OFFICE OF THE
CHIEF CORONER
OF NEW ZEALAND

Recommendations Recap

A summary of coronial recommendations and comments made between 1 October–31 December 2011

ISSUE 1

Coronial Services of New Zealand
Purongo O te Ao Kakarauri

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Welcome to the first edition of Recommendations Recap. This is intended to be a quarterly publication to keep the judiciary, staff, stakeholders, media and the public informed about the findings and recommendations of the New Zealand Coroners Court.

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 aim of this publication is to identify and summarise 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 edition of Recommendations Recap features 41 coronial cases where recommendations have been made. These final findings were released by a coroner between 1 October and 31 December 2011.

Each edition will also provide an in-depth case study on a particular topic where multiple coronial recommendations have been made. This edition features a case study on sudden unexpected death in infancy (SUDI) deaths, containing a snapshot of the numbers of SUDI deaths and recommendations made by coroners since 1 July 2007.

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Case study SUDI deaths

SUDDEN UNEXPECTED DEATH IN INFANCY (SUDI) OR **SUDDEN INFANT DEATH SYNDROME (SIDS)**

SUDI deaths at a glance AS AT 30/4/2012

There have been 163 cases where the final cause of death has been found to be sudden unexpected death in infancy (or sudden infant death syndrome)

There have been 30 cases of infant deaths where the final cause of death has been found to be asphyxiation in a background of unsafe sleeping arrangements, prone sleeping or co-sleeping

There have been 19 cases of infant deaths where the final cause of death has been found to be unascertained or unspecified, in a background of unsafe sleeping arrangements, prone sleeping or co-sleeping

NB: Collection of coronial data starts as of 1/7/2007

Recommendations from this edition

Many of the recommendations made in these findings were similar in nature, and have accordingly been reproduced once after the case summaries.

CASE NUMBER
CSU-2010-AUK-000623 / 2011 NZCorC 128

DATE OF FINDING 6 October 2011

CASE SUMMARY The deceased, an infant aged 7 months, died at her home. The cause of death was sudden infant death syndrome. She had been put down to sleep on her back in her parent's queen sized bed at approximately 9pm the previous evening, by her father. She was placed with her head on an adult pillow and a cotton sheet and duvet covering her. Her older brother (just under 2 years old) was asleep to the right of her on the other side of the bed. There was an adult pillow separating their heads. When the deceased was found unresponsive, her brother was asleep on the other side of the bed. The deceased was lying on her stomach.

CASE NUMBER
CSU-2010-AUK-000692 / 2011 NZCorC 110

DATE OF FINDING 22 November 2011

CASE SUMMARY The deceased, a 6 week infant girl, died from unascertained causes, while sleeping in an unsafe sleeping environment – namely a 'stroller type' pram which was inclined to a 45˚ angle.

CASE NUMBER
CSU-2010-AUK-001247 / 2011 NZCorC 179

DATE OF FINDING 23 December 2011

CASE SUMMARY The deceased, a 7 week old infant boy, died at his home from sudden infant death syndrome in the context of an unsafe sleeping environment involving bed sharing with an adult, an adult pillow, and maternal smoking. The deceased was placed to sleep on an adult-sized double sofa bed in which both his mother and his one-year-old sister were also sleeping. The deceased was placed on his side facing towards the centre of the mattress. Several blankets were pulled over him and his head was on an adult-sized pillow. His mother was sleeping in the middle, and his sister was on the other side.

Comments and recommendations

1. The Coroner commented that the circumstances of this death have highlighted the ongoing need for parents to be given very explicit messages about what safe sleeping means – and the risks of ignoring the research in this area. This includes the need for the message to parents to be made explicit that lying babies in the first year of their life on adult pillows is a hazard that increases the risk of SIDS, and that this practice should be avoided for every sleep and also that bed sharing is potentially unsafe and should be avoided. This advice should be provided at every opportunity – ante-natally, on obstetric wards, and post-natally by community child health services.
2. The Coroner stated that a copy of this finding will be forwarded to the Ministry of Health to consider in the context of other recent coronial recommendations around SIDS risks. Those recommendations are directed at ensuring that public health advice in relation to safe infant care practices and safe sleeping environments are strengthened, broadened and consistent amongst public health educators and health professionals.
3. The Coroner commented that it is important to emphasise the message that while obviously stroller type prams are designed for children and infants they are not suitable as a regular sleeping environment for young infants – especially if inclined to an angle which may cause airway obstruction. If used in this manner the infant is at potential risk of sudden death. A cot or bassinet is the best sleeping environment for an infant.
4. The Coroner noted that the above comment is consistent with the Australian/New Zealand standard 'Prams and Strollers – Safety Requirements AS/NZS 2088:2009' which requires strollers that cannot be adjusted to an angle greater than 130˚ to the horizontal be labelled 'not recommended for a child under 6 months old'. Additionally, the Ministry for Consumer Affairs produces a fact sheet for the safe use of prams and strollers which states, 'for a sleeping child a cot or bassinet is best'.

IN BRIEF Other recommendations and comments made by coroners concerning SUDI deaths

CSU-2008-WGN-000053, CSU-2008-WGN-000105, CSU-2008-WGN-000110, CSU-2009-WGN-000070, CSU-2008-AUK-001905, CSU-2008-WGN-000109, CSU-2008-WGN-000114

Recommendations made to Ministry of Health that the public health advice in relation to safe infant care practices and safe sleeping environments be strengthened and broadened as to make issues clear surrounding the dangers of co-sleeping.

Recommendations made that the Moe Ora scheme and similar schemes, be encouraged and supported by government with a view that every new mother and mother-to-be is provided with a cot if she is unable to afford the cost of purchase.

CSU-2009-WGN-000428, CSU-2010-ROT-000095, CSU-2008-HAS-000708, CSU-2009-ROT-000478, CSU-2008-DUN-000546, CSU-2008-PNO-000166, CSU-2008-AUK-001664, CSU-2008-AUK-000189

Recommendations made regarding the need for public health authorities to heighten public awareness in relation to unsafe sleeping and bed sharing and the very real risks involved, particularly with regards to co-sleeping.

CSU-2009-WHG-000114, CSU-2009-WGN-000073, CSU-2008-HAM-000236, CSU-2009-AUK-001249, CSU-2009-HAS-000346, CSU-2009-HAM-000619, CSU-2008-WGN-000679

Comments made addressed to families and caregivers reminding them of dangers of sleeping arrangements including sleeping with infants on a couch or armchair, co-sleeping, sleeping with infants while under influence of drugs or alcohol, infants sleeping on adult pillows, and overnight sleeping of infants in prams and car seats.

CSU-2009-AUK-001548

Recommendation made that advice regarding the risks of lying babies on adult pillows in the first year of the life should be provided ante-natally, on obstetric wards, and post-natally by community child health services.

Recommendation made to Auckland District Health Board that they strengthen the advice given to parents of babies with gastroesophageal reflux and/or nasogastric tubes, about the increased SUDI/SIDS risks associated with using adult pillows to 'prop' their babies for these conditions.

CSU-2009-AUK-001398, CSU-2011-AUK-000063, CSU-2008-AUK-000319, CSU-2009-AUK-000522

Comments made that the practice of putting infants down to sleep on their backs in their own sleeping space is protective of them.

CSU-2008-AUK-000668

Comment made that smoking by the mother during pregnancy and after the birth is a known risk factor for sudden infant death syndrome.

Recommendation made that all parents of newborns should ensure the involvement of Royal New Zealand Plunket Society in the care of their newborn children.

CSU-2008-HAM-000290

Comment made that the Coroner supports all efforts being made to educate parents as to the danger of drinking to excess while caring for infants because of the effect of alcohol impairing the parents' ability to ensure their children are safe and well.

CSU-2008-WHG-000109

Comment made with respect to Māori families about the use of the *wahakura* – a flax bassinet, which keeps a baby safe, when having to sleep with an adult.

CSU-2008-HAS-000012

Recommendation made that lead maternity carers should prepare a written plan, to be agreed with the mother, to provide a safe and secure environment for a newborn infant, including details of sleeping arrangements.

