

# Auckland District Health Board: Reported Sentinel and Serious Events

## 1 July 2003 - 31 December 2007



1 July 2003 - 30 June 2004					
Year	Severity	Description	Review findings	Recommendations	Followup
03/04 1	Sentinel	Radiation overdose during radiotherapy treatment. No adverse outcome to patient.	After upgrade, equipment returned set to 'normal' rather than standard setting of 'low' Safety checks not performed prior to commencing use Staff unable to identify why equipment was not operating correctly	Service company not to change settings without informing customer Revise radiation safety check protocol Revise trouble-shooting techniques	Service company informed and memo circulated  More frequent testing implemented
03/04 2	Sentinel	Vitamin K not prescribed (to improve blood clotting) in patient with serious liver disease. Patient developed bleeding around the brain. Brain injury resolved	Responsibility unclear between multiple medical teams Lack of blood test monitoring of clotting system No structured case review process to detect problems Communication issues	Comprehensive protocols for treatment of these patient groups required	International medical review. Advice regarding protocol received and implemented.
03/04 3	Sentinel	Elderly patient fell from bed sustaining significant brain injury which was fatal	Patient confused. Checked 15min earlier. Resuscitation status unknown Some delays in initiating appropriate treatment	Emergency assessment and Code Red training Audit of documentation of resuscitation status Increased emergency equipment checks	Completed  Undertaken 6 monthly  Implemented
03/04 4	Serious	Respiratory arrest after residual anaesthesia drug in central venous line was flushed through when in the ward. No long term consequences.	Probably caused by residual muscle relaxant Line was not aspirated prior to flushing	Education of staff regarding protocols for central line care	Completed
03/04 5	Serious	Delay in identifying and isolating a patient with pulmonary TB. Several patients and visitors exposed for up to 14 hours. No adverse outcome on followup of all exposed individuals	Lack of staff familiarity with issue Lack of individual plan based on risk profile	Staff education Develop clinical guidelines Implement individualised care plans Revise infection control policy	In Infection Control policy Care plan currently under development Updated in 2006.

## ADHB Reported Sentinel and Serious Events

Year	Severity	Description	Review findings	Recommendations	Followup
03/04 6	Serious	10x insulin overdose Required overnight treatment. No long term consequences.	Lack of familiarity with administration standards Insulin syringes not readily available	Staff education programme re independent double checking Insulin administration to be added to orientation programme Insulin syringes in pharmacy room	Completed  '5Rs' campaign Medication Safety Committee established Completed
03/04 7	Serious	IV dose of chemotherapy agent given by spinal injection. Error recognised and dose aspirated. Patient unharmed.	Non-adherence to checking process "Intra-theical" drug box system not robust Poor labelling to distinguish between IV vs intra-theical doses	Re-establish multiple step checking process Review IT box system  Improve labelling	Implemented  New intra-theical policy being developed in line with current international practice. Bag colour changed and full wording for label
03/04 8	Serious	10-fold under-dosing of cytotoxic treatment for cancer. No known consequences.	Course of treatment prescribed as 17mg rather than 170mg	Policy change to require first doses to be double checked and medication chart countersigned by consultant  Pharmacist access to chemotherapy protocols	Nurse double check prescription against protocol Registrar prescriptions countersigned  Implemented  '5Rs' campaign Medication Safety Committee established

