detailed information about the study and confirmation of ethics clearance. In some jurisdictions, a significant proportion of the emails bounced back because the addresses were no longer active. In these jurisdictions, the database managers were asked to randomly select an equivalent number of members from those who had not been selected the first time and to send the invitation to them. This happened in some, but not all, jurisdictions. This process was only undertaken once. In addition, emails could have been blocked by firewall or spam-detection programs, but there is no way of knowing to what extent this occurred. Therefore, the number of potential participants who actually received an email invitation is not known. A summary of the jurisdiction-specific aspects of the survey is shown in Table 1. Note that none of the allocated potential participants from the ACT, Northern Territory or Western Australia were actually sent emails.

The intention was to begin the survey on Monday 13th February 2007 and allow persons two weeks to complete it. However, for logistical reasons, some jurisdictions were unable to send the emails to participants until the week after the intended start date. Therefore, the survey was kept open for an extra two weeks. Reminders were to be sent to all participants approximately one and a half weeks after the initial invitation, but it is not clear what proportion of the participants actually received the reminders. The survey closed on Sunday 11th March.

Table 1 Summary of recruitment by jurisdiction.

Jurisdiction	Date sent	Number allocated	Number sent originally	Number undeliverable	Final number sent
ACT	-	200	0	0	0
NSW	20/2/20 07	2,500	2,500	?	?
NT	-	100	0	0	0
QLD	13/2/20 07	2,500	2,467	890	1,577
SA	14/2/20 07	1,000	1,000	50	950
TAS	16/2/20 07	500	500	?	?
VIC	13/2/20 07	2,500	2,500	?	?
WA	-	1,000	0	0	0
Total		10,300	8,967	?	?

# The survey instrument

The survey instrument was based (with permission) on the Employee Core Module of the NIOSH National Exposures at Work Survey <sup>14</sup>. A copy of the original NIOSH survey instrument is shown at Appendix 1; and a copy of the revised survey instrument, as used in the current survey, is shown at Appendix 2. The NIOSH survey considered some areas that were not of direct relevance to Australia or to this project. Therefore, the survey was adapted to the Australian context. This was done by modifying the list of occupations and work departments (questions 3 and 6 in the original survey; questions 3 and 5A in the new version of the survey instrument), and deleting some questions related to tasks, behaviours or other areas not relevant to the Australian context. These deleted questions covered some or all of:

- > the length of time working at the facility (question 5 in the original version of the survey instrument);
- > medical evaluation (questions 58 to 60);
- > demographics (questions 62, 63, 65 to 69);
- > specific tasks and exposures (questions 70, 71, 75 to 79); and
- > respondent feedback (questions 81 to 84).

The wording of some of the questions had to be modified for use in a general survey, because the original version was designed to be used at a particular facility rather than to be sent to individual workers. Changes to the wording of some other questions were made to improve the ease of reading, and in a few cases several questions were combined into one multi-choice question because this seemed more consistent with the overall format of the survey instrument. In addition, several questions were included in the revised version to cover areas not specifically addressed in the NIOSH version of the survey instrument. These were:

- the size and geographical location of the main facility (questions 20 to 22 in the new version of the survey instrument);
- > detailed questions on sharps injuries (questions 39 to 45);
- > stress and fatigue (questions 58 to 60B);
- > occupational conditions in patients (questions 68 and 69); and
- > work-related disorders in the participant, including compensation and return to work plans (questions 70 to 84).

The draft version of the revised survey instrument was developed in a Word document. This was sent to the hosting company, which adapted it for use in an on-line environment. This adaptation included limiting the allowed responses to specific questions to ensure clearly invalid responses could not be made. The survey instrument was designed so that participants would not be asked questions that were not relevant to

them (e.g. questions that would be relevant only if a particular answer had been given to a previous question). The survey was then checked for errors of content or formatting, misleading or ambiguous questions, and incorrect flow from one question to the next, and trialled by persons from the Australian Nursing Federation and the Office of the ASCC. On the basis of this checking and the trial, changes were made by the hosting company and checked by the project leader, resulting in the version that was used in the survey.

# Completion of the survey

Participants completed the survey on-line. This was managed by the hosting company, which provided weekly updates on completion numbers.

# Data cleaning and provision of data

The hosting company cleaned the data (although minimal cleaning was required because the controls for each question were designed to exclude invalid data). The raw data set was supplied to the project leader as a comma-delimited file and as a Statistical Package for the Social Sciences (SPSS) file.

# **Analysis**

The provided SPPS file was transformed into a Statistical Analysis System (SAS) file, and the analysis performed in SAS using SAS version 9.1<sup>17</sup>.

#### **Ethics**

The project received formal ethics clearance from the Human Ethics Research Committee of the University of Sydney (note that the Committee, like all such committees, charged for this consideration). As mentioned, the email sent to prospective participants contained a copy of the Participant Information Sheet. This sheet was also available from the web site containing the survey. A copy of the Participant Information Sheet is shown in Appendix 3.

# **Chapter 3: Findings Related to the Survey Process**

#### Introduction

This section describes aspects of the study related to the recruitment of subjects, development of the survey instrument, completion of the survey and related matters. The results of the data analysis are presented in the companion report to this report<sup>16</sup>.

# Choice of survey method

One of the key issues identified in initial project scoping studies commissioned by the Office, and by stakeholders, was the financial sustainability of any national hazard exposure surveillance program. The main factors affecting the sustainability are the type of survey and the approach to recruitment, and these two factors are clearly inter-related. One of the concepts to be examined, therefore, was lower cost research methodologies, and one such method is on-line research.

There are three common ways to gather data in a population survey:

- > computer-aided telephone interview (CATI) survey;
- > mail or paper-based survey;
- > on-line survey.

#### Computer-aided telephone interviews

Computer-aided telephone interviewing has been used as a means of collecting data on work exposures elsewhere in the world. This has probably been more commonly done as part of studies of particular exposure-diseases relationships rather than as part of exposure surveillance <sup>18, 19</sup>, but there has been some work done on using this approach to collect information as part of an occupational exposure surveillance approach (e.g. in New Zealand <sup>20</sup>, Denmark <sup>21</sup> and Canada <sup>22</sup>). Information on exposures in the general population has also been collected using this method <sup>23</sup>. These are a well established methodology but are resource intensive because an interviewer is required for each participant. The interviewer can directly enter data into a database, thereby avoiding the need for later data entry.

#### Paper-based surveys

Paper-based surveys have been used previously by NIOSH in their exposure surveillance studies. They may or may not involve an interviewer. In addition to the cost of the interviewers, paper-based surveys require the data to be entered at a later time, which means considerable resources are needed. Also, there is probably a greater chance, compared to the other survey methods, of data errors occurring.

#### **On-line surveys**

On-line surveys have not been used (at least on a significant scale) in exposure surveillance studies. However, on-line surveys have some major advantages over other survey techniques. Firstly, once the survey instrument is developed, there are minimal costs in obtaining the data from each participant because interviewers are not needed, providing a large saving in terms of personnel time. This means that the cost of collecting the data should be lower, and the marginal cost of collecting information from more participants is minimal. Secondly, the survey can be completed at the convenience and pace of the participant, probably increasing participation and improving the validity of the data that are collected.

The on-line approach also has several disadvantages. Firstly, only people with an email address can be included, which probably excludes a higher proportion of older persons, recent migrants and poorer persons. These persons are more likely to work in jobs with worse exposures and be employed by businesses with less capacity to make improvements in OHS, and presumably these are just the sort of jobs and businesses that many surveys would seek to target. Quota sampling is likely to be able to overcome this to some extent, but not completely. Secondly, there is potentially a lack of control of who is completing the survey (e.g. the same person could enter data more than once, or someone not targeted by the project could obtain the web address and enter data). There are various techniques that can be used to minimise this problem and it is not likely to be a major issue in any case. Thirdly, the use of spam filters and different operating systems (as discussed later) can interfere with attempts to contact potential participants, or for potential participants to complete the survey on line. Again, there are approaches that can be adopted to decrease the potential of this problem.

On balance, there is a lot to recommend the use of an on-line approach in certain circumstances. These include in particular where the working group being targeted is likely to have a high proportion of members with email capability; and where a list of names of potential participants can be made available to the group hosting the web site.

# Recruitment of participants

The goal of the concept stage of the surveillance project was to provide the Working Group with examples of data that could be derived from specific study designs. At the National Surveillance Workshop held in Sydney (June, 2006), the National Institute of Occupational Safety and Health (NIOSH) in the United States offered Australia use of its health and community sector survey. NIOSH had spent \$US 1.5 million developing and validating the survey. The purpose of this concept study was then to examine the feasibility of using an industry (health and community sector)-specific survey and to consider the kinds of data that

could result from such a study. The target workforce was therefore health and community service workers.

Initially, a series of hospitals was considered as potential sites for the study. However the experience of researchers at the NIOSH was that researching this field through hospitals was fraught with difficulty, particularly if a national estimate of exposures was required. The required sampling frame need for such a study (e.g. randomly selected workers stratified by profession/occupation, age, sex, state, region, type of facility, facility size and so on) was sufficiently complex to exhaust the available budget for the concept stage of the project. Given that no decision had been taken at this time to adopt an industry focus, the use of resources in this fashion could not be justified. Second, the NIOSH project, being multi-institutional, confronted such significant problems with multiple ethics applications as to prevent the project from going forward in a timely fashion.

As an alternative to a site-based methodology, the Office turned to a worker-centred methodology. At the same time, the Australian Nursing Federation approached the Office concerned about workplace exposures for nurses. A health and community sector exposure survey centred on nurses provided a useful vehicle for the Office to examine exposures from an industry perspective, using nurses as workers representative of the industry.

# Common approaches to recruitment

#### Recruitment via random digit dialling

To gather data on a representative sample of respondents, random digit dialling of respondents from telephone listings are commonly used to find appropriate respondents. Telephone numbers are randomly called and respondents are generally screened for suitability to participate in the study. Depending on the demographics of a research group, certain groups of respondents can be difficult to locate in the community. Within a normal population study, it is routine for a data collection company to make 20-30 telephone calls to secure a suitable person who is prepared to complete the telephone interview. Recruitment costs per respondent might also be expected to be of the order of \$20 or \$30 per secured interview.

#### Recruitment via respondent lists

An alternative method for accessing respondents is to use existing respondent lists. Lists commonly exist when researching people who are members of a specific organisation or workplace. Commonly such potential respondents have agreed to participate in research activities or the organisation secures such agreement prior to the research project being initiated. The benefits of such lists are that they offer a very low cost method for identifying and approaching the respondent group.

Coupled with pre-existing support from sponsoring bodies, response rates to studies can be very high. Respondents can be approached by telephone, or physical or electronic mail.

Lists are resource intensive to maintain. A proportion of members will regularly change physical or electronic addresses and/or telephone numbers. Constant resources are required to keep such lists up to date and they quickly become out of date. Even having access to accurate lists of ready respondents does not guarantee high survey response rates. Background data provided by the field supplier for this study indicated that even with highly resourced lists, good response rates at best are in the order of 25%.

#### Use of trusted persons or organisations

One commonly used method for enhancing response rates is to seek the endorsement of trusted persons or organisations. The thought behind this strategy is that organisational members are more likely to respond to a study if they trust the person running or endorsing the study. The trust factor is thought to resolve issues of suspicion and support the legitimacy of the proposed research. Trusted persons' models particularly have been developed as recruitment strategies for clinical research where respondents have been seen to be resistant to efforts to assist them <sup>24</sup>. They are also commonly used for projects concerned with vulnerable groups such as New Zealand Maoris. In this study, the ANF served as a trusted person. It was theorised that the Federation would have influence with nurses and be able to encourage them to participate in the study. Further they had access to lists of members and their email addresses that had reasonable accuracy. The ANF issued invites to members to participate to this study and to log on to a website for this purpose. This was seen to be an important strategy to support the project. However, in itself it is not enough to secure a very high level of support. In a better resourced, sector-based study, not subject to the present timelines, the ANF would have undertaken more promotional work such as newsletter stories and the like, to build awareness and support for the study. Nonetheless, compared to a CATI method, access to ANF lists greatly reduced the recruitment costs for this concept study.

#### Identification of potential participants

Australian Nursing Federation members were chosen as the target population for this survey because the ANF comprises a representative majority of the Australian nursing workforce and it was perceived that having union support for the survey would maximise the participation of subjects. Contact with the potential participants was via a letter from one of the Federation executives. Although there was no independent assessment of the correctness of this perception, this approach seems sensible and does not appear to have any major disadvantages as long as the Federation members are representative of most Australian nurses, which appears to be the case. For workforces with low union

membership, this probably would not be the most appropriate manner of subject selection and other approaches, such as approaching workers via workplaces identified using industry membership, might be better. However, this would create some organizational and ethics difficulties in terms of obtaining email details. This issue is likely to be an increasing problem in Australia (and elsewhere) because of the decrease in employee membership of worker representative bodies, increasing self-employment, and reasonably low membership of industry bodies by companies in many industries.

#### Using email as the form of contact

Given the availability of a trusted person to assist with recruiting and access to email addresses, email recruiting of nurses provided a straightforward way to enter the field. In addition, since on-line recruiting was being used, it followed that an on-line survey could be used. Potential participants were identified via the membership list in each Federation branch. These lists were believed to be complete and up to date. The project had initially been envisaged to involve a mail-out to Federation members, with a link included in the letter that the respondents could use to go to the survey on the web. However, advice from the company hosting the site was that there would be a lot of value in making the initial contact via email. This would allow the link to be in electronic form, allowing persons to connect to the survey simply by clicking on the link. This avoided problems with people making errors typing in the web address, which appears to be a big factor in persons not completing surveys. In addition, this potentially allows each person to have their own (but de-identified) link, so a reminder would not have to go to people who had previously completed the survey. The email approach also avoided printing and posting costs associated with two mail-outs (as follow-up was planned), which could be expected to be of the order of between \$10,000 and \$20,000 for 10,000 persons. A third advantage was timeliness - contact was able to be made more quickly because of the immediacy of email traffic compared to the slower postal system. It was hoped using an email approach would facilitate persons connecting to the web site, thereby encouraging them to complete the survey. The main perceived disadvantage of the email approach was that persons without an email address, or persons whose email address was not up to date, had to be excluded.

