RECOMMENDATIONS

1987

Quality assurance:

1. There is a need for an assessment of clinical practice in a national basis. Our experience suggests that our colleagues would welcome this.
2. Consultants in every District should ensure that their own coding and input to information systems (including the Körner systems) is accurate and up-to-date; without this, any audit is flawed. Every District should urgently review the storage, movement and retrieval of patents' notes, particularly those of deceased patients.
3. Clinicians need to assess themselves regularly. Effective self assessment needs time; time to attend autopsies, mortality/morbidity meetings and clinical review with other disciplines.

Accountability:

4. All departments of anaesthetics and surgery should review their arrangements for consultant supervision of trainees. Locally agreed guidelines are important to ensure appropriate care of all patients, but particularly when responsibility is transferred from one clinical team, or shift, to another. No senior house officer or registrar should undertake any anaesthetic or surgical operation as an emergency or urgent matter without consultation with their consultant (or senior registrar).

Clinical Decision Making:

5. Resuscitation, assessment and management of medical disease take time and may determine the outcome; their importance needs to be re-stated. Arrangements which permit this in every case are important.
6. The decision to operate on the elderly and the very sick is important and should be taken at consultant (or senior registrar) level. For the most seriously ill patients, consultant anaesthetists and surgeons should consult together before the operation.
7. The decision not to operate is difficult. Humanity suggests that patients who are terminally ill or moribund should not have operations (i.e. non life saving), but should be allowed to die in peace with dignity.

Organisational Issues:

8. Districts should review their facilities for out-of-hours work and concentrate anaesthetic, surgical and nursing resources at a single location. A fully staffed and fully equipped anaesthetic room, resuscitation room, operating room and recovery area and high dependency or intensive therapy unit should be available at all times.
9. The implementation of the CEPOD classification of operations (emergency, urgent, scheduled and elective) would concentrate the attention of all staff on the fact that very few operations need to be performed at night.
10. Operations should only be performed by consultants or junior surgeons (accountable to consultants) who have had adequate training in the specialty relevant to the operation. Health Authorities should therefore balance surgical specialties so that appropriate urological and vascular trained surgeons are provided in each District. In the case of small Districts this may

necessitate sub-Regional units to ensure adequate sub-specialty care. Neurological and neonatal surgery should be carried out at special Regional units.

1989

1. The National Confidential Enquiry into Perioperative Deaths should continue.

2. The information systems, particularly clinical information systems, in the NHS should be considerably improved to provide accurate and timely information for audit and clinical quality assurance. All consultants should assist in achieving this improvement.

3. Local audit meetings are essential to good clinical practice and all consultants should participate.

4. Surgeons and anaesthetists should not undertake occasional paediatric practice. The outcome of surgery and anaesthesia in children is related to the experience of the clinicians involved.

5. Consultants who take the responsibility for the care of children (particularly in District General Hospitals and in single surgical speciality hospitals) must keep up to date and competent in the management of children.

6. Consultant supervision of trainees needs to be kept under scrutiny. No trainee should undertake any anaesthetic or surgical operation on a child of any age without consultation with their consultant.

1990

1. The provision of clinical and management information about patients, including post mortem records, needs to be improved significantly.

2. Essential services (including staffed emergency operating rooms, recovery rooms, high dependency units and intensive care units) must be provided on a single site wherever emergency/acute surgical care is delivered.

3. Decisions for or against operations should be made jointly by surgeons and anaesthetists; this is a consultant responsibility.

4. The supervision of locum appointments at all grades in anaesthesia and surgery needs an urgent review.

5. All grades of surgeon and anaesthetist should be involved in medical audit and continuing medical education.

6. Efforts should be made to increase the number of post mortem examinations.

1991-1992

1. The medical Royal Colleges and the Specialist Societies in Surgery, Gynaecology and Anaesthesia must encourage all consultants to participate in the National Confidential Enquiry into Perioperative Deaths. Full co-operation would enable the profession to defend itself against charges of falling standards and lack of public accountability. The failure of some consultants to return questionnaires is unacceptable and a cause for concern.

