Waitematā District Health Board
Best Care for Everyone

Waitematā District Health Board

Serious Adverse Events Report

(1 July 2020 to 30 June 2021)

Corporate Quality and Risk

Waitematā
District Health Board

Best Care for Everyone

Our Promise Statement to our community is 'Best Care for Everyone'. We aim to provide care that is safe, clinically effective, focused on the individual needs of every patient and their whānau and on equity of health outcomes.

Waitematā District Health Board (DHB) provides health services to the estimated 629,000 residents living in the areas of North Shore, Waitakere and Rodney. We are the largest DHB in the country, and are experiencing rapid population growth. More than 8,600 people are employed by Waitematā DHB.

Waitematā DHB provides hospital and community services from North Shore Hospital, Waitakere Hospital the Mason Clinic and over 30 sites throughout the district. We provide child disability, forensic psychiatric services, school dental services, and alcohol and drug services to the residents of the overall Auckland region on behalf of all three Metro Auckland DHBs. Since 2013, the DHB has been the national provider of hyperbaric oxygen therapy services.

Our staff's commitment to quality and patient safety is reflected in the excellent health outcomes of our population, with our population's life expectancy at 84.2 years (2016-18), the highest in New Zealand. Life expectancy for Māori (82.4 years) and Pacific people (77.8 years) is also among the highest in New Zealand and increasing at a faster rate than other populations. The life expectancy of Asian people in Waitematā surpassed 90 years in 2016-18 and is now 90.9 years. The European and other population groups in Waitematā have the highest life expectancy compared with any other District Health Board at 84.3 years. Our amenable mortality rate is the lowest in New Zealand, and we also have one of the lowest rates of hospital mortality of any DHB.

Our clinical teams are supported to design and implement new models of care and best practice care processes, to improve patient outcomes and experience. One of our most important innovations has been

the introduction of Qlik Sense, a business intelligence tool that has enabled the development of clinical data dashboards. The dashboards are developed with our clinicians and provide them with important quality and safety data. The data is available in real-time and is easy to access through a responsive exploration tool.

Our 'if in doubt' adverse event reporting culture (described below), combined with our commitment to using data, enables our clinicians to learn from adverse events, identify and track improvements, and see the positive effect on health outcomes and patients' experience. In this 2020/21 serious adverse events report, we have described some of the improvement programmes that we have developed as a result of investigating and learning from adverse events.

What is a Serious Adverse Event?

An adverse event is an incident which results in unintended harm to a consumer. A serious adverse event is one which has led to significant additional treatment, is life-threatening or has led to an unexpected death or major loss of function.

Serious Adverse Event Investigation at Waitematā DHB

In the period covered by this Annual Report, Waitematā District Health Board recorded 129,671 Emergency Department attendances, 6,668 in hospital births, 130,935 inpatient discharges and 285,734 outpatient interventions. The volume of interactions we have with patients' demonstrates how infrequent serious adverse events are, nevertheless, when they do occur, they are the subject of an Adverse Event Investigation.

All serious adverse events at Waitematā DHB are investigated by a team of clinicians (e.g. doctors, nurses, midwives, allied health) and quality team staff.

Adverse event investigations are undertaken according to the following principles:

- Establishing the facts: what happened, to whom, when, where, how and why
- Looking at systems and processes of care delivery with a view to improvements, rather than blaming individuals
- Establishing how to reduce or eliminate a recurrence of the same type of event
- Formulating recommendations and an action plan
- Providing a report as a record of the investigation process
- Providing a means for sharing lessons from the event

Each event report is then reviewed by the Adverse Event Committee (consisting of senior allied health staff, doctors, nurses, patient experience and quality staff) to ensure that the investigation has appropriately established the facts, addressed all issues and the recommendations and actions are robust. All actions are assigned to a responsible owner and tracked to completion, which is facilitated by the Quality and Risk Team.