The preferred approach of the hosting company was that the emails be sent by them, as this would allow each potential participant to be assigned a unique link to the survey. However, this would have required Federation members' contact details to have been provided to the company. This raised ethics difficulties and it was decided at an early stage that this approach would not be used. An alternative would have been for the hosting company to generate 10,000 individual links and for these to be embedded separately in the emails being sent out. However, this would have required considerably more co-ordination with, and involvement from, the Federation database managers than had been

anticipated, and opened up considerable possibilities for error. Therefore, the alternative initially used was for the same link to be embedded in all the emails. All participants used this link to access the survey site. Subsequent to this decision, concerns were raised that the survey may take too long (an anticipated 20 to 30 minutes) for some people to complete at a single sitting. Participants would not be able to return to complete the survey unless they had a unique identifier or link to allow this. Therefore, the final approach that was adopted was a two-stage process. The same link was sent to all potential participants. This allowed the participant to go to the opening page of the web site, where they were asked to enter their email address. In response, a unique link was automatically sent to the participant's nominated email address without any personal details being known to the company or the project officer. The participant used the new link to reconnect to the site and could do this multiple times, allowing the questionnaire to be completed at more than one sitting.

This approach had the potential disadvantage that participants would have to wait for the unique link to be sent to them, and if there was a problem with that process, or it took a considerable time, the potential participant might lose interest and not complete the survey. Additionally, it meant that the participant had to supply personal details (in this case their email address) to a commercial third party. Despite the reassurances that all email records would be destroyed as soon as the data collection phase of the study was completed, potential participants may have baulked at providing such personal information. The link was sent within 30 minutes, and feedback from participants (based on those who contacted the project officers when they had difficulty accessing the site) suggested that the process work reasonably. Nearly 30% of persons who visited the main page (presumably with the intention of completing the survey) did not even start the survey, but the reasons for this are not known.

#### Involvement of potential participants

The true number of participants who were originally sent invitations to complete the survey is not certain, and the number who received the invitations is less clear, as a considerable proportion of email invitations bounced back because the email address was no longer current, the mailbox was full, or for other similar reasons. The extent to which this occurred appeared to vary between jurisdictions. For example, as mentioned earlier, of the first 2,467 emails sent out in Queensland, 890 were undeliverable (36%), whereas in South Australia 50 of the 1,000 emails were undeliverable. When considering the importance of this information, it should be kept in mind, as mentioned earlier, that a message could be deliverable but not actually received, because the message was blocked by a firewall or spam-detection program. Therefore, the total number of potential participants who received invitations is not known.

# Development of the survey instrument

The survey instrument was heavily based on a questionnaire developed by NIOSH for use in the National Exposure at Work Survey <sup>14</sup>. It was well-suited for use in Australia and for use in an on-line environment. Some changes were required to adapt the questionnaire for use in Australia, to delete aspects that were not relevant to or appropriate for the current survey, to modify questions to improve their utility, to cover areas in more breadth or depth, and to cover new areas.

The use of a questionnaire that had already been developed and tested was of great benefit in this project. Considerable time and effort were saved because questions didn't have to be tested and validated. Using validated questions maximised the probability that the collected data would be reliable and valid. In addition, using an existing questionnaire meant there was likely to be greater potential for comparison to similar data collected at other times and in other populations. Finally, the fact that, where possible, the original questionnaire used well-known, validated questions for specific areas also made it more likely to be directly useable in the Australian context. Future projects would benefit from a similar approach of adapting other questionnaires if there are appropriate instruments available.

Questions were added to the original questionnaire to cover areas that were not covered in depth, or not covered at all, in the original version. These areas included sharps injuries, bodily fatigue and discomfort, knowledge of the connection between work-related exposures and the development of various disorders, workers' compensation and return to work programs. The addition of these questions meant the questionnaire was longer than it would otherwise have been. This was balanced by the deletion of some of the original questions. The final questionnaire had 88 questions, some of which had multiple parts.

The rationale for using a fairly long questionnaire was that the time and resources required to conduct the survey would not often be available, so as much useful information as possible should be sought from the single questionnaire that was used. This needed to be balanced against the likelihood that completion and accuracy are likely to diminish as the length of the survey increases. It was expected that the survey would take approximately 20 to 30 minutes to complete, which was considered a reasonable completion time in terms of a compromise between these various factors.

The information letter to potential participants stated that it was expected the questionnaire would take 20 to 30 minutes to complete. It is not clear to what extent this may have discouraged persons to attempt the questionnaire. The mechanics of completion of the questionnaire were simple. The layout was good and the flow from question to question logical. Three quarters of the participants completed the survey in less than 30 minutes and a third completed it in less than 20 minutes, suggesting the information in the email was correct and that the

questionnaire length was not excessive. Persons who started the survey but did not complete it represented 15% of those who attempted the questionnaire.

The balance between the level of detail gained from the investment of time and resources and the maximisation of participation, should be at the forefront of decisions made regarding questionnaire length. Twenty to thirty minutes seems an appropriate length of time to aim for.

# Completion of the survey

A key limitation of on-line recruitment which relies on ad hoc mailing lists (as distinct to well maintained on-line research panels) is a potentially low response rate. Within the market research industry, response rates of 4% are considered good (C Rowen, personal communication). This means that in order to secure a reasonable sample size, a much larger number of invitations need to be issued. By comparison with the challenge of CATI recruiting discussed above, online recruitment offers a cost-effective alternative for securing survey respondents. In addition, in population studies seeking a respondent pool of 1,000 or more respondents, the upfront costs of CATI can be considerable, particularly when the costs of a 20-30 minute interview are in addition to recruitment costs. In comparison, data collection costs associated with on-line data collection are quite low.

There were a number of factors that would have worked to decrease the response rate in this particular survey. These included:

- lists of email addresses held by the Federation and used by them to contact potential respondents had inaccuracies, which meant that some of the invitees would not have received the invitation to participate.
- > firewall or spam-detection programs may have excluded the invitation to participate for some potential participants.
- > recipients had various problems logging on to the survey. In some cases the person misunderstanding what they needed to do, and in some the email sent in response to their initial login to the site did not arrive. This may have resulted from software issues such as the messages being blocked by a firewall or spam-detection program, or older versions of operating systems being in place.

The persons who didn't receive the initial invitation or the follow-up email from i-Link did not have the opportunity to participate in the survey and so should not be included in the total number of potential participants. However, the number affected by one or more of these problems is not known.

The completion rate of the questionnaire was actually better than is commonly experienced with surveys of ad-hoc mailing lists. The actual response rate is uncertain for the reasons discussed earlier. Regardless of

the number who received invitations, the key factor in terms of the usefulness of the data they provide is the extent to which the respondents represent all the population from which they are drawn – in this case, the members of the Federation (and, more broadly, the population of nurses in Australia).

The available information suggests that the survey participants did have similar characteristics, in terms of age and sex, to ANF members and to the broader Australian nursing community. Thus the information obtained should reasonably reflect the exposure experience and opinions of the majority of Australian nurses. This is considered in more detail in the companion report<sup>16</sup>.

Participation problems in this survey could be partially avoided through a different approach to logging into the survey, allowing the respondent to complete the survey when they first connected to the on-line site. This approach was not used in this survey primarily because the company hosting the survey (i-Link) did not have access to the list of email addresses from the Federation and so could not send out individual email links embedded in the first contact letter. The list was not made available by the Federation for privacy reasons, but with a longer lead-in to a future study it may be possible to overcome privacy concerns of the persons who own the list. This is particularly the case if future surveys are done as a member of the Australian Market Research Organisation (AMRO). As a member of this body, the survey group would be party to AMRO's agreement with the Privacy Commissioner which would permit the field supplier direct access to and use of email addresses for the sole purposes of the study (provided the owner of the list agreed to supply this information).

Note that the direct approach of using supplied email addresses would still have problems by not being able to make initial contact with some potential respondents. An alternate approach would be for a commercial survey organisation to contact people until the required number were achieved, using contact information from other sources. This might result in higher participation numbers if the persons had previously indicated that they were agreeable to being involved in surveys. However, it would require greater effort to ensure and confirm that the included sample were representative of the population of interest.

# Representativeness, validity and precision

The representativeness of the sample, the validity of the data and the precision of the resulting estimates are key issues in any survey.

<u>Representativeness</u> covers the extent to which the people who participated in the survey are similar to the whole population from which they come. If they are similar, then their answers can be presumed to be similar to those that would have been provided if everyone in the population took part. If that is the case, conclusions made on the basis of

the information supplied by the participants should be applicable to the whole population (in this case, all nurses in the ANF and, more broadly, all nurses in Australia). From the information available, it appears that those who took part in this study should be reasonably representative of all ANF members, and also representative of the whole Australian nursing workforce. The sex distribution of participants (86% female) was similar to that of all ANF members (92%) and to the Australian workforce (91%), with a slightly lower percentage of females in the participants. The age distribution was very similar (Table 2). A more detailed consideration of this issue is presented in the companion report<sup>16</sup>.

Table 2 Age of participants compared to ages of ANF members and Australian nursing workforce.

Age	ASCC survey	ANF membershi p	Australian workforce
15 – 24	5.6	6.1	4.2
25 – 34	17.3	18.2	18.4
35 – 44	27.8	25.5	28.8
45 – 54	35.3	32.7	33.0
55 +	14.1	17.6	15.5
Total	100.0	100.0	100.0

<u>Validity</u> covers the extent to which the obtained data accurately reflect the concept that the data describe. This can be assessed by checking internal consistency and logic (the extent to which data items that logically should agree, or should predict the value of another variable, actually do so), and externally (by confirming through checking that the data obtained through the survey agree with data independently collected on the same concept). For this survey, internal validity was checked for certain data items, and this analysis suggested the data were valid. This is described in the companion report<sup>16</sup>. It was not possible to assess external validity for this study.

<u>Precision</u> covers the extent to which the data are uncertain. If random samples of people are taken from the same population, one might expect that they would give the same answers to the same questions. Selected people might have slightly different characteristics, or the way the question is perceived might change slightly, or various factors might affect the mood of the person on the day, and so on. The more similar the answers between samples, the more <u>precise</u> the information is. Precision is increased by sampling more people; i.e. bigger numbers of people provide more precise data. Above a certain number, the gain in precision becomes minimal. For most common occurrences, the precision obtained from using about 1,000 people is of the order of 4% (C Rowen,

personal communication), so there is little to be gained by using more participants unless relatively rare factors are to be examined, or the analysis needs to take into account quite a number of variables in the same analysis.

As mentioned in the previous section, the information that is available suggests that the respondents are reasonably representative of the population of nurses in the Federation and, probably, in Australia. A sample of 900 to 1,000 should provide the required precision for most areas being assessed in a survey, so the information collected in this study should have appropriate precision. Investment in recruiting a greater number of people therefore is unlikely to contribute substantially to the usefulness of the information collected.

#### The role of the web site host

The online methodology required self-completion of an electronic questionnaire, necessitating hiring a host organisation. There are various companies that provide this service. The company used in this study was chosen on the basis of previous field experience and price.

The revised questionnaire was provided as a Word document to the host company for conversion into web format. This conversion appeared to be accomplished through a combination of direct conversion from Word and re-typing of some questions. This re-typing introduced a number of minor but unexpected formatting, content and spelling errors that were identified during the checking process. Identification, recording and explanation to the company of the errors and the required corrections required much more time than was anticipated. Project officers conducting similar studies in the future should ensure that the converted documents are rigorously checked.

Other problems identified in the checking stages included problems in the supplied version (such as ambiguous or misleading wording; relevant areas not covered by the included questions) and problems in the webbased version (such as not skipping questions or parts of questions appropriately, skipping questions inappropriately, and change in format). These problems were subsequently corrected.

As mentioned, minimal cleaning of the raw data set was required because the controls for each question were designed to exclude invalid data. The raw data set supplied to the project leader was basically free from missing data or transcription errors, and so was ready for analysis with less effort than anticipated at the beginning of the study. No basic coding was required because this was done automatically at the time of completion of the questionnaire by respondents. This is a major advantage of using an electronic questionnaire, provided enough effort has been invested in developing appropriate questions and applying appropriate and comprehensive coding masks to prevent missing data and the entry of obviously invalid data (e.g. requiring numeric data entry

for a certain question). Another advantage is that costs are not dependent on the number of participants, so a larger number of persons can be included without significantly increasing the project costs.

The use of a survey instrument that can be completed electronically should be strongly encouraged in future projects. Completion would not necessarily need to be done via the Internet (for example a portable data entry device such as a hand-held computer could be used), although use of the Internet does allow completion to be done away from the workplace and so without the possibility of the employer being aware of the employee's responses.

# Obtaining ethics clearance

There was some uncertainty as to whether the project required formal ethics clearance from a human research ethics committee. The company which owned the site on which the survey was hosted followed the relevant industry ethics guidelines and would have been happy to conduct the survey without additional formal ethics clearance. No identifying information was to be collected as part of the study. The only persons to make direct contact with potential participants were the holders of the contact information.

Based on the National Health and Medical Research Council's guidelines on epidemiological research <sup>25</sup>, the methodology used in the study required formal ethics clearance. This clearance was obtained from the University of Sydney Human Research Ethics Committee. For future projects, it should be noted that any recognised ethics committee can be used, but most charge for this service and the charge may be substantial.

# **Chapter 4: Conclusions**

Exposure surveillance is a focus of the programs of the Office of the ASCC. The project reported here was designed to support this work by trialling a web-based questionnaire to collect information on occupational exposures in nurses, who are expected to potentially experience exposure to a wide variety of important physical, chemical, biological, psychosocial or other hazards in the course of their work. The project had two main aims - to test in Australia the on-line use of an adaptation of the NIOSH Employee Core Module used as part of the National Hazard Exposure and Worker Surveillance study.

The results of this project suggest an on-line approach is a viable method for conducting a survey of occupational exposures. The main strengths of this approach are savings in terms of resources required to recruit participants, follow up non-responders, collect the data and produce a clean data set; flexibility in terms of recruiting more participants; and speed with which the data are available for analysis. The main disadvantages appear to be exclusion of persons without email and internet access; problems with contacting potential participants due to software issues, which should be minimised with the use of more straightforward contact and login procedures; and ethics considerations in terms of supplying contact details of potential participants to a commercial research provider, which should be able to be overcome with more lead-in time, depending on the source of the contact details.

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# **Appendix 1: Original NIOSH Survey Instrument**

National Exposures at Work Survey (NEWS)

Employee Core Module

HEALTH AND SAFETY HAZARD CONCERNS Please indicate the level to which you agree or disagree with the following Strongly Strongly statements. Disagree Disagree Agree Agree The health and safety of workers is a major priority with top management at this facility ..... b. I feel safe from work-related injury or illness in my current work environment..... I usually have enough time to take safety precautions while completing my duties ..... d. I feel free to express my concerns about health and safety conditions to management..... Proper personal protective equipment is made readily available by my employer..... I know how to reduce the risk of accidents and incidents in the workplace..... I am often required to do a task that makes me feel like I might be at risk of getting hurt.....

People working in my department or unit are frequently exposed to

dangerous or risky situations.....

