

OFFICE OF THE CHIEF CORONER OF NEW ZEALAND

Recommendations Recap

A summary of coronial recommendations and comments made between 1 April–30 June 2012

ISSUE 3

Coronial Services of New Zealand Purongo O te Ao Kakarauri

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Disclaimer This publication have been produced by research counsel of the Office of the Chief Coroner, with the best efforts made to accurately summarise the circumstances, findings and recommendations made by the coroner in each case. Despite this, it should be noted that they are not exact replications of coronial findings. The original finding should always be accessed if it is intended to refer to it formally.

Please also note that summaries of circumstances and recommendations following self-inflicted deaths may be edited so as to comply with restrictions on publication of particulars of those deaths, as per section 71 of the Coroners Act 2006. Similarly, the contents of summaries and recommendations may be edited to comply with any orders made under section 74 of the Act

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 *Recommendations recap* features 44 recent coronial cases where recommendations have been made. These final findings were released by a coroner between 1 April and 30 June 2012. It has been encouraging that the Office of the Chief Coroner has received an increasing number of responses to coronial recommendations in recent months.

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Recommendations

Adverse effects or reactions to medical or surgical care

CASE NUMBER

CSU-2009-WGN-000434 2012 NZCorC 47

CIRCUMSTANCES

The deceased died from bronchial pneumonia. The deceased had been living at the Riddiford Hostel, Newtown, a hostel run by the Capital and Coast District Health Board (CCDHB) but latterly he was of no fixed abode. It appeared that there had been some problems between him and the management of the Riddiford Hostel and that he had been evicted as a result of this. In the weeks preceding his death, he had been seen by a number of clinical specialists and agencies.

COMMENTS AND RECOMMENDATIONS

The coroner was satisfied that the health practitioners concerned with the care of the deceased met all acceptable standards. However the coroner commented that it was clear that the deceased's health had badly deteriorated over the last weeks and that as he was a resident at the CCDHB hostel, the issue of his diarrhoea should have highlighted that this man had a medical condition that needed attention.

The coroner also commented that he was pleased that there is a corroborative inter-agency group that is looking at assisting the homeless. He stated that it is extremely important to see that this continues for many social reasons, not the least being the welfare of people like the deceased but also the wider public as this death occurred at the height of the H1N1 pandemic scares going on at that time.

CASE NUMBER

CSU-2012-AUK-000394 2012 NZCorC 71

CIRCUMSTANCES

The deceased collapsed and died at her home from heart disease, which was possibly caused by medications properly prescribed. She received regular health visits as she had previously suffered a stroke and needed ongoing care. It is not possible to ascertain to any degree of certainty what caused the development of her myocarditis (an inflammation of the heart muscle).

COMMENTS AND RECOMMENDATIONS

Given the potential for the deceased's prescribed medications to have caused or contributed to her heart disease the coroner directed that a copy of this finding and the post mortem report be forwarded to CARM (Centre for Adverse Reactions Monitoring) for their consideration.

CASE NUMBER

CSU-2010-DUN-00456 2012 NZCorC 75

CIRCUMSTANCES

The deceased died at his home, the cause of his death being acute respiratory failure, due to an advanced stage of duchenne muscular dystrophy. As a result of the progressive muscular wasting and weakness caused by his illness, the deceased was fully dependent on non-invasive ventilatory support (his BiPAP machine) and was unable to tolerate more than one or two minutes off the machine.

At about 3.10 am on the morning of his death PowerNet Limited was advised that there was a power outage at the Palmerston substation. PowerNet was not aware that the deceased required a continuity of electrical supply for medical purposes. No efforts were made by PowerNet to advise vulnerable consumers of the outage. During the power supply outage the BiPAP machine, used by the deceased to breathe, failed to operate. Shortly before 4 am the deceased's parents were awoken by the sound of an alarm on the machine that operates when the power is cut however by the time they had awoken it was too late and he could not be revived.

COMMENTS AND RECOMMENDATIONS

The coroner commented that while he is satisfied that there was no fault or responsibility with either Contact (the retailer) or PowerNet (the line provider) this death has identified some factors that require further investigation. The deceased's mother understood that the medical dependency on electricity of her son had been registered with Contact, their retailer. The PowerNet records do not show this. The coroner directed that this difficulty be drawn to the attention of the Electricity Authority in his recommendations.

The Southern District Health Board (SDHB) said NIV (non-invasive ventilation) ventilators with an inbuilt rechargeable battery were available for portable home use.

The SDHB's review panel made the following recommendations:

- That consideration be given to the purchase of a sufficient number of ResMed Power Stations for patients showing signs of increasing dependence on NIV but not yet requiring full life support. If the ResMed Power Stations do not provide adequate safety margins, consideration of life support grade ventilators on a case-by-case basis is recommended.
- That a review of NIV equipment requirements across the SDHB is undertaken in accordance with best practice recommendations.
- That there be consideration of establishing a global document and patient information sheet as adjunct to any service-specific information to ensure compliance with the Ministry of Health and electricity authorities' recommendations.
- That consideration should be given to the development of SDHB NIV guidelines, including a categorisation system to assist with determining the allocation of non-invasive ventilatory equipment.

The coroner adopted the recommendation in the *Summary of the Southern District Health Board* event review summary. He recommended that the availability of non-invasive ventilation machines, with a battery backup, be provided for patients, such as the deceased, who require mechanical assistance to breathe when clinical circumstances dictate this for such patients.

The coroner directed that a copy of this finding be forwarded to the Ministry of Health to ensure that the recommendation is considered by all health boards.

CASE NUMBER

CSU-2009-AUK-001065 2012 NZCorC 90

CIRCUMSTANCES

The deceased died at North Shore Hospital. The cause of his death was pulmonary thromboembolism (PE). The PE was presumed to have arisen from a deep venous thrombosis (DVT).

The deceased had been admitted to hospital after being injured in a crash on a quad bike. He was able to walk after the crash and was transported to a local medical centre by a friend and then transferred to North Shore Hospital. A chest x-ray showed that he had fractured ribs, a fractured clavicle and possible lung bruising. The deceased was considered to be making good progress. He was being treated with oxygen therapy, pain relief and regular physiotherapy. He was given compression stockings to wear on his legs. The clinical records show that he was assessed several times by the hospital's pain team and repeated note is made of the severe pain he was experiencing, particularly when trying to move.

Two days after being admitted the deceased was assessed by a physiotherapist. He described ongoing pain in his left ribs, particularly on movement, which was inhibiting his ability to take deep breaths and cough. The physiotherapist assisted the deceased to stand up and transfer to a chair. Immediately after this transfer she noted that his oxygen saturations had dropped. She increased the oxygen in order to stabilise saturations. His saturations went up and remained stable. The physiotherapist immediately reported her concerns about his acute de-saturation on mobilising to nursing staff and to the registrar.

The next day the physiotherapist again attended the deceased. She reviewed his records, which included instructions from the registrar that the deceased should be encouraged to mobilise. His observations had been stable, his chest x-ray was essentially normal, and it was considered that his oxygen saturation levels were due to pain impairing his breathing. The deceased said that he was feeling improved, although movement remained painful. Despite the pain, he wanted to get up for a walk. He began his walk,

receiving oxygen via nasal prongs from a portable oxygen cylinder. However, after approximately four steps he said he was feeling light-headed and collapsed onto the bed. He was found to be not breathing and resuscitation was immediately commenced, but he did not respond.

COMMENTS AND RECOMMENDATIONS

The coroner found that the deceased's clinicians underestimated his risk of VTE (venous thromboembolism) and she accepted expert evidence given at inquest that his risk of VTE was not low. Expert evidence stated that the de-saturation that occurred during the physiotherapy session on 4 August was a clinical sign compatible with VTE, and in the expert's opinion the investigation undertaken (chest x-ray) was inadequate and not sensitive enough to detect or exclude VTE. The coroner accepted that the initial response by the deceased's doctors was reasonable but found that they needed a higher index of suspicion as to whether the episode was indicative of a VTE when no new or obvious cause for the dip in his oxygenation on 4 August was identified.

The deceased was appropriately prescribed compression stockings and the coroner accepted the evidence that this reduced the risk of him forming a proximal DVT or suffering a PE. She also accepted the evidence, which was uncontested, that appropriate use of heparin in addition to compression stockings would further have reduced, although not eliminated, the risk. All clinicians whose evidence was considered in the inquiry agreed that there is an increased risk of bleeding with heparin and that it must be used with caution in trauma patients. The coroner accepted that it was an appropriate decision not to commence the deceased on heparin when he was first admitted as his condition needed to be carefully assessed and his stability confirmed. However, expert evidence was of the view that the deceased ought to have started on heparin soon after the first 24 hours and the coroner accepted these opinions. In making this finding the coroner noted that the evidence is that even the optimal use of pharmacological prophylaxis does not prevent 100% of VTE and that the deceased may have had the thrombosis present from early in the course of his admission.

There was no documented policy for preventing VTE prophylaxis at Waitemata District Health Board (WDHB) at the time the deceased was in hospital. Since his death, WDHB began work on a VTE initiative, including an updated risk assessment tool, audit and education. Also, at a national level members of WDHB's haematology service were actively involved in a steering group for VTE prevention (VTE NZ).

WDHB has completed work on the VTE initiative introducing a hospital 'thromboprophylaxis risk assessment tool' in early June 2012.

WDHB stated that its initial goal is for 90% of adult medical and surgical admissions to hospital to have a VTE risk assessment completed within 24 hours of admission. The assessment is to be recorded in the patient notes and the results are to be audited. A *Thromboprophylaxis prescription guide* was released at the same time.

The coroner commended the WDHB for the introduction of these tools. She stated that they are an important safety initiative, the aim of which is to ensure that all medical and surgical patients in WDHB hospitals are appropriately assessed for risk of VTE, both at the time of admission and on a regular ongoing basis, and that decision making about appropriate treatment is instigated based on the assessment. The goal is to try and reduce the risk of deaths from VTE in future. In light of this initiative, the coroner stated that no recommendations to address the issues about VTE risk assessment and management identified in this inquiry were required.

The coroner further said that comment was made in her findings about the lack of documentation in the deceased's clinical record in relation to assessment for VTE risk, and the reasons for the clinical decision to prescribe the deceased Clexane. She stated that 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 patient receives good care, and continuity of care. Accurate clinical records also assist inquiries when questions are raised about what occurred in relation to a patient's care and management. The coroner drew the issues about the standard of the deceased's clinical record to WDHB for it to follow up.

CASE NUMBER

CSU-2011-DUN-000101 2012 NZCorC 95

CIRCUMSTANCES

The deceased died at the house he shared with others and caregivers. The cause of his death was cardiac arrhythmia, complicated by severe coronary artery atheroma in association with toxic levels of the drug Clozapine. The deceased had been a long-term patient of Southern District Health Board mental health services and had been prescribed Clozapine, an anti-psychotic, in 2001 to treat his psychiatric illness. Clozapine allowed the deceased to be managed in the community and to move to less supervised accommodation. Toxicology results showed Clozapine was detected in his blood at a concentration of eight milligrams per litre.

In the inquiry Environmental Science and Research (ESR) referred to seven cases of sudden death where Clozapine was the only drug detected. Levels were between 1.3 milligrams per litre and 13.5 milligrams per litre. This is consistent with the literature reports of intentional fatal Clozapine overdoses in concentrations of 1.2, 5.4, 8.4 and 8.8 milligrams per litre. The deceased did not have access to unauthorised medication and he was only taking medication as prescribed and at the appropriate intervals. Expert evidence pointed out that some of the deaths identified by ESR may have been by deliberate overdose and some may have been in individuals, similar to those of the deceased, taking prescribed and monitored doses.

COMMENTS AND RECOMMENDATIONS

The coroner was satisfied from the evidence that the prescription of Clozapine for the deceased was in the appropriate dosage. He stated that he had no evidence that would satisfy him that there was anything untoward about the administration of the medication. He was told, and must accept, that the doses were closely monitored by caregivers and given as prescribed and indicated. The coroner commented that what the evidence does do is show what can only be described as a build-up of toxicity of Clozapine.

The coroner recommended that a copy of this finding be sent to CARM (Centre for Adverse Reactions Monitoring) for its information and so it can take any appropriate action.

CASE NUMBER CSU-2011-DUN-000142 2012 NZCorC 26

CIRCUMSTANCES

The deceased died at her home, the cause of her death being a ruptured AAA (abdominal aortic aneurysm). St John Ambulance were called to the deceased's home by family members after she collapsed on the floor, however she could not be resuscitated. The paramedic in attendance established that the deceased had a history of hypertension and that the day before she had attended and been released by Dunedin Hospital.

The deceased had been taken to the Dunedin Public Hospital Emergency Department on 24 March 2011 complaining of lower back pain. She was seen at the Emergency Department. Blood samples were taken and an x-ray was completed. Abdominal examination of her was difficult due to the fact that she was morbidly obese. She was prescribed pain relief and released home. The next morning she continued to complain of unwellness and collapsed. The day after her death a consultant radiologist conducted a mandatory review, as required by Southern District Health Board (SDHB) of all Emergency Department x-rays and recognised the AAA.

COMMENTS AND RECOMMENDATIONS

The coroner stated that a comprehensive review of the admission of the deceased to Dunedin Hospital and her release was undertaken and the SDHB report was provided to the court as an exhibit. The report stated that Dunedin Emergency Department has a pro forma for dealing with back pain, which has several 'red flags' to help ensure dangerous causes of back pain are not missed. The pro forma does not include a leaking AAA as part of the diagnosis as it is a rare cause.

