



ANZHFR

Australian & New Zealand Hip Fracture Registry

Glossary of Terms

This glossary aims to provide simple, clear definitions for key terms associated with hip fracture care and the Australian and New Zealand Hip Fracture Registry (known as the ANZHFR or the Registry).

We hope that it will be a helpful resource whether the world of hip fracture care is new to you, or you already have personal or professional experience in the field.

[Click here to go directly to the Glossary](#)

How to Use the Glossary

- At the top of the first page, there is an index of the letters A-Z
- To search for a particular word, simply click on the first letter of the word in this alphabet index to jump directly to the correct section.
- When you have finished reading about that term, you can easily navigate back to the index by clicking the **"Back to top"** link that is printed in **red** at the end of each section.
- At the end of the document, you'll find brief descriptions of organisations associated with Registry. If you would like further information about an organisation, simply click on their title to be taken directly to the organisation website.

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If you feel that a definition is inadequate or there is a term missing that you think should be included, we would really like to hear about it so we can make this tool as comprehensive and useful as possible.

Click [HERE](#) to complete survey

Glossary

[A](#) [B](#) [C](#) [D](#) [E](#) [F](#) [G](#) [H](#) [I](#) [J](#) [K](#) [L](#) [M](#) [N](#) [O](#) [P](#) [Q](#) [R](#) [S](#) [T](#) [U](#) [V](#) [W](#) [X](#) [Y](#) [Z](#)

Organisations associated with the Registry

A

allied health (professionals): experts who use proven methods to prevent, diagnose, and treat health issues. They work together in teams to provide tailored care that fits each person. Physiotherapists, occupational therapists, pharmacists and dietitians are examples of some of the allied health professionals involved in hip fracture care.

anaemia: a condition where there aren't enough red blood cells (haemoglobin) to carry oxygen around the body. Anaemia may occur after surgery due to blood loss or the body healing. Older people may already have anaemia before breaking their hip, which can make their recovery slower. Anaemia can cause tiredness, weakness, and shortness of breath, making it more difficult to get moving again after surgery.

anaesthesia: comes from a Greek word meaning "without sensation." The term can be applied to some, or all the drugs used to produce anaesthesia and is also used to describe the whole process.

There are different ways to give anaesthesia. All use special drugs that block nerve signals to reduce feeling or pain. The type of anaesthesia used will depend on the nature and duration of the procedure, the patient's overall medical condition, and the preferences of the patient, anaesthetist, and surgeon performing the procedure. All involve the use of drugs to alter sensation. Sometimes the different methods are used together.

General anaesthesia

The patient is unconscious for the duration of the operation. The anaesthetic is given by injecting drugs through a cannula placed in a vein. During the operation, the anaesthetist continues to give intravenous drugs or by giving the patient a mixture of gases which they breathe. While the patient remains unaware of what is happening, the anaesthetist monitors their condition closely and constantly adjusts the level of anaesthesia.

Regional anaesthesia, or a "nerve block"

Local anaesthetic is injected around nerves to block pain signals from the area of surgery. Patients might feel touch, pressure, or vibration even with a nerve block. For hip fracture treatment, the block is usually applied in the groin area.

Spinal anaesthesia

A type of nerve block where the anaesthetic drug is injected into the fluid surrounding the spinal cord inside the tough covering called the "dura". In an epidural, the drug is placed just outside the dura, but still in the spinal canal. The site most often chosen is about 4–5 centimetres below your waist and right in the middle.

Read more about anaesthesia [HERE](#) (Australian Society of Anaesthetists)

anaesthetist: A specialist anaesthetist is a fully qualified medical doctor who, after obtaining their medical degree, has spent at least two years working in the hospital system before completing a further five years of training in anaesthesia." (Australian and New Zealand College of Anaesthetists, ANZCA). Anaesthetists give anaesthetics.

annual report: a document produced every year by the ANZHFR that shows how well hospitals are meeting the national recommendations for hip fracture care. It includes a summary of the information collected for the last calendar year. It highlights areas where care is getting better, and where improvements in care can be made.

Click [HERE](#) to view a short video summarising the ANZHFR 2024 Annual Report

anticoagulation: using specific medicines to help stop blood clots from forming. These are sometimes called "blood-thinners." They reduce the risk of problems like strokes or heart attacks. Common ones include *warfarin*, *rivaroxaban*, and *aspirin*. Doctors carefully monitor these medicines to ensure they work well and don't cause too much bleeding.

ASA grade: as part of the pre-anaesthetic assessment, the anaesthetist assigns the patient a classification developed by the American Society of Anaesthesiologists (ASA). This classification rates the patient's physical condition at the time of assessment, with higher scores indicating poorer health. The ASA helps the anaesthetist predict the patient's risks during surgery.

Australian and New Zealand Hip Fracture Registry (ANZHFR): a clinical quality registry that works to improve the care of older people who break their hip. For short, it is often referred to as the "Registry".

Australian Charter of Healthcare Rights: explains the main rights patients have when they receive healthcare services. The second edition came out in August 2019.

