OFFICE OF THE
CHIEF CORONER
OF NEW ZEALAND

Recommendations Recap

A summary of coronial recommendations and comments made between 1 January–31 March 2012

ISSUE 2

Coronial Services of New Zealand
Purongo O te Ao Kakarauri

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Coroners have a duty to identify any lessons learned from the deaths referred to them that might help prevent such deaths occurring in the future. In order to publicise these lessons, the findings and recommendations of most cases are open to the public.

The Recommendations Recap identifies and summarises all coronial recommendations that have been made over the relevant period. Where received, summaries of responses to recommendations from agencies and organisations are also included.

This issue of the Recommendations Recap contains 46 recent coronial cases where recommendations have been made. These final findings were released by a coroner between 1 January and 31 March 2012.

This issue features a case study report on deaths related to volatile substance abuse, specifically butane. The report contains the key statistics relating to these deaths, an outline of the issues involved and the legal framework surrounding volatile substance abuse. It also provides a summary of recommendations made by coroners following these deaths.

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Case study butane

VOLATILE SUBSTANCE ABUSE – BUTANE-BASED SUBSTANCES

In all cases where method is known, the abused substance was a common household product

Butane-related deaths at a glance AS AT 31/8/2012

There have been 63 **cases of deaths** relating to the recreational inhalation of butane-based substances between 2000 and 2012

55 of the 63 deceased were **under 24 years old**

- 24 of the deceased were under 17 years old
- The youngest deceased was a 12 year old male. The oldest deceased was a 76 year old male. However the second-oldest deceased was only 32 years old.
- Overall, the number of deaths peaked among 14 year old males (6 deaths) and 19 year old males (8 deaths). The peak age for females was 16 years old (4 deaths).

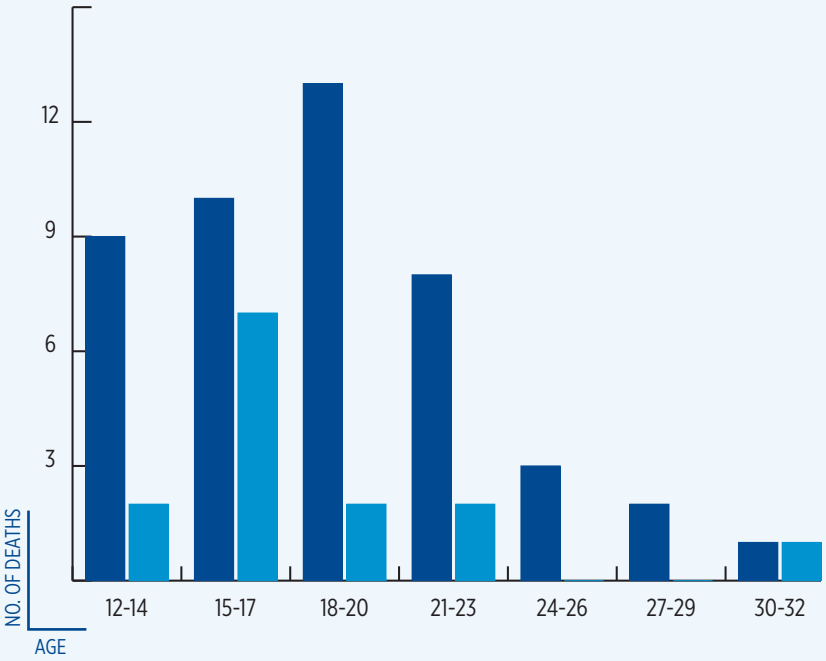
49 of the 63 deceased were **male**

Māori had the highest number of deaths of any ethnic group.
30 of the 63 deceased were of **Māori ethnicity**

Butane-related deaths (2000–12)

Year of death	No. of deaths
2000	4
2001	4
2002	2
2003	8
2004	7
2005	3
2006	6
2007	6
2008	7
2009	4
2010	7
2011	3
2012	2*

*2012 data is incomplete

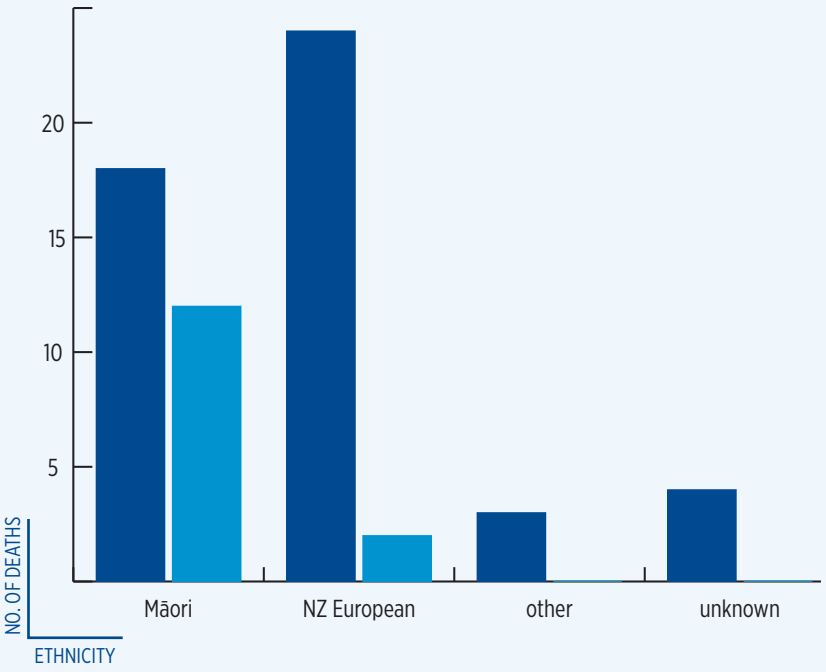


MALE

FEMALE

For ease of reference, the gender/age graph does not include the outlier of the oldest death – a 76 year old.

Annual data is by calendar year. Information on coronial cases was captured differently under the Coroners Act 1988 and Coroners Act 2006 regimes (the latter came into force 1/7/2007). Data may contain omissions. This data includes those deaths resulting from abuse of butane-based substances only. It does not cover deaths caused by abuse of all volatile substances.



The issues

Volatile substance abuse (or VSA) is the intentional use of aerosols, solvents and gases for deliberate intoxication. While there are a large variety of products that are abused, this case study is focused only on deaths that result from the abuse of butane-based substances. VSA, including butane inhalation has been an issue in New Zealand for a number of years, particularly among youth. Although there is a lack of New Zealand data about the prevalence of VSA in New Zealand and whether or not it is an increasing trend, coronial data demonstrates the cost of this dangerous practice.

Death from VSA can be random, meaning users can die from their first, fiftieth or hundredth use. It is impossible to guarantee safe use. Moreover, the risk of sudden death does not vanish immediately on cessation of inhalation, instead it persists for several hours.

Based on calls to the National Poisons Centre (NPC) the most commonly abused products in New Zealand are those containing propane and butane or butane alone. Data obtained from NPC indicates that the peak age of inhalant abuse is about 13–15 years, with the frequency of use declining by 17–19 years. Calls to NPC relating to exposure to inhalants have remained relatively constant since 2003.

The difficulty faced by those seeking to control VSA is that most of the commonly abused substances in New Zealand are everyday household products and therefore simply making these products illegal is not practical. Further, many of the substances that are being abused have been found to be readily available to young people from local retail shops.

VSA is extremely complex in nature due to the substances involved, the availability of the products and the culture surrounding abuse. Due to this complexity, the need for an inter-agency approach has been advocated. Multiple areas of intervention and prevention have been identified including regulation, education, research, support of vulnerable young people, individual and community health and family and socio-economic issues.

Coroners have made a number of recommendations and comments relating to butane-deaths over the past decade. Several coroners have expressed concerns regarding the availability of abused substances from retailers and have commented on the need for regulation and strategies to address this problem. Other recommendations have discussed the need for a national education campaign and increased publicity to improve knowledge about the risks of VSA and to help curb this dangerous practice. As can be seen below, coroners in Australia have made similar recommendations in recent years.

For more information on these issues and prevention strategies please see *Responses to volatile substance abuse in New Zealand: Review of the current evidence* (May 2007), New Zealand Drug Foundation. This paper can be accessed at drugfoundation.org.nz/evidence-review/Volatile-substances

The media and volatile substance abuse

The reporting of all volatile substance abuse is recognised as being of a highly sensitive nature. Reporting has the potential to assist in the reduction of abuse, or conversely increase the incidence by promoting use and the availability of products that may be used. Although there are no inhalant specific media guidelines, the following considerations based on those expressed by the 1985 Senate Select Committee on Volatile Fumes in Canberra, Australia may be a useful guide:

- The products subject to abuse should not be named and the methods used should not be described or depicted.
- Reports of inhalant abuse should be factual and not sensationalised or glamourised.
- The causes of volatile substance abuse are complex and varied. Reporting on deaths should not be superficial.
- Stories should include local contact details for further information or support.

The law

The use of legislation to restrict the sales of volatile substances is an intervention approach adopted in some jurisdictions. Based on the experiences of other jurisdictions, the benefits and success of this approach remains equivocal.

Relevant New Zealand legislation

As stated above it is not illegal to possess the vast majority of substances containing butane and there is little legislation prescribing sale and supply of these products in New Zealand. Nevertheless, the following legislation may be relevant.

Policing Act 2008, section 36
Police may detain an intoxicated person (including those under the influence of inhalants) found in a public place for the purposes of detoxification if they believe detaining them will prevent harm to themselves or others.

Child, Young Persons, and their Families Act 1989, section 48
Where a child is found unaccompanied by a parent or guardian in a situation where their physical or mental health may be at risk, police may deliver the child to custody of their parent or guardian with the consent of the child.

Summary Offences Act 1981, section 14B
Makes it an offence for retailers to sell sprays-cans to under 18 year olds and requires that spray-cans are only accessible by retail staff. Note that the intention of this provision was to reduce graffiti rather than being related to inhalant abuse and it only covers spray cans that contain 'paint, dye, ink, or some other pigment'. Nevertheless the provision does give retailers the right to refuse supply in those specific circumstances.

Other jurisdictions

In other jurisdictions, legislation has been introduced to prevent the sale of commonly abused inhalants to young people.

United Kingdom (UK)

The Cigarette Lighter Refill (Safety) Regulations 1999
These regulations make it an offence to supply any cigarette lighter refill canister containing butane or a substance with butane as a constituent part, to any person under the age of 18 years. The maximum penalty for a breach of the regulations is a six-month prison sentence, a fine of £5,000 or both.

Intoxicating Substances (Supply) Act 1985
Under this act it is illegal for a person to sell or supply a substance to anyone believed to be under the age of 18 or anyone acting on behalf of someone under that age, if he or she has reasonable cause to believe that the substance may be inhaled for the purpose of intoxication. The statute does not make it an offence, however, to purchase and subsequently abuse solvents and other volatile substances. The Act is applicable in England, Wales and Northern Ireland.

Scottish Common Law
The supply or sale of solvents or volatile substances to any person, knowing that these substances will be abused has been held to constitute criminal conduct. Courts have imposed fines of up to £12,000 and prison sentences of two years.

Australia

It is an offence in Queensland, Western Australia, Victoria, South Australia, New South Wales and the Northern Territory to knowingly supply an inhalant to a person for the purpose of intentional inhalation:

- Queensland – section 23 of the Summary Offences Act 2005
- Western Australia – section 206 of the Criminal Code Act 1913
- Victoria – sections 57 and 58 of the Drugs, Poisons and Controlled Substances Act 1981
- South Australia – section 19 of the Controlled Substances Act 1984
- New South Wales – section 10D of the Summary Offences Act 1988 (refers only to storage of spray paint)
- Northern Territory – section 52 of the Volatile Substance Abuse Prevention Act 2005, section 49 regarding management areas.

Voluntary supply reduction strategies

A number of voluntary approaches to sales restrictions on volatile substances have also been undertaken across jurisdictions. Voluntary codes of conduct and retailer education have been used in the Northern Territory, Queensland, Western Australia, Victoria and the UK.

In 2008, the New Zealand Drug Foundation also created a guide for retailers on managing the sale of volatile substances – accessible at volatilesubstances.org.nz

For help or support

DrugHelp drughelp.org.nz
A New Zealand website for people looking for help with their own or someone else's drug use. Based around stories of people personally affected by drug use, this website provides high quality, objective information on drug use.

Poisons Centre poisons.co.nz
You can contact New Zealand's Poison and Hazardous Chemicals Information Centre toll free for advice at 0800 POISON (764 766). Lines are open 24 hours a day, every day. In case of poisoning or inhalation (intentional or not) call immediately.

Alcohol Drug Helpline www.adanz.org.nz
Provides free and confidential support for anyone concerned about their own or someone else's alcohol or drug use. Experienced counsellors are available to provide confidential and non-judgmental help when you need it and can also refer you to a local treatment provider. The helpline (0800 787 797) is open from 10am–10pm, every day.

Youthline youthline.co.nz
There are a number of ways you can access Youthline's helpline services:

- 0800 37 66 33
- free txt 234
- talk@youthline.co.nz
- youth info and forum at urge.co.nz

Lifeline www.lifeline.org.nz
Confidential 24 hour counselling at 0800 543 354. Lifeline also has user-focused services such as Kidsline for kids aged under 15 and Chinese Lifeline for Mandarin and Cantonese speakers.

In an emergency, call 111.

Relevant recommendations from this issue

CASE NUMBER

CSU-2010-WGN-000478/2012 NZCorC 6

DATE OF FINDING 20 March 2011

CIRCUMSTANCES

The deceased, a 16 year old male, was found lying face-down on the riverbank of Black Creek at the end of Fullerton Grove, Wainuiomata. The cause of his death was found to be butane toxicity, self-ingested, but not with the intention of ending his life.

The deceased had a history of drug abuse and it was estimated by a friend that in the period immediately prior to his death, he was consuming approximately a can of butane gas every day.

Although the court was unable to know the exact chain of events that preceded and led to this death, the deceased's faculties were undoubtedly adversely affected by the abuse of butane. After huffing butane, the deceased collapsed or lost his balance, has fallen forwards and remained lying where he fell. A butane gas can was found lying by his body. It is likely that his collapse or fall was associated with a cardiac arrhythmic event or a reflex cardiac arrest. As stated by Dr White, cardiac dysrhythmias leading to cardiac or cardiorespiratory arrest are presumed to cause most deaths.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that, based on the number of deaths due to butane-toxicity that coroners deal with, 'clearly, inhalation of butane resulting in death remains a serious problem'.

The Coroner recommended to the Chief Executive of Ministry of Youth Affairs that the government take a fresh look at supply reduction strategies and the policing of volatile substance abuse in the light of the evidence contained in these findings.

Response from Ministry of Social Development

The Ministry of Social development provided the following response to the Coroner's recommendation directed to the Ministry of Youth Development:

As from 1 July 2011, the Ministry of Youth Development (MYD) was integrated into the newly formed Youth Policy Group under the Deputy Chief Executive responsible for policy in the Ministry of Social Development. The Youth Policy Group is made up of MYF (comprising funding, youth engagement and regional teams focussed on achieving active youth citizenship outcomes, a youth justice policy team, and a youth employment and education policy team.

Given this, and with respect to the Coroner, this recommendation largely falls outside of MYD's responsibility, and would be more usefully addressed to other agencies.

However, the Coroner's recommendation is timely. While this young man's death was not found to be suicide, the issue of young people's access to toxic substances is likely to be raised in the current review of the Suicide Prevention Action Plan that is being led by the Ministry of Health. It is also one of the topics currently on the Child and Youth Mortality Review Committee's agenda.

The Youth Policy Group, Ministry of Social Development, along with other agencies, is involved with both of these discussions.

This young man's death is not simply about solvent abuse. It raises questions about wider issues relating to the way we support our young people; how we help them get through tough times and how we make sure they get on the path to a positive future.

This is a joint responsibility across government and the encouraging thing is that a lot is happening in this space at the moment.

IN BRIEF Other recommendations or comments made by coroners concerning butane-related deaths

CASE NUMBERS

Three inquests held under the Coroners Act 1988:

1. Inquest held 18 November 2004, Christchurch
2. Inquest held 8 September 2004, Christchurch
3. Inquest held 8 September 2004, Christchurch

CASE SUMMARIES

1. The deceased, a 14 year old boy, died after inhaling butane. His death was caused by a combination of cardiac arrhythmia related to butane inhalation. The deceased was involved with the Police Pan Pacific Youth Project and Child Youth and Family Services.
2. The deceased was 18 years old and died from the effects of butane inhalation.
3. The deceased was 16 years old and died after inhaling butane at a party.

COMMENTS AND RECOMMENDATIONS

In all three cases listed above, the Coroner recommended that the findings be referred to the Ministry of Youth Affairs, Ministry of Health and Ministry of Education in relation to their consideration of strategies and programmes designed to deal with solvent abuse among young people. The Coroner commented that these cases highlight the issue of the ready availability through retail outlets of propellants that are susceptible to abuse particularly by young people.

In the first case the Coroner also raised the issue of the size of warning labels on the product used by the deceased and whether the requirements as to the size of the warning be substantially increased. He further recommended that Child, Youth and Family (CYF) and the Police Pan-Pacific Youth Project better formalise lines of communication on issues of relevance affecting people in the care of CYF.

CASE NUMBER

Under Coroners Act 1988 – Joint inquest into six deaths resulting from substance abuse, 6 September 2004, Wellington.