*NB: Please note that the events discussed in this report do not include Mental Health-related events; these are reported separately via the Office of the Director of Mental Health (Ministry of Health). In the 2020/21 there were **36** events related to behaviour (e.g. self-harm), that are not included in this report.*

Reporting Serious Adverse Events

All District Health Boards in New Zealand report **possible** adverse events that have occurred in the DHB to the Health Quality and Safety Commission (HQSC), these are prior to an investigation having been completed. Once Waitematā DHB has completed an adverse event investigation, the investigation report is approved by our Adverse Events Committee and the event is then **confirmed** with the HQSC. Sometimes, the investigation will identify that the adverse event was not as serious as first suspected and does not meet the criteria of a serious adverse event that is reportable to the HQSC (using an agreed HQSC rating matrix).

In 2020/21, there were **115 confirmed serious adverse events** following investigations. These numbers should be seen in the context of having been finalised in the last reporting year; however the event itself may have occurred in previous reporting years. In addition, there are a number of possible adverse events still under investigation that, if confirmed following investigation, the details of which will be reported in the 2021/22 serious adverse event report.

Improvements to reporting

We continue to deliver targeted adverse events training sessions to those staff involved in reviewing and investigating adverse events which reinforces our organisation's culture of 'if in doubt report and investigate' and improves the quality of the investigations. As a result we have seen an increase in timely reporting of adverse events, which is reflected in the figures below. This enables continuous improvements to be made to the quality and safety of the services we deliver to our community. This year we have also worked on reducing the time it takes to complete an investigation.

Overview for 2020/2021 completed Serious Adverse Event investigations

Every adverse event described in this report has a patient and their whānau at its centre. We acknowledge the impact of any event on the individuals involved, be that the patient, their whānau or our staff. We continually strive to learn from adverse events and to put processes in place to maintain and improve patient safety.

We have a large programme of quality improvement and innovation projects that are developed with the support of our Institute for Innovation and Improvement (i3). Many of these projects are designed to address adverse event investigation findings and ensure recommendations are implemented effectively. More information on the work of i3 can be found here https://i3.waitematadhb.govt.nz/ .

During the period covered by this report Waitematā DHB **confirmed**, through investigation, **115** adverse events that had caused serious harm or death (serious adverse events). We investigated and confirmed 59 serious adverse events in 2019/20, and 39 in 2018/19. We acknowledge this is a significant increase on the 2019/21 reporting year; however, it is attributable to a remarkable effort to investigate and close **76** events related to falls and **9** events related to pressure injuries that occurred prior to 2021.

Each of the 115 **confirmed** serious adverse events were investigated using a systematic investigation protocol. Understanding where improvements need to be made so that we can help staff keep our patients safe and deliver quality care are the main drivers for the investigation.

The tables below outline a summary of these 115 events, as well as the associated findings and recommendations. These events have been classified into the following themes:

- Falls with major harm (76)
- Hospital acquired pressure injury (9)
- Delay / failure in follow up or treatment (7)
- General care and treatment (7)
- Maternity (6)
- Always Report and Review events (10)

Always Report and Review events are a subset of adverse events that are reported and managed in the same way as serious adverse events, irrespective of whether or not there was harm to the patient. Always Report and Review events are events that, under different circumstances, may result in serious harm or death and are preventable with strong clinical and organisational systems. The details of these events are not covered in this report, however, recommendations from these investigations have resulted in changes to clinical guidelines, systems, and policies and included education focused in particular areas.

Falls With Major Harm (76)

In this reporting year, Waitematā DHB introduced an improved way of investigating falls with major harm with the aim of reducing delays in completing the investigations. As shown above, this category of serious adverse event is the most reported category within Waitematā DHB. The new process was to complete multi-disciplinary multi-incident investigations. Using this new approach Services focused on the investigation of all the falls that had occurred prior to 2021 as a priority. This new approach meant that the DHB was able to complete a higher number of investigations; 76 in this reporting year compared to 24 in the previous year, an increase of 32% completed investigations.

