Summary Report: Rapid Incident Review:

Waikato Hospital Event

2 April 2025

Te Kāwanatanga o Aotearoa
New Zealand Government

Health New Zealand
Te Whatu Ora

Dr Richard Sullivan apologises, on behalf of Health New Zealand and as Chair of the Review Team, to Patient A and the family, for their ongoing distress as a result of the events that occurred on 9 March 2025.

Background

A rapid incident review was commissioned by Health New Zealand (Health NZ) to investigate the care provided to Patient A at Waikato Hospital on 9 March 2025.

The terms of reference for this review are attached at **Appendix 1**.

A rapid incident review methodology was used to complete this review. This comprised:

- Collation and review of all documentation for this episode of care, including electronic and paper clinical records
- Collation and a rapid review of relevant Waikato policies and procedures, which are listed in **Appendix 2**
- Interviews with the most relevant staff that could be completed
- Engagement with the external review panel for expertise and advice
- Engagement with the family of Patient A where possible to inform the review
- Findings of a literature search of aspects of the incident to understand international practice and research, which is set out in **Appendix 3**.

Review Team

The Interim CEO of Health NZ appointed Dr Richard Sullivan, Chief Clinical Officer, as chair of the review panel, given his responsibility for quality and safety of clinical services across Health NZ. Dr Sullivan appointed the following members to join him on the panel:

- Dr Penny Andrew, Director Te Whatu Ora Improve
- Dr Sarah Jackson, National Chief Quality and Patient Safety
- Anne Pedersen, National Quality & Patient Safety Lead
- Marama Tauranga, Interim Chief Nurse Hauora Māori Services
- Professor Robyn Whittaker, Director Evidence Research & Clinical Trials

Exclusion

This process did not review the application of the relevant provision of the Mental Health (Compulsory Assessment and Treatment) Act 1992. That process is to be led by the Ministry of Health as deemed appropriate.

Limitations

This is a rapid review process undertaken in one week; by its nature it is rapid meaning there has been limited time to engage with staff, family and Police.

Given the constraints on timing for completing this rapid review, the family has been given a copy of a draft report prior to publication, but there has been limited time to enable meaningful feedback.

External Review Panel

An External Review Panel was arranged and comprised the following senior leaders with expertise across clinical, quality, safety and human factors disciplines:

- Dr Rawiri Jansen (Ngāti Raukawa) Chief Clinical Officer, Ngāti Tuwharetoa Iwi Māori Partnership Board; co-lead, National Diabetes Network Mahitahi Matehuka; and General Practitioner, Tend clinics, Auckland
- Dr Craig Immelman, Child and Adolescent Psychiatrist and honorary lecturer at the Department of Psychological Medicine, University of Auckland
- Dr Matira Taikato, Te Arawa and Ngāi Te Rangi, Clinical Director Mental Health & Addiction Services, Lakes District Health NZ
- Bob Henderson, Specialist in Aviation Safety
- Dr Martin Thomas, Clinical Director and Director of Safety and Quality Systems, Health Quality & Safety Commission.

The review panel was external to Health NZ apart from Dr Matira Taikato who was external to Waikato District.

Biographies for the panel are set out in **Appendix 4**.

This report is the high-level public summary of this incident.

Case Summary: Rapid Incident Review of Waikato Hospital Event

Patient Misidentification

Police responded to a report of concern about a person on a bridge early on the morning of 9 March 2025. They brought the person (Patient A) to Waikato Hospital's Emergency Department because she appeared distressed and was uncommunicative. She had no identification on her.

The Mental Health Crisis Assessment Team was asked to assess Patient A. A short time later the Police called the Emergency Department and incorrectly identified Patient A as Patient B. Her appearance and presentation were considered to be consistent with Patient B and their health diagnosis.

A decision was made to admit Patient A to hospital for compulsory inpatient treatment on the understanding that this was Patient B. This led to Patient A being transferred to the intensive mental health in-patient ward. Medications appropriate to Patient B's health diagnosis were prescribed and administered to Patient A.

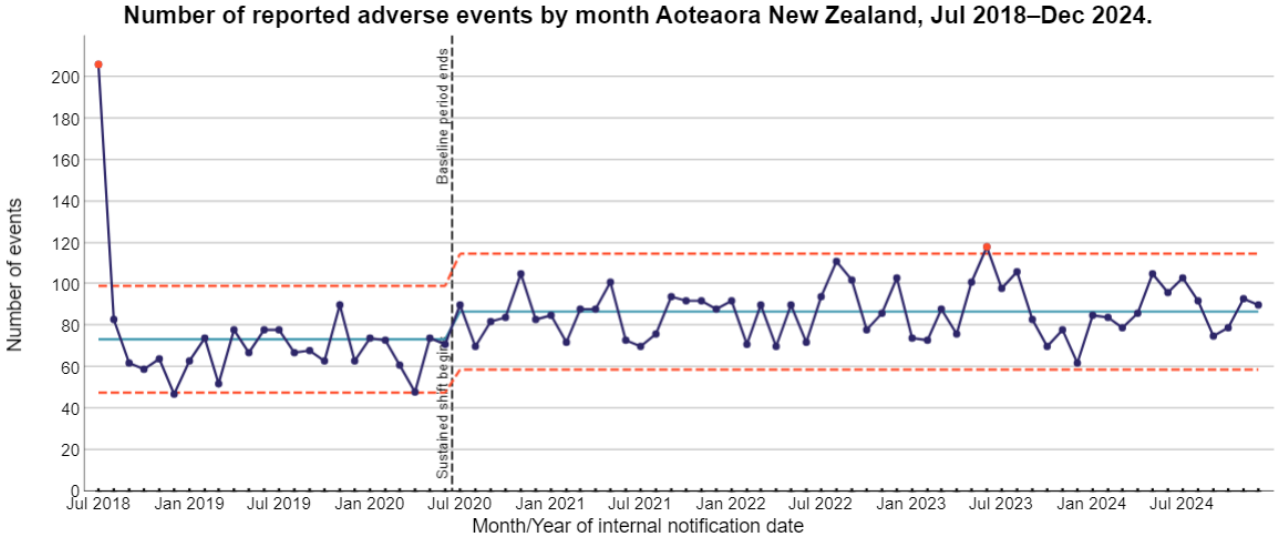
Patient A remained in the intensive mental health in-patient ward for the remainder of the day. Later that evening Police phoned the ward to advise that Patient A had been misidentified as Patient B.