CIRCUMSTANCES

This was a joint inquest into the deaths of six, otherwise unrelated, young people who died from the effects of butane inhalation. The deceased were aged 15, 15, 17, 21, 22, and 27. The deceased were a combination of occasional and regular butane abusers.

COMMENTS AND RECOMMENDATIONS

The Coroner made a number of recommendations addressed to the Minister of Health and the Chair of the Ministerial Committee on Drug Policy, Hon Jim Anderton MP:

- That government institute a national public education campaign to prevent the use of illicit drugs by children and young persons and to educate them and their parents/caregivers of the dangers involved.
- That the primary goal of the government's new National Drug Policy be focused on prevention and that specialist substance abuse services be established throughout the country to cater to the needs of children and young people with drug-related problems. The Coroner further recommended improved access to primary health care relating to drug-related problems and stronger partnerships between drug treatment services and mental health services.
- That training be provided for teachers, school counsellors, health-care workers and associated professionals in all forms of substance abuse and the recognition, treatment and management of drug problems.
- That the National Drug Education Programme in schools be delivered by people with relevant special training and experience; that the primary teaching principle should be prevention of the uptake of harmful drug use; and that the needs of such specialist agencies as WellTrust for adequate funding be addressed with urgency.
- That government develops a national, community-based programme for parents, caregivers and young people designed to improve knowledge at community/family/individual level of all aspects of normal childhood and adolescent development, developmental problems in the areas of physical, mental and sexual health, the dangers to health of all drug abuse and the availability of facilities and services for help.
- In the case of Māori youth (as recommended by the Parliamentary Health Committee Inquiry Report into the Mental Health Effects of Cannabis and endorsed by this court), the further development of a 'holistic, community-based strategy using iwi, education, health and justice linkages to confront [drug] and cannabis use at every level of the community'.

CASE NUMBER

Under Coroners Act 1988, inquest held 16 May 2005, Nelson District Court

CIRCUMSTANCES

The deceased was 19 years old and was known to inhale butane gas. Inhaling butane caused sudden decrease in cardiac output leading to cardiac arrest. The retail store, where the deceased and his friend purchased the butane products has since voluntarily removed butane gas from the shelves. It can now only be purchased on request and on producing identification confirming an age of 16 years.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that steps be taken to regulate the sale of products such as butane gas and other substance abuse materials, such as containing the product behind a closed counter and it only being able to be sold to the public on production of identification of a minimum age of 18 years.

CASE NUMBER

CSU-2008-DUN-000290

CIRCUMSTANCES

The deceased was a 22 year old beneficiary with a history of drug abuse. He had been using butane on a daily basis for several months. He died from butane intoxication.

COMMENTS AND RECOMMENDATIONS

The Coroner referred the fact that the inhalant product used by the deceased was sold without a health warning to the Ministry of Consumer Affairs and Ministry of Health with a request that an obligation to include a health warning, as to the dangers of inhaling, become mandatory.

CASE NUMBER

CSU-2008-ROT-000268

CIRCUMSTANCES

The deceased, a 14 year old boy, died after inhaling butane. His death was due to positional asphyxia associated with butane inhalation.

COMMENTS AND RECOMMENDATIONS

The Coroner referred the findings to the Ministry of Youth Affairs, Ministry of Health and Ministry of Education for consideration in respect of their strategies and programmes designed to deal with solvent abuse amongst young people. He commented that one of the strategies should be to prevent ready access by young people to solvents.

CASE NUMBER

CSU-2008-DUN-000505

CIRCUMSTANCES

The deceased, a 19 year old, died after inhaling butane. He died of respiratory failure due to inhalation of a toxic solvent.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that the Ministry of Health establish or enhance an education programme drawing to public attention the dangers of sniffing or inhaling ('huffing') toxic products that are not designed or intended for inhalation.

CASE NUMBER

CSU-2010-DUN-000057

CIRCUMSTANCES

The deceased, a 21 year old student, died at her home, the cause of her death being acute cardio-respiratory failure due to poison by inhalation of butane.

COMMENTS AND RECOMMENDATIONS

The Coroner referred to comments from Dr Michael Beasley of the New Zealand National Poison Centre that inhalant abuse is a persisting problem in New Zealand and is an extremely dangerous practice. Dr Beasley recommended continued education and other preventive measures are essential to help curb this practice.

The Coroner recommended that a copy of the finding be forwarded to the Medical Officer of Health with a request that further publicity be given to the dangers of inhalant abuse.

CASE NUMBER

CSU-2010-DUN-000431

CIRCUMSTANCES

The deceased, a 17 year old, was inhaling butane while being driven around by a friend when he passed out. The cause of his death were the effects of butane inhalation.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that a copy of the finding be forwarded to Ministry of Health so that further publicity be created in relation to the dangers of the inhalation of substances not designed for the purposes of inhalation.

Australian coroners' recommendations concerning butane-related deaths

Recommendations by coroners in other jurisdictions may be a useful guide as to how issues surrounding VSA have been addressed outside New Zealand.

CASE NUMBER
2236/02 – Coroners Court of Victoria

DATE OF FINDING 28 April 2004

CIRCUMSTANCES

The deceased, aged 13, inhaled butane with a friend that had been purchased from a local discount shop and collapsed shortly after. The cause of his death was described as volatile substances abuse (butane).

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that consideration be given to prohibiting or restricting the sale of volatile substances, in particular cans of lighter fluid, to minors in the same way that the sale of alcohol and tobacco is restricted.

The Coroner also recommended that consideration be given to placing warnings on cans of lighter fluid and other volatile substances, that the inhalation of the fumes can cause death after either occasional or regular use and that it can also cause brain damage, fits and fainting.

These recommendations were endorsed in case number 3608/04 at the Coroners Court of Victoria on 20 June 2005.

CASE NUMBER
5571/08 – Coroners Court of Victoria

DATE OF FINDING 29 April 2011

CIRCUMSTANCES

The deceased, aged 30, died after inhaling butane. He had other untreated drug dependence issues. His cause of death was butane toxicity.

COMMENTS AND RECOMMENDATIONS

The Coroners Prevention Unit was requested to review previous butane-inhalant related deaths to assist in the consideration of prevention strategies. Based on this research, the Coroner made in-depth comments relating to retailer education, product modification, health worker education and relevant legislation. A summary of these comments is below:

Retailer education is a widely used strategy for reducing incidence of inhalant abuse. The Coroner identified the following important aspects of retailer's conduct to reduce abuse and restrict access:

Retailers need to understand their legislative obligation not to sell inhalants to those that might abuse them.

Inhalants should not be displayed openly and should be stored where customers must ask for them.

Strategies are needed to be in place to refuse sale of inhalants to suspected abusers.

In order to effectively educate retailers the Coroner recommended a multi-pronged approach including the following: working with retail traders associations and other relevant bodies on a ongoing basis to identify relevant businesses selling inhalants and distribute education materials to them; that a database of retailers be maintained so that they can reminded of their legal obligations with regard to selling inhalants; that there is engagement with local community groups and workers to work with retailers and identify those where abusers are obtaining inhalants; that an annual audit process is implemented whereby compliance with the retailer code of conduct can be measured.

The Victorian Department of Human Services developed a suite of resources titled Responsible Sale of Solvents – A Retailer's Kit in 2002 which addressed retailers obligations under the Drugs, Poisons and Controlled Substances Act 1981 (Vic), as well as strategies for how to store solvents in shops, how to refuse a sale to a probable substance abuser, and so on. The Coroner made a recommendation that the Department of Health review the contents of this kit to ensure it is up-to-date and that it develops a process to distribute it proactively. The kit can be found here www.health.vic.gov.au/aod/pubs/solvents.htm

The Coroner stated that modifying products so that concentration and inhalation of butane is made more difficult or more unpleasant, is often discussed as a strategy for reducing incidence of inhalant abuse. The Coroner commented that there are currently no modifications to butane lighter refill cans that are realistically able to be implemented and that are supported by current evidence as being effective and deterring abusers. Concerns were also expressed that with so many different products that can

be abused through inhalation, when any particular product is targeted for modification, abusers can simply substitute another product. The Coroner commented that the Department of Health should be encouraged to commission research in the area of product modification and substitution.

The Coroner commented on the use of health worker education and harm reduction strategies, such as providing instruction on the safest manner to inhale butane and what to do in the case of an overdose. While this is advocated by some experts, others warned that care must be taken to only target those people already using inhalants and not current non-users. The Coroner commented that the Department of Health should consider developing a professional education resource for youth workers, health workers, drug and alcohol workers, child protection workers and others who have contact with inhalant abusers, to ensure they are familiar with current best practice in managing inhalant abuser risks.

The Coroner also commented on the legislative regime surrounding restricting access to butane. She referred to the fact that in the UK, the sale of butane lighter refills is restricted to those aged 18 years and over. She further commented that a similar law was recently proposed and debated in Western Australia and that in some Australian states age-based bans for other products (such as spray cans) have been introduced.

The Coroner commented that available evidence and expert opinion is divided on whether using legislative changes to further regulate the sale of butane and propane to those aged under 18 years should be canvassed in Victoria. Research findings, particularly from the UK, suggest that restricting access might not cause a lasting reduction in deaths. Additionally, inhalant users can simply shift to other products that are not regulated or are less well regulated. The Coroner commented that the Department of Health should consider meeting with inhalant abuse experts to explore whether there is an evidence base and rationale for banning butane sales to people aged under 18 years in Victoria, as has been done already with some other products (such as spray cans) interstate.

Recommendations

Adverse effects or reactions to medical or surgical care

CASE NUMBER

CSU-2010-WGN-000607
2012 NZCorC 35

CIRCUMSTANCES

The deceased, a 59 year old woman, died at Lower Hutt Hospital on 26 December 2010 as a result of abdominal sepsis, secondary to the spontaneous perforation of the sigmoid colon. The deceased presented to the emergency department two weeks earlier having had six episodes of diarrhoea and lower abdominal pain over a five hour period. At that time a diagnosis of gastroenteritis was determined, and she was discharged home that same day. Five days later the deceased was returned to the Hutt Hospital emergency department, where she showed similar symptoms to her previous admission. A CT scan showed signs of peritonitis from a hollowed viscous perforation.

The deceased's family raised several concerns over her hospitalisation. One of the family's major concerns during several visits to the hospital was the lack of discussions between the hospital and family and the lack of adequate answers to questions that the family posed.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that the Health and Disability Commissioner also became involved with this matter. The result of that was a mediated settlement effectively reached between the family of the deceased and the hospital staff. Part of that process dealt with this lack of communication between the hospital staff and the family of the deceased. Part of that process was that the Hutt Valley District Health Board were going to produce an information pamphlet that set out patients' rights and who to contact if there was a problem, and that the pamphlet would be available on all wards. The Coroner commented that he hoped that the Hutt Valley District Health Board has adopted the concept of providing this pamphlet.

The Coroner also commented that he has stated in several recent findings that he has concerns about what appears to be a lack of dialogue between hospital staff and families, more particularly with older patients under care, but also for patients such as the deceased. The Coroner commented that the Chief Medical Officer at Hutt Hospital, had stated in one of the Coroner's other inquiries into the death of an 85 year old (CSU-2010-WGN-000440) that the health system was not as sound and open as it should be in dealing with patients' future prospects. He said that families need to be told in a 'truthful manner' how their loved ones are and that they may die, so that they are prepared for it.

The Coroner stated that he still has a concern that had further testing been carried out on the deceased on her initial admission it may have identified the peritonitis (if indeed it was there at that time). Early intervention may have saved the deceased's life.

CASE NUMBER

CSU-2009-DUN-000421
2012 NZCorC 20

CIRCUMSTANCES

The deceased died at Dunedin Hospital of acute heart failure due to massive hemopericardium complicating ruptured fresh myocardial infarcts and severe coronary artery atherosclerosis. The deceased was admitted to Dunedin Hospital following chest pain and hospital investigations suggested he had suffered a 'heart attack' at some stage during the previous several days. At the hospital he went into cardiac arrest and was unable to be resuscitated. In the days prior to his hospital admission the deceased had visited Balclutha Doctors twice where he was not diagnosed with or treated for a cardiac event.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that the deceased presented with unusual symptoms that have proven to be symptoms relating to the rupture of the myocardial infarct which caused this death. This cause of death is uncommon. The deceased's GP examined and treated him to an appropriate professional standard although in retrospect the GP accepted that he could have done more.

The Coroner has further commented that an independent expert witness at inquest, has indicated that the case is so unusual that it would be appropriate to make reference to it, in the future, for training purposes. The Coroner recommended that the expert witness continue with his indication that he would present an academic paper based on the circumstances of this tragic death drawing to the attention of his colleagues his findings.

CASE NUMBER

CSU-2008-WGN-000113
2012 NZCorC 9

CIRCUMSTANCES

The deceased died at the Lower Hutt Hospital as a result of accidental respiratory failure. The deceased had been diagnosed with Guillain Barre syndrome and was transferred to the ICU as a consequence of increasing weakness and respiratory compromise. There were issues surrounding her medical care, particularly with respect to the surgical tracheostomy procedure, and a procedural issue surrounding the delay that was incurred to medical personnel getting to the emergency.

The deceased went into cardiac arrest at 1am on 26 July and an intensive care specialist, was urgently contacted. On his way back to the hospital the specialist was stopped by a police officer for speeding. The deceased never recovered, and at 1.50pm on 28 July, at the family's request, life support was ceased and shortly after she died.

COMMENTS AND RECOMMENDATIONS

The Coroner stated that there are two main areas that require further comment regarding this finding. The first is the hospital care that the deceased received, and the second important issue is the stopping by the police of the specialist. Regarding the first of these issues, the Coroner said he was satisfied that, given both the Health and Disability Commissioner complaint and the hearing before this court, that the Hutt Valley District Health Board has reviewed its actions and have taken numerous steps to improve so that, in any future situation that may arise with similar circumstances to the deceased's, matters will be better handled. The Coroner commented that it was tragic that these steps were not in place at the critical time, but hopefully this will not occur again.

The second issue involves the intervention of the police in stopping and thus delaying the specialist's return under emergency to the hospital. The Coroner was satisfied that the delay of between two and five minutes would not have altered the outcome on this occasion, but was concerned that such a situation may likely occur again. The Coroner commented that he would have liked to have seen a more pragmatic approach taken in the circumstances. Given the hour of the morning, the light traffic and road conditions prevailing, the Coroner stated that he believed that in this world there is still room for pragmatism, but at the end of the day it looks like it will take regulation to correct this situation.

The Coroner recommended to the Minister of Transport that it is time to review the regulations surrounding emergency procedures for medical personnel driving to a person requiring urgent medical attention. Such review should deal with the aspect of the use of the green light and additional warning devices being available to such people, or perhaps the role of intervention of a police escort. The Coroner stated: 'I am sure the latter could be undertaken with a low-risk factor, given that it may mean the difference between life and death of a member of the public'.

Response from the Hon Simon Bridges, Minister for Transport

The Minister of Transport provided the following response to the Coroner's recommendations:

I wish to respond to this recommendation you have directed to the government. My officials have reviewed the legislation surrounding the issue and consulted with the New Zealand Transport Agency (NZTA) and the NZ Police. After careful consideration of their advice, I have decided not to instigate a comprehensive review into the matter at this stage.

I would like to first address the issue of a green light (beacon) by medical personnel. Under current legislation doctors, nurses or midwives travelling to the scene of where a person requires urgent medical attention already have the option of using a roof-mounted green flashing beacon. The rule that provides this is the Land Transport (Road User) Rule 2004.

This provision was introduced some decades ago in response to a system which no longer applies. At this time, Christchurch operated a rapid response system that used general practitioners. This system was not entirely successful from a traffic management perspective.

It is important to note that vehicles displaying a green beacon must still comply with all the road rules, including the applicable speed limit, traffic signals and priority rules at intersections. In effect the green beacon is a warning mechanism that indicates to other road users they must pull over and allow the vehicle displaying the green beacon to pass if they are able to do so.

In the case in question, had the specialist been displaying a green beacon, he would still have needed to comply with the road rules and could not have exceeded the speed limit. If he did exceed the speed limit, he may still have been pulled over while using the green beacon.

Currently there is no plan to extend the scope of power conferred by the green beacon to allow drivers special road access akin to the kind granted by the red beacon, for example being able to exceed the speed limit and not observe give way rules. Red beacons can only be fitted to an emergency vehicle that is being operated in an emergency.

The Rule currently defines an emergency as being a vehicle used for attendance at emergencies and operated:

- by an enforcement officer
- by an ambulance services
- as a fire service vehicle
- as a civil defence emergency vehicle
- as a defence force emergency vehicle.

An ambulance service is defined as a 'service that complies with the requirements in NZS 8156:2992 Ambulance Sector Standard'. It is highly unlikely doctors and nurses would have the necessary emergency driver training required to operate an emergency vehicle. Therefore it would be an issue of safety to all road users if the green light granted special road access. Due to these reasons, it would also be inappropriate to grant medical personnel the use of red beacons.

Additional warning devices

Any potential 'additional warning device' such as a siren that could be provided to medical practitioners as recommended in your report would also not grant special road access. The purpose served by the addition of a siren would be akin to that served by the green beacon that is, to warn other road users and require them to pull over to let the vehicle pass. Again, due to the issue of safety of other road users, such a device would not allow the driver to exceed the speed limit or to not comply with the road rules.