Employees have sufficient access to workplace health and safety training

programs.....

The safety procedures and practices in this organization are useful and

work practices......

I know how to use safety equipment

and standard work procedures. .....

effective ......
Managers and supervisors set proper examples by following safety rules and

 Work areas are periodically inspected to identify potential health and safety

hazards

Page 1

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National Exposures at Work Survey (NEWS) Employee Core Module

Page 2

			_	Strongly Disagree	Disagree	Agree	Strongly Agree
	n.	Unsafe working conditions are corrected in a reasonable time period	l				
	0.	I have received adequate training from my current employer to recognize health and safety hazards in my job					
	p.	I have been trained by my current employer in how to recognize and de with potential incidents of workplace violence		<u> </u>			<b>-</b>
	q.	I could talk to my employer if I had a problem with violence or aggression i my workplace					
	r.	My work area is adequately staffed					
	S.	I can report injuries to my manager without worrying about how it will affect my job		_	٥		
	t.	I can report injuries to my manager without worrying about how it will affect my department's safety record.					
	u.	I worry about reporting injuries to my manager because I may have to take a drug test					
2.	(wh risk and	ase estimate the level of risk ere "1" is no risk and "5" is high ) to you from the following health I safety hazards specifically as y relate to your job or workplace.	No Risk 1	2	3	4	High Risk 5
	a.	Chemical agents in general (e.g., acids, caustics, solvents)					
	b.	Anesthetic gases					
	C.	Hazardous drugs (including antineoplastic agents)					
	d.	High level disinfectants (e.g., glutaraldehyde)					
	e.	Sterilants (e.g., ethylene oxide, hydrogen peroxide)					
	f.	lonizing radiation (e.g., X-rays, gamma rays, etc.)					

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National Exposures at Work Survey (NEWS) Employee Core Module Page 3 Nο High Risk Risk 2 3 1 4 5 g. Machine safety hazards (e.g., exposed moving parts, etc.)..... Non-ionizing radiation (e.g., UV, microwaves, radio-frequency, magnetic/electric fields, etc.) ......... Smoke from lasers and electrosurgery devices..... Infectious disease agents (e.g., tuberculosis)..... k. Blood-borne pathogens (e.g., HIV or hepatitis)..... Latex allergens (e.g., from gloves) ..... m. Needlesticks and other sharps ...... n. Temperature extremes ..... Noise level ..... 0 Poor indoor air quality (e.g., molds, cigarette smoke, vehicle exhaust, etc.)..... Workplace stress ..... Repetitive hand, wrist, arm or shoulder motions ..... Slips, trips, and falls..... Prolonged standing..... u. Lifting/repositioning heavy objects (including patients) ... Violence at work (e.g., assaults, threats, etc.).... w. Acts of bioterrorism at work ..... Other health and safety issues (Please specify).....

Specify:

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National Exposures at Work Survey (NEWS)
Employee Core Module

Page 4

#### JOB AND FACILITY DESCRIPTION

Which of the following best describes your current occupation? Please ✓ only one.

#### Health Services

	ians and Special ioners:	Therap	oists Audiologist		Radiologic Technologist or
	Anesthesiologist	_	Occupational Therapist	_	Technician
	Chiropractor		Physical Therapist		Respiratory Therapy
	Dietician		Radiation Therapist		Technician
	Family or General Practitioner	$\bar{\Box}$	Recreational Therapist	片	Surgical Technologist
	General Dentist	ā	Respiratory Therapist	ш	Other (Specify):
	Internist		Social Worker		
	Nutritionist		Speech-Language Pathologist	Suppo	ort Services
	Obstetrician/Gynecologist		Other (Specify):	Admini	istration:
	Optometrist				Administrator
	Oral or Maxillofacial Surgeon	_	ologists & Technicians		Clerical
	Orthodontist	u	Anesthesia Technician		Human resources
	Pediatrician		Cardiovascular Technologist		Legal
	Pharmacist		or Technician		Security
	Physician Assistant	_	Central Processing Technician		Other (Specify):
	Podiatrist		Dental Assistant	Cleani	na Maintananas and
	Prosthodontist		Dental Hygienist	Food S	ng, Maintenance and Service
	Psychiatrist	□	Dental Technician		Building Engineer/
	Psychologist		Dietetic Technician	_	Mechanical Systems
	Radiologist		Emergency Medical Technician		Technician
	Surgeon		Medical and Clinical	片	Chef or Head Cook
	Other (Specify):	_	Laboratory Technician		Cook
Nurses	and Nursing Support		Medical and Clinical	片	Dishwasher
Staff	and reasong support		Laboratory Technologist	片	Fast Food/Counter Worker
	Home Health Aide		Medical Assistant	ш	First Line Supervisor/ Manager
	Licensed Practical Nurse	_	Medical Records and Health Information Technician		First Line Supervisor/
	Nurse Anesthetist		Medical Sonographer	_	Manager of House-
	Nurse Practitioner	_	Nuclear Medical Technologist	_	keeping/Janitorial Workers
	Nurses' Aide		Occupational Health and	_	Food Preparation Worker
	Orderly/Attendant	_	Safety Specialist	브	Housekeeper
	Psychiatric Aide		Optician	ᆜ	Janitor
	Registered Nurse		Orthotist	Ц	Landscaping/Grounds- keeping Worker
	Other (Specify):		Paramedic		Pest Control Worker
			Pharmacy Technician		Other (Specify):
			Prosthetist	_	Outer (Specify).
			Psychiatric Technician		

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	al Exposures at Work Survey (NEWS) oyee Core Module	Page 5
4.	How long have you worked in this occupation over your entire career (including other facilities)?	<ul> <li>□ Less than 6 months</li> <li>□ At least 6 months but less than a year</li> <li>□ 1-5 years</li> <li>□ 6-10 years</li> <li>□ 11-20 years</li> <li>□ More than 20 years</li> </ul>
5.	How long have you worked at this facility?	<ul> <li>Less than 6 months</li> <li>At least 6 months but less than a year</li> <li>1-5 years</li> <li>6-10 years</li> <li>11-20 years</li> <li>More than 20 years</li> </ul>

Please continue on next page.

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National Exposures at Work Survey (NEWS) Employee Core Module

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6.	In which department(s) or specialty area(s) did you spend any substantial amount of time
	working (i.e., greater than 60 minutes) during the past week (i.e., 7 calendar days) at this
	facility? Please ✓ all that apply.

ADMINISTRATIVE:	HEALTHCARE:		
□ 1. Administration □ 2. Engineering Services □ 3. Food Service □ 4. Housekeeping □ 5. Human Resources □ 6. Laundry Service □ 7. Security □ 8. Safety and Health □ 9. Supply/ Distribution	□ 10. Adult Primary Care □ 11. Anesthesiology □ 12. Audiology □ 13. Cardiology □ 14. Central Processing □ 15. Dental Services □ 16. Dermatology □ 17. Ear, Nose & Throat □ 18. Emergency □ 19. Endocrinology □ 20. Family Practice □ 21. Gastroenter-ology □ 22. Geriatrics □ 23. Hematology □ 24. HIV/AIDS Clinic □ 25. Home Healthcare □ 26. Hospice Care □ 27. Immunology	□ 29. Infusion Therapy □ 30. Intensive Care □ 31. Laboratory □ 32. Long-term care Mental Health. □ 33. Nephrology □ 34. Neurology □ 35. Nuclear Medicine □ 36. Nutrition □ 37. Obstetrics/ Gynecology □ 38. Occupational Medicine □ 39. Oncology/Cancer Care □ 40. Ophthalmology □ 41. Optometry □ 42. Orthopedics/ Sports Medicine □ 43. Outpatient/Ambulatory Care □ 44. Pathology □ 45. Pediatrics □ 46. Pharmacy	□ 48. Psychiatry □ 49. Podiatry □ 50. Post Anesthesia Care Unit □ 51. Prosthetics □ 52. Pulmonary □ 53. Radiology □ 54. Research □ 55. Respiratory Care □ 56. Rheumatology □ 57. Sleep Disorders □ 58. Social Work □ 59. Spinal Cord Injury □ 60. Substance Abuse Counselor □ 61. Surgery □ 62. Urology □ 63. Other (Specify):
	28. Infectious Disease	47. Physical Therapy/ Rehabilitation	
From the department(s) area(s) checked above, number (1, 2, 3, etc.) of specialty area in which the time during the pas	please write the the department or you spent most of	Most timeL	П

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National Exposures at Work Survey (NEWS) Employee Core Module

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7.	Which of the following best describes your current employment status?	☐ Full-time employee of this facility (35 or more hours per week)
		<ul> <li>Part-time employee of this facility (less than 35 hours per week)</li> </ul>
		Per diem employee of this facility
		☐ Fee for service
		<ul> <li>Work for a professional services agency providing services to this facility</li> </ul>
		Work for a temporary job agency
		<ul> <li>Work for a company contracted by this facility</li> </ul>
		<ul> <li>Non-paid worker (e.g. volunteer, student, etc.)</li> </ul>
		Other (Please specify):
8.	Are you currently employed by this facility	☐ Permanent basis
	on a permanent or temporary basis? (A temporary basis is employment for a specific project or for a specified period of time.)	☐ Temporary basis
9.	Do you currently supervise other employees? (For the purpose of this question, a supervisor is someone who directs others' activities and performs such duties as conducting performance evaluations, approving leave requests, etc.)	Yes No Skip to Question 11.
10.	How many people do you directly supervise?	☐ 1 employee ☐ 2-5 employees ☐ 6-10 employees ☐ 11-25 employees ☐ More than 25 employees
11.	Do you currently provide direct patient care?	☐ Yes, less than 50% of the time ☐ Yes, 50% of the time or more ☐ No

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12. Which of the following descriptions comes □ Day only closest to describing your current work shift in the past 7 calendar days? (Do not include "on call" duties) Evening/swing only ■ Nights only Please ✓ only one. A mix of day, evening or night shifts □ Split shift Other (Please specify): Does your job include "on call" duties? 12b. Yes ■ No 13. In the past 7 calendar days, how many Number of days worked ......(Please write a number from 0-7) days did you work at this facility? 14. During the past 7 calendar days, how many Number of total hours scheduled ..... total hours were you scheduled to work? 15. During the past 7 calendar days, how many Number of hours actually worked..... hours did you actually work? 16. During the past 7 calendar days, were you ☐ Yes

□ No

davs

days

Yes

■ No

Yes, the past 7 days were typical

No, I worked more hours in the past 7

■ No, I worked fewer hours in the past 7

Number of days "on call"......

Number of hours .....

(Please write a number from 1-7)

☐ Did not have another paid job

Skip to Question 20.

How many hours in the past 7 calendar

days did you work on any other paid job? (Do not include hours worked at this facility)

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Compared to most weeks, were the past 7

calendar days typical in terms of total hours

Were you ever "on call" whether or not you

How many days were you "on call" during

were actually called during the past 7

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paid overtime?

calendar days?

the past 7 calendar days?

worked?

17.

18

19.

20.

Page 8

Page 9

#### JOB DEMANDS

Now we would like to know more about your current job in this health care facility. Please tell us
your general level of agreement with each of the following statements as they describe your
current job

cu	rrent job.	Strongly Disagree	Disagree	Agree	Strongly Agree
a.	My job requires that I learn new things				
b.	My job involves a lot of repetitive work				
C.	My job requires me to be creative				
d.	My job requires a high level of skill				
e.	I get to do a variety of different things on my job				
f.	I have an opportunity to develop my own special abilities				
g.	My job allows me to make a lot of decisions on my own				
h.	On my job, I have very little freedom to decide how I do my work				
İ.	I have a lot of say about what happens on my job				
j.	My job requires working very fast				
k.	My job requires working very hard				
I.	I am not asked to do an excessive amount of work				
m.	I have enough time to get the job done				
n.	Some demands I face at work are in conflict with other demands at work				
0.	My job requires a great deal of concentration				
p.	My supervisor is concerned about the welfare of those under his or her supervision				
q.	My supervisor pays attention to what I am saying				
r.	My supervisor is helpful in getting the job done				
S.	My supervisor is successful in getting people to work together				
t.	People I work with are competent in doing their jobs				

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			Strongly			Strongly
			Disagree	Disagree	Agree	Agree
	u.	People I work with take a personal interest in me				
	٧.	People I work with are friendly				
	W.	People I work with are helpful in getting the job done				0
22.	Ιh	ave a lot of say about	Strongly Disagree	Disagree	Agree	Strongly Agree
		Whether or not I work overtime				
	b.	Whether I work day, afternoon, or evening shifts				
	C.	Whether or not I work weekends				
	d.	At what time of the day I take a break				
	e.	When I take leave or vacation				
23.		ease indicate the level to which you agree or agree with the following statements.	Strongly Disagree	Disagree	Agree	Strongly Agree
	a.	Over the past few years my job has become more and more demanding				
	b.	I experience adequate support in difficult situations				
	C.	I am treated unfairly at work				
	d.	I have good opportunities for promotion, increase in income, or professional development				
	e.	I have experienced or I expect to experience an undesirable change in my work situation				
	f.	My job security is good				
	g.	My current occupational position adequately reflects my education and training	_		_	
	h.	Considering all my efforts and achievements, I receive the respect that I deserve at work				
	İ.	Considering all my efforts and achievements, my salary/income is adequate			_	

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24.	Please indicate the level to which you agree or disagree with the following	St	rongly			Strongly
	statements.		sagree	Disagree	Agree	Agree
	After work I come home too tired to do some of the things I'd like to do					
	On the job, I have so much work to do     that it takes away from my personal     interests					
	My family and/or friends dislike how often I am preoccupied with my work while I am at home					
	My work takes up time that I'd like to spend with family/friends					
25.	How do your skills and training compare with the tasks you are asked to perform on your job?	_ 	for My task and trair	and training	match for n	ny skills
26.	How much stress would you say you experienced at work the past 7 calendar days?	ō		no stress at a rate amount stress		
27.	How likely is it that you will make a genuine effort to find a new job (with another employer) within the next year?		Not at a Somewl Very like	nat likely		
28.	If a good friend of yours said that he or she was interested in working in a job like yours for your same employer what would you say?		l would l this job	recommend thave doubts	about recor	

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#### SAFE NEEDLE DEVICES, NEEDLESTICK INJURIES AND UNIVERSAL PRECAUTIONS