Patient A's family was contacted, and her mother came to the ward. Patient A was discharged and her mother took her home. Hospital staff visited Patient A and her family the following day. An incident form was submitted, and a Serious Adverse Event review was initiated immediately.

Context

Te Tāhū Hauora Health Quality & Safety Commission collects, analyses and reports on serious harm (adverse) events (defined as an event in which a person receiving health care experienced harm causing major loss of function and/or requiring significant intervention guided by the relevant Severity Assessment Code (SAC) guide).Te Tāhū Hauora Health Quality & Safety Commission collects, analyses and reports on SAC 1 (severe) and 2 events (major) harm (adverse) events, and those on the Always Report and Review (ARR) list, regardless of SAC rating. These reports are published on Te Tāhū Hauora Health Quality & Safety Commission's public-facing national quarterly dashboard.

The average number of serious (SAC 1 and 2) harm (adverse) events reported each month to the Te Tāhū Hauora Health Quality & Safety Commission is 87 per month and this has been stable since July 2020 when the average number was slightly lower at 73.



Source: Te Tāhū Hauora Health Quality & Safety Commission

The number of severe/ major harm (adverse) events occurring is likely to be higher than reported as reporting depends on a learning culture and people recognising a harm (adverse) event has occurred and the importance of reporting it, and why Te Tāhū Hauora Health Quality & Safety Commission also triangulates harm (adverse) events with other data sets.

Findings

Key Finding: This was a case where an 11-year-old child was mistaken for a 20-year-old adult and inappropriately received compulsory care and treatment under the Mental Health Act.

The factors that contributed to this are:

1. There was an assumption that this was a mental health presentation, because the Police advised that Patient A was found on a bridge displaying potential mental health symptoms. This resulted in the mental health Crisis Assessment and Home Based Treatment team (CAHT team) being called and asked to assess the patient, without Patient A being reviewed by the Emergency Department (ED) medical team first.
2. The CAHT team initially considered the possibility of a different diagnosis, declining the direct admission to the mental health inpatient unit. And the initial assessment by the CAHT team and ED registered nurse (RN) that Patient A resembled a child and may have a disability, demonstrated good clinical judgment and the consideration of a differential diagnosis.
3. There was a misidentification by Police of Patient A as Patient B, which was accepted by staff because it is common for Police to confirm patient identity. Patient A displayed limited verbal ability, and there was no additional information available to staff to verify the Police's identification. Patient B also had no next of kin in the system to contact.
4. Cultural support was initially not provided to Patient A.
5. The ED medical team did not see the patient. This was a lost opportunity for assessment by an ED doctor and consideration of a differential diagnosis for the presenting symptoms. A potential further opportunity occurred in the intensive mental health in-patient ward.
6. The CAHT team accepted the patient and made an admission and treatment plan in accordance with what would have been appropriate for Patient B.
7. Current Waikato Hospital identification processes are inadequate for this situation.
8. From this point, there was a failure to consider any other diagnoses to explain the clinical presentation.
9. Disability was also not considered following the initial assessment of Patient A.
10. The process of transfer to the admission area of the psychiatric intensive care unit was appropriate.
11. Patient A was medicated in the admission area and transferred to the intensive psychiatric care unit. Patient A declined oral medications resulting in intermuscular medication (IMI) being used.

12. Staff were working on the assumption that they were administering medication to an adult, not a child.
13. Medication decisions were based on Patient B's history of rapid escalation of their symptoms.
14. The medication given is rarely administered to children.
15. The medication is not first line choice in adults but was given due to a shortage of supply.
16. Restraint was used during the administration of the medication consistent with the hospital's restraint policy.
17. There was no mental health reassessment completed on entry to the psychiatric intensive care unit or prior to medication being given.
18. A second IM dose of medication was administered.
19. Vital signs were not measured and recorded after sedation. Post-medication visual observations in the unit occurred at frequent intervals.
20. Patient A's care was provided in the timeframes that would normally be expected.
21. Several staff commented on high workloads and a frequently full unit.
22. Once Patient A was correctly identified, appropriate actions were taken.
23. Support was offered to the family after the event and has continued.
24. The event was immediately reported and recorded as an adverse event, and a review process was commenced. This was consistent with Waikato District's adverse event process.
25. No immediate controls have been put in place.