This has enabled the DHB to identify themes across the falls with major harm events and has supported the identification of key factors that may have led to the fall. The primary themes across these events ranged from patient factors to organisational system factors, and included:

- Cognitive impairment experienced by the patient in an unfamiliar environment; not recalling reminders to call for assistance
- Variable interdisciplinary assessment or shared approach/management of falls
- Environmental issues such as poor hand holds when self-mobilising and poor evidence of orientation to the ward/routines
- Toileting plans were not documented
- Fall prevention plans were not complete
- Care plans were not always up to date

A Steering Group was set up to oversee a multi-disciplinary working group who were commissioned to address the themes identified through the use of quality improvement methodologies. The initial focus for the group includes:

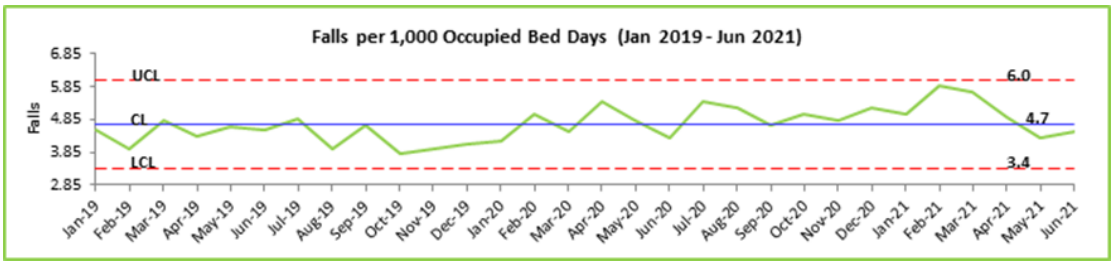
- Refocus of universal falls precautions programme
- Review of current falls prevention strategies and risk assessment tools
- Regular falls incident review

This work continues as a priority.

Current trends

The current trends and expected practice continues to be monitored and captured as per data below.

Falls trends and Actions

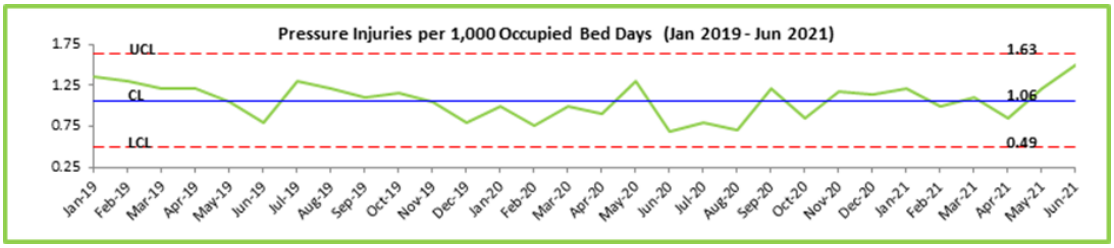


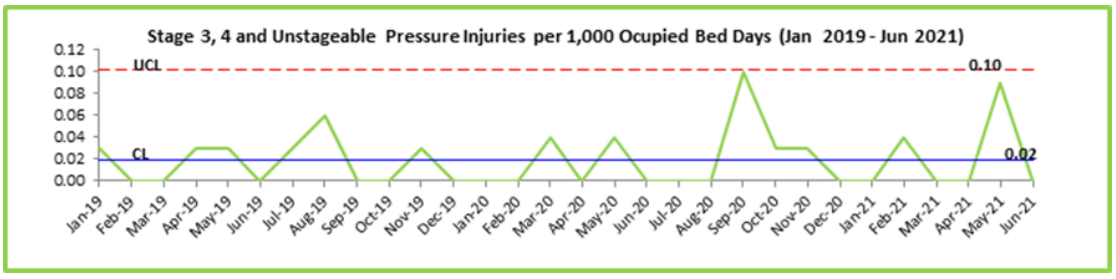
As per the data, falls with major harm continues to track downwards, however overall falls has started to increase. Several factors can be attributed to this trend, namely the ongoing patient flow, workload issues and nursing staff deficits in the clinical environment. Incidents continue to be reviewed with input by the Quality and Patient Safety Leads and recommendations made to address issues identified in general and specific ward practice.

Hospital Acquired Pressure Injury (9)

There has been an improvement in the reported incidence of pressure injuries with serious harm from 20 in the last reporting period, down to 9.