# ADHB Reported Sentinel and Serious Events



1 July 2004 - 30 June 2005					
Year	Severity	Description	Review findings	Recommendations	Followup
04/05 1	Sentinel	"Botox" treatment for excessive drooling complicated in 3 of 6 cases by temporary swallowing dysfunction	No process for introduction of new technique Lack of adequate information on risks / benefits to parents Miscommunication - information sheets not given out	Written protocol for Botox treatment Revise information sheet and consent process Improve discharge information	Independent external medical review. Protocol and info sheet written.  Completed
04/05 2	Sentinel	Patient incorrectly prescribed another patient's diabetic treatment. Outcome fatal	Two faxed GP referrals received at same time, one without identifying information. Two referrals assumed to be one and stapled together Medication information from wrong patient transcribed to hospital medication chart	GPs required to number fax pages and have patient ID number on each page  Internal faxes to services to be sent individually with page numbering	Policy implemented Audit found marked improvement.  Implemented
04/05 3	Sentinel	Skull opening (burr holes) initially performed on wrong side. Bilateral surgery required. No other adverse patient outcome.	Incorrect NHI number on referral letter Wrong patient's CT scans sent from referring hospital (but noted as such.) Digital X-ray system not functioning in OR due to electrical fault Multiple NHI numbers for patient	Feedback to referring hospital  Correct X-ray electrical fault  Early consolidation of emergency NHI numbers	Completed  Completed  Process implemented, but inconsistent
04/05 4	Serious	Patient for comfort care only died in single-manned ambulance en-route to another hospital. No nurse escort used.	Medical condition of patient not communicated to ambulance service	Revise policy on patient transfers Ambulance service to ascertain if nurse escort required	Completed  Current ambulance policy
04/05 5	Serious	5x overdose of fentanyl (morphine-like drug) causing respiratory arrest	Nurse unfamiliar with drug No double checking or syringe label Mis-communication between staff	Fentanyl protocol Audit of double check and labelling	Completed Good results

## ADHB Reported Sentinel and Serious Events

Year	Severity	Description	Review findings	Recommendations	Followup
04/05 6	Serious	Overdose of ketamine (anaesthesia/pain drug) causing coma on ward Coma reversed with antidote	Unfamiliar medication Infusion pump utilises free-flow giving set Handover communication	Promote use of intranet drug information Change type of infusion pump to use those with anti-syphon / self-clamping system for ketamine	Pharmacy intranet site upgraded  Guideline revised
04/05 7	Serious	10x morphine overdose causing breathing abnormalities. Recovered quickly - no long term harm.	Morphine protocol unfamiliar to staff	Consolidate protocols Staff education	Single morphine protocol and staff education complete
04/05 8	Serious	Clean but unsterilised operating instruments identified before use during procedure. Unstable patient kept anaesthetised while instruments re-sterilised	Use of paper rather than cloth wrap Pack not checked by OR staff  Mis-communication between OR and sterile supply staff	Request material wrap  All packs to be checked prior to anaesthesia being commenced  Phone communication policy & instructions	Stronger wrap and plastic inner now used. Packs checked prior to storage and prior to case. Completed
04/05 9	Serious	10x overdose of clonazepam (anti-seizure drug) in infant. Observation only required.	Unfamiliar medication Impractical dose charted Calculation error	Guideline for use of clonazepam, include requirement for prescribing in 100mcg dose increments Use a single paediatric drug manual  Drug calculator on intranet Medication Safety Committee	Guideline currently being developed. Alternative drugs preferred.  Royal Children's Hospital manual endorsed  Implemented Committee established
04/05 10	Serious	Clean but unsterilized instruments potentially used on 3 patients. No known adverse patient effects.	Limited ability to track all instruments to individual patients Lack of quality control systems	Electronic interface between steriliser and instrument order system Change sterilising indicator tape Add 'Helix' indicator for hollow instruments Improve documentation of use of emergency case carts Out-of hours recall system	Completed  Completed Implemented  Completed review of policy

## ADHB Reported Sentinel and Serious Events

Year	Severity	Description	Review findings	Recommendations	Followup
04/05 11	Serious	Adrenaline (circulatory stimulant) rather than diazepam (sedative) administered in error to ICU patient. Significant additional treatment required but no long term consequences.	Ampoules very similar Medications not checked Both drugs kept at bedside	Revise protocol for drawing up of drugs at bedside Consider use of pre-printed drug labels for syringes in ICU	Completed  Diazepam not kept at bedside
04/05 12	Serious	Brain tissue sample sent to the wrong laboratory department. Patient required a second operation to get another sample	Sample was sent to microbiology because a microbiology form rather than a histopathology form was used	Staff education	Reminder to all staff via internal bulletin.
04/05 13	Serious	Mis-identification of patient sample for blood cross-match prior to transfusion. No patient harm.	Two patients with similar ethnicity and history in the same room Failure to check wristband	Staff education re policy on wristband verification of patient identity Audit of performance	Completed  Wristband errors reported monthly
04/05 14	Serious	Patient on blood-thinning drug trial presented with brain haemorrhage. Use of trial medication unknown to clinical staff but no effective treatment possible. Outcome fatal.	No 'MedicAlert' bracelet  Research study inclusion difficult to find in records	Sponsors required to provide MedicAlert bracelets for trial agents with serious complications Review of electronic Clinical Alert system	Policy implemented  Interim change implemented. Ongoing review
04/05 15	Serious	5x overdose of gentamicin (antibiotic) over 24 hours. Risk of kidney and hearing damage.	One dose administered twice due to failure to check charts Two doses given at 8hrly rather than 24hrly due to mis-interpretation of prescription	Reinforce medication checking policy Improve availability of drug charts Medication Safety Committee	Completed  Charts available for rounds Committee established