Click [HERE](#) to view a summary of the Charter

[Back to top](#)

B

best practice: using the best available evidence to diagnose and treat problems or provide health care to help patients get the best results.

best practice guidelines: recommendations based on the best available evidence. Guidelines help health care providers decide on the best care for patients in different situations. These guidelines make sure healthcare decisions are based on strong evidence and aim to make patients better.

bisphosphonates: medications that treat weak bones (osteoporosis) and lower the risk of broken bones/fractures. Bisphosphonates slow down bone loss, making bones stronger. They may be taken in tablet form (weekly or monthly) or may be prescribed as a yearly injection. The drug names include Alendronate, Risedronate, Zoledronate but you may more commonly hear them called by their brand names such as Fosamax, Actonel EC and Aclasta.

bone protection medication: medications which slow down or block the action of bone-removing cells (called osteoclasts) while allowing bone-forming cells (called osteoblasts) to keep working. This process helps improve bone strength over time Bone protection medications are typically prescribed as a treatment for weak bones (osteoporosis).

Click [HERE](#) for further information about osteoporosis treatment (Source: Healthy Bones Australia)

[Back to top](#)

C

calcium: a mineral that helps make bones hard and sturdy. Most of the body's calcium is stored in the bones. Without enough calcium from your diet, the body will take it from the bones, which can weaken them and increase the risk of osteoporosis.

Click [HERE](#) for further information about calcium and bone health (Source: Healthy Bones Australia)

carer: gives personal care and support to someone with a disability, medical condition, mental illness, frailty, or old age.. People who are paid, volunteer, or do training-related caregiving aren't considered carers in this context.

clinical care standards: national standards set by the Australian Commission on Safety and Quality in Health Care, agreed upon by health ministers. They describe the expected healthcare for specific conditions.

Click [HERE](#) to see the Hip Fracture Clinical Care Standard

clinical practice: the assessment, diagnosis, treatment, and care given to a patient.

clinical quality registry (CQR): an organisation, such as the Registry, which collects information about the health care and outcomes (results) for a particular condition or disease. Their main aim is to make health care better.

co-chair: a person who shares leadership of a committee, meeting, or organisation with someone else. Together, they oversee the group, make decisions and represent the group publicly. The Registry has one co-chair who is an orthopaedic surgeon and one co-chair who is a geriatrician. This reflects the ideal, shared approach to high-quality hip fracture care.

co-design: Co-design means working *with* people instead of *for* them. In health research, it involves including consumers in the planning, doing and reviewing of research projects. The main goal is to have input from those with direct lived experience.

Good co-design follows four principles:

- Share power among researchers, consumers, and the community.
- Build trust and strong connections.
- Use methods that make people active partners.
- Support mutual teaching and learning.

cognitive assessment: a test that measures how well someone thinks, including memory, attention, reasoning, and language skills. Health staff use these tests to identify thinking problems, track changes in cognitive (thinking) abilities over time, and plan appropriate help or treatment.

comprehensive care: health care that offers all the services and support a person needs to stay healthy. This includes medical treatments, emotional support and addressing all aspects of a person's health needs.

computerised tomography (CT): a scan that uses X-rays and computer technology to take detailed pictures of the inside of the body, including bones, muscles, organs, and blood vessels. It gives more detailed images than regular X-rays by capturing multiple views of the same area as the X-ray beam moves around the body. The term CAT, which stands for "computed axial tomography," was used first, but CT scan is now more common. Both terms refer to the same procedure.

consultant surgeon: a highly skilled doctor who specialises in surgery. They have completed many years of training to perform operations and take responsibility for a patient's care before, during, and after surgery. They also guide junior doctors and work with other healthcare professionals to ensure the best care for patients.

consumer: a person who has used or might use healthcare services, or who takes care of someone using healthcare services.

consumer dashboard: a tool on the ANZHFR website that highlights the main results from the annual report. A person can also enter their own details—like gender, age, and walking ability—and see outcomes (results) for a person like them. This helps patients understand how their care and recovery compares to others with similar characteristics.

Click [HERE](#) to see the Consumer Dashboard

consumer representative: someone who takes on a role within an organisation to give advice on behalf of other consumers. In the case of health consumers, the aim is to improve health care.

co-production: a way of doing research where people with real experience work as co-researchers in making decisions and helping with every part of the research process, including sharing the study results. This method is meant to be fair and aims to give a voice to those affected by the issue, rather than just traditional researchers.

The co-production cycle has four steps:

1. *Co-planning:* Connect experienced people with researchers.

2. *Co-designing*: Define problems and plan the study together.
3. *Co-conducting*: Work together on the research.
4. *Co-reflecting*: Discuss results and plan next steps.