2. Surgeons, gynaecologists and anaesthetists need to address the continuing problem of thromboembolism which causes death after surgery. We have emphasised this matter before and we regret that we must again bring the profession's attention to it. Hospitals and clinical directorates should be required to address the issue and develop an agreed local protocol: every consultant should then follow this protocol. The research bodies and the Department of Health need to continue actively to encourage and support research in this field.

3. All grades of surgeon, gynaecologist and anaesthetist must realise the critical importance of fluid balance in elderly patients.

4. There needs to be a collaborative approach to the matching of surgical and anaesthetic skills to the condition of the patient.

5. Surgeons, gynaecologists and anaesthetists must have immediate access to essential services (recovery rooms, high dependency and intensive care units) if their patients are to survive. The previous Reports have emphasised the need to have emergency operating and recovery rooms available 24 hours a day.

6. It is no longer acceptable for basic specialist trainees (senior house officers) in some specialities to work alone without suitable supervision and direction by their consultant. Managers and consultants must locally achieve these arrangements.

7. The post mortem rate is too low. At least 49% of post mortems demonstrate, despite clinicians' scepticism, significant, new and unexpected findings that are relevant. Post mortems are an important form of quality control.

8. The necessary information available within the NHS under the present system is inadequate. Despite our repeated comment about this, we are still unable to obtain basic and timely data about the numbers of patients who have operations and the number of perioperative deaths. There is a need for an improved method for collection and validation of information on perioperative deaths locally and nationally.

1992-1993

1. NCEPOD has again identified a substantial shortfall in critical care services. Any hospital admitting emergency patients, and hospitals admitting complex elective patients, must have adequate intensive care and/or high dependency unit facilities at all times.

2. Trainees with less than three years' training in the speciality should not anaesthetise or operate without appropriate supervision.

3. Practitioners must recognise their own limitations and not hesitate to consult a more appropriate colleague when managing conditions outside their immediate expertise.

4. The skills of the surgeon and anaesthetist should always be appropriate for the physiological and pathological status of the patient.

5. Surgeons operating laparoscopically should not hesitate to convert to an open approach when necessary.

6. Appropriately trained staff must accompany all patients with life-threatening conditions during transfer between and within hospitals.

7. The medical profession needs to develop and enforce standards of practice for the management of many common acute conditions (e.g. head injuries, aortic aneurysm, colorectal cancer, gastrointestinal bleeding).

8. There is an urgent need to improve the quality of medical notes. There was found to be considerable variation in quality among those operation notes included with surgical questionnaires, particularly between specialties. Overall there is a clear need for an improvement in keeping operation records and The Royal College of Surgeons' guidelines and recommendations need to be re-emphasised.

9. Managers need to improve the services provided by medical records departments so that notes are available when required.

10. The number of post-mortems performed remains too low and poor communications persist in some cases between surgeons and pathologists. Whilst the overall quality of post-mortems performed is generally satisfactory it would be improved by wider observance of the Royal College.

1993-1994

1. Consultation, collaboration and teamwork between anaesthetists, surgeons and physicians should be encouraged and should be the usual practice.

2. Surgical management should be planned and should include all those provisions that are required for good outcomes.

3. The availability of staffed (medical, nursing and ancillary) emergency operating theatres on a 24-hour basis is essential; Trusts admitting urgent and emergency cases must ensure that they are provided.

4. The elderly and unfit constitute a large proportion of the workload; improved perioperative management is required to ensure that their care is appropriate.

5. Protocols for the treatment of common conditions should be applied more widely to both elective and emergency admissions, and should be subject to audit.

6. Continuity of care after operations is essential; local arrangements must ensure that it occurs.

7. The roles and responsibilities of all doctors need to be more clearly defined nationally, and implemented locally.

8. Clinicians and Coroners should make strenuous efforts to improve their local working relationships.

9. Systems should be implemented by Trusts to improve the retention and availability of all notes and records of clinical activity.