29.	Do you use or handle syringes, scalpels, or other sharp instruments which may	Yes			
	puncture your skin when performing your job at this facility?	No Skip to Question 34.			
	jes di dile identif .				
30	Do you perform injections, IV insertions, or phlebotomy in performing your job at this	☐ Yes			
	facility?	No Skip to Question 34.			
31.	When performing injections, IV insertions,	☐ Yes			
	or phlebotomy, do you ever use safe needle devices?	□ No ■■■■■ Skip to Question 33.			
	donoco.				
32.	How often do you use safe needle devices when performing injections, IV insertions, or	☐ Occasionally			
	phlebotomy? Please ✓ only one.	☐ Frequently			
		Usually			
		Always Skip to Question 34.			
33.	What are the reasons you do not always use safe needle devices? Please ✓ all that	<ul> <li>Potential for exposure to hazards is insignificant</li> </ul>			
	apply.	<ul> <li>Exposure is possible but the health hazard is insignificant</li> </ul>			
		□ Not required by employer			
		□ Not provided by employer			
		☐ Too time consuming			
		☐ Too awkward or difficult to use			
		☐ Too uncomfortable			
		☐ Not readily accepted by patients			
		<ul> <li>Not readily or always available in work area</li> </ul>			
		<ul> <li>Device not commercially available</li> </ul>			
		Other (Please specify):			

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34.	Over the past 12 months, how many needlestick or other sharps-related injuries (i.e., punctured your skin with a non-sterile needle device or sharp) did you receive while working at this facility?	□ 0
35.	Over the past 12 months, how many needlestick or other sharps-related injuries (i.e., punctured your skin with a non-sterile needle device or sharp) did you report to your employer at this facility (i.e., to employee health, your supervisor, or someone else in authority at work)?	Skip to Question 37 Some, but not all None
36.	For your most recent needlestick injury that you did not report, please select the reasons which best describe why you did not file a report? Please ✓ all that apply.	<ul> <li>1. I did not think the injury was significant enough to report</li> <li>2. I thought the needle was sterile</li> <li>3. I was too busy and did not have time to report the injury</li> <li>4. I was concerned about being blamed for unsafe work practices</li> <li>5. There was no one to cover my job while I went to report the injury</li> <li>6. There are no procedures at work for reporting needlestick injuries</li> <li>7. Other (Please specify):</li> </ul>
	36A. From the all the reasons checked above, please write the number (1, 2, 3, etc.) corresponding to the one most important reason you did not report your most recent needlestick injury.	Most important reason

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Employee Core Module Page 14 37. In your job at this facility, do you handle bed Yes pans, sheets, clothing or other materials that are visibly soiled with blood, urine, ☐ No ■ Skip to Question 42. feces, or vomit? 38. Have you been formally trained at this Yes facility to follow universal precautions □ No when handling bed pans, sheets, clothing or other materials that are visibly soiled with blood, urine, feces, or vomit 39. During the past 7calendar days, what was 1 time the total number of times you handled bed 2-5 times pans, sheets, clothing or other materials 6-10 times visibly soiled with blood, urine, feces, or ■ 11-20 times vomit? ■ 21-50 times ☐ More than 50 times 40. How does the number of times you handled Past 7 days were about normal bed pans, sheets, clothing or other Past 7 days were less than normal materials visibly soiled with blood, urine, Past 7 days were greater than normal feces, or vomit during the past 7 calendar days compare with most weeks? 41. During the past 7 calendar days, did you always wear the following personal protective equipment while handling bed pans, sheets, clothing, or other materials that may be soiled with blood, urine, feces, or vomit: water-resistant protective gown or ☐ Yes garment? □ No b. water-resistant protective gloves? Yes ■ No

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#### VIOLENCE IN THE WORKPLACE

The next few questions describe events which may occur from many sources at work, including patients, family members, visitors, coworkers or supervisors. For each item please indicate how often you have experienced the events at work during the past year.

In the	past 12 months, how many times	Never	1 time	2-3 times	4 or more times
42.	Have you been hit, kicked, grabbed, shoved, bitten, or had an object thrown at you while you've been at work?				
43.	Have you witnessed another person being hit, kicked, grabbed, shoved, bitten, or having an object thrown at them while you've been at work?				
44.	Have you been threatened with physical violence or with a weapon (like a gun, knife, club, sharp object) while you've been at work?				
45.	Have you been shouted at, sworn at, called names, or verbally confronted while you've been at work?				
46.	Have you been fearful that someone in your current workplace would physically harm you?				
47.	Have you reported an incident of violence to your employer at this facility?				

Please continue on next page.

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#### PHYSICAL DEMANDS/ERGONOMIC ISSUES

48.	Please tell us your general level of agreement with the following statements:		Strongly Disagree	Disagree	Agree	Strongly Agree
	a.	My job requires lots of physical effort				
	b.	I am often required to move or lift very heavy loads (objects or people) on my job			_	
	C.	My work requires rapid and continuous physical activity				
	d.	I am often required to work for long periods with my body in physically awkward positions				
	e.	I am often required to work for long periods with my head or arms in physically awkward positions		_	_	
	f.	I am often required to repeatedly reach above chest height				
	g.	My work requires repeated and strenuous pushing, pulling, or bending				
	h.	I am often required to squat or kneel to do my job				
	İ.	I am often required to bend or twist my wrists to do my job				
	j.	I am often required to use a lot of force with my fingers to do my job				
	k.	I am often required to make repeated precision movements with my fingers				
	l.	I am often required to work continuously for long periods at a computer			<b>-</b>	
49.	tin	uring the past 7 calendar days, how many nes did you lift or move patients weighing I lbs or more?	0	es nes mes	o to Questio	on 51.

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50.	In the past 7 calendar days, how often did you use any of the following when lifting or transferring patients weighing 50 lbs or more? (Check "Not Available" to indicate that the specified device or team was not available at your work facility.)  About							
		_	Never	Rarely	half the time	Most of the time	All of the time	Not Available
	a.	Lift or move by hand (unassisted)						
	b.	Mechanical lifting devices (e.g., ceiling lifts, Arjo™ lift, Hoyer™ lift)						
	c.	Slip or friction reduction sheets						
	d.	Gait belts (also called transfer belts)						
	e.	Back belts						
	f.	Lifting assistance from one or more co-workers (including designated lift teams						
	g.	Roller or slider boards						
	h.	Any other assistive device (Please specify)						
		Specify:						
51.		ring the past 7 calendar days, es did you lift or move objects		<b></b> 0		<b>→</b> Sk	cip to Ques	stion 53.
		n patients, weighing 50 lbs or		□ 1	-5 times			
					-10 times			
					1-20 times			
					1-50 times			
	☐ More than 50 times							

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**Employee Core Module** Page 18 52. In the past 7 calendar days, how often did you use any of the following when lifting or moving objects, other than patients, weighing 50 lbs or more? (Check "Not Available" to indicate that the specified device or team was not available at your work facility.) Not Never Occasionally Frequently Usually Always Available a. Lift or move by hand ....... Mechanical lifting devices (e.g., winch, dolly, forklift, etc.).... c. Roller or slider boards d. Back belts ..... e. Lifting assistance from one or more co-workers.... Any other assistive device (Please specify) ..... Specify: \_\_ 53. Has your employer evaluated your job or Yes workstation for ergonomic hazards in the □ No past year? ■ Don't know

Please continue on next page.

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#### PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING

54.	Which of the following personal protective	None
	devices or equipment are you required by your employer to wear on your job? Please ✓ all that apply.	Respirators (does not include surgical mask)
		Surgical mask
		Eye protection (e.g., safety glasses, goggles, etc.)
		Face protection (e.g., face shield, welding helmets, etc.)
		Foot protection (e.g., steel toed shoes, chemical resistant boots, etc.)
		Shoe covers/booties
		Protective clothing which is reusable (e.g., aprons, X-ray gowns, lab coats, scrubs, etc.)
		Protective clothing which is disposable (e.g., isolation gowns, coveralls, etc.)
		Ear protection (ear plugs or muffs)
		Hand protection (e.g., gloves, hand pads, barrier creams, etc.)
		Knee protectors
		Back belts or lumbar support
		Other (Please specify):

Please continue on next page.

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55.	On which of the following personal protective devices has your employer provided training to you in the proper selection, use, care, maintenance and replacement? Please ✓ all that apply.	_ _ _	None Respirators (does not include surgical mask) Surgical mask Eye protection (e.g., safety glasses, goggles, etc.) Face protection (e.g., face shield, welding helmets, etc.)
		_	Foot protection (e.g., steel toed shoes, chemical resistant boots, etc.)
		_	Shoe covers/booties
			Protective clothing which is reusable (e.g., aprons, X-Ray gowns, lab coats, scrubs, etc.)
			Protective clothing which is disposable (e.g., isolation gowns, coveralls, etc.)
			Ear protection (ear plugs or muffs)
			Hand protection (e.g., gloves, hand pads, barrier creams, etc.)
			Knee protectors
			Back belts or lumbar support
			Other (Please specify):
56.	Have you been formally fit-tested by an occupational health and safety specialist for the respirator you wear on your present job?	<u> </u>	Yes, I have been fit-tested  No, I wear a respirator on my present job but I have not been fit-tested  Not Applicable, I do not wear a respirator that requires fit-testing on my present job (e.g., PAPR or surgical mask).
57.	During the past 7 calendar days, did you wear natural rubber latex gloves while at work? Please ✓ all that apply.		Yes, powder-free Yes, powdered Yes, don't know if powdered or powder-free No

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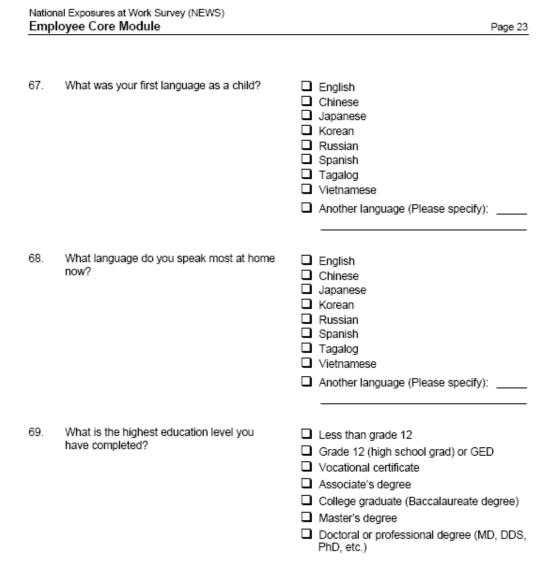
	al Exposures at Work Survey (NEWS) loyee Core Module		Page 21
MEDI	CAL EVALUATION		
58.	Within the past year, have you received a medical evaluation from this employer (such an evaluation may include a medical questionnaire, physical examination, blood tests, and/or urine test)?	Yes No	Skip to Question 61.
59.	Were the following medical tests or exams included as a part of the medical evaluation provided by this employer?	Yes	No
	Standardized medical questionnaire		
	b. Physical exam		
	c. Blood test		
	d. Urine test		
60.	Have the results of all tests included in your medical evaluation been provided to you by this employer?	☐ Yes ☐ No	

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	Now we would like to ask you some questions all	
61.	Are you male or female?	☐ Male
		☐ Female
62.	Which of the following categories describes	☐ White
	your race? Please ✓ all that apply.	☐ Black or African American
		☐ Asian
		☐ Native Hawaiian or other Pacific Islander
		☐ American Indian or Alaskan Native
		Other (Please specify):
		_ cass ( loads speakly)
63	Do you consider yourself Latino or of	☐ Yes, I am Latino/Hispanic/Spanish
	Hispanic origin or descent?	□ No, not Latino/Hispanic/Spanish
		No, not cauno/hispanic/Spanish
64	In what year were you born?	Year you were born19
0-7	III Wilat year were yed born:	real you were born13
65.	Were you born in this country (USA)?	☐ Yes, born in USA ➡ Skip to Question 67.
03.	voic you born in this country (oc/ty:	_
		☐ No, not born in USA
ee	In what year did you first same to the LICAS	
66.	In what year did you first come to the USA?	Year you first came to USA

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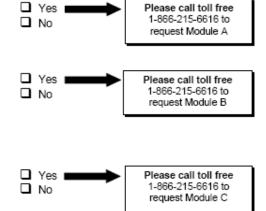
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In the following section, we ask a few questions regarding specific tasks you might perform on your current job. Your answers to these questions will determine whether additional modules of the survey apply to you.

- In your current job, do you administer ribavirin (Virazole), pentamidine (Nebupent) or tobramycin (Nebcin, "tobi") in an aerosolized form?
- In your current job, do you prepare or mix antineoplastic agents in a pharmacy or pharmacy-like setting? (Other terms used for antineoplastic agents include chemotherapeutic drugs, cytotoxic drugs and anticancer drugs.)
- In your current job, do you administer antineoplastic agents to patients? (Other terms used for antineoplastic agents include chemo-therapeutic drugs, cytotoxic drugs and anticancer drugs.)
- 73. In your current job, do you use ethylene oxide or hydrogen peroxide plasma to chemically sterilize medical devices, instruments, or supplies?
- In your current job, do you use high level disinfectants containing
  - glutaraldehyde (e.g., Cidex®, ColdSport®, Endocide®, Glutacide®, Hospex®, Metricide®, Sporicidin®, Wavicide®);
  - ortho-phthalaldehyde (e.g., Cidex OPA®);
  - peracetic acid (e.g., Steris® system) or;
  - hydrogen peroxide (e.g., Accell<sup>®</sup>, Optim<sup>®</sup>)

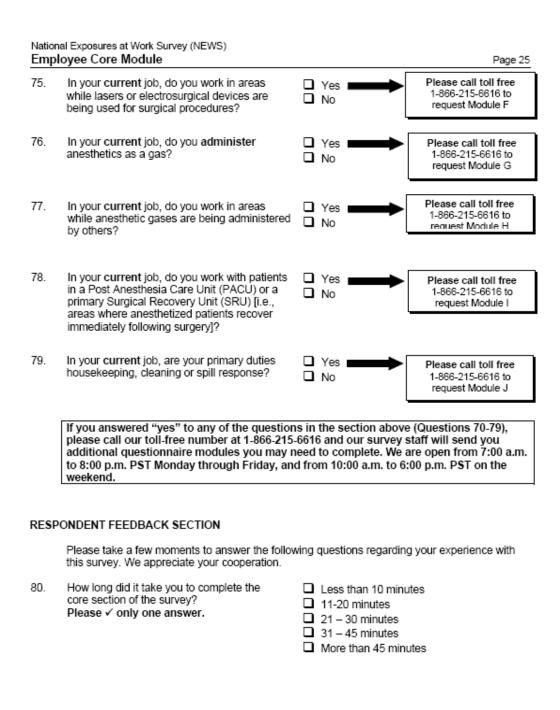
to disinfect medical instruments, devices or supplies (such as endoscopes, thermometers or other items which cannot be sterilized) by either manual or automatic methods? (This does not include the cleaning of countertops or other surfaces)







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	al Exposures at Work Survey (NEWS) loyee Core Module	Page 26
81.	How did you learn about the survey? Please ✓ all that apply.	☐ I received a letter ☐ I received an email message ☐ A co-worker told me about the survey ☐ A supervisor or manager told me about the survey ☐ I read a flyer or poster about the survey ☐ Other (Please specify):
82.	Where did you complete the survey? Please ✓ all that apply.	□ Work     □ Home     □ While commuting to or from work     □ Other (Please specify):
83.	Why did you choose to complete the paper version of the survey rather than the web version? Please ✓ all that apply.	<ul> <li>1. I don't have access to a computer</li> <li>2. I don't have access to the internet</li> <li>3. I had difficulty finding or entering the website</li> <li>4. I feel more comfortable completing the paper version</li> <li>5. I was concerned about the privacy/security of the web version</li> <li>6. I felt the paper version would take less time</li> <li>7. I felt the paper version was more convenient or flexible</li> <li>8. I didn't know a web version was available</li> <li>9. Other (Please specify):</li></ul>
	83A. From the reason(s) checked above, please write the number of the most important reason you chose to complete the paper survey rather than the web version.	Most important reason
84.	Would you ever consider completing a web version of this type of survey in the future?	☐ Yes ☐ No ☐ Possibly

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	imployee Core Module  Page  Page  Please use the space below to record any other comments you have about the survey.				
85.	Please use the space below to record any other comments you have about the survey.				