Recommendations

1. Apologise to Patient A and her family. Engage with Patient A's family and provide appropriate support to understand the findings and recommendations, ask any questions, and provide any further feedback into the Waikato Hospital's adverse event process.
2. Undertake a rapid review of international best practice for the identification of unidentified patients, particularly for people with any type of communication difficulty, and create a national policy. This should be done in collaboration with cultural and disability services, and in consultation with the Police.
3. Ensure that all Emergency Departments undertake medical reviews on all unidentified patients.

4. Establish a national restraint group to specifically develop best practice for physical restraint, medication restraint, monitoring after sedation, de-escalation processes and staff training. The scope of this group's work should include developing a checklist for assessment prior to medication restraint, and procedures for monitoring vital signs following sedation in mental health facilities.
5. Review admission criteria and procedures for admission to psychiatric intensive care units.
6. Review workforce resourcing in the district's mental health inpatient unit.
7. Ensure cultural support is offered to mental health patients as early as possible in the admission process.
8. Engage cultural and disability services in the actioning of relevant recommendations.

Next Steps

1. Ensure Patient A and family are given appropriate time and support to understand the findings and recommendations, ask any questions, and feedback any concerns into the Waikato Serious Adverse Event report process.

2. Disseminate findings to:
   - Patient A and her family
   - Health and Disability Commissioner
   - Te Tāhū Hauora Health Quality & Safety Commission
   - New Zealand Police
   - The Office of the Children's Commissioner
   - Ministry of Health | Manatū Hauora, including Dr John Crawshaw, Director of Mental Health, for consideration of requirements under the Mental Health Act
   - Ministry of Disabled People | Whaikaha
   - All senior Mental Health and ED Staff in Health New Zealand | Te Whatu Ora

3. Recommendations are to be converted into an action plan with clear deliverables and timelines within one week

4. Responsibility for implementation and monitoring of the review recommendations will be clearly communicated and established:
   - Responsibility for monitoring the progress of recommendations will be with the National Clinical Governance Group.
   - The Senior Responsible Officer for delivery will be the National Chief Mental Health reporting regularly to the interim CEO and Chief Clinical Officer at Health New Zealand | Te Whatu Ora.

5. Clinical staff debriefs to be undertaken at Health New Zealand | Te Whatu Ora | Waikato.

6. Share the report with the Serious Adverse Event Committee at Waikato for their review, engagement with Patient A and her family, and consider any further actions that may be needed.

Appendix 1: Terms of Reference

Rapid Incident Review: Waikato Hospital Event

Context

Health New Zealand (Health NZ) will review the episode of care of Patient A, who was mistakenly identified as Patient B. Patient A lives with a disability that means she was not able to tell people about herself.

Patient A was admitted to the mental health inpatient unit and administered medication. Approximately 12 hours into the admission, the identification error was made known to Health NZ staff, Patient A's family were contacted, and support was put in place. Patient A was discharged a short while later to her residential home.

Purpose

The purpose of this rapid incident review is to find out and record what happened and to make recommendations as to any further action required. This review is not a disciplinary inquiry and is not intended to attribute blame. The review and recommendations will be focused on systems and processes. If any issues concerning the conduct of individuals is identified, a separate review may be advised as a recommendation. A decision will be made on what further action or review is warranted after the review report has been completed and considered.

Scope

The scope of the rapid incident review includes the episode of care for Patient A from the time she was brought into Waikato Emergency Department by Police on 10 March 2025 at 7.00am, to time of discharge from hospital the same day at 9.40pm.

The review will include cultural safety considerations during the episode of care.

Given the limited time to accomplish this rapid incident review, we acknowledge that further exploration of some processes and systems may be required; if required this will fall outside of the scope of this review.

Function of the Review Team

The review team will:

1. Ascertain, as far as practicable, the circumstances surrounding the event including providing a chronological overview of the care provided to Patient A relevant to the adverse event.
2. Identify the actions taken since the event occurred e.g. contacting parents.

3. Determine when the initial review process started and whether it was carried out according to protocol.
4. Determine whether any immediate controls were put in place following the event.
5. Assess the most likely contributory factor(s), including taking into consideration all available information to date. This assessment will include comparison with national/international best practice to inform where improvements might be made.
6. Engage with Patient A and her family throughout the review process, to ensure their voices are heard and their concerns answered.
7. Recommend any further actions Health NZ should take as a result of this review, who should be responsible for these actions, the timelines in which they are expected to be completed and any additional further review that may be required.
8. Review escalation pathways taken, and appropriateness of those in relation to existing policies.

Composition of the Review Team

The review team will be comprised of relevant staff from national teams at Health NZ with experience in clinical quality and safety reviews.