The report suggested the following methods of improvement to better diagnose cases of AAA:

 The formal diagnosis of the AAA was made by a consultant radiologist. Radiologists are experts at reading everything in an x-ray. Other clinicians with less experience and training find it difficult to reach the appropriate skill level. The consultant radiologist recognised the problem – the recognition was too late.

- The report identified methods to achieve the desired outcome of faster reporting.
- The report was able to identify a previous case at Dunedin Hospital Emergency Department where the patient later died from a leaking AAA. The previous Health and Disability Commissioner, who investigated the death, made recommendations.

The coroner recommended that a copy of the finding, and the circumstances of the death it describes, be used by SDHB for education and training purposes.

CASE NUMBER

CSU-2008-WGN-000028 2012 NZCorC 37

CIRCUMSTANCES

The deceased, a three month old infant, died at her home address on the 1st of September 2007 from Sudden Unexpected Death in Infancy (SUDI) with an antecedent cause of moderate bronchopneumonia. The baby had a normal birth and had been well cared for during that time by her midwife. After birth she progressed well, but by the middle of August 2007, she had become noticeably unwell and was taken to the Waitangirua Health Centre where she was initially seen by a doctor there. Despite medical intervention and having further appointments both at Kenepuru Hospital's Accident and Emergency Department and at the Waitangirua Health Centre (seen on this occasion by a different doctor) the baby remained unwell and died three days later.

The baby's mother believed that a different outcome may have occurred if her baby had been admitted to hospital for observation, as infants can deteriorate fast. She was also critical about the lack of information that she had been provided with by the doctors regarding the medications the baby was taking. She didn't know if she was to continue with the existing medication in conjunction with the later prescribed medications and she felt that there was a distinct lack of communication.

COMMENTS AND RECOMMENDATIONS

The coroner commented that having reviewed all of the material and heard the evidence it would appear that at the time the baby was seen by the doctor at Waitangirua Health Centre, given the history of this baby, the doctor should have been pro-active and arranged for the baby to be admitted to hospital.

The coroner stated that had the doctor still been practising in New Zealand, he would have recommended that the doctor receive more formal training in paediatric medicine. However it is understood that the doctor now resides and practises in Australia.

Aviation accident

CASE NUMBER

CSU-2009-CCH-000174 2012 NZCorC 40 CSU-2009-CCH-000175 2012 NZCorC 41

CIRCUMSTANCES

Two individuals, an aircraft pilot and a tourist from the Netherlands, died at Gibbs Hill, Tasman district from multiple injuries sustained in a microlight crash.

The two deceased were the pilot and lone passenger of an Airborne Windsports Edge XT-912 microlight aircraft registration ZK-DGZ. The aircraft crashed on Gibbs Hill, Tasman district while on a commercial scenic flight over the Abel Tasman National Park. It is likely the pilot lost control when he encountered turbulent conditions while flying over Gibbs Hill. As a result of that loss of controlled flight, the microlight then encountered aerodynamic loads in excess of the normal design envelope loads. Structural failure then occurred in-flight with the rear leading-edge wing spar suffering a downwards failure 1.43 metres from the wing tip. The microlight then broke up in flight causing it to crash. While turbulence was forecast and predictable (with 15 knot winds likely to create some turbulence over Gibbs Hill), the severity of the turbulence that existed while ZK-DGZ was over Gibbs Hill was not forecast and was not predicted by the pilot.

COMMENTS AND RECOMMENDATIONS

The coroner stated that at the time of the crash on 9 February 2009, the operation of the company trading as Tasman Sky Adventures was unregulated. There was no provision under the Civil Aviation Rules, as then in place, for the operation to be regulated. Operations such as those conducted by the company are now regulated following the introduction of Rules Part 115. Rules Part 115 for microlights has now introduced requirements:

- for operator certification
- for pilots of microlights operated for hire or reward to hold commercial pilot licences (aeroplane) or commercial pilot licences (microlight)
- for microlights to be manufactured to design standards acceptable to the director of Civil Aviation
- for microlights to be maintained to standards of the manufacturers' maintenance programmes or approved programmes.

The coroner commented that it is unlikely that the earlier introduction of Part 115 of the Civil Aviation Authority (CAA) Rules would have avoided these deaths. It appears that the pilot licence held by the deceased and the permit issued to ZK-DGZ by the CAA met existing requirements. While the recording of maintenance undertaken on the microlight did not meet the requirement of (now in force) Rule 115, the coroner was satisfied this did not cause or contribute to the crash.

However, the coroner stated that these deaths may not have occurred had commercial operations of microlights been prevented until the operation was regulated under Part 115. He considered it was inappropriate for a commercial microlight operation to operate without regulation and direct oversight and auditing of that operation by CAA. He stated that these deaths would have been avoided had ZK-DGZ not been placed in a situation where it encountered aerodynamic loads in excess of the normal design envelope loads.

The wind above Gibbs Hill at 600 metres was estimated by a consultant meteorologist at MetService to be 35 to 40 knots at 2pm. To avoid turbulence or downdrafts, strong weather conditions should be avoided. The pilot flew ZK-DGZ into weather conditions over Gibbs Hill that created turbulence or downdrafts beyond the capability of ZK-DGZ. The possibility of those conditions arising was alluded to in the MetService local area forecast, with turbulence more specifically about and east of the ranges. While Gibbs Hill is considered to be sufficiently distant from the ranges so as not to be affected by turbulence from those ranges, the stronger winds would probably extend to Gibbs Hill. The coroner commented that it appears that the pilot did not encounter severe turbulent conditions or downdrafts until he reached Gibbs Hill, sometime after he had taken off in relatively calm conditions. With earlier uneventful flights, photographic evidence suggesting that only approximately 40 seconds to one minute before the crash ZK-DGZ was not experiencing turbulence at that time, and white caps that may not have been inconsistent with the forecast 15 knots winds at 1000 feet, there may not have been indicators available to the pilot to identify the presence of severe turbulence or downdrafts. The inversion layer that the expert said existed, which might explain the severely turbulent conditions at Gibbs Hill, was not forecast and was invisible. It was therefore not a factor that the pilot could have considered.

The coroner commented that the pilot appears to have been caught unawares by the conditions he encountered. He did not make any distress radio call. He did not land safely. He does not appear to have altered his usual flight route. ZK-DGZ appears to have overflown Gibbs Hill rather than avoided the line of hills. The ELT (emergency locator transmitter) on board ZK-DGZ was not activated. Had the two deceased survived the impact, the activation at or following impact of the ELT would have immediately alerted emergency services to the fact of and location of the crash. and more promptly provided medical assistance. It appears the ELT had to be activated manually, and it was not gravity force or impact activated. Once the microlight crashed, there was nothing that could have been done to manually activate the ELT or prevent these deaths as it appears they died on impact. It would have been preferable if ZK-DGZ had an impact activated ELT, which could also be activated manually. In the absence of appropriate activation of an ELT when the aircraft grounds, communication relies on radio or cell phone contact or waiting until the aircraft is overdue with the system of flight following at Tasman Sky Adventures. If the pilot or passenger attempts radio and cell phone contact (assuming it has not been damaged at impact), there is reliance on direct line of sight for radio contact, and cell phone coverage for cell phone contact. Neither is guaranteed depending on where the craft grounds. There is also no guarantee someone will be at the company's base to receive a radio call. The company now has in place a text messaging system for flight following when the base is not staffed.

The coroner considered that for a commercial operation where passengers are carried for hire or reward, an adequate flight following system is required. Rather than relying on an ELT, active tracking devices that send position reports at regular time intervals are preferable. If the unit stops transmitting upon impact, the transmission history will provide the last known location of the aircraft.

The deceased pilot was an experienced microlight pilot who also held a commercial pilot's licence. He was familiar with the area. He was usually able to read conditions and adjust plans accordingly. The coroner was concerned that ZK-DGZ encountered flight conditions outside of the manufacturer's flight envelope specifications, when within a minute beforehand the pilot was photographed in a relaxed flying control position.

The coroner stated that the XT-912 is a light, open cockpit, weight shift, flex-wing aircraft. It has a limited flight envelope. The gap between stalling speed and maximum permissible speed is not great. Negative g-force application (the type that may be encountered in turbulence) is prohibited. The general manager of the General Aviation Group of the CAA stated at the inquest that very light aircraft have to be treated with huge respect, because it is easy to exceed their limitations. The British Standard considered use of the microlight inappropriate for the purposes of public transport or aerial work (other than aerial work for flight training). The equivalent Canadian Standard stated that, in addition to private recreational use, a basic ultra-light aeroplane may be used for hire and reward for pilot flight training (but not for any other commercial aviation operation or aerial work).

The coroner commented that while a microlight is a basic low-performance aircraft – not designed to carry more than two passengers, which meets low momentum parameters acceptable to the director of CAA – not all microlights are the same. Some microlights are more powerful and faster than some standard category aircraft, which operate under the direct supervision of CAA.

The coroner considered that, in the interests of customer safety, consideration should be given as to whether only those microlights that meet the higher standards required for standard category aircraft should be used for the carriage of passengers for hire or reward. Microlights that do not meet that higher standard may well meet the needs of the private recreational pilot. The licensing of pilots and overseeing of maintenance of microlights for private recreational flights could remain under the supervision of certified associations under Part 115, but higher standards should be required for commercial microlight operations carrying passengers for hire or reward.

As both Britain and Canada considered that it was not appropriate to use microlight aeroplanes for the purpose of public transport or aerial work, consideration should be given to that restriction applying in New Zealand.

For commercial operations, the use of active tracking devices that send position reports at regular intervals or impact-activated ELTs that can also be activated manually may provide the most immediate notification of a crash, and enable prompt and accurate search and rescue.

The coroner directed the following recommendations to the Ministry of Transport and the CAA:

- That (other than flight training) consideration be given to permitting only those microlights that meet the higher standards required for standard category aircraft be used for the carriage of passengers for hire or reward.
- That consideration be given to whether all microlights carrying a passenger for hire or reward should be equipped with a ballistic emergency parachute system.

- That all microlight operators conducting flights for hire or reward publicly display the metrological and wind criteria at which their activities would cease.
- That consideration be given to whether, in flex-wing microlight aircraft, both lap and shoulder harnesses should be worn at all times during flight by both pilot and passenger, or whether fixed harnesses or inertia reel shoulder harnesses are more appropriate.
- That consideration be given to whether for commercial adventure aviation operations the use of active tracking devices and/or impact-activated ELTs should be mandatory.

Care facilities

CASE NUMBER

CSU-2011-AUK-000652 2012 NZCorC 38

CIRCUMSTANCES

The deceased died from injuries he sustained after he fell down the internal stairs of his residence and struck his head on the floor at the foot of the stairs. Following the fall, he made his way back to his room where he collapsed on the floor.

The deceased lived in a residence in Tawa Street, One Tree Hill, run by Idea Services Ltd for people with intellectual disabilities. He had lived there for the last six years. On the morning of 30 May 2011, the caregiver who had been at the residence overnight was going about her duties when she noticed a pool of blood on the floor at the bottom of the stairs. She found the deceased in his upstairs room on the floor lying on his side facing the bed. He had blood all over his clothes, swollen eyes and his nose was bleeding. He was breathing and groaning but not talking. An ambulance was called and resuscitation efforts were commenced at the hospital. His injuries were not considered survivable and he died in the emergency department of Auckland City Hospital.

COMMENTS AND RECOMMENDATIONS

After this death, Idea Services Ltd undertook its own internal inquiry, in part to establish whether there were safety issues at the residence that needed addressing. The report of the inquiry formed part of the evidence for the coroner's inquiry.

The report found that there was limited organisational guidance available to staff in relation to identifying and managing risks associated with falls. It recommended that Idea Services Ltd develop guidelines to inform staff in relation to falls management, including identification and management of potential harm from falls and post-fall response/management.

The report also stated that the staff working at the residence understood that the light in the stair area where the deceased fell should be left on all the time – although this was not formally recorded. Before retiring for the night the staff member on duty routinely ensured that the light was on. However, staff members reported during the subsequent inquiry that they often had to turn the light on again if they woke at night, as it was regularly turned off by residents. The report noted that the light switch is at the top of the stairs and requires a person turning it on and off to stand on the edge of the top step. The report recommended moving the light switch to minimise potential falls or harm when using the stairs. It also recommended that changes be made to ensure that the area immediately surrounding the stairs is illuminated at all times.

The report further recommended installing a second handrail on the stairs, noting that although there was already a handrail on the stairs, a second hand rail would improve safety for the residents. It further recommended that all Idea Services Ltd properties in the Cornwall/South Auckland area with internal and/or external stairs be reviewed to ensure that they are safe for user's needs and that the same be done for all properties rented or leased by Idea Services Ltd.

The coroner commented that stairs are inherently dangerous and are places where people have accidents. There was no particular evidence that the deceased was unsafe using the stairs and he was able to negotiate them unaided and had been doing so for the six years he had lived at the house. He was known to wander at night, but had never hurt himself in doing so. He had arguably become a little frailer in the months before his death – in part because he had a fractured arm and in part because of his recently identified heart disease. He had had two episodes of fainting or faintness since the heart disease had been diagnosed. However, no medical advice had been given to his caregivers that he was at particular risk of fainting or falling following diagnosis of the heart condition – the fainting and faintness were thought to be discrete episodes.

The coroner stated that Idea Services Ltd responded promptly and proactively to this death, conducting its own inquiry to identify any risks or potential risks for its clients. Several recommendations aimed at minimising the risk of falls on the stairs in the house the deceased lived in and more generally, in houses owned, leased or rented by Idea Services Ltd were made as an outcome of the internal inquiry conducted.