[Back to top](#)

D

data: the information the Registry gathers about the care and recovery of older people with hip fractures in Australia and New Zealand.

data access: access to information collected by the Registry to help answer a research question. Data access is governed by strict protocols to protect the privacy of individuals.

data dictionary: describes in detail each data item that is collected in a database, including its name, description, type of data, possible values and how it is formatted. Its main purpose is to ensure that data is collected and used consistently across an organisation.

data linkage: data comes from different places, like hospitals, pathology labs, and national databases. Data linkage connects records from different sources. It is commonly used in healthcare to create a more comprehensive dataset that can be used to get a clearer and more detailed picture of a health condition.. Patient privacy is protected by removing personal information so that individuals can't be identified.

data management committee: oversees access to the Registry data and advises the Steering Group on matters related to the collection and use of data. In Registry communications, it may be abbreviated to DMC.

data quality: refers to how accurate, reliable, and useful information is. Good data is correct, up-to-date, and fits the purpose it's being used for. If data is poor quality, it might have mistakes, be incomplete, or be misleading.

Data quality depends on -

- reliability (how dependable it is)
- accuracy (how correct it is)
- completeness (how full it is)

- relevance (how useful it is)

High-quality data means the information is likely to be trustworthy.

Delphi study: a way to gather the collective opinion of experts on a specific issue. It is often used in healthcare to help reach a consensus on how to handle a particular clinical problem. Experts share their views and provide feedback in multiple rounds, which helps refine ideas and reach agreement. This method is useful for creating guidelines on standard practices for care.

delirium: a common medical problem that causes changes in mental function. It can occur after a hip fracture, especially in older adults or those with memory issues. It's different from dementia but can be more likely if someone has dementia. Delirium is usually temporary and reversible.

Causes may include pain, anaesthesia, new medications, constipation, dehydration, infection, and withdrawal from usual medications or other substances.

Symptoms may include trouble focusing, confusion, disorientation, hallucinations, and difficulty speaking.

dementia: a loss of memory, language, problem-solving and other thinking abilities *that are severe enough to interfere with daily life.*

demographics: facts and figures about a group of people or community. This includes things like age, gender, ethnicity, income, education, marital status, and job. It helps to group and study people based on certain characteristics. Demographic data is used in health to see how people in different populations act and change over time.

denosumab: medication that treats weak bones (osteoporosis) and lowers the risk of broken bones/fractures. It can slow bone loss and improve bone density. Given as a six-monthly injection. Its brand name is Prolia.

Click [HERE](#) for further information about osteoporosis treatment (Source: Healthy Bones Australia)

dietitian: a health professional who helps with various health conditions by providing expert advice on nutrition and diet. Dietitians have recognised university qualifications and follow best practices. Dietitians look at each person's medical history, needs, goals, and lifestyle to give tailored nutrition advice and find the best approach for each individual.

discharge plan: a personalised care plan made with input from the person and their family, detailing care goals and needs such as wound care, pain relief, fracture prevention, new medications, and rehab needs. The plan is given to the person upon discharge and, with patient permission, is shared with their regular doctor and other care providers.

DOACs: *Direct oral anticoagulants (DOACs)* are medications used in adults to:

- Prevent strokes in people with a type of irregular heartbeat called nonvalvular atrial fibrillation (AF).
- Treat and prevent blood clots in veins, known as venous thromboembolism (VTE).
- Prevent serious heart problems in people with atherosclerotic disease, where arteries are narrowed by fatty deposits.

[Back to top](#)

E

echocardiography: a test that uses sound waves to create images of a person's heart. A small, hand-held device is placed on their chest, sending out sound waves to capture how the heart moves, including its valves and chambers. This helps doctors check how well the heart is working. May be referred to as an “echo” for short.

emergency department (ED): the place in a hospital where people go for urgent medical care, such as injuries or sudden illnesses. In the ED a nurse will assess how serious the condition is and prioritise patients based on the urgency of their needs. This is called *triage*. It will be decided whether a patient needs tests, treatments, or even surgery. The goal is to make sure patients get the right care as soon as possible, and to help them move to another part of the hospital for further treatment if needed.

epidemiologist: a scientist who collects and/or analyses data about how diseases or health events occur in different groups of people. Epidemiologists look for patterns in the data that might reveal factors or conditions related to the health issue, such as what factors contribute to a prolonged hospital length of stay after hip fracture. This helps create research questions for further study. The goal is to find ways to prevent or reduce the impact of health problems, leading to better patient outcomes.

episode of care: time spent in a part of the health care system that has a defined start and end, such as the time that a patient spends in the intensive care unit – the episode begins when

they are admitted and ends when they leave the ICU go to the general ward. One hip fracture may have multiple episodes of care as the patient moves through the hospital system. All the episodes together form a “period of care”.

EQ-5D: a tool that measures a person’s health and how they feel about their quality of life. It asks questions about five key areas: how well they can move, take care of themselves, do everyday activities, their experience of pain, as well as how they feel emotionally. It helps health care professionals understand how someone is feeling and how they are doing in daily life. The EQ-5D can track health changes over time and is commonly used in research and healthcare to see how treatments are working.

Click [HERE](#) to see the EQ-5D

ethics: ethics in health care guides health care workers to make responsible decisions based on patient beliefs, rights, and ethical principles. It ensures honest, compassionate care that prioritises patient safety, respect, and trust in the health care system.

ethics in research are a set of moral principles for researchers to follow. They ensure that the work is conducted responsibly, honestly and with respect for participants. Ethical practices help protect participants from risk or harm.

