

Treat the Cause

A review of the quality of care provided to patients treated for acute pancreatitis

summary



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Principal recommendations

Definitive eradication of gallstones prevents the risk of a recurrent attack of acute pancreatitis. This usually involves cholecystectomy and ensuring that no stones remain in the bile duct. For those patients with an episode of mild acute pancreatitis, early definitive surgery should be undertaken, either during the index admission, as recommended by the International Association of Pancreatology (IAP), or on a planned list, within two weeks. For those patients with severe acute pancreatitis, cholecystectomy should be undertaken when clinically appropriate after resolution of pancreatitis. *(Clinical Directors and All Clinicians)*

Given the increasing complexity of the management of acute pancreatitis and its multidisciplinary nature, formal networks should be established so that every patient has access to specialist interventions, regardless of which hospital they present to and are initially managed in. Indications for when to refer a patient for discussion with a specialist tertiary centre and when a patient should be accepted for transfer, should be explicitly stated. Management in a specialist tertiary centre is necessary for patients with severe acute pancreatitis requiring radiological, endoscopic or surgical intervention. *(Medical Directors and Clinical Directors)*

For all early warning scores and as recommended by the Royal College of Physicians of London for NEWS - all acute hospitals should have local arrangements to ensure an agreed response to each trigger level including: the speed of response, a clear escalation policy to ensure that an appropriate response always occurs and is guaranteed 24/7; the seniority and clinical competencies of the responder; the appropriate settings for ongoing acute care; timely access to high dependency care, if required; and the frequency of subsequent clinical monitoring. *(Medical Directors and Clinical Directors)*

Antibiotic prophylaxis is not recommended in acute pancreatitis. All healthcare providers should ensure that antimicrobial policies are in place including prescription, review and the administration of antimicrobials as part of an antimicrobial stewardship process. These policies must be accessible, adhered to and frequently reviewed with training provided in their use. *(Medical Directors, Clinical Directors, Medical Microbiology Directors, Clinical Pharmacy Lead and All Clinicians)*

Please see page 12 for the full list of recommendations.

Introduction

Acute pancreatitis is caused by an acute inflammatory process affecting the pancreas gland. The main causes are gallstones and an excess of alcohol. Most hospitals in the United Kingdom serving a population of 300,000 – 400,000 people admit around 100 patients with this condition each year.¹ The condition can be mild and self-limiting but can also be a severe illness causing multiple organ failure.

Severity of acute pancreatitis is classified as:

- Mild acute pancreatitis - the most common form, has no organ failure, local or systemic complications and usually resolves in the first week.
- Moderately severe acute pancreatitis - defined by the presence of transient organ failure or local complications.
- Severe acute pancreatitis - defined by persistent organ failure beyond 48 hours. This often includes a prolonged hospital stay, admission to critical care and a 15-20% risk of death.² (see Appendix 2)

Optimal care of the patient with acute pancreatitis should include timely diagnosis and assessment of severity, imaging, fluid resuscitation to ensure adequate tissue perfusion and prevent later complications, nutritional support, analgesia, management of co-morbidities, appropriate antimicrobial therapy and an awareness of the possibility of deterioration of the patient during their admission. In addition, critical care outreach/admission, gallstone management, support services and interventions should all be available should they be required.

Patients should not be readmitted with acute pancreatitis due to the fact it was not treated appropriately when first diagnosed. It is essential that the management of the acute pancreatitis involves establishing the underlying cause and treating it appropriately and promptly. Subsequent treatment is mainly supportive, including ongoing analgesia, nutritional support and appropriate antimicrobial use. Referral to a specialist centre may be necessary for patients with severe acute pancreatitis in need of radiologic, endoscopic, or surgical intervention; this requires good co-ordination of care through the use of networks.³

There have been many practice guidelines for acute pancreatitis management published to date but with significant variation in their implementation.⁴⁻⁷ The 2012 guidelines produced by the International Association of Pancreatology and the American Pancreatic Association (IAP/APA) provide the most recent recommendations concerning key aspects of medical and surgical management of acute pancreatitis based on the currently available evidence.³ These guidelines serve as a reference standard for current management. A structured, ongoing effort to achieve optimal dissemination and implementation of guidelines that promote evidence based medicine remains a key challenge. Evidence suggests that audit and clinical review increases awareness of guidelines and improves implementation.⁸