The Interim CEO of Health NZ appointed Dr Richard Sullivan, Chief Clinical Officer, as chair of the review panel, given his responsibility for quality and safety of clinical services across Health NZ.
Dr Sullivan appointed the following members to join him on the panel:

- Dr Penny Andrew, Director Te Whatu Ora Improve
- Dr Sarah Jackson, National Chief Quality and Patient Safety
- Anne Pederson, National Quality & Patient Safety Lead
- Marama Tauranga, Interim Chief Nurse Hauora Māori Services
- Professor Robyn Whittaker, Director Evidence Research & Clinical Trials

External Review Panel

An external review panel has been arranged comprised of senior leaders external to Health NZ, who will review the final report and give advice back to Health NZ on the substance and appropriateness of the report. These members are:

- Dr Rawiri Jansen, (Ngāti Raukawa) Chief Clinical Officer, Te Tuwharetoa Iwi Māori Partnership Board; co-lead, National Diabetes Network Mahitahi Matehuka; and General Practitioner, Tend clinics, Auckland
- Dr Craig Immelman, Child and Adolescent Psychiatrist and honorary lecturer at the Dept of Psychological Medicine, University of Auckland

- Dr Matira Taikato, Te Arawa and Ngaiterangi, Clinical Director Mental Health & Addiction Services, Lakes District Health NZ
- Bob Henderson, Specialist in Aviation Safety
- Dr Martin Thomas, Clinical Director and Director of Safety and Quality Systems, Health Quality & Safety Commission

The Ministry of Health will also be provided with a draft copy of the report for feedback and comment.

Appendix 2: List of Waikato District Policies and Procedures Reviewed

1. Admission, Discharge & Transfer Policy
2. After Hours Assessment & Admission of Tamariki and Rangatahi to the HRBC and Haumaru Ōrite
3. Hostile Incident Security Protocol
4. Identification of Unidentified Patients Procedure
5. Management of Potentially Violent Patients Procedure
6. Māori Health Policy
7. Patient Identification Policy
8. Restraint Policy
9. Tikanga Best Practice Guide Flip Chart
10. Use of Seclusion in Mental Health & Addiction Inpatient Setting Procedure

Other Documents Reviewed

1. Medical Council of New Zealand Statement on Cultural Safety

Appendix 3: Literature Search

Literature Search: Rapid Incident Review Waikato Hospital event

This is a brief pragmatic directed literature search to support the rapid incident review of the Waikato Hospital event of 9 March 2025. Aspects of the incident were identified by the review team as requiring some understanding of international practice and research. This is not a complete or systematic review. Further literature review of specific topics should be requested as needed.

Identification and Misidentification of Patients

The misidentification of people in the health system continues to be an issue worldwide, that results in administration of medications and blood products to the wrong patient, delays in starting treatments due to incorrect identification of tests, mistaken procedures and surgical interventions, and the cancellations of procedures (1-5).

A recent (October 2024) literature review by University Hospitals Bristol & Weston Library & Knowledge Services has a good summary of recent literature (1). This helped guide this review along with a 2024 UK National Learning Report by the Health Services Safety Investigations Body (2). This review stated that it is not yet possible to eliminate the risk however a combination of staff education, workplace optimisation and technological systems is likely to be the most effective.

The basis of most policies internationally is from WHO guidance in 2007 (6) which states that services should ensure that each patient is correctly identified with a minimum of two identifiers – such as name and date of birth upon admission, transfer and prior to carrying out a treatment, procedure or care. Transfers of care between community healthcare organisations, ambulance and hospitals are considered a particular point of risk (2,8). A root cause analysis of patient misidentifications in the Veterans Health Administration in 2022 found that the most common characteristic (39%) was ‘two identifiers not used’ (6).

Solutions described in the literature and most published policies are about processes in hospitals or transfers of care, relying upon staff education, wristbands, scanning barcodes, and health information systems (4). The UK report does state that the designs of current software and identification processes may be disadvantaging patients with a disability or of certain cultural backgrounds due to limited consideration of their needs (2). Sometimes the systems themselves can create identification issues (3). The HSIB suggests that services should seek to understand the risks from a safety management systems approach, and processes should be designed with equality impact assessments and considering the needs of specific patient groups that are at high risk of being misidentified (2,8).

The addition of patient photos to electronic health record or order entry (CPOE) systems has been suggested but not mandated by the US Office of the National Coordinator and The Joint Commission (9,10). While this can reduce wrong patient orders and near misses, there hasn't been a lot published on the real-world impact and it doesn't appear to completely eliminate the misidentification issue (11-13). In everyday situations, people report frequent misidentifications even of unknown persons as a known or very familiar person (14). Studies have shown that humans are error-prone in matching faces from photos and that there are biases in matching faces with respect to gender and ethnicity (15).