[Back to top](#)

F

falls assessment: the healthcare team asks about past falls, medications, and home safety while also testing strength, balance, and walking ability. A falls assessment helps identify factors that may increase the risk of falling again, so that they can be addressed or minimised.. Working collaboratively with the patient and family, the team develops personalised strategies to reduce the risk of another fracture.

femur: also known as the thigh bone, this is the biggest bone in the human body. It goes from the hip to the knee, holding up a person’s weight and allowing them to move. It has a long shaft with a head that fits into the hip joint and rounded ends that connect to the knee joint. A broken hip is a break to the top part of the femur.

follow-up 120-day: patients or carers are contacted at 120 days after their hip fracture surgery. This happens via a telephone call from staff from the hospital where the person had their hip operation. The purpose of the follow-up is to monitor the longer-term outcomes after hip

fracture. It helps to ensure that the consumer voice is heard. During the follow-up, patients, or their carers, are asked -

- Have they had any further surgery?
- Are they taking medication for bone protection?
- How well can they move around?
- Where are they living?
- How do they feel about their quality of life?

fracture: when a bone breaks due to an injury, which can be anything from a small crack in a bone through to the bone breaking into pieces. Causes include falls, accidents, sports injuries, and weak bones (osteoporosis).

fracture liaison service: an organised health service activity with dedicated personnel. This service aims to prevent further fractures in people who have had a sentinel (i.e. first) fragility fracture.

fracture risk: the likelihood that a person will break a bone. Risk is based on several things like a person's age, health, and lifestyle.

fractured neck of femur: may also be referred to as a broken hip, femoral neck fracture or hip fracture. It occurs when the top part of the thigh bone breaks near the hip joint. It is more common in older adults who fall and/or have weak bones (see: osteoporosis). Symptoms include strong pain in the hip or groin, trouble moving the leg, and difficulty standing on the hurt side. Treatment often involves having an operation to fix the break using screws, nails, or a hip replacement. After surgery, exercises and walking can help people to get their strength back and move better.

Read more about fractured neck of femur [HERE](#)

fragility fracture: a fracture that occurs in the context of a slip, trip or fall, often due to weak bones (osteoporosis)

frailty: a state of being more vulnerable because the body's systems have lost some of their reserves. A frail person has a harder time recovering from illnesses or injuries, whether it is something small like an infection or something more serious like a broken hip.

[Back to top](#)

G

geriatrician: a doctor that specialises in the medical care of older people

Golden Hip award: the Golden Hip award was started by the Scottish Hip Fracture Audit to encourage and reward improved health care for people with hip fractures. Each year, hospitals in Australia and New Zealand that show the best performance and most improvement are honoured for their efforts meeting the [Hip Fracture Care Clinical Care Standard](#).

governance: how decisions are made, and actions are taken in an organization or system. It involves setting rules, guiding behaviour, and making sure things run smoothly and fairly. Governance is about who makes the decisions, how they are made, and how they are carried out.

guidelines: are carefully developed clinical care instructions to help health care providers and patients decide on the best healthcare for certain situations. A clinical care standard and a clinical practice guideline serve different purposes:

Clinical Care Standard: Identifies key areas needing improvement in care.

Clinical Practice Guideline: Gives detailed instructions for managing specific conditions.

Care standards focus on where improvements are needed, while guidelines provide detailed treatment instructions.

[Back to top](#)

H

healthcare identifiers: in Australia, the Healthcare Identifiers (HI) Service assigns unique numbers to healthcare providers, organisations, and patients. These numbers help to prevent mistakes in healthcare information and communication.

healthcare service: an organisation that manages the clinical rules, handles the finances, and supervises how healthcare units operate.

healthcare record: a document that includes all the essential information about a patient's medical history, treatment details, notes from doctors and nurses, test results, pictures,

prescriptions, and charts showing which medications were given during their treatment. It keeps track of everything that happened during a person's hospital stay.

health literacy:

individual health literacy involves a person's skills, knowledge, motivation, and ability to find, understand, and use health information to make decisions about their health.

the *health literacy environment* is about how easy or hard it is for people to get, understand, and use health information and services. It includes things such as forms, brochures, and other documents given to patients as well as how health workers interact with patients and families.

haematologist: doctors who specialise in treating blood-related conditions, such as anaemia, leukaemia, lymphoma, and bleeding or clotting disorders. They may also provide advice on surgery for patients with any of these conditions or patients who are taking blood-thinning medication. They also manage blood transfusions.

Hipcast: an ANZHFR podcast series to help improve hip fracture care. Experts share advice on caring for people with a hip fracture, covering key topics related to high- quality hip fracture care.

Click [HERE](#) to see a list of HipCast episodes

Hip Fest: the annual Registry conference that brings together people with an interest in hip fracture care. This includes health care professionals, members of organisations related to hip fracture and bone health, and consumers. At HipFest, attendees hear the latest updates in hip fracture care and have the opportunity for hospitals to share the work they are doing to improve care. These conferences are held in Australia and New Zealand.