# ADHB Reported Sentinel and Serious Events

1 July 2005 - 30 June 2006					
Year	Severity	Description	Review findings	Recommendations	Followup
05/06 1	Sentinel	Two patients with retinal disease failed to receive follow-up appointments, thus putting their vision at greater risk	Varying interpretation / use of intra-service referral forms Clinic outcome forms not retained	Standardise intra-service referral process Ensure all clinic outcome forms are accounted for and actioned Review charts of all 1500 patients who may have been adversely affected	Implemented  New system implemented Completed. Patients identified and received appointments
05/06 2	Sentinel	Delay in transfusion for a severely anaemic patient (Hb48). Contributed to death.	Initial crossmatch delayed due to workload Adverse reaction to first unit Poor communication with Blood Bank Blood sent to patient's earlier location 0-negative blood not requested	Improve communication system with Blood Bank Teaching on transfusion reactions Staff education re correct approach to ordering urgent blood	Intercom installed  Completed  Flow chart and resource folder. Also on intranet.
05/06 3	Sentinel	Mains electrical supply failure for several hours	No significant clinical events, but many operations cancelled. Emergency management systems generally worked well Some network/computer support system problems Some lifts inoperative Poor emergency lighting in some areas Communication difficulties in some areas	A number of recommendations relating to environment, equipment, procedures and training	Majority have been completed, some remain outstanding.
05/06 4	Sentinel	Kidney stone removal (via uretoscope) attempted on wrong side due to X-ray image error. Procedure completed on correct side.	CT scan set for prone position but patient was supine - causing inverted images	Policy on correcting image orientation / annotation reiterated with staff	Completed

## ADHB Reported Sentinel and Serious Events

Year	Severity	Description	Review findings	Recommendations	Followup
05/06 5	Sentinel	Patient with asthma discharged from Emergency Department had a cardio-respiratory arrest 11 hours later. Died the following day.	Under current review by the Health and Disability Commissioner	Under current review by the Health and Disability Commissioner	Not applicable
05/06 6	Serious	Two patients each received a blood transfusion actually intended for the other. Minor reaction only.	Similar names, adjacent rooms, transfusion at same time. Double check of blood in the medication room, not at bedside	Change local policy to be consistent with ADHB policy - checking at bedside against patient nameband.	3 person check at bedside established.
05/06 7	Serious	Delay in diagnosis and treatment of cancer	Inability for refers to know if/when a referral request has been received by another service Inadequate information on priority available to schedulers Test results were signed off but not acted on by a clinician from a different service.	Clinic log book for all test referrals reviewed weekly  Develop E-referral system  Guidelines for re-scheduling appointments	Implemented  ADHB-wide system in development  Practice changed. Guideline not yet formalised.
05/06 8	Serious	Retained part of surgical instrument. Required 2 additional operations.	X-ray taken post-operatively Incomplete retrieval of retained parts.	Revise retained instrument policy Maintenance programme for this instrument	Completed  Implemented
05/06 9	Serious	Delay in response by appropriate emergency team but no additional adverse patient outcome.	Initial code red (adult) call should have been code pink (child) call.	Staff education	Completed
05/06 10	Serious	Amikacin (antibiotic) infusion given at 6x the prescribed rate. No patient harm.	Infusion incorrectly set up Error not identified at handover	Educational emphasis on drug infusions for nursing staff	Completed
05/06 11	Serious	Oral liquid medication given intravenously. No patient harm.	Administered by a different nurse from the one who prepared it Standard IV syringe used	Change policy - all oral elixirs checked at the bedside by administering nurse Coloured oral syringes with non-IV compatible tips	Implemented  Temporary supply in use