In the event that a review of the rules is undertaken, there is a chance the review may find the green beacon to be obsolete. Advanced paramedics now attend emergency call-outs with emergency service vehicles that are fitted with a siren and red beacons. The original system of using general practitioners to respond to emergencies is no longer in force in the way it was initially intended. Furthermore transport officials are of the view that green beacon devices are likely to be of limited practical value in terms of reducing the travel times of medical personnel attending medical emergencies. The NZTA advises me that it is not aware of any medical personnel currently using green beacons. As such the level of recognition of the green beacon among road users is low.

Police escort

I would like to address the possibility of the police providing escort to medical practitioners.

There is nothing in transport law that prevents police from assisting medical professionals getting to the scene of an emergency. This would normally involve the police assisting the medical professional by transporting him or her to the scene of the emergency in a patrol car. Transport officials have passed on your recommendation on to police for their information.

This may also be a matter for those in the medical profession to raise directly with police, so a workable solution can be found that would stop this sort of incident occurring in future.

Summary

I understand and appreciate the concerns raised in your report; however I am of the view that a full review is unlikely to generate any new and useful approaches. This is mainly due to the limited use of the green beacons by medical personnel that is already available under the Land Transport (Road User) Rule 2004. It should also be noted that the more common use of emergency vehicles has almost removed the need for the green beacon.

CASE NUMBER

CSU-2011-DUN-000015
2012 NZCorC 46

CIRCUMSTANCES

The deceased died at Dunedin Hospital on 10 January 2011, the cause of his death being cardiac arrhythmia complicating dilated cardiomyopathy and/or adverse drug reaction.

In treating the deceased for his mental condition, it was found by the clinicians that only one drug (Quetiapine) was tolerated and had beneficial effect. Prescribing and administering this drug may have had unintended, but recognised, side-effects of causing or contributing to cardiomyopathy. It was emphasised that cardiomyopathy can develop naturally or as an outcome of a viral illness and there can be no certainty as to cause or contribution.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that although he considered that the standard of care given to the deceased was to the appropriate professional standard, it is clear that his death has identified issues that can be learnt from. The medical profession will again be advised of the possibilities that Quetiapine may have contributed to the cardiomyopathy and that Amisulpride and Ziprasidone may also have resulted in unintended consequences.

The Coroner recommended that a copy of the finding be forwarded to the Centre for Adverse Reactions Monitoring in order that the outcomes of the several enquiries be recorded.

CASE NUMBER

CSU-2010-DUN-000439
2012 NZCorC 60

CIRCUMSTANCES

The deceased died at Dunedin Hospital. The cause of his death was identified at autopsy as multi-organ failure, secondary to disseminated carcinoma with prostatic adenocarcinoma primary.

Family representatives of the deceased expressed a number of concerns in relation to the care and treatment given and exchanges of communication between the family representatives and the Southern District Health Board were facilitated. The balance of family concerns related to what they perceived to be failures by the Southern District Health Board to communicate on matters of care to an appropriate degree.

COMMENTS AND RECOMMENDATIONS

The Coroner stated: 'It is the function of a coroner to investigate the 'circumstances of the death' (section 57(2) of the Coroners Act 2006). This includes matters directly causative of the death. It is not the function of a coroner to enquire into the underlying responsibility for every circumstance that may have contributed to the death.'

Having said this, the Coroner observed that the Southern District Health Board have accepted the concerns expressed to them, have apologised appropriately and have indicated service enhancements to address the issue. Each of the specific concerns has been addressed.

From the time of his admission to the hospital, it is clear that the deceased was extremely ill and his condition was terminal. The Coroner was satisfied that everything that should have been done for the deceased was done for him. Perhaps there could have been some enhancements to his care, and there should have been more communication with family representatives about his state of health and care, but the deceased died of natural causes.

The Coroner commented that he would arrange for a copy of this finding to be forwarded to the Southern District Health Board for training purposes and for clinicians to take into account the need for more appropriate consultation with family representatives on care and treatment issues.

Aged care

CASE NUMBER
CSU-2011-DUN-000107
2012 NZCorC 58

CIRCUMSTANCES

The deceased died at Southland Hospital, the cause of her death being pulmonary congestion/congestive heart failure due to poor urinary output and fluid overload. Her death was caused by, or hastened by, a fall at Calvary Hospital in which she received a severe gash to her leg. The cause of the fall appears to have been a spontaneous dislocation/fracture of the left neck of femur.

The deceased's family expressed concerns about what they considered to be shortcomings in the care offered and given by Cavalry Hospital.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that a copy of this finding be forwarded to Calvary Hospital and to the Southern District Health Board for the information of clinicians and for training and education purposes.

The Coroner further recommended that a copy of the finding and relevant extracts from the file be forwarded to the office of the Health and Disability Commissioner in order that further investigations into the circumstances of the death that are outside the jurisdiction of the coroner can be made.

Child deaths

CASE NUMBER
CSU-2009-HAM-000703
2012 NZCorC 5

CIRCUMSTANCES

The deceased, a 22 month old girl, died at Waikato Hospital of hypoxic/ischaemic encephalopathy and acute bilateral bronchopneumonia following head injuries. The deceased suffered a head injury, which caused a subdural haemorrhage. Despite several days of vomiting, loss of appetite and energy, no medical attention was obtained for the deceased. Subsequently, the deceased suffered a seizure and was admitted to hospital in a critical condition. Despite maximal medical treatment, staff were unable to prevent her death.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that this death highlights the absolute necessity for parents and caregivers of young children to seek medical assistance for children suffering an illness that does not quickly resolve. The Coroner said that he could accept that parents may wait for one or two days for symptoms such as vomiting, loss of appetite and energy, to resolve spontaneously, but it is unacceptable that no medical attention would be obtained by day three or day four of such symptomology in a 22 month old child.

There were several opportunities missed by the deceased's extended family members who had direct contact with her during the last few days of her life to insist on medical attention for her when she was clearly unwell. Any of these family members could have insisted that she be taken to the doctor, or they could have notified Child, Youth and Family of their concerns. If any good is to come from this death, it must be that extended family members will realise their responsibility to support and assist vulnerable children within their own whānau.

The Coroner recommended to the Chief Executive of the Ministry of Social Development that government agencies increase the sharing of information between each other to facilitate the early identification of vulnerable children for the purposes of assessing and enhancing the safety of those children without having to rely on notifications of safety concerns.

The Coroner also recommended to the Families Commission that greater efforts be made to educate family members/whānau on the need for such family members to monitor and support vulnerable children within the extended family/whānau.

Response from Families Commission

The Families Commission provided the following response to the Coroner's recommendations:

In March of this year, we wrote to advise you of our intention to discuss family and whānau education about child abuse and neglect with relevant agencies.

Section 14 of the Families Commission Act 2003 allows the Commission to refer matters raised with us to the official body with oversight of the area. Accordingly, we have referred this recommendation and relevant documentation to Brendan Boyle, Chief Executive at the Ministry for Social Development (MSD). MSD has oversight of matters relating to the protection of children, and preventative education of parents, family and whānau.

Case Number CSU-2010-AUK-001175 2012 NZCorC 39

CIRCUMSTANCES

The deceased, an 18 month old boy, died at Middlemore Hospital from blunt trauma to the head which was sustained when he was accidently struck and run over by a motor vehicle in the driveway of a private residence.

The deceased's mother had taken the deceased to visit her partner at his home. The mother, her partner and a friend were sitting on the front steps while the deceased and another child played on the front lawn. The mother watched the deceased move to the driveway of the house next door, which adjoined the lawn where he was playing. Shortly afterwards the occupants of the house next door, intending to travel to a local shopping centre, reversed down their driveway in a four-wheel drive Toyota Landcruiser. The vehicle struck the deceased and ran over him. The deceased suffered serious head injuries and was transported urgently to Middlemore Hospital where he was pronounced dead.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that New Zealand has one of the highest recorded incidences of child driveway death and injury in the world.[1] It has been estimated that on average four children die in non-traffic pedestrian events[2] in New Zealand each year, and that for every child killed by a vehicle moving at low speed approximately 12 are hospitalised.[3] Research has identified a number of common factors. In the majority of cases the driver is most often a parent or relative to the child, and the children who are injured or die are usually aged between one to two years.[4]

Major factors contributing to these child injuries or deaths on driveways are:

- property design – where there is inadequate separation between driveways and places that children access
- vehicle design, including poor rearward visibility
- human factors including lack of child supervision, and the driver not seeing the child or being alert to the possibility of a child being close to the vehicle.

[1] *Understanding and acting to prevent driveway injuries to children*, Safekids position paper (2007), p3.

[2] Deaths occurring on driveways, footpaths, carparks and private properties.

[3] *Low Speed Run Over Mortality*, Child and Youth Mortality Review Committee (2011), p2

[4] *Understanding and acting to prevent driveway injuries to children*, Safekids position paper (2007), p3.

Safekids New Zealand and the Child and Youth Mortality Review Committee (CYMRC) are two key organisations that are focused on preventing and reducing child death and injury from driveway incidents. These organisations have highlighted through their publications and campaigns a number of initiatives and strategies, with emphasis on reiterating the key messages to 'separate', 'supervise', and 'check'. During 2011 and 2012 Safekids running a national Driveway Run Over prevention campaign.

Separation in the context of the key messages refers to the need to separate play areas and children from areas where vehicles will drive. Supervision and checking includes active behaviours to know where children are before a vehicle is moved, checking for children before driving off, and always supervising children around vehicles.

In this respect the Coroner noted that a major factor in the deceased's death was his access to the neighbour's driveway – there being no barrier between the lawn and the drive. Also those supervising him appear not to have appreciated the risk associated with him playing on the drive.

In a recent article *Paediatric driveway run-over injuries: Time to redesign?*[5] the authors argued that there is a need for emphasis on physical measures and modifications to improve the safety of the driveway environment. That is, there must be a focus on separation between cars and children – through fencing, separating play areas from places where there are moving vehicles and, in relation to future housing developments, ensuring safe driveway design.

The houses involved in this event have been confirmed as Housing New Zealand homes. The CYMRC identified Housing New Zealand as a key prevention partner in relation to the separation and driveway design issues because Auckland-based research found Housing New Zealand to be the landlord in a disproportionately high percentage of properties where these injuries occurred.[6] The CYMRC therefore recommended that Housing New Zealand modify its current stock over time so that driveways are separated and children have safe play areas, and that it should also ensure that all new developments are constructed so that driveways are separated and children have safe play areas. The Coroner endorsed those recommendations and forwarded a copy of the finding to Housing New Zealand.

The Coroner further recommended to Housing New Zealand – noting the particular circumstances of this case – that it give consideration to erecting a boundary fence between the front lawn and driveway of the neighbouring properties involved in this event, and on any other Housing New Zealand properties similarly configured.

The Coroner commented that it seems trite to emphasise the need for adults to be vigilant in relation to supervising and checking their children in and around driveways and motor vehicles. Nevertheless tragedies such as this death serve as a reminder that supervising adults need to be mindful of the inherent risks associated with children playing in areas designed for vehicles – noting that children are extremely unpredictable, can be easily distracted and move quickly. It is incumbent also on drivers to be aware and remind themselves of the visibility limitations of their vehicles.

[5] *Paediatric Driveway Run-Over Injuries: Time to Redesign?*, NZMJ (3 July 2009), Volume 122, No 1298; Hsaio, Newbury, Bartlett, Dansey, Morreau and Hamill.

[6] *Low Speed Run Over Mortality*, Child and Youth Mortality Review Committee (2011), p15

Deaths in custody

CASE NUMBER
CSU-2008-AUK-001671
2012 NZCorC 34

CIRCUMSTANCES

The deceased, a 41 year old woman, died at Auckland Regional Women's Corrections Facility (ARWCF) on 21 November 2008. The cause of her death was hypertrophic cardiomyopathy.

On 20 November, the deceased approached a registered nurse during a medication round complaining of a headache and sleeping problems. The nurse gave the deceased Panadol and made an appointment for her to see the prison doctor the following day. The next morning the deceased

told the same nurse that she still had a headache. The nurse advised her that she was scheduled to see the doctor that day and issued her with two more Panadol. The deceased did not see the doctor on 21 November as there were more prisoners scheduled to see the doctor that day than the doctor was able to see. The Coroner was satisfied on the evidence that there was nothing in her presentation to the nurse or in her health history that should have alerted nursing or medical staff that the deceased needed to see the doctor as a matter of priority on 21 November.

At approximately 9.33pm, the deceased activated her cell alarm. The alarm was answered three to four minutes later by the Acting Senior Corrections Officer who was working in ARWCF's Master Control. Staff in Master Control are responsible for answering cell alarms and controlling gates and doors. She asked the deceased twice through the alarm intercom system what her emergency was. She received no response from the deceased and cancelled the alarm without taking any further action – she did not record that the call had been received and did not notify the Principal Corrections Officer of the cell alarm.

The deceased was found unresponsive in her cell at approximately 10.55pm during a routine Prisoner Cell and Location Check. It took 13 minutes before a key arrived to unlock the deceased's cell door in order to render her emergency assistance. Once the cell was unlocked resuscitation was commenced by corrections officers and continued until ambulance paramedics arrived. Resuscitation efforts were unsuccessful and she was pronounced dead at the scene.

At the time of this death, prisoner checks were required to be carried out at two hourly intervals from the time of general lock-up until the prisoners are unlocked the following morning. Officers carrying out prisoner checks are required to signal regularly their location via an electronic pegging system. Each staff member has their own 'pegging square' or key and when undertaking checks has to swipe this over an electronic point which verifies that the staff member was in that part of the prison at that time. There were significant procedural breaches in respect of the management of the deceased on the night she died in regard to prisoner cell checks. It was established that the physical cell and location checks required had not been completed, although these checks had been recorded as having being done.

CCTV footage revealed that the corrections officer on duty in the remand unit between 5pm and 10pm on the night of the deceased's death had been circumventing the pegging process by attaching her peg to a broom and standing on a chair. This allowed her to register her pegs on parts of the unit she had not actually checked.

COMMENTS AND RECOMMENDATIONS

The Coroner made the following comments:

The deceased was let down by the environment at ARWCF on the night of her death. There were poor prison systems as well as individual staff who were found wanting on the night – one wilfully and another because of lack of understanding and poor judgment. It is not possible to know whether, even if the responses had been exemplary, the outcome might have been different for the deceased. She had an undiagnosed heart condition that can cause sudden collapse and death, even where the person has not had previous symptoms.

Significant changes have been made at ARWCF and in the Prison Service nationally as a result of issues identified after this death. In addition to the national changes that followed operational review, each of the Inspector of Prisons' recommendations in relation to staff induction and training, recording of such induction and training, updating of manuals and desk files, conducting prisoner and location checks as specified in national policy, and daily checks that the pegging system is being used appropriately, were accepted by Prison Service Regional Management and implemented.

The changes made should assist to ensure that the failures that occurred on the night of this death do not occur again. I commend the Prison Service on the efforts made to identify the root causes of the failings, and to rectify them.

There is one key outstanding issue arising from the circumstances of this death that may, if addressed, help to

prevent deaths in similar circumstances in future. That is the length of time it can take to unlock a cell door during night watch hours in New Zealand prisons.

The Inspector of Corrections' recommendation that the Prison Service, National Office should consider reviewing the procedure for cell key security during hours of night watch to ensure response times are within a satisfactory range was rejected by the Prison Service, National Office (via the General Manager). I find this rejection unacceptable.

The effect of the response timeframes that the Prison Service has to date considered adequate is that if a prisoner has an emergency during the hours of night watch there is little prospect of emergency assistance being provided within a timeframe that gives the prisoner any chance of being successfully assisted. Undoubtedly, prisoner and staff safety is a paramount consideration and the prison environment poses particular challenges to responding to emergencies during night watch. However, evidence was given at inquest that there are possible solutions and methods utilised in prisons overseas to try and address the challenges.

In response to an opportunity to respond to these comments, pursuant to section 58(3)(a) of the Coroners Act 2006, the General Manager of Prison Services advised that a review of response times to opening cell doors across all prisons and sites is now underway. The review, and consideration of the viability of alternatives to address any shortcomings identified in response times at sites, is expected to be completed by 30 April 2012. The General Manager stated that what the alternatives might be and how they might be implemented will depend on the review.

Given the issues and risks highlighted in the inquiry into this, the steps currently being undertaken by the Prison Service are appropriate.

The Coroner recommended to the Chief Executive, Department of Corrections:

1. That the Prison Service sets as its benchmark for response times to opening cell doors in all New Zealand prisons a timeframe that meets international best practice standards.
2. That any shortcomings in response times to opening cell doors identified in the current Prison Service review are rectified as a matter of priority.
3. That consideration is given to how response times to prisoner cell alarm activations can be improved, including:
   a. consideration of whether the cell alarm step up timeframe of 90 seconds in place at ARWCF and other prisons in New Zealand is too long – particularly at times when there is only one staff member on the unit
   b. consideration of whether the cell alarm system should be modified so that when staff are away from the staff base on the unit they are alerted to cell alarm calls.
4. That there is a clear process in place at ARWCF and other prison facilities that use the same cell alarm system, to ensure that if a cell alarm is deactivated in Master Control before the cell from which the alarm was activated has been recorded, staff in Master Control know what action is required.
5. That modifications are made to the cell alarm system in use at ARWCF and at other prison facilities, to ensure that cell and unit information is retained after the cell alarm has been cancelled, so that this information can be recalled by staff in Master Control.