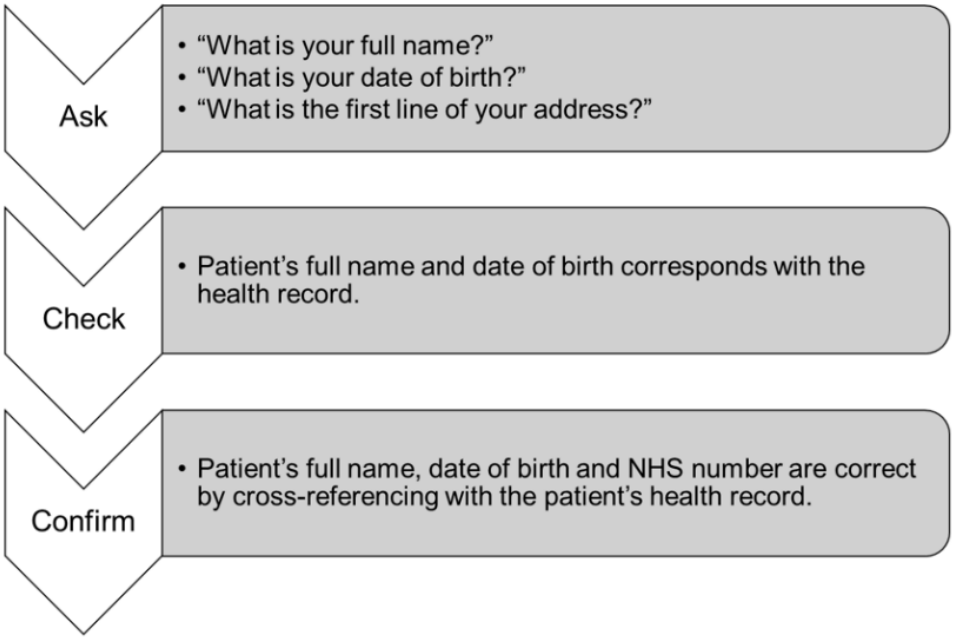
> "Although matching two faces may seem like a straightforward task, a wealth of psychological research has shown that, even from high-quality images, it can be difficult and error-prone (***Bruce et al., 1999***, ***2001***; ***Henderson et al., 2001***; ***Megreya & Burton, 2006***, ***2008***). In a study where participants were tasked with matching high-quality images with passport or driving license photos, there were on average 20–25% errors, illustrating the flaws in this type of identification procedure (***Kramer et al., 2019***). Furthermore, studies have also found that matching live people to photographic identification can also be error-prone (***Bindemann & Sanford, 2011***; ***Kemp et al., 1997***; ***Megreya & Burton, 2008***). (from 15)

Newer methods are being tested. These include AI facial recognition which has its own bias issues (16); and biometrics such as fingerprint, palm, iris, ear, which may have ethical, data sovereignty and legal implications (17-19).

The UK review states that patients are at higher risk of misidentification in certain situations and settings, including handovers between services or organisations (2). There has been considerable research on high pressure settings and staff workload in relation to errors in hospital (20).

However, in general, most methods rely on patients identifying themselves through a verbal communication process (figure 1), and investigations have found an increased likelihood of misidentification where patients are unable to identify themselves or be part of the identification process, such as with cognitive impairment or communication difficulties (2).

Figure 1 Example process for patient identification where a patient does not have a wristband (taken from (2))



Non-communicative Patients/Residents

A robust policy on identification of non-verbal people is important and generally reinforces that each individual is unique so identification processes must reflect their specific circumstances and needs, as well as prioritising respect and dignity, and confidentiality. Methods include assessment by medical professionals to determine the underlying reasons for non-verbal communication and provide a basis for determining tailored methods. Assistive technology may help, such as communications devices and applications. Collaboration with caregivers and family members plays a vital role in both identification and the individual's preferences in communication methods. Staff training and raising awareness are also likely to be important.

WHO guidance (6) and others reinforce the requirement for an institutional policy on the identification of non-verbal patients but do not state exactly what this should be. Most are focused on the ED environment of a patient being comatose or confused temporarily, having some kind of identification on their person, or being accompanied by someone who knows them.

> "For those individuals who are non-communicative or are confused, each organization determines what process will be used to safely identify these individuals. Such expectations must be clearly communicated to staff, and should be based on promotion of individual safety, not convenience or workflow." The Joint Commission (21)

Policies for children generally rely on a caregiver or parent (Figure 2).

Figure 2: Strategies to consider when caring for patients who do not communicate verbally (from (22)).

Do	Don't		Example Phrase
Acknowledge the patient first, regardless of whether you think they will be able to communicate verbally back **Say hello and introduce yourself and** give them a compliment, if appropriate, or acknowledge they aren't feeling well	**Immediately start taking a history** from the family **without directly acknowledging their child** as your patient		*Walking into room, looking at patient, and talking directly to them:* "Hi, you must be Charlie. I'm Dr Jones, and I'm going to be one of the doctors taking care of you while you're here. I'm sorry you feel sick. I'm going to chat with your mom to see how I can help you feel better."
Seek to understand **how the patient communicates** with the family	Assume that because a patient does not communicate verbally, they have **no way of communicating** Ask "**does she talk**?"		"Help me understand how Charlie communicates with you. How does she let you know she needs something?"
Listen to families because, they are the experts in their child's communication Ask the family how their child's **behavior is different from baseline**	**Assume your previous experience** with patients who are nonverbal translates to this patient Assume grunts, extremity movements, or decreased energy are **normal for this child**		"How has Charlie been showing you she feels uncomfortable? What's different about how she is acting today than her usual?"
Consider **touching the arm, hand, or foot to connect with the patient,** asking the patient and family if it is ok first	Have the **only physical connection be via the examination**		*To the family:* "How does Charlie respond to touch? Charlie, can I shake your hand to introduce myself?"
Inform the patient about the various steps of the physical examination or the **plan for their care,** through words and actions.	**Talk only to the family** about the examination or plan or **not talk at all during the examination**		"I'm going to use my stethoscope (showing the child) to take a listen to your heart and then listen while you take some breaths."
Use **person-first language** (child who is hearing impaired; child who is nonverbal).	Use **diagnosis-first language** (deaf child; nonverbal patient)		*Presenting patient and/or dictating note:* "Charlie is a 5-year-old little girl who is nonverbal and communicates to her family with simple signs."