Thank you for your time and contribution to the National Exposures at Work Survey. Please continue to the appropriate hazard module, if applicable.

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# Appendix 2: Revised Survey Instrument as used in this Survey

### Title: ELM1333 - Employee Core Module

Project: Q74374

INTRO: Thank you for participating in this survey. The survey aims to provide information on work-related exposures that you encounter as a nurse. There are also some questions on workers' compensation and rehabilitation.

The survey is expected to take about 20 to 30 minutes to complete. You can answer the survey in several sessions if you want, although it would be best if you can complete it in one session. If you do exit the survey before completing it, you will come back to the same spot when you return to complete it at a later time.

This questionnaire is based on the National Exposures at Work Survey developed by the United States National Institute of Occupational Safety and Health. Some of the questions relate to all your nursing work, and some relate to a specific nursing job. Unless otherwise stated, all questions referring to a particular occupation or job refer to your main nursing job.

When asked for a number or percentage, please give your answer in numbers not words.

Q1: Please indicate the level you agree or disagree with the following statements. They relate to your main occupation in nursing (that is, the one in which you spend the most amount of time).

Please select one per row

	Strongly disagree	Disagree	Agree	Strongly agree
The health and safety of workers is a major priority with top management	[ ]	[ ]	[ ]	[ ]
I feel safe from work-related injury or illness in my current work environment	[ ]	[ ]	[ ]	[ ]
I usually have enough time to take safety precautions while completing my duties	[ ]	[ ]	[ ]	[ ]
I feel free to express my concerns about health and safety conditions to management	[ ]	[ ]	[ ]	[ ]
Proper personal protective equipment is made readily available by my employer	[ ]	[ ]	[ ]	[ ]
I know how to reduce the risk of accidents and incidents in the workplace	[ ]	[ ]	[ ]	[ ]
I am often required to do a task that makes me feel like I might be at risk of getting hurt	[ ]	[ ]	[ ]	[ ]
People in my department or unit are frequently exposed to dangerous or risky situations	[ ]	[ ]	[ ]	[ ]
Employees have sufficient access to workplace health and safety training programs	[ ]	[ ]	[ ]	[ ]
The safety procedures and practices in this organization are useful and effective	[ ]	[ ]	[ ]	[ ]
Managers and supervisors set proper examples by following safety rules and work practices	[ ]	[ ]	[ ]	[ ]
I know how to use safety equipment and standard work procedures	[ ]	[ ]	[ ]	[ ]
Work areas are periodically inspected to identify potential health and safety hazards	[ ]	[ ]	[ ]	[ ]
Unsafe working conditions are corrected in a reasonable time period	[ ]	[ ]	[ ]	[ ]
I have received adequate training from my current employer to recognize health and safety hazards in my job	[ ]	[ ]	[ ]	[ ]
I have been trained by my current employer in how to recognize and deal with potential incidents of workplace violence	[ ]	[ ]	[ ]	[ ]
I could talk to my employer if I had a problem with violence or aggression in my workplace	[ ]	[ ]	[ ]	[ ]
My work area is adequately staffed	[ ]	[ ]	[ ]	[ ]
I can report injuries to my manager without worrying about how it will affect my job	[ ]	[ ]	[ ]	[ ]

I can report injuries to my manager without worrying about how it will affect my department's safety record	Ţ	]		]	]			]	]	
Q2: Please estimate the level of risk (where "1" is no risk and "5" is high risk) safety hazards specifically as they relate to your job or workplace.	to y	/ou	ı fr	on	ı tl	ne 1	foll	ow	ing	health and
Please select one per row										
	1		,	2		3		4		5
Chemical agents in general (e.g., acids, caustics, solvents)	1	1	1	1	ſ	1	1	1	1	1
Anaesthetic gases	1	í	1	í	1	1	1	1	1	1
Hazardous drugs (including antineoplastic agents)	ĵ	ĵ	ĵ	ĵ	ĵ	ĵ	í	ĵ	í	j
High level disinfectants (e.g., glutaraldehyde)	1	1	1	1	1	1	]	1	1	1
Sterilants (e.g., Ethyline oxide, hydrogen peroxide)	1	1	1	1	1	1	]	1	]	1
Ionising radiation (e.g., X-rays, gamma rays, etc.)	1	1	1	1	1	1	]	1	1	]
Machine safety hazards (e.g., exposed moving parts, etc.)	1	1	1	]	1	1	]	]	]	1
Non-ionising radiation (e.g., UV, microwaves, radio frequency, magnetic/electric fields, etc)	]	]	]	]	]	]	]	1	]	1
Smoke from lasers and electrosurgery devices	1	]	1	]	1	]	]	]	]	1
Infectious disease agents (e.g., tuberculosis)	1	]	1	]	1	]	]	]	]	]
Blood-borne pathogens (e.g., HIV or hepatitis)	1	]	1	]	1	]	]	]	]	1
Latex allergens (e.g., from gloves)	1	]	Ţ	]	Ţ	]	ĺ	]	ĺ	]
Needlesticks and other sharps		]	Ţ	]	Ţ	]	[	]	[	1
Temperature extremes	ľ	]	Ţ	]	Ţ	]	ļ	]	ĺ	]
Noise level	ı	J	ŀ	J	L	J	l.	J	ı	J
Poor air quality (e.g., moulds cigarette smoke, vehicle exhaust, etc.) Workplace stress	ı.	1	ı ı	1	ı	1	ı 1	1	ı ı	1
Repetitive hand, wrist, arm or shoulder motions	ı.	1	ı	1	ľ	1	1	1	ı.	1
Slips, trips and falls	ľ	1	1	1	ľ	í	1	1	í	1
Prolonged standing	'n	í	'n	1	ï	í	í	1	í	1
Lifting/repositioning heavy objects (including patients)	í	í	í	í	í	í	í	í	í	í
Violence at work (e.g., assaults, threats, etc.)	í	í	í	1	í	1	í	1	í	í
Acts of bioterrorism at work	ĵ	ĵ	ĵ	ĵ	ĵ	ĵ	ĵ	ĵ	ĵ	j
Other health safety issues (please specify)	1	]	1	]	1	]	]	1	]	1
Q3: Which of the following best describes your current occupation?										
Please select only one										
(1) - Assistant in nursing										
( 2 ) - Enrolled nurse										
(3) - Nurse educator										
( 4 ) - Nurse practitioner ( 5 ) - Patient care attendant										
( 6 ) - Registered midwife										
(7) - Registered nurse										
( 8 ) - Registered psychiatric nurse										
( 9 ) - Personal Care Assistant										
( 10 ) - Other (specify):										
		_	_	_	_	_	_	_	_	
Q4: How long have you worked in this occupation over your entire career?										
Please type in your response										
1 - Weeks : [				]						
2 - Or months : [					1					
3 - Or years : [				1						

Q5A: In which department(s) or specialty area(s) did you spend any substantial amount of time working (i.e., greater than 60 minutes) during the past 7 calendar days? Please tick all that apply.

Please select as many as apply

- [1]-1-Administration
- [ 2 ] 2 Human resources
- [ 3 ] 3 Pre/post graduate education
- [4]-4-Clinical education
- [5]-5-Research
- [ 6 ] 6 Occupational health and safety
- [7]-7-Aged Care
- [8]-8-Anaesthetics
- [ 9 ] 9 Blood bank
- [ 10 ] 10 Cardiology
- [ 11 ] 11 Community
- [ 12 ] 12 Coronary Care
- [ 13 ] 13 Critical Care
- [ 14 ] 14 Day Surgery
- [ 15 ] 15 Dermatology
- [ 16 ] 16 Drug and alcohol abuse
- [ 17 ] 17 Ear nose and throat
- [ 18 ] 18 Emergency
- [ 19 ] 19 Endocrinology
- [ 20 ] 20 Gastroenterology
- [ 21 ] 21 General Practice
- [ 22 ] 22 Haematology
- [ 23 ] 23 Immunology
- [ 24 ] 24 Infectious disease
- [ 25 ] 25 Intensive care
- [ 26 ] 26 Medical
- [ 27 ] 27 Mental Health
- [ 28 ] 28 Midwifery
- [ 29 ] 29 Neurology
- [ 30 ] 30 Nuclear Medicine
- [ 31 ] 31 Oncology
- [ 32 ] 32 Orthopaedics
- [ 33 ] 33 Outpatients
- [ 34 ] 34 Paediatrics
- [ 35 ] 35 Palliative Care
- [ 36 ] 36 Pathology/cannulation
- [ 37 ] 37 Perioperative
- [ 38 ] 38 Postoperative
- [ 39 ] 39 Radiology
- [ 40 ] 40 Rehabilitation
- [ 41 ] 41 Renal
- [ 42 ] 42 Respiratory
- [ 43 ] 43 Rheumatology
- [ 44 ] 44 Sexual Health
- [ 45 ] 45 Sleep disorders
- [ 46 ] 46 Spinal Cord Injury
- [ 47 ] 47 Surgical
- [ 48 ] 48 Thoracic
- [ 49 ] 49 Urology
- [ 50 ] 50 Other(please specify)

Q5B: From the department(s) and specialty area(s) selected above, please rank the choices in terms of the amount of time spent in the department or specialty area during the past 7 calendar days. Use "1", "2", "3", etc, with "1" meaning the most time is spent in that department or specialty area.

Please type in your response

Q6: Which of the following best describes your current employment status	in nursing?
Please select only one	
( 1 ) - Full-time employee (35 or more hours per week) ( 2 ) - Part-time employee (less than 35 hours per week) ( 3 ) - Casual, employed by a single facility ( 4 ) - Casual, working for a job agency	
(5) - Student	
( 6 ) - Non-paid worker (e.g. volunteer)	
(7) - Other (please specify)	
Q7: Are you employed on a permanent or temporary basis? (A temporary b project or for a specified period of time)	asis means you are employed for a specific
Please select only one	
( 1 ) - Permanent basis	
(2) - Temporary basis	
Q8: Do you currently supervise other employees? (For the purpose of this of directs others' activities and / or performs such duties as conducting performequests, etc.)	
Please select only one	
( 1 ) - Yes	
(2)-No	
Q9: Approximately how many people do you directly supervise?  Please type in your response	
riease type iii your response	
1 - Number of people: : [	1
Q10: Approximately what percentage of your time do you currently provide provide patient care)?	e direct patient care (put zero if you don't
Please type in your response	
1 - Percentage of time: : [	1
Q11A: Which of the following descriptions comes closest to describing your days (Do not include "on call" duties)?	r current work shifts in the past 7 calendar
[Asked if code 2 is selected at Q8]	
Please select only one	
(1) - Days only	
( 2 ) - Evenings only	
(3) - Nights only	
( 4 ) - A mix of day, evening or night shifts	
( 5 ) - Split shift ( 6 ) - Other (Please specify):	
( 6 ) - Other (Please specify):	
Q11B: Does your job include "on call" duties?	
Please select only one	
(1)-Yes	

( 2 ) - No	
Q12: In the past 7 calendar days, how many days did you do nursing	work?
Please type in your response	
$\ensuremath{\mathtt{1}}$ - Number of days worked (Please write a number from 0-7) : [	1
Q13: In the past 7 calendar days, how many total hours were you so	heduled to work?
Please type in your response	
1 - Number of hours scheduled :	1
Q14: In the past 7 calendar days, how many hours did you actually w	vork?
Please type in your response	
1 - Number of hours actually worked : [	1
Q15: In the past 7 calendar days, did you earn overtime payments?	
Please select only one	
( 1 ) - Yes ( 2 ) - No	
Q16: Compared to most weeks, were the past 7 calendar days typica	l in terms of total hours worked?
Please select only one	
( 1 ) - Yes, the past 7 days were typical	
( 2 ) - No, I worked more hours in the past 7 days	
( 3 ) - No, I worked fewer hours in the past 7 days	
Q17: Were you ever "on call" (whether or not you were actually called	ed) during the past 7 calendar days?
Please select only one	
( 1 ) - Yes	
( 2 ) - No	
Q18: How many days were you "on call" during the past 7 calendar d	lays?
Please type in your response	
1 - Number of days "on call" (Please write a number from 0-7) : [	1
Q19: How many hours in the past 7 calendar days did you work on an nursing occupations)	ny other paid job? (Do not include hours worked in
[Asked if code 2 is selected at Q17]	
Please select only one	
( 1 ) - Number of hours	

Q20: How large do you think your main workplace facility is?

(2) - Did not have another paid job

Please	select	only	one

- (1) Large (over 1,000 employees)
- ( 2 ) Medium (100 1,000 employees)
- (3) Small (less than 100 employees)
- (4) No main workplace

#### Q21: Where is your workplace situated?

Please select only one

- ( 1 ) Metropolitan (city or major town)
- (2) Rural / remote

#### Q22: In which State or Territory do you perform most of your work?

Please select only one

- (1) Australian Capital Territory
- (2) New South Wales
- (3) Northern Territory
- (4) Queensland
- (5) South Australia
- ( 6 ) Tasmania
- (7) Victoria
- (8) Western Australia

### Q23: Now we would like to know more about your main current job. Please tell us your general level of agreement with each of the following statements as they describe your current job.