Recommendations

Adverse effects or reactions to medical or surgical care

CASE NUMBER

CSU-2011-CCH-000586
2011 NZCorC 171

CIRCUMSTANCES

The deceased was 74 years old and died in Christchurch Hospital after presenting to the Emergency Department with a two day history of right sided abdominal pain. A CT scan revealed cholecystitis and a malignancy in the colon. She was administered three Picopreps as a bowel preparation prior to treatment. This preparation precipitated volume overload and contributed to her death by renal failure.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that the Canterbury District Health Board devise and implement protocols to avoid fluid overload during bowel preparation of diabetic patients

CASE NUMBER

CSU-2010-AUK-001262
2011 NZCorC 119

CIRCUMSTANCES

The deceased was an 81 year old admitted to hospital with abdominal cramps and jaundice. The direct cause of death was sepsis due to ascending cholangitis as a result of a large bile duct obstruction. The deceased presented with atypical symptoms of the disease and there was a delay in diagnosis and treatment. An ultrasound was needed to confirm this diagnosis but unfortunately there was a delay in this test being performed.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that the Auckland District Health Board (ADHB) has recognised that patients with ascending cholangitis are high risk patients best looked after by doctors with particular expertise in the management of this condition. She commended the DHB on its new policy that any patients with ascending cholangitis must have a non-discretionary referral to a gastroenterology team who will take over the care of such patients. However, she also noted that this policy relies on a diagnosis of ascending cholangitis having been made.

The Coroner therefore commented that it appears that the new ADHB policy may not be sufficiently broad in scope, and considered that specialist input at the time the deceased's diagnosis was being considered would have been helpful.

The Coroner recommended that ADHB considers whether its policy on mandatory referral to a gastroenterology team for patients diagnosed with ascending cholangitis should be expanded to include a requirement for input into diagnosis from the gastroenterology team where ascending cholangitis is considered a possible diagnosis.

RESPONSE FROM AUCKLAND DISTRICT HEALTH BOARD

The ADHB stated that due to the broad range of potential presenting symptoms and signs of cholangitis, it would be impractical with current resources to expect a gastroenterology review in all such patients.

The ADHB did recognise that the deceased's death highlights potential flaws in the current system and initiated a change to policy. This policy change addressed the need for earlier specialist input where cholangitis is considered likely. The policy changes also provide that, if cholangitis is considered likely, radiology will consider imaging as an 'urgent' priority.

CASE NUMBER

CSU-2008-DUN-000525
2011 NZCorC 115

CIRCUMSTANCES

The deceased was admitted to Dunedin Hospital from the rest home where she resided, suffering from a severe rash after being administered the drug Cefaclor. She had received Cefaclor before without a severe allergic reaction however the deceased had known allergies to penicillin. The deceased died in hospital, the cause of death 'being toxic epidermal necrolysis due to cefalosporin antibiotic use'.

COMMENTS AND RECOMMENDATIONS

The Coroner commented: 'There have been only four recorded patients suffering from toxic epidermal necrolysis due to cephalosporin worldwide since the drug was developed for administration. The death of [the deceased] was very, very rare (...) I take this opportunity of reminding all parties that the practice of medicine will never be able to reach perfection'. However, the Coroner also commented that the rapidly deteriorating condition of the deceased could have been and should have been recognised and acted upon earlier than it was.

The Coroner recommended that a copy of his finding be sent to the Centre for Adverse Reactions Monitoring (CARM) and the Intensive Medicines Monitoring Programme (IMMP) of the Pharmaco Vigilance Centre Otago University to ensure that the risk factors associated with Cefaclor (CeClor) and cephalosporins generally are recorded. He also recommended that a copy of this finding be forwarded to Dunedin Hospital. He stated that there are problems with the charting of drugs and recording adverse reactions and cross-reactions and that attention should be given to a programme to address these problems.

The Coroner recommended that a copy of the finding be forwarded to Dunedin Hospital and St Andrew's Home.

CASE NUMBER

CSU-2009-AUK-000932
2011 NZCorC 115

CIRCUMSTANCES

The deceased, aged 22 years, died from neisseria meningitidis infection (meningococcal septicaemia).

The deceased saw his GP at 12.13pm on 8 July 2009. He had flu-like symptoms with no rash or sign or meningism. The deceased was referred to Auckland Hospital and was assessed and triaged to be seen in a 30 minute period. Due to the fact that the Emergency Department and Admission and Planning Unit were very busy, it took more than an hour after his initial triage before he was seen by a doctor. His illness progressively got worse with a continuation of the symptoms and later appearance of a rash on his body consistent with meningococcal disease. Despite hospital medical management, the deceased died that evening from meningococcal disease – C-strain.

The deceased's symptoms and illness coincided with the first season of H1N1 influenza A and peak hospital presentations of both seasonal flu and H1N1. Also, as a medical student, the deceased had been in contact with people who had contracted H1N1 virus. The early symptoms of the deceased's disease were confused with the influenza epidemic. It was the Coroner's view that the inevitability of identifying the correct disease would have increased with more regular reassessments once the triage time had expired.

COMMENTS AND RECOMMENDATIONS

The Coroner made the following comments:

1. There has been a heightened media campaign raising the awareness of meningococcal disease particularly the C-strain. The deceased's family have been tenacious in lobbying for a greater awareness of this fatal disease. They have questioned medical authorities about the availability of accepted vaccinations and the accompanying educational information with it.
2. In the TV One current affairs programme *Close Up* on 15 April 2011, Dr John Holmes, for the Ministry of Health, made an appearance after the unfortunate death of

Penelope Lake, a teenager from Wellington. Dr Holmes outlined in that interview some of the issues and difficulties associated with this disease. One of those issues was the education and availability of a vaccination for the C-strain. In the Coroner's view the media coverage did raise the awareness of meningococcal disease in the context of the public's unawareness of the available resources associated with the disease.

3. In a recent situation, the Northland District Health Board (NDHB) embarked on a publicly-funded programme of vaccination for the meningococcal C-strain. At a media briefing on 16 September 2011, the NDHB made reference to their concerns around the rising numbers of those with the C-strain disease. Dr Claire Mills, one of the senior members of the NDHB, Public Health Unit, confirmed the Northland situation had risen to a level considered serious and warranting a publicly-funded vaccination programme.
4. It must be noted that the Northland situation is either the exception to the rule or the pioneer in this initiative. To date it is the only district health board (DHB) in New Zealand currently undertaking such a project. The programme targets young children, teenagers and young adults most at risk of this disease. The campaign aims to vaccinate approximately 85 percent of Northlanders aged from 12 months to under 20 years of age. The programme is envisaged to run for approximately 10 weeks ending 16 December 2011.
5. All children and young people in schools will be offered free vaccination starting with high schools. Children, aged 12 months to fives, will be offered a vaccination through their GPs. Those youth not in school and under 20 years of age will also be vaccinated from their GPs and/or special clinics set up in the area.
6. Dr Claire Mills in the media release on 16 September 2011 indicated the vaccine to be used is Meningitec®. She goes on to say this vaccine has a very good safety record and has been used extensively in Europe, the UK and in Australia since 1999. The vaccine does not contain live bacteria and therefore it is not possible to get the disease from the vaccine. The vaccine provides protection after about 10 days and is considered to be between 90% and 95% effective. Dr Mills said: 'meningococcal disease can be difficult to diagnose and anyone with symptoms should seek medical attention without delay, as early treatment is very important. If, despite earlier treatment, your condition deteriorates, don't hesitate to seek medical attention again'.
7. The important issue to note was to recognise the seriousness of the disease in this area at this time by identifying who was most at risk. Then the decision to embark on a campaign to immunise with good public relations, good communication and effective educational releases involving the schools, clinics etc. The effectiveness of the campaign would turn on parents, caregivers, schools and other related influences supporting it. The campaign has been generally well received.

The Coroner accepted and endorsed the recommendations submitted by the interested parties. The parties agreed that the following recommendations should be accepted by the Coroners Court:

Early warning scoring system for assessing physiological instability

1. The Royal New Zealand College of General Practitioners develop and propagate an objective tool for assessing physiological instability, which integrates multiple physiological markers.
    a. A national clinical working group for the New Zealand ambulance sector develop and promulgate an objective tool for assessing physiological instability, which integrates physiological markers.
    b. That the Auckalnd District Health Board (ADHB) present the deceased's case and the early warning system apparently adopted by the ADHB, to the Chief Medical Officers of the other 19 DHBs) with a recommendation that the DHBs adopt a system for escalation of care for physiological instability, which integrates multiple physiological markers.
    c. That the tools developed and adopted under recommendations 1–3 include a reference to the fact that where a patient presents with influenza-like illness or symptoms, together with markers of physiological instability, bacterial sepsis should be included in the differential diagnosis.

d. That ADHB uses the deceased's case for teaching during implementation of the early warning system.

2. Information regarding influenza-like illness and possible bacterial sepsis
   a. That the Ministry of Health (MoH) communications and guidelines regarding influenza-like illness, whether routine or in response to an influenza outbreak, include the caution that other illness, notably bacterial sepsis, may present with similar symptomology as influenza. In the absence of a cough, sore throat, a differential diagnosis of influenza-like illness should also include possible bacterial sepsis until proven otherwise.