Click [HERE](#) to view recordings of previous HipFest presentations

hip fracture: see “fractured neck of femur”

human research ethics committee (HREC): HRECs review research proposals that involve humans to ensure they meet ethical standards and guidelines, like doing good, avoiding harm, respecting patient wishes, and fairness in treatments. Their guidance ensures patient care

follows ethical standards, legal requirements, and community expectations. The Registry has approval from HRECs in each State and Territory.

[Back to top](#)

I

informed consent: a talk between patients and healthcare providers about treatments, care steps, or what might happen. This helps patients choose if they want a certain treatment or to help them make decisions in planned care. Informed consent is about making sure patients know about all the choices they have, and what might happen, such as how well a treatment might work and any possible side effects.

[Back to top](#)

J

K

key performance indicator (KPI): a way to measure how well a hospital, clinic, or healthcare provider is performing. KPIs help track progress, improve patient care, and make sure everything runs smoothly. KPIs should be clear, measurable, and useful so the information can be used for continuing improvement in care. Can also be called an indicator or quality indicator.

Examples of Healthcare KPIs:

1. *Patient Safety:*

- How often patients get infections in the hospital
- How many mistakes happen with medications

2. *Quality of Care:*

- How many patients need to return to the hospital within 30 days
- How long patients stay in the hospital on average

3. *Efficiency:*

- How many hospital beds are in use
- How long patients wait in the emergency room

4. *Patient Experience:*

- How happy patients are with their care
- How quickly complaints are resolved

5. *Financial Performance:*

- How much it costs to treat each patient
- How well the hospital manages its budget

[Back to top](#)

L

length of stay: sometimes abbreviated as LOS. Length of stay is the number of days a patient spends in the hospital from admission to discharge. It is a useful measure in managing and planning health care by indicating illness severity, treatment effectiveness, and hospital efficiency.

local anaesthetic: a type of medicine that numbs a specific part of your body to stop you from feeling pain during a medical procedure. It only affects the area where it's applied, so you stay awake and aware while the area is numb. Examples include the numbing shots dentists use or the cream used for small skin procedures.

[Back to top](#)

M

magnetic resonance imaging (MRI): a medical test that takes detailed pictures of nearly every part of the body, including organs, bones, muscles, and blood vessels. MRI uses a large magnet and radio waves to create these images. Unlike X-rays, MRI does not use radiation.

malnutrition assessment: a trained healthcare professional performs a clinical assessment to diagnose protein-energy malnutrition (undernutrition). They use a “tool” (such as survey) that has been tested and proven to work for diagnosing this condition.

mobilisation: moving or helping someone move after surgery. Includes activities like sitting up, standing, and walking with help or with a walking aid. Mobilisation helps with blood flow,

strengthens muscles, and helps a person recover movement and function. After a hip fracture, the aim is to get up the first day after surgery and at least take a few steps.

Read more about mobilising following hip fracture surgery [HERE](#)

mortality: refers to the number of deaths in a certain group of people or area over a specific period. The Registry measures mortality at 30 days and 120 days post hip fracture. According to Australian data from the Australian Institute of Health and Welfare (AIHW) for 2023, 26% of people over 45 who had their first hip fracture died within a year.

multidisciplinary collaboration: when healthcare providers from different professions share information about a person's health and treatment to give the person the most efficient and effective possible care.

multidisciplinary team: different health professionals who are responsible for different parts of the patient's care. These health professionals work together to give the patient the best chance of a good recovery.

These may include -

- emergency department staff
- anaesthetists
- nurses
- physiotherapists
- dietitians
- occupational therapists
- pharmacists
- pain specialist
- social worker
- rehabilitation special

My Health Record: an online record of a person's health information, kept secure by the people who run the national My Health Record system in Australia (the Australian Digital Health Agency). Doctors and other healthcare providers can add important medical documents to this record, like details about a person's past treatments, health conditions they have been diagnosed with, the medicines they take, and any allergies they have.

Click [HERE](#) to read more about the Australian Digital Health Agency

My Hip, My Voice: the body of work the Registry is doing to strengthen relationships with consumers. The project aims to learn from consumer experiences to make care better. Another important focus is making sure that the Registry information and resources about hip fracture care meet the needs of older people and their families /carers.

Click [HERE](#) to view the My Hip, My Voice resources

[Back to top](#)

N

national trend: how things change over time across an entire country. It can show how many hip fractures happen over time, and what care and treatments are being used. This information helps health care teams see what aspects of care are improving overall and where there is more work to be done.

neck of femur (NOF): “NOF” is a common medical abbreviation, used especially in orthopaedics and geriatrics. The *femur* is the long bone of the upper leg, and its *neck* is the narrow section between the ball (hip joint) and the *shaft*. A break here is commonly called a *fractured NOF* for short. This makes it clear where in the thigh bone the fracture has occurred.

nerve block: an injection of local anaesthetic into the groin to reduce pain by blocking the pain signals from the broken hip travelling to the brain. The nerve block can be given in the emergency department and will provide relief for several hours. Sometimes a catheter will be inserted into the groin to allow the doctors to give the patients repeated nerve blocks.