Response from Department of Corrections

The Department of Corrections provided the following response to the Coroner's recommendations:

The Department has considered Coroner Greig's recommendations and as a result implemented a number of changes, in addition to those undertaken prior to the inquest, to ensure that the failures that occurred on the night of [the deceased's] death do not occur again.

In response to recommendation 1 above:

The Department sought advice from international jurisdictions about their response times in similar circumstances. However, our enquiries found no jurisdictions had an operational standard for these circumstances, and there was no 'international best practice standard' against which we could benchmark our performance.

In the absence of an international benchmark standard, you are aware that we commenced a series of exercises across all prisons to review our response times. Two factors were considered during the exercises – the time taken to assemble the number of staff required to safely unlock the cell, and the time taken to provide the means of unlocking the cell.

During the exercises, cells occupied by prisoners of differing security classification were selected for testing at all prisons. The exercises were conducted 'live' and without special preparation and repeated a number of times.

In response to recommendation 2 above:

The results of the exercises did not indicate a systemic issue with the length of time taken to access prisoners at night in an emergency in every prison. Staff responded professionally to open the cell as safely and quickly as possible.

The average time taken across 18 prisons for the safe unlock of a prisoner at night was five and a half minutes. The individual time results for each prison was varied, due to significant differences between each prison's layout, staffing, classification of prisoner, design, configuration and security measures.

At all sites tested, the time taken to obtain the means to open the cell (ie retrieving the cell key) was equal to, or greater than, the time taken for the required number of staff to assemble at the cell. Where there was a difference between the times, obtaining the means to open the cell was the consistently limiting factor.

These exercises have given us the opportunity to focus on further reducing the time it takes to safely unlock a cell at night. Prison managers have been tasked with considering how they will do this at their sites, as well as implementing enhancements that will reduce the elapsed time between an emergency and gaining access to a cell.

At Rimutaka Prison, changes have been made to the location of cell keys for all units that use manual locking systems. The changes mean that the time taken to source the means of entering the cell is reduced, and the cell can be unlocked faster in an emergency.

In response to recommendations 3–5 above:

The Department believes that the current cell alarm step-up timeframe of 90 seconds is not unreasonable as it provides staff time to complete their current task (ie answering another cell alarm), before it is automatically 'stepped up' to Master Control if not answered.

However the Prison Services Operation Manual (PSOM), which prescribes the rules and procedures to be followed by staff in the course of their work, has been updated to prioritise our response to cell alarms.

PSOM now directs that any time a residential unit is left unattended, the cell alarm system must be switched to Master Control. Master Control must treat cell alarms as a priority and responding staff must resolve the activation, for example by radioing the appropriate officer to check a particular cell, before clearing the alarm. Master Control staff will only clear the cell alarm call activation once receiving the all clear from the responding officers.

The Department has investigated the possibility of the cell alarm being forwarded to a portable phone carried by custodial staff when they are away from the staff base. Unfortunately there is no way to integrate this solution with our current system. We will continue to monitor emerging developments in technology to see if this option is possible in the future.

While cell and unit information for each cell alarm is recorded in the current system, this information is not easily accessible from Master Control. To enable this to occur an additional work station would be required in Master Control to enable direct access to the Cell Alarm system. There are restrictions within the Master Control environment, due to the complexity of the work undertaken there and the limited space available, therefore placing an additional work station into the areas is not being considered by the Department. Instead, the changes made to PSOM outlined above, including the prioritisation of cell alarms and the actions to be taken in response, address this issue.

CASE NUMBER

CSU-2011-HAM-000172
2012 NZCorC 1

CIRCUMSTANCES

The deceased died at Spring Hill Prison, Harness Road, Te Kauwhata. His death was found to be self-inflicted.

COMMENTS AND RECOMMENDATIONS

The Coroner made recommendations addressed to the Department of Corrections in relation to increasing the amount of prisoner cell and location checks by prison staff during night time hours, to establish the prisoners' location and wellbeing.

The Coroner emphasised that this is not intended to be a prescriptive recommendation and commented:

'I have confidence that the Department is sufficiently concerned to take whatever action is appropriate to reduce the number of suicides in prisons, so that they will give serious consideration to the intent behind this recommendation. For that reason I have not made it so prescriptive but it is addressed in general terms.'

Response from Department of Corrections

The Department of Corrections provided the following response to the Coroner's recommendations:

Musters and prisoner cell and location checks (PCLC) are a system of counting and accounting for the whereabouts of prisoners. They are carried out to ensure the security of a prison and the protection of the public. These checks are not designed for the purposes of determining the well-being of prisoners. These checks involve checking the occupied locked cells to ensure the door and windows are secure, that there is nothing untoward or out of place in the cell, that the correct number of prisoners are in the cell and that the prisoner/s appear to be okay and that in general, nothing is obviously wrong.

A more comprehensive well-being check could not be made during the night, as it would require disturbing prisoners' sleep and lighting the cell. To do this regularly during the night would be inhumane.

Prison Services has reviewed the frequency and timing of night time observations and has concluded that the reduction in the number of routine scheduled night time cell checks does not equate to a reduction in the care of prisoners. Staff are still required to observe prisoners, and continue to be able to respond to emergencies or cell alarms. Prisoners who are deemed at-risk continue to be checked in accordance with their management plan.

We have examined the rate of unnatural deaths in custody for the six months prior to and the six months since the implementation of the PCLC process on 1 February 2011. There was no change in the rate of unnatural deaths over that time. Nine of the 12 unnatural deaths in custody in 2010/11 were apparent suicides.

Seven of the 12 prisoners had a history of mental health issues. Eight of the 12 prisoners were in custody for violent or sexually related charges. Seven of the 12 prisoners were remand prisoners. There does not appear to be any correlation in prison site, or the age, ethnicity, or sentence length of the prisoners.

There is no evidence to suggest that more frequent routine and scheduled checking of prisoners will deter or prevent a person from taking their own life where they are determined to do so. The counting or checking of prisoners and recording of those checks does not reliably improve our ability to identify at-risk prisoners. If we are concerned about a prisoner's health and well-being, we actively manage this and endeavour to identify their needs before they become urgent.

We do consider that a more targeted approach to care for prisoners identified as potentially vulnerable is appropriate, and we have recently introduced 'prisoner welfare monitoring checks'. The intention of the welfare checks is for staff to undertake additional, non-intrusive checks of prisoners during lock-up hours if this observation would contribute to the safe and humane containment of a prisoner who has not been assessed as at-risk. For example, welfare checks would be undertaken in situations where a prisoner is more agitated or withdrawn than usual, has received bad news, or has been involved in an incident with staff or other prisoners, but has not been assessed as at-risk of self harm.

Welfare checks are recorded, and information shared between shifts. A handover sheet is being developed to support this new practice.

Assessing the risk of self-harm is not an exact science. Our staff work hard to identify prisoners who are at risk of self harm and to manage these prisoners appropriately, safely and humanely.

We do recognise that most deaths in custody occur during lock-down hours. However our focus is, and should remain on, the early identification of vulnerable prisoners through active management, and to provide appropriate interventions to prevent incidents of self-harm.

The changes to the PCLC process and introduction of welfare checks are consistent with our move towards increased individual responsibility and decision-making by custodial staff, within a structured framework. For some time now we have been moving away from strictly prescribed procedures towards recognising the professionalism and judgment of our staff. They will always be supported by appropriate frameworks, practice guides and, most importantly, ongoing training.

CASE NUMBER

CSU-2009-AUK-001614
2012 NZCorC 61

CIRCUMSTANCES

The deceased died at Mount Eden Men's Prison in Auckland, between 29 and 30 November 2009 as a result of suicide. The deceased was facing multiple charges that had attracted high level of public and media interest. On the day he was found dead the deceased had a call-over hearing scheduled at Auckland District Court.

In May 2009 there were two prisons for men in Auckland located on the same site in Mt Eden. These were Auckland Central Remand Prison (ACRP) and Mt Eden Men's Prison (MEMP). Since June 2008, the functions across ACRP and MEMP have gradually merged. An announcement was made at that time that MEMP would eventually be closed and ACRP would be amalgamated into a new prison to be built on site (Mt Eden Men's Correctional Facility). Where prisoners were placed was decided after they had been received and processed. Placement depended on a variety of criteria, including the location of available beds.

At the time the deceased was received at ACRP on 29 May his risk of self harm was assessed, using the New Arrival Risk Assessment (NARA) form in use at the time. The national prison policy requirement is for a prisoner to be assessed in relation to their risk of self-harm whenever there is a change in the prisoner's circumstances or location.[7] If two of the 'yes or no' questions on the form are answered by the prisoner in the affirmative then the prisoner is automatically considered at risk and further assessment is required. The prisoner's risk status is then further considered and 'signed off' on.[8]

The deceased had 12 NARA assessments over the six month period he was in prison. The deceased moved locations in the prison several times. He had NARA assessments done on several occasions when he was placed in voluntary protective segregation (VPS) due to his fears for his own safety from other prisoners, from whom he had received threats and abuse in relation to the fact that he was HIV positive. He received a NARA on 7 June when media released details of the deceased's offending and the deceased expressed concern for his safety around other prisoners. The deceased also had NARA assessments done on his return from court appearances. In all cases he answered at least two positive questions and 'failed' the NARA but was deemed not to be at risk upon further assessment. He did not report any suicidal or self-harm thoughts on any occasion. The deceased was started on antidepressant medication following an Initial Prisoner Health Assessment undertaken for all new prisoners.

The deceased spent time in medical oversight segregation due to him developing boils. These were found to be infected on 2 July and the deceased was transferred to

[7] *Policy and Procedure Manual B.14.01*, Prisoners at Risk to Themselves, New Arrival Assessment (NARA) Policy and Procedure Manual Standards states that 'Every effort is to be made to identify prisoners at-risk, and manage them to minimise their risk of self-harm.'

[8] Note that the prison service has since reviewed the process of NARA assessments for all prisons. A new risk assessment model has since started at all prisons.

the Health Unit at ACRP. He remained there, where he was the only prisoner, until 16 October when he was deemed medically fit to return to normal prison muster. No NARA assessment was done as a result of this move.

On 4 November the deceased was transferred to MEMP as a VPS prisoner. The move was due to an attempt by the prison to keep segregated prisoners from across MEMP and ACRP in one unit. Evidence heard at inquest was that MEMP was a very different environment to ACRP, with MEMP being a very noisy, much older prison. The deceased spoke to his lawyer on 5 November and said he was upset about being moved and that he had none of his belongings, had been unable to get towels and had not received his medication for the day. There is no record of the deceased receiving his antidepressant medication on 5, 11, 17, 23 and 26 November. The deceased also expressed concern about the effect the move would have on his medical treatment given the familiarity of the medical staff at ACRP with his condition. A request made by his lawyer for the deceased to be moved was denied.

The deceased spoke to his lawyer on 11 November and stated that at MEMP he couldn't get a toothbrush or toilet paper. He had previously spoken to his lawyer about not getting access to ear plugs or solution for his contact lenses, although these were not considered to be contraband items. On 20 November the deceased received news that his appeal to the High Court against the refusal to grant him electronic bail had been dismissed.

The deceased was last seen alive at approximately 4.23pm at 'general lock-up' on Sunday 29 November. The deceased's cell in MEMP had a window with horizontal and vertical bars across it. The window, which opened out, could be opened from inside the cell by a prisoner in the cell. The deceased used one of the bars across the window as a hanging point. The window was of standard configuration for all cells at MEMP. Then Prison Manager of ACRP and MEMP and Assistant Regional Manager of Prison Services stated that the window bars at MEMP were there for security and to allow ventilation.

COMMENTS AND RECOMMENDATIONS

The Coroner made the following comments in relation to the hanging point used by the deceased in the cell.

I have become aware during the course of this inquiry that there were a total of fourteen suicide deaths at MEMP from 1 October 1996 to 1 October 2011 (excluding the death of [the deceased]). Of these, ten of the deaths occurred in circumstances where prisoners utilised the bars inside the cell window as the hanging point.[9]

In six separate findings between 1998 and 2005, an Auckland Coroner recommended that the Department of Corrections take steps forthwith to modify the existing window bar areas in all cells at MEMP where the window bar and/or frame was exposed as an obvious hanging point and further, that any modifications to existing window bar areas should address the twin issues of safety and air flow. The Department of Corrections did not make the modifications recommended.

The Prison Manager stated that she understood that it was not possible to replace the window bars at MEMP with perspex or a similar alternative with ventilation holes that were small enough to alleviate the risk of self harm and allow sufficient air flow to make the cells habitable. MEMP had no forced air ventilation system and, accordingly, implementing the recommendations would have meant the installation of a whole new forced air system. The Prison Manager also said that due to the age of MEMP, there were also other hanging points such as bunks and doors inside its standard cells.

The Prison Manager's evidence was that MEMP was built in the 1870's and its closure had been mooted for a number of years prior to the Government announcement in 2008 that MEMP was to be replaced.[10] Earlier closure had not been possible because of growing prisoner numbers and demands for prison space within the Auckland region. She stated that as a result of the likely closure of MEMP all sorts of maintenance work in the prison was deferred.

[9] Evidence on whether there were any deaths in similar circumstances prior to 1996 is not before the court.

[10] The Prison Manager's evidence is that closure of Mt Eden Men's Prison was first discussed in Parliament in 1952.

The Prison Manager stated that she understood that the likely closure of MEMP was, in part, why the Coroner's recommendations for modifications to the obvious hanging points that the windows at MEMP posed had not been adopted. However, more fundamentally, the Department of Corrections has adopted the approach that robust upfront assessment and then having good strategies for managing people while they are deemed at risk is better than just reducing hanging points in prisoner cells. The Prison Manager advised that even in newly designed prisons hanging points cannot be totally eliminated.

(...)

Obviously, the risk of suicide in prison can never be completely eliminated. However endeavours should be made to mitigate the risk. The application of effective risk assessment and management of those identified as being at risk is an important part of doing so. The work done by the Department of Corrections on improving processes and skills of staff in this area is laudable. However, recognising environmental factors such as hanging points and eliminating (where possible and reasonable) those points is also required.

It is extremely concerning to this court that over a period of almost fifteen years the Department of Corrections did not address the clearly identified and recognised risk of the window bars in cells. Prior to [the deceased's] death ten deaths in similar circumstances had occurred at MEMP since 1996. The risk had been highlighted explicitly in repeated Coroners' findings and recommendations aimed at addressing the risk were made.

Pursuant to section 58(3)(a) of the Coroners Act 2006 the Department of Corrections was notified of the proposed comment on this matter and provided with an opportunity to respond. It responded that the Department's position was never to ignore the Coroner's recommendations. Rather, it did not implement the recommendations because it considered that significant public expenditure on a forced air ventilation system at MEMP was not appropriate in the circumstances. These circumstances included the impending closure of MEMP plus the focus on upfront assessments as the more appropriate means of managing at risk prisoners.

In this regard it submitted that such assessments are better than just reducing hanging points, as even in cells specifically designed to reduce the risk of self harm and hanging points, hanging points cannot be eliminated totally.

I have considered carefully the Department of Corrections' response. In my opinion, notwithstanding the likely closure of MEMP in the future, the failure over an extended period to take steps to mitigate the clearly identified risk posed by the window bars was a serious omission. MEMP is now closed. The evidence is that cells in MECF, the prison that replaced MEMP in 2011, incorporate a number of design features aimed at reducing hanging points and minimising the risk of self-harm.

The Coroner also made the following comments with regard to the assessment of at risk status while the deceased was in prison:

[N]either health services staff nor corrections officers gave specific consideration as to whether [the deceased's] risk of harm to himself might be increased by the effects of the move from the prolonged period in the quiet infirmary, where he was largely separate from other prisoners, to open muster. No NARA assessments were made as a result of the move and no plan was put in place to specifically monitor [the deceased] for a period.[11] The potential difficulty of [the deceased's] transition was recognised in the internal health services clinical review that states, 'It is not uncommon for people receiving a high level of health intervention to feel at a loss and unsupported when the level of intervention and interactions is no longer required'.

(...)

I am not able, on the evidence, to make a finding that the move from the infirmary to MEMP, after a short spell in ACRP, was a factor in [the deceased's] decision to end his life. Nevertheless, it is clear that [he] found the moves difficult, particularly the move to MEMP.

It was open to prison management to place [the deceased] in ACRP or MEMP as it saw fit, once [he] no longer required care in the infirmary. However, the significant changes

[11] The Department of Corrections advised that a NARA assessment was not mandatory following transfer from the infirmary to open muster at ACRP as this was considered an internal transfer.

from infirmary to open muster and from ACRP to MEMP should have warranted closer monitoring of [the deceased]. Such monitoring would, in my view, have been consistent with the standard in the national policy on prisoners at risk to themselves set out in the Department of Corrections then Policy and Procedures Manual which stated 'Every effort is to be made to identify prisoners at-risk, and manage them to minimise their risk of self-harm.'[12] The inspector of Corrections's evidence is that this standard requires a prisoner to be assessed in relation to their risk of self harm whenever there is a change in the prisoner's circumstances and/or location.

Custodial staff form the front line of preventing suicides in prison. To be effective, suicide prevention should include on-going observation by well-trained staff who are proactive in identifying situations where assessment of risk should be done.