The proposers of this study were motivated to suggest that a review of all aspects of the quality of care for patients with acute pancreatitis nationwide was needed. The management of acute pancreatitis crosses many medical specialties and the complexity of care means that there are several areas where they believed the care for patients with acute pancreatitis could be improved. This view was supported by the NCEPOD Steering Group and the commissioners of this work programme. It has been known for many years that treating gallstones early prevents recurrent acute pancreatitis and interventions in patients drinking alcohol in excess can help reduce their intake. Yet concerns remained within the professional groups that patients may still not be receiving optimal care.

The study presented in this report is a comprehensive assessment of current practice and will go some way to identify and address the issues in the care of patients with acute pancreatitis with the aim of improving practice and outcomes for future patients.

Method and Data Returns

Method

Study Advisory Group

To develop this study a Study Advisory Group (SAG) was convened. This multidisciplinary group comprised clinicians in: gastroenterology, critical care, radiology, pharmacy, surgery, specialist dietetics, specialist nursing and lay representation.

Study aim

To identify the remediable factors in the quality of care provided to patients treated for acute pancreatitis.

Objectives

The Study Advisory Group identified a number of areas of care to review that would address the primary aim of the study, these included:

- The presentation, diagnosis & admission of patients with acute pancreatitis, including use of early warning scores (EWS)
- The quality of initial management
- The criteria used to determine severity of acute pancreatitis
- Whether critical care input was being sought appropriately and, when sought, whether there was an adequate response
- Ongoing supportive management, including the adequacy of nutrition, analgesia and the appropriateness of antimicrobial usage
- Radiological imaging and intervention
- Treating the cause, including appropriateness of endoscopic retrograde cholangiopancreatography (ERCP), timeliness of gallstone treatment and referral to alcohol cessation services, when indicated
- The treatment of complications, including use of the step-up approach for pancreatic necrosis and timing of interventions
- Co-ordination of care for patients with acute pancreatitis. This included whether well-established networks of care and robust clinical guidelines for transfer to a tertiary centre were in place

- Whether all deaths were discussed in a morbidity and mortality meeting

Hospital participation

National Health Service hospitals in England, Wales and Northern Ireland were expected to participate as well as hospitals in the independent sector and public hospitals in the Isle of Man, Guernsey and Jersey.

Within each hospital, a named contact, referred to as the NCEPOD Local Reporter, acted as a link between NCEPOD and the hospital staff, facilitating case identification, dissemination of questionnaires and data collation.

Study population and case ascertainment

Patients aged 16 years or older who were coded for a primary diagnosis of acute pancreatitis and admitted to hospital between 1st January 2014 and 30th June 2014 inclusive were included. The inclusion ICD10 diagnosis codes used were:

- K85.0** Idiopathic acute pancreatitis
- K85.1** Biliary acute pancreatitis
- K85.2** Alcohol induced acute pancreatitis
- K85.3** Drug induced acute pancreatitis
- K85.8** Other acute pancreatitis
- K85.9** Acute pancreatitis, unspecified

There were no specific exclusions.

Critical care admission data were also requested and the following subpopulations of patients were selected (one or more of the criteria below):

- An inpatient stay of three or more nights
- Admission to critical care
- Death in hospital

A sample of this subpopulation was then randomly selected (up to 5 cases per hospital) for inclusion.

Questionnaires and case notes

Two questionnaires were used to collect data for this study; a clinician questionnaire for each case and an organisational questionnaire for each participating hospital.

Clinician questionnaire

This questionnaire was sent to the consultant responsible for the care of the patient at the time of their discharge. If that consultant was not the most suitable person to complete the questionnaire they were asked to identify a more appropriate individual. Information was requested on the patient's presenting features, co-morbid conditions, initial management, investigations/procedures carried out, treatment, complications and escalation in care.