The coroner commended Idea Services Ltd for its approach and did not consider that extra recommendations were required. She considered that the recommendations in the report, if implemented, will assist to minimise the risks associated with falls on the stairs at the house where the deceased lived and at other Idea Services Ltd's properties.

The coroner recommended to Idea Services Ltd that to the extent that it has not already done so, it implement the recommendations made in the internal report into this death.

Deaths in custody

CASE NUMBER

CSU-2010-DUN-000364 2012 NZCorC 63

CIRCUMSTANCES

The deceased, a remand prisoner, died at Otago Corrections Facility (OCF) in circumstances indicative of suicide. He was facing multiple stressors with a history of drug addiction and had a recent operation on his arm which caused chronic pain. His family expressed concerns about a failure in care and protection offered at OCF and a failure to provide appropriate medical support. In particular, his family was concerned with failures by OCF to administer medication that has been prescribed by his GP at the appropriate times. In particular Tramadol, a drug he had been prescribed, was not administered to him when it ought to have been due to staff shortages.

A toxicology test at autopsy determined that the deceased had likely consumed cannabis in the period immediately prior to his death. Notes left by him confirmed his mental fragility, although the fact that he was depressed was well recognised by his family. His sister had telephoned the prison in reference to family concerns about his mental state. Concerns had also been expressed through the prison chaplaincy service to the effect that he was vulnerable. These concerns had not been recorded or acted on by OCF.

COMMENTS AND RECOMMENDATIONS

The coroner commented that although he is in no doubt as to the professionalism and good faith of the doctors treating the deceased, the environment that exists at OCF compromises their ability to provide appropriate care, if, for example, medications are not dispensed as instructed or if the doctors do not receive information that a prisoner's presentation has changed.

The coroner was concerned that information relating to the deceased's mental state was made available to OCF by a telephone call from a family member. Whether the family member knew the severity of the mental state faced by her brother is unclear but at least she passed this information on to OCF management. The coroner commented that it is a matter of regret that this information was not recorded, disseminated and acted upon.

The coroner stated that he also heard of concerns expressed through the prison chaplaincy service to the effect that the deceased was vulnerable. Unfortunately there appears to have been no gathering of this intelligence and arranging for it to be transferred to the OCF Health Centre. The coroner commented that the fact that the deceased had consumed cannabis, probably in the period immediately prior to his death, and almost certainly since his admission to OCF is also of concern. He accepted that the possession, and use, of the drug cannabis at OCF is unusual as well as being illegal. The coroner commented that the contribution of cannabis to his state of mind will never be able to be accurately measured. The coroner was advised that cannabis can variously be either a stimulant or a depressant and, when taken in conjunction with other drugs, it may have been a significant contributor to the deceased's mental state.

The coroner commented that the deceased's injured arm was creating chronic pain. A mix of medications prescribed by his GP to combat this pain would appear to have been working moderately well when he was admitted to OCF. A trial of other pain relief was not as effective as he had hoped and of particular concern is the fact that the most effective pain relief, Tramadol, was prescribed but was unable to be delivered due to 'staff shortages.'

The legislation governing care of prisoners in custody is *Medical treatment and standard of health care*, section 75, Corrections Act 2004:

- A prisoner is entitled to receive medical treatment that is reasonably necessary.
- The standard of health care that is available to prisoners in a prison must be reasonably equivalent to the standard of health care available to the public.

The coroner stated that when he considered the facts of this death against the statutory provisions, he found that the time of delivery of appropriate pain relief medication was not the same as the time of delivery that would have been achievable in the community.

The coroner recommended that a copy of this finding be forwarded to the Chief Executive of the Department of Corrections. He stated that the causes and circumstances of this death have shown suboptimal care by OCF in two respects:

• The failure by OCF to deliver prescribed pain relief at a time deemed most appropriate by the clinicians.

• Two communications were made, by family and by the chaplaincy, expressing concerns to OCF as to the mental status of the deceased. This intelligence was not collected, recorded, reported or acted upon.

CASE NUMBER

CSU-2011-DUN-000173 2012 NZCorC 76

CIRCUMSTANCES

The deceased, then a prisoner, died at Invercargill Prison of natural causes. The cause of his death was acute heart failure.

The deceased had been on the run for six months and had not been taking his medication for a heart condition or keeping medical appointments. He had also continued with his lifestyle and habits of drug taking and cigarette smoking. When he was located by police and remanded in custody, an initial risk assessment deemed him as 'at risk' and he was placed on 15 minute observations and listed to see the medical officer. Due to his need to appear in court, the deceased did not see the medical officer on 19 April 2011 as scheduled. Because of the Easter and Anzac holidays, it proved difficult to create a suitable appointment for him with the medical officer for the prison.

During a routine prisoner check on the morning of 27 April 2011 corrections officers saw the body of the deceased through the peephole in the cell door. They entered the cell, commenced CPR and called for back-up assistance. The deceased had been dead for some hours before he was found.

COMMENTS AND RECOMMENDATIONS

The coroner commented that although, ideally, Department of Corrections (Corrections) ought to have ensured a medical appointment for the deceased during the 12 days he was in their custody, it is appreciated that the arranging of such appointments could have proved particularly difficult because of the additional security risk (flight risk) the deceased presented and because the period conflicted with statutory holidays. In acknowledging this, the time taken by Corrections to obtain a medical assessment for the deceased was sub-optimal and the coroner noted, with approval, the improvements suggested by Invercargill Prison health unit in this regard.

The coroner recommended that Corrections, who were to be sent a copy of this finding, consider and adopt, as far as possible, the recommendations included in the report of the Inspector of Prisons.

The coroner also recommended that Corrections consider further the methods to address the continual taking of illegal drugs by prisoners while they are in custody.

The coroner recommended that Corrections consider alternative strategies to ensure that prisoners who ask to see a medical practitioner are not frustrated in this request by issues such as statutory holidays, the need to attend court or similar. In saying this, the coroner acknowledged that evidence given at the inquest said that changes in the existing policy to address this issue have been instituted.

CASE NUMBER

CSU-2011-CCH-00030 2010- NZCorC 80

CIRCUMSTANCES

The deceased, a remand prisoner, died at Christchurch Men's Prison of self-inflicted injuries. After being arrested the deceased was assessed while in police custody. He was not considered to be at-risk although he had a suicide alert in the police system from 2006. This information was not sent to the prison receiving office or watch-house psychiatric nurse who had access to the deceased's psychiatric records from 2006.

The deceased was remanded in custody and when he arrived at Christchurch Men's Prison he underwent a risk assessment, which did not identify any concerns regarding his safety. His communications with corrections officers and fellow prisoners also gave no concern for his safety. Following the September 2010 earthquake there was a temporary reclassification that allowed the Te Ahuhu Unit to hold remand prisoners and other prisoners. As a result, the deceased was placed in a single-occupant cell in a low-security unit. During the night on 10 January, correction officers did the normal routine check of the prisoners by using their torches to look into the cell windows. The purpose of this check is only to check to see if there is a body on the bed and ensure that there is nothing untoward happening. Three of these prisoner cell and location (PCLC) checks were performed that night at regular two hour intervals. The deceased was found dead in his cell the next morning.

COMMENTS AND RECOMMENDATIONS

The coroner commented that there is a need for review of the prisoner cell and location check policy, as highlighted by the Chief Ombudsman, to better ensure the welfare of the prisoners. The first issue is whether the recent change in policy as to the frequency of prisoner cell and location checks is appropriate given the requirements of the Corrections Act 2004 to ensure the safe custody and welfare of prisoners. The new policy reduces the number of checks from every two hours after lock up, to two times, one between general lock up and the other randomly determined by central control between the hours of 11pm and 6am. The second issue is whether prisoner cell and location checks should be limited to establishing the prisoner's presence in the cell subject to nothing being noticeably untoward (as would appear to be the practice at Christchurch Men's Prison), or whether the checks should establish the prisoner's well-being (as presently expressed in the Prison service operations manual).

The coroner commented that the Te Ahuhu Unit was constructed in recent times and has an obvious design feature which can lead to self-harm. The evidence shows that prisoners who are low risk from a security and self-harm perspective benefit from this type of 'hut' accommodation. The minimisation of ligature points is referred to in the Corrections' standards for new facilities. The coroner further commented that this case highlights that an assessment of being not at risk of self-harm (which applied to the deceased) does not equate to that prisoner being at low risk of self-harm.

Usually only a prisoner who is 'towards the pathway of being released' is placed in a hut unit. Prison authorities in such circumstances have had the opportunity to observe a prisoner over a period of time. However, in this case the prisoner was in the early period of imprisonment and was only placed in the unit because of exigencies arising from the Canterbury earthquakes. The evidence indicates that although historic information concerning a prisoner's at-risk status is taken into account when known, the main emphasis is on how the prisoner presents at the assessment.

Although unlikely to have been a factor in this death, Christchurch Men's Prison's non-compliance with the relevant standard from the *Prison service operations manual* that prisoner cell and location checks be carried out at irregular intervals – is an issue highlighted by this inquest.

The coroner made the following recommendations directed towards the Chief Executive of the Department of Corrections:

- That the prisoner cell and location check policy be reviewed to better ensure the welfare of the prisoners.
- That taking account of the Department's facilities standards, the design of new cell facilities should avoid exposed piping.
- That consideration be given to only placing prisoners considered at low risk of self-harm and who are 'towards the pathway of being released' in low security units with design features such as exposed piping.
- That policy concerning a prisoner's at-risk status in New Zealand prisons is reviewed with regard to the weight to be placed on historic at-risk information relating to the prisoner.

The coroner also recommended to the Manager of Christchurch Men's Prison that Christchurch Men's Prison reviews its procedures to ensure prisoner cell and location checks are carried out at irregular intervals.

Diving, scuba diving, snorkelling

CASE NUMBER

CSU-2009-WHG-000045 2012 NZCorC 55

CIRCUMSTANCES

The deceased of drowned while participating in a recreational dive off the Island of Moturoa on the Karikari Peninsula in the Far North.

The post mortem examination showed evidence of barotraumas (injury due to change in the atmospheric pressure). It is more than likely the deceased got into difficulty while entering the water or under the water where he has failed to equalize causing trauma to his middle ear. It has either rendered him unconscious or has caused him to panic where he has inhaled water and has subsequently drowned. His diving equipment, while in a poor condition, did not contribute to his death.

COMMENTS AND RECOMMENDATIONS

The coroner endorsed the recommendations made by the Police national dive squad report. He commented that they are recommendations that all industry and recreation divers should consider for the future.

All those involved in the recreational dive on 8 March 2009 were experienced divers and may have overlooked some of the basic requirements of safe diving practices. Those recommendations include:

- Divers ensure that they discuss a dive plan.
- Divers remain together during the dive, including during the ascent and descent.
- Divers are familiar with the dive computer, including reading and understanding the manuals relating to that computer.
- · Divers follow safe ascent rates at all times.
- · Divers check and maintain their equipment thoroughly.

- Divers should not be afraid to abort the dive if feeling unwell.
- Conversely, if the dive buddy thinks their partner is unwell they too should not be afraid to abort the dive.

CASE NUMBER

CSU-2008-CCH-000165 2012 NZCorC 72

CIRCUMSTANCES

The deceased died at Latoka Hospital in Fiji where she was on her honeymoon with her husband. She died from injuries sustained when she was struck by a 20 foot aluminium boat while snorkelling in water off the beach at Matamanoa Island Resort.

The deceased and her husband obtained masks, goggles and fins from the resort shop but were offered no information about where or where not to snorkel around the island, nor did they make any enquiries as they had seen other people snorkelling in and around the area they were intending to go. They were 10 to 15 metres from shore, when the boat, which was transferring passengers' luggage to and from the island, struck the deceased.

The operator of the boat, an employee of the resort, was not following the defined channel and did not have a licence to operate a motor vessel. Concerns were also expressed about the lack of first aid equipment at the resort for cases of emergency.

COMMENTS AND RECOMMENDATIONS

At the time of the incident a Fiji-registered company, Alpine Holdings (Fiji) Limited, owned the resort. The coroner commented that while he has jurisdiction to determine the cause and circumstances of the deceased's death, as her body was repatriated to New Zealand, he does not have jurisdiction to make recommendations or comments to a person or company in Fiji.

The coroner was advised that this death has been taken very seriously and that an investigation was carried out by the Fijian Ministry of Labour's National Occupational Health and Safety Services, which made recommendations that have been implemented by the resort including:

- Staff training for enhanced OSH awareness in respect of accidents such as that which occurred on this occasion.
- The boating channel/entrance way should be marked.
- Guest briefing on keeping clear of the boating channel.
- Boat-master qualification for those using any relevant vessel, and adherence to the staffing levels required by the authorities in relevant regulations.
- The undertaking of basic sea safety course by all boat masters.
- First aid training and CPR training for relevant staff.
- Larger engines were replaced with smaller (5 horsepower) engines; and on the larger boat, a propeller guard was installed.

All boats and water equipment were sold to Calypso Holdings Ltd, trading as Viti Water Sports (Viti), a five-star PADI (Professional Association of Diving Instructors) dive operation that had been operating diving from Matamanoa for a number of years. That company is contracted to carry out all water sports activities for guests, and also to transfer guests to and from the Island. By contract, they are required to abide by all safety regulations of the Fijian authorities. They are actively monitored in that regard.

