

Workplace Health and Safety Queensland

A Guide to Health and Safety in the Call Centre Industry



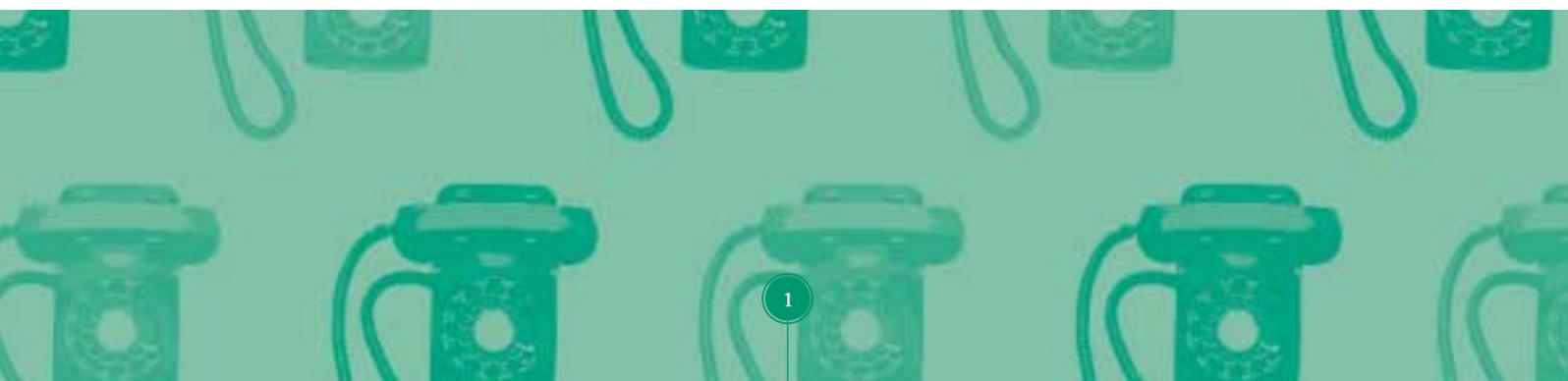
© The State of Queensland Department of Industrial Relations 2003.

Copyright protects this publication. The State of Queensland has no objection to this material being reproduced but asserts its right to be recognised as author of its original material and the right to have its material remain unaltered.

This publication is produced to convey general interest policy information. While every care has been taken in preparing this report, the State of Queensland accepts no responsibility for decisions or actions taken as a result of any data, information, statement or advice, express or implied, contained in this report.

For further information, please telephone 1300 369 915 or visit our website at www.whs.qld.gov.au

Purpose and scope of this guide	3
Part 1 Workplace health and safety legislation.....	4
Chapter 1 Introduction	4
1.1 What constitutes a call centre?.....	4
1.2 Characteristics of call centres	4
Chapter 2 Workplace health and safety obligations	4
2.1 General obligations	4
2.2 Obligation holders	4
2.3 Obligations	5
2.3.1 Employer	5
2.3.2 Workers and other persons	5
2.3.3 Persons in control of workplaces	5
2.3.4 Persons conducting a business or undertaking	5
2.4 Labour hire organisations and host employers	6
Chapter 3 Managing health and safety	6
3.1 Step 1 – Identify hazards	6
3.2 Step 2 – Assess risks	7
3.3 Step 3 – Determine control measures	7
3.4 Step 4 – Implement control measures	8
3.5 Step 5 – Monitor and review	8
3.6 An occupational health and safety management system approach	8
Part 2 Major hazards in the call centre industry	9
Chapter 4 Manual tasks in the call centre industry	9
4.1 Introduction	9
4.1.1 Working postures	9
4.1.2 Repetition and duration	9
4.1.3 Work area design	10
4.1.4 Work organisation	10
4.2 Individual factors	10
4.3 Work-related musculoskeletal disorders in call centres	10
4.3.1 Upper limbs	11
4.3.2 Back	11
4.4 Manual tasks: risk factors and control measures	11
Chapter 5 Occupational stress	13
5.1 Introduction	13
5.2 Stress and the call centre industry	13
5.3 How stress affects health	13
5.4 Major causes of call centre stress	13
5.5 Stress: risk factors and control measures	13
5.6 Stress management programs	16



Chapter 6	Headset use	16
6.1	Introduction	16
6.2	Acoustic shock	17
6.3	Noise exposure	18
6.4	Baseline audiometry	18
6.5	Background chatter	19
6.6	Infection control: risks and control measures	19
Chapter 7	Voice strain	19
7.1	Voice: An occupational tool for call centre operators	19
7.2	Identifying vocal strain	19
7.3	Factors contributing to vocal health	20
7.3.1	Environmental	20
7.3.2	Behavioural/habitual	20
7.3.3	Physical	21
7.4	Principles for voice injury prevention	21
7.5	Further medical intervention	21
Chapter 8	Other health issues in call centres	21
Part 3	Other obligations	22
Chapter 9	Other workplace health and safety legislative obligations	22
9.1	Consultative arrangements	22
9.1.1	Workplace Health and Safety Officers	22
9.1.2	Workplace Health and Safety Representatives	22
9.2	Reporting arrangements	22
9.3	First aid	22
9.4	Emergency procedures	22
9.5	Electrical issues	22
9.6	Hazardous substances	22
9.7	Plant	22
9.8	Amenities	22
9.9	Workplace bullying	22
9.10	Violence in the workplace	23
9.11	Indoor air quality	23
Appendixes		
Appendix A	Characteristics of call centres	24
Appendix B	Obligations of call centre employers	25
Appendix C	Risk priority chart	26
Appendix D	Checklist: call centre health and safety issues	27
Appendix E	Individual factors	31
Appendix F	Checklist for performance monitoring, feedback and targets	32

Purpose of this guide

This industry guide provides:

- information on hazards and risks in the call centre environment
- control options for dealing with these hazards
- a list of reference material
- information on how a risk management process is conducted in the workplace.

This document is designed to assist call centre employers and workers to meet their workplace health and safety obligations as required by the *Workplace Health and Safety Act 1995*. It does not address all potential hazards and their risks, but does address the major ones.

The identified control measures outline a range of options that may be adopted for the risks identified. They are determined by using the Hierarchy of Control (see Chapter 3), which is a preferred priority for selecting health and safety control options.

Where this Guide does not address an identified risk, it should be managed using the risk management process (see Chapter 3).

Scope of the guide

This document has been specifically designed to assist employers and workers to understand and meet their workplace health and safety obligations.

It pertains to call centres; call centre owners and operators; and call centre workers as described in section 1.1, and covers the identification and management of some of the major (or most common) hazards involved in such workplaces.

Chapter 1: Introduction

1.1 What constitutes a call centre?

Call centres are typically located within other industries such as banking and finance, insurance, travel services, telecommunications, road services, public utilities and agencies, and sales.

For the purposes of this guide, a call centre refers to:

- telemarketing centres and telemarketing workers
- help desks
- hotlines
- contact centres
- workers engaged to perform call centre work from home
- workplaces that are part of a collective call centre service where the call centre characteristics (outlined in section 1.2 and Appendix A) exist
- workplaces where the primary role of workers is to respond to telephone and other electronic requests from clients and where some or all of the call centre characteristics (outlined in section 1.2 and Appendix A) exist.

Within a call centre, workers are generally:

- engaged to answer large volumes of phone traffic and/or electronic requests
- trained and skilled in customer service
- based at single or multiple computer workstations
- equipped with a computer workstation, telephone (usually with headset) and supplementary task-related documentation.

For the purpose of this guide a call centre does not automatically include workers who perform work at a computer workstation. Workers need to be operating with the identified call centre characteristics (see Section 1.2 and Appendix A) and exposed to some or all of the hazards and their potential risks outlined in this document.

Depending on the type of call centre and the job design, different levels of risk may exist for each hazard area. However, regardless of the type of call centre, the risk management process detailed in Chapter 3 should be followed.

1.2 Characteristics of call centres

From a health and safety point of view, the call centre industry is characterised by certain organisational factors that distinguish it from the office environment. These factors include:

- hot-desking
- electronic performance monitoring and targets
- performance appraisal systems (linked to electronic performance monitoring)
- limited task variation
- limited autonomy – depending on the type of call centre
- staff forecasting
- potential high stress environment.

(See Appendix A for complete definitions.)

Chapter 2: Workplace health and safety obligations

2.1 General obligations

Workplace health and safety is ensured where persons are free from death, injury or illness, and from the risk of death, injury or illness created by workplaces, workplace activities or specified high-risk plant.

2.2 Obligation holders

The *Workplace Health and Safety Act 1995* (the Act) imposes workplace health and safety obligations on people at workplaces to ensure workplace health and safety. The following persons have obligations under the Act:

- employers
- persons in control of workplaces
- persons conducting a business or undertaking
- workers and other persons (members of the public, subcontractor, contract worker) at a workplace
- self-employed persons
- principal contractors
- designers, manufacturers, and suppliers of plant
- erectors and installers of plant
- manufacturers, and suppliers of substances for use at workplaces
- owners of specified high risk plant
- designers of buildings or other structures to be used as workplaces
- persons in control of relevant workplace areas
- persons in control of fixtures, fittings and plant included in relevant workplace areas

Workplace health and safety is ensured when persons are free from the risk of death, injury or illness created, by workplaces, workplace activities or specified high risk plant. Ensuring workplace health and safety involves identifying and managing exposure to the risks at your workplace.

2.3 Obligations

The following outlines the main obligation holders found in the call centre industry and their responsibilities to workplace health and safety. For further information on obligations refer to the *Workplace Health and Safety Act 1995* sections 28-36.

2.3.1 Employer

Definition

An “employer” is a person who engages someone else to do work, other than under a contract for service, for or at the direction of the person.

A person is considered to have “engaged someone else” to do work even when the person works on a voluntary basis.

Obligations

- An employer has an obligation to ensure the workplace health and safety of each of the employer’s workers in the conduct of the employer’s business or undertaking
- An employer has an obligation to ensure the employer’s own workplace health and safety in the conduct of the employer’s business or undertaking
- An employer has an obligation to ensure other persons are not exposed to risks to their health and safety arising out of the conduct of the employer’s business or undertaking.

2.3.2 Workers and other persons

Definition

A person is a “worker” if the person does work, other than under a contract for services, for or at the direction of an employer. A person may be a “worker” even though the person is not paid for work done by the person. However, a person is not a “worker” merely because the person does work for an organisation of which the person is a member.

An “other person” includes any person whose workplace health and safety may be affected by the business or undertaking. This includes members of the public, subcontractors and contract workers.

Obligations

Under section 36 of the Act, a worker, contract worker, subcontractor, or anyone else at a workplace has the following obligations:

- to comply with the instructions given for workplace health and safety by the employer and, if the workplace is a construction workplace, the principle contractor for workplace health and safety
- to use personal protective equipment if it is provided by the employer and the worker is properly instructed in its use
- not to wilfully or recklessly interfere with or misuse anything provided for workplace health and safety
- not to wilfully place at risk the workplace health and safety of any person
- not to wilfully injure himself or herself.

2.3.3 Persons in control of workplaces

Obligations

A person in control of a workplace has the following obligations:

- to ensure the risk of injury or illness from a workplace is minimised for persons coming onto the workplace to work
- to ensure the risk of injury or illness from any plant or substance provided by the person for the performance of work by someone other than the person’s workers is minimised when used properly
- to ensure there is appropriate, safe access to and from the workplace for persons other than the person’s workers.

2.3.4 Person conducting a business or undertaking

Obligations

A person who conducts a business or undertaking has an obligation to ensure the workplace health and safety of each person who performs a work activity for the purposes of the business or undertaking.

The obligation applies–

- whether or not the relevant person conducts the business or undertaking as an employer or self-employed person; and
- whether or not the business or undertaking is conducted for gain or reward; and
- whether or not a person who performs a work activity for the purposes of the business or undertaking works on a voluntary basis.

2.4 Labour Hire Organisations¹ and Host Employers²

Essentially, labour hire organisations and host employers have a 'shared responsibility' for their worker's and other person's workplace health and safety in the workplace.

Labour hire agencies provide contract workers to their clients (host employers). They do not supervise the conduct of the work or control the workplace at which it is performed. However, this does not diminish their obligation to ensure that contract workers and subcontractors are not put at risk of injury or disease whilst working for a host employer. Consequently, when the hired labour is of a contract worker type, the agency's obligations are the same as those of any employer. When the hired labour is a subcontractor, the agency is responsible for advising him/her that as 'self-employed persons' they have separate obligations under the Act.

It is important to note that contract workers must not only comply with instructions given by the labour hire company, but with those given by the host employer as well. Although subcontractors are responsible for their own health and safety, they must also comply with the instructions of the host employer.

See Appendix B for a case study example.

Contract workers must comply with the instructions given by the labour hire company as well as the host employer. Subcontractors are responsible for their own health and safety and must also comply with the instructions of the host employer and labour hire organisation.

Chapter 3: Managing health and safety

The *Workplace Health and Safety Risk Management Advisory Standard 2000* is a risk management standard that applies to all Queensland workplaces to which the *Workplace Health and Safety Act 1995* applies.

It provides a risk management process to help employers meet their health and safety obligations.

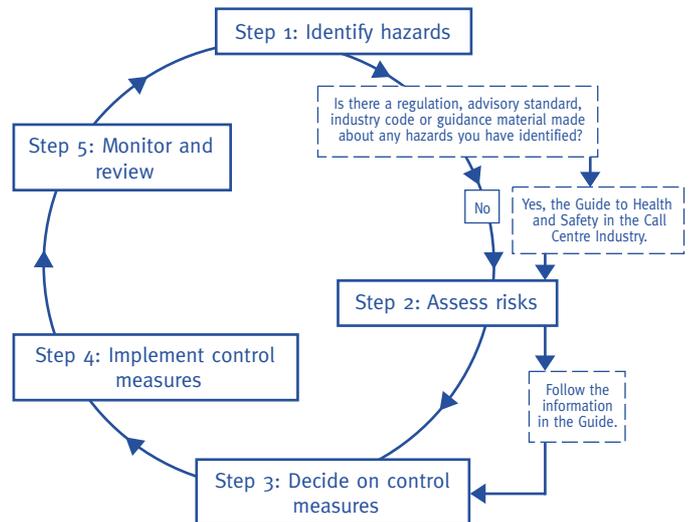
The risk management process should be undertaken:

- now, if you have not done it before
- after a change occurs or is introduced (for example, to work procedures)
- after an incident or 'near miss'
- at regular times scheduled according to the level of workplace risk.

Communication and consultation with workers throughout the risk management process, and on an

ongoing basis, is a valuable step in ensuring a thorough and effective health and safety management system.

The risk management process is illustrated below:



3.1 Step 1 – Identify hazards

In consultation with workers, make a list of potential hazards at your workplace that have the potential to cause harm. General types of workplace hazards can be classified under:

- manual tasks (e.g. working postures, repetition and duration)
- occupational stress (as described in Chapter 5)
- headset use
- noise (e.g. background noise and masking noise)
- work environment (e.g. lighting, amenities)
- energy (e.g. electricity)
- substances (e.g. chemicals)
- plant (e.g. equipment, hand tools)
- emergency procedures
- workplace harassment/bullying.

Identify the risk/s associated with each hazard before proceeding to step 2.

A risk is the likelihood that death, injury or illness might result because of the hazard.

Chapters 4 – 8 are designed to assist you to identify and assess the risk factors in your call centre.

- 1 A labour hire organisation can be either a business entity or a person who contracts with a client (host employer) to supply labour in the form of a contract worker or subcontractor to work at the host employer's workplace.
- 2 A host employer can be either a business entity or a person (client) who contracts with a labour hire organisation for the supply of labour in the form of a contract worker or a subcontractor, or with a group training scheme for the training of apprentices and trainees.

3.2 Step 2 – Assess risks

List the identified risks in order of priority using the Risk Priority Chart in Appendix C.

When conducting your assessment, consider, for example:

- the number of times a situation arises
- the number of people exposed, the duration of their exposure, possible outcome/consequence of exposure
- skills/experience of workers
- environmental conditions
- acoustic conditions in the call centre
- the condition of equipment
- presence or absence of volume control limiting devices in headset systems
- the effectiveness of existing control measures
- any special characteristics that might affect the likelihood of an occurrence
- the potential for the hazard to become more serious
- individual differences between workers, including physical and psychological health.

3.3 Step 3 – Determine control measures

Consult with workers when identifying appropriate control measures. Consultation is a requirement under the *Workplace Health and Safety Act 1995*.

To ensure you have controlled the risks identified to the best of your ability, use the *Hierarchy of Control* – outlined below.

This hierarchy is an order that tells you which of the control measures provides a better level of risk control. You should use controls that are presented first, wherever possible.

Hierarchy of Control

1. Firstly, try to **eliminate** the hazard, if possible. This may mean discontinuing the work practices that create the risk or removing hazardous equipment or substances.

If this is not possible, prevent or minimise exposure to the risk:

2. **Substitute** a less hazardous work process, material or equipment; or **redesign** equipment or practices so that work can be done differently.

3. **Isolate** the hazard from the worker by making changes to the work environment or practices so that exposure is minimised.

If this is not possible, reduce the likelihood of risk with:

4. **Administrative controls**, including improved supervision/instructions; job rotation; training; and/or policies and procedures.

5. **Personal protective equipment (PPE)** as a barrier between workers and hazards.

Examples of control measures that may **eliminate** a hazard in the call centre industry include:

- Job redesign or job enlargement to incorporate regular postural changes may eliminate exposure to prolonged static working postures
- Consultation and active involvement of workers in all work and environmental decisions/tasks may eliminate workers perceptions of lack of control over work tasks and environment.

Administrative controls and personal protective equipment (PPE) should only be used:

- when no other practical or permanent control measures are available
- as temporary measures while a more permanent solution is found or,
- to supplement other controls.

The control measures you choose should:

- adequately control exposure to the risk
- allow workers to do their work without undue discomfort or distress
- not create another hazard (e.g. locking a rear exit door for security purposes may create a potentially hazardous situation if workers are unable to evacuate the building in an emergency).

In practice, several control options are often used in combination. Measures such as administrative controls are often used as interim solutions while more permanent solutions are implemented.

Refer to Chapters 4 – 8 for possible control measures for the risks you have identified in your call centre

3.4 Step 4 – Implement control measures

Undertake those activities necessary to allow the measures to operate effectively.

- **Develop work procedures** to ensure that the control measures are effective.
- **Communicate and consult** with workers and others about the control measures and the reasons for their implementation.
- **Provide training** for workers, particularly where changes in work procedures occur as a result of implementing the control measures.
- **Supervise** the workers to verify that the control measures are effective.
- **Maintain** the control measures to ensure their ongoing effectiveness. (Specify maintenance procedures for the new control measures as part of routine work practices).

3.5 Step 5 – Monitor and review

Determine whether chosen control measures have been implemented as planned. Here you should:

1. Consult and communicate with workers:
 - Inform them about the chosen control measures
 - Invite their comments and ideas about the control of risks.
2. Determine whether chosen control measures:
 - are in place
 - are being used
 - are being used correctly
 - are working.
3. Consider whether the effect of the changes on the assessed risks has been to:
 - eliminate exposure
 - control exposure as intended
 - adequately reduce exposure.
4. Determine whether:
 - the implemented control measures –
 - introduced any new problems
 - worsened any existing problems
 - there are any new (but unrelated) problems.

Set a date to review the entire workplace health and safety risk management process. Under the Act, you have an obligation to ensure workplace health and safety by managing exposure to the risks associated with all hazards at your workplace. Workers are also obliged to follow instructions with regards to health and safety.

For further information on managing health and safety, refer to the *Workplace Health and Safety Risk Management Advisory Standard 2000*.

3.6 An occupational health and safety management system approach

In developing a comprehensive occupational health and safety (OHS) management system in your call centre, you should consider the following components:

1. Commitments and responsibilities to OHS
2. Policies and procedures
3. Consultation arrangements – a joint approach
4. Information and training
5. The risk management process – outlined above
6. Record keeping

Part 2 Major hazards in the call centre industry

Some hazards in call centres may not create an immediate risk of obvious traumatic injury, however, they can result in short and long-term debilitating injuries and illnesses.

The most significant hazards stem directly from the work organisation and performance management techniques common to many call centres. All are risks that should be managed to ensure workplace health and safety. These potential hazards include:

- manual tasks
- occupational stress
- headset use
- other health issues (e.g. biological hazards).

To help you to conduct your risk assessment, these hazards will be discussed in terms of the call centre characteristics discussed in Chapter 1.

Appendix D contains a checklist to assist in identifying risks in your call centre.

Chapter 4: Manual tasks in the call centre industry

4.1 Introduction

Call centre workers may be exposed to the risk of musculoskeletal injury (e.g. soft tissue injuries to the neck, shoulders, back, wrists and hands) as a result of awkward, static and/or repetitive working postures.

The *Manual Tasks Advisory Standard 2000* outlines a number of risk factors that increase the likelihood of musculoskeletal injury developing. These include:

- working postures
- repetition and duration
- work area design
- work organisation.

4.1.1 Working postures

Awkward postures are those in which parts of the body are not in their normal (comfortable) position. That is, the trunk and head upright, arms by the side of the body, forearms hanging straight or at a right angle to the upper arm, and the hand in the handshake position.

Such postures are not necessarily harmful in all circumstances. However, they can cause damage to the muscles and other tissues in combination with:

- another awkward posture, such as the back being bent and twisted (e.g. when a worker is seated and reaching for a low desk drawer at a computer workstation)
- repetitive actions that:
 - increase wear and tear (e.g. repeatedly reaching for a button or handset to answer a phone call)
 - involve small muscles, such as the hand, because small muscles fatigue sooner (e.g. data entry onto computer during and after customer phone calls)
- a static posture that is maintained for a prolonged period (e.g. sitting at workstation with the neck tilted backwards to view computer monitor; or, with the elbow away from the side of the body and the shoulder elevated to access and use the keyboard or mouse).

4.1.2 Repetition and duration

Repetition refers to the repeated performance of similar work tasks (or work cycles) involving the same body actions and the same muscles being used continuously. An obvious example is the keyboard data entry performed each time a phone call is answered in a call centre.

You may wish to define a work cycle in your call centre as the length of time between answering and completing a phone call, any post-call administrative duties and waiting time for the next call.

An example of repetitive work would be:

- conducting calls of an average duration of 30 seconds
- performing computer data entry with each call/transaction.

Repetitive movement reduces the rest and recovery time resulting in increased 'wear and tear' of body tissues and greater potential for muscle fatigue. This may then be followed by an inflammatory response and tissue damage.

Work is considered repetitive when:

- the duration of a work cycle is less than 30 seconds and the work is performed continuously for a minimum of 60 minutes¹, and/or
- a fundamental activity is repeated for more than 50% of the work cycle time (e.g. when entering data into the computer during a phone call assuming the data entry activity is being performed for more than 50% of the work cycle).

Duration refers to the length of time a worker is exposed to a risk factor such as repetitive movement or awkward and/or static postures.² The duration of a task can have a substantial effect on the likelihood of both general and muscle fatigue. Where highly repetitive work is performed for a total of four hours during an eight-hour shift, it is considered to be of high duration and should be considered for control measures.

4.1.3 Work area design

The work area design (or workstation) comprises all components of the workplace – including all work surfaces, materials and equipment-used by the worker in the performance of a particular job.

The relationship between these different components and their position in relation to the worker are important because of their effect upon working postures. Relevant factors include:

- the amount of reaching, bending or twisting required
- the height at which a task is performed, which may encourage the worker to have their neck and back bent too low and shoulders and arms raised too high
- static postures, in particular, those affecting the back, neck and shoulders
- visual access (including the effect of lighting, glare and reflection factor) which encourages the worker to bend their neck and/or back to see the task properly.

In a well-designed work area it is not necessary to reach across large distances. For most of the time, the worker is upright with their shoulders in a natural position (i.e. not elevated) and their upper-arms close to their trunk.

4.1.4 Work organisation

The way in which work is organised in your call centre can intensify the demands placed upon a worker in the performance of their tasks. Workplace health and safety can be adversely affected by, for example:

- an increase in the duration of exposure
- an increase in the frequency of a task being performed (particularly detrimental when the task is repetitive)
- a reduction in recovery time.

Depending on how they are implemented, some organisational factors that may contribute detrimentally include:

- **staffing levels** - too many/too few workers for the demands of the workload
- **pace of work and bonus schemes** - if excessive demands are made on workers it can increase muscle tension and reduce functional capacity
- **lack of variability in tasks** - the absence of changes in posture and the chance for recovery increases the load on muscles and tendons
- **inadequate rest breaks** - contribute to fatigue and overexertion by not allowing enough time between activities (possibly leading to permanent soft tissue injury over time).

4.2 Individual factors

Factors that can increase the likelihood of an individual experiencing health and safety problems include:

- their skills and experience
- their physical characteristics
- whether they are accustomed to doing the work
- their job satisfaction
- the use of personal protective equipment and clothing.

Each of these factors need to be considered when developing a risk management strategy.

See Appendix E for complete definitions and the *Manual Tasks Advisory Standard 2000* for further explanation.

4.3 Work-related musculoskeletal disorders in call centres

Musculoskeletal injury is generally caused by a combination of work organisation and work area design risk factors. In call centres, parts of the body most often affected by musculoskeletal injury, pain and discomfort include the:

- upper limbs (neck, shoulders, wrists and hands)
- back.

1 Although this is the accepted general industry standard outlined in the *Manual Tasks Advisory Standard 2000*, the potential risk of musculoskeletal disorders might also exist with longer work cycles and work periods of less than 60 minutes duration.

2 Significant muscular fatigue occurs after about 25 minutes of continual static seated posture. This type of muscular fatigue is the greatest cause of occupational back pain. In other words, postural change is ideally required every 25 minutes or so in order to reduce fatigue and pain.

4.3.1 Upper limbs

Neck and shoulder pain and injury in call centres can be linked to workers holding their arms in such a way as to use a keyboard and a pointing device (mouse), i.e. working postures.

More specifically, the risk of injury is caused by workstations not properly set up for the individual body size of the worker or the length of time they stay at their workstations. Problems include, for example, a keyboard, pointing device (mouse) or monitor at an incorrect height and/or distance from the body, resulting in awkward postures of the worker's neck and shoulders. These postures combined with long periods of limited movement leads to limited blood flow through the muscles and to a build-up of toxins, with insufficient nutrients being delivered to the muscles.

As 'hot-desking' is common in call centres, workers must adjust their workstation correctly at the beginning of each shift if workplace health and safety is to be ensured.

Repetitive keyboard use over long periods can cause **hand and wrist** pain and injury, commonly tendon and nerve disorders such as carpal tunnel syndrome. This risk can be exacerbated by keyboard use in cold environments, and when the hands and wrists are in awkward postures.

4.3.2 Back

Back pain and injury in call centres is linked to workers sitting for prolonged periods with little opportunity to vary their postures. Even with good chair design, prolonged sitting can lead to back pain caused by spinal intervertebral disc degeneration and other disorders.

Problems caused by static posture are associated with:

- the nutrition of discs
- decreased blood circulation
- blood pooling in the legs.

The risks are increased by twisting or bending the back while sitting, or using a chair that does not fully support the body.

4.4 Manual tasks: Risk factors and control measures

The risk factors for musculoskeletal injury outlined in section 4.1 have been grouped into the work characteristics of call centres (as outlined in Appendix A). This has been done for ease of use in call centre risk assessments.

If you identify one or more of these risks of musculoskeletal injury present in your call centre, they require further risk assessment.

Manual tasks: Risk factors and control measures

Risk factor	Possible control measures
<p>Working postures:</p> <p>1. Mismatched or non-adjustable work station equipment:</p> <p>Where equipment such as chairs, desks, keyboard trays etc are not matched to the dimensions of the workers or are not adjustable to suit multiple users (eg. a fixed desk that is too low), the worker is often unable to achieve comfortable working postures at their workstation. This may create a risk of injury.</p>	<ul style="list-style-type: none">• Purchase and use suitable furniture, preferably chosen in consultation with workers eg. trial chairs before purchase.• Use furniture that matches the worker (for single user workstations) or is fully adjustable to allow workers to achieve comfortable working postures (for multi-user workstations).• Use furniture that accommodates the size and shape of as many workers as possible.

Manual tasks: Risk factors and control measures

Risk factor	Possible control measures
<p>2. Hot-desking (or workstations that are not adjusted to allow for optimal working postures): Workstations that do not allow for optimal working postures may increase the risk of a musculoskeletal injury.</p>	<ul style="list-style-type: none"> • Train and regularly update workers on how to correctly adjust their computer workstation to suit their body. • Encourage the correct adjustment of workstations at the start of each shift.
<p>Repetition and duration</p> <p>1. Limited task variation: Where workers are required to remain seated at their workstation throughout a shift or have limited opportunities for changes in posture, they may be exposed to greater risk of musculoskeletal injury. Inadequate rest breaks or lack of task variability can increase the load on muscles and tendons due to lack of changes in posture and the chance for recovery. The accumulation of fatigue and lack of recovery may lead to permanent injury.</p>	<ul style="list-style-type: none"> • Try to use job design that encourages changes in posture. For example, incorporate tasks that require the worker to leave their workstation i.e. call follow-up or administration tasks away from workstation. • Promote and encourage postural changes during work tasks i.e. standing at workstation, walking to collect forms or printing. • Where sit-stand workstations are adopted, use workstation equipment that allows workers to maintain correct upper body postures. • Encourage workers to take regular short breaks away from the computer workstation i.e. for refreshments, toilet breaks, stretching etc.
<p>Work organisation</p> <p>1. Limited task variation</p> <p>See notes in prior section</p>	<p>Refer to Chapter 5 on 'Occupational Stress'.</p>
<p>2. Working environment and lack of control over work: Working environments where the pace of work is high with performance pressures and incentive schemes are likely to create excessive demands on workers. So too can limited control or autonomy over the workers environment and task demands. This can contribute to increased muscle tension and reduced functional capacity, and developing musculoskeletal disorders in call centre workers.</p>	

For further information regarding working postures, repetition and duration, work area design and work organisation refer to the *Manual Tasks Advisory Standard 2000*.

Chapter 5: Occupational stress

5.1 Introduction

The language of stress

Any discussion of occupational stress must necessarily begin with a common understanding of how terms such as 'stress' will be used. The language used to discuss stress can be confusing. In some instances, stress is considered good for an individual - in others it is used as a term to describe undesirable responses. Stressors are events that happen. As a result of appraisal of the level of a threat, stressors may lead to a stress response for some workers. This stress response might be observed from the individual's distress behaviour, such as withdrawal or anger. On the other hand, stressors may also lead to a positive response. Some individuals who have a stress response may suffer a physiological or psychological disorder.

When does it occur?

Occupational stress can occur when workers are unable to satisfactorily adjust to demands and changes in a work environment. The response of an individual will vary depending upon:

- the extent to which someone perceives an event to be threatening
- the actions available to a person to deal with a threat
- the expectation that person has of coping with the threat.

Australian research

Australian research into occupational stress has identified a range of organisational variables that are likely to impact upon worker distress. These variables are linked to worker responses such as taking leave, leaving the job or organisation, seeking medical assistance or claiming workers' compensation.

The variables include:

1. organisational climate - which can be influenced by:
 - a. supportive leadership
 - b. appraisal and recognition
 - c. professional growth
 - d. role clarity
 - e. professional interaction
 - f. participative decision making
 - g. excessive work demands
2. negative events, and
3. positive events.

5.2 Stress and the call centre industry

Stress has been identified as a significant health and safety issue in call centres. It has been reported that stress-related absenteeism costs the industry approximately \$150 million per year.

5.3 How stress affects health

The health effects of work-related stress may include:

- psychological effects (i.e. burn out, poor concentration, suppressed anger, anxiety, depression, apathy, psychiatric conditions)
- headache
- musculoskeletal disorders
- cardiovascular disorders (i.e. high blood pressure)
- gastrointestinal disorders (i.e. nausea, constipation, stomach ulcers)
- amenorrhoea (i.e. cessation of menstrual period)
- suppressed immune function (i.e. increased susceptibility to infection)
- sleep disorders
- chronic fatigue effects
- behavioural effects (e.g. smoking, drug abuse, aggression, error-proneness).

Furthermore, research has found that high levels of stress increase the risk of injury arising from other hazards such as manual tasks and risks associated with headset use, such as acoustic shock (discussed in Chapters 4 and 6).

5.4 Major causes of call centre stress

Despite the individual differences discussed in section 5.1, the most significant causes of occupational stress in the call centre environment relate to:

- work organisation that provides little task variation and autonomy (i.e. a worker having control over his/her work tasks and environment)
- performance management techniques that lack worker consultation and are perceived as unrealistic, subjective and unachievable.

5.5 Stress: Risk factors and control measures

Effective risk management focuses on the prevention and management of risks. In the case of stress, this means preventing stress from occurring rather than simply treating the symptoms. The occupational stress risk factors outlined below are intended to provide a practical approach to preventing stress in the workplace.

If you identify that one or more of these risk factors are present, they may require further risk assessment and the implementation of control measures.

Occupational stress: Risk factors and controls

Occupational stress risk factor	Possible control measure/s
<p>Electronic performance monitoring (EPM): EPM in call centres is used for two main purposes:</p> <ul style="list-style-type: none"> • To assess the performance of workers and/or the call centre • As a training tool. 	<ul style="list-style-type: none"> • Develop clear policies on the development, implementation and purpose of monitoring. Ensure all workers and supervisors are aware of these policies. • Gather a balance of quality customer service data as opposed to simply quantitative data or statistics. • Train supervisory workers in objective, appropriate and ethical use of monitoring. • Use EPM to monitor team and call centre performance rather than individual monitoring. Use individual monitoring as a training and development tool. • Indicate when monitoring will take place i.e. when listening in to calls, supervisors could be seated next to or near the worker, providing some verbal feedback. • Consult with workers when developing EPM systems. Negotiation of objectives and reasonable standards will increase workers' perceptions of ownership and fairness. Providing a means by which workers can review and have input into the performance indicators may enhance their feelings of control and therefore reduce stress.
<p>Performance targets: Performance targets in call centres are usually based on the key performance indicators or call centre statistics measured through electronic performance monitoring.</p>	<ul style="list-style-type: none"> • Set performance targets that are realistic and achievable. • Take into account workplace changes or demands when setting targets. • Consult with workers – this may ensure targets are realistic and achievable. • Incorporate quality-based goals into performance targets eg reduced customer complaints.
<p>Performance appraisals and monitoring feedback systems: Appendix F contains a checklist for assessing the use of performance monitoring, feedback and targets.</p>	<ul style="list-style-type: none"> • Introduce a policy on developing, implementing and using performance appraisals and feedback systems. Ensure all workers and supervisors are aware of these policies. • Train supervisors in the objective and appropriate use of appraisal and feedback systems. • Consult with workers in the formulation of work standards and setting acceptable quantity-quality balances in the worker evaluation process. • Use systems and/or marking criteria that are implemented in an objective format which ensures absence of supervisor bias: <ul style="list-style-type: none"> • Clearly communicate marking criteria or desired performance standards to all • Assess skills directly related to the workers work tasks/demands • Consult with workers when formulating performance appraisals • Use performance appraisal systems that account for a balance between quality service provision and time taken per call/number of calls.

Occupational stress: Risk factors and controls

Occupational stress risk factor	Possible control measure/s
<p>Lack of control over working environment and tasks (repetitive or monotonous work organisation): The amount of control call centre workers have over their job is now recognised as a decisive factor in the development of occupational stress. Jobs with high demands and low control most often result in stress.</p>	<ul style="list-style-type: none"> • Develop and maintain a working environment where workers are consulted and can provide feedback to changes impacting on workplace/tasks. • Incorporate some task variation or job rotation where high repetition and lack of mental stimulation is present. • Allow workers to develop their own communication style and technique over the phone as opposed to the use of phone scripts. NOTE: Scripts may be of value for training and induction purposes. • Allow workers to control the flow of calls i.e. be able to log out of the phone system as needed. • Workers should be able to take toilet breaks as required on need – without requesting permission.
<p>Poor organisational support:</p>	<ul style="list-style-type: none"> • Communicate and consult with workers regarding the introduction and training in any workplace changes/modifications. • Provide workers with opportunities for training and professional development. • Address conflict or grievances in a serious, objective and prompt manner. • Provide clear outline of roles and responsibilities of workers. • Offer support to workers during periods of difficulty, for example, at times of illness or death of a family member. • Develop a definition of quality customer service that is clearly communicated. Include a realistic length of time required to achieve this in a phone call. • When workers divert from performance standards, seek out reasons why.
<p>Shiftwork: Shiftwork is known to contribute to stress in some workers. Shiftwork usually affects sleeping time and quality which can lead to fatigue and domestic and social difficulties. These and other problems associated with shiftwork can also contribute to workplace conflicts and accidents. Worker's personal safety/security may also be at risk for night and weekend rosters. Refer to Workplace Health and Safety Queensland <i>Managing Shiftwork</i> brochure for more information.</p>	<ul style="list-style-type: none"> • Train workers in the health effects of shiftwork and how to effectively manage them. • Communicate and consult with workers and supervisors when designing or changing rosters. • Where practical, incorporate tasks that involve activity or interaction with other team members to help maintain alertness on night shifts. • Ensure effective security arrangements are in place, particularly for night and weekend workers. • Use rosters that are flexible and given well in advance eg at least two weeks notice.

Occupational stress: Risk factors and controls

Occupational stress risk factor	Possible control measure/s
<p>Physical work environment: Uncomfortable physical working conditions such as excess background noise, cold, heat, poorly designed equipment and computer software often leads to increased stress levels in the workplace. Refer to the relevant Australian Standards and Workplace Health and Safety Queensland publications for more information regarding these issues.</p>	<ul style="list-style-type: none"> • Make the call centre environment as comfortable as possible and designed specifically for the tasks being undertaken. • Maintain computer software and work equipment in good working order. • Minimise background noise to allow the worker to easily communicate with clients. • Use noise-cancelling microphones that filter out background noise, such as the voices of other call handlers, so that only the caller and handler's voices are heard through the earpiece. This allows workers to keep their voices low and helps reduce overall call centre noise. • Train workers to position the microphone for optimal performance, otherwise they may have to talk loudly and increase their headset volumes in order to hear themselves and the client.
<p>Abusive, threatening or harassing calls:</p>	<ul style="list-style-type: none"> • Develop and implement policies and procedures for dealing with abusive customers. Include transfer procedures, reporting and debriefing requirements. Train workers in these procedures. • Encourage workers to participate in training programs which incorporate communication and conflict resolution skills as well as information about normal reactions to these incidents • Maintain workplace efficiency and effectiveness so that client frustration can be minimised i.e. software programs that are easy to view, understand and use.

5.6 Stress management programs

Although stress management programs and training may be effective in reducing the short-term health effects of stress, they do not produce significant long-term results. It is more effective to target the causes of stress in a proactive manner as opposed to implementing reactive stress management programs i.e. relaxation techniques. Open communication and consultation of workplace issues with workers has traditionally been seen to provide better resolution of workplace issues.

Although not independently adequate, as part of a total stress control strategy, stress management programs may be beneficial.

Chapter 6: Headset use

6.1 Introduction

Headset use is commonplace in all call centres and may present some risks to workplace health and safety. This chapter addresses the following:

- acoustic shock – risk factors and controls
- noise exposure
- baseline audiometry
- background chatter
- infection control.

6.2 Acoustic shock

Incidents of Acoustic Shock (or Acute Aural Trauma) have been documented since the 1970s. It is believed to be caused by a hypersensitive neurological reflex (startle reflex) that is primarily stress induced. In this instance, stress is the psychological response. The physical response occurs before the psychological response and is caused by the reflex action of an ear muscle contraction in response to a loud squawk or shriek.

Acoustic Shock is defined by the European Telecommunications Standards Institute as *any temporary or permanent disturbance of the functioning of the ear, or of the nervous system, which may be caused to the user of a telephone earphone by a sudden sharp rise in the acoustic pressure produced by it* (2000).

The condition can occur following a sudden sound from telephone handsets and headsets (referred to as an acoustic incident or spiking). The affected worker usually removes the headset within a few seconds and, in extreme cases, can even fall to the ground. A range of physiological symptoms may then be experienced. These can include tinnitus (ringing in the ears); vertigo (dizziness and loss of balance); a feeling of pressure or fullness in the ear; facial numbness; tingling, tenderness or soreness around the ear and neck; ear pain; and, often, burning sensations. In a very few cases, loss of hearing may occur.

With the occurrence of an acoustic incident, the operator's reflex is stimulated or activated and takes time to return to its normal state. There is evidence that a stressed individual will exhibit this response more easily than someone who is not suffering from stress. Following an incident the worker may then be in constant anticipation of the next loud sound. This becomes an issue because the ear muscle affected can "learn" to react at lower noise levels thereby causing the psychological response to occur more easily in the worker.

Secondary symptoms – headaches, fatigue, anxiety and feelings of vulnerability – that appear consistent with stress from trauma may also develop. So too may tertiary symptoms including anger; hyper-vigilance; hypersensitivity to sound (hyperacusis); depression; substance abuse; and anxiety, especially about returning to work.

The 'startle reflex' may remain, or be exaggerated further, if the affected ear is subjected to another acoustic event soon after the initial incident. Ongoing symptoms (secondary and tertiary) indicates the development of Acoustic Shock. This may be attributed to poor identification and management of an acoustic incident in the first instance.

The risk factors that you should look for in your call centre are outlined below. If one or more of these risk factors is present, further risk assessment may be required and control measures may need to be implemented.

Acoustic shock: Risk factors and control measures

Acoustic shock risk factor	Possible control measure/s
<p>1. An acoustic incident (sudden sound through headset): Typical examples of sounds include misdirected faxes, faults in handsets, feedback between microphone and ear phone, alarms at the other end of the phone (microwave ovens, smoke alarms etc), mobile phones and customers with malicious intent (whistle blown down phone line). It is not the loudness of the sound that is significant (all Australian Communications Association approved phones and headsets are limited to 120 dBA) but the sudden rise in noise levels.</p>	<ul style="list-style-type: none"> • Attach an acoustic shock protection device, which prevents potentially damaging acoustic levels or content reaching the headset wearer's eardrum. • Ensure workers are trained in the proper fitting and use of headsets to reduce feedback. • Implement policies and procedures for identifying and removing faulty headsets. • Implement a mobile phone policy that prevents the use of mobile phones in or near the call centre area.

Acoustic shock: Risk factors and control measures

Acoustic shock risk factor	Possible control measure/s
<p>2. Poor identification and management of an acoustic incident: Where an acoustic incident is not identified as having occurred, the call centre operator may continue to work wearing the headset on the affected ear. As Acoustic Shock is more likely to develop with repeated noise stimulation directly into the ear, this may lead to the condition developing further.</p>	<ul style="list-style-type: none"> • Develop and implement a procedure for managing an acoustic incident (<i>eg remove headset immediately and stop work or headset use in the affected ear; report event to management; event is recorded and logged; where ongoing symptoms persist the worker is referred to an audiologist or ear, nose and throat specialist for review; headset to be checked for clarity of sound before further use</i>) • Train workers and supervisors in identifying an acoustic incident and the development of acoustic shock including what steps to follow in the event of a sudden loud and unexpected sound, causing pain (acoustic incident).
<p>3. Occupational stress: As stated above, stress and anxiety are considered to be the primary contributors to developing Acoustic Shock following as acoustic incident.</p>	<ul style="list-style-type: none"> • Implement stress prevention strategies as outlined in Chapter 5 and this Chapter to control the risk of developing Acoustic Shock following an acoustic incident.

6.3 Noise exposure

Under Section 69 of the *Workplace Health and Safety Regulation 1997* an employer must prevent risk to its workers from exposure to excessive noise at work. Section 68 defines excessive noise.

Although noise levels in call centres are unlikely to exceed the exposure limits for excessive noise, the limits specified on page 13 of the *Workplace Health and Safety (Noise) Advisory Standard 1999* are especially important to call centre occupants. The Standard provides practical advice regarding identifying sources and levels of noise, assessing exposure to noise, and eliminating or minimising noise exposure as a risk to health and safety at the workplace.

6.4 Baseline audiometry

As the work in call centres is conducted on a mainly auditory basis it is imperative that call centre telephone operators' hearing ability (and language command) is of a sufficient level to do the tasks required of them. With regards to hearing, pre-employment baseline audiometric screening of workers and/or contractors is therefore

highly recommended. As hearing impairment can have many causes besides noise induced, the audiometric screening of a prospective telephone operator should be conducted by an audiologist or ear, nose and throat specialist (ENT), to establish if any hearing problems exist and if so, what the cause of it is. Audiometric testing of telephone operators may then be repeated annually. The follow up testing could be conducted by the audiologist, ENT or alternatively, where no acoustic incident has been experienced, by an audiometrist using the methods specified in the Australia/NewZealand Standard 1269 –1998: Part 4.

Where a telephone operator has experienced an acoustic shock, is clearly affected by the incident and has notified the supervisor of the incident, the operator should be referred back to the audiologist or ENT for examination at the first instance. The examination should establish details of whether or not damage to hearing, and in what form, has been sustained and if a deviation from the original baseline audiometric test did occur. Depending on the outcome of the examination a rehabilitation program should be in place to assist the affected worker's return to work.

6.5 Background chatter

Most call centres operate as an open office environment. In view of the loudness and constancy of conversations i.e. background chatter, the ambient (background) noise may rise to levels that interfere with good communication ability. This can be frustrating to both the worker and the caller and it may necessitate the operator turn up the volume on the headset in order to hear over the ambient noise. In order to keep daily noise exposure at low levels and to minimise the risk of an acoustic incident, office settings should be designed to maximise the *signal to noise ratio* by minimising ambient noise.

Suitable design (call centre interior construction, partitioning and seating arrangements) which reduce noise and promote good signals from headsets are recommended – refer to Australian Standards 2107–2000 and 4443–1997. Training workers to keep voice levels moderate, a quiet work regime and no mobile phone use policy for workers near headset users may also be implemented in the call centre to reduce that daily noise exposure of the telephone operators.

6.6 Infection control: risks and control measures

Infection control procedures are necessary to prevent the spread of infection (e.g. ear and respiratory infections) between workers due to the close exposure of headsets to the external ear canal and the mouth.

Possible control measures (that give consideration to the ‘hierarchy of control’) include:

- Reducing the risk of cross infection by supplying individual workers with a headset that is not shared with other workers.
- Where this is not possible, clean headsets (both ear and mouthpiece) with cleansing wipes between use. If appropriate, the foam covers for the headset should also be replaced.
- Training all workers in infection control and headset use, and in the regular cleaning and maintenance of headsets.

Chapter 7: Voice strain

7.1 Voice: An occupational tool for call centre operators

Background to voice as an occupational tool

There is a significant component of the population for whom voice is a primary tool of trade. This includes professionals from a range of industries such as teachers, lecturers, call centre and customer service operators, telemarketers, sales personnel, counsellors, broadcasters, umpires, allied health professionals, lawyers, clergy, and performers. Call centre operators take a high volume of calls per day, answer specific and broad questions related to products, services and organisations with a high level of customer service. Using the voice at work requires higher vocal competency than every day speaking. Due to the greater demands on voice, voice overuse and strain are potential occupational hazards.

Voice care and OHS

Voice care can be defined as an awareness of how to care for the voice and the mechanisms that are involved in its production. A voice injury prevention program is designed to minimise the risk of voice injury and to improve vocal quality.

7.2 Identifying vocal strain

The majority of voice problems can be eliminated if identified and treated in time. Vocal strain and injury often result in physical changes to the vocal mechanism. There are likely to be changes in the quality of the voice.

Vocal strain and injury is caused by a variety of factors, including muscle tension, poor posture, misuse of the voice, work environmental factors such as background noise stress and emotional condition, general health and lifestyle. The effects of vocal injury, including loss of voice, vocal roughness, and fatigue, are often not recognised as preventable and treatable symptoms.

Symptoms of vocal strain

- Total or intermittent loss of voice
- Rough or hoarse quality
- Change in pitch and restricted pitch range
- Decrease in volume
- Pitch breaks on words or phrases
- Vocal fatigue at the end of a day or after a prolonged conversation/presentation
- Loss of intonation or expression
- Constant throat clearing

- Voice fades out at the end of a sentence
- Dryness in the throat and excessive mucous
- Sensation of lump or pain in the throat
- Increased effort to talk
- Difficulty swallowing
- Shortness of breath.

Some of these symptoms may occur during viral infections of throat/sinuses and may be resolved when the virus subsides. Minor changes in breath, voice quality, pitch, loudness, and resonance can be experienced without concern of developing a voice problem.

Impact of voice strain

- Changes in individuals voice quality
- Potential for developing physical changes in the vocal folds and surrounding musculature/membranes, particularly if factors contributing to vocal strain are not identified and managed
- Increased amount of absenteeism/sick leave to recover from vocal strain or to seek further medical management or treatment options
- Reduction in vocal performance to meet communication and customer service demands for clients
- Emotional and social well being
- Job satisfaction, as voice is required for almost all components of the work as a call centre operator.

7.3 Factors contributing to vocal health

7.3.1 Environmental

Background noise

Noise from machinery (e.g. photocopiers and machinery, colleagues, radio, or from callers environment) causes speakers to increase their voice volume.

Continuous talking over noise can cause strain on the vocal mechanism and surrounding muscles, increasing muscle fatigue and stress.

Air temperature and quality

The voice is sensitive to levels of humidity in the air where decreases in humidity levels (i.e. dry air) have an effect on how often the vocal folds vibrate, thus, the quality of the voice. Hot climate or warm air can have a drying effect on vocal folds, laryngeal and nasal membranes, thus increasing risk of irritation, dehydration and muscle fatigue. It is recommended that at least 2-3 litres of water be taken throughout the day to avoid dehydration.

Chemicals/irritants in the air such as dust/smoke have a drying effect on the mucous membranes and/or increase in inflammation of the membranes of the vocal mechanism. This may result in increased irritation causing unnecessary coughing and throat clearing.

Acoustics of environment

Hard surfaces can cause any noise to bounce off and become reflected back adding to the overall noise level. Poorly designed or maintained equipment can add extra noise, distraction or increase postural problems.

7.3.2 Behavioural/habitual

Vocal demand

Lack of warm-up of any muscle group prior to strenuous exertion can lead to muscle strain and pain. The voice requires gentle warm-up prior to commencing a day's talking at work.

Vocal misuse

Throat clearing, shouting and excessive use of voice are examples of abusive behaviours. Extended vocal misuse is likely to cause vocal strain in the short term and result in pathology such as nodules or cysts in the long term. Individual vocal style may also affect the voice. Personality factors have also been identified with certain types of voice problems.

Posture and breathing

Poor posture in the lower back, abdomen, neck and shoulder area will have a negative effect on breathing and voice production skills. Adequate breath support is required for effective and efficient voice production

Muscle tension

Common tension sites are jaw, mouth, neck and shoulder areas and the likelihood of these areas being affected increases if the voice is used consistently.

Stress/emotions

Excessive muscular tension is a well-known symptom of stress and may occur at work. It affects different muscle groups in different people.

This muscle tension has a profound effect on how the voice is produced and can lead to further voice problems. It is important to identify the source of stress for effective management.

Changes in breathing such as shallow or uncontrolled breath are often reflected with emotions such as anger, sadness, excitement, and/or stress, whether it be due to personal or workplace stress.

7.3.3 Physical

Fatigue

A body that is tired or not working at premium level will be less able to deal with the stresses and demands of work. It will also take longer to recover from illness. General body fatigue and fitness levels are reflected in the voice. If you are tired you cannot expect optimal vocal efficiency.

Allergies/colds/flu

Colds, flu, viruses, allergies, sinus etc have a significant impact on vocal strength and vocal performance. They are often associated with increased mucous, dehydration, fatigue, mouth-breathing (due to nasal congestion) and reduced breath control.

Whilst having an upper respiratory tract infection (URTI), the voice is prone to damage. Speaking for extended periods can increase the occurrences of lesions. Intervention in early stages of an URTI may prevent laryngitis or vocal injury and alleviate the need to have time away from work later in the course of the infection.

Alcohol/caffeine

Alcohol and caffeinated drinks (e.g. coffee, cola and chocolate-based drinks) are diuretics, which draw water out of the system. They have an overall drying effect and may increase the risk of friction in the vocal mechanism.

7.4 Principles for voice injury prevention

7.4.1 Principles and model for voice injury prevention training program

The majority of voice problems can be eliminated if identified and treated in time.

A work site assessment of the call centre environment is recommended prior to commencing training. A work site assessment assesses the work environment on factors affecting the voice in the workplace, identifies the vocal demands of the workplace and provides a summary of the issues specific to a call centre.

It is recommended that a Voice Injury Prevention Program address five principles:

Awareness

Recognise factors which affect the voice and signs of vocal strain.

Understand the components of good voice production.

Prevention

Identify factors that compromise vocal health eg environmental, physical and behavioural.

Performance

Voice exercises assist in preparing the voice to meet the demands of the workplace, and to maximise strength and endurance of the vocal musculature. Research shows the voice quality improves with increase in intensity/volume, and pitch ranges.

Exercises of the supporting musculature such as neck and shoulder should minimise tension sites. A qualified speech pathologist with experience in voice is able to demonstrate correct method of exercises.

Recovery

Educate in managing voice strain and recognising if further intervention is required.

Evaluation

Identify strategies and solutions for call centre operators and teams where a voice care management plan is conducted.

7.5 Further medical intervention

When to seek further medical intervention

The voice has great capacity to repair itself with adequate rest and hydration. In most cases, problems with the voice are temporary. Consult a medical practitioner when you have noticed:

- a change in voice quality
- increased effort in talking
- loss of voice
- pain in throat or on swallowing for more than 2 days.

Who to consult

If the symptoms persist seek medical advice:

- occupational health and safety officer/team supervisor
- your local doctor may refer you to an ENT (Ear Nose and Throat specialist), or laryngologist
- speech pathologists take self-referrals.

Chapter 8: Other health issues in call centres

Various media and journals have raised other health issues, including eye strain and issues relating to indoor air quality. At this stage, only limited scientific evidence associated with their incidence in call centres is available. However, where risk identification and assessment suggest that a risk of injury is present, control measures should be implemented.

Some of these issues are discussed briefly in Chapter 9.

Part 3 Other obligations

Chapter 9: Other workplace health and safety legislative obligations

9.1 Consultative arrangements

9.1.1 Workplace Health and Safety Officers

Part 8 of the *Workplace Health and Safety Act 1995* (the Act) requires an employer to appoint a qualified person as a workplace health and safety officer (WHSO) for a workplace if 30 or more workers are normally employed at the workplace.

9.1.2 Workplace Health and Safety Representatives

In accordance with Part 7 of the Act, workers may elect a workplace health and safety representative on their own initiative or at the suggestion of their employer. Part 7 details arrangements and requirements for election as well as the entitlements of workplace health and safety representatives.

9.2 Reporting arrangements

Part 7 of the *Workplace Health and Safety Regulation 1997* provides details of the reporting requirements.

Records must be made of every work injury and dangerous event that occurs in the workplace, and of any illness caused by work. In the event of a death, serious bodily injury, dangerous event or work-caused illness Workplace Health and Safety Queensland must be notified promptly after the event coming to the notice of the employer. The Approved Form must be completed and lodged within 24 hours. Schedule 3 of the Act provides definitions of serious bodily injury, work-caused illness and dangerous event.

9.3 First aid

The *Workplace Health and Safety First Aid Advisory Standard 2000* contains guidance and advice to help employers to meet their obligations to make appropriate provisions for first aid.

9.4 Emergency procedures

Develop and implement an emergency plan, and include regular fire drills as a necessary component. Having an appropriate emergency plan, and following it, can reduce the consequences of fire and other emergencies and can even mean the difference between life and death.

Approach your local fire and rescue authority for further information or for assistance in developing an emergency plan. Information is also available in the *Workplace Health and Safety First Aid Advisory Standard 2000*.

9.5 Electrical issues

Parts 4, 5 and 6 of the *Electrical Safety Regulations 2002* contain the specific requirements for electrical equipment and installations at the workplace.

9.6 Hazardous substances

Part 13 of the *Workplace Health and Safety Regulation 1997* sets out the requirements for workplaces that use hazardous substances. It requires employers to prevent or control exposure to hazardous substances at work.

9.7 Plant

The *Workplace Health and Safety Plant Advisory Standard 2000* provides practical advice on ways to manage the exposure to risks associated with plant. The Standard outlines the obligations of persons involved, and provides practical information on risks and control measures.

9.8 Amenities

Part 8 of the *Workplace Health and Safety (Miscellaneous) Regulation 1995*, specifies obligations in relation to workplace amenities.

The *Workplace Health and Safety Amenities Advisory Standard 2000* provides additional practical advice about the type of amenities required at workplaces.

9.9 Workplace bullying

Workplace bullying is the repeated, less favourable treatment of a person by another or others in the workplace. It is considered an unreasonable and inappropriate work practice and includes behaviour that intimidates, offends, degrades or humiliates a fellow worker.

For further information on preventing bullying in the workplace, refer to *Workplace Bullying – An Employers Guide* and *Workplace Bullying – A Workers Guide*.

9.10 Violence in the workplace

Violence at work can be internal (i.e. between workers in the workplace) or external (i.e. directed at a worker by a visitor, client or contractor). Types of violence include verbal abuse, physical assault, harassment, intimidation or threats.

For further information on preventing violence in the workplace refer to *Violence at Work - a Workplace Health and Safety Guide*.

9.11 Indoor air quality

Controlling indoor air quality involves preventing exposure to extreme thermal environments and health risks from air contaminants in the workplace. The *Indoor Air Quality Guide* and the *Health and Safety Guide for the Office* provide advice on a range of standards and guidelines that are available to assist in managing indoor air quality.

Appendix A: Characteristics of call centres

Hot-desking

Hot-desking is where workers are not allocated a specific computer workstation, but use whichever workstation is available or allocated during the shift. To equip the workstation, workers are provided with mobile drawers and equipment for work and personal purposes.

Performance monitoring and targets

Most call centre workers experience quantitative or qualitative performance monitoring. Monitoring can take place at an individual, team or entire call centre level. There are two main types of call monitoring techniques:

1. **Electronic Performance Monitoring (EPM):** Uses technology to monitor and record minute-by-minute details of work. This allows the employer to identify specifically the amount of time spent on all aspects of work.
2. **Audible Monitoring:** Involves call centre supervisors listening to the workers' telephone conversations with clients.

The extent and use of such performance management techniques varies depending on the call centre management techniques adopted and the type of work conducted. The information gained, known as 'key performance indicators' (KPIs) or call centre statistics, then act as a tool for assessing the performance of the call centre. Commonly used KPIs include 'abandoned call rate' and 'average speed of answer' and, often, for each statistic, call handlers are required to achieve set targets. These targets are often accompanied by incentive or reward systems.

Performance appraisal systems

Closely linked to performance monitoring, performance appraisals or performance monitoring feedback is common in the call centre industry. Conducted at regular intervals (e.g. three monthly), it may involve the grading and scoring of workers on numerous work-related categories. The type and nature of the grading scale is often developed and implemented by the call centre supervisors or team leaders. Performance appraisal systems are often used in establishing bonuses and performance pay rises.

Task variation

Call centre work usually requires the worker to use their computer workstation and telephone for all job functions. Generally, it is unnecessary for workers to leave their workstation except during designated breaks.

Limited autonomy and workers forecasting

Designed to optimise worker numbers and accommodate peaks and troughs in customer demand, rostering systems in many call centres are staggered and regimented. This can leave little flexibility regarding start and finish times. Workers forecasting and rostering is often based on performance monitoring statistics i.e. average length of calls, number of calls received per day. However, in some instances, this does not allow for potential and unforeseen fluctuations and variations in call lengths and frequencies. For example, lonely or problem customers or a sudden increase in incoming calls (e.g. calls to an electrical company during power outages).

Most often, the number of incoming calls dictates workers workload and pace. In some instances calls are not actively answered. Rather, calls are automatically 'dropped-in' to the operator's phone line each time a call is completed. Furthermore, calls are often scripted with procedures in place as to how each call should be handled.

High stress environment

A recent survey of call centre workers found that more than 70% of workers were experiencing at least one stress symptom at any time and that 61% of these workers had not experienced stress symptoms prior to call centre employment. Stress at work has also been attributed to high levels of staff turnover and attrition rates are significantly higher in 'high stress' centres when compared to the industry average.

Headset use

Headsets are commonly used throughout call centres.

Appendix B: Obligations of call centre employers

Case study:

Company H decides to outsource its call centre as it is becoming too large to manage as part of the entire organisation. They decide to outsource the management and operation of the call centre to an employment and recruiting agency, Company L. Company H provides the office space and equipment and sets the call centre performance targets. Company L is responsible for the recruiting, training, delegating and supervising of workers in the call centre.

What are the respective obligations of Company L and Company H with respect to workplace health and safety legislation?

Both companies should ensure each is familiar with:

- *The Workplace Health and Safety Act 1995*, Regulations and associated legislation applicable to the type of work to be performed by call centre workers, including contract workers
- their respective workplace health and safety obligations, and is able to discharge them.

Both companies should ensure that:

- it has systems and processes in place to prevent or minimise the exposure of contract workers to the risk of death, injury or illness caused by the workplace of the host employer (*Company H*) including specified high-risk plant or workplace activities
- when required by the Act, the host employer (*Company H*) has provided for the appointment of a workplace health and safety officer to assist in managing workplace health and safety where the contract worker is working for the host employer
- it has in place systems and processes to manage health and safety which are capable of:
 - identifying workplace hazards
 - assessing risks that may result because of the hazards
 - deciding on control measures to prevent, or minimise the level of, the risks
 - implementing control measures
 - monitoring and reviewing the effectiveness of the measures
 - ensuring workers are given such instruction and training as is required by legislation.

Company L (labour hire organisation) has obligations relating to methods of work and management techniques. For example, work-related stress and training in the safe use and operation of call centre equipment.

Company H (host employer) has obligations relating to the management of risks associated with call centre equipment, premises and associated hazards. For example, appropriate ergonomic office equipment, emergency evacuation procedures, performance targets in relation to the allocation of financial and human resources.

Appendix C: Risk priority chart

Likelihood: How likely is it that the incident will occur?	Consequences: How severely could someone be hurt?			
	Extreme (permanent disablement, death)	Major (serious bodily injury)	Moderate (treatment at casualty)	Minor (first aid only, no work time lost)
Very likely (Could happen frequently)	1	2	3	4
Likely (Could happen occasionally)	2	3	4	5
Unlikely (Could happen, but rarely)	3	4	5	6
Very unlikely (Could happen, probably never will)	4	5	6	7

This is a way of ranking risks in terms of their priorities. The scores obtained have no absolute value. The chart only **ranks** the risks.

The scores (1-7) in the risk priority chart indicate how important it is to do something about each risk.

Score Action required

1, 2 or 3 Do something about these risks immediately.

4 or 5 Do something about these risks as soon as possible.

6 or 7 These risks may not need immediate attention.

Appendix D: Checklist

Call centre health and safety issues

		Comments
1	Obligation holder	
1.1	Who is the obligation holder (host employer, outsourced agency)? Who is responsible for what aspects of the workplace?	
1.2	Is the obligation holder (call centre manager/supervisor) aware of their responsibilities under WH&S legislation?	
2	Consultation	
2.1	Is a Workplace Health and Safety Officer (WHSO) appointed where there are more than 30 workers? Y/N (if no go to 2.6)	
2.2	Are workers aware of the WHSO's identity?	
2.3	Does the WHSO conduct inspections, report on hazards and unsafe practices, and investigate injuries and accidents, rehabilitation?	
2.4	Is the WHSO given sufficient resources and assistance to complete these tasks?	
2.5	Is the WHSO consulted regarding changes to Workplace Health and Safety in the workplace, e.g. new equipment and work procedures?	
2.6	Have workers opted to elect a Workplace Health and Safety Representative (WHSR)? Y/N (If no go to 2.9)	
2.7	Are workers aware of the WHSR's identity?	
2.8	Is the WHSR provided with adequate assistance and coordination?	
2.9	Is there a Workplace Health and Safety committee? (If no go to 3)	
2.10	Are sufficient cooperation and adequate resources given for the committee to function effectively?	
3	Identification and reporting	
3.1	Is the workplace registered with Workplace Health and Safety Queensland where there are more than 3 workers?	
3.2	Are notifiable events reported to Workplace Health and Safety Queensland, e.g. injury or illness requiring hospitalisation, dangerous events/near misses?	
3.3	Are records kept of all workplace injuries/illnesses (musculoskeletal and stress-related injury included)?	

		Comments
4	Working postures	
4.1	Can workers assume postures that minimise the risk of musculoskeletal injury when working at workstations?	
	<p>Consider:</p> <ul style="list-style-type: none"> • feet flat on the floor/supported by footrest • knees at 90 degree angle with thighs supported • adequate room under the desk • minimum of 3 cm between the back of the knee and the seat • backrest with lumbar support positioned in the lumbar curve of the back • shoulders relaxed and in neutral position, • elbows by the operator's side • forearms and hands parallel to the ground with limited deviation of the wrist required • top of monitor screen below eye level • screen documents/document holder positioned to avoid head movements and awkward static neck postures. 	
4.2	Is the workstation equipment supplied adequate to allow workers to achieve the above postures?	
	<p>Consider:</p> <ul style="list-style-type: none"> • seating that is fully adjustable and in working order (refer to AS4438) • the need for footrests • armrests-do they impede movement/positioning at the workstation? • workstations that allow for postural variation (e.g. standing) (refer to AS 4442, 4443) • the need for a document holder and its positioning • workstations – are they able to be easily adjusted by workers? • if special tools or equipment are needed for workstation adjustment, are they readily available to workers at all times of the day or night? 	
4.3	Is the workstation set up in a way that limits the need for excessive bending, reaching or twisting?	
	<p>Consider:</p> <ul style="list-style-type: none"> • the mouse pad – does it fit onto the keyboard surface? • whether keyboard, mouse, phone/headset controls and frequently used paperwork are accessible? • document holder – necessary? 	
4.4	Is the monitor positioned in a way that limits visual discomfort and strain?	
	<p>Consider:</p> <ul style="list-style-type: none"> • desk width – does it allow for adequate space between the operator's eyes and the monitor (ideally 60-70cm)? • glare and reflectance • lighting (refer to AS1680) 	

		Comments
4.5	Are all workers (including casual and part-time) trained in the ergonomic set-up of their computer workstations?	
4.6	Are there methods to ensure that workers correctly adjust their workstations, particularly where 'hot-desking' occurs?	
5	Repetition and duration	
5.1	Does the work organisation of the call centre present a risk of injury/illness from high repetition and duration?	
	<p>Consider:</p> <ul style="list-style-type: none"> workload-adequate staffing; resource planning; and organisation of tasks for peak times. work pacing/autonomy-are the workers able to control the rate of incoming calls and take regular short breaks easily; is there any opportunity for task variation (to prevent prolonged static postures and overuse of the same muscles); are performance targets realistic. 	
6	Headsets/hearing	
6.1	Does headset equipment provided limit the occurrence of sudden loud sounds?	
6.2	Are headsets tested for clarity of sound and feedback? How? How often? What happens to faulty headsets?	
6.3	Do workers undertake regular maintenance of their headsets?	
6.4	Have adequate infection control measures been implemented?	
	<p>Consider:</p> <p>Headsets –</p> <ul style="list-style-type: none"> do workers have their own? is someone designated and responsible for cleaning them? are foam covers (both ear and mouth piece) replaced for each new user? 	
6.5	<p>Training – are workers:</p> <ul style="list-style-type: none"> trained in the proper fitment and use of headsets? instructed about what steps to follow in the event of a sudden acoustic incident (loud and unexpected sound causing pain)? 	
6.6	<p>Is an appropriate procedure in place in the event of an acoustic incident that could result in acoustic shock?</p> <p>(For example, remove headset immediately and stop working or using the headset in the affected ear; report the event to management; record and log the event; worker is referred to an audiologist or ENT specialist for auditory assessment; headset is tested for safety before further use.)</p>	

		Comments
6.7	Acoustics – is excessive background noise controlled? (refer to AS2107 and AS2822)	
	<p>Consider whether workers:</p> <ul style="list-style-type: none"> • are able to hear clients while on the phone, without need to increase the volume of the headset excessively? • have to raise their voice to communicate with clients or other workers? 	
7	Work-related stress	
7.1	<p>Which potential sources of stress are present in this workplace?</p> <ul style="list-style-type: none"> • monitoring of performance on an individual level without consultation • key performance indicators directed at individuals without consultation • use of performance appraisals/feedback systems that do not ensure objectivity and are not directly relevant to work demands • limited control (autonomy) over work practices and environment • conflict between management and workers • abusive, threatening or harassing calls • repetitive or monotonous work organisation • poor organisational support (training, consultation on monitoring and targets, communication) • role conflict (time available to do tasks outstrips the time available; quality of customer service vs. quantity of calls) • shiftwork • physical work environment (temperature, visual, distractions, noise) • other 	

Overall comments

Risks identified:

- 1.
- 2.
- 3.
- 4.
- 5.

Risk assessments:

Control measures:

Checklist references:

- Australian Standard AS 4438 Height Adjustable Swivel Chairs (1997)
- Australian Standard AS 4442 Office Desks (1997)
- Australian Standard AS 4443 Office Panel Systems – Workstations (1997)
- Australian Standard AS 1680 Interior Lighting (1993/4)
- Australian Standard AS 2107 Acoustics – Recommended Design Sound Levels and Reverberation Times for Building Interiors (2000)
- Australian Standard AS 2822 Acoustics – Methods of Assessing and Predicting Speech Privacy and Speech Intelligibility (1985)
- Australian New Zealand Standard 1269 Part 4 Audiological Assessment

Appendix E: Individual factors

Skills and experience

Being inexperienced in a job can be a significant manual tasks risk factor.

Physical characteristics

An overload situation may result from a mismatch between the workers and the task. For example:

- Workers with a recent work-related injury have a greater chance of being re-injured.
- Pregnancy affects the risk of back pain because the changing shape of the body places more work on the back muscles in supporting the weight of the uterus.

Unaccustomed work

Workers who are new, have transferred from another job or are returning from extended absences and whose muscles are not conditioned to the work.

Job satisfaction

A worker's job satisfaction and ability to influence the planning of their work and breaks helps to prevent musculoskeletal injuries. Job stress can cause increased tension in muscles and an increased potential for injury.

Personal protective equipment and clothing

Personal protective equipment and clothing can reduce the potential for injury.

(Manual Tasks Advisory Standard 2000)

Appendix F: Checklist for performance monitoring, feedback and targets

Checklist Performance monitoring, feedback and targets			
Call centre performance	Questions	Yes	No
Performance targets	<ul style="list-style-type: none"> • Do standards fairly reflect the average capacities of the particular work force? • Will they create unhealthy stress for many workers? • Do they take into account recurring system difficulties and other workplace problems? • Do they include quality as well as quantity goals? • Do they represent a 'fair day's pay' for a 'fair day's work'? • Do workers share in any productivity gains achieved through the introduction of new technology? 		
Performance monitoring	<ul style="list-style-type: none"> • Do workers know and understand how measurements are being made? • Can the measurement system be defeated easily, thereby impairing the morale of those willing to 'follow the rules'? • Do workers receive statistics on their team performance directly and in time to help them manage their work rate? • Is the relation between quality and service measures and work quantity communicated by supervisors when they discuss problems of performance levels with workers? • Do supervisors clearly communicate that they are taking system and workplace problems into account? • Are group rather than individual rates used with those tasks that make such an approach more equitable? • Is there a formal complaint process by which an operator can contest the way work data has been used by the supervisor? 		
Performance appraisal/ feedback	<ul style="list-style-type: none"> • Are there meaningful recognition programs for workers who perform well? • Is work quantity only one of a well-rounded and objective set of performance criteria used for worker appraisals? • Does the worker get to see and participate in the performance appraisal? • Is there a process by which the worker can appeal against the performance appraisal by their supervisor? • Is there a performance-planning system that identifies worker weakness in performance and identifies ways to remedy such problems? 		

(Adapted from Westin, A.F. 1992, 'Two key factors that belong in a macro ergonomic analysis of electronic monitoring: Worker perceptions of fairness and the climate of organisational trust or distrust', *Applied Ergonomics*, 23, 1, pp. 35-42)