3. Protocol for pre-hospital parenteral antibiotics
   a. That the Royal New Zealand College of General Practitioners initiate a national working group to develop a protocol for the administration of pre-hospital parenteral antibiotics.
   b. That the protocol includes the signs and symptoms of suspected bacterial sepsis and indicators for the taking of blood culture samples, in patients without hemorrhagic rash.
   c. That the Royal Australian College of Physicians and the national clinical working group for the New Zealand ambulance sector be included amongst those invited to participate in this working group.

4. Immunisation policy
   a. That the MoH updates its immunisation guidelines and communications to medical practitioners and consumers to ensure the inclusion of the option of vaccination for meningococcal C disease.
   b. The New Zealand Vice-Chancellors' Committee requests that all universities amend the advice they give students regarding vaccination and that the advice to students includes information regarding the option of vaccination for meningococcal C disease.
   c. That the MoH identifies what other institutions or groups present an increased risk of contracting meningococcal disease and ensure that these institutions or groups provide advice regarding options for vaccination for meningococcal C disease. Some of these groups would include boarding schools and sports academies where there are live-in situations.
   d. That the Australasian College of Emergency Medicine amends its immunisation policy to specify which vaccine preventable diseases are included in its advice to offer immunisation to emergency medicine health care workers.
   e. That the MoH reviews, at the earliest opportunity, the cost-benefit of a publicly-funded vaccination programme for meningococcal C and undertakes appropriate consultation, including with consumers.
   f. It should be noted that the NDHB has already undergone a publicly-funded programme and the issue whether this should be extended to the other 19 DHBs remains a decision in those respective boards and the MoH.

5. Post-incident response protocol
   a. That the MoH review its quality improvement guidelines and workbooks in light of the deceased's case in order to include specific triggers or indicators for review where there is no identified adverse incident.
   b. That ADHB presents a summary of the deceased's case to the chief medical officers of the other 19 DHBs with a recommendation that they review their quality and safety structures in order to include specific triggers or indicators for review where there is no identified adverse incident.

6. Activation of 'code red'
   a. That nursing and junior medical staff be reminded of the criteria for the activation of a 'code red' and be encouraged to do so when they become concerned about a patient's wellbeing rather than delaying the decision to make the call.
   b. To some extent the activation of a 'code red' is part and parcel of the use of a scoring system for identifying physiologically unstable patients as discussed in early warning scoring system.

Aged care

CASE NUMBER
CSU-2009-AUK-001537
2011 NZCorC 109

CIRCUMSTANCES

The deceased, an 80 year old female, died at North Shore Hospital from complications of malnutrition, pressure ulcers and cerebrovascular accident (infarct). The deceased had been living with her son who was his mother's sole caregiver. Her physical condition had been declining over the past two years and increasingly she required care for all the usual activities of daily living including feeding, showering and toileting. In the two weeks prior to her hospitalisation she began eating less and less and had also become incontinent. The deceased had not seen a doctor in two years, had not received any public medical care and was not known to Age Concern. Her son appears not to have known about the possibility of home help care or other wider community services. There was no evidence of deliberate neglect.

Upon her arrival at hospital on 1 November 2009 the deceased had a very thin, wasted appearance and was obviously dehydrated. She also had a sacral pressure sore which was necrotic. In the early hours of 13 November 2009 the deceased was noted to be unresponsive. It was suspected that she had had a seizure possibly due to a low calcium level, and a CT scan showed bilateral subdural haematomas (bleeds into the brain, a stroke) likely to be spontaneous, rather than traumatic. She continued to decline and died two weeks following her admission.

An initial post-mortem undertaken by a pathologist concluded that the cause of death was morphine and midazolam intoxication. The Coroner's inquiries established that the deceased had received double the prescribed dose of midazolam on 15 November, and possibly double the prescribed dose of morphine. Despite this, it was a second pathologist's (Dr Stable's) opinion that neither the morphine nor the midazolam was a significant factor in the deceased's death.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that the circumstances of this death raise questions about public awareness of, and access to, community services to assist in elder care. She noted that Age Concern operates an Elder Abuse and Neglect Prevention Service focussed on public awareness and the early identification and prevention of elder neglect. She directed a copy of these findings to be sent to that organisation for consideration within their neglect prevention programme of the specific factors in this case, which limited the deceased's (and her son's) opportunity to access help and assistance, and how such factors may be alleviated.

The Coroner made the following recommendations to Waitemata District Health Board:

1. Notwithstanding Dr Stables' opinion regarding the role of morphine and midazolam in this death, and my findings in this respect, it is extremely concerning that the clinical records show, at least in the case of midazolam, that twice the prescribed dose was administered on 15 November. This is especially worrying in light of the deceased's fragile physical state. It is difficult to understand how such an error occurred given that a checking system was clearly in place (as evidenced by the chart itself).
2. I recommend that this case be reviewed to identify how the error occurred, and that steps be undertaken to assist in the prevention of similar errors occurring in the future. Given the ambiguity of the clinical record as it pertains to the administration of morphine, such review should also consider and re-emphasise the importance of accurate and legible record-keeping.

Care facilities

CASE NUMBER
CSU-2010-HAM-000185
2011 NZCorC 111

CIRCUMSTANCES

The deceased died at a care facility operated by Te Roopu Taurima O Manukau Trust. The deceased was in the care facility and became agitated after being refused approval to take food belonging to another person in the house. After physically assaulting one of the two male caregivers in the house he was restrained by both caregivers in his bedroom. At one stage during the restraint process, the deceased was kneeling on the floor with his chest and stomach across his bed while the caregivers each held one of his arms. After approximately five minutes in this position the caregivers released him, but then noticed that he appeared to be suffering an epileptic seizure. He was helped on to the floor and his breathing was checked. He was noted not to be breathing and CPR was commenced. An ambulance was called but the deceased could not be resuscitated. The cause of death, as established by the pathologist in the post-mortem, was 'sudden death during restraint, with the following contributing conditions: morbid obesity, epilepsy, dilated cardiomyopathy, Wolf-Parkinson-White syndrome and restraint stress'.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that he was satisfied that the caregivers and the organisation that they are involved with will look to see what lessons they can learn from this death and may, if they consider it appropriate, implement changes to their training and their restraint process. The Coroner stated that he was simply highlighting the risks involved in the restraint process, which he knows are contained in the training material used. But these comments may also give the organisation some ground to be able to consider whether there are any other options or training protocols that they could put in place that may prevent further deaths occurring in similar circumstances in the future.

Child deaths

CASE NUMBER
CSU-2009-AUK-001598
2011 NZCorC 120

CIRCUMSTANCES

The deceased, a six year old girl, was part of an extended family group enjoying a family touch rugby tournament at Tamaki College sports grounds. She and her younger brother were playing in the school grounds on a scrum machine owned by the College. The machine toppled over and the deceased was trapped and crushed.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that the College's response to deal with issues identified by this death were responsible and prudent. She recommended that copies of the finding be sent to the Ministry of Education and to the Chief Executive of the New Zealand Rugby Union (NZRU) to highlight the issues raised by this death.

Response from New Zealand Rugby Union

The NZRU stated that it has written to all 26 provincial unions instructing them to forward on to their member clubs a memo detailing the Coroner's findings and recommendations to ensure scrum machines are stored in a safe and secure manner. They also planned to highlight the same at their Amateur Rugby Managers Meeting and Rugby Road Show Club Forums.

CASE NUMBER
CSU-2011-AUK-000173
2011 NZCorC 125

CIRCUMSTANCES

The deceased, a two year old girl, was at Waiwera Pools with her family and wandered away without anyone noticing. A member of the public informed a lifeguard who was attending to a person in the first aid room that something was at the bottom of the tower pool. The lifeguard dived in and pulled out a child.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that this death highlights again the need for parents to actively and closely supervise young children at swimming pools, even if the pool complex provides lifeguards. If there is a handover from one parent to the other of responsibility for such supervision, then it is imperative that each parent clearly understands who has that responsibility at any given time. The Coroner emphasised that parents cannot and should not rely upon staff at a commercial pool complex to supervise their young children, as this is not usually the staff's responsibility.

CASE NUMBER

CSU-2009-AUK-001378
2011 NZCorC 123

The deceased, an infant, drowned in a stormwater pipe near Pomaria Street, Henderson. She likely stepped onto a displaced manhole cover lying in the driveway of a property on Longburn Road, Henderson, Auckland, and was tipped into the manhole below. Following which she was swept down the pipe to a point where her body was caught by tree roots, which had infiltrated and were obstructing the pipe.

An extensive eight day search took place before the deceased was found. A constable who first attended the scene checked the manhole when he saw that the lid was ajar, looked in it and saw it was full of water but did not see the child. He replaced the lid and did not report his action. The coroner commented that the lack of debriefing at shift change had caused the oversight in reporting to the next shift what had been found by the last.