CASE NUMBER

CSU-2009-CCH-001030 2012 NZCorC 79

CIRCUMSTANCES

The deceased drowned and likely suffered cardiac arrhythmia, while snorkelling in a lagoon at Aitutaki, Cook Islands in an expedition organised through Bishop's Lagoon Cruise. The deceased had no snorkelling experience and suffered from diabetes.

No steps were taken by the captain to ascertain if the deceased suffered from any medical conditions and there was no safety briefing before the participants entered the water with a strong current. The boat, which was crewed by one only person (the captain), anchored approximately

40 to 50 metres away from where the participants were dropped off in the water. No appropriate floatation devices (other than life jackets) were available as aids to swimmers and no rescue or medical equipment was available aboard the boat in anticipation of an emergency.

The coroner reviewed the circumstances of the deceased's death in accordance with Australian/New Zealand Standards that apply to snorkelling operations at a workplace (AS/NZS 2299).

COMMENTS AND RECOMMENDATIONS

The coroner commented that he is unable to make recommendations or comments to anyone outside New Zealand to prevent deaths in similar circumstances in the future. However he stated that the publication of this finding should assist in making New Zealanders aware of the basic precautions to take when snorkelling/swimming (whether in New Zealand or overseas), and may assist in highlighting to operators providing snorkelling activities the practical instructions and procedures that should be in place, and rescue and medical equipment that should be available, in anticipation of emergencies.

The coroner commented that it would be a comfort to New Zealanders and others undertaking snorkelling activities in the Cook Islands if similar standards applicable in Australia and New Zealand were adopted in the Cook Islands

Drug, alcohol or substance related

CASE NUMBER

CSU-2010-DUN-000188 2012 NZCorC 91

CIRCUMSTANCES

The deceased died at her home in Dunedin. The cause of her death, established at autopsy, was cardiac arrhythmia due to an overdose of prescribed medication. The deceased had

been taking prescription medication for a number of ailments. One of the medications prescribed was Amitriptyline – prescribed for pain, sleeping and as an antidepressant.

The deceased had requested extra supplies of medication anticipating out of town travel. It has been recorded that on the night before her death, she had taken a large amount of pills at one time, although it is not known what sort of pills they were or the exact quantity. The taking of pills did not appear to have been with an intention by the deceased to take her own life.

COMMENTS AND RECOMMENDATIONS

The coroner commented that there is always a danger with medications, and particularly with a significant number of different medications, for patients to confuse doses or not strictly adhere to their exact medication prescription. Patients have also been known to selfmedicate and take more than an appropriate dose when the patient considers the symptoms necessitate it. Whether the taking of the medication overdose by the deceased was for this latter purpose or strictly accidental may never be known.

The coroner stated that the public needs to be aware that prescribed medications are to be taken exactly as recommended by the doctor who prescribed them. It is inappropriate for a patient to vary a prescription as a patient is likely to lack the appropriate knowledge of the consequences.

Fall

CASE NUMBER CSU-2010-ROT-000081 2012 NZCorC 77

CIRCUMSTANCES

The deceased died in Taupo as a result of injuries sustained when she fell down some stairs. The deceased was visiting elderly friends when she fell approximately 1.5 metres down an outside stairwell and hit the back of her head on the concrete floor. The accident occurred at a premises that operated as a boarding house.

The deceased's family expressed concerns that she was attempting to climb some outside stairs in the dark with no outdoor lighting. The family was concerned at how dangerous the stairs were including the landing and felt that the accident was preventable.

COMMENTS AND RECOMMENDATIONS

The coroner recommended that the findings be forwarded to the Minister of Housing and that the Minister consider the most appropriate way to ensure that relevant council building codes for properties that take members of the public in to stay (whether or not they are formally run as a business) must comply with reasonable safety standards, and that they be regularly inspected to ensure that they continue to comply.

Homicide or interpersonal violence

See mental health issues below.

Labour or pregnancy related

CASE NUMBER

CSU-2010-HAM-000021 2012 NZCorC 87

CIRCUMSTANCES

The deceased, an infant, died at Waikato Hospital due to intrapartum asphyxia. The baby was born by emergency caesarean section and when born, he was floppy and unresponsive. A faint heartbeat was heard and aggressive attempts were made to resuscitate him. He was pronounced as a stillbirth by the paediatrician in attendance.

The baby's mother chose a new lead maternity carer (LMC) after her original LMC went on long-term sick leave. She was not aware that the new LMC was within her first year of graduation and qualification as a midwife. The mother was anxious about her baby's posterior position and labour and told her LMC that the posterior birth of her first son had been complicated.

On 24 October 2009 the mother's waters broke and her contractions began. The LMC was phoned and the baby's parents and LMC agreed to meet at River Ridge East Birth Centre. The LMC assessed the mother as being in early labour and she was sent home, despite her wanting to remain at River Ridge. Once home, the mother's contractions remained strong and regular and she had a strong desire to push. Her LMC was again called and came to the house at about 10am. The LMC found that the mother was fully dilated and an ambulance was called to transfer her to River Ridge where she arrived at about 11am. Due to a lack of progress, the mother was transferred to Waikato Hospital by ambulance at about 12.30pm and arrived about 45 minutes later.

The LMC did not communicate any urgency to the hospital midwives regarding the labour. The LMC did not provide the obstetric registrar with any information of the fetal heart rate recorded before the mother's admission to hospital or provide any clinical notes on admission. The registrar was also not informed that the mother may have been fully dilated at any time between 4am and 10am, that she had been pushing involuntarily at home and had been instructed by her LMC not to push until she arrived at River Ridge at 11am. No maternal observations were taken and recorded by the LMC, or passed on to the registrar. As a result of these omissions, there was a failure by the LMC and the District Health Board (DHB) staff to recognise the urgency of the mother's and baby's situation and expedite delivery. No transfer of care between the medical providers was noted in the clinical notes. The hospital midwives proceeded on the basis that responsibility for primary care remained with the LMC, whereas the LMC was of the view that care had transferred to the hospital midwives. The obstetrics registrar took no part in any discussions regarding transfer of midwifery care. This uncertainty on the part of the LMC and hospital staff resulted in neither the LMC nor the hospital midwives taking control of the mother's labour (or monitoring the continuous cardiotocographic machine [CTG]) in the absence of the registrar. Although the registrar had given the instruction that the CTG trace was borderline and that it needed to be continuously monitored, the CTG trace was not discussed by either the registrar or LMC when they communicated regarding an epidural.

After complaining of not being able to breathe, the mother was rushed to theatre for an emergency caesarean section however the baby died shortly after birth. The cause of his death was due to intrapartum asphyxia. The hypoxic intrauterine environment arose during a prolonged second stage of labour due to fetal malposition and uterine rupture. The coroner found that the following factors contributed to the death of the baby:

- A failure by the LMC to recognise that the progress of labour was not normal.
- A failure by the LMC to convey urgency on transfer (either verbally or in documentation) to hospital staff.
- A failure by the LMC and hospital staff to recognise the urgency of the mother's situation and expedite delivery.
- A failure by the LMC and hospital staff to review and properly interpret the CTG trace.

The baby's parents felt that the care they received from the midwife, who looked after the mother at the time of the birth, had contributed to the death of their son. In his findings the coroner considered the procedural issue of jurisdiction. A coroner does not have jurisdiction over a stillborn child. Despite the paediatrician's conclusion that the baby was a stillbirth, the coroner received evidence that the baby had been assessed by nurses as having a faint heartbeat when born. This is a sign of life and therefore the baby could not be classed as a still-born child. The coroner therefore concluded he had jurisdiction to open an inquiry and consider the circumstances of this death.

COMMENTS AND RECOMMENDATIONS

The coroner considered the *Guidelines for consultation with obstetric and related specialist medical services.* Evidence given by midwives at the inquest reflected the view that the *Referral guidelines* were just guidelines and did not have to be complied with, provided that the LMC had good reason to base a clinical judgment. In contrast, the view of obstetricians is that the *Referral guidelines* should be followed more rigorously. The coroner considered that the more risk averse approach is consistent with the 'avoid preventable deaths' statutory function of the Coroners' Court.

The coroner commented: 'the *Referral guidelines* are in my view a safe harbour and all LMCs would do well to practice within the safety they provide. According to Dr Sally Pairman, Chair of the Midwifery Council of New Zealand, the Midwifery Council has tried really hard to get the *Referral guidelines* to be a nationally accepted set that have an evidence base. If that is so, the Midwifery Council should be recommending that all LMC midwives follow the *Referral guidelines* and stay within the safe harbour they provide'.

The coroner considered an upcoming review of the Referral guidelines and concluded that, even with proposed amendments, there was room for ambiguity in the proposed review. The coroner commented that the guidelines should be clear and as concise as possible to assist rather than create uncertainty for practitioners. The coroner also considered that the consultative group considering the review of the guidelines should consider rewording paragraphs 1 and 2 of the *Referral guidelines* headed Purpose of guidelines and Circumstances where guidelines may be varied. The coroner stated: 'the guidelines in my view, should recommend a cautious approach to departing from the recommended course. The Referral quidelines, should also state that it would be expected that the guidelines would be followed in most cases given that they have been prepared following extensive consultation with the various professional bodies involved and are evidence based.'

The coroner examined the steps already taken by the Waikato District Health Board (WDHB) following the undertaking of a serious event review of the care and treatment to the baby and his mother. The coroner considered that the WDHB properly acknowledged the breakdown in its procedures, confusion in relation to respective roles and responsibilities, and how those issues contributed to the horrendous experience for the mother and her family. The WDHB identified the issues raised and that appropriate corrective action had been taken. The coroner therefore concluded that these issues do not need to become the subject of recommendations given that sufficient remedial action has been taken that, in his view, is likely to reduce the chances of other deaths, in similar circumstances in the future.

The coroner recommended that the Ministry of Health should reconvene the consultative group that reviewed the *Referral guidelines* and consider amendments to the *Referral guidelines 2012* which:

- clarify the definition of the commencement of second stage of labour in the light of the findings in this case to remove any ambiguity
- provide a process for the transfer of clinical responsibility for midwifery care from the LMC to secondary midwifery care that involves a conversation between the LMC, the secondary midwife, the woman concerned and any specialist involved, to determine that the transfer of midwifery care is appropriate and acceptable, and determine the respective roles and responsibilities
- reword paragraphs 1 and 2 headed *Purpose* and *Guiding principles* to:
 - state that the *Referral guidelines* were formulated following extensive consultation with the Royal Australian and New Zealand College of Obstetricians and Gynaecologists (RANZCOG) and the NZ College of Midwives (NZCOM), are evidence based and considered good and safe practice
 - emphasise that the *Referral guidelines* should be followed in most cases.

The coroner also recommended that the WDHB require its obstetrics registrars to consult with their respective supervising specialist about every woman transferred from primary care.

The coroner made the following recommendations directed towards NZCOM:

- review midwifery training to ensure that training is consistent with the *Referral guidelines*
- encourage midwives within their first years of practice, to practice within the safe harbour of the *Referral guidelines*
- consult with NZCOM and Health Workforce New Zealand, with a view to reviewing the Midwifery First Year of Practice Programme, with particular emphasis on the mentoring aspect of the programme, with a view to changing the mentor to a supervisor
- work with the Ministry of Health to make the Midwifery First Year of Practice Programme compulsory
- review the roles and descriptions of midwives who provide collegial support, supervision and oversight to colleagues.

Response from the NZ College of Midwives (NZCOM)

The coroner received a report from NZCOM, dated 28 May 2012, in response to his findings and recommendations in the above case. The report expressed some concerns about the processes and outcomes in the case and the comments and recommendation made by the coroner in relation to the midwifery profession.

The report discussed a number of actions taken by NZCOM in response to the baby's death:

- Consultation and discussion with the Midwifery Council, the Ministry of Health, midwifery educators and practising midwives has taken place through NZCOM with the aim of ensuring that midwifery education and care continually meet the standards that the family should have been able to expect from the maternity services.
- NZCOM, the Midwifery Council and the Ministry of Health have implemented a number of initiatives to increase public confidence around some of the issues

raised in this case. There have been major education and practice changes over the last few years to support new graduate midwives make the transition to practice more confidently.

- NZCOM is also working on National IT Board projects that aim to develop more effective ways of sharing maternity information between the community and hospital systems. Better mechanisms to easily share client records will mean that hospital services have fuller information and community midwives and their clients receive more appropriate support when requesting advice and assessment from the secondary service.
- NZCOM and RANZCOG have met several times with St John ambulance services to increase integration and improve everyone's responses to obstetric emergencies. Currently all parties are reviewing transfer procedures and updating St John clinical practice guidelines. In addition, NZCOM is working with Ministry of Health legislators to address some of the issues around Pethidine being the only strong analgesic available to midwives in the community when women require pain relief.

With regards to the coroner's findings, NZCOM agreed with the coroner that the LMC midwife held clinical responsibility for her decisions and actions in relation to the mother up until the point she reached Waikato Women's Hospital. NZCOM stated that it expects the same standard of care for practice, documentation and communication to apply to all midwives, not just new graduates. The report acknowledged that in this instance the midwife's notes and her communication with this family let her, and them, down considerably. The report stated that the midwife has acknowledged this contribution to the events that followed and she must continue to examine her own decision-making processes if her care is to be robust. NZCOM noted the coroner's acknowledgement that this midwife has reviewed and undertaken further education as a result of this case

The report stated that the coroner misunderstood the evidence of the midwifery experts with regard to the significance of experience in midwifery competence. The report states that the evidence of midwifery experts is that regardless of experience, all midwives should be competent and that when in doubt, health practitioners should err on the side of caution.