Cognitive Biases in Clinical Decision-Making Contexts

Forensic and psychological science has long known about and described cognitive biases and their impact on identifying people and on critical incidents (23-26). There have also been studies on cognitive biases in clinical decision-making in emergency clinicians (27), in conditions of uncertainty or urgency (28), and for mental health patients (29).

In respect to this context, relevant cognitive biases particularly include things like confirmation bias (tendency to process information by favouring, or interpreting, information that supports one's existing beliefs), conformity and group think (tendency for groups to prioritise concurrence and suppress individual perspectives), availability heuristic (tendency to base decisions on easily accessible information), anchoring bias (tendency to fixate on specific information such that other information is ignored, discounted or evaluated in light of the anchored information) and fundamental attribution error (tendency to attribute an outcome to an individual's traits rather than their circumstances).

ECRI and the Institute for Safe Medication Practices include in their 2025 Top 10 Patient Safety Concerns the risk of dismissing patient, family and caregiver concerns which includes diagnostic errors due to cognitive error (30). The examples they give include premature closure (disinclination to consider alternative diagnoses once a probable one is found), diagnostic overshadowing (misattribution of symptoms to an existing diagnosis or a personal factor such as disability, substance abuse or obesity) and confirmation bias (tendency to interpret new information as confirming a preconceived diagnosis).

Even people themselves can sometimes confirm incorrect information they are given (ie. 'Are you x?' 'Yes'), where an open question (e.g.'What is your name?') would better elicit the correct answer. Two such potential patient misidentification cases are described here **Check the Wristband | PSNet** and **https://www.hdc.org.nz/media/aljfyi5f/19hdc00915.pdf** .

In the context of high anxiety or pressured situations – due to organisational systems, workload, time pressure, teamwork, and case complexity - individual human factors can be even more important (20).

> 'Clinicians are not always fully in control of the consultation process nor, therefore, of the quality of the consultation; thus, decision making and clinical outcomes can be compromised. For example, in high-pressure settings, such as EDs, ICUs, operating theatres or delivery rooms, external factors often play a significant role in decision making. Complex case decisions made in uncertain and dynamic circumstances could also be affected by doctors' personal factors, short consultation times and decisions needing to be made and acted on quickly, as well as the pressure of other patients waiting to be seen. Collecting accurate data, selecting and quickly analysing clinical evidence and the decisions that support the diagnosis can be influenced by high pressure conditions.' (20)

These human factors can be particularly difficult to address. Some of the many ECRI recommendations are to: highlight the impact with staff and ensure appropriate time to process information, consider the potential for differential diagnoses and consult with colleagues/conduct additional testing to confirm an initial diagnosis, consider the role of cognitive biases during event analyses to enhance understanding of how they contribute to patient safety events and how they can be mitigated (30). Education for new health professionals around cognitive biases and self-reflection, including dual process thinking in decision making (system 1: fast, automatic thinking and system 2: slow, deliberate thinking) has been suggested (28) (and is often included in emergency medicine training), although there are complexities here that would need to be further explored in depth (with experts) before any recommendations are made (31).

References

1. Evidence search: The importance of patient identification. Claire Field. 9th October, 2024. UK: University Hospitals Bristol & Weston Library & Knowledge Services.
2. UK Health Services Safety Investigations Body. 2024. National Learning Report: Positive Patient Identification. **National learning report: Positive patient identification**
3. NHS England. 2021. Digital Clinical Safety Strategy.
4. De Rezende H, Melleiro M, Marques P, Barker T. Interventions to reduce patient identification errors in the hospital setting: A systematic review. Open Nursing Journal 2021;15(1): 109-121.
5. Kulju S, Morrish W, King L, Bender J, Gunnar W. **Patient Misidentification Events in the Veterans Health Administration: A Comprehensive Review in the Context of High-Reliability Health Care.** Journal of Patient Safety 2022;18(1): E290-E296.
6. World Health Organisation 2007. Patient Safety Solutions. World Health Organisation.
7. Suclupe S, Kitchin J, Sivalingam R; McCulloch P. Evaluating Patient Identification Practices During Intrahospital Transfers: A Human Factors Approach. Journal of Patient Safety 2023; 19(2):117-127
8. Assistant Secretary for Technology Policy, U.S. Dept of Health and Human Services. SAFER Safety Assurance Factors for EHR Resilience. 2024. Accessed 29/03/2025 at: **https://www.healthit.gov/sites/default/files/topiclanding/2025-01/6.%20Patient%20Identification%20Final.pdf**
9. The Joint Commission, Division of Healthcare Improvement. Quick Safety: People, processes, health IT and accurate patient identification. 2018. Issue 45. Accessed 29/03/2025 at: **https://www.jointcommission.org/-/media/tjc/newsletters/quick-safety-45-hit-and-patient-id-9-25-18-final.pdf**
10. Aseem S, Ratrout B, Litin S, Ganesh R, Croghan I, Salerno M, Majka A, Chutka D, Hurt R, Abu Lebdeh H, Vincent A, Nanda S. **A Process of Acceptance of Patient Photographs in Electronic Medical Records to Confirm Patient Identification.** Mayo Clinic Proceedings: Innovations, Quality and Outcomes 2020;4(1): 99-104.
11. Hyman D, Laire M, Redmond D, Kaplan D. The use of patient pictures and verification screens to reduce computerized provider order entry errors. Pediatrics 2012; 130: e211-19
12. Blanchfield B, et al. 56 Adding Patient Photos to the Electronic Health Record to Improve Patient Identification and Reduce Wrong Patient Order Errors. Annals of Emergency Medicine, Volume 74, Issue 4, S22 - S23
13. Itoh Y, Miura H, Shimane D. A descriptive study on misidentifications of a person as a familiar person in an everyday situation. Scientific Reports. 2023 May 26;13(1):8530.
14. Havard, C. The Importance of Internal and External Features in Matching Own and Other Race Faces. Perception 2021; 50(10): 861-875.
15. Sadahide A, Itoh H, Moritou K, Kameyama H, Oda R, Tabuchi H, Kiuchi Y**. A Clinical Trial Evaluating the Efficacy of Deep Learning-Based Facial Recognition for Patient Identification in Diverse Hospital Settings.** Bioengineering 2024;11(4):