Pressure Trends and Actions





As per the data above, unstageable pressure injuries are reduced, however there is a noticeable increase in the numbers of pressure injuries overall. Several factors can be attributed to this trend, namely the ongoing patient flow, workload issues and nursing staff deficits in the clinical environment.

These trends have been discussed at Frontline Focus Friday with the explicit message that we need to maintain a focus on patient safety and continue to reduce the risk hospitalisation poses within the hospital setting. There is targeted work underway to support wards with staff replacement, rostering practices and staff education to reinforce expected practice.

Individual wards and areas, where concerns have been identified, are provided with particular support from the Associate Directors of Nursing (ADONs) and the Quality and Patient Safety Leads for the service.

A number of actions have been reinforced across wards including:

- Pressure injury 'Bundle of Care' has continued to be hard for staff to see in e-vitals
- Pressure injury individual e-learning and nursing training focus in divisional learning frameworks has continued from previous initiatives
- Recent re-engagement of pressure injury steering group, nursing and allied health leadership across divisions
- Refocus of removal of Compression / Anti-Embolism stocking use in acute medicine and Specialty Medicine & Health of Older People wards that was decided in 2019
- Reminder to participate in SKINN/Inspect training in services and annual pressure injury 'Champions' study day. *Staff are not able to be released for training over 2020 due to COVID and into 2021 due to workload pressures.*
- Staff training and access to uploading digital photography into clinical portal continues from the 2019 initiative.

Whilst an overall reduction in Hospital Acquired Pressure Injuries stage 3, 4 and unstageable has been seen in Acute and Emergency Medicine inpatient wards, there is still a need to be highly vigilant with sustaining improvements in assessment, care planning and decision-support tools the already been implemented on the wards and have become business as usual for the team.

Future work

There is still ongoing work to ensure we maintain and improve our current level of care. Regular meetings with the ADONs have been scheduled to ensure ongoing delivery of the work plans and the wider issues affecting staff engagement. We will review and support the ADONs with the action plans for the both the falls and pressure work group. Emphasis is on ensuring monthly discussion involving interdisciplinary enthusiasts.

Delay / Failure in follow up or treatment (7)

What happened?	Investigation Findings	Recommendations
A delay in dental follow up resulted in dental decay	Proactive strategies to engage with the family were not attempted. Following a diagnosis of five decayed teeth the initial risk assessment was correctly scored as high but seven days later it was incorrectly rescored as a moderate risk. Therefore the patient continued to be placed incorrectly on a 12 month recall	Ensure all ARDS staff adhere to the Supportive Treatment Pathway Policy so families are supported to attend scheduled appointments and treatments are completed. Ensure school rolls are reconciled with clinic rolls at least once a year; ensuring contact details for families are current and accurate.

What happened?	Investigation Findings	Recommendations
	instead of a six month recall. At most examination appointments, x-rays were not taken and preventative fluoride treatment was not applied despite the presence of decay in five deciduous teeth. The patient was transferred to the Adolescent Oral Health Service at the end of year-8 at school, not having been examined by ARDS for over three years, with active decay left untreated in adult teeth.	Ensure all ARDS staff adhere to the Preventive Examination and Risk Assessment and Individual Treatment Planning policies. The Year 8 Adolescent Transfers policy is to be revised
Delay in recognising dental decay resulted in root canal treatment	Patient contact details were not confirmed and appointment booking information was sent to wrong address. Patient was deactivated from ARDS due to non-attendance of appointments. Deactivation of a child after failing to attend two or more appointments was a Business Rule until 2018. The patient was not transferred to the Adolescent Oral Health Service at the beginning of school Year 9, for on-going dental care. Treatment planning and preventative fluoride treatments were not carried out at eleven appointments. Risk assessment was inaccurate therefore recall dates were incorrect. X-rays taken in 2015 were incorrectly read as clear and the patient was incorrectly placed on a twelve-month recall.	Ensure school rolls are reconciled with clinic rolls at least once a year; ensuring contact details for families are current and accurate. Ensure all ARDS staff adhere to the Supportive Treatment Pathway Policy so families are supported to attend scheduled appointments and treatments are completed. Ensure all ARDS staff adhere to the Preventive Examination and Risk Assessment and Individual Treatment Planning policies. The Year 8 Adolescent Transfers policy is to be revised
Delay in recognising dental decay resulted in root canal treatment	Patient contact details were not confirmed and appointment booking information was sent to wrong address. Patient was deactivated from ARDS due to non-attendance of	Ensure school rolls are reconciled with clinic rolls at least once a year; ensuring contact details for families are current and accurate. Ensure all ARDS staff adhere to the Supportive Treatment Pathway Policy