COMMENTS AND RECOMMENDATIONS

The Coroner made the following recommendations to Local Government New Zealand:

1. Building on the improvements effected by the Auckland Council in management of its stormwater infrastructure (and associated public risk), and having regard to the recommendations made to the court by Mr Brian Kouvelis, consulting civil engineer, the Coroner recommended that Local Government New Zealand establish a national body of guidelines and recommendations for adoption by all territorial local authorities (TLAs) for the management of stormwater systems, including the steps needing to be taken in the interests of public safety, the levels of service required in respect of surcharging manholes, and the establishment of criteria for the fitting of safety grilles or other protective devices to manholes in existing and new stormwater networks.
2. The Coroner recommended that consideration be given to the establishment of an integrated risk management policy (similar to that developed by the Rotorua City Council) for adoption by TLAs, the purpose of which policy is to link infrastructure activity, asset management/planning and corporate risk management (each asset management plan to include a comprehensive risk register), through levels of service, to sound and effective community outcomes.
3. The Coroner recommended that Local Government New Zealand convey to TLAs the following specific recommendations made by Mr Kouvelis, for consideration or action pending completion of recommendations 1 and 2:
    a. That TLAs take immediate steps to secure manhole covers or fit safety grilles to manholes that:
        i. have been identified with a potential for surcharging through network modelling studies
        ii. have a known problem with surcharging as reported through existing stormwater operation and maintenance contracts and programmes
    b. That a quality assurance loop be included in maintenance and operations contracts to ensure consistent effectiveness of work order, actions and intent
    c. That key stormwater pipes within stormwater networks be fitted with telemetered sensors to monitor stormwater network performance and to enable rapid response to displaced manhole covers in areas at risk of surcharge within the stormwater network
    d. That TLA call-centre complaints protocols include the issuing of a complaint number to complainants for future reference and follow-up

e. That procedures for prioritising responses to notification of displaced manhole covers be reviewed

f. That procedures in terms of identifying problems in stormwater drainage networks following repeat complaints of manhole cover displacement in or around an area to be reviewed

g. That each TLA develops a robust system of identifying and ranking public safety risks around all manholes

h. That each TLA develops a public health and safety risk profile of all existing manholes according to level of service, depth and location.

Response from Local Government New Zealand (LGNZ) and New Zealand Police

The Chief Executive of LGNZ circulated a memo, dated 28 October 2011, to local councils advising them of the Coroner's recommendations and appending a copy of the certificate of findings.

A press release from NZ Police responded to the Coroner's comments in his finding about the need for timely debriefing of frontline staff.

Superintendant Bill Searle, Waitemata District Commander, said this was already being done. A form developed by Auckland Police Search and Rescue (SAR) has been circulated to all SAR supervisors throughout the country. Police processes have been changed to ensure 'hot debriefs' are now conducted in such cases, and this will be reflected in the updated police manuals.

Diving, scuba diving, snorkelling

CASE NUMBER

CSU-2011-ROT-000139
2011 NZCorC 108

CIRCUMSTANCES

The deceased was on tourism boat at Raoul Island. She had been involved in snorkelling activities and got into difficulty. She raised her hand and was picked up by a dive support boat and taken back to the main ship. The ship's doctor treated her. Her condition began to deteriorate rapidly and she died. The forensic pathologist noted that probably unbeknown to her she had an underlying history of heart disease with an abnormal aortic valve in her heart.

COMMENTS AND RECOMMENDATIONS

The Coroner endorsed the following recommendations made by the Police National Dive Squad:

1. Ensure the diver's experience is clear to those planning or organising a dive trip.
2. Do not enter the water in adverse conditions.
3. Do not enter the water if you are not confident and without proper training.
4. If in difficulty at any time in the water – surface, abandon the dive and seek assistance early before the situation gets out of hand.
5. Be completely familiar with the dive equipment used and its correct set up.

CASE NUMBER

CSU-2008-CCH-000837
2011 NZCorC 117

The deceased, a dive centre owner/operator, died while diving in the vicinity of the wreck of the Holmglen off the coast of Timaru. He was diving using closed circuit rebreather with trimix, at a maximum depth of 65–67 metres. This is considered a deep dive and was possibly only the

third dive to the wreck since the sinking of the vessel in 1959. The deceased's experience and qualifications appropriately allowed him to use trimix on closed circuit, although he was not formally qualified with the combination. Death was due to acute heart failure with coronary artery disease. There was terminal aspiration of sea water. The cardiac event was precipitated by dysrhthmia, which in turn resulted from physiological stresses and increase in task-loading. These occurred during a decompression that was disrupted following the loss of the datum line due to the collapse of a buoy holding a 20 kilogram weight that was attached to the datum line.

COMMENTS AND RECOMMENDATIONS

The Coroner made the following recommendations for divers undertaking technical dives:

1. Ensure persons dive with dive buddies and remain in close proximity throughout the dive especially during the ascent.
2. Ensure a pre-dive check is undertaken and includes a check of dive buddies' equipment (but with responsibility for the equipment remaining with the diver concerned) including bail-out equipment and systems (particularly gas types).
3. Ensure the pre-dive plan is followed, not exceeded.
4. Ensure divers have a plan if an emergency occurs during the dive.
5. Ensure an appropriate dive brief is conducted, which includes the surface support/boat skipper.

CASE NUMBER

CSU-2010-CCH-000790
2011 NZCorC 112

The deceased got into difficulty while snorkelling with a group of friends with Encounter Kaikoura. She had been fitted out with a wetsuit, mask, snorkel and fins, and was interacting with the dolphins for approximately 10 minutes when she raised the alarm. She was taken aboard and an ambulance was called. She was attended to immediately upon arrival on shore and taken to the local medical centre. After a period of trying to clear her airways she went into cardiac arrest.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended to Canterbury District Health Board that Kaikoura Hospital be equipped with a continuous positive airway pressure (CPAP) device and that protocols for its use be established and medical staff be trained in its use.

The Coroner recommended to Maritime New Zealand that for snorkelling and similar marine charter activities that:

1. Individual waiver forms should be used, not a group form.
2. Vessels should comply with Maritime NZ regulations (eg Rule 40A, Appendix 8) and the NZU code of practice for dive operators.
3. First-aid equipment should comply with Maritime NZ requirements and be checked monthly. It should also meet any local or specific needs. An example of this for snorkelling/scuba diving activities might be to not stock a bronchodilator, this being replaced by stocking asthma snorkels and ensuring that an asthma sufferer's own inhaler is immediately to hand.
4. An oxygen cylinder of appropriate size (determined by the likely length of time to obtain emergency services assistance) and an oxygen kit, such as those marketed for the diving environment by the Divers Alert Service Asia-Pacific (DAN, a not-for-profit organisation) is carried. This should be checked daily and kept in good condition. Not all oxygen kits are suitable for the marine environment.
5. All employees on board should be trained first-aiders including basic life support resuscitation, at least two should be trained oxygen providers and (if appropriate) AED use and all should undertake annual refreshers. Courses specific to diving and snorkelling activities are the most appropriate, such as those of DAN or the Professional Association of Diving Instructors (PADI) (emergency first responder, oxygen provider, etc) NZU also provides a syllabus for a Dive activities supervisor (DAS) programme.
6. Manning levels should comply with Maritime NZ regulations and be sufficient to ensure that customers are not essential to providing first aid or resuscitation. This implies an absolute minimum of three people – a skipper, a DAS (current Maritime NZ requirement is

1 per 18 snorkelers) and either a deck hand or diving assistant/trainee. Clients should only ever be involved if they voluntarily bring specific expertise to the situation.

7. Rescue and emergency procedures, including man-over-board, fire, and emergency on board, should be documented and practiced regularly.
8. An emergency protocol for obtaining assistance should be in place, and practiced/tested at regular intervals. All staff should be trained to operate the vessel's radio on the emergency and local channels.
9. Further investigation be undertaken as to the appropriateness of an automatic emergency defibrillator (AED) being carried (and in particular the safety of operating such device in a water environment).

Drug, alcohol or substance abuse

CASE NUMBER
CSU-2010-DUN-000057
2011 NZCorC 168

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

COMMENTS AND RECOMMENDATIONS

The Coroner commented: '[This] is another tragic outcome of a young person experimenting with the inhalation of toxic substances. Dr Michael Beasley of the New Zealand National Poison Centre comments that inhalant abuse is a persisting problem in New Zealand and is an extremely dangerous practice. He recommended continued education and other preventive measures are essential to help curb this practice'.

The Coroner recommended that a copy of his finding be forwarded to the New Zealand National Poison Centre for its information and to the Medical Officer of Health with a request that further publicity be given to the dangers of inhalant abuse.