10. Trusts need to encourage more participation in clinical audit.

11. More research is required on thromboembolism prophylaxis.

1994-1995

1. Essential services (high dependency and intensive care beds) are still inadequate and resources need to be increased to correct deficiencies.

2. Communication between specialists and between grades needs to be more frequent and more effective.

3. There are special circumstances of patients (those over 90 years of age, those with aortic stenosis, those who need radical pelvic surgery, those who need transfer to neurosurgical units and those for emergency vascular operations) which require special individual attention by consultant anaesthetists and consultant surgeons.

4. Organisation for effective clinical audit still needs to be improved in all disciplines but particularly in gynaecology and ophthalmology.

5. Clinical records and data collection still need to be improved.

6. The abilities of locums should be ascertained before appointments are made.

1995-1996

1. All hospitals admitting emergency surgical patients must be of sufficient size to provide 24-hour operating rooms and other critical care services. There should also be sufficient medical staff to perform these functions.

2. These provisions should be continuous throughout the year: trauma and acute surgical emergencies do not recognise weekends or public holidays.

3. Patients now expect to be treated and managed by trained and competent staff. Patients assume trainees to be taught appropriately and supervised as necessary. Consultants should acknowledge these facts and react accordingly.

4. All hospitals which admit patients for emergency procedures should have an emergency surgery list, staffed and in a fully-equipped theatre suite. Anaesthetists and surgeons rostered for emergency work should be free from other commitments: this should be a fixed part of the consultant contract.

5. Consultant anaesthetists, surgeons and hospital managers should together plan the administration and management of emergency admissions and procedures.

6. In order to avoid queuing for theatre space it may be necessary to nominate an arbitrator in theatres who would decide the relative priority of theatre cases. This practice already successfully operates in some hospitals and should be used more widely.

7. All hospitals should record the grades of anaesthetists and surgeons present in the anaesthetic room and the operating theatre and their responsibilities.

8. Systematic clinical audit should include the pattern of work in the operating theatres.

9. An attempt to harmonise the definitions used by the NHS Executive, and the clinical definitions commonly used by surgeons and anaesthetists, would be welcome.

10. The condition of patients should be optimised prior to anaesthesia and surgery. This may involve the use of local protocols addressing issues such as: the required duration of preoperative starvation, the use of emergency admission units/wards, the preoperative use of critical care services (ICU/HDU etc.), the management of co morbidities by other consultant medical specialists as appropriate, fluid management, analgesia and appropriate use of facilities for the elderly.

1996-1997

General Comment:
It is a surgical skill to recognise when surgery will be too adventurous, ill advised or futile, given the condition of the patient. It is difficult to resist pressure to operate, whether this comes from the patient, relatives or medical colleagues but it must be recognised that surgery cannot solve every problem (page 38).

1. A fibreoptic intubating laryngoscope should be readily available for use in all surgical hospitals. Several *anaesthetists* working in a department should be trained for, and competent at awake fibreoptic intubations (page 27).

2. The maintenance of an adequate blood pressure through the operative and post operative period is an essential part of *anaesthesia* for patients undergoing carotid endarterectomy surgery. This required invasive blood pressure monitoring and particular care in patients with poor cardiovascular reserve (page 33).

3. Laparoscopic abdominal surgery may take place through a small incision but it still requires *anaesthesia* and the physiological onslaught of a pneumoperitoneum. High risk patients may not be able to tolerate this stress (page 40).

4. Morbidity/mortality meetings should take place in all *anaesthetic* departments. Regular review of mortality following operations is an essential part of *anaesthetic* practice (page 123).

5. There are many aspects around the care of patients undergoing *anaesthesia and surgery* for oesophageal disease, which are of major concern. A fundamental re-examination of the arrangements for the care of these patients is urgently required (pages 50, 57 and 65).

6. The technique of tracheostomy should be taught to trainee *surgeons*. The indications for performing this procedure under local or general anaesthesia should also be taught (page 30).