The report discussed NZCOM's view of the LMC midwife's level of responsibility once transfer has taken place. In their view, the moment that the mother was admitted to Waikato Women's the assessment responsibility should have become that of the acute admitting service team. It is NZCOM's view that the WDHB failed to meet its obligations to both the mother and the LMC and that not enough attention was given by the coroner to this level of failure. The report refers to the lack of recommendations for the ambulance service, Medical Council and medical schools, DHB staff and hospital management. NZCOM is critical that instead of recommendations being made for all parties that were identified as contributing to the outcome, the recommendations made were largely directed at the midwifery profession.

NZCOM was concerned that the coroner's findings lacked a 'universal understanding of the roles and responsibilities of the tertiary service'. The report discussed the difference in roles between midwives and obstetricians and rejected the notion that midwifery does not take an evidenced-based approach or is not risk averse.

The report asserted that the issues regarding guidelines and transfer of care are more complex than the discussion and recommendations appear to acknowledge due to the lack of unequivocal evidence in maternity to support protocols. NZCOM stated that there is 'a lack of consensus between maternity hospital policies' around the world.

NZCOM expressed the view that 'an environment of respect' between health professionals is more likely to produce transformative solutions to the issues raised in the process of enquiry.

Mental health issues

CASE NUMBER

CSU-2009-WGN-000446 2012 NZCorC 54

CIRCUMSTANCES

The deceased was stabbed to death in his home.

The deceased lived at Mansfield House. Mansfield House is owned by Te Menenga Pai Charitable Trust. At the time it was under responsibility and direction of Capital and Coast District Health Board (CCDHB).

Mansfield House is a residence for people that have mental health and other issues. It primarily provides accommodation for people with mental health issues who require supervision, but also accommodates:

- people with known drug and alcohol abuse issues
- people who require accommodation on release from prison
- anyone who cannot be housed elsewhere.

On the evening before his death the deceased had been inhaling solvents and had become intoxicated. He began to disturb other residents with noisy and disruptive behaviour. Another resident became very angry at this disruption and decided to kill the deceased.

A special audit was conducted in relation to two serious events, one a suicide and the other this death. That audit was instigated by the CCDHB, Wellington. One of the issues identified from that audit was the low number of staff for the size and type of clients being referred to the Trust.

COMMENTS AND RECOMMENDATIONS

The coroner commented that while the effects and achievements of the founder and manager of Mansfield House are to be applauded, it is clear that the Trust was not being supervised to the degree necessary. The trustees had either deceased or were only tenuously linked to the Trust. The staff numbers were unable to cope with the workload required to ensure the smooth running and the wellbeing of the residents. The coroner noted that this situation has been corrected, but yet again highlights that where the central and controlling health authority devolves its responsibilities to organisations such as the Te Menenga Pai Trust, there needs to be a thorough supervision and audit process in place to ensure that responsibilities are carried out as required.

Natural causes

See adverse effects or reactions to medical or surgical care above.

Overseas deaths

See diving, scuba diving, snorkelling above.

Product-related

CASE NUMBER CSU-2010-DUN-000310 2012 NZCorC 82

CIRCUMSTANCES

The deceased died of injuries he received when he became trapped between two vehicles. He had been having a discussion with a contractor working on a neighbouring property. As he was leaving the property, the deceased made his way between two Nissan trucks parked on the road. As he was walking through the gap of approximately 10 metres, the park brake of a truck parked uphill failed and released. This allowed it to roll forward where it collided with the truck parked in front of it, trapping the deceased between the vehicles and causing fatal crush injuries.

COMMENTS AND RECOMMENDATIONS

The coroner commented that the evidence is that the park brake on the truck failed. The failure was due to either a failure to design and manufacture the brake assembly to ensure that dirt or grit does not compromise its efficient and safe operation, or to a failure to service the assembly in an appropriate manner. Both of these issues are seen as being the causes of, or the contributors to, the tragedy.

The coroner recommended that UD Truck Distributors (NZ) Ltd continue with its undertaking to advise all owners and operators of Nissan trucks, models CW330 and CW380, and to the providers of service to them, of the potential hazard that exists with the inappropriate or premature release of the truck park brake, whether this occurs by reason of poor maintenance, dust or grit ingress, brake wear, or by the failure of an operator to fully apply the brake. The coroner directed that a copy of this finding be forwarded to Road Transport Association (NZ), NZ Contractors Federation and NZ National Road Carriers (Inc) to ensure that members are aware of the potential hazard and arrange for vehicles, possibly affected, to be inspected regularly by appropriately trained mechanics.

The coroner also recommended that Steve Clearwater Contracting Limited (SCCL) review its HSE (health and safety in employment) protocols and processes. Although the coroner accepted that SCCL has a health and safety officer and takes advice on matters, the result has been that the company 'talks the talk' but does not 'walk the walk'. The coroner acknowledged that there was no proof of negligence by SCCL and that there was no breach of HSE regulations which directly contributed to this death. SCCL was issued with a warning notice.

Recreational or leisure activities

CASE NUMBER

CSU-2011-DUN-000455 2012 NZCorC 52

CIRCUMSTANCES

The deceased, a student from Australia, died while climbing on the Southwest ridge of Mount Aspiring. He died of injuries he received when he stumbled or slipped from a position very high up on the mountain and slid and fell approximately 500 metres down the west face of the mountain before coming to a stop in a bergschrund (crevasse at the head of a glacier).

The deceased was climbing with a companion. While crossing the Bonar Glacier the two were roped together to guard against problems, which could have arisen from a fall into a crevasse on the glacier. Subsequently, the deceased and his companion agreed to take off the rope and each then 'solo-climbed' up the lower portion of the southwest ridge towards the summit of Mount Aspiring. It was at this point that the deceased slipped.

COMMENTS AND RECOMMENDATIONS

The coroner commented that the facts surrounding this death are unfortunately similar to the facts in another death (CSU-2008-DUN-000695) on 27 November 2008 after a fall from approximately the same position as this one. Although an exact cause for the loss of balance and the fall in this earlier case has been unable to be confirmed, it takes only a momentary loss of concentration or a minor stumble to have tragic consequences on a steep and exposed slope.

The coroner commented that in the earlier case the evidence required that he consider the possibility of ketoacidosis, which was suggested by abnormally high acetone levels which had been measured. Ketoacidosis and low blood glucose levels can result in fatigue, dizziness and disorientation. There was insufficient evidence for it to be found that this was a cause or a contributor to his loss of balance and slip, but evidence was given that a failure to take adequate food, fluid and rest is likely to be more commonly encountered in the case of younger mountaineers involving a multi-day ascent (walking from the valley floor to a hut and then embarking on the climb). All climbers should learn to rehydrate and take nutrition as necessary.

The coroner commented that if climbers took the safest and most conservative option at every point to ensure their safety, they would not succeed in climbing very far. The dilemma faced by climbers, in balancing the need to gain the summit with the need to achieve this safely, ought always to be resolved with the emphasis on safety.

The coroner stated the crampon fitting adopted by the deceased was a cause or contributor to the fall. While it is stressed that there appears nothing inherently wrong with the design and application of the crampons used by him, it is a responsibility of a coroner to draw to public attention the circumstances of a death to ensure that such circumstances are not repeated. Enhancement to crampon strap and attachment design ought to be drawn to public attention. Many, if not most, mountaineers will have experienced a crampon detachment, sometimes during periods of difficulty. This creates a significant hazard to the crampon wearer and to his, or her, companions. Every effort should be made to adopt the best, safest and most modern technology and enhancements to avoid any possibility of problems occurring as a result of such a failure. There is a relatively straightforward solution available to any potential problem.

The coroner made the following recommendations directed towards mountaineers:

- That mountaineers consider carefully their nutrition and hydration requirements for what is clearly a very strenuous and energy-intensive sport. He stated that publicity should be given by mountaineering clubs and tramping clubs to their members and others, and, if appropriate, advice should be sought from expert nutritionists.
- That mountaineers should consider carefully their experience and ability and should adjust their ambitions appropriately. Climbing solo is acceptable but carries

grave dangers. Novice climbers should learn appropriate rope handling and belaying techniques and compromise their objectives if their techniques are unsound. Mountain users ought always to conduct appropriate research on their objectives, take local advice when given and be prepared to adjust their destination according to advice given.

 Mountaineers ought to carefully consider appropriate methods to affix crampons to their boots in the most appropriate, secure manner. It is necessary to adopt, not only the manufacturers' recommendations on sale, but also such enhancements as have been established by subsequent usage.

CASE NUMBER

CSU-2011-DUN-000273 2012 NZCorC 66

CIRCUMSTANCES

The deceased, a German tourist, died near the Cascade Bluffs in the Fiordland National Park. While tramping alone, he left the track, slipped and fell over a steep bluff.

COMMENTS AND RECOMMENDATIONS

The coroner commented that this death is another tragic example of a visitor from overseas underestimating New Zealand alpine conditions, particularly winter conditions. The deceased was under-prepared for the tramp. His light tramping boots may have been suitable for the Cascade Saddle, or for less difficult tramping trips in summer conditions, but they allowed no margin for error. He left a well marked and safer track and traversed to an area of steeper bluffs, no doubt to scope areas for photographic opportunity. His lack of experience in some conditions allowed him to underestimate the slippery footing and it is this which has proved fatal

The coroner commented that while solo tramping is an acceptable concept, it does carry with it greater risks. Trampers on their own do not have the opportunity to discuss potential hazards with others and as such the decision-making of solo trampers may be compromised. It has been suggested that a solo tramper is more likely to err by not making a decision, through failing to recognise that they need to stop and make a decision. If he had not been alone he may not have taken the route he did.

The coroner recommended that a copy of this finding be forwarded to Federated Mountain Clubs for a synopsis to be published in the organisation's bulletin to draw to public, and specifically mountain users, attention to the dangers associated with tramping while alone with inappropriate footwear and without appropriate experience in our mountain regions.

CASE NUMBER

CSU-2011-ROT-000021 2012 NZCorC 67

CIRCUMSTANCES

The deceased died at Lake Okareka, Rotorua from drowning and head injuries. The deceased and his friends were using jet skis belonging to another group who were not well known to the young men. Although the owners had not given them permission or any instruction they were aware and did not object to the young men using the jet skis.

Witnesses described the young men as driving dangerously and contrary to commonly observed boating rules. Only one of the group was wearing a life jacket. They were riding the jet skis fast and close to each other and performing tight turns. During a tight turn manoeuvre close to another jet ski, the deceased was thrown off. Because of the speed and the tight turns no one could see him and a following jet ski hit him causing substantial head injury.

Two of the drivers of the jet skis were charged under the Maritime Transport Act and Rules with operating a vehicle dangerously. As a result of the police investigation the matter was sent to the Crown solicitor for analysis and a decision on whether any charges should be laid and what they would be. The recommendation of the Crown solicitor was that the charge under the Maritime Transport Act of operating a vehicle so as to cause unnecessary danger to the deceased was appropriate. Two young men pleaded guilty to those charges and on 30 June 2011 were convicted and discharged.

COMMENTS AND RECOMMENDATIONS

The coroner has reviewed the legal position and in particular reviewed the submissions from the New Zealand Police and the opinion of the Crown solicitor as to the appropriateness of legislation in this area. The coroner referred to his 2011 finding in CSU-2009-ROT-000014 ('the 2011 finding'). That finding contained a comprehensive review of the law and is pertinent also to this death. A wide range of recommendations were made in the 2011 finding as to the need for law reform.

In this case all three areas of maritime law applicable have been flagrantly breached by the operators of the jet skis. No proper lookout having regard to the risk of collision was followed. The vessels did not proceed at all times at a safe speed so as to avoid collision and to be able to be stopped within a safe distance appropriate to prevailing circumstances. Most importantly the basic law in operating a vessel of keeping to a speed of less than 5 knots within 50 meters of another vessel or a person in the water was seriously breached.

The coroner stated that in the 2011 finding the court identified very clearly the analogy to land transport laws and the range of offences available in that area. They included a range of prosecutions of statutory provisions available from careless use through to reckless driving causing death or injury. Eight different offences according to the level of seriousness were identified.

The coroner stated that this finding will again make recommendations to ensure that appropriate, urgent steps are taken to reform the law and provide for a range of offences. The coroner repeated his observation that it is incredible that no license or qualifications or skills are needed to operate a boat or a jet ski. They are vessels capable of doing 90 kilometres per hour and were described in evidence as motorcycles on water. Yet these young men were given no instruction and basically but for one of them, had no idea as to safety rules and rules that apply in operating vessels. The coroner commented there are apparently no controls at all over who can buy a boat or a jet ski and this is in stark contrast at least to those controls that exist with motor vehicles. Overseas jurisdictions are different and the analogies and comparisons are all set out in the 2011 finding. The coroner repeated his comments made in his earlier findings stating that in his view bringing in registration for vessels and for operators would benefit New Zealand in the following ways:

- It would ensure boats are registered in order to easily identify those who offend under the Maritime Transport Act.
- Everyone operating a boat would meet minimum knowledge requirements on safety and rules, and have a boat operator licence to as proof of that.
- It would ensure that boats and maritime products are not operated by people (particularly young people) who lack appropriate appreciation of the dangers of maritime safety.
- It would ensure owners of boats take responsibility for who they lend their boats or maritime products to.
- It would reflect the seriousness and culpability of those who cause death or are dangerous in New Zealand waters.
- It would bridge the gap that presently exists.