Organisational questionnaire

An organisational questionnaire was sent to every hospital where patients may be treated for acute pancreatitis. The data requested in this questionnaire included information on the teams that patients with acute pancreatitis are admitted under, ERCP services, radiology services, surgical services, guideline use and standard operating procedures relevant to the management of acute pancreatitis patients. Completion of the organisational questionnaire was the responsibility of the Medical Director of the Trust/Board or a person, nominated by them, who would be able to complete the form accurately. Input from the clinical leads for sub-speciality services, including surgery, radiology/interventional radiology and endoscopy was strongly recommended. Where data were incomplete NCEPOD staff contacted individual Trusts/Boards to maximise the percentage of full data sets.

Case notes

Photocopied case note extracts from the final inpatient admission were requested for each case that was to be peer reviewed. These included:

- All inpatient annotations/medical notes for the patient's final admission
- Nursing notes
- Critical care notes
- Operation/procedure notes
- Anaesthetic charts

- Observation charts
- Haematology/biochemistry results
- Fluid balance charts
- Blood transfusion records
- Drug charts
- Radiology reports
- Nutrition/dietitian notes
- Consent forms
- Discharge letter/summary
- Autopsy report if applicable

Peer review of the case notes and data

A multidisciplinary group of case reviewers was recruited to peer review the case notes and associated clinician questionnaires. The group of case reviewers comprised consultants, associate specialists, trainees and clinical nurse specialists, from the following specialties: gastroenterology, anaesthesia, intensive care medicine, acute medicine and surgery. Questionnaires and case notes were anonymised by the non-clinical staff at NCEPOD. All patient identifiers were removed so neither the Clinical Co-ordinators at NCEPOD, nor the case reviewers, had access to patient identifiable information.

Following anonymisation, each case was reviewed by one case reviewer within a multidisciplinary group. At regular intervals throughout the meeting, the Chair allowed a period of discussion for each reviewer to summarise their cases and ask for opinions from other specialties or raise aspects of the case for discussion. Case reviewers completed a semi-structured assessment form for each case which provided both quantitative and qualitative responses to their opinion on the care that had been provided.

The grading system below was used by the case reviewers to grade the overall care each patient received:

- **Good practice:** A standard that you would accept from yourself, your trainees and your institution.
- **Room for improvement:** Aspects of **clinical** care that could have been better.
- **Room for improvement:** Aspects of **organisational** care that could have been better.
- **Room for improvement:** Aspects of both **clinical and organisational** care that could have been better.
- **Less than satisfactory:** Several aspects of clinical and/or organisational care that were well below that you would accept from yourself, your trainees and your institution.
- **Insufficient data:** Insufficient information submitted to NCEPOD to assess the quality of care.

Information governance

All data received and handled by NCEPOD complies with relevant national requirements, including the Data Protection Act (DPA) 1998 (Z5442652), the NHS Act 2006 (PIAG 4-08(b)/2003, App No 0077) and the NHS Code of Practice.

Data quality

On receipt of the case data each case was given a unique NCEPOD number. The data from all questionnaires received were electronically scanned into a preset database. Prior to any analysis taking place, the data were cleaned to ensure that there were no duplicate records and that erroneous data had not been entered during scanning. Any fields that contained data that could not be validated were removed.

Data analysis

Following cleaning of the quantitative data, descriptive data summaries were produced. The qualitative data collected from the case reviewers' opinions and free text answers in the clinician questionnaires were coded, where applicable, according to content to allow quantitative analysis. The data were reviewed by NCEPOD Clinical Co-ordinators, a Clinical Researcher and a Researcher to identify the nature and frequency of recurring themes.

Case studies have been used throughout this report to illustrate particular themes.

All data were analysed using Microsoft Access™ and Excel™ by the research staff at NCEPOD.

The findings of the report were reviewed by the Study Advisory Group, case reviewers and the NCEPOD Steering Group prior to publication.

Data returns

In total 8,925 patients from 215 hospitals were identified as meeting the study inclusion criteria (Figure 1.1). When the sampling criteria of five cases per hospital was applied 987 cases were selected for inclusion in the main data collection. A total of 712/987 (72%) completed clinician questionnaires and 697 sets of case notes were returned to NCEPOD. The case reviewers were able to assess 418 cases, the remainder of the returned case note extracts were either too incomplete to allow assessment or were returned after the final deadline and last case reviewer meeting.

