What is the Western Australian Audit of Surgical Mortality (WAASM)?

Every year thousands of people undergo surgery in Western Australian hospitals for a variety of different reasons. It would be impossible to review the care of every patient who was admitted into hospital, or even every patient that underwent a surgical procedure.

The Western Australia Audit of Surgical Mortality (WAASM) is a process of looking further into the circumstances of patients who died in hospital while under the care of a surgeon.

A very small number of patients admitted under the care of a surgeon die in hospital. Some patients die before undergoing surgery. The majority of patients who die are extremely aged, very ill or badly injured or a combination of all of these conditions. Through the WAASM project these cases are examined and reviewed by one or two other surgeons who were not involved in the care of the patient.

Lessons learned from looking at the care of this small group of very ill patients is used to improve care for all hospital patients. Participation in the WAASM by surgeons is voluntary. Currently nearly all WA surgeons who have had a patient die whilst under their care, participate in the WAASM process.

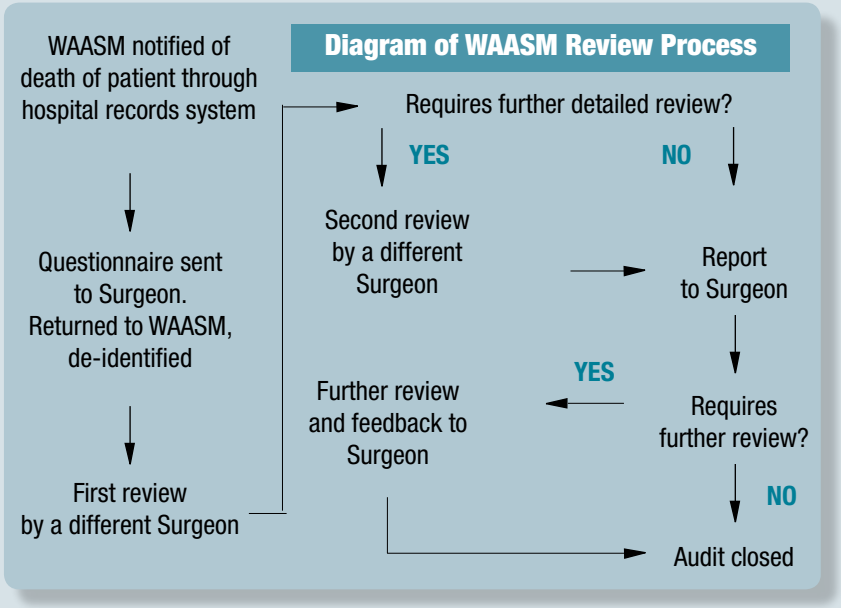
How is the information collected and assessed?

WAASM is located within the offices of the Royal Australasian College of Surgeons and run by a dedicated project team. The WAASM office is notified of all deaths that occur in Western Australian hospitals. Surgeons involved with a patient who dies are sent a WAASM questionnaire. The survey asks the surgeon to describe any possible deficiencies in the care that the patient received, and whether or not they consider these impacted on the welfare of the patient. Another surgeon then reviews the completed questionnaire. In approximately 15% of cases a further detailed review of the case is requested. A third surgeon then prepares a report on the case, indicating in his/her opinion, where care could have been improved and draws attention to lessons to be learned from the case.

All of this information is recorded on the WAASM database. Reports and other documents are prepared and sent out to surgeons and all WA hospitals. No identifying information on individual patients or surgeons is provided to the hospitals.

Through this process WAASM has demonstrated that the majority of patients who died while under the care of surgeons were managed entirely appropriately.

Diagram of WAASM Review Process



WESTERN AUSTRALIAN AUDIT OF SURGICAL MORTALITY

How is information used?

The main purpose of WAASM is to provide information back to the surgeons and the hospitals so that changes can be made to improve care.

Individual surgeons receive the reports from another surgeon who has assessed their case. They also receive summaries of other reviewed cases so lessons can be learned and risks of a similar incident occurring again are reduced.