The coroner recommended and reinforced his previous recommendations as follows:

- All powered recreational vessels or maritime products be registered and issued with an identification number. It must be highly visible.
- All operators of powered recreational vessels or maritime products be required to hold a license before operating the vessel or maritime product.
- All candidates for licenses be required to know the basic safe boating rules and their legal responsibilities.
- The laws relating to maritime activity be reformed to incorporate the above recommendations and in addition provide for a graduated form of penalty similar to the land transport legislation.
- That consideration be given to the introduction of an 0800 number like 0800 Crime Stoppers to make it easier for people to report hoonish and other behaviour on the water.

The coroner further recommended that consideration be given to requiring all operators and passengers on jet skis wear life jackets and helmets at all times.

CASE NUMBER

CSU-2011-CCH-001126 2012 NZCorC 93

CSU-2011-CCH-001127 2012 NZCorC 94

CIRCUMSTANCES

Two individuals, both visitors to New Zealand, drowned while trying to cross a river in the Franz Josef Glacier valley. The two deceased and their two friends decided to go for a hike in the area using a map that they obtained from the counter of their backpackers. One of the walks listed in the pamphlet was the Roberts Point Track. There was a very elementary stylised map showing the track. The group apparently made no other enquiries about it.

The Roberts Point Track was signposted as being a five hour return trip. It is a track leading to a viewing point and returning back to the carpark. It took the group approximately four hours to reach the end of the track during which time they passed several signs, at least one of which was a sign advising not to attempt to cross the river. At about 9pm, almost seven hours after setting out, they were returning along the track towards the Douglas Walk Bridge, which would have taken them across the river and back to the carpark. It was starting to get dark and they were tired. They believed they could see the carpark on the other side of the river and they decided after a group discussion to take a shortcut and attempt to cross the river. The two deceased fell into the river while attempting to cross and drowned.

The river appeared to be flowing slowly and shallow with four branches. In fact it was a glacial-fed river, very cold with some prospect of containing ice. It was flowing rapidly and was opaque so the bottom of the riverbed could not be seen. A Department of Conservation manager observed the Waiho River at mid-afternoon on the day of the incident. It was higher and dirtier than he would have expected. He attributed the state of the river to a lot of snowmelt as it was a fine and warm afternoon. He said he would never have attempted to cross the river on the day of the incident.

COMMENTS AND RECOMMENDATIONS

The coroner commented that there is no evidence that any of the party had extensive experience in New Zealand mountain terrain. In fact, it is very unlikely. They were undertaking recreational activities in and around Franz Josef, but they fell into the category of the inexperienced visitor. It was within their capacity to successfully complete the Roberts Point Track although the track is for experienced and well-equipped trampers only.

The coroner further commented that the party underestimated the dangers of attempting this alpine river crossing and there was poor decision-making. They did not take account of the signage, which clearly indicated that they should not attempt to cross the river. The dangers of crossing alpine rivers, which are glacial-fed, were highlighted in this inquest. In this case there was an appropriate bridge nearby. Safety warning signs should be strictly observed to prevent any like tragedies occurring in the future.

The Department of Conservation has itself set out seven recommendations, three of which have already been implemented. These are:

- Updating its website information on the Roberts Point Track to promote consistent safety messages including 'never attempt to cross the Waiho River'.
- Updating the brochure Glacier Region Walks at reprint with the safety message, 'never attempt to cross the Waiho River'.
- Updating the visitor risk assessment for Roberts Point Track, which is an internal document, to reflect that a double fatality occurred due to visitors leaving the track and attempting to cross the Waiho River.

The four remaining recommendations relate to:

- the realignment of the Roberts Point Track where it comes close to the Waiho River
- a further sign to be installed advising of the Douglas Bridge being only 30 minutes away
- an information panel, which is being considered, that will provide clear descriptors around track information,

hazard warnings, safety information and dangers associated with the Waiho River using recognised international hazard symbols and colours

• the removal of an existing warning sign if the information panel is implemented.

The first and second recommendations are being implemented. The third recommendation was due to be implemented by October 2012. With regard to the third recommendation, the Department of Conservation preferred option was to modify the text, symbols and layout of the existing information panel to present key safety messages.

The coroner recommended that the Department of Conservation, in considering the revision of the information panel referred to in the third recommendation of the *Visitor incident investigation report*, considers stating that a double fatality occurred due to visitors leaving the track and attempting to cross the Waiho River.

Self-inflicted

See also deaths in custody above.

CASE NUMBER

CSU-2010-WGN-000024 2012 NZCorC 64

CIRCUMSTANCES

The deceased committed suicide in his home. The deceased remained affected by traumatic events in his childhood. His family was aware of his depression and had discussed the need to seek help with him. He had seen a doctor in 2007 who prescribed him fluoxetine for depression. In July 2010 the deceased was referred to a counsellor. There is some doubt as to whether this was a referral from his doctor or from the Family Court.

The deceased's former partner said that after going to the counsellor for a couple of sessions the counsellor said the deceased would be better served by being seen by a mental

health person and that he would refer him back to his doctor. The former partner told the court the deceased never heard anything further from his doctor or mental health services.

COMMENTS AND RECOMMENDATIONS

The coroner commented that it appears to him that the deceased was desperately in need of mental health intervention from at least 2007 but more particularly in 2009. It would appear that his medical centre did not arrange referral to the mental health services, nor arrange follow up appointments but simply referred him to a counsellor specialising in family violence.

The coroner commented that he believes that the medical personnel did not provide a satisfactory assessment for the needs of the deceased at his 2007 and 2009 attendances.

CASE NUMBER

CSU-2010-AUK-001077 2012 NZCorC 88

CIRCUMSTANCES

The deceased committed suicide. He had a history of recurrent endogenous depression and suicidal ideation. In the period immediately before his death the deceased had become very depressed. Four days prior, the deceased threatened to take his own life but was stopped by his wife. Neither he nor his wife told anyone of these events.

On the day of his death the deceased's wife became sufficiently concerned about her husband to phone the WDHB (Waitemata District Health Board) mental health services. She spoke to a member of the Intake and Assessment Team and said that she was fearful that her husband might harm himself and explained what had occurred four days earlier. The staff member told her that another staff member would phone her husband after he got home that evening. She was told to call the police if he threatened to self harm and if she thought there was imminent risk. When the deceased came home he was still upset and later told his wife that he had had enough. Later that evening the deceased took his own life. WDHB clinical records state that a member of the Intake and Assessment Team tried to contact the deceased on both the home phone and his mobile phone that evening around 9.30pm, without success. The deceased's wife said she did not hear the phone ringing and expressed concerns that the mental health services were not more proactive and did not visit her husband. WDHB mental health services reviewed the care and decision making on the day of the call to them and were of the view that while more 'assertive' intervention to assess the deceased was an option, the circumstances did not clearly indicate that a more urgent response was required.

COMMENTS AND RECOMMENDATIONS

The coroner accepted that the clinical judgment made not to make an immediate urgent visit to the deceased was not unreasonable and that a member of the Intake and Assessment Team did try and contact the deceased that evening. However, the coroner commented that looking at the issue from the wife's perspective, it is easy to understand her feelings that the response to her call to the mental health services for help did not seem sufficiently proactive. She was living with a man she knew was distressed and unhappy and who had threatened to kill himself four days previously. She did not seek help at that stage, but the deceased's palpable distress on the day of his death was the catalyst for her to do so.

When she called the Intake and Assessment Team she was given sensible and practical advice to call the police if her husband threatened to kill himself and she felt there was imminent risk and was told to wait for a phone call from a member of the Intake and Assessment Team to her husband. This meant that unless she made a 111 call she did not have any other positive plan of action for how to seek assistance or support if she felt concerned about her husband while she waited for the call from mental health services.

The coroner recommended that WDHB Mental Health Services reflect on the response to the wife's call of 18 August 2010 and consider whether, in similar circumstances in future, the Intake and Assessment Team should routinely give more proactive, practical advice to ensure the person making the referral knows how or where to seek further help or support in the period before the mental health service responds.

CASE NUMBER

CSU-2009-ROT-000289 2012 NZCorC 96

CIRCUMSTANCES

The deceased, aged 15 years old, died at Rotorua Hospital. The cause of death was toxicity from the effects of a mixed drug toxicity of heart medication.

The deceased was in a relationship with a 27 year old man who was married to another woman. In mid-July 2012 this man decided he wanted to discontinue his relationship with the deceased and go back to his wife, and began to communicate this to the deceased. She was extremely upset about this and sent him numerous texts saying that she did not want to break up. When the wife became aware that the deceased was texting her husband, she sent her abusive texts threatening her if she did not stop communicating with him. The deceased continued to text her ex-boyfriend, asking him to come and see her and threatening that she may kill herself.

On the morning of 17 July the deceased texted her ex-boyfriend telling him that it may be the last text he ever received from her and at 1.12pm sent him a further text telling him that she had just taken most of her 'dad's heart pills'. About an hour later she again texted him telling him that it wasn't her that had sent the previous text and that she 'wouldn't kill herself'. She received further texts written by the wife (although sent from the man's phone) stating 'I don't care if you kill yourself'.

At about 4.30pm the deceased came out of the bedroom to seek help as she had become very unwell. She was taken by ambulance to Rotorua Hospital where she died the following morning. Packets of medication belonging to the deceased's father were found with tablets missing. The toxicology report showed high levels of the drugs Diltiazem and Desacetyldiltiazem.

COMMENTS AND RECOMMENDATIONS

The coroner stated that in his view the Law Commission should seriously consider bringing together an additional law to what already exists which is specific to social media and, in particular, bullying by way of text, email, Facebook, Twitter and others. He commented: 'As they rightly point out, the existing criminal and civil law is capable of dealing with many of the types of harmful communication referred to. The laws, however, pre-date the internet. The Law Commission notes that the current law 'is not always capable of addressing some of the new and potentially more damaging ways of using communication to harm others.' They also note there are obstacles that include the difficulties for the public in accessing the law, the cost of bringing legal proceedings, the adequacy of investigative resources and tools, the problems in the way in which offences are defined and possible gaps in the types of offence currently included within the statute book. They rightly point out that many citizens are unaware of the range of criminal offences which may apply to harmful and offensive online or text speech.

The coroner commented that serious consideration should be given to a law that is clearly understood and accessible to the public and covers the harmful effects of these new ways of communicating. That could easily be defined and then communications within those various modes such as Twitter, Facebook, email and texts would have a clear law and penalty regime applying to them.

The coroner further commented that these forms of communication, especially to young people, can be vicious and potentially harmful. The evidence shows in this case, and the research indicates in more recent cases, that young people are particularly susceptible to this form of communication. They are often on their own when they receive it. It can be late at night, particularly with phones that are left beside beds. There is a problem with sleep deprivation and, generally, a young person such as the deceased is not equipped to deal with the matters she found before her and, in particular, the vicious nature of the bullying texts she received. Accordingly, the court will recommend a need for reform.

The coroner recommended that these findings be forwarded to the Law Commission, to the Attorney General and to the Minister of Justice. The coroner also recommended that there be a new law enacted to adequately provide culpability and a penalty provision which has a deterrent effect that covers the new forms of communication and is particularly hard on abusive and malicious content. That new law should particularly note the vulnerability of young people as a mitigating factor.

Sudden unexpected death in infancy (SUDI)

CASE NUMBER

CSU-2010-DUN-000348 2012 NZCorC 69

CIRCUMSTANCES

The deceased, an 18 month old infant, died at her home. The death had some features associated with SUDI. The baby was described as being dressed in pyjamas, with a singlet and a nappy. She had been put to bed restrained by a sheet folded up and tied around the mattress in a strip about six inches wide. This was done to stop her from getting out of bed. This was then covered by a sheet, then a blanket and then a duvet. The tied sheet may have limited the baby's ability to remove bed clothes to achieve a cooler environment.

There was a heat pump in the room and the police report noted that the room temperature was warm. Expert advice was sought and obtained from a consultant paediatrician to Southland Hospital. He commented that 'certainly from the description of the finding and the circumstances, hyperthermia is a significant risk factor. Children are often able to cope with quite heavy wrapping if their head is free as they have a very good ability to dissipate excess heat through their head. This could be compromised by a high ambient temperature such as might have been present in the small bedroom'.

COMMENTS AND RECOMMENDATIONS

The coroner commented that he is not able to state unequivocally that this death was caused by overheating or that the ambient temperature of the baby's sleeping accommodation was, in conjunction with her clothing and bedding, inappropriate. However the coroner drew to public attention the fact that high temperatures in living (and particularly in sleeping) accommodation, is a risk factor for premature deaths of vulnerable children. Low temperatures are also, of course, a risk factor. Families of babies ought to take advice on, and learn how to care for their babies in these circumstances. Babies do not have a well developed heat dissipation mechanism and care needs to be exercised by parents and caregivers in ensuring that babies do not overheat or get too cold when put down to sleep.

The coroner recommended that a copy of this finding be forwarded to the Child Youth Mortality Review Committee in order that the circumstances of this death can be further explored and identified and that appropriate publicity can be given to the circumstances of this death in order that such circumstances do not recur.

CASE NUMBER

CSU-2010-DUN-000346 2012 NZCorC 92

CIRCUMSTANCES

The deceased, a nine month old infant, died at his home of an acute episode of septicaemia and consequent fever that was further compounded by environmental overheating.

In the two weeks prior to his death, the baby suffered from eczema, which causes breaks in the skin surface and increases the risk of skin infection. He was put to bed by his caregiver in the evening. He was dressed in a stretch and grow, a singlet and a nappy, then wrapped in a blanket, possibly with more than one layer, with another blanket over him, and then a double layer of duvet. A heat pump in the lounge, in which the baby was placed in his cot, was reported as running all night at a temperature of, possibly, 25 degrees. When he was checked on the following afternoon, it was discovered that he had died.