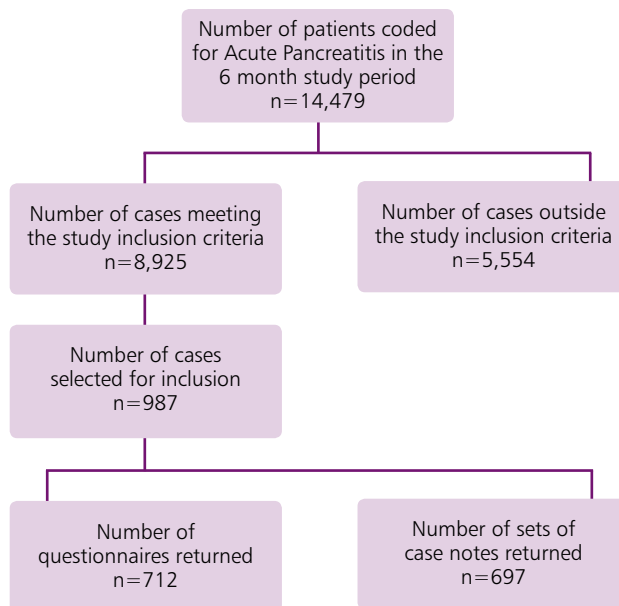


Figure 1.1 Data returns

Key Findings

Organisational data

- The commonest identified causes of acute pancreatitis were gallstones in 322/692 (46.5%) patients and alcohol excess in 152/692 (22.0%) patients
- In 121/692 (17.5%) patients no underlying cause of the acute pancreatitis had been identified. By contrast the commonest diagnosis code (ICD10) used was 'unspecified acute pancreatitis' which accounted for 52% of the total population in this study
- 20.6% (143/694) of patients included in this study had one or more previous episode of acute pancreatitis
- In 121/130 (93%) patients the cause of the previous admission was the same as the current admission
- The case reviewers considered that the patient's co-morbidities had contributed to the severity of the attack of acute pancreatitis and/or the outcome in 46.3% (106/229) of patients
- The clinicians involved in the care of patients at the hospital identified that co-morbidities were not well-controlled on admission in 44/427 (10.3%) patients.

Initial presentation, diagnosis and admission

- Patients with acute pancreatitis were largely managed by surgeons; with both general and specialist surgical teams involved
- In 94.8% (289/305) of cases assessed, the case reviewers stated that the assessment in the emergency department was sufficiently prompt for the patient's condition
- In 11.1% (55/494) of the patients admitted via the emergency department the clinicians involved in the care at the hospital had concerns about the management of care in the emergency department, the commonest concerns being delays in senior medical review; delayed ward admission; inadequate assessment and resuscitation
- In 22.5% (88/391) of cases appropriate initial investigations were not undertaken, in the case reviewers' opinion.

KEY FINDINGS

Initial management

- Although the initial assessment was deemed prompt in the majority of patients it did not include any form of early warning score in 154/502 (30.7%) of emergency department admissions for acute pancreatitis
- On admission to a ward, an early warning score was performed in 571/662 (86.3%) cases
- The type of early warning score used in the emergency department and the ward was not the same in 8% (22/285) cases
- 93% (356/383) of cases had evidence of ongoing use of an early warning score. This frequently led to an escalation of response (47.3%). While responses were almost always appropriate, they were not always timely
- Intravenous fluid management was considered inadequate in a similar percentage of cases (13.8% and 13.1%, respectively) by both the clinicians caring for the patient and the case reviewers
- Clinicians reported that 148/681 (22%) patients developed acute kidney injury, and in six cases this was considered preventable
- Where a first consultant review was identifiable (87.5% of cases), this was considered not to be timely by the case reviewers in 9.5% of cases.