16. Etter L, Ragan E, Campion R, Martinez D, Gill C. **Ear biometrics for patient identification in global health: a field study to test the effectiveness of an image stabilization device in improving identification accuracy.** BMC Medical Informatics & Decision Making 2019;19(1): 114.
17. Cohen J. **Playing the match game: Biometrics, algorithms help boost hospitals' patient-matching rates**. Modern healthcare 2020;50(23): 16.
18. Riplinger L, Piera-Jiménez J, Dooling JP. Patient Identification Techniques - Approaches, Implications, and Findings. Med Inform 2020;29(1):81-86
19. Zavala A, Day G, Plummer D. Decision-making under pressure: medical errors in uncertain and dynamic environments. Aust Health Review 2018; 42: 395-402
20. The Joint Commission Standards: National Patient Safety Goals. Two Patient Identifiers – Understanding the Requirements. Accessed 29/03/2025 at **https://www.jointcommission.org/standards/standard-faqs/home-care/national-patient-safety-goals-npsg/000001545/**
21. Schnaith A, Schifsky J, Schifsky T, Pitt. Communication strategies for patients who are nonverbal. Peds 2021; 148(3): e2021051867
22. Murata A, Nakamura T, Karworwski W. Influence of cognitive biases in distorting decision making and leading to critical unfavourable incidents. Safety 2015; 1: 44-58.
23. Rogers, Jordan E. et al. How to Mitigate the Effects of Cognitive Biases During Patient Safety Incident Investigations. Joint Commission Journal on Quality and Patient Safety, Volume 48, Issue 11, 612 – 616
24. Kassin S, Dror I, Kukucka J. The forensic confirmation bias: Problems, perspectives, and proposed solutions. Journal of Applied Research in Memory and Cognition 2013; 2 (1): 42-52
25. Heyer C Semmler C. Forensic confirmation bias: The case of facial image comparison. J Appl Res Memory & Cognition 2013; 2 (1): 68-70
26. Jala S, Fry M, Elliott R. Cognitive biases during clinical decision-making and its influence on patient outcomes in the emergency department: A scoping review. J Clin Nursing 2023; 7076-85
27. Thompson J, Bujalka H, McKeever S, Lipscomb A, Moore S, Hill N, Kinney S, Cham KM, Martin J, Bowers P, Gerdtz M. Educational strategies in the health professions to mitigate cognitive and implicit bias impact on decision making: a scoping review. BMC medical education. 2023 Jun 20;23(1):455.
28. Crapanzano KA, Deweese S, Pham D, Le T, Hammarlund R. The role of bias in clinical decision-making of people with serious mental illness and medical co-morbidities: a scoping review. The journal of behavioral health services & research. 2023 Apr;50(2):236-62.
29. ECRI. Special Report: Top 10 Patient Safety Concerns 2025. Accessed 29/03/2025 at **https://assets.ecri.org/PDF/Top10PatientSafetyConcerns_2025_final.pdf**
30. Pelaccia T, Sherbino J, Wyer P, Norman G. Diagnostic reasoning and cognitive error in emergency medicine: Implications for teaching and learning. Academic Emergency Medicine. 2024 Oct 21.

Also reviewed:

World Health Organisation. Global Patient Safety Report 2024. Accessed 29/03/2025 at: **Global patient safety report 2024**

American Health Information Management Association. AHIMA Policy Statement on Patient Identification. Accessed 29/03/2025 at: **patient-id-policy-statement-final.pdf**

NHS Worcestershire Acute Hospitals. Policy to identify all patients. 2024. And other NHS Trust similar policies available online.

Appendix 4: Biographies of Reviewers

Dr Martin Thomas, Director of Safety and Quality/Clinical Director

Dr Martin Thomas is the Director of Safety and Quality/Clinical Director at Te Tāhū Hauora Health Quality & Safety Commission. Martin's portfolio covers system safety, improved service delivery, trauma, infection prevention and control and mental health and addictions programmes. Martin has been with Te Tāhū Hauora since 2021.