The St John ambulance officers who attended noted that the lounge, in which the cot was located, was very warm. The heat pump mounted on the northern wall of the lounge was set at 25 degrees and there were no windows open.

COMMENTS AND RECOMMENDATIONS

The coroner drew to public attention the fact that high temperatures in living, and particularly in sleeping, accommodation are a risk factor for the premature deaths of vulnerable infants. Low temperatures are of course also a risk factor. Families of babies ought to take advice on, and learn how to care for, their children in all circumstances. As pointed out by the expert witnesses, babies do not have a well developed dissipation mechanism and care needs to be exercised by parents and caregivers to ensure that babies do not overheat, or get too cold, when they are put down to sleep.

The coroner also commented that the fact that the baby was not checked for about 17 hours is of concern. Those left in charge of vulnerable infants ought to exercise their duties responsibly.

The coroner recommended that a copy of this finding be forwarded to the Child Youth Mortality Review Committee in order that the circumstances of this death can be further explored and identified, to enable appropriate publicity to be given to the circumstances of his death in order that such circumstances do not recur.

CASE NUMBER

CSU-2010-WHG-000181 2012 NZCorC 73

CIRCUMSTANCES

The deceased, a four month old infant, died of acute bronchopneumonia associated with unsafe sleeping conditions. There is a conflict in evidence as to the circumstances of this death. The version of events provided by the baby's father indicate he was found deceased in his crib with his blankets over his face. This is in direct contrast to the version of events provided by his mother where she saw him sleeping between his brother and his father. Irrespective of the conflicting evidence, the post mortem examination concludes he died from an unsafe sleeping arrangement.

COMMENTS AND RECOMMENDATIONS

The coroner commented that the issue of unsafe sleeping arrangements for babies has been highlighted in a number of coronial decisions over the past few years. There have been calls on the government agencies and child focus agencies to provide better education and monitoring around safe sleeping practices.

The coroner further commented that he can only reiterate the principles around safe sleeping. These principles are not new as they have been advocated for some years by coroners. Nevertheless they remain important and appropriate:

- Always ensure baby is in their own bed.
- Place baby on their back appropriately wrapped.
- Ensure baby's face is clear from soft toys, blankets, sheets, clothes or anything that will compromise their ability to breathe unencumbered.
- Place baby where they can't wriggle under blankets or become wedged between mattress and cot.
- Don't use a pillow.
- Don't sleep baby next to you, other adults or other siblings of the baby.
- If baby needs to sleep with you they should have their own independent bed whether it be a crib, wahakura or a plain old cardboard box made into a comfortable bed.

CASE NUMBER

CSU-2009-WGN-000163 2012 NZCorC 85

CIRCUMSTANCES

The deceased, a six month old infant, died at his home from sudden unexplained death in infancy (SUDI). The baby was placed in his mother's bed, lying in the prone position. About an hour later he was found to be rolling his eyes and had a slight nose bleed, he was then comforted and taken back to bed, again placed on his stomach. Approximately forty minutes later a family member went to check on him, he was in a critical condition. The baby's mother began CPR until emergency services attended but unfortunately he could not be revived. The history of the baby's sleeping patterns indicates that his death was related to sleeping in the prone position. When he was approximately seven weeks old, he was admitted to hospital after he had stopped breathing. On that discharge the baby's mother was given an apnoea monitor that was to be strapped to the baby's abdomen when he was put to bed. There had been concern expressed that he was sleeping on his tummy, as this was not a recommended practice.

When mother and baby returned home, the baby's mother had a lot of difficulty getting the baby to sleep on his back and after some time he was returned to sleeping on his tummy. A hospital check-up took place a week before the baby's death where his mother misinformed the doctor and said that the baby had been sleeping on his back.

COMMENTS AND RECOMMENDATIONS

The coroner commented that the baby had developed a sleeping pattern of only doing well when sleeping in the prone position. It is clear that the health carers had advised the mother of the dangers from this practice but baby would not settle in any other manner. At six months old he had developed strong limbs was able to 'lift himself up' and perhaps his mother felt he was beginning to be able to look after himself from a sleep perspective.

The coroner commented that there was a period of time when only the Plunket Service was available to mothers and their babies but over recent years this has now devolved into a myriad of service providers, including Plunket and others like Tamariki Ora. The coroner stated that a doctor from Tamariki Ora made what is, in his view, a very sensible and realistic suggestion; at present children only come under the care of Well Child providers when they are age of six to eight weeks and that it would be more desirable for enrolment of mothers with Well Child providers at a late stage of pregnancy (36 weeks) so that the providers can be onboard at the early stage to establish best sleeping practice and reinforce educational messages. This action could eliminate the development of dangerous sleeping habits.

The coroner recommended to the Minister of Health that Well Child providers such as Plunket, Tamariki Ora and others be engaged with expectant mothers from about week 36 of their pregnancy so that these carers are able to engage with the family at the earliest opportunity to educate and develop safe sleeping practices and other best practices for the newly born.

Response from the Minister of Health

The Minister of Health provided the following response to the coroner's recommendations:

I referred your [finding] to Chief Advisor, Child and Youth Health at the Ministry of Health. He advises that it appears from the evidence presented that the family received clear and consistent advice, and a range of services from Well Child, general practice and paediatric services through [the baby's] life. However, as in a number of SUDI cases, the family had difficulties acting on this advice, and the health professionals involved were either unaware of the family's difficulties, or were unable to assist the mother to provide a safe sleeping environment for her son.

I note your recommendation [stated above]. In Budget 2011, the Government allocated an additional \$21.3 million over four years for additional Well Child services. Subsequently, the Ministry has contracted Plunket (and other providers of Well Child/Tamariki Ora services) to provide additional visits for first-time mothers, and families with high needs, to enable them to keep their children safe and healthy. Some of these visits can be provided before the birth, following a referral from a midwife or doctor caring for the mother during pregnancy. The [deceased's] family would have qualified for additional visits under the new initiative.

CASE NUMBER CSU-2010-ROT-000045 2012 NZCorC 89

CIRCUMSTANCES

The deceased, a five month old infant, died due to accidental asphyxia, based on circumstantial evidence. The baby had been put to sleep face up on a pillow next to his parents in a large bottom bunk bed. His parents had been drinking alcohol the night before his death. When the baby's mother woke up in the morning she found the baby cold and unresponsive. He did not respond to resuscitation. The baby's mother gave evidence at inquest that it had never been spelt out to her what the risks were with bed sharing in these circumstances and exactly what the unsafe sleeping practices were.

COMMENTS AND RECOMMENDATIONS

The coroner commented that the extreme risks of unsafe sleeping practices such as existed in this case are highlighted graphically in his 2011 finding in case CSU-2010-ROT-000095. He stated that they apply even more so in this finding because of the combination of bed-sharing (of the baby with both parents) and that the parents had also been drinking alcohol.

The coroner commented that this is yet another case where the message of unsafe sleeping arrangements had not got through to the parents.

The coroner stated that the graphic educational message must reach New Zealanders, and this court pleads with the government, various authorities and those involved in the wider medical profession to ensure that this occurs. The coroner repeated that it is a shocking fact that a large number of baby New Zealanders are dying through these unsafe sleeping arrangements, particularly when the evidence is so clear that it is almost entirely preventable.

Transport-related

See also **product-related** above and **work-related** (agriculture) below.

CASE NUMBER

CSU-2011-DUN-000321 2012 NZCorC 51

CIRCUMSTANCES

The deceased died from injuries he received when he was struck by a car. The deceased was thirteen years old and was a student at a local high school. On 30 June 2011, he was attempting to cross Ruakura Road in Hamilton on his way to school. He was seen to sprint across the road in close proximity to a car. The driver applied his brakes but was unable to avoid hitting the deceased. He was admitted to Waikato Hospital, but his injuries were unsurvivable.

COMMENTS AND RECOMMENDATIONS

The coroner recommended to the chief executive officer of Hamilton City Council that the relevant roading authority consider whether a designated pedestrian crossing facility should be established to help pedestrians cross Ruakura Road safely near the entrance to Innovation Park/Ruakura Research Centre, or whether pedestrians should be directed to cross this road in another location.

CASE NUMBER

CSU-2011-AUK-000272 2011 NZCorC 53

CIRCUMSTANCES

The deceased died from multiple injuries sustained when she was accidentally run over by a truck and trailer unit.

COMMENTS AND RECOMMENDATIONS

The coroner explained that the incident occurred approximately 20 metres from a light-controlled intersection. There was also a light-controlled pedestrian crossing at the intersection, which the deceased could have used to cross the road safely. Unfortunately, she did not do so, choosing to cut in front of waiting traffic, apparently unaware of the impending green light phase for that traffic.

The coroner commented that the circumstances of this death therefore serve as a tragic reminder for pedestrians to be cautious when crossing busy, city roads – and that the safest option for crossing roads controlled by traffic lights is at the light-controlled pedestrian crossing, on the 'green man' signal.

CASE NUMBER

CSU-2011-DUN-000113 2012 NZCorC 56

CIRCUMSTANCES

The deceased died of injuries sustained when he lost control of the motorcycle he was riding. He was intoxicated with alcohol and cannabis and allowed his motorcycle to cross the centre line of the road and collide with an oncoming vehicle. The driver of the other vehicle in the collision was in no way responsible for the crash and was driving appropriately at the time.

COMMENTS AND RECOMMENDATIONS

The coroner drew to public attention the tragic consequences of alcohol- and cannabis-affected drivers in charge of vehicles travelling at high speed. A copy of the finding was forwarded to NZ Transport Agency for the information of the organisation.

CASE NUMBER

CSU-2011-HAM-000624 2012 NZCorC 68

CIRCUMSTANCES

The deceased died at Harding Road, Matamata as a result of injuries sustained in a motor vehicle crash. The deceased was a disqualified driver. On the evening of his death he went to a cricket game and barbeque with friends. He drank alcohol during and after the game to an extent where he was two and a half times over the legal driving limit. He then drove at speed and failed to properly negotiate an intersection losing control of his car and crashing into a power pole.

COMMENTS AND RECOMMENDATIONS

The coroner made the following recommendations:

- That an advisory sign be erected on Mowbray Road to advise motorists that Harding Road is offset to the left.
- That stop signs be erected in place of the give way signs currently governing the intersection of Mowbray Road, Tower Road and Harding Road.
- That a chevron board be erected on the eastern side of Tower Road facing towards Mowbray Road.

Response from Matamato-Piako District Council

Matamata-Piako District Council provided the following response to the coroner's recommendations:

Please note that Matamata-Piako District Council engages an external engineer to undertake an independent road safety audit for all fatal crashes that occur on our district roads. It must be noted that the audit report does not comment on the actual crash itself as details are not known on the factors that may have contributed to the crash. The report is simply commenting on whether improvements on the road environment could further enhance safety.

The report had the following recommendations outlined, which Council has already completed or is in the progress of doing so:

- Change the intersection controls on both Mowbray Road and Harding Road to stop controls.
- Install an edge line on Mowbray Road for 100 metres on the left side of the lane approaching Tower Road.
- Install edge marker posts on Tower Road through the intersection.
- Install a diverging chevron board opposite Mowbray Road.

CASE NUMBER CSU-2011-DUN-000072 2012 NZCorC 74

CIRCUMSTANCES

The deceased died from injuries sustained when he lost control of the van he was driving at speed while intoxicated. The van left the road and ended up upside down in a creek, trapping him in a position which caused asphyxiation.

The deceased had been drinking alcohol with other employees at their employer's headquarters. After being teased and harassed by others he left the party and got into the shearers van, which was parked outside with the keys left in the ignition. His blood alcohol level was seven times over the limit at which he was allowed to drive.

COMMENTS AND RECOMMENDATIONS

The coroner commented that the consumption by some at the party of significant quantities of alcohol contributed indirectly to this death. This death is proof of the dangers of drinking to excess. There were many attending the function on the night, other than the deceased, who were also significantly adversely affected by alcohol. If they had not been drunk their behaviour may have been such that the events on the night and the consequences of those events may not have occurred.

The coroner recommended that a copy of this finding be forwarded to the New Zealand Shearing Contractors Federation for circulation to its members. He asked that all shearing contractors take steps to ensure the safety of their employees outside their normal working hours. Consumption by members of shearing gangs of significant amounts of alcohol ought to receive more supervision. Shearing contractors may be placed in the position of the holders of licences for liquor outlets and have an element of 'host responsibility' placed upon them.

CASE NUMBER

CSU-2011-DUN-000211 2012 NZCorC 78

CIRCUMSTANCES

The deceased died from injuries sustained in a motor vehicle crash. After smoking cannabis during the day, the deceased has driven in an erratic manner on the road between Ravensbourne and Dunedin.

He lost control of his vehicle and allowed it to cross onto the incorrect side of the road where it collided with a truck. He was not licensed to drive a motor vehicle and was described as being an inexperienced driver. No blame was attributed to the driver of the truck.

COMMENTS AND RECOMMENDATIONS

The coroner commented that virtually all of the effects of cannabis reported by ESR (Environmental Science and Research) were exhibited by the deceased:

- euphoria and relaxation
- an impairment of perception and cognition

- a lack of motor coordination
- taking longer to respond to events
- reduced ability to think clearly
- reduced ability to pay attention
- distorted perception
- difficulty in thinking and problem solving
- · loss of coordination.

This death has proven, at least to the deceased's relations and friends, and to his wider peer group, the fact that smoking cannabis and driving do not mix.