CASE NUMBER
CSU-2009-HAM-000071
2011 NZCorC 113

The deceased, a 22 year old woman, died at Waikato Hospital of methanol poisoning. She had been visiting friends where she was offered a drink, which she was told was homebrew alcohol. The deceased was given a mixture of methanol and either water or lemonade to drink and she consumed a considerable quantity of this concoction over several hours. She did not know she was drinking methanol. The following day, she presented at hospital after complaining of being unwell. She was transferred to Waikato Hospital where, despite receiving maximal treatment, she died as a result of the damage done to her brain by the methanol that she had ingested.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that this death highlights the dangers of drinking an unknown liquid even when provided by a friend. He stated:

'I am concerned that there appears to be a drinking culture amongst the crowd that [the deceased] mixed with, and this culture has directly led to [the deceased's] death by encouraging [her] to drink a substance that she suspected was alcohol but was not certain that it was alcohol. I would like to think that the people involved, their friends and the wider community at large will reconsider their attitude to drinking alcohol, particularly from an unapproved source. I can understand that they may think it is a lot cheaper to drink homebrew alcohol, but there are inherent risks in drinking homebrew alcohol, even if it is not methanol. There are still risks involved in the way that the homebrew alcohol is derived that can have a very harmful effect on people.'

The Coroner commented that this death was entirely preventable, if people had been a little more careful about the substance that they had been drinking.

CASE NUMBER
CSU-2011-HAM-000224
2011 NZCorC 156

The deceased died from alcohol toxicity. During the afternoon of his death, the deceased consumed most of a bottle of whiskey and became very intoxicated. His mother made regular checks on him and placed him in the recovery position. At one point his mother noted that he was having trouble breathing, but medical assistance was not called for. Later that evening, his mother found him lying on his bed in a lifeless state.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that this death is another example of a person drinking himself to death while most likely unaware of the danger that drinking excessive amounts of alcohol carries, or else reckless as to the risk to his safety. He stated that 'such ignorance or recklessness is difficult to understand given the publicity generated by recent deaths in relation to excessive consumption of alcohol'.

The Coroner also commented that of equal concern is the fact that no medical assistance was sought when it was noticed that the deceased was highly intoxicated and having difficulty breathing. This death serves to reinforce earlier calls made for medical assistance to be sought whenever a person is noted to be highly intoxicated rather than simply being left to sleep it off.

Labour or childbirth

CASE NUMBER
CSU-2011-HAS-000045
2011 NZCorC 116

CIRCUMSTANCES

The deceased, an infant, died at Gisborne Hospital one day after he was born. He was reported to be a well grown and healthy baby when his mother was admitted to hospital for his birth. He had a normal CTG on admission for induction of labour. A review commissioned by Tairawhiti District Health Board TDHB) concluded that there had been a failure to appreciate the significance of severe chorioamnionitis with evidence of fetal compromise. It was considered that interpretations of CTG tracings were incorrect and that opportunities for intervention were missed. The direct cause of death was congenital pneumonia associated with ascending infection. The antecedent cause was chorioamnionitis and chorionoc vessel vasculitis.

COMMENTS AND RECOMMENDATIONS

The Coroner endorsed recommendations made by Dr Ngan Kee in his report commissioned by TDHB. The Coroner made the following recommendations with a view to improving the interpretation of CTG data and the care provided to fetuses and mothers in labour, and with a view to reducing the chances of the occurrence of other deaths in similar circumstances.

To Tairawhiti District Health Board, that the Board

1. Require all clinical staff, including lead maternity carers (LMCs) and obstetricians complete the K2 training and simulator cases by an appropriate date
2. Require that staff complete the simulator cases annually
3. Audit compliance by staff with the Board's requirements
4. Ensure that clinical staff receive teaching with regards to the risk factors for chorioamnionitis, its clinical presentation, risks to the fetus and mother, and management principles
5. Develop a guideline for the management of pyrexia in labour
6. Develop a massive blood transfusion policy
7. Provide a second on-call obstetrician
8. Ensure expectant mothers are aware of an option for a caesarean birth when appropriate
9. Provide documentation recording passing of care responsibility from LMC midwives to obstetricians, and vice versa
10. Provide protocols to ensure that an expectant mother is aware who is responsible for her care at any stage during the induction and delivery process.

To Midwifery Council of New Zealand

All midwives be required to complete electronic fetal monitoring and CTG interpretation as part of the Recertification Programme.

Response from Tairawhiti District Health Board

The TDHB had the following responses to the recommendations made by the Coroner:

Recommendation 1. The TDHB can require hospital-based midwives and obstetricians to complete the K2 training course and simulator cases and this is being done. TDHB cannot require that LMCs complete the training, as they are not employees of the DHB, but are independent practitioners. The TDHB is currently involved in a regional process to gain some consistency and share resources regarding CTG training with both the K2 and RANZCOG CTG training programmes.

Recommendations 2–5 have been actioned.

Recommendation 7. The TDHB could not provide a rostered second on-call obstetrician. The TDHB stated: 'In a DHB with only three of four obstetricians available at any time it would be unduly onerous to have two rostered on duty nightly, and in many instances would be impossible (due to leave, etc). We suggest that any obstetrician who feels unsafe for whatever reason (fatigue, work overload, emergency outside of their expertise etc) should call on a colleague for assistance. This has been done frequently in the past and will continue to be encouraged'.

Recommendation 8. The TDHB does not believe such a separate protocol is necessary in view of the new Ministry of Health Referral Guidelines and the recently released New Zealand Maternity Standards. These guidelines make it clear that in any situation where a caesarean is appropriate the LMC, in consultation with the woman, refers to the obstetrician and a three-way discussion is to take place.

Recommendations 9 and 10. The TDHB already has a stamp to record passing of care from primary to secondary clinicians. The TDHB is however working on a more comprehensive sticker to be placed in the notes reflecting the responsibility of core midwives versus the LMC.

Mental health issues

See **self-inflicted** deaths below.

Natural causes

See **adverse effects or reactions to medical or surgical care**, **aged care** and **labour or childbirth** deaths above.

Recreational or leisure activities

See **diving, scuba diving, snorkelling** deaths above.

Self-inflicted

CASE NUMBER

CSU-2011-WGN-000186
2011 NZCorC 172

CIRCUMSTANCES

The deceased died at Houghton Bay, Wellington by committing suicide by jumping off a cliff into the sea where he sustained fatal multiple injuries.

COMMENTS AND RECOMMENDATIONS

The Coroner made the following recommendation to the Mayor and councillors, Wellington City Council:

'It is recommended that the Council investigate the construction of a short protective fence section to the lay-by look-out area at Houghton Bay, such fence to impede the public gaining access to a cliff face, but not to restrict the public's view from the lookout itself'.

The Coroner considered the making of a prohibition order in terms of section 74 of the Coroners Act, but recognised that doing so made it impossible to make the above

recommendation as the need for it is self explanatory. He concluded that in the wider interests of the public good such a recommendation must be made.

Response from Wellington City Council

The Wellington City Council has been working on this project at the Houghton Bay site in consultation with a safety consultant, post-vention coordinator and an expert on suicide behaviour. The Council is endeavouring to balance the views of a number of different stakeholders while also striking a balance between both deterrence and the protection of the natural environment. The Council is currently planning to erect an approximately 1.1 metre high fence around the edge of the footpath with a physical barrier behind that of deterrent plants and foliage. Once finalised, the Council intends to issue a formal response to the Coroner's recommendation explaining its intended actions.

CASE NUMBER

CSU-2011-HAM-000324
2011 NZCorC 175

The deceased died at his home address. His death was intentionally self-inflicted. He and his family had prior involvement with CYFS.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that CYFS review its policy with regard to the threshold for a social work assessment to the intent that greater scrutiny be given to cases involving young adolescents who have become the subject of a police investigation. He stated that CYFS should consider whether it is appropriate to abdicate responsibility to the Police Youth Aid service without first undertaking such an assessment and consulting with the family involved. This recommendation is directed to the Chief Executive Officer of the Child, Youth and Family Service.

Permission was sought from and given by the Coroner to publish this recommendation in the above form, pursuant to section 71 of the Coroners Act 2006.

CASE NUMBER

CSU-2011-CCH-000784
2011 NZCorC 114

CIRCUMSTANCES

The deceased died by suicide.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that when a patient is under compulsory care under the mental health services and there is a history of non-compliance with medication, extra vigilance is required by mental health services to ensure compliance. He stated that it is a matter of being on watch.

The Coroner recommended to South Canterbury District Health Board that they make inquiries from the providers of venlafaxine and if appropriate of a pharmacist, to inquire whether in fact there can be the accumulation of venlafaxine in the blood as that is an important factor for dispensing or prescribing doctors to know. It would be helpful for other people around the country as well.