The Coroner made the following comments with regard to medication management at MEMP:

I find that [the deceased's] medication administration was not of an appropriate standard at MEMP. There is evidence, which I accept, that the therapeutic levels of this drug would not have been affected by the omissions. However that is only part of the equation. It is clear from the note that [the deceased] left, and his conversation with his lawyer on 5 November, that the failure of the staff to ensure that [he] got his medication preyed on his mind. He stated that he saw it as symbolic of inefficiencies in health delivery at MEMP and that he could not rely on the staff there for appropriate care.

(...)

Repeatedly failing to administer medication prescribed (and accordingly deemed necessary) by a medical practitioner is not acceptable. Prisoners are reliant on prison health services personnel administering medication accurately, as prescribed.[13]

The suggestion given in evidence that perhaps the drugs were given, but the administration was not recorded, is also not acceptable. Keeping accurate clinical records is a basic competency and a necessary component of good clinical practice. Clinical records are an integral tool to ensure that a person receives good clinical care, and continuity of care. Accurate clinical records also assist inquiries when questions are raised in relation to a person's clinical care and management.

The Coroner made the following comments on the deceased's access to personal supplies:

Early on in [the deceased's] imprisonment while he was in ACRP, and again after he was transferred to MEMP, he had periods when he did not have access to personal supplies that would assist him to function normally.

(...)

The Prison Manager stated that in her experience prison creates a heightened sense of anxiety for many prisoners and that loss of freedom, in all senses of the word, including the ability to access things which may allow a person to function normally, can have a very adverse effect on a prisoner.

A breakdown in the systems in place at ACRP and MEMP to enable prisoners to have supplies of items necessary so they could function normally is evident in [the deceased's] experience. I am left in little doubt on the evidence before me that [the deceased's] inability to, at times, access basic supplies contributed to his overall sense that life in custody was hard to bear.

The Coroner stated that because MEMP closed in 2011, recommendations related to matters that might prevent deaths at that prison in similar circumstances are not relevant. However, she stated that the circumstances of this death highlight issues that present ongoing challenges for the Department of Corrections, and any private prison provider contacted by the Department of Corrections, as they strive to reduce the risk of prisoners taking their own lives in prison. In particular:

[12] *Policy and Procedure Manual* B14.01.

[13] The standard set out at PPM B.06 of Prisoner Health Services National Policy requires that 'Prisoner's health needs are addressed in a manner which is consistent with the standards of care available to the general public'.

- The need to ensure that there are sufficiently robust assessment processes for identifying prisoners at risk of harm to themselves in place in New Zealand prisons.
- The need for all custodial staff and health staff working in prisons to be well enough trained to be able to identify prisoners at risk of harm to themselves and capable of being proactive in identifying situations when assessment of such risk should be done.
- That environmental risks such as hanging points are identified and where possible eliminated or the risks mitigated.[14]
- That systems and procedures put in place to administer medication prescribed to prisoners are robust and the keeping of accurate clinical records is maintained to an appropriate standard.

The Coroner directed a copy of this finding to be sent to the Chief Executive of the Department of Corrections and the Managing Director of Serco, the private company managing Mt Eden Men's Correctional Facility.

With regards to any restrictions on publication under sections 71 and 74 of the Coroners Act 2006, the Coroner commented that the circumstances of the deceased's arrest, the charges he was facing at the time of his death and his death in prison are all in the public domain. They are matters of public interest.

The Coroner further commented that it is important that the public should have confidence in the New Zealand prison system. Where there have been inadequacies or deficiencies in the management of prisoners it is desirable that the public should have access to knowledge of the reasons for such deficiencies, that the deficiencies have been inquired into, and that steps have (or will) be taken with a view to ensuring that they do not occur again. The Coroner therefore did not consider that the making public of particulars of the deceased's death is likely to be detrimental to public safety and permitted the publication of the findings in their entirety.

[14] See as a recent example the case of CSU-2008-AUK-000047 in which the Coroner recommended that the Department of Corrections take action as a matter of priority to install alternative shower/air vents in ACRP so as to minimise their use as a hanging point for attempted suicide.

Drugs, alcohol or substance abuse

CASE NUMBER

CSU-2010-DUN-000057
2012 NZCorC 57

CIRCUMSTANCES

The deceased died at the Wharemauku Stream, Tui Road West, Raumati as a result of drowning while under the influence of tetrahydrocannabinol. She had a history of schizophrenia, hallucinations and delusions. She was known to use cannabis and in the days preceding her death her behaviour became erratic and bizarre.

COMMENTS AND RECOMMENDATIONS

The Coroner commented: 'This is another sad case and once again highlights the serious side effects that can occur with the usage of illegal mind-altering drugs such as cannabis'.

CASE NUMBER

CSU-2010-DUN-000413
2012 NZCorC 27

CIRCUMSTANCES

The deceased died of the effects of isopropyl alcohol ingestion. The Coroner did not find the death to be a suicide. The deceased was found by police slumped across his bed. An empty 500 millilitre bottle of isopropyl alcohol used for cleaning compact discs was located on the computer desk in the room. Enquiries established that the deceased suffered from alcoholism and mental illness. He suffered from seizures relating to alcohol abuse. Shopping receipts located indicated that he had purchased 25 bottles of wine over the 17 days between 19 October 2010 and 5 November 2010.

COMMENTS AND RECOMMENDATIONS

The Coroner stated: '[The deceased] was an alcoholic. He, while likely affected by alcohol, chose to ingest an inherently dangerous substance, careless of its effects on him. In particular, the advice of Environmental Science and Research in relation to the cumulative central nervous system depressant effects of the various substances taken

by the deceased needs to have its dangers publicised. Those drinking to excess and consuming products not designed to be consumed do so at their peril'.

The Coroner further commented that in addition to calling for appropriate publicity to be given to this finding by the media, that it is forwarded to the Drug and Alcohol Addiction Centre, Otago University, Christchurch, for the attention of Professor Doug Selman.

See also **case study on volatile substance abuse – butane** above.

Fall

CASE NUMBER
CSU-2011-AUK-000319
2012 NZCorC 4

CIRCUMSTANCES

The deceased died at Middlemore Hospital. The cause of death was chest and abdominal injuries consistent with a fall. The deceased and a friend were climbing an electricity pylon when the deceased received an electric shock from the power lines and fell approximately 13 metres. He survived the initial fall and was transported to Middlemore Hospital by ambulance. He died shortly after arriving at hospital.

COMMENTS AND RECOMMENDATIONS

The Coroner noted that Counties Power Limited, which maintains the electricity network that this particular pylon forms a part of, has now installed barbed wire climbing deterrents on all three pylons in this vicinity. He commended the company for undertaking such preventative measures, particularly as these pylons are located in a relatively remote site in a low population area with gated access. In view of this remedial action, the Coroner did not consider there were any recommendations that could be usefully made which might prevent further deaths occurring in the future in similar circumstances.

The Coroner accepted the view of Counties Power Limited, that it is common knowledge that climbing electricity pylons with power lines attached is extremely hazardous. In addition, the pylon also had standard danger signage mounted on it, although the sign was weathered. The Coroner therefore did not consider that the deceased was ignorant of the dangers faced when he climbed the pylon.

The Coroner commented that this death highlights the very real danger facing any person who attempts to climb an electricity pylon. The police inform that this continues to be a problem, particularly with people attempting to steal the copper from wire power lines. This death, although apparently unrelated to such criminal activity, should serve as a warning to anyone who considers climbing pylons, that they face potentially fatal consequences.

Fire-related

See **work-related (other)** deaths below.

Homicide or interpersonal violence

CASE NUMBER
CSU-2010-CCH-000232
2012 NZCorC 49
CSU-2010-CCH-000233
2012 NZCorC 50

CIRCUMSTANCES

Two individuals died at Maitai Motor Camp in Maitai Valley, Nelson following a homicide-suicide. A male died as a result of a self-inflicted gunshot wound to the chest. A female died from a gunshot wound to her abdomen, fired by the male. The male had shot her in the hip and assaulted her prior to firing the fatal shot.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that the two deceased were entangled in a volatile and violent relationship. The violence in the relationship appears to have been predominantly psychological and emotional and there is no suggestion that there had been constant physical violence. However, physical violence appears to have been emerging, as the week before they died the female's friends saw bruising on her arm that she said had been inflicted by the male.

The Coroner stated that this case is an example of the too frequently fatal nature of violent and abusive relationships, and it illustrates the particular danger faced by victims of domestic violence and abuse when they move to end the relationship. There is increasing public awareness of the issue, but the Coroner expressed her concern that there remains a lack of understanding of the nature of domestic violence and abusive relationship – particularly when it doesn't manifest physically – and of the very real danger it poses its victims.

Shedding light on cases like this will hopefully contribute to greater public awareness of the issues and risks, and may help victims of domestic violence and abuse to take steps to protect themselves when they do decide to leave. In this regard the Coroner noted that the New Zealand Women's Refuge has a range of resources and pamphlets on domestic violence and abuse, and supporting victims to safety (womensrefuge.org.nz Crisis line 0800 733 843).

One of the fact sheets available is *Safety Plan – Leaving the Relationship*. This includes the advice 'Do not discuss with your abuser, or anyone else who may tell him/her, that you are planning to leave', and includes a number of strategies for lowering risk.

Mental health issues

See **self-Inflicted** deaths below.

Natural causes

See **adverse effect or reactions to medical/surgical care** and **aged care** above.

Product-related

CASE NUMBER
CSU-2011-DUN-000062
2012 NZCorC 62

CIRCUMSTANCES

The deceased died at Dunedin Hospital on 13 February 2011, from head injuries received when she fell from a ladder. The deceased was standing on a ladder approximately 1.8 metres above the ground, pruning trees on her property when she overbalanced and fell, the ladder then falling on top of her. The deceased's head struck the road where she landed causing the injury which eventually proved fatal. The deceased had previously had a stroke and suffered from a lack of vision in one eye, which could have contributed to a loss of balance.

COMMENTS AND RECOMMENDATIONS

The Coroner commented on statistics listed by ACC. There were over 260,000 claims for falls in the home in the last calendar year. Forty-one percent of all home falls involve those between the ages of 25 years and 64 years. ACC identify over 4000 people in New Zealand each year suffering serious injury after falling off ladders in the home. It is pointed out that ladders can tip easily. ACC recommended that ladders are always placed on flat firm ground and that people on ladders ought not to overreach sideways.

The Coroner commented that the task the deceased was undertaking was inherently unsafe and it would be a further tragedy if the community could not learn from the circumstances of her death. He stated his intention to forward a copy of the finding to both the Department of Labour (now the Ministry of Business, Innovation and Employment) and ACC.

The Coroner recommended that the 'ladder safety tips', included in ACC publications be again drawn to public attention. They are as follows:

- Check your ladder before using it.
- Never use a ladder with missing, broken, or loose parts – it's just not worth the risk.
- When setting up a ladder, make sure it is on a firm, even surface. The best advice is to secure the base of the ladder.
- Always keep three points of contact when climbing a ladder (for example, two feet and one hand) and never overreach sideways.
- Ladders are not designed as working platforms. For big jobs such as painting walls, consider using scaffolding or hire a professional.

Recreational or leisure activities

CASE NUMBER
CSU-2011-DUN-000117
2012 NZCorC 12

CIRCUMSTANCES

The deceased, of Sydney, Australia, died of injuries received in a fall on an unnamed glacier on the Southern aspect of Mount Revelation in Fiordland National Park. While descending an unnamed glacier, she slipped on the ice, slid and fell into a crevasse receiving fatal injuries.

The deceased and her partner were roped together with an estimated 10 to 15 metres of rope between them. Her partner descended first. A steeper icy section of the glacier of some 20 to 30 metres was encountered. Her partner stopped, intending to place an anchor to secure the further descent. The deceased, then approximately 15 metres behind him, slipped. Efforts made by the deceased to self-arrest, and by her partner to hold the impact of her fall were unsuccessful.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that the deceased's partner ought to have been the rear climber as he was the stronger and the more confident of the two. Both should have accepted and acted upon the first concerns expressed by the deceased.

Both the deceased and her partner ought to have changed their cramponing technique to better reflect the nature of the terrain. The Coroner agreed with an expert witness's suggestion that front-pointing in the steeper ice would have made the descent significantly safer.

The deceased's partner has provided a schedule of treks, tramps and climbs enjoyed by the deceased and himself since February 2000. The two of them had achieved significant success in a number of adventures, some with significant technical difficulty. The schedule does not include, however, the attendance of either of them at any course of instruction. Although such observations, as are now able to be made, show both had experience and ability, it may have been that advice given on a training course may have told them of hazard identification and hazard mitigation, which their experience has not taught them.

The Coroner commented that while he does not consider that the ascent and descent of the unnamed glacier which the deceased and her partner were undertaking was beyond their experience and expertise, this death is a timely reminder to all visitors to the New Zealand mountains that the environment is hazardous, that no shortcuts in appropriate techniques can be taken and that absolute care and concentration is essential at all times.

The Coroner recommended that a copy of this finding be forwarded to Federated Mountain Clubs of New Zealand so that a synopsis can be published in the Bulletin of the organisation to draw to public attention the contributors to this death in the hope that such circumstances are not repeated.

CASE NUMBER
CSU-2010-DUN-000257
2012 NZCorC 33

CIRCUMSTANCES

The deceased, a tourist visitor to New Zealand, died near Barrier Knob, Fiordland. The cause of the death was extensive traumatic injuries, due to a severe impact. While off route on a climbing trip between Barrier Knob and Adelaide Saddle, the deceased slipped and fell.

Although he had completed extensive and arduous traverses of mountains in Tasmania, the deceased was not considered an experienced rock climber nor was he experienced in New Zealand alpine conditions. At the time that he would have been traversing Barrier Knob, weather in the region was reported as deteriorating. The area from which the deceased fell may have appeared to have been able to have been negotiated but it was actually very difficult. The ground on which he was walking would likely also have been very treacherous and slippery in the wet conditions.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that although the deceased was of excellent physical fitness and had some mountaineering experience, he agreed with the expert advice given that the route attempted by the deceased is an alpine route for experienced climbers and that it was inappropriate for him to be attempting the journey upon which he embarked.

The Coroner stated that he had considered evidence in previous cases, in which those in the mountains would have gained benefit if they had been able to consult a companion. The decision-making of solo trampers may be flawed and the opportunity for discussion and problem-solving could often be enhanced by two minds rather than one being focused on a problem.

The Coroner accepted that solo tramping and solo climbing is a well recognised and acceptable concept. It does, however, carry with it greater risks.

The Coroner recommended that a copy of this finding be forwarded to the Federated Mountain Clubs (FMC) of New Zealand in order that a summary be published in the FMC Bulletin to draw to the attention of those using our mountains for recreation the dangers associated with this pastime.

Self-inflicted

CASE NUMBER
CSU-2008-WGN-000311
2012 NZCorC 8

CIRCUMSTANCES

The deceased, a 25 year old woman, committed suicide. From the evidence presented to the court it is clear that the deceased had a troubled and tragic life. She had suffered from a chronic depressive illness and experienced a traumatic childhood where she became involved with Child Youth and Family (CYF) and was moved between caregivers.

COMMENTS AND RECOMMENDATIONS

The Coroner commented: 'This is yet another tragic case of a young woman whom I feel both the family and the social welfare system failed in the early years of her life'.

The Coroner referred to his findings in CSU-2008-WGN-000158 which involved the death of a 17 year old. The Coroner commented, 'I believe that in today's setting it is critical that there is a continuation of support for people at risk aged in their twenties. This is a very vulnerable time for young people with all the external pressures that they face in a complex world. In that case I heard evidence of what is described as High Complex Needs – an initiative that supports agencies to work together to find solutions for young people who have complex and ongoing and persistent needs'.

The Coroner commented that this case again highlights the need for a more robust and expanded support system for young people who have fallen into the categories that involve state intervention to look after their health and wellbeing not only as children but through young adolescence well into their twenties.

The Coroner endorsed his recommendation made in CSU-2008-WGN-000158, that CYF and the appropriate health service develop a memorandum of understanding to map a process to deal with young adults for care and guidance after state custody has terminated and that the Department of Social Welfare (now Ministry of Social Development) look to provide a funding base to meet these needs.

The Coroner endorsed the strategies that the Ministry of Health – Primary Mental Health and Suicide Prevention Services have begun to implement, but encouraged the development of a process to put counselling services in close proximity with a general practice.

The Coroner recommended that copies of these recommendations were to be made available to the Ministers of Health and Social Development.

CASE NUMBER

CSU-2008-CCH-000126
2012 NZCorC 30

CIRCUMSTANCES

The deceased died by suicide while under the care of the Nelson Malborough District Health Board, Mental Health Services. At the time of his death, the deceased was an inpatient of the Mental Health Admission Unit. He had been granted unescorted leave at his home that afternoon.

Approximately six weeks before his death, the deceased was arrested after allegedly attacking a car with a machete while the driver was seated in the car. After his arrest he was admitted into mental health care under the Mental Health Act. That morning, before his arrest, the deceased went to the Mental Health Unit and asked to be allowed to have a shower as he could not stop sweating. He was told to go home and ring the Mobile Community Team.

The deceased's father was of the view that his son would not have approached the mental health unit unless he knew he needed help. He suggested that there must have been a file on his son at the Mental Health Unit that could have been available and he should not have been turned away, but rather told to stay until he was able to be assessed.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that both the family and Director of Mental Health (Ministry of Health) raised issues concerning the care and treatment of the deceased and that the court endorsed those concerns. In particular the Nelson Marlborough District Health Board (NMDHB) needs to reconsider how it monitors those clients that are to be gradually returned to their community.

