Auckland District Health Board Summary
1 July 2012 to 30 June 2013
Serious Adverse Events

There were 67 serious adverse events reported by ADHB in the July 2012 to June 2013 year.

Adverse events identified as serious receive an in-depth investigation by a team of clinicians and quality department staff who are independent from the event. The reports are reviewed by a committee of senior management and senior clinical staff for robustness and for issues which may need to be addressed at an organisational level. The recommendations from the reports are tracked to ensure that follow-up and implementation occurs.

The table and report below outlines a summary of events, findings and recommendations of the events which have occurred. The events have been classified into eight specific themes:

- Delay in escalation of treatment
- Wrong procedure
- Patient misidentification
- Procedural injury
- Medication error
- Delay/failure in follow up or treatment
- Pressure injuries
- Falls
- Other

Description of Event	Review Findings	Recommendations/Actions	Implementation
Delay in escalation of treatment			
Death during inpatient dialysis	Severity of illness unrecognised on ward No process to review dialysis decision Dialysis machine functioned correctly	Review ward medical cover systems *C. difficile* toxin testing hours in lab manual Policy and guidelines for high risk dialysis including when to review	In progress Completed Completed
Delay in intervention for significant dysrhythmias prior to cardiac arrest. No long term harm.	Complex unusual rhythm mis-diagnosed Limited escalation Inexperienced junior medical staff Potassium treatment given in potentially hazardous manner	Resuscitation Council to consider adding prolonged QT and polymorphic VT teaching to Level 6/7 training Improve junior medical staff orientation Consider remote monitoring option Review step-down options for high-risk patients	To be actioned Completed In progress In progress
Delay in diagnosis of severe sepsis in a pregnant woman	Under review	Under review	
Significant delay in transfer of unstable patient to higher care setting. No adverse outcome.	Diagnosis initially unclear delaying transfer Too unstable for ward nursing care	Assessment of uncertain diagnosis in unstable ward patients should take place in an ICU or HDU setting	In progress
Delay in escalation of treatment for high risk patient with new instability after transfer from ICU.	Under review	Under review	

Description of Event	Review Findings	Recommendations/Actions	Implementation
Patient mis-identification			
Blood sample from wrong patient sent to prepare blood for transfusion. Risk of serious incompatible transfusion.	Two patients requiring transfusion. Failure to check patient details during the blood sampling process Sample not labelled at point of collection	DHB wide communication and safety alert for all staff.	Completed
Chemotherapy pre-medication given to incorrect patient. No permanent harm.	Two patients with similar names Non-English speaking patient Photo ID process not used	Full implementation of photo ID system Alert system for similar / duplicate names	In progress Completed
Platelet transfusion administered to incorrect patient. No harm.	Platelets sent to wrong ward - 2 screens open in eProgesa. Wrong event number written on issue form Double checking did not detect different patient identity	Process changes in Blood Bank to improve work flow and reduce potential source of errors Staff education on independent double checking and risks of "confirmation bias"	Completed Completed
Procedural injury			
Major stroke following complex heart surgery to blood vessels supplying the brain possibly caused by air entering the heart bypass system	Air in circuit high risk for stroke Alternative explanations for cause of stroke equally valid Weaknesses in pre-operative preparation	Specific section of "time out" team communication for planned operative technique options More standardisation of surgical technique	Completed In progress

Description of Event	Review Findings	Recommendations/Actions	Implementation
Unexpected intra-operative death of a child with cancer involving the heart	Under review	Under review	
Unrecognised access needle dislodgement during dialysis leading to major blood loss. Not fatal.	Severity of illness not recognised Limited escalation / assistance	Patient triage education Moisture (blood) detection system? Review dialysis co-ordinator role	Completed None available In progress
Accidental major blood loss into cardiopulmonary bypass machine during heart surgery. Significant brain damage and death 10 months later.	Under review	Under review	
Significant vaginal injury during instrumental birth	Poor planning and communication Concerns with supervision of staff	Encourage attendance at local run multidisciplinary training in obstetric emergencies which emphasises effective team work Structured handover process focused on improved communication and information sharing More robust supervision and sign off process for new senior staff	Complete Ongoing In progress
Cardiac arrest following artificial rupture of membranes during labour. Prolonged resuscitation resulting death of mother and survival of baby.	Probable amniotic fluid embolism	Under review	
Retained piece of drainage tube in chest	Under review	Under review	