Permission was sought from and given by the Coroner to publish this recommendation in the above form, pursuant to section 71 of the Coroners Act 2006.

CASE NUMBER

CSU-2008-AUK-000414
2011 NZCorC 107

CIRCUMSTANCES

The deceased hanged himself at Auckland Hospital. At the time of his death he was a formal patient at Te Whetu Tawera (TWT), the Auckland District Health Board's psychiatric unit. He was admitted to Ward TWT under the Mental Health Act after presenting to the Emergency Department following a deliberate act of self harm. The deceased had a history of substance abuse, including methamphetamine use. Over the course of his time in TWT the deceased was found with multiple dangerous objects in his possession that he could use to harm himself. A review of the incident noted that his risk assessment and management plan contained no documentation of the clinical

interventions needed to preserve his safety. It is not known on the evidence before the court whether the deceased was capable of forming the necessary intent to take his life and of knowing the nature and quality of his intended action and of its probable consequences. It is likely that the deceased suffered a major depressive episode with psychotic features, which raises a question of volition.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended to the Chief Executive Officer, Auckland District Health Board:

1. That in reviewing the Board's present policy relating to increased patient observations, careful consideration be given to the guidelines for levels of observation in inpatient units, as set out in the Ministry of Health's Best Practice Evidence-Based Guideline, the Assessment and Management of People at Risk of Suicide (May 2003).
2. That the Board give favourable consideration to the implementation of such practical changes as may be recommended by the Clinical Director of Te Whetu Tawera, Dr Gregory Finucane, in the light of these findings, including the locking of bathroom/shower room doors by patients and the searching of patients and their rooms for objects that may be used for wilful harm or self-destruction.

The Coroner considered the making of a prohibition order in terms of section 71 of the Coroners Act 2006, concluding that the making public of particulars of the deceased's death, and the responsive steps taken by the Board in the interests of patient safety and welfare, will promote public safety.

SUDI

See **case study on SUDI** deaths above.

Transport-related

CASE NUMBER
CSU-2009-WHG-000169
2011 NZCorC 121

CIRCUMSTANCES

The deceased died after the van he was driving was involved in a collision on SH1. A vehicle turned right out of a 'T' shaped intersection and wrongly turned into the northbound land, inevitably hitting the deceased's van. Due to the complications of his injuries he sustained, he required surgery. Unfortunately the deceased had a sudden arrest and he passed away as a result of pulmonary thromboembolism.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended:

1. That the authority governing road safety signage consider providing appropriate signage for cars that engage the Brynderwyn intersection of SH1 and SH12 to stay in the left lanes as required by the road laws of NZ.
2. That the painted arrows on the road at the intersection be changed to provide clearer assistance as to which lane a car should be travelling out of the intersection and to ensure that drivers stay left in their respective lanes when leaving this intersection.
3. The Coroner suggested painting a large arrow approximately five metres up from the intersection in the north bound lane. This would assist the awareness of the driver. With respect to vehicles turning right into the south bound lane, as they clear the 'T' intersection, having a large painted arrow pointing south bound, in the south bound lane would also assist the driver.

Response from New Zealand Transport Agency (NZTA)

In its response, NZTA stated that there are no signs being used at intersections in New Zealand for the purpose of reminding people to keep left, or gazetted in the Traffic Control Devices Rule 2004 to address the issue. NZTA commented that traffic movements at intersections can

be complex and additional signs would not necessarily be helpful or be effective at an intersection where the safety of all users is foremost and providing a minimum of distraction in terms of additional signage is a well recognised safety objective.

With regards to recommendation 2, NZTA stated that markings to remind tourist traffic to stay left have been installed at some 70 sites in Northland post this fatal crash.

In response to the suggestion of the Coroner (3 above), NZTA stated that it has determined that a distance of about 50m from the intersection represented the optimum location for a painted arrow. NZTA stated that if the arrows were to be provided too close to the intersection it is likely that drivers will not have 'settled down' adequately from negotiating the intersection to notice the arrow.

CASE NUMBER

CSU-2010-DUN-000023
2011 NZCorC 167

The deceased lost control of his vehicle while driving on Peninsula Beach Road and it left the road and crashed. It appears that the deceased was overcome by a medical event such as to cause him to lose effective control of the vehicle. The deceased applied the brakes but this resulted in the vehicle braking system skidding one wheel more than the other. The vehicle appears almost to have come to a stop before tipping forward over the edge of the roadway and rolling onto rocks below. The pathologist did not consider the injuries he received in the crash to be life-threatening. His cause of death was 'cardiac arrhythmia in the setting of coronary artery disease and chronic obstructive pulmonary disease'.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that although the fact that the deceased was driving over the speed limit was not a cause of the death, it is a circumstance of the death. He stated that all motorists need to be warned to obey the rules and regulations imposed for their safety. The Coroner noted that the circumstances of the death do highlight the issue of the use of 'spacesaver' spare wheels, and the fact that these ought only to be used in specific and limited circumstances.

The Coroner recommended that a copy of this finding be forwarded to NZTA for the information of the organisation.

CASE NUMBERS

CSU-2010-HAM-000563
2011 NZCorC 126

CSU-2010-HAM-000564
2011 NZCorC 127

CIRCUMSTANCES

Two males died as a result of injuries they suffered in a motor vehicle crash involving a vehicle that lost control and collided with a truck. The driver of the vehicle that lost control held a learner licence, which she gained four months earlier. There were no licensed drivers in the vehicle. She was driving fast along Otewa Road, Otorohanga when she lost control of her vehicle on a moderate left hand bend. The vehicle slid before rolling and colliding with a truck. The driver of the truck, a 57 year old male, and a passenger in the other vehicle, a 17 year old male, died as a result of the injuries they suffered in the crash.

COMMENTS AND RECOMMENDATIONS

The Coroner endorsed the recommendation made by the police serious crash investigation and recommended that an advisory speed sign be placed prior to the bend at which this crash occurred.

Response from Otorohanga District Council

A report of the Otorohanga District Council on road safety from February 2011 stated that new speed advisory signage has been arranged to be installed on the corner where this incident occurred. The report also commented that loose metal from various entrance ways would make this corner more difficult to negotiate at speed, and so has written to

the property owner adjacent to the corner, and asked that they give serious consideration to sealing the farm entrance ways on the corners, using the 50% Council subsidy scheme.

CASE NUMBER

CSU-2010-DUN-000420
2011 NZCorC 169

The deceased died on State Highway 90 near Romahapa, the cause of her death being extensive traumatic injuries resulting in cardiac tamponade (due to a severe impact to the chest). While returning to her home, the deceased has driven onto the incorrect side of the road to pass a campervan and collided with an oncoming SUV on its correct side of the road. Although a medical event cannot be positively excluded, the fact that the deceased was using her indicators showed she intended to pass the campervan in front of her. It is more likely she attempted the overtaking manoeuvre without noticing the SUV travelling towards her. Visibility at the time was described as being good, with excellent natural lighting and no sun strike.

COMMENTS AND RECOMMENDATIONS

The Coroner noted that the SUV was a dark metallic gray and because of this may have been less visible to other road users, particularly an oncoming car. The Coroner commented that there are some car colours that are more easily seen than others and vehicles travelling on the open road with their headlights on, even at times of otherwise good visibility, are more able to be seen by other road users.

The Coroner recommended that NZTA give consideration to researching the colouration and visibility of vehicles and the contribution to road crashes of vehicles of less visible colours. NZTA could also consider whether it is appropriate the all vehicles have headlights on all of the time.

CASE NUMBER

CSU-2010-AUK-001499
2011 NZCorC 170

CIRCUMSTANCES

The deceased died of head injuries sustained in a motorcycle accident. The deceased had been drinking throughout the day and set off home on his motorcycle after 9pm. The deceased struck a parked vehicle and was thrown from his bike. He impacted with a concrete power pole. His helmet came off during this impact. Having considered the evidence the Coroner was satisfied that the deceased was wearing his helmet but considered it unlikely that he had fastened it prior to the crash.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that it is self-evident that wearing a safety helmet can reduce the severity of, and possibly the occurrence of head injury. For such helmets to be effective (especially given the forces involved in a collision) they should always be fastened when riding. The Coroner stated, 'sadly this is an all too familiar scenario where the combination of excessive alcohol and speed has led to a fatality. As the message about speed, and not drinking and driving is well known I do not propose to make any further comments or recommendations in this matter'.