The Director of Mental Health was quite critical that the deceased who did not appear of sound mind was given home leave to presumably a known empty house. He commented on the importance of relapse prevention, which requires triangulation between patients, clinician and support people (the family). An ideal situation is to have arrangements in place between patient, hospital and the receiving family to be present to provide the necessary support.

The Coroner also commented that notes and positive action should have been undertaken when the deceased presented for his 'shower'. The NMDHB acknowledges this fault and has taken steps to ensure that the 'any door is the right door' policy is fully implemented.

The Coroner commented that at the conclusion of the hearing, information was to be provided as to what progress the NMDHB has made with respect to the installation of a database that could be readily accessed by the various medical services.

The following is a copy of the update that has occurred since this death.

'The journey towards an electronic health record was started at NMDHB around 2006 when a business case was drawn up and a selection process was started. The product chosen was 'Concerto', by Orion Health, Auckland. The project implementation started in early 2008 and Concerto went live at Nelson Hospital on 15/09/2008. Wairau Hospital followed a week later on 22/09/2008.

'From this day onwards, clinicians in the district were able to access radiology reports and images, Nelson and Wairau combined encounter histories, hospital pharmacy dispensing records, planned appointments, waitlisted events, as well as basic demographic information in a patient-centric way from one software platform without the need to log onto various systems.

'At the same time, Orion Health's product Soprano Medical Templates was implemented alongside Concerto. This product allows for the electronic generation of discharge summaries, and the electronic transmission to other health care providers capable of receiving electronic messages via HealthLink. All of our GPs in the district have this capability and those summaries have been transmitted electronically since implementation.

'In May 2009, the lab results were integrated into the clinical workstation and 2009 also saw the integration of echocardiograms (ECG). In 2010, a specialist letters tool was introduced at NMDHB, which provides a structured workflow for dictated clinical letters. Those letters are accessible via Concerto once they have been approved by the clinician.

'Uptake by clinicians has steadily increased since implementation, but some areas still lag. To date, all of NMDHB clinical staff (approximately 1400 people) have been trained and given access to Concerto. Suggestions and enhancement requests are received from clinicians frequently and have led into an interesting journey of constant improvements. The creation of clinical documentation has since been expanded to other documents, which are now created alongside the discharge summary. Allied Health started creating their discharge summaries/clinic letters in 2009. In May 2010, the diabetes service moved their service to be fully electronic.

'Patients' assessments, clinic notes and letters are now created electronically in Concerto and are visible to other clinicians via Concerto. Specialty templates have been introduced to facilitate the needs of the different areas and allow clinicians to create their documentation more efficiently. Surgical audits went live in mid-2010 and operation notes have been added most recently, with ear, nose and throat currently testing the pilot. Orthopaedic operation notes are currently being developed, as well as forms and documentation for our speciality nurses.

'Since implementation, about 75,000 documents have been electronically created via Concerto, 93% being discharge summaries. Another 15,000 letters are now available via Concerto since the implementation of the specialist letters tool.

'NMDHB strives to utilise the potential of this platform to its fullest for the benefit to our clinicians and patients on the journey to ultimately achieve the electronic health record.'

Response from NMDHB mental health service

NMDHB provided the following response to the Coroner's recommendations:

The following is a summary of actions taken by the NMDHB mental health service in light of recommendations made by the Coroner following the death of the deceased while on leave from the Mental Health Admission Unit (MHAU) at Nelson Hospital in 2007:

1. The MHAU has for some years adopted the practice of graduated leave from the MHAU prior to discharge as a patient recovers from an episode of major mental illness. Greater caution has been exercised in the light of the Coroner's finding with respect to determining the appropriateness of leave by the inpatient team as well as consultation with the relevant community mental health team(s) and family to ensure that all relevant parties agree to the leave plan and steps are taken should concerns arise while the patient is on leave.
2. With regard to the 'any door is the right door' policy and specific reference to a person presenting to the MHAU for assistance, clinical staff ascertain the reason for presentation, current mental state and imminent risk and refer on to the appropriate service as clinically indicated. Should a referral to the on call staff for the Mobile Community Team be indicated the staff member contacts them and determines the place and time of assessment, be that at the MHAU or elsewhere depending on risk, and makes a file note of the contact and action taken.
3. Work has progressed with respect to the management of clinical files with the NMDHB mental health services. While in the main reliance is maintained on the paper record, most file notes, clinic letters and admission/discharge summaries are generated electronically. To date not all mental health staff members have been able to access all electronic records (limited to certain folders depending on workplace) but it is of note that at our small management meeting it was agreed that all such files be compiled into a single folder to be accessed via Concerto and action has commenced on this. It is also worth noting that local developments with the electronic record are largely interim solutions while the regional and national IT plans are progressed.

CASE NUMBER

CSU-2010-DUN-000421
2012 NZCorC 17

CIRCUMSTANCES

The deceased committed suicide at her home. She was at the time serving a community detention sentence and had requested a variation of her bail conditions. Neither the court nor the police have a record of the request being made or the outcome of the request or the reasons for that outcome.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that a copy of the finding be forwarded to the Commissioner of Police expressing his concern at the fact there does not appear as if there is any documentary record of a request made by a person on bail for a variation of bail conditions, including a change of address, if that request is not given effect to.

Response from NZ Police

NZ Police provided the following response:

It appears that [the deceased], who was on an active charge, may have tried to seek variation of her bail conditions, but neither police nor courts had any record of this.

I note that normally an approach by a defendant regarding a variation of conditions of bail is made to a court, and that normally the only record police would have of that is if there is a hearing and the bail varied (this would be noted on the prosecution filed and recorded by court if held in open court). I appreciate that there may also be instances of informal approaches to either courts or police staff, but we have no way of knowing if that was the case.

In an email dated 15 March 2012, in response to a query from police, the Dunedin Registrar advised police's Southern District Prosecution Manager that:

'No record is held of the enquiry. Defendants are first directed to their lawyer. If they wish to proceed without assistance they are directed to their nearest courthouse to complete a bail variation request form. This is important because it requires that they make a declaration. Upon completion of that form it is faxed to police intel (or to home court if not Dunedin). The defendant is advised to return in 60 minutes or to wait if they wish.'

It seems relatively straightforward for courts to make a note on the court file that an enquiry was made and any subsequent action arising from that, whether a formal request is considered or whether a defendant is sent to see counsel. This matter has been raised with courts management both in Dunedin and nationally, and is under consideration. A copy of this letter has also been sent to the General Manager District Courts, Mr Tony Fisher, for his information.

CASE NUMBER

CSU-2009-AUK-001637
2012 NZCorC 23

CIRCUMSTANCES

The deceased died in circumstances that amount to suicide. At the time of his death he was under the care of mental health services.

COMMENTS AND RECOMMENDATIONS

The Coroner made a number of comments regarding the standard of the mental health care the deceased received. The Coroner identified that deficiencies in care had been addressed by the District Health Board and commended the Counties Manukau District Health Board on their response to the issues arising from the deceased's care.

The Coroner also commented on the importance of medical professionals keeping accurate and clear clinical records.

The Coroner directed that a copy of the finding be sent to the Ministry of Health Mental Health Directorate to consider further issues arising from this death concerning the disjunction between alcohol and drugs services and other mental health care.

The Coroner recognised that there is significant learning to be gained from this case and authorised that an anonymised version of this finding, and all particulars within it, could be used within the clinical/medical/mental health setting for research, training and study purposes.

CASE NUMBER

CSU-2010-DUN-000306
2012 NZCorC 45

CIRCUMSTANCES

The deceased committed suicide. Two days before his death the deceased attended Emergency Psychiatric Services (EPS) at the Southern District Health Board (SDHB). A Root Cause Analysis Report completed by the SDHB clinicians identified issues in relation to his care and treatment provided by the EPS team. The deceased and his friend were said to be upset by the length of the wait and by the difficulty they had in locating EPS help.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that the SDHB take into account what could be considered to be issues of some suboptimal care offered to the deceased. Specifically SDHB should make it easier for afterhours visitors to find EPS and contacts, ensuring patients are attended to as soon as practicable in a secure and private setting and ensuring appropriate follow up of all people who attend the service.

Sudden unexpected death in infancy (SUDI)

CASE NUMBER

CSU-2008-WGN-000311
2012 NZCorC 8

CIRCUMSTANCES

The deceased, an infant aged three months, died at Rotorua. The cause of death being SUDI against a background of unsafe sleeping arrangements and co-sleeping with an adult. The baby was put to bed in the evening by her mother and she was found on the left side of her mother the next morning by the grandmother.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that this is a further case of co-sleeping and it is highly likely that the baby has died as a result of this. The court makes it clear that there is no criticism of the mother here but it is a matter of education in terms of dangers that can exist. The Coroner referred to his findings in CSU-2010-ROT-000095.

The Coroner repeated the recommendations made in CSU-2008-WGN-000270 (2009 NZCorC 183). Those recommendations are as follows:

To the Director General of Health, Ministry of Health, Wellington

- That the public health advice in relation to safe infant care practices and safe sleeping environments be strengthened and broadened to make it clear that:
  - bed-sharing by adults and siblings with infants under six months exposes the infant to the risk of death and should be avoided.
  - the safest place for babies to sleep for the first six months of life is in a cot beside the parental bed.
- That steps be taken by the Ministry to ensure that the same advice is given by public health educators and health professionals in those public health sectors over which the Ministry has influence.
- That the Moe Ora scheme, referred to in these findings, and similar schemes, be encouraged by government and lent every possible support, with a view to ensuring that every new mother and mother-to-be is provided with a cot if she is unable to afford the cost of purchase.

I recommend that the Ministry of Health website be far more explicit in terms of the risks associated with unsafe sleeping practices and set out a guideline as to safe sleeping practices and unsafe sleeping practices with a graphic warning that if unsafe sleeping practices are followed there is a very real risk that the baby will die.

Transport-related

CASE NUMBER

CSU-2011-DUN-000052
2012 NZCorC 15

CSU-2011-DUN-000053
2012 NZCorC 16

CIRCUMSTANCES

Two people, a mother and her seven year old daughter, died from injuries sustained in a car crash on State Highway 1 at Clarksville near Milton. While driving south on State Highway 1, the mother lost control of the car she was driving due to her intoxication. It appears that her seven year old daughter was not secured into the car with appropriate restraint. The car crossed the centreline and collided with an oncoming truck, which was in its correct lane and in all respects being driven in an appropriate manner. No blame was attributed to the driver of the truck, who did all that he should have done to avoid the collision.

Before the fatal crash, a call had been made to the police *555 number reporting erratic driving of a vehicle now known to be that driven by the deceased. The vehicle was not located by police. Concerns were expressed at the inquest in relation to what was perceived to be a failure of the *555 system.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that a copy of this finding be forwarded to the New Zealand Transport Agency as a further example of the dangers of driving after drinking alcohol to excess and the dangers of driving without occupants in the vehicle wearing seatbelts.

The Coroner also commented on concerns expressed at the inquest in relation to what was perceived to be a failure of the *555 system. The Coroner stated that he was not satisfied that there was, necessarily, a failure in the system. However, the Coroner commented that he would ensure that a copy of this finding is sent to the Commissioner of Police in order that the reporting of the erratic driving by *555 and appropriate follow up is not lost sight of.

CASE NUMBER

CSU-2011-DUN-000170
2011 NZCorC 164

CIRCUMSTANCES

The deceased, a farm worker, died from injuries he received in a car accident near Special School Road, Otekaike, State Highway 83.

After a very full day of work the deceased and some others went to the Duntroon Hotel to watch the rugby and drink. Later that night, while driving from Kurow to Duntroon at high speed, the deceased has lost control of the car he was driving, due at least in part to his intoxication, and the car has left the road and crashed.

COMMENTS AND RECOMMENDATIONS

The Coroner commented on the issue raised at inquest of fatigue and how this affects employees specifically in dairy farming. The Coroner agreed that, on occasions, the dairy industry requires its employees to work long hours. Outcomes of fatigue on driving are well known.

The Coroner stated that he can only comment on matters which can be directly considered to be the circumstances of a death. He stated that he did not believe he could properly link the decision of the deceased to go drinking after working long hours to be a responsibility of his employer. The situation may be different when an employee is required by an employer to work for long hours and then, when fatigued, and because of this tiredness, loses control of a motor vehicle. At inquest, the deceased's father has pointed out that long work hours for young people without life experience is a risk factor that should be taken into account by the dairy industry. The Coroner commented that an issue of which he is aware is the contribution of the stimulatory effect of alcohol. In modest quantities, alcohol is a depressant, or soporific, and is likely to make an intoxicated person more tired and sleepy. In a greater concentration, alcohol has the opposite effect and is a stimulant. The Coroner sought advice on the point from Professor Doug Sellman of the National Addiction Centre, University of Otago, Christchurch. Professor Sellman advises that, in substantial quantities alcohol can have a stimulating effect. However, the Coroner stated that he accepts the comments

of the deceased's father and will ensure that a copy of his finding is forwarded to the New Zealand Federated Farmers for circulation to its members and for further investigation by the Department of Labour.

The Coroner commented that it is not only the issue of work hours and fatigue that needs to be addressed but there must be an education programme, promoted within the farming industry – and directed to its younger employees, pointing out the dangers of drinking after work and then driving vehicles, particularly at speed. The Coroner hopes the publicity given to the circumstances of this death will prove a lesson to not only those family and friends close to him but to the wider community.

The Coroner recommended that a copy of this finding be forwarded to Federated Farmers so that organisation can give consideration to his comments. The Coroner also recommended that a copy of this finding be forwarded to the Department of Labour in order that the issue of fatigue in the workplace, and particularly the farming industry, can be further investigated.

Response from Ministry of Business, Innovation and Employment (formerly Department of Labour)
The Ministry provided the following response the Coroner's recommendations:

You will be interested to know that stress and fatigue are specifically included in the 'Priorities for action' section of the Agriculture Sector Action Plan to 2012, published in March 2012 and available electronically at dol.govt.nz/whss/sector-plans/agriculture. I have also registered your findings on the Ministry's database.

CASE NUMBER

CSU-2009-WGN-000393
2012 NZCorC 31

CSU-2009-WGN-000394
2012 NZCorC 32

CIRCUMSTANCES

Two males died at Grays Road, Camborne, Porirua as a result of sustaining blunt force injuries from a motor vehicle crash. The weather had been overcast with intermittent periods of rain throughout the evening causing the road surfaces in the area to become quite slippery. Both of the deceased were passengers in the car. The driver of the vehicle lost control when he drove into a bend too fast.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that Grays Road has a reputation for being one of the Wellington region's most treacherous roads. A newspaper report stated that there had been over 100 reported crashes, including three deaths, on the road between 2004 and including this crash of 2009. Eighty-five of these crashes were due to vehicles losing control on the bends. This court in fact dealt with a further fatality of an 18 year old (CSU-2008-WGN-000075) whose motor vehicle was struck by an oncoming car, the driver of that car being convicted of careless use causing death.

The Coroner commented that an immediate action was to install a series of what are called 'traffic calmers'. These consist of rows of luminous poles placed on each side of the traffic lane, which have the effect of reducing vehicle speeds. In addition, a temporary lower speed limit to 60kmh has also been implemented. The Council advised that this lower speed limit was required until the improvements to the road were completed, to allow the possibility at that point of higher speeds to be revisited. After that, the process of implementing a permanent speed limit was a long process. It is noted that the placement of the traffic calmers did not occur at the location of this crash site, and it is clear that the

underlying cause of this crash lay with the dangerous driving of the driver on this occasion. But any effect to reduce the speed on that is fundamentally a winding country road must be encouraged.

The Coroner stated that a recent site inspection of Grays Road shows that the warning signs and temporary 60kmh limit remains in place, as do the traffic calmers. He commented that, 'with these steps put in place, it is, in my view, clear that the local authority is taking the high accident rate that has occurred on Grays Road very seriously'.

The Coroner commented that given the Council's crash reduction study, there is no need for him to make any recommendations. However he stated that it is hoped that the Council will retain the extra safety precautions and reduced speed limit until the road can be completed with the reshaping and resurfacing programme and the desirable speed limit to be imposed on that section of the road has been evaluated.

CASE NUMBER

CSU-2011-DUN-000331
2011 NZCorC 163

CIRCUMSTANCES

The deceased died on State Highway 83, Otematata, in the early hours of the morning of 14 August 2011, the cause of his death being haemorrhage and shock from transection of the thoracic aorta and other multiple severe injuries. The injuries were received by the deceased when the car he was driving crashed into a bridge abutment. The deceased was intoxicated and was not wearing a seatbelt.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that copy of this finding be forwarded to the New Zealand Transport Agency as a further example of the tragic combination of a young man in control of a motor vehicle while intoxicated and while not wearing a seatbelt.

CASE NUMBER

CSU-2009-WGN-000087
2012 NZCorC 7

CIRCUMSTANCES

The deceased died at Lower Hutt Hospital as a result of blunt force trauma to the thorax. He was travelling back towards his home from Lower Hutt via State Highway 58, 'Haywards Hill'. He was riding a Suzuki motorcycle when he collided with a 'u-turning utility vehicle' and died from the injuries he sustained.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended to the Ministry of Transport that consideration be given to the installation of no u-turn signage near the end of the median barrier rope area at the uphill end from Lower Hutt on State Highway 58, known as Haywards Hill.