What happened?	Investigation Findings	Recommendations
	appointments. Deactivation of a child after failing to attend two or more appointments was a Business Rule until 2018. The patient was not transferred to the Adolescent Oral Health Service at the beginning of school Year 9, for on-going dental care.	so families are supported to attend scheduled appointments and treatments are completed. Ensure all ARDS staff adhere to the Preventive Examination and Risk Assessment and Individual Treatment Planning policies. The Year 8 Adolescent Transfers policy is to be revised
Delayed diagnosis of stroke	Confirmation bias (in that staff believed the problem to be non-stroke related) was evident. The initial scan was ordered by a House Officer but should have been a senior clinician as type of scan was not appropriate. The scan was not followed up in a timely manner. The Stroke consult service did not see the patient for two days. Care was not escalated appropriately when the patient deteriorated. The family were not listened to.	Better supervision of House Officers. Senior clinicians to order stroke related scans. Stroke service to review referrals daily. All patients in ADU to be reviewed by a medical registrar in the morning. Undertake a review of process for clinical review of stroke patients. Family to be included in discussions.
A six-week-old baby developed a brain abscess that was diagnosed three weeks after the first presentation	Further investigations should have been prompted by a fever persisting beyond 48 hours after starting antibiotics. Parents had limited English so communication was difficult. Discharge planning was deficient. No GP was listed in the system so GP did not receive a discharge summary.	Develop a paediatric policy for meningitis management. Remind staff to use interpreters to convey key clinical information. Discuss feasibility of making GP a mandatory field for the system.
Delayed diagnosis of testicular torsion	There was a failure to transfer to paediatric surgery on initial presentation. Inappropriate advice was given by Starship hospital to arrange an ultrasound. The ultrasound provided false reassurance.	Testicular torsion is to be excluded by the paediatric surgical team. Ultrasound not an appropriate tool for the paediatric group with testes pain. All paediatric patients with testicular pain (under 18) are to be transferred to Starship hospital.

What happened?	Investigation Findings	Recommendations
Delayed diagnosis of abdominal aortic aneurism (AAA)	There was a delay in making the final diagnosis of Ruptured AAA. The presence of an AAA in someone of the patient's relative young age is uncommon. The physical examination was technically difficult. The operative findings were severe. An earlier diagnosis was unlikely to change the outcome.	Use case as training tool in Emergency Department. Present case to Mortality and Morbidity Meeting.

General Care and Treatment (7)

Some of the events described in this section are both rare and significant in their nature. All events have been the subject of detailed investigations by a team of subject matter experts. We continue to deliver the recommendations from each investigation; however, any immediate learning's were acted upon at the time.

What happened?	Investigation Findings	Recommendations/Actions
Treatment intervention due to lack of interventional radiology service access	Gastroscopy potentially avoidable if after hour's interventional radiology services at Auckland District Health Board (ADHB) could have been accessed.	Establish a mutually agreed process for referring patients to the Interventional Radiology Service at ADHB. Establish a DHB service agreement with Interventional Radiology services at Auckland DHB to support cross site service provision. Consider a business case for the provision of an after-hours Interventional Radiology Service at WDHB.
A patient had a chest drain inserted for a pneumothorax but suffered an intrathoracic bleed following removal.	A chest x-ray showed the pneumothorax to be stable and not increasing in size. Conservative management without the use of chest drain should have been considered. Respiratory advice should have been sought. A pig-tail chest drain insertion was done well. Instructions for chest drain removal in	Chest x-rays should be reviewed and respiratory advice should be sought with regards to chest drain insertion. Report to be used as a case study for learning. Convene a multidisciplinary panel to make a decision about whether to stop using locking pigtail chest in the thoracic space (ie as chest drains). Amend all policies and procedures