Description of Event	Review Findings	Recommendations/Actions	Implementation
requiring additional surgery			
Respiratory then cardiac arrest due to blocked trachea following tracheostomy decannulation. No long term harm.	Risk of airway obstruction after prolonged intubation was not recognised Grannulation tissue and displaced cartilage in trachea Decannulation while in chair	Revised unit policy on decannulation – including risk of prolonged intubation and granulation tissue growth, and bed-only positioning during decannulation	Completed
Incorrect central venous line (for dialysis rather than for fluids) placed by radiologist. Repeat procedure required.	No discussion between clinical team and radiologist E-request was ambiguous Operator and support staff did not check clinical record to check appropriateness of chosen central venous line	Under review	
"3-way" tap left open on chest drainage tube allowing lung to collapse. No permanent harm.	"3-way" tap was not required but attached as it was in the insertion pack Staff unfamiliar with use of drains with in-line taps	Remove taps from standard chest drain insertion packs (available as an extra) Re-establish junior staff education session on chest drains	In progress In progress
Failure of equipment during fetal surgery, causing prolonged alternative procedure. Death of second twin.	Under review	Under review	
Facial nerve cut during tumour surgery due to inadequate signal from nerve monitor. Residual weakness of facial	Under review	Under review	

Description of Event	Review Findings	Recommendations/Actions	Implementation
muscles.			
Medication error			
Patient mask attached to carbon dioxide cylinder instead of oxygen. No harm.	Recent change in gas cylinder colours Oxygen and carbon dioxide cylinders Identical size and stored close together Nurse checking responsibility unclear	Complete cylinder changeover Separate storage areas Include oxygen as medication for checking	Complete Complete Complete
Local anaesthetic infusion for epidural connected to intravenous line. No evidence of toxicity.	Infusion content double checked but not the patient connection. Epidural infusion lines and connectors are compatible with intravenous systems	Policy altered to include double checking of epidural line connections Yellow stickers to be place on all epidural lines for easy identification Consider local development of physical solution to eliminate compatibility	Completed Complete In progress
Latex exposure in an allergic patient causing moderate reaction	Latex allergy was well documented, but staff were unaware Lack of communication between clerical and clinical staff Alert notification for electronic notes not used	Organisational communication regarding registration of allergy alerts Patient info form changes to be advised to clinical staff Review information handling processes in outpatient and booking systems	Completed Completed In progress
Flush of IV cannula containing residual muscle relaxant after surgery causing significant temporary weakness	Incomplete handover / communication No routine system for flushing of lines prior to discharge from OR / PACU	All intravenous medications given into an IV line must be flushed Forward recommendation to ANZCA to be considered for inclusion in the College	Complete In progress

Description of Event	Review Findings	Recommendations/Actions	Implementation
		guidelines Handovers to include intravenous lines and flush details Formalize PACU policy to (re)flush all lines in PACU	 Complete In progress
Fatal cardiac arrest associated with high local anaesthetic levels from epidural infusion	Previously unknown severe coronary disease was a significant contributor to death Non-standard concentration of local anaesthetic used Pump alert limits not set appropriately High cummulative dose over several days not appreciated	Improve pre-operative assessment systems for out-of-area and high-risk patients Limit use of non-standard concentrations Revise prescription form to include toxicity risk levels and antidote dose Modify epidural pump alerts Earlier consultation with pain specialist for patients with difficult pain control	In progress Agreed Draft form completed In progress
Delay/failure in follow up or treatment			
Death from conservatively treated cardiac laceration after self-discharge	Under review	Under review	
Delay in availability of tissue histology results over Christmas – New Year period. Patient died of complications of advanced cancer prior to results	Death was not preventable. Request for testing did not indicate any urgency Lack of appreciation of timing of routine	Review of the test guide in relation to working days to incorporate effect of public holidays Forms for frozen and fresh tissue should	Complete