Click [HERE](#) to read more about managing pain after hip fracture

N.I.C.E. (National Institute for Health and Care Excellence): an independent organisation set up in 1999 to improve healthcare in the UK and ensure everyone gets the same quality of care. It provides guidance for health professionals, reviews new health technologies, and sets standards for health and social care services. NICE also offers information to health managers and advice to international organisations and governments. Some Australian guidelines are based on those of NICE.

non-operative management: means treating a hip fracture (or any condition where surgery is a treatment option) without surgery. This is often used for people who are too frail or have health issues that make surgery risky. However, surgery is usually preferred, even if the person is not expected to live long. This is because surgery will usually relieve the person's pain and thus will help ensure that a person's final days are as comfortable and dignified as possible. Sometimes, the fracture is stable enough to heal without surgery.

[Back to top](#)

O

opioid: a type of drug that helps to relieve pain by affecting the brain and nervous system. They are strong painkillers, but they can also be addictive and cause side effects like drowsiness or confusion. Common examples include medications like morphine, oxycodone, and codeine.

opt-out: within hospitals that participate in the Registry, people with a hip fracture are included in the Registry by default, unless they *opt out*. Opt-out means people are provided with information to explain what information is being collected and how to request not to have their personal information included in the Registry

orthogeriatric model of care: a shared-care arrangement for hip fracture patients between the specialties of orthopaedic surgery and geriatric medicine. This model of care, where both specialists work alongside a broader team to care for the patient, enhances recovery after a hip fracture.

orthopaedic surgeon: a doctor that specialises in the care of injuries to bones, muscles and joints. An orthopaedic surgeon does the operation to fix the broken hip.

osteoporosis: is a condition where bones become weaker and less dense, and more likely to break. While osteoporosis can affect any bone, it often impacts specific areas, like the hip, wrist, and spine. Osteoporosis commonly affects older adults, especially women after menopause, but it can happen to anyone. Things like lack of calcium, vitamin D, or physical activity, as well as certain medications or health conditions, can increase the risk.

outcome: a result is called an “outcome” if a specific action or situation causes a change in the condition of a person, group, or population.

[Back to top](#)

P

palliative: for elderly patients with hip fractures who have significant health concerns or are nearing the end of life, a *palliative* approach focuses on managing pain and discomfort rather than restoring mobility and function. This care prioritises the patient's needs over their prognosis, providing symptom relief and offering emotional and practical support to both the patient and their family. Palliative care does not exclude surgery; hip fracture surgery is often still performed to alleviate pain from the fracture.

paracetamol: a common pain reliever often used to help manage pain in people with hip fractures. When taken regularly, it can reduce the need for stronger pain medications such as opioids. This can help to lower the risk of side effects like confusion, that can sometimes occur when taking those stronger drugs.

participating site: hospitals which contribute data / information to the Registry about the people they treated for a hip fracture.

Click [HERE](#) to view the participating sites in Australia and New Zealand

patient identifiers: information used to identify a patient, like their full name, date of birth, gender, address, healthcare record number, and Individual Healthcare Identifier.

patient-level audit: is the term for the collection of data/information about the hospital care of individuals with a hip fracture.

patient-reported experience measures (PREMs): Patient-Reported Experience Measures are surveys where patients share their thoughts about the care they received. Survey responses always anonymous. The answers to the survey are used by hospitals to make improvements to care.

person-centred care: also known as patient-centred or consumer-centred care. Involves healthcare providers and patients working together. The priorities of person-centred care are:

- respecting patients' wants and needs
- offering emotional support
- ensuring physical comfort
- sharing information clearly
- keeping care consistent
- involving family
- making care easy to access

physiotherapist: registered health professional with training and experience in understanding the human body and movement. Physiotherapists help people to manage injury, illness and chronic diseases through prescribing appropriate exercises and through health education. Physiotherapists help people get moving again after hip fracture surgery through exercises, walking practice and prescribing walking aids.

policy: an agreed upon set of rules that help make decisions and actions consistent in an organisation. It allows members of the organisation to know what should be done and how things should be handled.

pre-operative: refers to the time period or activities that happen *before* a surgery, including the actions taken to *prepare* a patient for surgery. This includes adjusting medications, scheduling necessary tests and exams, and providing both physical and psychological preparation.

post-operative: refers to the period and care that happens *after* a surgery. It's the time following the operation when a person begins their recovery.

pressure injury: damage to the skin and tissue caused by staying in one position too long. After hip surgery, limited movement increases the risk, especially on areas like the heels, hips, or lower back. Hospitals prevent this by changing positions, using special mattresses, and keeping the skin clean and dry.

primary health care: where people generally go first for health services. Broadly speaking, it involves health care that does not involve going to a hospital. For example, a General Practitioner (GP) is a primary health care provider.

Primary care keeps people healthy, helps stop illnesses before they start, helps with short and long-term health problem and supports people at the end of their lives.

[Back to top](#)

Q

quality improvement (QI): involves looking at how things are done, finding ways to do them better and making sure they improve over time.