RESPONSE FROM THE NEW ZEALAND TRANSPORT AGENCY (NZTA)

The NZTA responded to the Coroner's recommendations stating that the NZTA installed four no u-turn signs at this location in January 2010. One sign on the left of the road approximately 60 metres prior to the end of the barrier, one on the end of the wire rope barrier, and the other two on the shoulder to the north of the barrier in an area where west-bound vehicles might pull off the road.

CASE NUMBER

CSU-2011-DUN-000131
2012 NZCorC 10

CSU-2011-DUN-000132
2012 NZCorC 11

CIRCUMSTANCES

Two males died as a result of injuries sustained in a motor vehicle crash at State Highway 1, Hampden when a Toyota vehicle collided with a truck. The driver of the Toyota lost control and crossed onto the incorrect side of the road, colliding with an oncoming truck. He died in Dunedin Hospital as a result of a diffuse cerebral injury and other injuries. The Coroner stated that the likely cause of the loss of control of the car was the driver falling asleep.

COMMENTS AND RECOMMENDATIONS

From the evidence describing the event that the most likely explanation for the crash is that the driver of the Toyota went to sleep. Even a millisecond of sleep would have been sufficient to enable him to have lost concentration in the manner in which he did.

The Coroner commented that there is no sufficient evidence to enable him to establish that the driver of the Toyota was so intoxicated with alcohol that it was an offence for him to be driving however he was persuaded that in fact this is not the case. The Coroner was referred to the likely contribution of fatigue to the loss of control by the Toyota driver. The driver was working hard, studying hard and socialising hard. The scientific community acknowledge that the consumption of even moderate amounts of alcohol is likely to have a soporific effect. Alcohol makes a tired person more tired. It appears clear that the Toyota driver was very tired and was probably affected by the residue of the alcohol in his bloodstream.

The Coroner recommended that a copy of the finding be sent to the Southern District Health Board. Inquiries into the causes and circumstances of these deaths would have been assisted by an 'on-admission' testing for a blood alcohol concentration. It had been the Coroner's understanding until now that such testing was a matter of routine but he has learnt that it is not. The Coroner asked that the Southern District Health Board (SDHB) institute a protocol that, wherever possible, a blood sample is taken from patients who have been involved in a road crash as soon as they are admitted to hospital and preferably before other drugs, which might compromise accurate testing, are administered.

Response from Southern District Health Board

SDHB determined that section 73 of the Land Transport Act 1998 permits the taking of blood samples in road traffic crashes and provides immunity from civil or criminal action where such samples are taken. However, while this Act does mandate the patient to submit to the taking of a sample it does not mandate the medical practitioner to take such samples. In clinical practice such evidential samples are taken pursuant to specific requests to medical staff by the police for them.

SDHB stated: 'The problem we have is that the medical practitioner must have reasonable grounds to suspect that there has been a road traffic crash before relying upon the provisions in this Act. Unless there is confirmation of a road traffic crash by the police, or some other reliable evidence, then the provisions of section 73 cannot be relied upon for protection from civil or criminal action and the taking of blood samples without consent may well be unlawful. We also believe that to follow this recommendation would be seen as an unethical intrusion into the doctor-patient therapeutic relationship. Our practice is to take evidential blood only when the police request it and always when treatment and investigations have finished'.

CASE NUMBER

CSU-2011-CCH-000564
2012 NZCorC 22

CIRCUMSTANCES

The deceased died on Barrington Street, Christchurch from injuries sustained when, while crossing that road at or near the intersection of that road with Lincoln Road, she was struck and run over by the rear wheels of a three axle trailer connected to a truck/tractor unit being driven from Lincoln Road into Barrington Street, Christchurch.

The deceased was struck by the trailer before sunrise in half light. The truck took a wider swing before turning left to ensure the 40 foot long trailer did not mount the kerb. It has not been established whether or not the deceased activated the pedestrian light before she crossed, or that a 'green man' signal was illuminated.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that the first recommendation to be made relates to preventing traffic turning at the intersection while pedestrians who have the 'green man' or red flashing man are crossing.

The second relates to a comments made by witnesses. One witness states, 'In the darkness the person sees the tail lights of the tractor truck unit go through and then there's darkness. The person steps out as they think it's passed and then realise the trailer is there.' A witness comments 'I believe a change in the trailer design could

have prevented this accident. The problem is that there is a dark area between the tractor unit and rear of the following trailer where the triple axel is located. This dark space needs to be covered. I am suggesting that there be at least two metal rails running along the ledge of the trailer at waist height with LED lights attached.' The Coroner commented that the issue is that there is no deflection barrier reducing the chances of a person being hit by the rear wheels of an empty trailer.

The Coroner recommended to the Christchurch City Council Roading Authority that the lights at the Lincoln Road/Barrington Street intersection be changed so that there is a green arrow for traffic turning left from Lincoln Road to Barrington Street, but that the light should remain red if a pedestrian has pushed the button activating lights permitting pedestrians to cross, and giving sufficient time for pedestrians to cross.

The Coroner noted that there is a green arrow light on the other side of Lincoln Road for traffic turning right into Barrington Street. The Coroner's recommendation would extend to that light, namely that the green arrow to turn right from Lincoln Road into Barrington Street not activate while pedestrians are crossing Lincoln Road at that point with the 'green man' or red flashing man light activated.

The Coroner further recommended to the Ministry of Transport and the New Zealand Transport Agency that an investigation be undertaken as to the feasibility of requiring heavy trailers that do not have trays extending beyond the outer edge of the wheels to have metal rails with LED lights or reflectors attached running along the outer edge of the trailer at waist height, and the appropriateness that such a requirement be imposed.

Response from Christchurch City Council
Christchurch City Council made the following comments in response to the Coroner's recommendation:

Referring to the Coroner's recommendation, it is illegal for us to install a green left arrow unless these are no other movements permitted to enter this same section of the intersection. With the current operation of the intersection, this is not possible for us to do.

However, we have installed a red left-turn arrow which will illuminate when the pedestrian call button is pushed, and remain illuminated for six seconds after the light goes green. This will require the pedestrian call button to be pressed (as probably did not occur in this event), but will hold up any left turners from anticipating a green, and not considering pedestrians.

The second part of the recommendation to [the Council], 'my recommendation would extend to that light, namely that the green arrow to turn right from Lincoln Road into Barrington Street not activate while pedestrians are crossing Lincoln Road at that point with the 'green-man' or red flashing man light activated', is that this green arrow does not (and never has) operated at the same time as a green-man or flashing red-man at this leg of the crossing.

In fact if the green right arrow for traffic from the south approach was lit, there would not have been a green light for traffic arriving from the north approach.

CASE NUMBER

CSU-20090-CCH-000451
2012 NZCorC 24

CIRCUMSTANCES

The deceased died at Atawhai Drive as a result of sustaining aortic laceration and blunt trauma chest injuries from a motor vehicle accident. He was travelling home along State Highway 6 at Atawhai when he ran into the back of a stationary vehicle, which was waiting to make a turn off the highway into a private property. The stationary vehicle did not have a current warrant of fitness.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that there was some doubt as to whether the stationary vehicle was able to activate the indicator lights. It is a salutary point that the vehicle should not have been driven on the highway at that time given that it did not have a current warrant of fitness. This death highlights the need to ensure that all vehicles on the road must have a current warrant of fitness and if not, simply not be on the road.

A copy of the court's provisional findings was provided to the various parties for the purposes of section 58(3) of the Coroners Act 2006. A reply was received from the Operations Manager of the New Zealand Transport Agency (NZTA). He advised that a 'flushed median' (which introduces a central hatched marking over a length of road, creating a median strip that increases separation between opposing traffic lanes that drivers can use while waiting to turn right, without the demarcation of a formal bay) has been constructed at this crash site. The overtaking lane on this section of the road has also been removed.

The NZTA has also undertaken a formal speed limit review but the findings indicated that the current 100kmh limit was appropriate.

The Coroner commented that it is pleasing to see that the NZTA is taking steps to improve the road safety in this area and has altered the road layout in the vicinity of the crash, however the road does require, in his view, close monitoring with the aim of providing continued roading improvements. It is still recommended that warning signs be installed in this vicinity to advise of the likelihood of stopped turning traffic waiting to turn into private driveways.

Response from the NZTA

The NZTA provided the following in response to the Coroner's recommendations:

The NZTA has reviewed the recommendation to provide signage, warning approaching drivers that there may be vehicles stopped waiting to turn into private driveways in the vicinity of the crash location.

Rather than using signage to warn drivers of the possibility their path may be blocked by a vehicle waiting to turn, the NZTA has sought to improve the safety for turning vehicles, by providing a flush median. The flush median and, where appropriate, wider sealed shoulders, provide turning vehicles with a place to wait, clear of the through traffic, before making their turn.

While signage has a place, it was not considered appropriate in this context for the following reasons:

- The signage is likely to have a limited life span in terms of driver awareness given the majority of drivers in this area are regular road users.
- Signage will add to visual clutter.
- Signage at this location may raise an expectation in drivers that other similar situations would be signed. Given it is not practical to sign every location, the result could be detrimental.

Although more expensive to implement, the NZTA believes providing the flush median at this location will result in a safer outcome, and we would like to assure the Coroner that the safety of all road users is a high priority for the NZTA and we will continue to monitor this section of highway and undertake improvements where possible.

CASE NUMBER

CSU-2010-DUN-000210
2012 NZCorC 19

CIRCUMSTANCES

The deceased died on State Highway 1, Hampden. The cause of his death being multiple severe injuries sustained when he was struck by two vehicles. He was walking on a highway in the dark in winter. He was intoxicated to a significant degree and was dressed in dark clothing so he was effectively invisible to oncoming drivers. He was struck by two vehicles, the drivers of each being unable to avoid him. No blame is attributed to either driver.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that the circumstances of this death unfortunately exactly parallel the circumstances of the death of another pedestrian walking on an unlit country highway while intoxicated for which an inquest was held in Oamaru in 2010. The Coroner stated in that finding and repeats:

'Those persons who drink to excess owe a responsibility to themselves. An individual must either choose not to overindulge in alcohol until totally out of control or an individual ought properly do this in a place of safety and subject to adequate supervision. I have suggested previously the concept of a sober companion, similar to that of a sober driver, to ensure safety'.

The Coroner noted that he has now sat on too many inquests involving intoxicated pedestrians. The common theme is that not only do such persons drink to excess and drink to the extent that they cannot take responsibility for their own safety, they also choose to walk on rural roads with no street lighting. They are invariably dressed in dark clothing. Such pedestrians are effectively invisible to the drivers of vehicles using the road legitimately and travelling at appropriate speeds.

If a pedestrian chooses to walk on a rural road (or any road) at night, either drunk or sober, such pedestrians ought to carry a light and wear appropriate clothing such as a day glow or reflective jacket. The principle of see and be seen would save many lives.

The Coroner noted an observation in the Serious Crash Unit report. There appears to be a 'dark spot' between street lighting and the Coroner stated that he would send the finding to the appropriate roading authority and ask that the issue of street lighting in the area be reviewed. The fact that there was no illumination overlap between the pole-mounted lights may have been a contributor. It may be better to have no lights at all or it may be better to have an extra light to ensure there is no 'block' of shadow. The Coroner stated that he would leave the matter to the roading authority to investigate and make such enhancement as is appropriate.

The Coroner recommended a copy of this finding be forwarded to the New Zealand Transport Agency (NZTA) to ensure his comments are addressed. He also requested that additional publicity be given to his comments in relation to the safety of pedestrians walking on roads at night while wearing inappropriate clothing and not carrying lights.

Response from the NZTA

The NZTA provided the following response to the Coroner's comments and recommendations:

A key issue is that if someone is truly intoxicated then they should make arrangements to stay at the venue or get a lift. We encourage this of drivers. It is of concern that intoxicated pedestrians walk home where they are in danger of staggering or weaving into the traffic. No amount of visibility can address this potential issue. We would therefore advocate staying at a venue or getting a lift rather than being brightly dressed with a torch.

The NZTA is currently scoping work in the area of impairment including alcohol. While the focus is on drivers, we will certainly consider pedestrians as part of this. We are actively talking with Rural Women as part of this work. Initial interviews as part of this project have identified that there are numbers of people drinking due to stress with break-ups or personal circumstances; we will be considering what potential interventions can be undertaken.

CASE NUMBER

CSU-2011-ROT-000062
2012 NZCorC 59

CIRCUMSTANCES

The deceased died on State Highway 1, Putaruru from severe chest and abdominal injuries sustained in a motor vehicle crash. The deceased was driving a Toyota van heading south on State Highway 1. His vehicle was involved in a head on collision with another vehicle, which was headed north on State Highway 1 near the Timber Museum just south of Putaruru. The deceased died at the scene.

The evidence established that the road and the vehicles were in good condition. The deceased was found to have 77 milligrams of alcohol per 100 millilitres of blood upon analysis and his speed was calculated at 109 kmh at the time of the crash. The vehicle he hit was travelling at 75 kmh. It appears the vehicle driven by the deceased failed to follow a moderate left hand bend and continued straight crossing the centre line into the north-bound lane and despite the driver of the other vehicle taking evasive action a collision was unavoidable.

The court was unable to determine what caused the deceased to drift across the road, and in that respect will leave the verdict open, but there is no doubt as to the cause of death.

COMMENTS AND RECOMMENDATIONS

The Coroner endorsed the recommendation of the traffic crash expert that rumble strips be placed on all centre lines and no passing lines.

Water-related (general)

See **work-related (other)** deaths and **work-related (agriculture)** below.

Work-related (agriculture)

CASE NUMBER

CSU-2011-DUN-000011
2012 NZCorC 18

CIRCUMSTANCES

The deceased, a farmer from Tuatapere, Southland, drowned in an oxidation pond. While attempting to recover a sheep from the sewage treatment plant oxidation pond, the deceased fell into the water and was unable to extricate himself from the pond due to the slippery nature of its sides.

COMMENTS AND RECOMMENDATIONS

The Coroner observed that the fences surrounding the oxidation ponds ought to have been stockproofed to the extent that a lamb or sheep should not have been able to obtain access to the pond. He noted that enhancements to the fencing have subsequently been made.

The Coroner expressed specific concern as to the hazard presented to the public by ponds, the nature of which is identified in the evidence presented. The Coroner commented, 'the sides of the pond are particularly slippery and are of an angle that makes egress difficult if not impossible, particularly for a less agile person. The black plastic lining of the pond is similar to that utilised in a number of applications, including in irrigation ponds. In my view it is appropriate that a more efficient method of escape for a person trapped in a plastic-lined pond should be considered. In the case of the oxidation ponds, responsibility for their safety rests with the local authority. While I attribute no blame to the Southland District Council, the opportunity must be taken to review the safety of such ponds'.

The Coroner recommended that a copy of this finding be forwarded to Local Government New Zealand in order that consideration be given to the hazards that have been identified in my investigation of this death. Local Government New Zealand (LGNZ) should draw to the attention of its constituent local authorities the dangers associated with members of the public becoming trapped in ponds (created for either irrigation or oxidation or for other purposes) that are lined with black plastic. An investigation should be undertaken by LGNZ of methods to make such ponds safer.

CASE NUMBER

CSU-2010-DUN-000446
2012 NZCorC 25

CIRCUMSTANCES

The deceased, a farmer, died at his farm, the cause of his death being haemorrhage and shock complicating multiple severe injuries. The injuries were sustained by the deceased when, while driving his Mitsubishi truck to muster sheep, he stopped the truck on a relatively steep farm road. Instead of stopping the truck and making it safe by use of the handbrake and perhaps by leaving it in gear with the engine switched off, the deceased has alighted and walked, for reasons unable to be confirmed, in front of the truck. The faulty handbrake released, probably due to the vibrations of the motor, which was running, and the truck ran forward over him causing him injuries, which proved fatal.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that he agreed with the observation of the Department of Labour inspector in that, although vehicles operating solely within the confines of a farm are not subject to the same regulatory requirements as vehicles operating on public roads, such vehicles should continue to be regularly serviced by appropriately qualified tradesmen. The servicing should focus on matters of essential safety.

The Coroner recommended that a copy of the finding be forwarded to Federated Farmers for publication to its members and to identify the need for vehicles utilised on the farm to be regularly inspected and maintained for the

purposes of safety. The Coroner further recommended that a copy of the finding be forwarded to the Ministry of Business, Innovation and Employment for its information.

Response from Federated Farmers
Federated Farmers stated the following in response to the Coroner's recommendations:

Federated Farmers initially responded to the Coroners request by publishing a column, Safety matters and don't I know it, by Federated Farmers National President Bruce Wills in the Sunday Star Times on 10 June. A copy of the column is available on our website (fedfarm.org.nz/n3660.html). We worked with the [deceased's] family when putting this column together and they approved the final version.

We are also putting together a factsheet with the help of DLA Phillips Fox on the Department of Labour's (now Ministry of Business, Innovation and Employment) quad bike guidelines, explaining farmers' obligations under the Health and Safety in Employment Act 2012 and the guidelines to ensure they are operating a safe workplace for both themselves and their employees. This includes conducting pre-operation checks before riding and ensuring their bikes are in reliable working condition by undertaking regular maintenance checks.