## ADHB Reported Sentinel and Serious Events

Year	Severity	Description	Review findings	Recommendations	Followup
05/06 12	Serious	Undiagnosed acute kidney injury postoperatively (creatinine 479) Did not require dialysis. Residual mild dysfunction.	Complex postoperative state with significant fluid losses No kidney function tests performed for 5 days due to laboratory strike	ACC case - no internal report	Not applicable
05/06 13	Serious	Infant tracheostomy tube fell out requiring patient resuscitation. Infant recovered.	Tracheostomy tube size had become too small following patient growth making it easier to dislodge	More frequent review of appropriate size of tracheostomy tube	Policy to review every 3 months
05/06 14	Serious	Failure of intra-operative ultrasound machine. Procedure unable to be completed, further surgery required.	Inadequate repair of earlier fault by external supplier	No formal report	
05/06 15	Serious	No anti-D treatment given to Rhesus-negative mother. Patient did not produce antibodies, so no adverse outcome.	Policy of Lead Maternity Carer being responsible for anti-D assessment was not followed	Education of staff	Completed
05/06 16	Serious	Delay in follow-up of cervical biopsy suggesting cancer. No adverse patient outcome.	Failure of follow-up system for suspicious results Electronic systems not properly utilised	Change in clerical processes and performance Established backup mechanism 3-year retrospective look back to identify any other cases	Implemented  Implemented Completed
05/06 17	Serious	Child administered 10mg clonazepam (sedative / anti-seizure) instead of 10mg clobazam (anti-seizure). Required stomach washout.	Similar drug names. Double checked by nurses but error not identified. Mother questioned different tablet.	Staff communication of risk for these medicines Review pharmacy stock for similar examples	'Look-alike, sound alike' alert to staff Complete

# ADHB Reported Sentinel and Serious Events



1 July 2006 - 30 June 2007					
Year	Severity	Description	Review findings	Recommendations	Followup
06/07 1	Sentinel	18 month delay in diagnosis of cancer. Metastasis present when diagnosis confirmed.	Probable cancer reported on 3 earlier chest x-rays taken for other reasons Lack of consistent process for sign off of x-ray reports	Electronic sign-off for radiology reports Clarify responsibility for review of routine pre-operative chest X-ray reports	Electronic x-ray ordering and reconciliation system to be installed mid-2008
06/07 2	Sentinel	Skull opening (burr holes) initially performed on wrong side. Bilateral surgery required. No other adverse patient outcome.	Long prep time due to anaesthesia difficulties during which time both anaesthetist and nurses changed shift. Surgery side checks were not performed during handovers. Consistent access to digital radiology in OR Surgeon was covering for a colleague. Surgeon fatigue.	Revise surgery site marking policy 'Time out' check of operation and site immediately prior to start of surgery  Improve access to digital radiology images in OR	Implemented  Established as operating room policy in all surgical specialities. Implementation in progress.  New systems in place
06/07 3	Sentinel	Delay in recognising severity of infection and instituting appropriate treatment. Patient died.	Response to very high heart rate. Review of blood culture results Difference between provisional and final CT scan reports.	Revise procedures for abnormal physiologic recordings. Reminder to clinicians regarding responsibility for reviewing diagnostic tests.	Planned review of hospital-wide early warning system Revised process for review of results implemented in medical wards
06/07 4	Sentinel	Instruments used on a patient with undiagnosed Creutzfeldt-Jakob Disease may have been used in operations involving 43 other patients before this was known.	Pre-operative identification of patients at risk of CJD Handling of instruments used on patients with variable risk of CJD	Temporary solutions for pre-operative assessment and instrument quarantine Develop preferred options long-term policy & processes	Implemented  In progress