What happened?	Investigation Findings	Recommendations/Actions
	the patient's notes were not followed. It should be a gentle pull but force was used resulting in significant pain for the patient. It was a traumatic removal. There was no written or verbal handover of a post removal care plan by the medical to the nursing staff. No post removal observations were taken meaning that the patient's deterioration was not recognised. The patient suffered a haemothorax but investigation and treatment for this was delayed. At the time of the incident there were over-lapping chest drain policies that did not reference each other.	according to the decision made. Subject to the decision above, amend the 'Instructions for Removal of [pigtail chest] Drain' (sticker for the clinical record), and the Chest Drain Policy and Pigtail Management Policy, to specify that when removing a locking pigtail 'if there is any resistance and or pain STOP immediately' (per the New South Wales Health Safety Notice 08 October 2009). Update the Handover Policy to include doctor-to-nurse and nurse-to-doctor communication and the inclusion of the patient's nurse on the ward round, or at procedures, to facilitate communication and handover. Develop and implement a policy/procedure/protocol for the management of interapleural haemorrhage. Review relevant polices.
A patient was incorrectly discharged with a diagnosis of neck pain and gastroenteritis. The patient later died of a subarachnoid haemorrhage.	Alternate diagnoses for acute presentations of headache, neck pain and vomiting were not considered. A CT scan was not performed. The Bundle (Guideline) For Managing Diarrhoea And Vomiting was not utilised which would have highlighted that in the absence of diarrhoea, raised intracranial pressure should be considered as an alternative diagnosis for vomiting.	The case to be presented to the emergency department (ED) Mortality and Morbidity meeting, and to other ED staff members, for learning. Conversion of hard copy Best Care Bundles (BCB) to electronic (eNotes), for ease of access.
A patient with a serious spinal injury died in the Emergency Department (ED).	The ED had very high volume and acuity. This situation was not escalated. Inadequate escalation of the patient's clinical deterioration.	Review and amend where necessary the current hospital escalation plan. Implementation of HQSC Patient Deterioration Programme. Implementation of early warning scoring system (NZ NEWS) within ED environment.

What happened?	Investigation Findings	Recommendations/Actions
A patient with Ankylosing Spondylitis (AS) suffered an unrecognised cervical spine injury after a fall which developed into a spinal cord injury following a CT scan.	The risk of the supine position in patients with Ankylosing Spondylitis was underestimated by staff. The patient's spine was not able to be maintained in a neutral position for the CT scan. There was a three hour delay for the CT scan.	Education of all emergency department (ED), radiology and transit care staff regarding the risk of AS and other fixed spine deformities. The ED and radiology department to procure or develop appropriate physical resources for maintaining C-spines in a neutral position. Update the ED Suspected C-spine Best Care Bundle. Share learning with other ED's and regional trauma centres. Transit Nurse group to provide consistent training regarding moving patients with possible spinal injuries.
Patient received 10x dose of Ketamine resulting in respiratory arrest. Patient recovered quickly.	Emergency Department (ED) Registered Nurses (RN) are familiar with Ketamine for sedation but not pain relief. It is usually administered by an Emergency Medicine (EM) Doctor or Nurse Practitioner under supervision in the resus room. The EM Senior Medical Officer (SMO) was happy for Ketamine to be administered in the ED Monitored area by the RN, but decreased the dose. Previous multiple doses of Morphine may have contributed to the effect from Ketamine. Both RNs followed the correct medication process steps, but did not check final volume 5mg = 0.5mls.	ED RN's are not to administer prescribed IV Ketamine for pain; This must be administered by the prescribing Doctor. IV Ketamine is only to be administered in the ED Resus area Stock Morphine and Ketamine pre-filled syringes in separate Pyxis drawers in the ED and review labelling. Review E-prescribing to see if all IV medications prescribed can show dose in mg/ml as well as on labels Where IV medications are administered in incremental doses (e.g. Morphine, Ketamine) a system should be developed to enable increments to be marked on the syringe ED ACCNs to undertake spot audits on most shifts of RN documentation throughout ED Reminder email to be sent to all ED staff regarding safe medication practice and requirements. Both RNs involved with the incident to re-sit the online medication test