CASE NUMBER
CSU-2011-DUN-000112
2012 NZCorC 13

CIRCUMSTANCES

The deceased, a farm worker, died at Pedlor Grange Farm in Te Anau. While entering the chamber of the baler with which he was working to clear a blockage or effect repairs, the deceased was crushed by the operation of a baler door. Entering the baler chamber, the deceased did not ensure that the baler was made safe. He either triggered the sensor plate or for some other reason the baler door closed on him causing the injuries, which proved fatal.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that the deceased was an experienced baler operator. He had received training in the operation and maintenance of the baler and had several years' experience. He was known by his employer and by his wife to be safety conscious and always willing to take advice. The deceased was provided with a copy of the safe operations manual for the baler, which emphasised several intermediate steps to be taken prior to entering into the cavity. It is clear that sufficient manual and electronic controls are available to ensure that operators are working on the inside of the baler.

The Coroner commented that in furtherance of his role to make recommendations or comments to ensure that the circumstances of the death are not repeated, he raised the question whether the existence of such manual controls, which incorporate the human element, can be eliminated. The Coroner observed that it may be possible to create a failsafe device to ensure that the baler cannot operate, and the door cannot close in circumstances that applied during the investigation by the deceased.

In recognising that it is often impractical to ensure that experienced and trusted employees such as the deceased do not work alone, the Coroner observed that there are often advantages in more than one person being involved in a decision-making process. If another employee had been present when the problem (whatever it was) with the baler was first noticed, the other person may have urged greater caution on the deceased or physically checked with him the fact that the baler was made safe.

The Coroner recommended that a copy of the finding be forwarded to the Department of Labour (now Ministry of Business, Innovation and Employment), to Federated Farmers and to the manufacturers and suppliers of the Vicon baler. The finding should be used to draw public attention to the tragic circumstances of this death to ensure that these circumstances are not repeated. All those working with machinery ought to follow carefully and explicitly the safe operating procedures established. Employers of such persons ought to reinforce with employees the absolute

need to follow safety protocols. Consideration ought to be given to the possibility of employees in such circumstances as those facing the deceased be supported by the attendance of another employee to check safety protocols.

The Coroner further recommended that a copy of this finding be forwarded to the manufacturers and suppliers of Vicon balers to draw to their attention the circumstances of this death. The manufacturers could learn from the narrative and investigate whether or not the installation of a further failsafe mechanism is possible. The computer may be able to be programmed to ensure that certain activities or actions, cannot take place if the 'safety tap' is not turned to off.

Response from the Ministry of Business, Innovation and Employment (formerly Department of Labour)
The Ministry provided the following response to the Coroner's recommendation:

Our staff have used this example in their sector engagement work with industry to assist the prevention of harm to the workplace. I have also registered your findings on the Ministry's database.

Case number
CSU-2011-HAM-000172
2012 NZCorC 2

CIRCUMSTANCES

The deceased died at Waikato Hospital. The cause of death was acute pulmonary thromboembolism, complicating thoraco-adbominal injuries suffered in a bulldozer accident. The deceased was working on a farm in Cambridge, clearing scrub, when his bulldozer rolled, trapping him between the bulldozer and scrub crusher. He was admitted to Waikato Hospital by ambulance. He underwent surgery, and was making slow progress in his recovery when he had an acute catastrophic cardiorespiratory deterioration. He died despite extensive attempts to resuscitate him.

In its report, the Department of Labour (now Ministry of Business, Innovation and Employment) commented that it may have been prudent for the deceased to have used the bulldozer to build a more stable platform upon which to position it prior to commencing the gorse crushing operation.

COMMENTS AND RECOMMENDATIONS

The Coroner stated that in view of comments made in the report concerning the benefits of ensuring a stable platform upon which to position the bulldozer, he considered this is something that the Ministry of Business, Innovation and Employment may want to give further consideration to, and may wish to publish some guidelines on best practice for the industry.

Response from the Ministry of Business, Innovation and Employment (formerly Department of Labour)
The Ministry provided the following response to the Coroner's recommendation:

The Standards Setting team has reviewed the Coroner's findings and have decided the most appropriate action is to incorporate the information into the review of the Approved Code of Practice for Operator Protective Structures (tractor section).

It is expected this review will occur during the current financial year.

Work-related (other)

CASE NUMBER
CSU-2008-HAM-000222
2012 NZCorC 3

CIRCUMSTANCES

The deceased died at Waikato Hospital on 5 April 2008. The cause of death was traumatic injuries due to an explosion. The deceased was one of eight fire fighters attending at a cool-store in Tamahere in response to a fire alarm, which had been triggered by a significant leakage of refrigerant. The fire fighters were unaware that the refrigerant was hydrocarbon-based and therefore highly flammable, and there was no signage warning them on site. As the fire fighters entered the plant room, an explosion occurred. The deceased died as a result of the injuries he sustained in that explosion.

COMMENTS AND RECOMMENDATIONS

The Coroner stated that as a matter of record, and in support of the recommendations made by the Department of Labour (now Ministry of Business, Innovation and Employment) and the New Zealand Fire Service for their own purposes, he endorses all the recommendations made by those two organisations.

The Coroner also made the following recommendations:

To the Institute of Refrigeration, Heating and Air Conditioning Engineers (IRHACE); the Climate Control Companies Association; all other personnel involved in the refrigeration industry; any training organisation or education provider involved in training refrigeration industry personnel.

- That the refrigeration industry develops best practice guidelines for the safe use of hazardous substances when used as refrigerants. Such guidelines should incorporate the Institution of Professional Engineers New Zealand practice note and AS/NZS 1677, as well as have regard to all relevant legislation. In particular, the guidelines should give clarity on the application of such regulations to refrigeration systems where any ambiguity exists.
- That the refrigeration industry develop and implement a registration system for industry personnel having responsibility for aspects of the industry with the potential for serious risk to life or property. An obvious example is refrigeration engineers designing and installing refrigeration systems capable of using hydrocarbon-based refrigerants, and people maintaining such systems.
- That any refrigeration industry group, or any other organisation or education provider involved in training industry personnel, specifically incorporate in its syllabus for refrigeration training reference to AS/NZS 1677, the safe use of A3 refrigerants (as classified in AS/NZS 1677.1:1998), and the interaction of the various regulations that apply to refrigeration systems.
- That the refrigeration industry representative groups publicise widely within the industry the lessons learned from this incident and the hazards involved in the use of A3 refrigerants, specifically referring to the failings by various parties identified in the DoL prosecutions brought as a result of this incident.
- That the refrigeration industry be more proactive in addressing its statutory health and safety obligations, particularly in relation to the use of A3 refrigerants.

To the Ministry of Business, Innovation and Employment (formerly Department of Labour)

- That consideration be given to whether gas suppliers and refrigeration engineers involved in the installation or handling of hydrocarbon-based refrigerants should be licensed.
- That consideration be given to implementing and enforcing a licensing and inspectorate regime for installations using hazardous substances posing a significant threat to life or property.

The Coroner commented that notwithstanding the inherent risks associated with their work, fire fighters are entitled to the same protection offered to all other visitors to a workplace by the provisions of the Health and Safety in Employment Act 1992. In addition, fire fighters are entitled to expect that a refrigeration plant complies with all of the relevant statutory regulations and industry standards, particularly those intended to ensure the safe operation of such plants.

It was the failure to comply with such regulations and standards that created the situation where the explosion occurred on 5 April 2008. It was also due to this failure that the deceased, and some of the other fire fighters with him, walked into Plant Room 1 totally unaware of the explosive conditions existing in that room at the time.

The Coroner commented: 'I trust that some good will come from the deceased's death; that the lessons learned from the incident, which resulted in his death, will be applied to the wider community, resulting in a safer environment for all personnel having to deal with industrial operations utilising hazardous substances'.

Response from the Institute of Refrigeration, Heating and Air Conditioning Engineers of New Zealand (IRHACE)

IRHACE issued the following press release, dated 23 March 2012:

We are pleased that the Coroner's findings are congruent with the HVAC+R industry submissions to the inquest into the death of [the deceased].

The industry trade associations, Climate Control Companies Association (CCCA) and IRHACE, are making progress following the incident.

The CCCA and the IRHACE, with support from five of six of the refrigerant suppliers (Cooling Supplies, Heatcraft, Patton Ltd, Realcold Ltd and Refrigeration Specialties Ltd), have established the Refrigerant Licence Trust Board (RLTB).

RLTB provides training and certification that enables HVAC+R practitioners to meet their legal compliance requirements under the HSNO Act and the Compressed Gas Regulations.

- We and the Department of Labour [now Ministry of Business, Innovation and Employment] have agreed to work on an industry code of practice covering the design, installation and maintenance of refrigeration systems.
- RLTB has been granted authorisation by the Commerce Commission for refrigerant suppliers to restrict the sale of refrigerants to purchasers who can demonstrate legal compliance with approved filler or handler test certificate or a refrigerant licence.
- The recent review of the refrigeration trade qualifications, carried out with the industry training organisation, Competenz, will be adding this requirement for specific training on the safe use of hydrocarbon refrigerants and will be included in the new version of the level 4, R&A Qualification.

As part of industry submission to the Coroner, CCCA and IRHACE recommended that practitioners in the HVAC+R trade should be registered like other trades (electricians, plumbers, etc). The Coroner has made a specific recommendation that registration of the refrigeration industry should be implemented due to the serious potential risk to life or property.

The industry is willing to work with the government to ensure suitable legislation is put in place to achieve this for the safety of all New Zealanders. We do not believe a voluntary (unlegislated) scheme will be successful and safety must be assured.

The use of hydrocarbon and other natural refrigerants is becoming more common with the phase out of CFC and HCFC refrigerants under the requirements of the Ozone Layer Protection Act. The natural refrigerants are more flammable and dangerous to the practitioner and the public. Training and competence assurance to use these new more dangerous refrigerants must be mandatory to ensure public safety is protected.

CASE NUMBER

CSU-2009-HAS-000048
2012 NZCorC 21

CIRCUMSTANCES

The deceased, the chief engineer on board the Australian-registered passenger ship Oceanic Discoverer, suffered crush injuries sustained during a fire and emergency drill. The vessel was berthed at the Port of Napier when the deceased became trapped in a watertight door after the master of the vessel closed watertight doors remotely from the bridge. The deceased's injuries occurred on 19 February 2009 and he died in Hawke's Bay Regional Hospital on 9 March 2009 from the injuries sustained in the incident.

COMMENTS AND RECOMMENDATIONS

The Coroner stated that a comprehensive investigation and report has been completed by members of the Transport Accident Investigation Commission. That report identifies issues relating to the design and operation of the relevant watertight door on board the Oceanic Discoverer, and the training of crew in the operation of that door. Relevant findings included:

- The watertight doors were set to close with a speed twice the maximum allowable under the International Convention for Safety of Life at Sea, which would likely have contributed to the deceased becoming trapped.
- The door operating handle protruding so far inside the watertight door space was an unnecessary design or installation feature that meant the deceased was not able to free himself when the door closed on him.

- The audible door closing alarm was not working after the incident. If it was not working at the time of the incident that could have contributed to the deceased becoming trapped in the door.
- The watertight doors had not been maintained and tested in accordance with the manufacturer's instructions and did not meet the performance standards required by the International Maritime Organization
- The watertight doors on the Oceanic Discoverer had an unexplained design or maintenance peculiarity where the door would begin to self-close even when in the local-control mode.
- The Commissioners made recommendations to the Director of Maritime New Zealand to address with the International Maritime Organization issues around rules, regulations and advice given to mariners for the operation of watertight doors, and also made recommendations to the manufacturer of the watertight doors to address possible design issues.
- Following the comprehensive investigation and report by members of the Transport Accident Investigation Commission, and to avoid unnecessary duplication, the Coroner did not consider that the holding of an inquest would elicit any information further to that disclosed by the investigations that have been conducted, nor serve any other useful purpose.

The Coroner endorsed the recommendations made by members of the Transport Accident Investigation Commission in their report Marine Inquiry 09-202.

CASE NUMBER

CSU-2011-DUN-000054
2012 NZCorC 14

CIRCUMSTANCES

The deceased died in the Talla Burn near the Millennium Track between Beaumont and Millers Flat, the cause of his death being drowning. When walking up the Talla Burn to take water samples, the deceased fell into and was swept away by the flooded river.

After the deceased had gone missing there had been difficulties in his father communicating his location to police communications. The information provided to the call taker about his location would not have been immediately apparent on maps. A further issue was that maps held by police communications had not been updated to include the very recent completion of the Talla Burn Power House.

COMMENTS AND RECOMMENDATIONS

The Coroner stated that there is little doubt that the Talla Burn was at that time in flood, and presented a hazard to the deceased. The deceased and his brother had agreed that neither would go up the Talla Burn to take samples when the river was in flood and that the deceased would not go up the river alone. This agreement was accepted by the Department of Labour (now Ministry of Business, Innovation and Employment) as being an appropriate analysis of workplace risks and a solution to mitigate those risks, but the agreement was not followed.

In retrospect, a more appropriate method to mitigate risk would have been for Talla Burn Generation Limited to have established a safer walking/scrambling track with ropes for security or steps or some other structures in the appropriate danger points. The Coroner accepts that any soil disturbance may have required Otago Regional Council (ORC) consent but this option to mitigate danger ought to have been explored.

When a company creates a plan to mitigate against a dangerous work practice, there is an obligation on an employee to follow such a plan. It is regrettable that the deceased, in his desire to obtain evidence of the compliance by the company with its obligation to ORC, omitted to follow the company's agreed safety protocols.

The Coroner stated that while he cannot recommend that all members of the public concentrate more on providing clear and concise facts to emergency services when support is requested, it is appropriate that police communications call takers are made aware of this. The Coroner's view of the responses, given by both call takers to the deceased's father, is that these responses are appropriate and professional.

The Coroner stated: 'The only enhancement I can suggest is that a person in the position of the deceased's father ought to have been reassured by the call takers, consistently and constantly, that, 'Help is on the way.' I understand that, in events of that nature, the call taker is immediately supported by others and, while engaging with the caller, has another (or others) in the Call Centre assisting in the passing on of information and with radio communication with police cars, helicopter rescue and other assets. The deceased's father was not reassured about this.'

The Coroner commented that what we now know is that neither the 'Millennium Track' nor the 'Talla Burn Power Station' nor the 'Tallaburn' are marked on police communications maps. The Coroner observed that the Millennium Track is a local term used to describe the road on the map as the Beaumont Millers Flat Road. Logic tells us that this description has been in existence for at least 11 years. The Coroner commented that while it is unknown to him how a description in common use gets to be included in police communication maps, he asked that the Commissioner of Police, to whom a copy of the finding was to be sent, address this issue.

Another important matter that would have assisted both the deceased's father and the police communications call taker would have been a 'Rapid Number' for the Talla Burn Power Station. The Coroner stated that he will send a copy of the finding to Local Government New Zealand. A solution to the problem might be as simple as ensuring that a Rapid Number is ascribed to any building for which a building permit is issued by a local authority.

The Coroner further commented: 'As I have previously stated, it is appropriate for the police officer, in control of an incident or search, from time to time, to be objectively appointed and, when ceasing his/her responsibilities to ensure that a replacement is appointed. It is the responsibility of that controller to consider all assets available, including experts who can advise on matters in accordance with their speciality. Although I accept a cost factor must be considered when deploying assets, this should not be the dominating factor and decisions should be made objectively, taking into account all information available'.

The Coroner recommended that a copy of the finding be sent to the Commissioner of Police in order that his above comments be considered.

The Coroner also recommended that a copy of the finding be sent to Local Government New Zealand so that his suggestion of the inclusion of a Rapid Number as an outcome of a building permit consent application be considered.

Response from NZ Police

NZ Police provided the following response to the Coroner's comments and recommendations:

'Please note actions have been taken to rectify the communication issues around the Millennium Track and Talla Burn power station areas. As of 1 March 2012, Millennium Track has been added as a searchable road name in the mapping systems that are used in the police communication centres.'

Acronym glossary

Acronyms used in this Recommendations Recap	
ACC	Accident Compensation Corporation
ACRP	Auckland Central Remand Prison
ARWCF	Auckland Regional Women's Corrections Facility
CARM	Centre for Adverse Reactions Monitoring
CCCA	Climate Control Companies Association
CCTV	Closed-circuit television
(H)CFC	chlorofluorocarbon (Hydrochlorofluorocarbons)
CT scan	aka CAT scan
CYF	Child, Youth and Family
CYMRC	Child and Youth Mortality Review Committee
DHB	district health board
CMDHB	Counties Manukau District Health Board
NMDHB	Nelson Marlborough District Health Board
SDHB	Southern District Health Board
DoL	Department of Labour (now Ministry of Business, Innovation and Employment)
ECG	echocardiogram
EPS	Emergency Psychiatric Services
FMC	Federated Mountain Clubs (of New Zealand)
GP	General practitioner
HDC	Health and Disability Commissioner
HVAC+R	heating, ventilation, and air conditioning + refrigeration
ICU	Intensive care unit
IPENZ	Institution of Professional Engineers New Zealand
IRHACE	Institute of Refrigeration, Heating and Air Conditioning Engineers of New Zealand
kmh	kilometres per hour
LGNZ	Local Government New Zealand
MEMP	Mount Eden Men's Prison
MHAU	Mental Health Admission Unit
MYD	Ministry of Youth Development
NARA	New Arrival Risk Assessment
NPC	National Poisons Centre
NZTA	New Zealand Transport Agency
ORC	Otago Regional Council
PCLC	prisoner cell and location checks
PSOM	Prison Services Operation Manual
RLTB	Refrigerant Licence Trust Board
VPS	voluntary protective segregation
VSA	volatile substance abuse

Index

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