The coroner recommended that a copy of this finding be forwarded to the NZ Transport Agency so that further publicity can be given by that organisation to the dangers of driving while affected by cannabis.

Response from New Zealand Transport Agency (NZTA)

The NZTA provided the following response to the coroner's recommendations:

On 15 January 2012 the NZTA launched a drug-driving advertising campaign which is the start of a long-term behavioural change campaign aimed at reducing the harm caused by drugged drivers. At this point, our aim is simply to raise awareness of the issue of drug-driving, create conversations and encourage debate about the issue.

We want people to reconsider their current views about driving on drugs, or to question just how safe it is to drive under the influence of drugs. One of our key challenges is that many people currently believe there is either no change in their driving, or that drugs actually make them drive more safely.

We are currently specifically looking at cannabis and how we might address this through our advertising campaign. At present we are scoping what form this might take and as you will appreciate this is new ground and challenging.

We are also looking to undertake a community demonstration project around alcohol and drug impaired driving. The project is a collaborative cross-agency project that has a stakeholder reference group and will be multi-faceted. It is early in the scoping phase but will be a tailored education of influencers who have a trusted relationship with drivers. These findings are certainly useful in getting an understanding around cannabis and driving.

CASE NUMBER

CSU-2011-CCH-000472 2012 NZCorC 84

CIRCUMSTANCES

The deceased, an Australian citizen and visitor to New Zealand, died in a road crash. The deceased and his coworker were travelling in a north-easterly direction along Taylorville Road, approximately two kilometres east of the intersection with State Highway 6. It had been a very cold and frosty night and their vehicle slid on an icy road surface on a moderate right-hand S-bend and rolled over a steep bank. Both of the men were wearing seatbelts. The deceased was described as a careful person and an experienced driver but he was not experienced in driving in frosty and icy conditions. Although the speed he was travelling at would have been appropriate in normal conditions, with local knowledge he would prudently have been travelling at a lesser speed. Not being a local driver, the deceased did not sufficiently recognise the potential hazard and was not receiving immediate advice from road signs or other markings.

Road marker posts in the crash area were spread apart at irregular distances in excess of 100 metres. Only one reflectorised road marker post was visible on the outside of the curve to drivers travelling northeast around the left-hand curve approaching the area of loss of control. A sign indicating slippery road and ice conditions was located some 1.3 kilometres back from the crash scene. The road contractor had treated the road surface for ice prevention the previous evening, and again on the morning in question. A surface coating left by the de-icing/anti-icing agent calcium magnesium acetate (CMA) treatment and some traffic passing over it may have contributed to the slippery surface that the deceased's vehicle struck.

COMMENTS AND RECOMMENDATIONS

The coroner commented that as the absence of reflective road marker posts and the position of the signs in the vicinity of the crash site have now been remedied he makes no formal recommendations to the road controlling authority (Grey District Council) relating to the immediate section of the road where the crash occurred.

The coroner observed that the road controlling authority remains responsible even though the road contractors may be contracted to carry out certain tasks. This is recognised in the road safety report completed by the transport engineer of the Grey District Council.

The coroner directed the following recommendations to the chief executive of Grey District Council and other road controlling authorities with responsibility for roads that are prone to winter ice conditions:

- That the road controlling authority maintains a record of the approved location of all permanent warning signs.
- That the maintenance contractor maintains a record of the location of temporary warning signs, in particular for ice hazard conditions, and regularly keeps the road controlling authority updated as to the location of these signs.
- In addition to the requirements of the contractor to inspect, replace and maintain existing traffic signs the road controlling authority carries out at least an annual audit of the location of all approved permanent warning signs throughout the district.
- In addition to the requirements of the contractor to inspect, replace and maintain existing edge-marker posts the road controlling authority carries out at least an annual nighttime audit of the location of edge-marker posts throughout the district.
- That the practice of covering-over curve advisory speed signs during hazardous conditions adopted by some road controlling authorities be investigated for icy road conditions.

CASE NUMBER

CSU-2011-CCH-000716 2012 NZCorC 36

CIRCUMSTANCES

The deceased died at State Highway 6, Haast Junction when he lost control of the vehicle he was driving. This resulted in the vehicle rolling and coming to rest on the deceased who was not wearing a seatbelt and was ejected from the vehicle. The unwarranted and unregistered vehicle was in poor condition, the vehicle entered onto State Highway 6 at excess speed, and the deceased's judgement was likely impaired as a result of the consumption of alcohol.

COMMENTS AND RECOMMENDATIONS

The coroner recommended to NZ Transport Agency that a raised traffic island be installed at the intersection of Haast Jackson Bay Road with State Highway 6, Haast to ensure that traffic entering onto the highway does so from a right-angle position.

CASE NUMBER

CSU-2011-HAM-000078 2012 NZCorC 43

CIRCUMSTANCES

The deceased died on Ngaruawahia Road as a result of injuries sustained in a motor vehicle crash. The deceased was driving home from work when a truck travelling in the opposite direction failed to safely negotiate a moderate bend. The truck then rolled over and collided with the deceased's vehicle as he had insufficient time and distance to avoid the collision. The police established that the driver of the truck had been travelling at a speed too great to negotiate the corner safely.

COMMENTS AND RECOMMENDATIONS

The coroner observed that the Police Serious Crash Unit (SCU) noted in its report that the existing signage and the advisory speed of 65 kilometres per hour for that particular corner appears appropriate for the environment and complies with guidelines. The report also noted that the particular dynamics of heavy vehicles are not considered with regard to the test procedure in determining the criteria for curve advisory signs. However, it is assumed that drivers of heavy vehicles are aware of their vehicle's limitations, and will modify their driving behaviour accordingly.

The SCU report notes that this particular corner has a crash history involving at least three previous truck rollover incidents within the past five years for northbound vehicles. This is despite the signage warning road users of the appropriate speed to negotiate this corner. The SCU report suggests that a sign symbolic of a tilting truck should be erected to warn drivers of heavy vehicles of the particular danger of their vehicle rolling over, such as the signs commonly used by Australian authorities. The coroner considered there is merit in this suggestion, as the crash history of this particular corner indicates that the current speed advisory sign is not sufficient warning to truck drivers of the rollover danger.

The coroner recommended that the roading authority responsible for State Highway 39, where this crash occurred, erect appropriate warning signage indicating the danger of heavy vehicles rolling over at this particular corner.

Response from New Zealand Transport Agency (NZTA)

The NZTA provided the following response to the coroner's recommendations:

The section of State Highway 39 from Ngaruawahia to Whatawhata had been the subject of a Safety improvement project. In December 2011, the NZTA carried out the following improvements to the road:

- Installation of road safety signs on both sides of the highway advising motorists to slow down – high crash area.
- Installation of curve warning signs with supplementary 65 kilometre per hour speed advisories, both sides of the highway.
- Installation of high-friction surfacing. The chevron and speed advisory signs remain.
- Installation of an active warning sign, which is activated if the approach speed of vehicles is higher than the speed that is considered safe to negotiate the bend.

The active warning signs have two activations, the first flashes an arrow and the second flashes the arrow and the words 'slow down'.

We have carefully considered your recommendation that the the NZTA install appropriate signage indicating the danger of heavy vehicles rolling over at this coroner. Given the significant changes that have been made on this corner our safety engineers consider that the warning signage now provided gives a much better indication of the dangers of this corner. They are concerned that another sign may clutter the corner and not have the desired effect.

Since the changes have been made, we have been monitoring the effectiveness of the safety measures and to date the changes have proved very effective. We are continuing to monitor the effectiveness of the safety improvements implemented to ensure we are maintaining a safe environment.

Water-related (general)

See diving, scuba diving, snorkelling and recreational or leisure activities above.

Water-related (recreational fishing or boating)

CASE NUMBER

CSU-2011-DUN-000123 2011 NZCorC 65

CIRCUMSTANCES

The deceased died in Doubtful Sound of sustained severe injuries when he was driving his boat at high speed in poor visibility, while intoxicated with alcohol. It was a very dark night with no stars visible and he was navigating using the GPS (global positioning system). The deceased's friend, who was also on the boat, considered that the deceased would have been travelling at a speed approaching the maximum. The boat crashed into a rocky outcrop near Espinosa Point in Doubtful Sound. The deceased's blood alcohol concentration was 102 milligrams of alcohol per 100 millilitres of blood.

COMMENTS AND RECOMMENDATIONS

The coroner commented that alcohol does not just affect motor skills, it affects cognitive skills. One outcome is likely to have been the failure by the deceased to set the GPS as he ought to have. A further failure by him was his driving the boat at a speed that was too fast for the circumstances. Because of intoxication, a person's decision-making is flawed. Intoxicated people are more likely to attempt unsafe acts. The coroner stated that Maritime New Zealand has, in its March 2012 issue of its magazine *Look out*, drawn to public attention the dangers of boating while intoxicated. The coroner commented that, if any good can come from this tragic death, it is for it to create publicity to the danger of being in charge of a boat while intoxicated.

The coroner recommended that the text of this finding be referred to by Maritime New Zealand in its future publications as a further example of the dangers of operating boats while intoxicated and asked that Maritime New Zealand continue to give publicity to the dangers.

CASE NUMBER CSU-2009-WHG-000105 2012 NZCorC 70

CIRCUMSTANCES

The deceased died from mechanical asphyxia after being trapped between his Toyota van and boat trailer as it jackknifed when he was attempting to retrieve his boat from the water while the tide was coming in. He was on his own and was obviously running between engaging his vehicle and ensuring the boat was on his trailer properly when he has left his vehicle in motion and has been trapped between his van and his trailer as it jack knifed.

COMMENTS AND RECOMMENDATIONS

The coroner acknowledged the size of the boat and the terrain in and around the ramp area will determine how the launch and retrieval of a boat should be handled. In some cases a single operation is appropriate. The coroner commented that this unfortunate death serves to remind boat users of ensuring safe practices. In stating the obvious, having at least two people involved in the launching and retrieving manoeuvres will always be safer than a single person operation.

The coroner commented that the Maritime New Zealand website has limited instructions around the launching and retrieval process of boats. It is based on a sensible and pragmatic approach. There are YouTube clips that demonstrate launching and retrieving practices that highlight pitfalls and provide safe instruction, if you are operating on your own. The most pragmatic recommendations are to methodically check your equipment and to comply with safe practices in the launching and retrieval process. This includes having a pre-launch checklist. The safest launching recommendation is to have another person assist the driver in guiding the vehicle and boat trailer into the water before releasing the boat safely and leaving the ramp. The safest retrieval process mirrors the launching process. It is also recommended that the driver and supporting team take into consideration changes in the environment like wind, tides, depths of water and slime on the ramp that may impact on the retrieval process.

Work-related (agriculture)

CASE NUMBER

CSU-2012-HAS-000029 2012 NZCorC 86

CIRCUMSTANCES

The deceased died from injuries sustained when a quad bike he was attempting to reverse moved in a forward direction and went over a bank. The deceased was a retired farmer and an experienced quad bike rider. He and two others were on the farm riding quad bikes. They rode to the top of a ridge and parked their quad bikes. When they decided to return home the deceased got on his bike and started it normally; his bike was heard clicking into gear. His bike then took off forward and went over the bank.

The quad bike the deceased was riding had been regularly serviced. The Department of Labour inspector commented that the deceased was parked to close to the edge of the bank. Despite being a very experienced bike operator he would have not been able to correct his forward movement, especially as he was expecting to move in the opposite direction. The methods on most Honda quad bikes to engage into reverse gear are not straight forward and there was no optional audible reverse gear selection alert indicator attached to the bike. The deceased was not wearing a safety helmet at the time of the incident and as he was a visitor to the farm he was not legally required to wear a helmet.

COMMENTS AND RECOMMENDATIONS

The coroner repeated an earlier recommendation made in his 2011 finding in CSU-2011-HAS-00005 that all quad bikes be fitted with an audible alarm that activates when the vehicle is in reverse gear.

The coroner recommended that all riders of quad bikes wear an approved safety helmet. The coroner directed that a copy of this finding be forwarded to Federated Farmers for publication to its members.

Acronym glossary

Acronyms used in this Recommendations Recap		
AAA	abdominal aortic aneurysm	
CAA	Civil Aviation Authority	
CARM	Centre for Adverse Reactions Monitoring	
СМА	calcium magnesium acetate (road de-icing/anti-icing agent)	
CTG	cardiotocographic machine	
DHB	District Health Board	
CCDHB	Capital and Coast District Health Board	
SDHB	Southern District Health Board	
WDHB	Waitemata DHB or Waikato District Health Board	
ELT	emergency locator transmitter	
ESR	Environmental Science and Research	
GP	General practitioner	
GPS	global positioning system	
HSE	Health and safety in employment	
LMC	lead maternity carer	
NIV	Non-invasive ventilation. Ventilation using a mask or similar device through the patient's upper airway (ie not bypassing the upper airway with a tracheal tube, laryngeal mask, or tracheostomy) .	
NZCOM	New Zealand College of Midwives	
NZTA	New Zealand Transport Agency	
OCF	Otago Corrections Facility	
OSH	Occupational health and safety	
PADI	Professional Association of Diving Instructors	
PCLC	prisoner cell and location check	
RANZCOG	The Royal Australian and New Zealand College of Obstetricians	
SCU	Police Serious Crash Unit	
SUDI	Sudden unexpected death in infancy	
VTE	venous thromboembolism: covers both DVTs and PEs.	
DVT	deep vein thrombosis: blood clot that forms within a vein.	
PE	pulmonary embolism: a piece of blood clot that lodges in the lungs.	
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Index

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