Ongoing supportive management

- 90% (358/398) of patients were considered to have been seen by all the appropriate specialists for their condition. Where this was lacking (40 cases), gastroenterological input was considered to be the missing specialty in half of these cases
- 42% (74/414) of patients were admitted to a critical care unit, with only two cases identified where they believed the patient would have benefitted, but who did not receive it
- A pain score was measured in 71.5% (379/530) of patients on admission and patients waited a median of 1 hour before receiving their first analgesic
- In one fifth of cases, antimicrobial management was not considered appropriate by both the clinicians and the case reviewers; the commonest reason of inappropriate antibiotic prescription being that antibiotics were not indicated (60/72 patients)
- 147/168 (87.5%) of hospitals had a nutrition team in place
- A screening nutritional assessment was performed in only 67.4% (368/546) of cases
- Subsequent referral to a dietitian and nutrition team input occurred in 39% (201/521) and 25% (143/572) of cases, respectively
- Overall, nutritional assessment was deemed adequate by clinicians in only 77% (421/549) of cases
- Supplemental nutrition was considered and used in 240/555 (43.2%) patients. Of 226 patients who did not, case reviewers stated that they should have in a further 9% (12/131)
- Overall management of the patients' nutrition was considered adequate by the case reviewers in only 85% of cases and by the clinicians in 77%.

Imaging

- There were 482/691 (69.8%) patients who had an ultrasound scan during their admission. The ultrasound scan identified gallstones in 216/466 (46.4%) of these
- One-fifth (21%; 44/209) of patients who did not have an ultrasound had no reason identified to omit this simple non-invasive test
- Two-thirds of patients 416/692 (60.1%) had one or more CT scan during their admission
- The case reviewers considered that the timing of the CT scan(s) was appropriate in 90% (226/251) of patients
- The case reviewers considered that just 2.7% (10/367) of patients had too many scans and a similar number (3.8%; 14/367) had too few CTs for their clinical condition
- The case reviewers identified deficiencies in the use of imaging in 12.5% of cases. MRCP (22/48) and ultrasound (17/48) were the most commonly omitted investigations.

Treating the cause

- 56.2% (91/162) of hospitals reported that acute pancreatitis patients requiring a cholecystectomy would have their procedure done either during the index admission, or within two-weeks of discharge. Almost a quarter stated that it would be prioritised but not within two weeks, while 22% stated that it would not receive any prioritisation at all
- 22% (253/1,129) of consultants were reported as undertaking 1-10 laparoscopic cholecystectomies during the 2014-2015 financial year in their hospital
- Gallstones were the cause of a recurrent acute pancreatitis admission in 40/132 (30.3%) patients who were recurrent admissions during this study
- Only 18.9% (61/ 322) of patients with acute pancreatitis due to gallstones had definitive management during their admission
- In the case reviewers opinion, of 179 patients not undergoing definitive treatment for gallstones during the index admission, 53/143 (37%) should have done
- Clinicians similarly reported that the date of first definitive treatment was not acceptable in nearly one-third of cases (71/216). Lack of access to appropriate lists was cited as a factor in 69 cases and lack of access to ERCP in another eight
- 23/156 (14.7%) hospitals stated that ERCP was available on a 24 hours, 7 days per week basis
- 75/686 (10.9%) of patients underwent an ERCP in this study. The reasons given were consistent with appropriate current indications in acute pancreatitis
- Only 80% (133/166) of hospitals reported having some form of alcohol liaison service on-site. This was not available at weekends in 110/133 hospitals
- For patients who had a documented previous admission with acute pancreatitis due to alcohol, the clinicians caring for these patients could only confirm that a referral had occurred to an alcohol liaison service in 28/52 patients.

Treatment of complications

- Only 47/172 (27%) hospitals stated that they could provide pancreatic drainage on-site
- Only 28/114 (24.6%) hospitals where interventional radiological cover was not provided for pancreatic drainage out of hours stated that they were part of a formal network to cover this, with the remainder relying upon “informal networks” and “local goodwill”. Fourteen hospitals stated that there were no arrangements in place to cover this indication
- The majority of hospitals (119/170; 70%) did not provide the service to perform all the potential surgical procedures a patient with severe acute pancreatitis might require
- Radiological, endoscopic and surgical intervention was performed in 49, 2 and 23 patients respectively, of the 712 patients. For patients undergoing necrosectomy, the median length of time to surgery from admission was 27 days (range 1 – 80 days). In the opinion of the case reviewers and clinicians, the timing of necrosectomy was considered consistent with optimal timing for walling off of necrosis to take place and appropriate in all of the cases where a judgement could be made.