Description of Event	Review Findings	Recommendations/Actions	Implementation
becoming available.	histology service	be separated with clear indication for "urgent" specimen	In progress
Delay in diagnosis of intra-cranial bleeding following a fall in a patient taking an anti-coagulant. Fatal outcome.	Algorithm for assessment in ED was followed correctly but does not adequately provide for increased risk with anticoagulants Significance of new symptoms after discharge not recognised	Request revision of traumatic brain injury guidelines through Ministry of Health	Completed
Delay in birth of baby with prolonged fetal distress during labour	Delay in access to operating room Technically difficult Caesarean section	Under review	
Pressure injuries			
Pressure injury to buttocks during prolonged admission after Caesarean section	Multiple transfers of care between wards Pressure injury not considered a risk in maternity service Delay in obtaining pressure relieving mattress	Pressure risk assessment and care plan implementation in maternity services Training in use of pressure relieving mattress Case presentation of pressure injury	Completed Completed
Pressure injury under neck collar progressed from minor to significant after discharge	Poor collar fitting and poor skin condition Poor pressure injury documentation Minor injury covered by dressing Risk inadequately handed over on transfer to residential care	Improved support for community providers. Would care plan in transfer documents prepared on day of discharge	Completed Completed
Significant pressure injury due to prior debilitation and prolonged immobility	Risk identified and all appropriate	Nil	N/A

Description of Event	Review Findings	Recommendations/Actions	Implementation
secondary to unstable clinical state	preventative measures were taken		
Other			
Legionella infection in an immunocompromised patient due to contaminated tap water supply. Required prolonged intensive care treatment.	Copper-silver ionisation system not working appropriately Lack of quality control and maintenance	Maintenance of ionisation system to appropriate standards New monitoring and pathogen testing system High risk patients to use sterile water	Completed Completed Completed
Baby abducted from neonatal intensive care unit. No adverse outcome.	Under review	Under review	

Inpatient Falls

Serious harm falls remain an issue with high level attention. Thirty-three patients had falls with major harm recorded in 2012-2013. Twenty-nine patients who fell sustained a wide variety of fractures (facial, vertebral, rib, upper limb, pubic rami and lower limb). Six patients suffered neck of femur fractures. Three patients had falls that resulted in wounds re-opening or lacerations that needed suturing. The total number of patients with serious harm after a fall in hospital is the same as that reported in 2011-2012, although the number of patients that sustained fractures was higher in 2012-2013 (29 versus 21).

The majority of patients (17) fell on their way to or from the toilet, but the time of day did not appear to be a factor in the falls. Wearing socks or stockings was a factor in three falls. Five patients fell climbing over or around bedrails. One older people's ward had a cluster of falls over the year (6) and these are being reviewed in more depth with the ward.

A multidisciplinary falls and pressure injury steering group oversees improvement work and has been in place for two years. Across ADHB the following actions have been implemented in 2012-2013:

- Accurate identification processes using checking of coding databases to identify all patients who suffer serious harm falls. This process was changed from a quarterly check to a monthly check in March 2013.

- Standardised risk assessment with an intervention package for adult areas in ADHB. Implementation was completed in February/March 2013.
- Intentional rounding has been implemented in older people's and general medical wards with the aim to implement in all adult wards. Intentional rounding involves patients being asked every hour if there is anything the staff member can do for the patient (in addition to normal clinical contact). Such an approach helps address comfort and toileting needs.
- "Sticky socks" have been made available for patients to wear over stockings or if the patient does not have hard soled foot wear available. Implementation started in September 2013.
- Case review of all serious harm falls by the Nurse Advisor Quality & Safety to identify lessons for the organisation.
- Monthly random audit of falls risk assessment and care planning. Initiated in April 2013, with feedback reports from the Chief Nursing Officer circulated to all wards showing each ward's compliance with the HQSC criteria for falls risk assessment and the ward position with respect to compliance compared to other wards.

Issues for further attention

The appropriate use of bedrails has received increased focus as bedrails can both prevent harm and cause harm, and five patients suffered a serious injury climbing over or around bedrails. A workgroup involving restraint and falls experts has been convened, cause and effect workshops held, and areas for attention identified with implementation expected in the beginning of 2014. This work is aligned with work in behaviours of concern to ensure patients have the right interventions matched to their ongoing level of need.

Case review for each serious harm fall is undertaken by the charge health professional in the area the fall occurred to identify and remedy local factors leading to or associated with the fall. However, serious harms falls in each clinical area are a rare event for that area. Reviewing each serious harm fall in isolation from other such falls (with respect to that area and over time) means that clinical areas may struggle to identify lessons. Thus the process and type of review requires further development at ADHB.