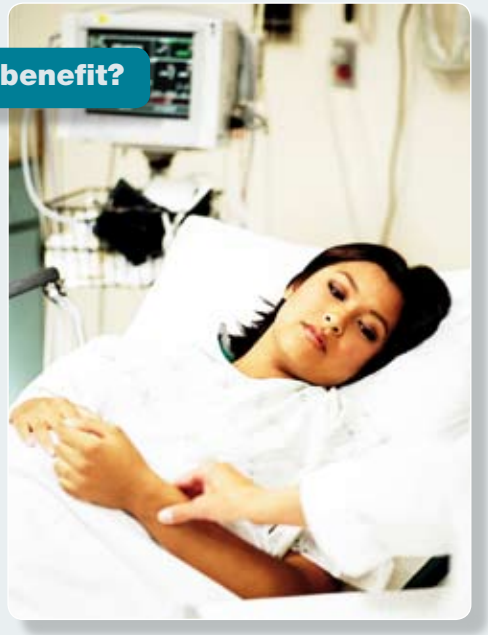
Hospitals receive summary reports on cases that were audited in their hospital.

WAASM prepares an annual report that summarises the main issues and outcomes of the audit. This report is sent to all surgeons and hospitals and is available on the Royal Australasian College of Surgeons' website.

www.surgeons.org/waasm

How does the patient benefit?

WAASM aims to identify areas where problems have occurred, through the routine review of patient care, and by giving feedback to surgeons and hospitals so the care of all patients will be improved.

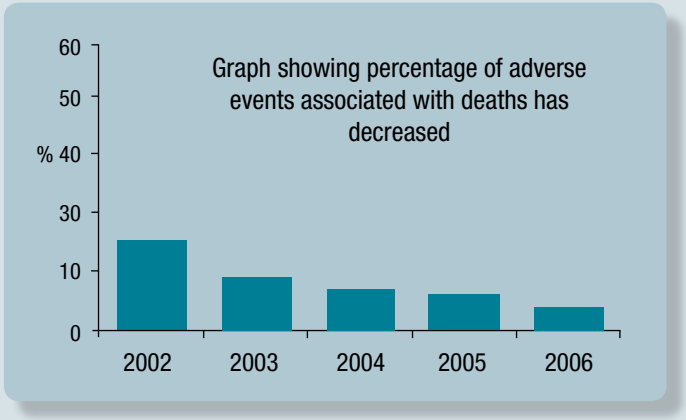


Adverse events

Health care is complex and medical procedures, especially surgery have risks. Adverse events are defined as an unintended injury caused by medical management rather than by a disease process. They are sufficiently serious to lead to prolonged hospitalisation or to temporary or permanent impairment or disability of the patient at the time of discharge, or which contributes to, or causes death.

This same definition of adverse events is used internationally by medical research and other clinical groups.

All hospitals have systems in place to monitor and reduce the number of adverse events. WAASM is one system that records the incidence of adverse events specifically in surgical patients who have died while in hospital. The proportion of reported adverse events has decreased in surgical patients since the start of the WAASM process.



WAASM also records less serious incidents. Through addressing these types of issues the overall quality of patient care can be improved. An example is delays in the patient receiving a procedure, due to either lack of facilities, or problems with staffing or communication. The reviewing surgeon can identify if there were different options available in the care process. The close involvement of experienced surgeons contributing in a detailed review process provides valuable insight and comment. Through the WAASM review process, this information is communicated back to surgeons and hospitals.

WESTERN AUSTRALIAN AUDIT OF SURGICAL MORTALITY

Improvements in care *DVT Prevention and Management*

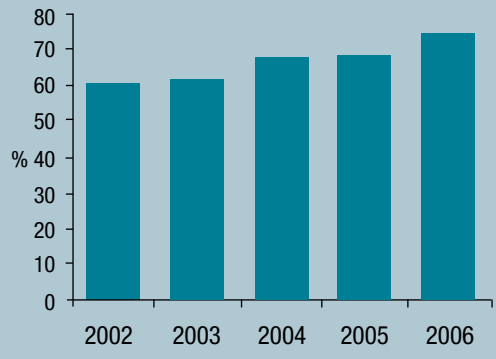
Deep Vein Thrombosis (DVT) occurs where blood clots form in the veins that are located deep within the body. A piece of the blood clot may break off and travel to the heart or lungs and cause a blockage. This is known as a pulmonary embolus. The clot may go to the patient's brain and cause a stroke. This can result in death.

Anticoagulants are drugs that help to prevent the formation of new blood clots as well as the growth of existing ones. These drugs are often given to patients in hospital before and after an operation in an effort to prevent DVT. WAASM data identified some at risk patients who were not routinely being given therapy or medication to prevent DVT.