Regional organisation of care

- Approximately 1/3 of hospitals in the current study reported being part of a formal regional care network for acute pancreatitis
- 81/107 hospitals that were not part of a formal care network reported being part of an informal network
- Nearly a quarter (26/107; 24%) of those hospitals not covered by a formal network were not part of an informal network
- Just under half of all hospitals that responded reported having guidelines for acute pancreatitis
- Nearly one-third (28.4%; 42/148) of hospitals reported having a multidisciplinary team meeting where patients with acute pancreatitis are discussed.

Outcomes and overall quality of care

- During this admission, the majority of patients (78%; 547/701) were discharged to their previous place of residence
- 89/712 (13%) patients died during the admission and (35/712) 5% of patients were transferred to another hospital
- Clinicians and the case reviewers determined that further investigation beyond that planned was needed in an additional 9% (48/538) and 21% (73/336) of patients respectively
- Clinicians reported that 55 of 61 deaths were discussed at an M&M meeting
- Overall, 45% of patients received ‘Good Practice’; ‘Room for improvement’ (either clinical or organisational care or both) was identified in 52% of the cases; and ‘Less than satisfactory’ care occurred in 3% of cases.

Recommendations

1. Hospital coders and clinicians should work more closely together to ensure coding for acute pancreatitis is accurate. This will aid local quality improvement initiatives and national reporting while facilitating the commissioning of services according to the needs of patients. *(Hospital Coders, Professional Association of Clinical Coders, Clinical Directors and All Clinicians)*
2. Better management of co-morbidity in patients with acute pancreatitis is needed, especially through the involvement of the relevant specialists, as this represents an opportunity to improve overall outcomes. *(All Clinicians)*
3. All patients presenting to the Emergency Department with an acute illness, such as acute pancreatitis, should have physiological parameters recorded as part of their initial assessment. These measurements should form part of an early warning score, such as the National Early Warning Score (NEWS). *(Emergency Medicine Doctors)*
4. An early warning score should be used in the emergency department and throughout the patient's stay in hospital to aid recognition of deterioration. The score should be standardised within and across hospitals. Use of the National Early Warning Score (NEWS) would facilitate this standardisation. *(Medical Directors and All Clinicians)*
5. For all early warning scores and as recommended by the Royal College of Physicians of London for NEWS - all acute hospitals should have local arrangements to ensure an agreed response to each trigger level including: the speed of response, a clear escalation policy to ensure that an appropriate response always occurs and is guaranteed 24/7; the seniority and clinical competencies of the responder; the appropriate settings for ongoing acute care; timely access to high dependency care, if required; and the frequency of subsequent clinical monitoring. *(Medical Directors and Clinical Directors)*
6. Acute Pancreatitis may require input from a number of different specialities. Therefore it should be managed by a multidisciplinary team, comprising all specialities needed to treat the condition as well as the underlying co-morbidities. *(Clinical Directors and All Clinicians)*
7. Antibiotic prophylaxis is not recommended in acute pancreatitis. All healthcare providers should ensure that antimicrobial policies are in place including prescription, review and the administration of antimicrobials as part of an antimicrobial stewardship process. These policies must be accessible, adhered to and frequently reviewed with training provided in their use. *(Medical Directors, Clinical Directors, Medical Microbiology Directors, Clinical Pharmacy Lead and All Clinicians)*
8. All patients admitted to hospital with acute pancreatitis should be assessed for their overall risk of malnutrition. This could be facilitated by using the Malnutrition Universal Screening Tool (MUST) and provides a basis for appropriate referral to a dietitian or a nutritional support team and subsequent timely and adequate nutrition support. *(Medical Directors, Clinical Directors and All Clinicians)*
9. Gallstones should be excluded in all patients with acute pancreatitis including those thought to have an alcohol-related acute pancreatitis, as gallstones are common in the general population. Abdominal ultrasound scanning is the minimum that should be performed. *(Clinical Directors and All Clinicians)*
10. Definitive eradication of gallstones prevents the risk of a recurrent attack of acute pancreatitis. This usually involves cholecystectomy and ensuring that no stones remain in the bile duct. For those patients with an episode of mild acute pancreatitis, early definitive surgery should be undertaken, either during the index admission, as recommended by the International

