

REASON: The Final Results

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The REASON study (**R**esearch into **E**lderly Patient **A**naesthesia and **S**urgery **O**utcome **N**umbers) is a major collaborative achievement for Australian and New Zealand anaesthetists. Initiated by the ANZCA Perioperative Medicine Committee and ANZCA Trials Group the REASON study aimed to determine the incidence of complications and mortality in older patients after surgery. At the end of the study we had data from 23 hospitals across Australia and New Zealand. Much of the cost of this study was absorbed by individual Departments of Anaesthesia. We studied 4,158 consecutive (non-cardiac) surgical patients aged 70+ years, staying at least one postoperative night; 68% had pre-existing comorbidity. The 30-day mortality was 5% and 20% had complications. On multivariate analysis, important patient factors associated with 30-day mortality included: age; worsening ASA physical status; and preoperative albumin <30 g/l. Non-scheduled surgery was associated with increased mortality. Important complications included: acute renal impairment, unplanned ICU admission, and systemic inflammation. Adjusted for preoperative factors, only thoracic surgery was associated with increased mortality. About 9.5% were admitted to ICU/HDU: 5% planned and 4.5% unplanned. Older surgical patients have high rates of comorbidity and postoperative complications, placing considerable demands on critical care services. Patient factors were often stronger predictors of mortality than the type of surgery. Strategies are needed to reduce complications and mortality in older surgical patients.

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