Please select one per row

	Strongly Disagree	Disagree	Agree	Strongly Agree
My job requires that I learn new things	[ ]	[ ]	[ ]	[ ]
My job involves a lot of repetitive work	[ ]	[ ]	[ ]	[ ]
My job requires me to be creative	[ ]	[ ]	[ ]	[ ]
My job requires a high level of skill	[ ]	[ ]	[ ]	[ ]
I get to do a variety of different things on my job	[ ]	[ ]	[ ]	[ ]
I have an opportunity to develop my own special abilities	[ ]	[ ]	[ ]	[ ]
My job allows me to make a lot of decisions on my own	[ ]	[ ]	[ ]	[ ]
On my job, I have very little freedom to decide how I do my work	[ ]	[ ]	[ ]	[ ]
I have a lot of say about what happens on my job	[ ]	[ ]	[ ]	[ ]
My job requires working very fast	[ ]	[ ]	[ ]	[ ]
My job requires working very hard	[ ]	[ ]	[ ]	[ ]
I am not asked to do an excessive amount of work	[ ]	[ ]	[ ]	[ ]
I have enough time to get the job done	[ ]	[ ]	[ ]	[ ]
Some demands I face at work are in conflict with other demands at work	[ ]	[ ]	[ ]	[ ]
My job requires a great deal of concentration	[ ]	[ ]	[ ]	[ ]
My supervisor is concerned about the welfare of those under his or her supervision	[ ]	[ ]	[ ]	[ ]
My supervisor pays attention to what I am saying	[ ]	[ ]	[ ]	[ ]
My supervisor is helpful in getting the job done	[ ]	[ ]	[ ]	[ ]
My supervisor is successful in getting people to work together	[ ]	[ ]	[ ]	[ ]
My supervisor considers my viewpoint	[ ]	[ ]	[ ]	[ ]
My supervisor is able to suppress personal biases	[ ]	[ ]	[ ]	[ ]
My supervisor treats me with kindness and consideration	[ ]	[ ]	[ ]	[ ]
My supervisor takes steps to deal with me in a truthful manner	[ ]	[ ]	[ ]	[ ]

People I work with are competent in doing their jobs		]	1		]	]	]	]	]	]	
People I work with take a personal interest in me		]	1		]	]	1	]	]	]	
People I work with are friendly		]	1		]	]	[	]	]	]	
People I work with are helpful in getting the job done		]	]		]	]	[	]	]	]	
Q24: I have a lot of say about:											
Please select one per row											
,	Strongly I	Disagree	,	Disa	gree	Agr	e.e	Str	rongly /	Agree	
Whether or not I work overtime		]			]		1		[]	.9.00	
Whether I work day, afternoon, or evening shifts		í		1	1	í	í		[ ]		
Whether or not I work weekends		í		j	ĵ	í	í		[ ]		
At what time of the day I take a break		1		1	1	]	1		[ ]		
When I take leave or vacation	ĵ	]		]	]	[	]		[ ]		
Q25: Please indicate the level to which you agree or	disagree	e with t	he f	ollov	wing:	state	mer	rts.			
Please select one per row											
			ongly agree		Disa	gree	Agr	ree	Stro Agr		
Over the past few years my job has become more and mo demanding	re	]	1		[	]	]	]	]	]	
I experience adequate support in difficult situations		_	]		[	]	]	]		]	
I am treated unfairly at work		1	]		[	]	[	]	[	]	
I have good opportunities for promotion, increase in incom professional development		]	1		[	]	]	]	]	]	
I have experienced or I expect to experience an undesiral change in my work situation	ole	]	1		[	]	]	]	]	]	
My job security is good		]	]		[	]	]	]	[	]	
My current occupational position adequately reflects my e and training	ducation	]	1		[	]	]	]	[	]	
Considering all my efforts and achievements, I receive the that I deserve at work	respect	]	1		]	1	]	]	[	1	
Considering all my efforts and achievements, my salary/ir adequate	come is	]	1		[	]	1	]	[	]	
Q26: Please indicate the level to which you agree or	disagree	e with t	he f	ollov	wing :	state	men	rts.			
Please select one per row											
			ongl agre		Disa	gree	Ag	ree		ngly	
After work I come home too tired to do some of the thing to do	s I'd like	[	]		1	]	]	1	1	1	
My working hours are so long that my work takes away fr personal interests	om my	[	]		1	]	]	1	]	]	
My family and/or friends dislike how often I am preoccupi my work while I am at home	ed with	[	]		1	]	]	1	]	]	
My work takes up time that I'd like to spend with family/fi	riends	[	]		1	]	]	]	]	]	
Q27: How do your skills and training compare with t	he tasks	you ar	e as	ked	to pe	rforn	n on	you	ır job?		
Please select only one											
(1) - I am asked to do more than I am trained for											
(2) - My tasks are a good match for my skills and trainin	g										
(3) - My skills and training are more than I can use in m	_										
Q28: How much stress would you say you experience	ed at wo	ork the	past	7 ca	lend	ar da	ys?				

Please select only one

(1) - Almost no stress at all
( 2 ) - A moderate amount of stress
(3) - A lot of stress
Q29: How likely is it that you will make a genuine effort to find a new job (with another employer) within the next year?
Please select only one
(1) - Not at all likely
( 2 ) - Somewhat likely ( 3 ) - Very likely
(3) - Very likely
Q30: If a good friend of yours said that he or she was interested in working in a job like yours for your same employer what would you say?
Please select only one
( 1 ) - I would recommend this job
( 2 ) - I would have doubts about recommending this job
( 3 ) - I would advise my friend against taking this job
Q31: Do you use or handle syringes, scalpels, or other sharp instruments which may puncture your skin when performing your job?
Please select only one
(1)-Yes
(2)-No
Q32: Do you perform injections, IV insertions, or phlebotomy in performing your job?
Please select only one
(1)-Yes
(1)-Yes
(1)-Yes (2)-No
( 1 ) - Yes ( 2 ) - No  Q33: When performing injections, IV insertions, or phlebotomy, do you ever use safe needle devices?
(1) - Yes (2) - No  Q33: When performing injections, IV insertions, or phlebotomy, do you ever use safe needle devices?  Please select only one
(1) - Yes (2) - No  Q33: When performing injections, IV insertions, or phlebotomy, do you ever use safe needle devices?  Please select only one (1) - Yes
(1) - Yes (2) - No  Q33: When performing injections, IV insertions, or phlebotomy, do you ever use safe needle devices?  Please select only one (1) - Yes (2) - No
( 1 ) - Yes ( 2 ) - No  Q33: When performing injections, IV insertions, or phlebotomy, do you ever use safe needle devices?  Please select only one ( 1 ) - Yes ( 2 ) - No  Q34: How often do you use safe needle devices when performing injections, IV insertions, or phlebotomy?
(1) - Yes (2) - No  Q33: When performing injections, IV insertions, or phlebotomy, do you ever use safe needle devices?  Please select only one (1) - Yes (2) - No  Q34: How often do you use safe needle devices when performing injections, IV insertions, or phlebotomy?  Please select only one (1) - Never (2) - Occasionally
(1) - Yes (2) - No  Q33: When performing injections, IV insertions, or phlebotomy, do you ever use safe needle devices?  Please select only one (1) - Yes (2) - No  Q34: How often do you use safe needle devices when performing injections, IV insertions, or phlebotomy?  Please select only one (1) - Never (2) - Occasionally (3) - Often
(1) - Yes (2) - No  Q33: When performing injections, IV insertions, or phlebotomy, do you ever use safe needle devices?  Please select only one (1) - Yes (2) - No  Q34: How often do you use safe needle devices when performing injections, IV insertions, or phlebotomy?  Please select only one (1) - Never (2) - Occasionally (3) - Often (4) - Usually
(1) - Yes (2) - No  Q33: When performing injections, IV insertions, or phlebotomy, do you ever use safe needle devices?  Please select only one (1) - Yes (2) - No  Q34: How often do you use safe needle devices when performing injections, IV insertions, or phlebotomy?  Please select only one (1) - Never (2) - Occasionally (3) - Often
(1) - Yes (2) - No  Q33: When performing injections, IV insertions, or phlebotomy, do you ever use safe needle devices?  Please select only one (1) - Yes (2) - No  Q34: How often do you use safe needle devices when performing injections, IV insertions, or phlebotomy?  Please select only one (1) - Never (2) - Occasionally (3) - Often (4) - Usually
(1) - Yes (2) - No  Q33: When performing injections, IV insertions, or phlebotomy, do you ever use safe needle devices?  Please select only one (1) - Yes (2) - No  Q34: How often do you use safe needle devices when performing injections, IV insertions, or phlebotomy?  Please select only one (1) - Never (2) - Occasionally (3) - Often (4) - Usually (5) - Always
(1) - Yes (2) - No  Q33: When performing injections, IV insertions, or phlebotomy, do you ever use safe needle devices?  Please select only one (1) - Yes (2) - No  Q34: How often do you use safe needle devices when performing injections, IV insertions, or phlebotomy?  Please select only one (1) - Never (2) - Occasionally (3) - Often (4) - Usually (5) - Always

[ 2 ] - Exposure is possible but the health hazard is insignificant
[ 3 ] - Not required by employer
[ 4 ] - Not provided by employer
[ 5 ] - Too time consuming
[ 6 ] - Too awkward or difficult to use
[ 7 ] - Too uncomfortable
[ 8 ] - Not readily accepted by patients
[ 9 ] - Not readily or always available in work area
[ 10 ] - Device not commercially available
[ 11 ] - Other (Please specify):

Q36: Over the past 12 months, how many needlestick or other sharps-related injuries (i.e., punctured your skin with a non-sterile needle device or sharp) did you receive while working?

[Asked if code 2 is selected at <u>Q32</u>] [Asked if code 5 is selected at <u>Q34</u>]

Please select only one

- (1)-0
- (2)-1
- (3)-2
- (4)-3 (5)-4
- (6)-5
- (6)-5
- (7) More than 5 (please specify how many):

Q37: Over the past 12 months, how many needlestick or other sharps-related injuries (i.e., punctured your skin with a non-sterile needle device or sharp) did you report to your employer (i.e., to employee health clinic, your supervisor, or someone else in authority at work)?

Please select only one

- (1)-All
- (2) Some but not all
- (3) None

Q38A: For your most recent needlestick or other sharps-related injury (i.e., punctured your skin with a non-sterile needle device or sharp) that you did not report, please select the reasons which best describe why you did not file a report?

Please select as many as apply

- [ 1 ] I did not think the injury was significant enough to report
- [ 2 ] I thought the needle was sterile
- [ 3 ] I was too busy and did not have time to report the injury
- [ 4 ] I was concerned about being blamed for unsafe work practices
- [ 5 ] There was no one to cover my job while I went to report the injury
- [ 6 ] There are no procedures at work for reporting needlestick injuries
- [ 7 ] Other (Please specify):

Q38B: From all the reasons selected above, please rank the choices in terms of the importance for not reporting the needlestick injury. Use "1", "2", "3", etc, with "1" meaning the most important reason.

Please type in your response

Q39: Which of the following best describes the general procedure you were doing at the time of the injury?

[Asked if code 1 is selected at 037]

#### Please select one

- (1) Giving an intramuscular or subcutaneous injection
- (2) Taking blood
- (3) Inserting an IV cannula
- ( 4 ) Assisting in operation / procedure
- (5) Other (please specify)

#### Q40: Which of the following best describes the specific task you were doing at the time of the injury?

#### Please select only one

- (1) Manipulating the needle in a patient
- (2) Taking the sharp to be disposed
- (3) Disposing of the sharp
- ( 4 ) Handing the sharp to someone
- (5) Taking a sharp from someone
- (6) Re-capping a needle
- (7) Accessing an IV line
- (8) Cleaning up
- (9) Other (please specify)

#### Q41: What was the sharp object that caused the injury?

#### Please select only one

- (1) Hypodermic needle
- (2) Butterfly needle
- (3) IV catheter stylet
- (4) Scalpel
- (5) Suture needle
- (6) Glass vial
- (7) IV tubing needle
- (8) Other (please specify)

#### Q42: Did the injury have any high-risk characteristics?

Please select as many as apply

- [ 1 ] Large, hollow-bore needle
- [2] Deep puncture
- [ 3 ] High risk patient
- [ 4 ] Other (please specify)
- [ 99 ] No high-risk characteristics

#### Q43: If the patient was considered to be an infectious disease risk, what was the infectious disease?

Please select as many as apply

- [ 1 ] Hepatitis B
- [2] Hepatitis C
- [3]-HIV
- [ 4 ] Other (please specify):
- [ 99 ] Patient was not an infectious disease risk

#### Q44: Did you contract a disease as a result of the needlestick injury?

Please select only one

- (1)-Yes
- (2)-No

( 3 ) - Don't know						
Q45: What disease did you contract?						
Please select only one						
[ 1 ] - hepatitis B						
[2] - hepatitis C						
[3]-HIV						
[ 4 ] - Localised infection						
[ 5 ] - Other (please specify):						
Q46: In your job, do you handle bed pans, sheets	, clothing or	other materials	s that are	visibly so	iled with blo	ood, urine,
faeces, or vomit?						
[Asked if code 1 is selected at <u>Q36</u> ] [Asked if code 2 is selected at <u>Q44</u> ]						
Please select only one						
(1)-Yes						
(2)-No						
Q47: Have you been formally trained to follow un materials that are visibly soiled with blood, urine,			andling b	ed pans, sl	heets, clothi	ing or other
Please select only one						
(1)-Yes						
(2)-No						
(3) - Don't know						
Q48: During the past 7 calendar days, what was t other materials visibly soiled with blood, urine, fa			ou handle	d bed pan	s, sheets, cl	othing or
Please select only one						
(1)-1 time						
( 2 ) - 2-5 times						
( 3 ) - 6-10 times						
( 4 ) - 11-20 times						
( 5 ) - 21-50 times						
( 6 ) - More than 50 times						
Q49: How does the number of times you handled blood, urine, faeces, or vomit during the past 7 ca					isibly soiled	with
Please select only one						
( 1 ) - Past 7 days were about normal						
(2) - Past 7 days were less than normal						
( 3 ) - Past 7 days were greater than normal						
Q50: During the past 7 calendar days, how often						
handling bed pans, sheets, clothing, or other mat	eriais that n	nay be solled Wi	un blood,	urine, rae	ces, or vom	it:
Please select one per row						
	Never	Occasionally	Often	Usually	Always	
Water-Resistant protective gown or garment?	[ ]	[ ]	[ ]	[ ]	[ ]	
Water-resistant protective gloves?	[ ]	[ ]	[ ]	[ ]	[ ]	

Q51: This question relates only to physical and verbal violence by members of the public and patients. In the past 12 months, how many times.....