RECOMMENDATIONS

Association of Pancreatology (IAP), or on a planned list, within two weeks. For those patients with severe acute pancreatitis, cholecystectomy should be undertaken when clinically appropriate after resolution of pancreatitis. *(Clinical Directors and All Clinicians)*

11. As recommended by the British Society of Gastroenterology, ERCP services should work collaboratively in a regional or hub-and-spoke model, with simple and rapid referral pathways established. Through this method, facilities for urgent or emergency ERCP should be widely available. *(Clinical Directors and Endoscopy Leads)*
12. As previously supported and recommended by NCEPOD, each hospital should have a 7-day Alcohol Specialist Service, to provide comprehensive physical and mental assessments, 'brief interventions' and access to services prior to discharge. *(Medical Directors)*
13. All patients with suspected alcohol-related acute pancreatitis should be discussed with the hospital alcohol support service at every admission. Efforts to deal with this underlying cause of acute pancreatitis should equal those of gallstone acute pancreatitis. Future clinical guidelines on acute pancreatitis should incorporate this. *(Clinical Directors, All Clinicians, Specialist Associations, NICE, BSG, IAP, APA)*
14. Given the increasing complexity of the management of acute pancreatitis and its multidisciplinary nature, formal networks should be established so that every patient has access to specialist interventions, regardless of which hospital they present to and are initially managed in. Indications for when to refer a patient for discussion with a specialist tertiary centre and when a patient should be accepted for transfer, should be explicitly stated. Management in a specialist tertiary centre is necessary for patients with severe acute pancreatitis requiring radiological, endoscopic or surgical intervention. *(Medical Directors and Clinical Directors)*
15. The 2012 IAP/APA guidelines provide recommendations concerning key aspects of medical and surgical management of acute pancreatitis based on the currently available evidence. These recommendations should serve as a reference standard for current management of acute pancreatitis. *(Clinical Directors and All Clinicians)*
16. Specialist tertiary centres for acute pancreatitis should be commissioned. A specialist tertiary centre is defined by the IAP as a high volume centre with intensive care facilities, daily access to radiological intervention, interventional endoscopy including EUS and ERCP and surgical expertise in managing necrotising pancreatitis. An example model to base this on from the English Department of Health could be the existing 'Improving Outcomes Guidance' compliant hepato-pancreato-biliary cancer units. *(Specialist Commissioners and Medical Directors)*
17. NCEPOD supports the IAP recommendation that after excluding the commoner causes of acute pancreatitis, those in whom the cause remains unknown should undergo MRCP and/or endoscopic ultrasonography to detect occult microlithiasis, neoplasms or chronic pancreatitis as well as rare morphologic abnormalities. A CT of the abdomen should also be considered. *(Clinical Directors and All Clinicians)*
18. All patient deaths should be discussed at morbidity and mortality meetings and learning should be shared through network meetings and their annual reports. Adequate time for structured assessment of deaths and complications should be provided by hospital Trusts/Boards. *(Medical Directors, Clinical Directors and All Clinicians)*

Overall quality of care

The case reviewers deemed that, overall, 45% of patients received Good Practice, i.e. a standard that they would accept from themselves, their trainees and their institution. It is the purpose of NCEPOD reports to identify opportunities for improvement; these can be aspects of clinical or organisational care or both. In total, this was identified in 52% of the cases reviewed. Less than satisfactory care

is defined as that where several aspects of clinical and/or organisational care were well below that which the reviewers would accept from themselves, their trainees or their institution. This occurred in 3% of cases (Figure 10.1). While less than satisfactory care can never be accepted, this figure of 3% for this category represents one of the lowest observed in an NCEPOD report.