## ADHB Reported Sentinel and Serious Events

Year	Severity	Description	Review findings	Recommendations	Followup
06/07 5	Sentinel	Completed suicide while receiving inpatient psychiatric care	Repeatedly denied suicidal ideation Open ward, but episodes of unexplained absence Last check 2 hours earlier was calm Delay in ambulance arrival	Physical changes to room Doors to be reconfigured to allow observations at night. Dual response by hospital and ambulance to emergency calls.	Complete Door changes complete New procedures for ambulance and hospital emergency team in place
06/07 6	Sentinel	Delayed diagnosis of placental abruption. Fetal death.	Communication between obstetric teams Diagnosis of urine infection in high risk patients	Protocol for delineation of responsibilities between teams Lab urinalysis rather than dipstick testing for high risk patients	Completed and implemented Policy changed
06/07 7	Sentinel	Alleged homicide by psychiatric patient under community care	External review in progress	External review in progress	
06/07 8	Sentinel	Failure to continue steroid treatment after hospital discharge leading to blindness	Poor communication at time of hospital discharge regarding need for continued treatment Risk of blindness increased from 10% to 50%	ACC case - no internal report	Not applicable
06/07 9	Sentinel	Brain damage of newborn due to inadvertent breathing obstruction	Residual sedation of mother High epidural block Distance from nursing station. Reduced lighting.	Nursing observation standards modified	Implemented
06/07 10	Serious	10x overdose of morphine in terminal care setting May have hastened death slightly	Infusion pump set up incorrectly Infrequent use of these pumps	Revise protocol Teaching programme and competency audit Revise documentation	Policy updated In progress - not yet complete Complete
06/07 11	Serious	Fractured wrist 1 week prior to admission for a different problem. Missed orthopaedic clinic review. Fracture misalignment not detected, adverse functional outcome.	Fracture clinic not contacted by ward staff.	Staff education	Complete

## ADHB Reported Sentinel and Serious Events

Year	Severity	Description	Review findings	Recommendations	Followup
06/07 12	Serious	Enteral feed given into wrong abdominal tube (dialysis tube rather than stomach tube). Additional treatment required.	Room dark, using torchlight Patient lying on correct tube Lack of familiarity with dialysis tubes	Labelling of tubes Staff education	Implemented Completed
06/07 13	Serious	Bleeding from the heart (pericardial tamponade) following heart tissue biopsy. Cardiac arrest. Resuscitated, then surgical repair. Mild residual disability.	Procedure performed appropriately Known risk of procedure	Echocardiograms to be performed routinely at the end of heart tissue biopsy procedures.	Implemented
06/07 14	Serious	Double dose of insulin given. No patient harm,	Second nurse was not aware that first nurse had given the dose. Patient did not speak English	No formal report	Adult Medicine Safety Committee established '5Rs' campaign on medical wards
06/07 15	Serious	3 hour delay in blood transfusion for severely anaemic patient	Addressed at local level	No formal report	
06/07 16	Serious	X ray equipment failure leading to pacemaker insertion to be abandoned in mid-procedure. Second operation required later on other side.	Intermittent fault Work-around process failed on this occasion	Definitive repair required	Completed
06/07 17	Serious	Anti-D given to mother after 4 days, outside appropriate "window". No adverse outcome.	No action on positive baby blood test. Recurrent event	Change policy to give all Rh negative mothers anti-D before delivery.	National policy changed Currently being implemented
06/07 18	Serious	Central venous line misplaced on insertion. Fluids administered into chest. Delay in diagnosis. Chest drainage required.	Initial CXR position appropriate Later X-rays showing problem not reviewed.	Addressed a local level. No formal report	
06/07 19	Serious	Drug infusion pump (remifentanil) malfunction leading to overdose. Resuscitation successful.	'Up' button found to be damaged. Pump changed	No formal report	

## ADHB Reported Sentinel and Serious Events

Year	Severity	Description	Review findings	Recommendations	Followup
06/07 20	Serious	Intoxicated, abusive patient punched at security staff who returned blows and knocked patient unconscious. No long term patient harm.	Inappropriate action by staff	Staff member disciplined	
06/07 21	Serious	White blood cells transfused without being irradiated to reduce risk of serious complications	Mis-identified as platelets and not irradiated. Staff unfamiliar with white cell transfusion requirements	Staff education  Update intranet resources	Completed  Completed
06/07 22	Serious	Echocardiogram results scanned to incorrect patient record, leading to inappropriate treatment.	Non-matching NHI number not identified during scanning Patient details not checked when report was read in electronic record system	Reminder to scan staff regarding vigilance required Clinical staff reminded to check patient details on all clinical information	New process in place to further reduce risk of error
06/07 23	Serious	No ECG machine or defibrillator readily available at an Obstetric emergency call.	Machines only on neighbouring ward. Orderlies who bring extra machines to other codes are not on the Obstetric emergency call group	Automated defibrillator to be ordered for ward. Orderlies to be added to Obstetric emergency call group	On ward and staff trained  Implemented
06/07 24	Serious	Drug treatment omitted leading to development of serious heart rhythm abnormality. Resolved.	Failure in handover process when patient being transferred between wards	Addressed at local level. No formal report.	
06/07 25	Serious	Lack of ICU nurses led to a patient already anaesthetised and prepared for cardiac surgery being woken up so that a more urgent case could be done.	Communication between services	Addressed at local level. No formal report	
06/07 26	Serious	"Intravenous" line placed in brachial artery rather than vein. No adverse outcome.	Technical error	Staff education	Completed