What happened?	Investigation Findings	Recommendations/Actions
A patient underwent a nephrostomy and ureteric stenting on the wrong side.	The e-referral form stated the correct side but the doctor believed the form was incorrect due to the patient's health status. There was clinical documentation missing from the e-referral form. The patient was consented for the "wrong" side. The "Time-out" checking process did not stop the incorrect procedure being performed. The doctor was distracted during the time out process.	E-referrals will be emailed the day before the procedure to ensure if there is doubt it can be clarified early. Procedural consent must correlate with the e-referral information. Time out process to be reviewed and improved. Distracting devices should not be used during interventional radiology procedures.

Maternity (6)

What happened?	Investigation Findings	Recommendations/Actions
A labouring woman incorrectly received intravenous medication (Syntocinon) to increase uterine activity.	The woman should have received medication for dehydration. The Syntocinon infusion was pre-prepared and left in the room in case of post-partum haemorrhage after birth. The checking process was not followed when administering the infusion.	Advisory sent to all staff prohibiting the pre preparation of medication. Update the post-partum haemorrhage policy to reflect the above. Update the medications test to include specific question on double checking intravenous medicines. Audit to be performed. Liaise with pharmacy regarding a new additive label to encircle a fluid bag so the additive can be noted from all angles
Deterioration of maternal wellbeing postnatally was not recognised leading to delayed recognition and treatment of uterine rupture.	The patient was not being monitored on the Maternal Early Warning System (MEWS) which would have alerted the staff to deterioration and expedited treatment for uterine rupture.	Achieve a culture in maternity where MEWS is used routinely for all admissions (excluding labouring women). Audit MEWS use monthly.
A mother suffered a PPH and collapsed	The acute on call Senior Medical Officer (SMO) was involved with other	Develop a wall poster for theatre and birthing suite regarding the massive

What happened?	Investigation Findings	Recommendations/Actions
following a forceps birth.	cases. The adult resuscitation team provided prompt and appropriate care. There was confusion about activating the massive blood transfusion protocol and collecting the blood packs.	transfusion protocol and the ordering of blood.
A woman had a significant post-partum haemorrhage following a caesarean-section, resulting in an increased level of care.	The anaesthetic and obstetric care was excellent. Communication between the private obstetrician and WDHB staff was not optimal and it was not clear who had responsibility for the woman.	Develop an MOU that governs the interface between provision of primary and secondary obstetric care in WDHB maternity facilities.
A baby died in-utero pre-labour while in the care of maternity staff.	A test (CTG) to establish fetal well-being should have been repeated during the night. Miscommunication about timing of scan and plan of care. Senior medical officer (SMO) workload was heavy but a second SMO was not called in. Bedside phone system failed.	A formal register to be kept on CTG credentialing for obstetric staff. Use as case review for documentation education Service to review the threshold for calling in second SMO Repair bedside phone system
Hypoxic ischemic encephalopathy	Difficult extraction at caesarean section because of extreme uterine cavity distortion from large and multiple uterine fibroids.	No recommendations

The maternity service has an active and engaged quality improvement programme. In the past 12 months the service has implemented the early recovery after caesarean section (EROS) programme to reduce caesarean complications. It is also working with ACC to pilot the new national fetal assessment in labour training.

Final comment

Adverse event reporting and investigations are fundamental to enhancing patient safety and experience as well as improving the quality of care we provide. By learning from adverse events and near misses we are able to identify areas for improvement and further development, that will help our staff deliver safe, effective and person centred care. As detailed above, Waitematā DHB has made a number of system and process improvements as a result of learning from Adverse Events and continues to strive to deliver 'Best Care for Everyone'.