CASE NUMBER

CSU-2011-HAM-000314
2011 NZCorC 173

CSU-2011-HAM-000315
2011 NZCorC 174

CIRCUMSTANCES

Two males died as a result of injuries they sustained in a motor vehicle crash on a bend just south of the intersection of State Highway 39 and Limmer Road. A vehicle driven by one of the deceased lost control, causing it to cross into the northbound lane and directly into the path of a northbound vehicle.

Both the driver of the vehicle that lost control and his passenger died of injuries sustained in the crash. Both men had been smoking cannabis that night and were travelling too fast for the conditions.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that cannabis had an effect on the driver to alter his perception of what was going on and to slow his reactions. He stated: 'In my view cannabis is as responsible as speed for the cause of this crash'.

The Coroner noted that the report of the police serious crash investigation made some recommendations concerning high profile police enforcement 24 hours a day on main arterial state highway networks. The Coroner endorsed his recommendation, but noted that of course that will be a matter of police resourcing. He said, 'certainly having a high profile police presence on our roads does tend to slow down traffic'.

CASE NUMBER

CSU-2010-DUN-000410
2011 NZCorC 177

CIRCUMSTANCES

The deceased died at Sullivan Road, Poolburn from injuries sustained in a motor vehicle crash. The causes of his death were positional asphyxia due to a chest crush injury in association with head injuries including skull fractures and subarachnoid blood. While driving a Land Rover, the deceased failed to negotiate a bend in the road, probably due to his level of intoxication. Because he was not wearing a seatbelt, the deceased was partially ejected through the sun roof of the vehicle and was trapped in that position when the vehicle rolled on him.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that a copy of this finding be sent to NZTA as a further example of the tragic combination of the consumption of excess amounts alcohol, driving at speed and failing to wear a seatbelt.

CASE NUMBER

CSU-2011-DUN-000331
2011 NZCorC 163

CIRCUMSTANCES

The deceased died when the car he was driving crashed into a concrete bridge abutment on the Otematata-Kurow Road. The deceased received fatal injuries in the crash. The Coroner found that the deceased lost control of his vehicle due to his level of intoxication. He was not wearing a seatbelt.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that a copy of this finding be forwarded to LTNZ (now NZTA) as a further example of the tragic combination of a young man in control of a motor vehicle while intoxicated and not wearing a seatbelt.

CASE NUMBER

CSU-2010-HAM-000265
2011 NZCorC 140

CIRCUMSTANCES

The deceased died at Starship Hospital from a head injury sustained in an accidental motorcycle collision. While the deceased was riding his motorbike along a country road behind a vehicle being driven by his mother, he has inadvertently crossed over the centreline and into the path of an oncoming vehicle while he was turning into the driveway of his house. The driver of the oncoming vehicle had no opportunity to avoid impacting with the deceased.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that he is aware that sometimes exigencies require farmers to travel on roads while not conforming strictly to legal requirements. But these exigencies usually relate to matters of convenience, as in this case, rather than emergency situations. In this case, the most convenient means for the deceased to get home was also the most dangerous, and ultimately resulted in his death. This death demonstrates the terrible price that can be paid for taking such risks to personal safety. I trust that those living in rural communities will appreciate that non-compliance with laws governing travel on country roads can cost lives.

CASE NUMBER
CSU-2010-WHG-000010
2011 NZCorC 165

CIRCUMSTANCES

The deceased, a 16 year old male, died when the vehicle he was a passenger in collided with a 12 tonne cattle truck. The deceased was a front left passenger in a Honda Civic being driven by a 16 year old restricted licence holder on State Highway 14 travelling east from Dargaville to Whangarei. The driver of the vehicle has lost control and has slid across the centre line and into the path of a 12 tonne cattle truck at the intersection of State Highway 14 and Kara Road. The truck was in the correct lane and was unable to take evasive action. The left front passenger seat occupied by the deceased took the full impact of the crash where the truck has gone over the top of the car killing him instantly.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that this accident is a sobering reminder of the horrific statistics of road crashes, injuries and deaths involving New Zealand teenagers aged 15 to 19 years of age. The Coroner commented on the concerted effort by various agencies including the NZTA and other interested groups to bring awareness and a change to these statistics for this age group.

The Coroner asked the NZTA to consider a media campaign that targets this age group and those slightly older with the view of empowering them, particularly those who are invited in social settings to get into a car when it is not safe. The empowerment would address having the ability to say 'no' and that it is okay to say 'no' or reject a request to get into a car when it is not in their best interests.

The Coroner acknowledged that this is a very delicate and extremely important issue for this age group. He further acknowledged that it is not a simple matter to put together a media campaign without a wider discussion with agencies and other interested groups.

Response from NZTA

In a response, NZTA acknowledged the Coroner's recommendation and stated the following:

'NZTA has undertaken research to understand how to get teens to better comply with the conditions of their restricted licence. The first 6–12 months after getting a restricted licence is known to be the most risky for teens.

'Our research indicated we were best to look at working with parents and caregivers of teens to inform them of this risk, so they can help teens identify and monitor those risks. In June 2011 we launched the Safe Teen Driver campaign, which incorporates television advertising and a website safeteendriver.co.nz where tools can be found for parents.

'At this time we are monitoring and tracking this campaign.

'Within the next few months we will be releasing some new secondary curriculum materials for use by schools. The materials will work through the New Zealand curriculum with the underlying premise 'we travel together'. The resources enable personal decisions about safety when travelling, which was your recommendation. The resources will be free for any school to download and will be promoted to the education sector – see education.nzta.govt.nz'.

Water-related (general)

See **diving, scuba diving, snorkelling** deaths above.

Work-related (agriculture)

CASE NUMBER
CSU-2010-DUN-000437
2011 NZCorC 160

CIRCUMSTANCES

The deceased, a farmer, died of extensive skull fractures and brain injuries due to a severe impact. While assisting with the unloading of grain from a truck, using an auger powered by a tractor power take-off (PTO), the PTO attachment

failed and fractured allowing an end to come free, rotate and strike the deceased violently in the head. This caused an injury which was instantaneously and inevitably lethal. The Department of Labour identified several contributory failures that may have caused the PTO shaft to break: the horsepower of the tractor used to power the auger was nearly three times the recommended drive system for the auger, there was an increase of the flow of grain into the auger hopper, the rotation speed of the auger may have caused extra stress on the PTO shaft, and the sheer pin of the auger that was to protect in case of failure had been modified.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that it is inappropriate to modify mechanisms that protect in case of failure and that problems associated with operating machinery in a manner that exceeds its design capacity can lead to failure.

The Coroner recommended that a copy of this finding be forwarded to both the Department of Labour in order that appropriate publicity be given to the circumstances of the death in the hope that such circumstances are not repeated. He also recommended that a copy of the finding be forwarded to Federated Farmers in order that a summary of the circumstances of the death be published to members to similarly identify contributors to the death.

CASE NUMBER

CSU-2010-DUN-000395
2011 NZCorC 178

CIRCUMSTANCES

The deceased died of injuries sustained when he lost control of the fertiliser spreader truck he was driving. The cause of death in the opinion of the pathologist was cardiac arrhythmia, complicating contusion and laceration of the right ventricle. The fertiliser spread truck he was driving slid on a slippery slope and overturned. The deceased was unrestrained by a safety belt and was thrown about in the cab of the truck.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that a copy of this finding be forwarded to the Department of Labour to prompt further involvement with the New Zealand Ground Spread Fertiliser Association (the Association) in the creation of further safety enhancements. The Coroner asked that the industry and the Department of Labour work together to clarify the benefits of operators using safety belts and investigating methods to ensure these are more 'user friendly' for drivers in difficult situations. He also commented that the Association should investigate the provision in the trucks of its members of an emergency call and tracking system not dependent upon cell-phone or radio coverage or the continuing consciousness of an operator who may have been disabled in a rollover.

The Coroner recommended that the Association and the Department of Labour give consideration to establishing a protocol between customers, contractors and employees, ensuring the fact that employees are not pressured to complete spreading tasks beyond safe parameters.

CASE NUMBER

CSU-2008-CCH-000173
2011 NZCorC 180

CIRCUMSTANCES

The deceased received injuries after being hit in the head by an irrigation hose. The hose was reeled onto a hose drum and snapped, causing one of the ends to strike the deceased. Two butt joint welds had been carried out to the hose-line, and it was the first which failed. Two thirds of the weld fusion process did not take place, severely weakening the butt joint.

COMMENTS AND RECOMMENDATIONS

In relation to the deficient butt weld, the Coroner recommended:

1. That there is strict compliance with industry standards as to a controlled environment for butt welding processes in the field. This is likely to require the temporary erection of a tent with sides sufficient to minimise possible contaminants including draughts.
2. The Department of Labour provides information to the farming industry as to the hazards of the possibility of butt weld fusion failure and the dangers that this process could entail.