In 2002 WAASM organised a meeting for surgeons to discuss the prevention of DVT. WAASM sent out reports, reviews and newsletters specifically targeting DVT prophylaxis. Over the years that WAASM has been in existence the use of DVT prophylaxis in the patients reviewed has increased.

Through the WAASM process, there is ongoing monitoring of the appropriate management of DVT prevention.

Graph showing percentage of reviewed patients who received DVT Prophylaxis increased from 2002 to 2006



Improvements in care
Fluid Balance Management

Another area where WAASM identified inconsistencies was in the management of fluid balance. The human body has control mechanisms which maintain a balance between fluid intake and fluid loss. When patients are very ill, this situation becomes more complicated and fluid may also be lost through vomiting, diarrhea, and bleeding. Fluid is often given intravenously through a drip to make up fluid loss. It is important to maintain a correct fluid balance in the body and ensure that correct amounts of fluids are given. This is especially important in critically ill or elderly patients.

WAASM has examined a selection of patients where surgeons have reported problems with fluid balance management. In a similar way to providing information about DVT prophylaxis management, information on fluid balance will be sent to surgeons and a discussion meeting will be held for all health professionals.

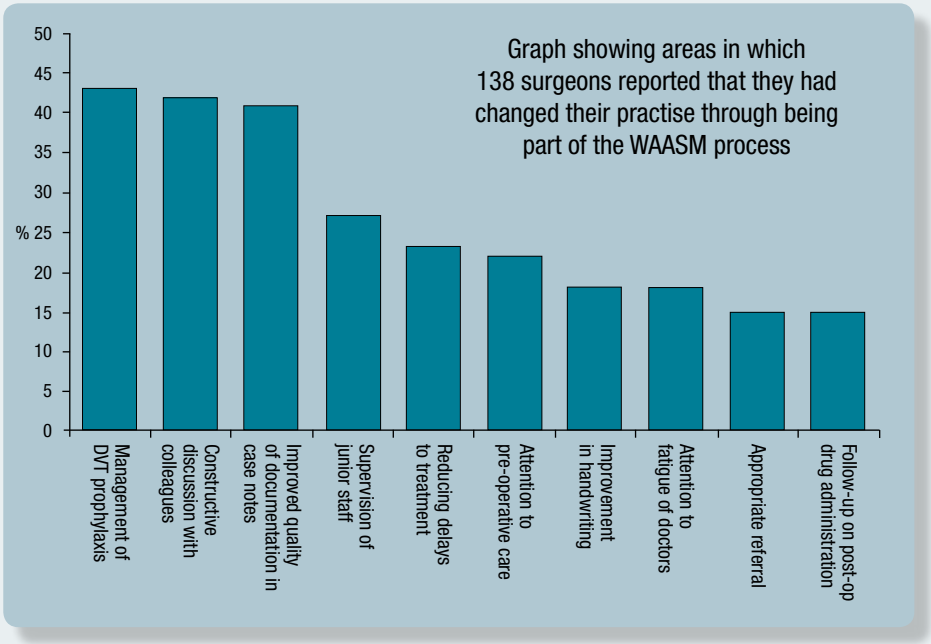
WESTERN AUSTRALIAN AUDIT OF SURGICAL MORTALITY

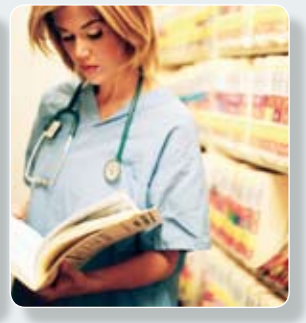
Changes in practise

In 2004 WAASM surveyed WA surgeons to find out:

- if the audit was useful to them
- if the audit had caused them to change their practise
- to find out ways to improve the audit.

138 of the 190 (73%) surgeons who replied said that they changed their practise in at least one way as a result of the WAASM process.





The WAASM process has shown that through education, feedback and the close involvement of surgeons, patient care has changed and improved. All hospital patients benefit from improvements made to clinical care.

WAASM is funded by the WA Department of Health and managed by the Royal Australasian College of Surgeons. The College has established a committee called the Australia and New Zealand Audit of Surgical Mortality (ANZASM). The ultimate goal is to have audits similar to WAASM successfully operating in all Australian States and in New Zealand.

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