[Back to top](#)

R

rehabilitation: the process of helping people recover from illness or injury. It involves diagnosing, assessing, and treating individuals with disabilities to improve their performance and quality of life. Rehabilitation health professionals include doctors, nurses, and allied health workers. As a multidisciplinary team, these professionals work together with patients to help them achieve their best possible recovery.

research sub-committee: a smaller sub-group of people from the Registry Steering Group uses data from the Registry to consider and answer research questions that may lead to better hip fracture care.

Click [HERE](#) to see some of the past and current research studies using the data collected by the Registry

residential aged care facility (RACF): in Australia and New Zealand an RACF is a place of long-term care for older people who can no longer live in their own home and need assistance with daily living. It includes accommodation and personal care 24 hours a day, as well as access to nursing and general health care services. Residential aged care

may be subsidised by the Australian or New Zealand government or may be paid for privately.

reversal agent: drugs that can quickly reverse the effects of blood thinners if a patient needs emergency surgery or is experiencing severe, life-threatening bleeding.

[Back to top](#)

S

sarcopenia: a condition that comes with age, where a person loses muscle mass, strength, and function. Losing muscle strength from sarcopenia can make the body weaker overall. This increases the risk of falling, which can lead to fractures and other injuries. It can also make it harder to do everyday activities.

Symptoms can include:

- Smaller muscles
- Muscle weakness
- Less stamina
- Poor balance
- Difficulty climbing stairs

Sip 'til Send: a relatively new approach used to shorten the time patients have to fast before surgery. It allows patients to drink approved clear liquids, up to 200 millilitres, every hour until it's time for their surgery. This approach has been shown to help reduce:

- Time spent without fluids
- Complications after surgery
- Nausea and vomiting
- Thirst
- Dehydration
- Patient experience

sprint audit: additional questions or variables are temporarily added to the routine Registry data collection for a limited time, usually 1-2 months. Sprint Audits allow the Registry to take a deeper look of one aspect of care e.g. pain management, by asking hospitals and patients some extra questions about that aspect. All additional questions must be approved by the Human Research Ethics Committee.

Click [HERE](#) to read some previous Sprint Audit results

stakeholder: an individual or group with a key interest in a particular outcome, project, or organisation. Stakeholders might include government agencies, non-government organisations, health organisations, industry or research funders, as well as consumers, community members, clinicians and researchers. Collectively, consumers and community members may be referred to as ‘the public’.

standard: set of agreed-upon qualities and steps to make sure that a product, service, or method works well and keeps working well over time.

steering group: a committee/ group of people that oversees the way the Registry operates. It includes experts in the field, and representatives from organisations that are involved in the care of older people after a broken hip. It also includes consumer representatives. The group make sure the Registry is achieving its purpose and looks for opportunities for the Registry to develop.

surgery: is an operation. Operating on a person after a hip fracture aims to relieve pain and help them move again as soon as possible. The type of surgery depends on the fracture, its severity, the person’s age, health, and activity level. Early surgery helps prevent complications and speeds up recovery. The Hip Fracture Clinical Care Standard recommends surgery should occur within 36 hours of the person breaking their hip.

The type of surgery might include:

- Replacing all or part of the hip
- Fixing the fracture with a plate and screws
- Using screws only
- Using a rod inside the thigh bone

Read more about surgery for hip fracture [HERE](#)

systematic review: carefully examines all the research that meets certain criteria to answer a specific question. Researchers follow a clear, structured process to gather and assess the evidence, making sure to minimise bias. This helps ensure that the findings are reliable and can be used to make informed decisions.

[Click HERE to view a 3 minute video if you would like to know more about systematic reviews](#)

[Back to top](#)

T

telehealth: using technology like computers and phones to provide healthcare and send health information.

time to surgery: refers to the time that elapses between when a patient first arrives at the initial hospital with a broken hip to when they undergo surgery to repair it. This timeframe includes any transfers to another hospital for the operation, if that is required. The Hip Fracture Clinical Care Standard recommends that surgery take place within 36 hours of the patient's initial hospital presentation. Having surgery within this timeframe can reduce complications, help patients recover better, and shorten hospital stays.

transitions of care: when a patient's care is moved between different healthcare places, providers, or levels of care because the patient's condition or needs are changing.

[**Back to top**](#)

U

unwarranted clinical variation: differences in healthcare practices, treatments, or outcomes that cannot be explained by factors like patient preferences, medical conditions, or evidence-based guidelines *Unnecessary* differences can show ways we need to change so we can make sure the best care is available for all patients, no matter where they are treated.

urinary tract infection (UTI): an infection that affects parts of the urinary system, which includes the kidneys, bladder, ureters, and urethra. It may occur after hip fracture surgery, particularly if the person is less mobile, or has a catheter. Symptoms include pain when passing urine, frequent urge to urinate, or feeling unwell. UTIs are treatable with antibiotics.