Trained as an anaesthetist in the UK, he moved to Lakes District Health Board to take up a specialist role in 2002. Prior to joining Te Tāhū Hauora he held various clinical leadership roles during his time at Lakes and was chief medical officer for eight years. In 2019 Martin was seconded to Ministry of Health to develop a credentialling framework for female pelvic floor reconstructive surgery.

Martin is a strong advocate for clinical leadership with a particular focus on the systems that underpin effective clinical governance. He has an MBA from the University of Waikato and is currently studying to become an Associate Fellow of the College of Medical Administrators.

Dr Rawiri McKree Jansen (Ngāti Raukawa), Chief Medical Officer

Dr Rawiri McKree Jansen was a resource teacher of Māori language before completing his medical training at Middlemore Hospital in South Auckland in 2000. It was Dr Jansen's second attempt at medical school, having interrupted his studies to be an activist and protestor (Māori land, Māori language, Nuclear Free Independent Pacific and 1981 Springbok Tour).

Dr Jansen has provided clinical teaching, Te Reo and Tikanga Māori programmes for Māori health professionals throughout the country for several years. He has been Chairman of Te Ataarangi Trust (a national Māori language organisation), and Chairperson of Te Ohu Rata o Aotearoa (Māori Medical Practitioners Association). He joined Te Aka Whai Ora from the National Hauora Coalition, where he was Clinical Director for a network of over 50 GP practices, serving over 220,000 patients across five District Health Boards.

Rawiri is Chief Clinical Officer for the Tuwharetoa IMPB (Iwi Māori Partnership Board), co-lead for the National Diabetes Network Mahitahi Matehuka and continues to work as a General Practitioner at Tend clinics in Auckland.

Robert (Bob) Henderson MNZM, MSc, CMIoD

Bob Henderson has a MSC (1st class honours) from the University of Auckland in Psychology (human factors). He is a Chartered Member of the Institute of Directors in NZ and a Fellow of the Royal Aeronautical Society. He has experience as a Civil Aviation

Authority flight examiner and was Human Factors programme manager for Air New Zealand, responsible for training 1000 pilots and 2500 flight attendants

Bob is experienced in the application and delivery of human factors training and knowledge across health care and aviation organisations, including the application of just culture principles.

Bob was an external expert reviewer on preventable maternity death at Auckland City Hospital. He served two terms on the board of Health Quality and Safety Commission which included the successful introduction of the Safe Surgical Checklist into New Zealand hospitals. He has also served on the board of Aspeq, an online exam provider for safely critical organisations including aviation and midwives

Dr Craig Immelman, Consultant Psychiatrist

Dr Craig Immelman is a registered medical practitioner with the New Zealand Medical Council and holds a current Annual Practising Certificate, with specialist qualifications in the scope of psychiatry. The degree of MB.BCh was conferred to Dr Immelman by the University of Witwatersrand, Johannesburg in 1989.

Dr Immelman is a Fellow of the Royal Australian and New Zealand College of Psychiatrists (FRANZCP 2001) and has a Certificate of Child & Adolescent Psychiatry (2002). He has been practicing as a Child & Adolescent Psychiatrist since 2002.

Dr Immelman is a Fellow of the Faculty of Child & Adolescent Psychiatry, the Faculty of Forensic Psychiatry and a Fellow of the Psychiatry of Old Age (RANZCP). He is a Corresponding Member of the American Academy of Child & Adolescent Psychiatry, and a Member of the Australian & New Zealand Association of Psychiatry, Psychology and Law.

Dr Immelman also has the designation of both a Specialist Assessor and a Medical Consultant for the purposes of the Intellectual Disability (Compulsory Care and Rehabilitation) Act 2003. He is an Honorary Senior Clinical Lecturer in the Department of Psychological Medicine at the University of Auckland, previously having established and run a Master's level paper on Youth Forensic Mental Health.

Dr Immelman has a private practice in Auckland.

Dr Matira Taikato, Consultant Psychiatrist, Director of Mental Health and Addiction Services, Lakes District

Iwi: Te Arawa and Ngaiterangi

Dr R Matira Taikato holds an MB ChB. Otago, MRCPych (UK), FRANZCP and is a consultant psychiatrist currently employed as Clinical Director Mental Health & Addictions-Lakes, Health New Zealand | Te Whatu Ora.

Dr Taikato has 35 plus years in psychiatry, specialising in general adult psychiatry with experience in forensic psychiatry, youth & addictions. She worked in Scotland 1997-2005, Tauranga 2005-2007 and Queensland 2007-2023 (first 10 years in the public sector and last six years in private practice).

Dr Taikato has undertaken some administrative work but predominantly clinical. She currently has active participation in hapū and iwi projects and activities for the rohe of Te Arawa. Dr Taikato is also an active member of Te Kaunihera (the Māori advisory committee for RANZCP).

Glossary of Terms

Term	Description
CAHT	Crisis Assessment and Home Treatment Service
CCO	Chief Clinical Officer
ED	Emergency Department
HRBC	Henry Rongomau Bennett Centre is a mental health facility located the Waikato Hospital Campus, Hamilton
IMI	Intra-muscular injection
NAS	Non audible stimuli
RN	Registered Nurse
WHO	World Health Organisation

Te Kāwanatanga o Aotearoa
New Zealand Government

Health New Zealand
Te Whatu Ora