#### [Asked if code 2 is selected at Q46]

Please select one per row

	Ne	ver	tin	l ne	2- tim	-3 nes	4 or more times
Have you been hit, kicked, grabbed, shoved, bitten, or had an object thrown at you while you've been at work?	]	]	[	]	[	]	[ ]
Have you witnessed another person being hit, kicked, grabbed, shoved, bitten, or having an object thrown at them while you've been at work?	]	]	[	]	[	]	[ ]
Have you been threatened with physical violence or with a weapon (like a gun, knife, club, sharp object) while you've been at work?		-	-		-		[ ]
Have you been shouted at, sworn at, called names, or verbally confronted while you've been at work?	] *	]	[	]	[	]	[ ]
Have you been fearful that someone in your current workplace would physically harm you?	]	]	[	]	[	]	[ ]
Have you reported an incident of violence to your employer?	]	]	[	]	[	]	[ ]

#### Q52: Please indicate your general level of agreement with the following statements

Please select one per row

	Strongly Disagree	Disagree	Agree	Strongly Agree
My job requires lots of physical effort	[ ]	[ ]	[ ]	[ ]
I am often required to move or lift very heavy loads (objects or people) on my job	[ ]	[ ]	[ ]	[ ]
My work requires rapid and continuous physical activity	[ ]	[ ]	[ ]	[ ]
I am often required to work for long periods with my body in physically awkward positions	[ ]	[ ]	[ ]	[ ]
I am often required to work for long periods with my head or arms in physically awkward positions	[ ]	[ ]	[ ]	[ ]
I am often required to repeatedly reach above chest height	[ ]	[ ]	[ ]	[ ]
My work requires repeated and strenuous pushing, pulling, or bending	[ ]	[ ]	[ ]	[ ]
I am often required to squat or kneel to do my job	[ ]	[ ]	[ ]	[ ]
I am often required to bend or twist my wrists to do my job	[ ]	[ ]	[ ]	[ ]
I am often required to use a lot of force with my fingers to do my job	[ ]	[ ]	[ ]	[ ]
I am often required to make repeated precision movements with my fingers	[ ]	[ ]	[ ]	[ ]
I am often required to work continuously for long periods at a computer	[ ]	[ ]	[ ]	[ ]

#### Q53: During the past 7 calendar days, how many times did you lift or transfer patients

Please select only one

- (1)-0
- ( 2 ) 1-5 times
- (3) 6-10 times
- ( 4 ) 11-20 times
- ( 5 ) 21-50 times
- ( 6 ) More than 50 times

Q54: In the past 7 calendar days, how often did you use any of the following when lifting or transferring patients? (Select "Not Available" to indicate that the specified device or team was not available.)

Please select one per row

	Ne	ver	Rar	elv		the	Most		ie .	All of			Not			
11% constants to be add for a solute day					-	ne	-	me		tin			aila			
Lift or move by hand (unassisted)	]	j	[	]		]		]		-	]		[ ]			
Mechanical lifting devices Slip or reduction sheets	I.	1	ı.	]	]	]		]			]		[ ]			
Gait belts (also called transfer belts)	ı	í	ı,	1	]	1		1			1		[ ]			
Back belts	1	1	'n	1	1	1		1		'n	1					
Lifting assistance from one or more co-workers						-					-					
(including designated lift teams)	[	]	[	J	[	]	Į.	]		[	]		[ ]	ı		
Roller or slider boards	]	]	]	1	]	1	]	]		]	]		[ ]	J		
Any other assistive device (Please specify)	]	]	[	]	]	]	]	]		]	]		[ ]	J		
instrument/equipment trays; large fluid-fille full wash bowls, etc)?  [Asked if code 1 is selected at Q53]  Please select only one  (1) - 0 (2) - 1-5 times (3) - 6-10 times (4) - 11-20 times (5) - 21-50 times (6) - More than 50 times	a bay	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,					uiuiya							bag	,	- bags
Q56: In the past 7 calendar days, how often than patients) that you considered heavy or machines; packaged stores; instrument/egu	awkw	vard	i(su	ıch a	s dru	ug tro	lleys;	pati	ent	troll	eys;	beds	; ar	naest	thetic	
	awkw ipmer	vard nt ti	i (su rays;	ch a	s dru je flu	ug tro uid-fi	lleys;	pati ags s	ent uch	troll as p	eys; erit	beds oneal	; ar	naest alysis	thetic s fluid,	,
than patients) that you considered heavy or machines; packaged stores; instrument/equ bladder washout bags, urine bags; full wash team was not available.	awkw ipmer	vard nt ti s, e	i (su rays; tc)?	ich a ; larç Sele	s dru ge flu ect "N	ug tro uid-fi Not A	lleys;	pati ags s le" t	ent uch	troll as p dicat	eys; erit	beds oneal at the	i; ai I dia e sp Not	naest alysis secifi	thetic s fluid,	,
than patients) that you considered heavy or machines; packaged stores; instrument/equ bladder washout bags, urine bags; full wash team was not available.	awkw ipmer bowl	vard nt ti s, e	d (surays; tc)?	ich a ; larç Sele	s dru ge flu ect "N	ug tro uid-fi Not A	olleys; lled ba vailab	pati ags s le" t	ent uch o inc	troll as p dicat	eys; erito te th	beds oneal at the	i; ai I dia e sp	naest alysis pecifi	thetic s fluid,	,
than patients) that you considered heavy or machines; packaged stores; instrument/equ bladder washout bags, urine bags; full wash team was not available.  Please select one per row  Lift or move by hand  Mechanical lifting devices (e.g., winch, dolly,	awkw ipmer bowl Nev	vard nt ti s, e	d (su rays; tc)?	ich a larg Sele	s dru ge flu ect "N	ug tro uid-fi Not A	olleys; lled ba vailab	pati ags s le" t	ent uch o inc	troll as p dicat	eys; erit te th	beds oneal at the	i dia e sp Not ailal	naest nlysis pecifi	thetic s fluid,	,
than patients) that you considered heavy or machines; packaged stores; instrument/equ bladder washout bags, urine bags; full wash team was not available. Please select one per row  Lift or move by hand	awkw ipmer bowl: Nev	vard nt tr s, e	d (surays; tc)?	sch a larg Sele	s dru ge flu ect "N	ug tro uid-fi Not A	olleys; lled ba vailab	pati ags s le" t	ent uch o inc	troll as p dicat	eys; eerito te th	beds oneal at the	Not ailal	naest alysis pecifi	thetic s fluid,	,
than patients) that you considered heavy or machines; packaged stores; instrument/equ bladder washout bags, urine bags; full wash team was not available.  Please select one per row  Lift or move by hand  Mechanical lifting devices (e.g., winch, dolly, forklift, etc.)	awkw ipmer bowl Nev	vard nt ti s, e	d (surays; tc)?	sch a larg Sele	s dru ge flu ect "N	ug tro uid-fi Not A	olleys; lied ba vailab uently ] ]	pati ags s le" t	ally	troll as p dicat	eys; eerito te th	beds oneal at the	Not ailal	naest alysis pecifi	thetic s fluid,	,
than patients) that you considered heavy or machines; packaged stores; instrument/equ bladder washout bags, urine bags; full wash team was not available.  Please select one per row  Lift or move by hand  Mechanical lifting devices (e.g., winch, dolly, forklift, etc.)  Roller or slider boards	Nev	vard nt tr s, e	d (surays; tc)?	sch a larg Sele	s dru ge flu ect "N	required [	olleys; lled ba vailab uently	pati ags s le" t	ent uch o inc	troll as p dicat	eys; eritore the	beds oneal at the	Not all all all all all all all all all al	naest alysis pecifi	thetic s fluid,	,
than patients) that you considered heavy or machines; packaged stores; instrument/equ bladder washout bags, urine bags; full wash team was not available.  Please select one per row  Lift or move by hand  Mechanical lifting devices (e.g., winch, dolly, forklift, etc.)  Roller or slider boards Back belts	Nev	er	d (surays; tc)?	sch a larg Sele	s dru ge flu ect "N	Freque	olleys; lied ba vailab uently ] ]	pati ags s le" t	ally	troll as p dicat	eys; eritore the	beds oneal at the	Not all all all all all all all all all al	naest alysis pecifi	thetic s fluid,	,
than patients) that you considered heavy or machines; packaged stores; instrument/equ bladder washout bags, urine bags; full wash team was not available.  Please select one per row  Lift or move by hand Mechanical lifting devices (e.g., winch, dolly, forklift, etc.) Roller or slider boards Back belts Lifting assistance from one or more co-workers	Neve	er	(surays)	sch a ; larg Sele	ss druge flu	Freque	ently	pati ags s le" t Usu [ [ [ [	ally	Alw [ [ [ [	eys; erito e th	beds oneal at the	Not ailat	naest alysis pecifi	thetic s fluid,	,
than patients) that you considered heavy or machines; packaged stores; instrument/equivalent bags, urine bags; full wash team was not available.  Please select one per row  Lift or move by hand Mechanical lifting devices (e.g., winch, dolly, forklift, etc.) Roller or slider boards Back belts Lifting assistance from one or more co-workers Any other assistive device (please specify)	Neve	er	(surays)	sch a ; larg Sele	ss druge flu	Freque	ently	pati ags s le" t Usu [ [ [ [	ally	Alw [ [ [ [	eys; erito e th	beds oneal at the	Not ailat	naest alysis pecifi	thetic s fluid,	,
than patients) that you considered heavy or machines; packaged stores; instrument/equivalent bladder washout bags, urine bags; full wash team was not available.  Please select one per row  Lift or move by hand Mechanical lifting devices (e.g., winch, dolly, forklift, etc.) Roller or slider boards Back belts Lifting assistance from one or more co-workers Any other assistive device (please specify)  Q57: Has your employer evaluated your job of Please select only one	Neve	er	(surays)	sch a ; larg Sele	ss druge flu	Freque	ently	pati ags s le" t Usu [ [ [ [	ally	Alw [ [ [ [	eys; erito e th	beds oneal at the	Not ailat	naest alysis pecifi	thetic s fluid,	,
than patients) that you considered heavy or machines; packaged stores; instrument/equivalent bladder washout bags, urine bags; full wash team was not available.  Please select one per row  Lift or move by hand Mechanical lifting devices (e.g., winch, dolly, forklift, etc.) Roller or slider boards Back belts Lifting assistance from one or more co-workers Any other assistive device (please specify)  Q57: Has your employer evaluated your job of Please select only one  ( 1 ) - Yes	Neve	er	(surays)	sch a ; larg Sele	s druge flu	Freque	ently	pati ags s le" t Usu [ [ [ [	ally	Alw [ [ [ [	eys; erito e th	beds oneal at the	Not ailat	naest alysis pecifi	thetic s fluid,	,
than patients) that you considered heavy or machines; packaged stores; instrument/equivalent bags, urine bags; full wash team was not available.  Please select one per row  Lift or move by hand Mechanical lifting devices (e.g., winch, dolly, forklift, etc.) Roller or slider boards Back belts Lifting assistance from one or more co-workers Any other assistive device (please specify)  Q57: Has your employer evaluated your job of the properties	awkw ipmer bowle	er ] ] ] ] rkst	I (surays,	sch a ; larg Sele	s druge fluct "M	Frequence (	lled by vailab	patings sile" t	ally in the state of the state	Alw  [ [ [ [ the p	eys; eritte the th	beds oneal at the	Not ailat	naest Nysisi Decifi	s fluid, ied de	, vice or
than patients) that you considered heavy or machines; packaged stores; instrument/equivalenthess packaged stores; instrument/equivalenthess packaged stores; instrument/equivalenthess packaged stores; full wash team was not available.  Please select one per row  Lift or move by hand Mechanical lifting devices (e.g., winch, dolly, forklift, etc.) Roller or slider boards Back belts Lifting assistance from one or more co-workers Any other assistive device (please specify)  Q57: Has your employer evaluated your job of the package select only one  (1) - Yes (2) - No (3) - Don't know	awkw ipmer bowle	er ] ] ] ] rkst	I (surays,	sch a ; larg Sele	s druge fluct "M	Frequence (	lled by vailab	patings sile" t	ally in the state of the state	Alw  [ [ [ [ the p	eys; eritte the th	beds oneal at the	Not ailat	naest Nysisi Decifi	s fluid, ied de	, vice or
than patients) that you considered heavy or machines; packaged stores; instrument/equivalenthes; packaged stores; instrument/equivalenthes; packaged stores; instrument/equivalenthes; packaged stores; instrument/equivalenthes; packaged stores; full wash team was not available.  Please select one per row  Lift or move by hand Mechanical lifting devices (e.g., winch, dolly, forklift, etc.) Roller or slider boards Back belts Lifting assistance from one or more co-workers Any other assistive device (please specify)  Q57: Has your employer evaluated your job of the packaged select only one  (1) - Yes (2) - No (3) - Don't know  Q58: On a scale of 1 to 5, where 1 means "exployed you would rate yourself in terms of general selections."	awkw.ipmer bowle  Neve  [  [  [  [  cor woo	er ] ] ] ] rkst	I (surays)	sch a ; larg Sele	s druge fluct "Male ally	Frequence (	lled by vailab	patings sile" t	ally in the state of the state	Alw  Alw  [ [ [ [ the passing	eys; eritte the the ays ] ] ] ] past	ave asse in seek.	Not ailat	naest alysisi poecifi ble	s fluid, ied de	, vice or
than patients) that you considered heavy or machines; packaged stores; instrument/equivalenthes; packaged stores; instrument/equivalenthes; packaged stores; instrument/equivalenthes; packaged stores; instrument/equivalenthes; packaged stores; full wash team was not available.  Please select one per row  Lift or move by hand Mechanical lifting devices (e.g., winch, dolly, forklift, etc.) Roller or slider boards Back belts Lifting assistance from one or more co-workers Any other assistive device (please specify)  Q57: Has your employer evaluated your job of the packaged select only one  (1) - Yes (2) - No (3) - Don't know  Q58: On a scale of 1 to 5, where 1 means "exployed you would rate yourself in terms of general selections."	awkw.ipmer bowle  Neve  [  [  [  [  cor woo	er ] ] ] ] rkst	I (surays, tc)?	sch as; larg Sele	s druge fluct "Male ally	reans I fatig	ently  inchase  "extra gue du	Usu  [ [ [ zard:	ally  ally  ally  ally  the	Alw Alw [ [ [ [ the ;	eys; eritte the the ays ] ] ] ] past	beds oneal at the ave year	Not ailat	naest alysisi poecifi ble	thetic	, vice or

[][][]

[ ]

[ ]