[**Back to top**](#)

V

validation: making sure that a method, tool, or study measures what it's supposed to. It helps researchers to have better confidence that their results are accurate, reliable, and

useful. Tools and other measures can be “validated” by comparing with known standards, getting expert opinions, or testing it multiple times.

variation: difference in healthcare processes or outcomes, compared to peers or to a standard of care, such as an evidence-based recommendation

venous thromboembolism (VTE): “the name given to blood clots that may form in people during illness, injury, or after surgery.” (ACSQHC)

There are two different kinds of blood clots:

- *Deep vein thrombosis (DVT):* occurs when blood clots form in veins, usually deep inside the legs or in the pelvis, where they may cause symptoms like pain, tenderness, redness, or swelling of the leg.
- *Pulmonary embolism (PE):* occurs when a blood clot breaks off and moves through the veins to block blood vessels in the lungs. This may cause symptoms like shortness of breath, coughing up blood, chest pain, faintness, and loss of consciousness. If the clot blocks enough blood vessels in the lungs, the person can die.

Vitamin D: helps the body absorb calcium from food, which is important for strong bones. It also supports bone growth and helps keep calcium levels in the blood properly balanced.

[**Back to top**](#)

W

weightbearing: refers to the weight placed on an injured body part. There are several different abbreviations which describe the varying amounts of weight that are permitted on the injured/operated limb.

- **WBAT:** “Weight-bearing as tolerated” meaning one may place as much weight through the leg as tolerated, to their comfort
- **FWB:** “Full weight-bearing” meaning there are no restrictions to weight-bearing

- **NWB:** “Non-Weight Bearing” meaning one should not put any weight on the affected limbs
- **TWB:** “Touch weight-bearing” meaning the ability to touch the foot or toes to the floor without the affected limb providing support
- **PWB:** “Partial weight-bearing” a broad term ranging from anything more than non-weight bearing to less than full weight-bearing

[Back to top](#)

X

Y

Z

Organisations associated with the Registry

Australian and New Zealand Bone and Mineral Society (ANZBMS): professional medical / scientific society that brings together clinical and experimental scientists and physicians actively involved in the study of bone and mineral metabolism in Australia and New Zealand.

Australian Commission on Safety and Quality in Health Care (“the Commission”): an organization that leads efforts to improve the safety and quality of healthcare across the country. The Commission focuses on ensuring that people are safe when they receive care and that they get the healthcare they need.

Australian Frailty Network (AFN): brings together experts, healthcare workers, policymakers, and the community to prevent frailty and slow its effects. By creating knowledge, applying research, and supporting training, it aims to improve the lives of older Australians, families, and caregivers. The goal is to deliver a national plan to tackle frailty and help Australians age well.

Australian Institute of Health and Welfare (AIHW): the AIHW is an independent government organization established by the Australian Institute of Health and Welfare Act 1987. The AIHW collects health and welfare data and turns it into reliable evidence. This helps government agencies, researchers, policymakers, and the community make better decisions about policies and services.

Australian Institute of Health Innovation: a research-intensive institute located at Macquarie University, Sydney, the Institute conducts world-class research to catalyse performance improvement in healthcare services and systems in Australia and internationally.

Australian Orthopaedic Association (AOA): peak professional organisation for orthopaedic surgery in Australia.

Australian Physiotherapy Association (APA): peak body representing the interests of Australian physiotherapists and their patients.

Australian and New Zealand College of Anaesthetists (ANZCA): specialist medical college responsible for training, assessing, and setting standards for all specialist anaesthetists and specialist pain medicine physicians wishing to practice in Australia and New Zealand.

Australasian College of Emergency Medicine (ACEM): not-for-profit organisation responsible for training emergency physicians and advancement of professional standards in emergency medicine in Australia and Aotearoa New Zealand.

Australasian Faculty of Rehabilitation Medicine (AFRM): a Faculty of the Royal Australasian College of Physicians (RACP), provides training and continuing education for Rehabilitation Medicine Fellows and trainees throughout all stages of their career.

Australian and New Zealand Orthopaedic Nurses Alliance, (ANZONA): a professional alliance of nurses who aim to promote orthopaedic nursing, through high quality education and working with key industry partners

Dietitians Australia: peak industry body for dietetic and nutrition professionals, representing over 8000 members in Australia and overseas.

Healthy Bones Australia: formerly known as Osteoporosis Australia, is a national non-for-profit organisation and the leading consumer body to reduce broken bones and improve bone health across Australia.

National Hip Fracture Database (NHFD): a national project in the UK that tracks the quality of hip fracture care. It was established in 2007 to improve the care and cost-effectiveness of hip fracture treatment. The NHFD allows hospitals to compare their performance against national standards and aims to improve treatment, falls prevention, and bone health management, leading to better patient outcomes and fewer fractures. The NHFD is the UK counterpart of, and was an inspiration for the ANZHFR.

New Zealand Orthopaedic Association (NZOA): the professional body for Orthopaedic Surgeons in New Zealand

Osteoporosis New Zealand: national organisation in New Zealand specifically committed to improving the lives of people living with osteoporosis and preventing the fractures it causes.

Royal Australasian College of Physicians (RACP): a not-for-profit professional organisation responsible for training and educating physicians and paediatricians across Australia and New Zealand.

Royal Australasian College of Surgeons (RACS): non-profit organisation training surgeons and maintaining surgical standards in Australia and Aotearoa New Zealand.

[Back to top](#)