Work-related (other)

CASE NUMBER

CSU-2008-CCH-000234
2011 NZCorC 118

CIRCUMSTANCES

The deceased was upgrading a private power line on a rural property. He accidentally fell some seven metres to the ground when a pole he had climbed by ladder fractured below ground level after a sudden change in load tension resulted from the unbinding of a conductor on an adjacent steel pole. He died then and there of head and chest injuries.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that:

1. The Electricity Engineers' Association (EEA) reviews the processes for updating its relevant safety manuals. It was apparent in this case that the previous 2004 edition of the relevant manuals needed updating. Although this update has now occurred, a continuous review process with associated progressive updating of manuals may more readily align best practice with changing industry requirements.
2. The Electricity Engineers' Association takes such steps as are available to it to best ensure that industry employers implement effective practices in accordance with the requirements set out in relevant EEA publications with particular reference to pole safety assessment and situations involving changes to pole top loading; and the use of elevating work platforms in appropriate circumstances particularly when dealing with assets that through age or for other reasons may be more likely to fail.

Response from Electricity Engineers' Association (EEA)

A copy of the Coroner's findings has been tabled and discussed at the EEA Board meeting and EEA Safety Strategy and Policy Group meeting.

The meetings agreed:

1. The EEA reviews and updates existing EEA process for the development of new EEA documents and review of existing documents. The processes to be followed for the guide development and review have been formalised. The EEA has identified the guides requiring update and the SSPG is working through the updates with industry at the moment.
2. To include wording within new and reviewed EEA documents that emphasised the importance of users providing feedback on the EEA documents and ensuring they checked and monitored the currency of associated documents reference in EEA documents. We have also reviewed our communications strategy to ensure more timely publishing of safety newsletters, information and availability of safety presentations.
3. To communicate to industry on the outcomes of the Coroner's findings, in particular:
   - picking up on pole safety issues around the age of network/pole assets and broadband roll out
   - encouraging employers to adopt, implement and monitor what EEA publishes on behalf of the industry
   - encouraging companies to undertake refresher training around pole testing and foundation testing
   - encouraging the sharing of information (via the EEA) on near misses or incidents
   - encourage companies to provide feedback on industry documents to EEA.

   The EEA have been involved in a number of industry safety forums and met with industry CEOs, industry safety practitioners and field staff around New Zealand to reinforce messages on safe work practices for poles. Further meetings are planned for 2012. The EEA has also been working with the Electrical Worker Registration Board (EWRB), which covers occupational licensing in our industry on the requirements for certificates of competency for electrical workers (including line mechanics). The EWRB recently accepted the EEA Guide for competence programmes, which includes pole safety, as a professional development programme to be used by our industry employers when doing annual safety refresher training.
4. The EEA Technical Guide to Work on Poles and Pole Structures (which was updated in September 2010 after the accident investigations report for this incident was available) is now the subject of another review and, along with the new Line Mechanic and Cable Jointers Handbook, is expected to be published no later than August 2012.

CASE NUMBER

CSU-2010-CCH-000043
2011 NZCorC 141

CIRCUMSTANCES

The deceased died from multiple internal injuries with mechanical asphyxiation, secondary to compressive injury, sustained when a tree he was cutting down fell on him. The tree had been secured to the mainline of the cable hauler prior to being cut, the intention being that the tree would fall freely but once down the mainline could be used to facilitate its immediate retrieval. However, there was insufficient slack in the mainline to let the tree fall freely, and as the tree began to fall the line tightened and pulled the tree off the stump and back towards the deceased. He was unable to move from its path and was trapped beneath it.

COMMENTS AND RECOMMENDATIONS

The Coroner commented that this revealed what she considered to be shortcomings in the employer's management of health and safety issues, particularly in relation to the tree felling process the deceased was using when he died. She also commented that this process does not appear to be an industry recognised practice, nor does it appear to be used widely within the industry, although Pelorus employees were well familiar with it.

The Coroner further stated, 'since [this incident] Pelorus Contracting Limited has produced a one page health and safety policy document regarding use of the process, but in my view further action should be taken to formalise training and identify competencies required, if this process is to be persisted with. In particular, the training should cover the means by which the person using the process can determine the tension in the mainline when the line is unsighted'.

Response from Pelorus Contracting Ltd

Pelorus Contracting Ltd has informed the Office of the Chief Coroner that it has not used this technique since the incident due to the terrain and block(s) that they have been working in. Since the death of the deceased the firm has put in place a certificate to certify that the recipient has been trained and certified to use the process.

Pelorus Contracting Ltd further stated that it will be applying all training under Policy 12.8 Machine Assisted Felling – Cable Harvesting of the new Code of Practice for Safety and Health in Forest Operation issued by the Department of Labour. FITEC, which is under contract with Pelorus to certify all training, will certify the harvesting technique.

CASE NUMBER

CSU-2010-DUN-000479
2011 NZCorC 181

CIRCUMSTANCES

The deceased died at Dunedin Public Hospital as a result of pneumonia and sepsis following lung contusions and pneumothorax. The injuries were sustained when, while helping with the felling of trees at Centennial Avenue, Balclutha, he was struck by the head of a tree that had been cut from the tree and was being pulled by him with a rope in his direction. The primary cause of the deceased's injuries was that he was standing in a position of vulnerability, pulling the rope. More rope should have been used and the deceased should have been positioned outside the fall zone.

COMMENTS AND RECOMMENDATIONS

The Coroner recommended that a copy of this finding be forwarded to the Department of Labour for the information of the Department of Labour and for its further submission to the New Zealand Arboricultural Association. The Coroner commented that there is a lesson of safe practice that has been learned from the tragedy and this lesson requires publicity.

CASE NUMBER

CSU-2010-DUN-000445
2011 NZCorC 182

The deceased was a fisherman on the fishing vessel Amaltal Atlantis, a vessel owned by Talley's Fisheries Limited. While working in the fish handling centre of the ship, the deceased was observed to collapse and resuscitation efforts were unsuccessful. The cause of death established at autopsy was haemorrhage and shock due to liver rupture. A specialist pathologist advised that this would only have been caused by a blow.

Three days before his death, two fellow crew members were working with the deceased on the top deck of the Amaltal Atlantis pulling in a fishing net. A warp wire, which was attached to the net, flicked up and knocked the deceased backwards off his feet. He fell against the side of the boat. Neither crew member clearly saw the incident. Both thought that the deceased was uninjured and he did not complain of injuries and kept on working. Both observed however that over the next few days the deceased appeared to have been suffering from flu-like symptoms and was not his normal cheerful, healthy self. The incident, and any injury suffered, did not appear to have been reported to management of FV Amaltal Atlantis and was not included in the appropriate Trip Injury/Accident Report.

COMMENTS AND RECOMMENDATIONS

The Coroner commented on the importance for work colleagues and supervisors to take responsibility and draw to the attention of the appropriate personnel, any observed ill-health of their work colleagues so that appropriate action is taken.

The Coroner recommended that a copy of the finding will be forwarded to Talley's Fisheries Limited for the information of the company. He recommended Talley's Fisheries Limited consider the information that has been learned and create enhancements to the Trip Injury/Accident Report processes adopted.

The Coroner also recommended a copy of the finding be forwarded to Maritime New Zealand so that consideration can be given to enhancing accident, injury and prevention protocols.

Acronym glossary

Acronyms used in this Recommendations Recap	
AED	automatic emergency defibrillator
CARM	Centre for Adverse Reactions Monitoring
CeClor	Cefaclor
CEO	chief executive officer
CPAP	continuous positive airway pressure (device)
CT scan	aka CAT scan
CTG	cardiotocography (fetal heartbeat during pregnancy)
CYFS	Child, Youth and Family Service
DAN	Divers Alert Service Asia-Pacific
DAS	dive activities supervisor
DHB	district health board
ADHB	Auckland District Health Board
CDHB	Canterbury District Health Board
TDHB	Tairawhiti District Health Board
NDHB	Northland District Health Board
EEA	Electricity Engineers' Association
EWRB	Electrical Worker Registration Board
FITEC	Forest Industry Training
GP	General practitioner
IMMP	Intensive Medicines Monitoring Programme
LGNZ	Local Government New Zealand
LMC	lead maternity carer
LTNZ	Land Transport New Zealand (now NZTA)
MoH	Ministry of Health
NZTA	New Zealand Transport Agency
NZU	New Zealand Underwater
NZU(A)	New Zealand Underwater (Association)
PADi	Professional Association of Diving Instructors
PTO	power take-off
SAR	search and rescue
SIDS	sudden infant death syndrome
SUDI	sudden unexpected death in infancy
TLA	territorial local authorities
TWT	Te Whetu Tawera (Auckland District Health Board's psychiatric unit)

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