Q59A: This question is about your bodily feelings of fatigue related to work in the past week. For the choices below, please select the choices which best describe your experience of fatigue (how much fatigue and how often you

experience it) at work d	luring the	e past week. Th	e ratings are done	separately for the	upper and lower b	ody.
For example, if in the up fatigued occasionally, th				the time, no fatigue	occasionally, and	l extremely
Upper Body						
		Nover	Occasionally	Unif the time. N	last of the time	All of the time
Not Fatigued		Never	Occassionally	Half the time M	lost of the time	
			$\wedge \mathbb{M} \cap$			0
Slightly fatigued		0	-/IAIL			0
Moderately fatigued		•	0	0	0	0
Extremely fatigued		0	•	0	0	0
Please select one per row						
Upper Body						
	Never	Occassionally	Half the time	Most of the time	All of the time	9
Not Fatigued	[ ]	[ ]	[ ]	[ ]	[ ]	
Slightly fatigued	[ ]	[ ]	[ ]	[ ]	[ ]	
Moderately fatigued	[ ]	[ ]	[ ]	[ ]	[ ]	
Extremely fatigued	[ ]	[ ]	[ ]	[ ]	[ ]	
Q59B: Lower body						
Please select one per row						
	Never	Occassionally	Half the time	Most of the time	All of the time	
Not Fatigued	r 1	[ ]	[ ]	1 1	[ ]	-
Slightly fatigued	ίí	ίí	ίj	ίj	Ĺĵ	
Moderately fatigued	[ ]	[ ]	[ ]	[ ]	[ ]	
Extremely fatigued	[ ]	[ ]	[ ]	[ ]	[ ]	
Q60A: This question is a below, please select the often you experience it) For example, if in the up and extreme discomfort	choices at work oper body	which best des during the past y you felt no dis	cribe your experie t week. The rating comfort about hal	nce of discomfort () s are done separate If of the time, slight	how much discom ly for the upper a	fort and how nd lower body.
Upper Body						
	Ne	ever Oc	cassionally H	alf the time Mos	t of the time Al	of the time
No discomfort		0	0		0	0
Slight discomfort		$\Delta \times \Delta \Lambda$		- () (	6	0
Moderate discomfort			V XI LL	-2014		ŏ
		_	0	0	0	_
Extreme discomfort		0	•	0	0	0
Please select one per row						
Upper Body						
	Never	Occassionally	Half the time	Most of the time	All of the time	e
No discomfort	[ ]	[ ]	[ ]	[ ]	[ ]	
Slight discomfort	[ ]	[ ]	[ ]	[ ]	[ ]	
Moderate discomfort	[ ]	[ ]	[ ]	[ ]	[ ]	

Your general level of fatigue this week?

Extreme discomfort	[ ]	[ ]	[ ]	[ ]	[ ]	
Q60B: Lower body						
Please select one per row	,					
	Never	Occassionally	Half the time	Most of the time	All of the time	
No discomfort	[ ]	[ ]	[ ]	[ ]	[ ]	
Slight discomfort	[ ]	[ ]	[ ]	[ ]	[ ]	
Moderate discomfort	[ ]	[ ]	[ ]	[ ]	[ ]	
Extreme discomfort	[ ]	[ ]	[ ]	[ ]	[ ]	
Q61: Which of the folk your job?	owing perso	onal protective d	evices or equipmen	nt are you required	by your employer to w	ear on
Please select as many as	apply					
[ 1 ] - Respirators (does	not include	surgical mask)				
[2] - Surgical mask						
[ 3 ] - Eye protection (e.	.g., safety gl	asses, goggles, et	c.)			
[ 4 ] - Face protection (e	e.g. face shie	ld, welding helme	ts, etc.)			
[ 5 ] - Foot protection (e	_	d shoes, chemical	resistant boots, etc.)			
[ 6 ] - Shoe covers/boot						
[7] - Protective clothing	_					
[ 8 ] - Protective clothing	-		lation gowns, coveral	ls, etc.)		
[ 9 ] - Ear protection (ea						
[ 10 ] - Hand protection	(e.g., gloves	, hand pads, barr	er creams, etc.)			
[ 11 ] - Knee protectors	where accomment					
[ 12 ] - Back belts or lun [ 13 ] - Other (Please sp						
[ 99 ] - None	ecity).					
[ 22 ] - Holle						
-				employer provided	I training to you in the	proper
selection, use, care, m	aintenance	and replacemen	it?			
Please select as many as	apply					
[ 1 ] - Respirators (does	not include	surgical mask)				
[ 2 ] - Surgical mask						
[ 3 ] - Eye protection (e.						
[ 4 ] - Face protection (e	_					
[ 5 ] - Foot protection (e	_	d shoes, chemical	resistant boots, etc.)			
[ 6 ] - Shoe covers/boot						
[7] - Protective clothing	_					
[ 8 ] - Protective clothing	-		lation gowns, coveral	ls, etc.)		
[ 9 ] - Ear protection (ea		-				
[ 10 ] - Hand protection	(e.g., gloves	, hand pads, barr	ier creams, etc.)			
[ 11 ] - Knee protectors						
[ 12 ] - Back belts or lun	nbar support					

## Q63: Have you been formally fit-tested by an occupational health and safety specialist for the respirator you wear on your present job?

Please select only one

[ 99 ] - None

( 1 ) - Yes, I have been fit-tested

[ 13 ] - Other (Please specify):

- ( 2 ) No, I wear a respirator on my present job but I have not been fit-tested
- ( 3 ) Not Applicable (I do not wear a respirator that requires fit-testing on my present job)

Q64: During the past 7 calendar days, did you we	ar natural rubber latex glo	ves while at w	ork?	
Please select as many as apply				
[1]-Yes, powder-free				
[2] - Yes, powdered				
[ 97 ] - Yes, don't know if powdered or powder-free				
[ 98 ] - No				
[ 99 ] - Don't know				
Q65: In your current job do you administer antine	oplastic agents to patient	s (other terms	used for antineop	lastic
agents include chemotherapeutic drugs, cytotoxic	drugs and anti-cancer dr	ugs)?		
Please select only one				
(1)-Yes				
(2)-No				
( 3 ) - Don't know				
Q66: In your current job, do you use ethylene oxi devices, instruments, or supplies?	de or hydrogen peroxide p	olasma to chen	ically sterilize me	dical
Please select only one				
(1)-Yes				
(2)-No				
(3) - Don't know				
does NOT include the cleaning of countertops or of Please select only one (1)-Yes	ther surfaces.)			
(2) - No				
(3) - Don't know				
Q68: This question refers only to the patients that patients you used to see when caring for patients percentage (%) do you think was caused by the p haven't seen any patients with the disease, tick "!  Please type in your response	. For each of the diseases atients' work. If you reall	shown below,	approximately wh	at
Anxiety disorders	rank	dk1	dk2	
Arthritis	i i	ίí	i i	
Asbestosis	[ ]	ίί	( )	
Asthma	[ ]	Ĺ	1 1	
Bladder cancer			[ ]	
		[ ]		
Brucellosis	[ ]	[ ]	[ ]	
Dementia	[ ]	[ ]	[ ]	
Depression	[ ]	[ ]	[ ]	
Dermatitis	[ ]	[ ]	[ ]	
Back pain	[ ]	[ ]	[ ]	
Emphysema	[ ]	[ ]	[ ]	
Glaucoma	[ ]	[ ]	[ ]	
Hearing loss	[ ]	[ ]	[ ]	
Heart disease	[ ]	[ ]	[ ]	

[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]		[ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ]	f work?
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at your patien	[ ]	[ ]	f work?
at your patien	nts could ha	ive?	f work?
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ırsing that req	uired you t	o take time off	f work?
irsing that req	uired you t	o take time off	f work?
st recent injur	y/disease t	that required y	ou to take ti
d time off work	k?		
on glass vial';	'hurt back	lifting patient'	).
1			
j			
]			
1			
] ] ]			
		on glass vial'; 'hurt back	on glass vial'; 'hurt back lifting patient'

Please select only one

```
1 - days : [ ]
2 - or weeks : [ ]
3 - or months : [ ]
```

#### Q73: How long ago did the injury / disease occur?

Please select only one

```
1 - weeks : [ ]
2 - or months : [ ]
3 - or years : [ ]
```

#### Q74: Did you make a workers' compensation claim?

Please select only one

- (1)-Yes
- (2)-No
- (3) Don't know

#### Q75: What was the main reason you didn't make a workers' compensation claim?

Please select only one

- (1) Injury not serious enough
- (2) Not covered by workers' compensation
- (3) Not aware that I could make a claim
- ( 4 ) Discouraged by colleagues from making a claim
- (5) Discouraged by management from making a claim
- ( 6 ) Other (please specify)

#### Q76: Was a return to work plan prepared for you?

#### [Asked if code 1 is selected at Q74] [Asked if code 3 is selected at Q74]

Please select only one

- (1)-Yes
- (2)-No
- (3) Don't know

#### Q77: Has this plan finished or is it still in place?

Please select only one

- (1) Yes, it is finished
- (2) No, it is still in place
- (3) Don't know

#### Q78: What is your current situation?

Please select only one

- ( 1 ) Returned to work with the same employer
- (2) Returned to work with a different employer
- (3) Still haven't returned to work but expect to
- ( 4 ) Don't expect to return to work, but no decision made yet

( 6 ) - Medically retired ( 7 ) - Voluntarily retired						
(8) - Fit for work but not currently employed						
(9) - Other (please explain)						
Q79: If you are currently working, what duties are you do	ing compare	ed to prior t	o your ir	njury / dise	ase?	
[Asked if code 1 is selected at Q78] [Asked if code 2 is selected at Q78]						
Please select only one						
(1) - Doing same duties						
( 2 ) - Doing modified duties						
( 3 ) - Doing different duties						
Q80: If you are currently working, what hours are you wo	rking compa	red to prio	r to your	injury / di	sease?	
Please select only one						
(1) - Doing same hours						
(2) - Doing less hours						
( 3 ) - Doing more hours						
Q81: Please indicate the level to which you agree or disag that do not apply to you)	ree with the	following	statemer	nts (please	tick N/A fo	or items
	Strongly Disagree	Disagree	Agree	Strongly Agree	N/A	
My return to work plan was put in place in a reasonable time	[ ]	[ ]	[ ]	[ ]	[ ]	
People from work kept in touch with me while I was off work	[ ]	[ ]	[ ]	[ ]	[ ]	
While I was off work management was generally sympathetic towards me	[ ]	[ ]	[ ]	[ ]	[ ]	
While I was off work my rehabilitation providers (doctors etc) were generally sympathetic towards me	[ ]	[ ]	[ ]	[ ]	[ ]	
I felt supported by my colleagues while I was off work	[ ]	[ ]	[ ]	[ ]	[ ]	
I was given modified duties as part of my return to work plan	[ ]	[ ]	[ ]	[ ]	[ ]	
My return to work plan was successful	[ ]	[ ]	[ ]	[ ]	[ ]	
Q82: Listed below are service providers who may have be providers in terms of the provider who you regard as bein program (starting with a rank of 1 (one) being for the mo program, put 0.	g the most h	nelpful part	y involve	ed in your r	ehabilitatio	on
Please type in your response						
Q83: If in your view the RTW plan was NOT successful, w	hat wee the	main reaso	n for the	lack of eve	case?	
	iat was the i	mam reaso	ii ioi tiie	lack of suc	cess:	
Please type in your response						
l r		j 1				
Ì		í				
[		]				
t .		1				
Q84: Is there anything in the return to work process that	vou se s be-	alth profess	eional	ould chara	e or intend	luce?
Qo-1. 15 there anything in the return to work process that	you, as a nea	aith profess	nonai, w	outu chang	e or introd	lacer
[Asked if code 7 equals 3 at <u>OS1</u> ]						

( 5 ) - Permanently unable to work but not medically retired

```
[Asked if code 7 equals 4 at <u>Q81</u>]
[Asked if code 7 equals 5 at <u>Q81</u>]
Please type in your response
99 - I wouldn't change anything
Q85: DEMOGRAPHICS
Are you male or female?
[Asked if code 2 is selected at Q76]
[Asked if code 2 is selected at 070]
[Asked if code 3 is selected at 076]
Please select only one
(1) - Male
(2) - Female
Q86: In what year were you born?
Please type in your response
1 - Year or birth: : [
Q87INTRO: RESPONDENT FEEDBACK SECTION
Please take a few moments to answer the following questions regarding your experience with this survey. We
appreciate your cooperation.
Q87: How long did it take you to complete the survey?
Please select only one
(1) - Less than 10 minutes
(2) - 11-20 minutes
(3) - 21 - 30 minutes
(4) - 31-45 minutes
(5) - More than 45 minutes
Q88: Please use the space below to record any other comments you have about the survey.
Please type in your response
99 - No comment
```

### Appendix 3: The Participant Information Sheet

Dr Tim Driscoll

MBBS BSc(Med) FAFOM FAFPHM Director

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#### RESEARCH STUDY INTO OCCUPATIONAL EXPOSURES OF **AUSTRALIAN NURSES**

#### PARTICIPANT INFORMATION STATEMENT

You are invited to take part in a research study into occupational exposures of Australian nurses. The study is designed to identify the key hazards to which Australian nurses are exposed as a result of their work and to estimate the proportion of nurses who are exposed to them. This information can be used in the planning of longer term exposure surveillance; education of potentially exposed workers; and appropriate targeting of activities to prevent or minimise exposure.

The study is being conducted by Dr Tim Driscoll (a researcher at ELMATOM Pty Ltd), Dr Anthony Hogan (of the Office of the Australian Safety and Compensation Council) and Ms Ged Kearney (Assistant Federal Secretary, Australian Nursing Federation).

If you agree to participate in this study, you will be asked to fill out a web-based questionnaire about various job-related exposures that you may have. You can connect to the questionnaire simply by clicking on the email address included in the attached email from the Australian Nursing Federation. The information you supply will not be able to be connected to you and you will not be required to provide any personal details apart from age and gender. The data collection aspect of the survey is being conducted on the behalf of the researchers by i-Link Research Solutions Pty Ltd, which is experienced in on-line surveys. I-link will then provide the raw data set to the project team for analysis. No information that could allow you to be identified or traced is collected by i-Link.

A report of the study will be produced and will be made available to all participants via the Nursing Federation.

While it is hoped that this research study is of benefit to all nurses, it may not be of direct benefit to you.

Participation in this study is entirely voluntary: you are not obliged to participate and - if you do participate - you can withdraw at any time simply by not completing the questionnaire.

If you would like to know more at any stage, please contact Tim Driscoll, project leader (ph: 02-98030301; email elmatom@optushome.com.au). This information sheet is for you to keep.

Any person with concerns or complaints about the conduct of a research study can contact the Senior Ethics Officer, Ethics Administration, University of Sydney on (02) 9351 4811 (Telephone); (02) 9351 6706 (Facsimile) or <a href="mailto:qbriedle: