Cancer Council
Western Australia

Workers' compensation claims
paid in Australia 2000-2009

Occupational exposure to ultraviolet (UV) radiation

Monograph Series 2011

Occupational exposure to ultraviolet (UV) radiation: Workers' compensation claims paid in Australia 2000-2009

Key issues:

- UV radiation and skin cancer risks in Australia
- Legislative responsibilities for employers (PCBUs) and workers
- Compensation claim statistics and examples
- Further assistance

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Cancer Council Western Australia

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1.0 Executive summary

This monograph will address the issue of occupational exposure to ultraviolet (UV) radiation in Western Australia and highlight the need for employers to put in place policy and procedures to protect workers. It also documents the quantum of workers' compensation claims made for sun related injury/disease from 2000 to 2009. The large majority of these are for UV related skin cancers.

A total of 1,360 workers compensation claims for sun related injury/disease have been made in Australia between 2000 and 2009, at a total cost of $38.4 million. This figure is likely to increase in the future and is preventable by the establishment and enforcement of proper sun protection policies and practices.

UV radiation is a known cause of cancer [1]. Too much exposure can lead to skin cancer and other conditions including eye damage, sunburn and visible aging [2]. A number of factors including our close proximity to the equator, high sun elevation and our generally clear atmospheric conditions mean that Australia experiences higher levels of UV radiation than countries in Europe and North America [3, 4]. High UV levels combined with Australian's outdoor lifestyle, cultural attitudes and predominately fair skinned population mean that Australia experiences some of the highest rates of skin cancer in the world [5].

Each year approximately 440,000 Australians are treated for skin cancer and over 1,850 people lose their lives to this disease [6, 7]. Skin cancer incurs greater costs than any other cancer in Australia, costing the healthcare system more than $300 million each year [8].

The outdoor nature of some employment can result in increased exposure to UV radiation for workers. Research shows as many as 34% of Australian workers are exposed to direct sunlight during working hours and it is estimated that around 200 melanomas and 34,000 non melanoma skin cancers per year can be attributed to occupational exposures to UV radiation [9, 10]. As UV radiation is a known cause of injury and disease employers (PCBUs) have legislative responsibilities to protect workers from over exposure [1]. Workers must comply with the employers efforts to reduce workplace health and safety risks including following policy and procedures, attending training, following instruction and using personal protective equipment (PPE).

The issue of occupational exposure to UV radiation in Australia is becoming increasingly recognised and the number of serious claims and their associated costs are increasing. There are a considerable number of case examples publically available in which claimants proved their skin cancers were caused by occupational sun exposure and successfully claimed against their employers or former employers for breach of duties. These cases firmly establish the legal recognition of sun exposure as an occupational hazard causing injury/disease and of breach of employers' duties to provide safe workplaces in this context.

Cancer Council WA recommends that employers assess the risks in their workplace and implement policies and control measures to reduce harms for their workers. Cancer Council WA can provide information and assistance about skin cancer, sun protection, legal obligations, and other information required to develop a comprehensive sun protection program in the workplace.

2.0 Scope

2.1 UV radiation

Ultraviolet (UV) radiation has been classified as a 'Class 1 Carcinogen' by the International Agency for Research on Cancer (IARC)[1]. Class 1 is reserved for substances and exposures that are known to cause cancer in humans [1]. Overexposure to UV radiation can result in a range of health hazards, from short-term effects such as sunburn (erythema) and eye damage to chronic effects such as skin cancer (including melanoma) and cataracts [2].

There are three types of UV radiation: UVA, UVB and UVC radiation [11]. Overexposure to UVA radiation is primarily responsible for the visible signs of aging including rough, blotchy, wrinkled and sagging skin. High doses of UVA radiation can also cause sunburn, DNA damage in the skin, and skin cancer. UVB radiation is even more dangerous than UVA radiation and is the main cause of sunburn and skin cancer. UVC radiation is also dangerous to humans but is blocked by the ozone layer and doesn't normally reach the earth's surface [12]. However, it can be generated by industrial processes including arc welding [13].

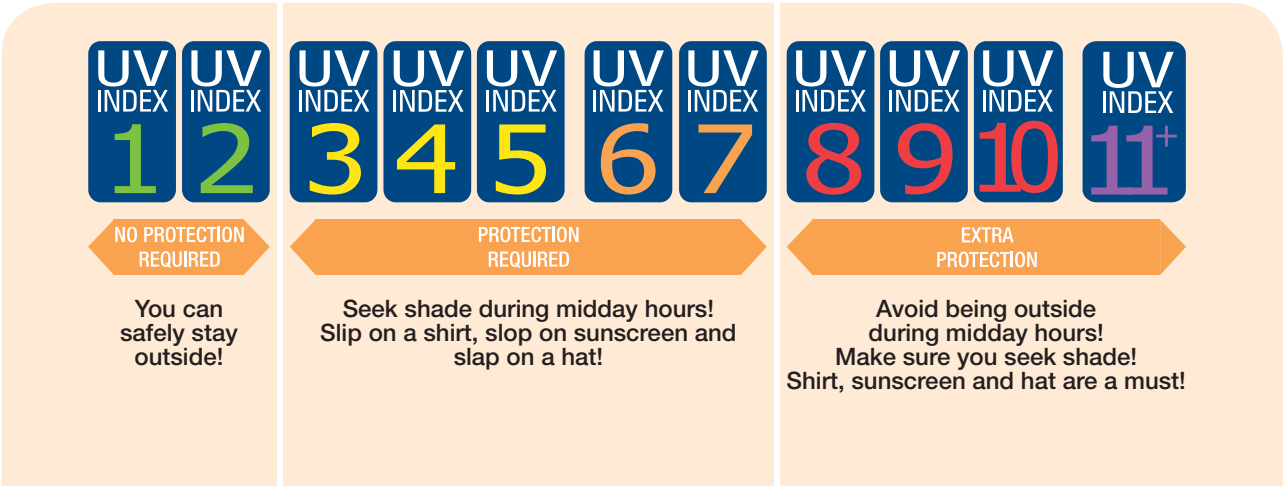
The World Health Organization (WHO) has developed the UV index (shown in Figure 1) as a way of assessing when sun protection is required.

The UV Index classifies UV levels at the earth's surface and includes a series of action statements that relate to sun protection behaviour. When the UV index reaches 3 (moderate) or above, UV radiation is intense enough to damage the skin and contribute to the risk of skin cancer, therefore sun protection is required [14].

The pattern of UV exposure also influences the health effects a person may experience. In particular, cumulative sun exposure has been shown to be linked to squamous cell carcinoma (a non-melanoma skin cancer that develops in the squamous cells of the skin) and intense, intermittent sun exposure is associated with melanoma (develops in the skin's melanocytes) and basal cell carcinoma (a non-melanoma skin cancer that develops in the skin's basal cells) [15, 16].

Australia experiences higher levels of UV radiation than countries in Europe and North America; this is due to a number of factors including our close proximity to the equator, high sun elevation and our generally clear atmospheric conditions. UV levels also vary across Australia depending on the time of year and geographical location [3, 4]. Once the UV reaches 3 it can cause damage, which is significant as during an Australian summer UV levels higher than 12-14 are regularly recorded, and locations in the far north occasionally reach levels as high as 16 and 17 [4, 14].

Figure 1 *WHO's UV Index and related sun protection behaviours [14].*



Occupational exposure to ultraviolet radiation

An indication of the high dosage of UV radiation that Western Australians can be exposed to is shown in Appendix 1. These tables show the average length of time the UV index is above 3, above 8 and above 11 each day at five locations in WA from Albany to Kununurra. The data, collected from the Bureau of Meteorology's UV Alert forecasts over the summer months of 2010/2011, shows that in summer, locations all around WA receive extremely damaging UV levels for considerable periods each day. For example, in Perth, in January the UV index is in the extreme range (exceeds 11) for more than three hours a day. During this same month the UV index exceeds 11 for approximately two hours in Albany and four hours in Karratha. We also know that in places north of Bunbury the average midday UV Index will reach 3 or higher even in mid-winter.

2.2 Skin cancer in Australia

Australia, in particular WA, has some of the highest rates of skin cancer in the world. Despite skin cancer being a largely preventable disease, it affects at least two in every three Australians before the age of 70. The risk is higher in men (two in three) than in women (three in five) [17].

Each year approximately 440,000 Australians are treated for skin cancer and over 1,850 people lose their lives to this disease – a figure higher than the national road toll [6, 7]. Of those Australians who died in 2008 more than two thirds (67%) were men [7].

The large number of medical visits, including diagnoses and treatments, related to skin cancer that occur each year place a large financial burden on the Australian healthcare system. Statistics show that skin cancer incurs greater costs than any other cancer in Australia, costing the healthcare system well in excess of $300 million dollars each year [8].

Melanoma incidence rates in Australia and New Zealand are between two and five times as high as those found in Canada, the United States of America (USA) and the United Kingdom (UK). Although mortality rates are modest, they are still two to three times higher in Australia and New Zealand than in Canada, the USA and the UK [18].

The high rates of skin cancer in Australia can be attributed to a number of factors, including high levels of UV radiation throughout the year, outdoor lifestyles, cultural attitudes, the predominately fair skinned population and the desirability of a tan (although this has fortunately diminished in recent years) [4, 5].

2.3 Occupational exposure to UV radiation in Australia

The outdoor nature of some employment can result in increased exposure to UV radiation for workers. The 2008 National Hazard Exposure Worker Surveillance survey found that 34% of Australian workers were exposed to direct sunlight during working hours [9]. Outdoor workers are thought to receive five to 10 times more UV exposure in a year than indoor workers. This increased exposure means outdoor workers have a high risk of developing skin cancer [19].

Occupational UV exposure occurs not only through direct sun exposure but also via reflection and refraction. This means even those working in the shade can be exposed to UV radiation. Workers who spend a significant amount of time in a work vehicle can also receive high levels of exposure through untinted side windows [20].

It is estimated that in Australia around 200 melanomas and 34,000 non-melanoma skin cancers per year are caused by occupational exposures [10]. The 2008 National Hazard Exposure Worker Surveillance survey indicated that those working in the agriculture, forestry, fishing and construction industries have greater risk

of exposure to high UV levels. The survey also found that people in small workplaces (less than five workers) were 80% more likely to be exposed to high UV than those in workplaces with more than 200 workers. Further, workers in smaller workplaces were less likely to be provided with sun protective control measures than those in larger workplaces [21].

Development of squamous cell carcinoma has been most strongly associated with continuous occupational exposure to UV radiation. Basal cell carcinoma is most strongly associated with intermittent sun exposure and sunburn. Intermittent sun exposure and sunburn, particularly non-occupational (recreational) exposures, are also strongly associated with the development of melanoma [16].

2.4 Workplace policy

In 2010, Cancer Council WA investigated the sun protection procedures and policies of 29 outdoor workplaces in Western Australia. The investigation showed that workplaces that use outdoor work/sun protection policies have better levels of awareness and compliance with guidelines than those that do not have formal policies [22]. This is not an isolated result; a study of sun protection behaviours in men in Queensland treated for non-melanoma skin cancer, found that men who were employed in workplaces with mandatory sun protection policies were more likely to protect themselves from the sun [23].

The Queensland study revealed that one of the important challenges in establishing and implementing sun protection policies in the workplace is outdoor workers may be unlikely to change their attitudes and behaviours towards sun protection until they have already suffered significant sun damage. The study suggests that sun protection policies should be mandatory and monitored for compliance in order to be effective in reducing rates of skin cancer amongst outdoor workers [23].

3.0 Workplace legislation

Currently, each state and territory government is moving to harmonise work health and safety legislation as part of an initiative of the Council of Australian Governments. This will result in similar laws (including Regulations and Codes of Practice) in each jurisdiction from 2012. The main objective is to provide a balanced nationally consistent framework to secure the health and safety of workers and workplaces

When these changes occur the term 'persons conducting a business or undertaking' (PCBU) will replace the term 'employer' in the context of health and safety documentation in Australia. As such the term appears throughout this document and refers to employers, sole traders, principal contractors, unincorporated associations, partnerships, franchisees and volunteer organisations. Similarly the term 'employees' has also been replaced by 'worker' and refers to a person who carries out work in any capacity for a PCBU, including employees, contractors, sub-contractors, labour hire employees, outworkers, apprentices, trainees, work experience students and volunteers.

3.1 Legislative responsibilities

A person conducting a business or undertaking (PCBU) must ensure, so far as is reasonably practicable, that the health and safety of workers and other people in the workplace is not put at risk from work carried out as part of the conduct of the business or undertaking. This includes the provision and maintenance of a safe and healthy work environment, plant and structures, safe systems of work, safe use handling and storing of plant, structures and substances, and the provision of any information, training, instruction or supervision that is necessary to protect people from risks.

UV radiation is a known human carcinogen (Class 1), therefore to meet their legal obligations the PCBU should address UV radiation as a workplace hazard [1]. Failure to comply may result in fines under work safety legislation and may leave a workplace liable to legal action.

While at work, a worker must take reasonable care for his or her own health and safety and ensure that they do not adversely affect the health and safety of other people. The worker must also comply with any reasonable instruction that is given by the PCBU, and co-operate with any reasonable policy or procedure relating to health or safety in the workplace.

A self-employed person must ensure, so far as is reasonably practicable, his or her own health and safety while at work.

This means that, to work safely in the sun, workers must follow workplace sun protection policy and procedures, attend training, follow instruction and advice provided, and use personal protective equipment (PPE) as provided by the PCBU. Failure to comply may result in consequences, which may include being removed from site or having their employment terminated. Workers may also face fines under work safety legislation.

4.0 Compensation claims statistics

There is considerable legal precedent recognising a claim for skin cancer caused by sun exposure in the workplace. Most PCBUs are well aware of their obligations in relation to workplace hazards such as asbestos and tobacco smoke. According to the International Agency for Research on Cancer (IARC), UV radiation falls in the same category of carcinogens (cancer-causing agents) as asbestos and tobacco smoke, and so it should be treated just as seriously [1].

SafeWork Australia have data available which shows the impact sun exposure is having in terms of workers' compensation claims – including the number of claims and costs. A total of 1,360 workers compensation claims for sun related injury/disease have been made in Australia between 2000 and 2009, at a total cost of $38.4 million. The data must be viewed with some caution as they are rounded to the nearest five claims for confidentiality purposes and have some limitations in terms of inclusions (full information available at www.safeworkaustralia.com.au). Regardless, the data shows that the issue of occupational sun exposure is becoming increasingly recognised, and the number and cost of claims is increasing.

Occupational exposure to ultraviolet radiation

The following graphs and interpretations are based on data provided by SafeWork Australia:

Figure 2

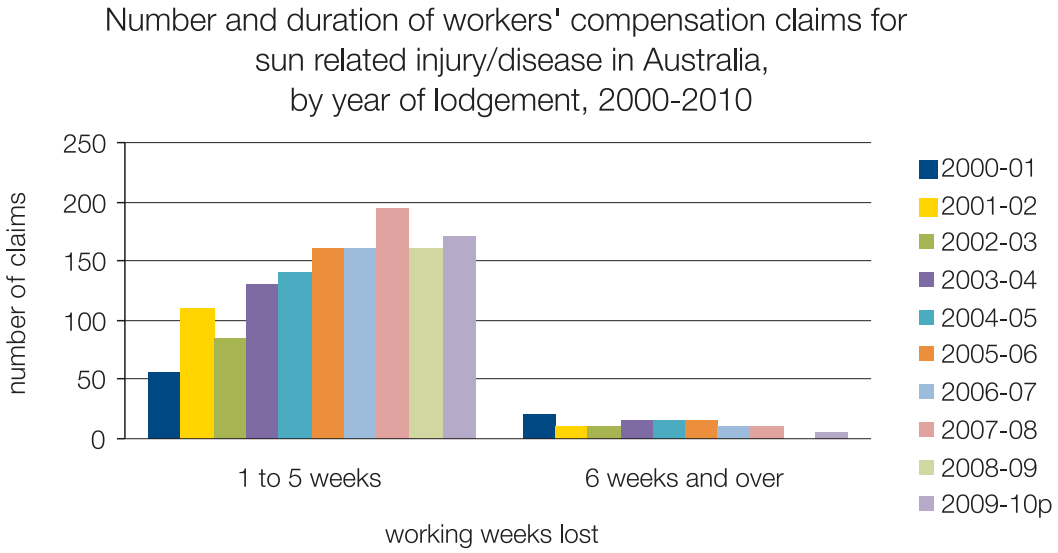


Figure 2 reports the number and duration of claims for sun related injury/disease. Most claims in Australia are for workers claiming short absences from work or a permanent incapacity (permanent incapacities are classified in the 1-5 week category). The data shows a substantial increase in the number of claims over time.

Figure 3

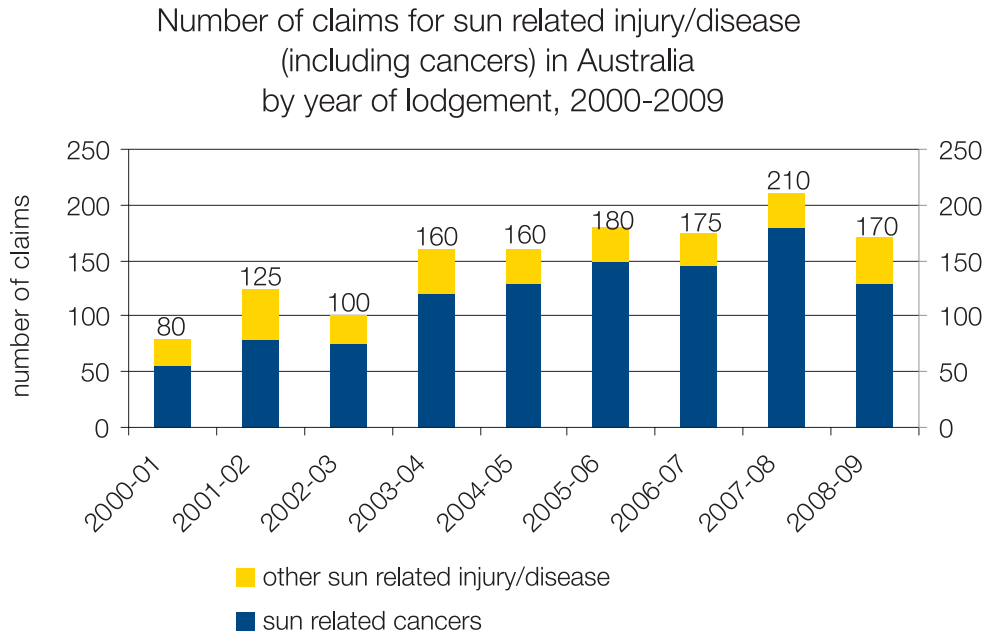


Figure 3 more specifically shows the number of claims made for sun related injury/disease (including cancers) within Australia. It highlights the increasing number of claims for injury/disease attributable to sun exposure (numbers peaked at a total of 210 claims in 2007-08). This may be reflective of Australia's rising rate of skin cancers, our ageing population and the increasing awareness that damage caused by workplace sun exposure can be compensated.

Occupational exposure to ultraviolet radiation

Figure 4

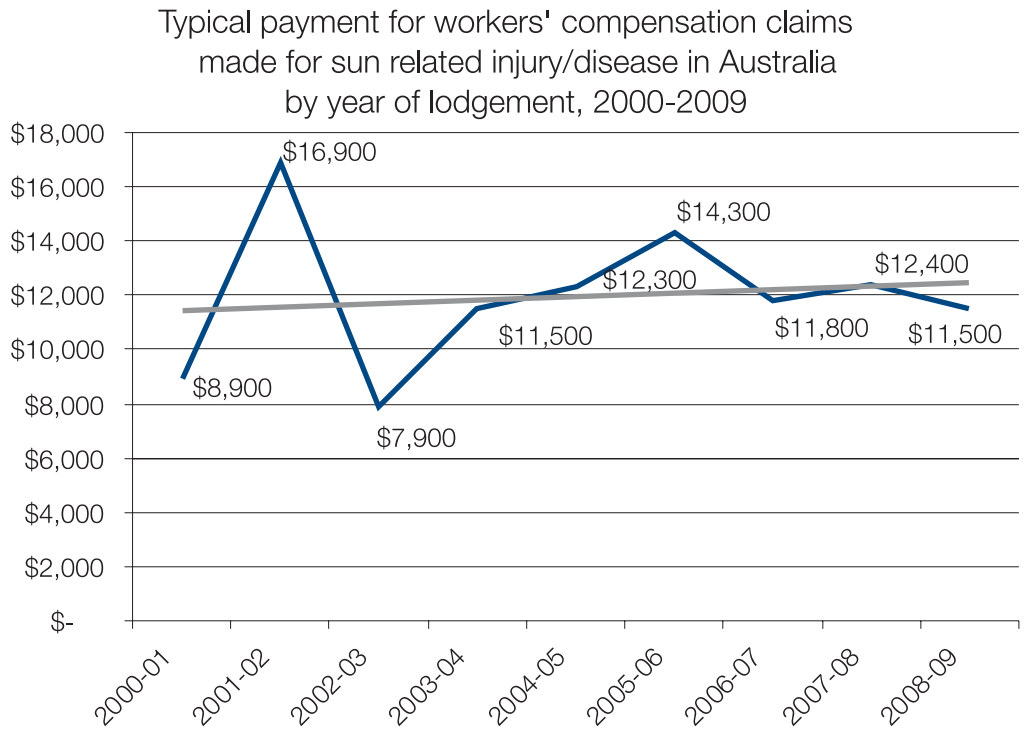
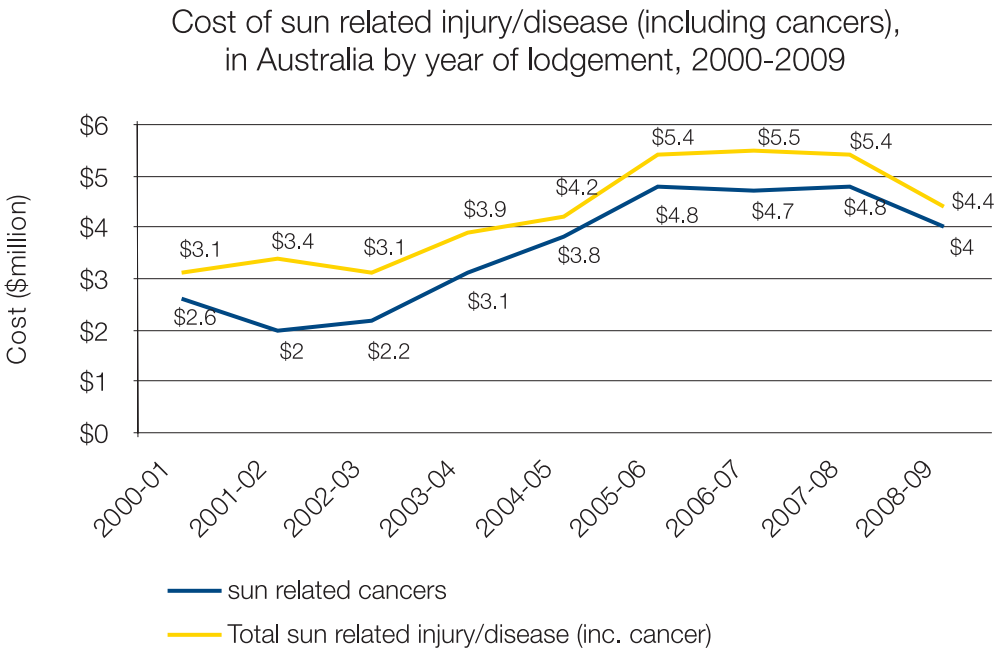


Figure 4 reports typical (median) payments made to workers who made a claim after developing a sun related injury/disease. Median payout figures are more representative of the typical claims than average figures as they are not skewed by the occasional high compensation payout. Australia's high rates of skin cancer mean that workplaces that do not protect workers face a higher likelihood of compensation claims. Compensations claims can costs workplaces in more way than the costs of the claim payout. Claims can also affect workplaces in terms of work time lost, legal fees, time spent dealing with claim and increased insurance premiums.

Figure 5



Sun related injury/diseases, particularly skin cancers, result in a large financial burden, primarily in the healthcare system where they represent the largest cost burden of all cancers. Large costs are also being incurred through workers' compensation payouts. Figure 5 shows the total costs of compensations paid to workers in Australia for all sun related injury/disease, as well as costs specifically for cancers caused by sun exposure. The data shows that these figures are increasing significantly (total payments for skin cancer claims doubled from $2 million in 2001-02 to $4 million in 2008-09).

5.0 Compensation claim examples

A search of Australian legal databases returned a considerable number of cases in which claimants proved their skin cancers were caused by occupational sun exposure, and successfully claimed against their employers or former employers for breach of employer duties. Reporting differences between the states may account for the large number of case examples from New South Wales.

The selection of example cases outlined below was sourced from legal databases and reported decisions of state workers' compensation commissions and courts, which are available online [24, 25]. Cancer Council WA considers it important to respect the privacy of claimants and PCBUs in the cases discussed, and so they are referred to in numerical terms.

The cases that follow firmly establish the legal recognition of sun exposure as an occupational hazard causing injury, and of breach of PCBU's duties to provide safe workplaces in this context.

Case No. 1 v Company 1 & Another [2000] NSWCCR 607

In 1997, Case No. 1, a former bricklayer, died from malignant melanoma. The executor of his will made a compensation claim on behalf of his two children against his employer in 2000.

Case No. 1 was a fair-skinned, red-headed bricklayer, who was exposed to UV radiation for a prolonged period in the course of his employment. He was frequently sun burned on exposed areas of his face, arms and legs. He had a primary malignant melanoma excised from his lower back in 1986 and by 1995 the cancer had metastasised to other parts of his body. He died of the effects of malignant melanoma in 1997.

The court found that cumulative exposure to the sun was a characteristic of Case No. 1's employment as a bricklayer, and accepted the medical evidence that cumulative exposure to the sun creates a risk of melanoma. It found that his exposure to UV radiation over a prolonged period of time increased his risk of developing melanoma and substantially contributed to his developing melanoma.

The claimant was successful, though orders and findings were not reported.

Case No. 2 and Company 2: [2003] settled out of court

Case No. 2 delivered mail in Queensland for eight years. He usually worked during the hottest part of the day, wore short-sleeved shirts and shorts, wasn't provided with sunscreen and wore a regulation motorcycle helmet, which did not have a sun visor.

In 2001, Case No. 2 was diagnosed with a melanoma on his forehead, which he had removed. He also had smaller cancers removed from his right cheek and the left side of his head. When Company 2 refused to compensate him for the two days he required off work for the cancers to be removed, Case No. 2 took his case to the Commonwealth Administrative Appeals Tribunal.

However, shortly before the hearing began, Company 2 agreed to pay all legal costs, medical expenses, and some travel costs. Company 2 has agreed to compensate Case No. 2 if he develops a secondary melanoma, and has confirmed that should it be fatal, his family will receive lump sum compensation.

Case No. 3 v Company 3 [2003] VCC 23

Case No. 3 laid bricks and drove trucks for Company 3 for 35 years. He spent a considerable part of his working life in the sun, wearing singlets that exposed his arms and part of his chest and back. He developed multiple skin cancers on his back, neck and shoulders, and had multiple malignant melanomas removed from his back.

In 2003 a Victorian County Court judge ruled that Case No. 3 had the right to sue his employer for compensation for his skin cancer injuries. The case established a precedent in recognising UV radiation as a workplace hazard and skin cancer as a serious occupational injury. Case No. 3 settled out of court, and died in 2007.

Case No. 4 v Company 4 [2004] NSW WCC 3488

Case No. 4, a former wharf worker, sued his former employer in 2004 after he developed skin cancer associated with exposure to UV radiation in the course of employment. He worked outdoors for Company 4 and was not provided with or required to wear sun protection. He usually wore shorts and a t-shirt, and often only shorts during summer.

Case No. 4 developed basal cell carcinomas, solar keratoses, and squamous cell carcinomas that required removal and his doctor predicted that he would continue to develop new lesions throughout his life. He claimed that he felt constant anxiety about developing malignant melanoma.

The Commission found that Case No. 4's skin condition '[placed] an extreme limitation on his daily activities'. He was awarded weekly compensation payments; $4,500 in respect of pain and suffering, reimbursement for all related medical expenses, and his legal costs.

Case No. 5 v Company 5 [2004] NSW WCC 6434

Case No. 5 suffered significant damage to his skin while employed as a labourer with a road and traffic authority. He required numerous procedures to remove skin cancers from his ears, abdomen, cheeks, back, arms, legs and neck. He resigned from Company 5, citing health concerns, in 2003, and took out an action in the NSW Workers Compensation Commission.

The NSW Workers Compensation Commission awarded Case No. 5 damages on the grounds that continuous, excessive exposure to the sun while at work had caused or contributed to his skin cancer. The Commission determined that his employment substantially contributed to his injury, and awarded him weekly compensation at the maximum statutory rate, medical expenses and costs.

Case No. 6 v Company 6 [2006] NSW WCC 5866

Case No. 6 was employed as a marine steward on the wharves for Company 6. He worked outside, and generally wore shorts and a t-shirts or singlet. His employer did not supply him with sunscreen or a hat. He subsequently suffered severe facial and bodily disfigurement caused by a skin cancer requiring ongoing treatment and monitoring.

The NSW Workers Compensation Commission found that his employment was a substantial contributing factor to his injury and Company 6 was ordered to pay medical expenses relating to his condition, and an undisclosed amount for permanent impairment.

Case No. 7 v Company 7 [2006] NSW WCC 10799

Case No. 7 was employed by Company 7 as a waterside worker on the Sydney wharves. During the course of his employment he worked on average 50 hours per week, of which 90% was outdoors. He was therefore constantly exposed to sunlight both directly and from reflected UV radiation off the water. He mainly wore shorts or trousers and a short sleeved shirt, and only started wearing a hat in his last five years of employment. He did not wear sunscreen. He commenced an action against Company 7 for compensation after he developed skin cancer which severely disfigured his face and body. The NSW Workers Compensation Commission ordered Company 7 to pay Case No. 7 $60,000 for permanent impairment, $5000 for pain and suffering, and costs.

Case No. 8 v Company 8 [2009] NSW WCC 5671

Case No. 8 worked outdoors as a road construction foreman and concrete finisher for a local government. He did not wear protective clothing or apply sunscreen during his 13 years of employment prior to 1989, after which his employer provided him with protective clothing and sunscreen. He suffered basal cell carcinomas on his head/face, chest, neck, back, legs and arms, which had to be removed at considerable cost.

The NSW Workers' Compensation Commission accepted Case No. 8's claim and ordered Company 8 to pay $25,930.85 for his medical treatment and related expenses, and legal costs.

Case No. 9 v Company 9 [2009] NSW WCC 5997

Case No. 9 claimed compensation for injuries caused by working outdoors for his former employer, an energy company, between 1974 and 1995. He suffered facial disfigurement, severe bodily disfigurement and loss of sexual capacity caused by skin cancer.

The Commission heard evidence that between 1999 and the time his case was heard Case No. 9 visited doctors over 120 times to have skin cancers treated. On virtually all of these occasions he was incapacitated for anywhere from two weeks to two months afterwards, as the majority of the skin cancer wounds became infected for two to eight weeks afterwards. The Commission accepted that his condition meant he could no longer spend any significant time outdoors, w_hich affected his ability to enjoy the amenities of life. Case No. 9 also submitted that his unsightly appearance and bodily disfigurement caused the loss of his sexual relationship with his wife.

The Commission awarded Case No. 9 $20,000 for pain and suffering, $6,400 for his facial disfigurement, $7,500 for his bodily disfigurement, and $9,400 for his loss of sexual function. Company 9 was also ordered to pay legal costs.

Case No. 10 v Company 10 [2010] NSW WCC 8766

Case No. 10 was employed by Company 10, a local government, as a plant operator. He worked outside mowing lawns on the nature strips of streets, parks, and sporting fields. He developed skin cancers on his face, ears, neck temple, back and arms from excessive exposure to sunlight.

The Commission held that Case No. 10's injuries arose out of the course of his employment and that his work was a substantial contributing factor to his injuries. Company 10 was ordered to pay all medical expenses and legal costs.

Case No. 11 and Company 11 [2010] Qld

In 2010 the family of Case No. 11 received a record payout from Company 11 after Case No. 11, a former carpenter and plasterer, passed away at the age of 43, two years after being diagnosed with melanoma. His wife, who is now the sole carer of their four young sons, was awarded total dependency and received a landmark six figure payout.

This case sets a significant precedent for sizeable payouts for melanoma caused by occupational exposure in Queensland.

6.0 Assistance with sun protection policies in the workplace

6.1 Cancer Council WA

Cancer Council Australia has developed a comprehensive guide for workplaces looking to develop sun protection policies called *Skin cancer and outdoor work: A guide for employers* [26]. The guide explores the relationship between UV exposure and skin cancer and provides PCBUs with information and advice to confidently address sun protection in the workplace.

Skin cancer and outdoor work: A guide for employers advises that a comprehensive workplace sun protection program requires:

- Running periodic risk assessments to determine workers' UV exposure levels;
- Introducing sun protection measures;
- Providing information, education, training and supervision to workers to encourage safe work in the sun;
- Developing a comprehensive sun protection policy; and
- Monitoring program effectiveness and making necessary changes.

Skin cancer and outdoor work: A guide for employers is available for purchase or can be downloaded from Cancer Council WA's website www.cancerwa.asn.au.

The SunSmart Team at Cancer Council WA is able to assist workplaces to introduce effective sun protection policies.

The SunSmart Team can:

- Provide information and education for PCBUs assessing the need for a comprehensive sun protection policy
- Provide clear guidelines to build a workplace sun protection policy
- Provide resources and information to educate workers on sun protection issues
- Provide education and training to management, health and safety staff or workers

The SunSmart Team can also help with revising existing policies with a view towards increasing protection for workers, clarifying expectations and a reducing potential legal liability.

Resources and further information are available at www.cancerwa.asn.au, or contact the Cancer Council WA SunSmart Workplace Coordinator on (08) 9388 4350.

6.2 WorkSafe WA

WorkSafe WA has a range of resources relating to sun protection and other workplace health and safety issues. These are available online at www.worksafe.wa.gov.au. In cooperation with Cancer Council WA, WorkSafe WA presents regular information sessions on managing heat stress and working in hot conditions.

WorkSafe WA can be contacted on (08) 9327 8777.

7.0 Conclusions

Occupational exposure to UV radiation is a hazard for any workplace. As UV radiation is a known cause of cancer – and outdoor workers experience higher exposure levels than those who work indoors – it is important that PCBUs put in place comprehensive sun protection policies and procedures to help minimise the risk of exposure to workers. This will ensure that PCBUs not only protect their workers from skin cancer, but also meet their legislative responsibilities to protect workers from harm.

The claim statistics and case examples reported in this document highlight the need for PCBUs to have effective policies and procedures in place for reducing workplace sun exposure. The increasing numbers of serious claims and their associated payout costs indicate that skin cancer and other sun related injury/disease are gaining recognition as compensable conditions. PCBUs need to be aware that without effective policy and procedures they are leaving themselves open to an increased likelihood of a compensation claim.

8.0 Appendices

9.1 Appendix 1

Western Australian Daily UV Graphing Results

Sun protection is required when UV Index levels reach 3 or higher. Once UV levels pass 8 maximum sun protection is vital.

November

	Average U max V	Average time UVI over 3	Average time UVI over 8	Average time UVI over 11
Albany	10.17	7hrs 45mins	3hrs 28mins	36mins
Perth	11.45	7hrs 56mins	4hrs 17mins	1hr 38mins
Geraldton	12.83	8hrs 6mins	4hrs 47mins	2hrs 59mins
Karratha	14.89	8hrs 10mins	5hrs 15mins	3hrs 55mins
Kununurra	15.33	8hrs 5mins	5hrs 17mins	4hrs 4mins

December

	Average max UV	Average time UVI over 3	Average time UVI over 8	Average time UVI over 11
Albany	10.6	8hrs 14mins	4hrs 21mins	1hr 47mins
Perth	12.89	8hrs 26mins	5hrs	3hr 13mins
Geraldton	14.47	8hrs 32mins	5hrs 23mins	3hrs 57mins
Karratha	15.84	8hrs 24mins	5hrs 32mins	4hrs 22mins
Kununurra	15.68	8hrs 13mins	5hrs 27mins	4hrs 12mins

January

	Average max UV	Average time UVI over 3	Average time UVI over 8	Average time UVI over 11
Albany	12	8hrs 11mins	4hrs 28mins	2hrs 6mins
Perth	13.13	8hrs 18mins	4hrs 59mins	3hrs 16mins
Geraldton	14.29	8hrs 24mins	5hrs 21mins	3hrs 52mins
Karratha	14.82	8hrs 12mins	5hrs 17mins	3hrs 58mins
Kununurra	15	8hrs 6mins	5hrs 18mins	3hrs 57mins

February

	Average max UV	Average time UVI over 3	Average time UVI over 8	Average time UVI over 11
Albany	11.47	7hrs 42mins	4hrs 7mins	1hr 39mins
Perth	12.21	7hrs 50mins	4hrs 26mins	2hrs 31mins
Geraldton	12.84	7hrs 52mins	4hrs 39mins	3hrs
Karratha	13.89	7hrs 52mins	4hrs 57mins	3hrs 29mins
Kununurra	14.33	7hrs 51mins	4hrs 57mins	3hrs 39mins

March

	Average max UV	Average time UVI over 3	Average time UVI over 8	Average time UVI over 11
Albany	8.43	6hrs 31mins	1hrs 25mins	0
Perth	9.35	6hrs 43mins	2hrs 6mins	15mins
Geraldton	10.3	6hrs 58mins	3hrs	50mins
Karratha	12.17	7hrs 18mins	4hrs 10mins	2hrs 25mins
Kununurra	13.48	7hrs 28mins	4hrs 35mins	3hrs 10mins

Source: Cancer Council WA. Data collected from published UV alerts in 2010 / 11.

Further information on average UV strengths for Western Australia is available from http://www.bom.gov.au/jsp/ncc/climate_averages/uv-index/index.jsp?period=an

9.0 References

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For support and information on cancer and cancer-related issues, call Cancer Council Helpline. This is a confidential service. Available Statewide for the cost of a local call Monday to Friday 8 am – 6 pm