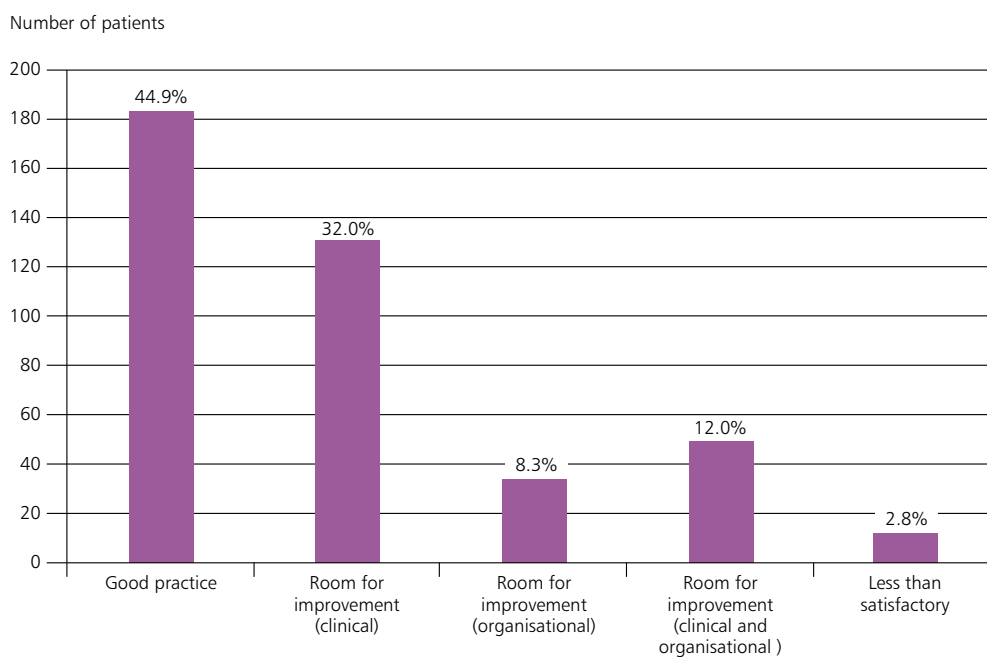


Figure 10.1 Overall assessment of care

Summary

Guidelines for the management of acute pancreatitis have existed for many years; the British Society of Gastroenterology guidelines were last updated nearly 10 years ago. The latest International Association of Pancreatology & American Pancreatic Association guidelines were published in 2012. However, audits of guideline use in acute pancreatitis have often shown poor compliance. The proposers of the study felt that despite the existence of management guidelines the care of these patients was variable nationwide.

Therefore NCEPOD was asked to assess the quality of care given to patients with acute pancreatitis. We used our standard method of assessment of all hospitals in our study. This included assessment of care at an organisational level, clinical level within hospitals and external peer review of selected cases. We identified 14,479 patients with acute pancreatitis during a six month period from 1st January 2014. From these we selected a group of 8,925 patients who had either stayed in hospital three or more nights, gone to critical care or died. From a random sample, 712 patients underwent hospital clinician review and 418 patients had external peer review.

Overall, we found that there was room for improvement in care in 50% of patients with acute pancreatitis. 21% of patients in the study had one or more previous episodes of acute pancreatitis, 93% of those for the same cause. Case reviewers felt that efforts to prevent recurrent episodes due to gallstones and alcohol were inadequate. Clinicians reported that the date of first definitive treatment for gallstones was not acceptable in nearly one third of cases.

Aspects of general care where improvements could be made include avoidance of inappropriate antibiotic prescription; 1/5 of patients were being given antibiotics unnecessarily. The use of an early warning score was omitted in 31% of emergency department admissions and appropriate investigations were omitted in 22% of cases. We also found that 21% of patients who did not have an ultrasound had no reason identified to omit this, potentially missing cases of gallstones.

We recommend that clinicians fully investigate patients for the cause of acute pancreatitis. They should ensure early treatment for patients with gallstones and alcohol cessation advice where indicated. We recommend the judicious use of antibiotics as most patients with acute pancreatitis do not require them.

The organisation of care should be improved. Hospitals should develop standardised early warning scoring systems which are used throughout the hospital and commenced in the emergency department. At a regional and national level, the processes of care for patients with acute pancreatitis need to be reviewed. The development of better networking arrangements and regional pancreatitis units, with shared management guidelines, is essential to improve the co-ordination of care.

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