

SELECTED KEY POINTS

- Co-operation by participating hospitals was commendably high, with 98% of monthly returns being received (page 2).
- This is one of the first NCEPOD studies in which denominator data were collected (page 2).
- The overall mortality reported in this study is almost identical to that previously reported independently in surveys undertaken by the British Cardiovascular Intervention Society (BCIS) (page 3).
- There was very high consultant involvement in both the decision to undertake, and the performance of, PTCA procedures (pages 8 and 16).
- Operators were fully trained and considered to be suitably experienced to perform the procedure in almost all cases (page 16).
- The majority of cardiologists (95%) are complying with the BCIS recommendations on the number of procedures which should be performed each year (page 17).
- The majority of procedures in those patients who died were performed as an emergency in high risk patients with acute coronary syndromes (acute myocardial infarction or unstable angina) (pages 9-10).
- PTCA is very safe when performed as a planned procedure for patients with stable angina (page 9).
- A high proportion of patients had coexisting medical conditions (page 10).
- A high proportion of patients had moderate or severe left ventricular dysfunction and extensive coronary artery disease (pages 11-12).
- Intracoronary stents were inserted in approximately 50% of cases (page 15).
- Nearly half the patients were referred from another hospital (page 6).
- Some instances of delay in interhospital transfer were cited, but no patient was recorded as having deteriorated during the journey (page 6).
- Intra-aortic balloon pumps would appear to be under-used considering the fairly high proportion of patients reported to be in cardiogenic shock (pages 15 and 24).
- Very few patients underwent emergency or urgent CABG following PTCA (page 22).
- A designated recovery area was available in 81% of cases (page 23).
- There appears to be an under-use of glycoprotein IIb/IIIa receptor blockers in high risk PTCA (page 20).
- Ninety-four percent of catheter laboratory staff receive regular resuscitation training (page 18).
- The decision whether or not cardiopulmonary resuscitation (CPR) should be performed was made in a responsible way by experienced cardiologists (page 25).
- In 92% of cases the interventional centre held regular audit meetings (page 27).

RECOMMENDATIONS

- Interventional cardiology centres should have a sufficient number of appropriately experienced clinicians and other staff to run an emergency PTCA service (pages 16-18).
- It is essential that there is an efficient system for transferring patients from the district general hospital to the interventional centre; ambulance services should be able to respond rapidly to calls for urgent transfer of patients requiring PTCA in the setting of acute myocardial infarction (pages 6-7).
- There is a need for consistency in the definition of cardiogenic shock, in order to give an accurate prognosis and compare outcomes of treatment (page 13).
- All catheter laboratory staff should have regular resuscitation training (page 18).
- Intra-aortic balloon pumps should be available for appropriate patients; staff should be familiar with their use (pages 15 and 24).
- Catheter laboratories should have a designated person responsible for checking that all necessary equipment is both present and functional (page 18).
- All catheter laboratories should have appropriately equipped recovery areas (page 23).
- Monitoring with pulse oximetry should be available for all cases and performed whenever sedation or opiates are used or oxygen therapy is required; this should be performed by an appropriately trained nurse or technician (page 18-19).
- Glycoprotein IIb/IIIa receptor blockers should be used more widely for patients undergoing high risk PTCA. Heparin doses should be adjusted accordingly, and monitored using activated clotting time (ACT) or equivalent, in order to minimise the risk of bleeding (page 20).
- Clinicians should be informed of the date and time that postmortem examinations are being performed and should do their best to attend; a copy of the postmortem report should always be sent to the appropriate clinician (pages 26-27).
- Regular audit meetings should be held in all interventional cardiology centres (page 27).
- For the practice of angioplasty and the assessment of its risk to be improved, and for patient consent to be better informed, comprehensive systems for recording patient and procedural data need to be in place. Data should be regularly audited and submitted to allow comparison with national averages (page 13).
- Hospitals should provide access to case records for audit purposes (page 27).