# ADHB Reported Sentinel and Serious Events

1 July 2007 - 31 December 2007					
Year	Severity	Description	Review findings	Recommendations	Followup
07/08 1	Sentinel	Patient incorrectly received full dental clearance rather than partial clearance	Inappropriate referral process from private to public Referral letter scanned under wrong patients name and number Not seen as public outpatient prior to surgery Mis-communication led to patient signing consent for full clearance	Confirm referral standards with all staff Double check NHI with other personal information Scan into both CRIS and Titanium systems "Open-ended" questioning to be promoted	In progress  Established as policy  Established as policy  In progress
07/08 2	Sentinel	Apparent suicide while receiving inpatient psychiatric care (under consideration of the Coroner).	Diagnostic formulation uncertain Identified as high risk and in psychiatric ICU Inadequate observation	Changes to nursing observation policy Review clinical leadership structure Clinical decision-making issues Review of management of dual-diagnosis clients	Implemented  In progress  In progress
07/08 3	Sentinel	Death of mental health inpatient from medical causes	Cause of death unclear Frequency of clinical observation / monitoring Level of internal medicine support for physical disease	Review of nursing observation policy Clarification of response of mental health doctors to medical emergencies Specialist physician for mental health ward	Completed  Completed  0.2 FTE appointment made
07/08 4	Sentinel	Immigrant with TB reported by laboratory to have extensive drug resistant tuberculosis (XDR-TB). Very toxic treatment; required termination of pregnancy. NZ residency status denied and deported. Later found XDR-TB status was a laboratory error.	Root cause analysis currently in progress	Root cause analysis currently in progress	Immigration Service requested to reinstate residency

## ADHB Reported Sentinel and Serious Events

Year	Severity	Description	Review findings	Recommendations	Followup
07/08 5	Serious	Delay in giving anti-retroviral treatment to a baby of an HIV positive mother. No adverse outcome.	Incomplete handover to newborn medicine Lack of knowledge of appropriate procedures	Paediatric diary on post-natal wards  HIV protocols to be in both mother and baby notes	Not implemented – ward improved use of current systems Implemented
07/08 6	Serious	Histology result suggestive of cancer not noted for 2 months. Delayed treatment.	Hard copy results not sent to team leader No tracking system to follow important specimens	Switch to electronic system  Dictated note as part of operation record. Needs formal tracking system - ADHB-wide issue	Completed  Implemented as temporary system
07/08 7	Serious	Lack of ICU staff led to several ventilated patients being staffed at a ratio of 1 nurse to 2 patients	Ventilated patients re-sedated to improve safety. No adverse outcomes.	Increase nursing FTE	Applied for in 08/09 budget
07/08 8	Serious	Fall causing fractured hip while returning unassisted from toilet.	Addressed at local level	No formal report	
07/08 9	Serious	Pager system inoperative for 2 hours due to Telecom fault	Backup system using cell phones for routine calls and radiotelephones for internal emergencies implemented successfully	No significant issues	Not applicable
07/08 10	Serious	Lung vessel dilator drug (sildenafil) doses omitted leading to deteriorating oxygenation and emergency ICU transfer.	Addressed at local level	No formal report	
07/08 11	Serious	Failed termination of pregnancy not identified as tissue analysis result not received.	Inadequate specimen labelling No consent documentation Patient re-presented at 17 weeks into pregnancy	Improved tissue specimen documentation and consent process	Staff instructed regarding revised processes