7. Pharyngeal pouch is a benign condition but appears to have a significant mortality. *Surgical* subspecialisation for this condition within otolaryngology departments is required (page 32).

8. More detailed perioperative investigation and assessment may prevent radical spinal *surgery*, which is unhelpful for individual patients with advanced malignant disease (page 71).

9. *Surgeons* need to be clear about the aims of the treatment and benefits for the patients for the patient when planning surgery for advanced malignancy (pages 23, 73 and 76).

10. Patients and their relatives need to recognise the limits of *surgery* in advanced malignant disease. A decision to operate may not be in the best interests of the patient (page 38).

11. The hospital post mortem rate of 8% was unacceptably low. The reasons for this low rate need to be examined (page 95).

1999

Clinical:

1. There is a need for a system to assess the severity of surgical illness in **children** in order to gather meaningful information about outcomes. The ASA grading system is widely used by anaesthetists but, as a comparatively simple system, does have limitations for use in children. (See pages 31-33).

2. Anaesthetic and surgical trainees need to know the circumstances in which they should inform their consultants before undertaking an operation on a **child.** To encourage uniformity during rotational training programmes, national guidelines are required. (See pages 39-41).

3. The death of any **child,** occurring within 30 days of an anaesthetic or surgical procedure, should be subject to peer review, irrespective of the place of death. (See page 47).

4. The events surrounding the perioperative death of any **child** should be reviewed in the context of multidisciplinary clinical audit. (See page 47).

5. Fluid management in the **elderly** is often poor; it should be accorded the same status as drug prescription. Multidisciplinary reviews to develop good local working practices are required. (See pages 68-71).

6. A team of senior surgeons, anaesthetists and physicians needs to be closely involved in the care of **elderly** patients who have poor physical status and high operative risk. (See pages 58-59, 62, 80).

7. The experience of the surgeon and anaesthetist need to be matched to the physical status of the **elderly** patient, as well as to the technical demands of the procedure. (See pages 62, 74, 81, 86).

8. **Elderly** patients need their pain management to be provided by those with appropriate specialised experience in order that they receive safe and effective pain relief. (See pages 75-76, 78-79).

9. Surgeons need to be more aware that, in the **elderly**, clinically unsuspected gastrointestinal complications are commonly found at post-mortem to be the cause, or contribute to the cause, of death following surgery. (See page 102).

Organisational:

10. The concentration of **children's** surgical services (whether at a local or regional level) would increase expertise and further reduce occasional practice. (See page 26).

11. A review of manpower planning is required to enable anaesthetists and surgeons in various specialties to train in the management of small **children.** (See page 26).

12. In the management of acute **children's** surgical cases a regional organisational perspective is required. This particularly applies to the organisation of patient transfer between units. Paediatric units have a responsibility to lead this process. (See pages 43-46).

13. All Trusts should address the requirements of the framework document on **paediatric** intensive care. Most children's hospitals have a good provision but many district general hospitals are deficient. (See pages 35-36, 46).

14. There is a need for central guidance to ensure the uniformity of data collection on surgery in **children**. (See page 16).

15. If a decision is made to operate on an **elderly** patient then that must include a decision to provide appropriate postoperative care, which may include high dependency or intensive care support. (See pages 61-62, 70).

16. There should be sufficient, fully-staffed, daytime theatre and recovery facilities to ensure that no **elderly** patient requiring an urgent operation waits for more than 24 hours once fit for surgery. This includes weekends. (See pages 61-63, 82).

17. Clinicians are still unable to return data to NCEPOD as a result of missing patient records. Action is required to improve hospital record systems; this is within the remit of **clinical governance.** (See pages 11-12).

18. NHS Trusts must take responsibility for ensuring that all relevant deaths are reported and questionnaires returned to NCEPOD as part of their **clinical governance** duties. (See page 3).

2000 - Interventional Vascular Radiology

1. It is essential that vascular radiologists and surgeons work together as a team both in the decision as to what procedures to undertake and in the management of any complications. (See pages 13-14, 20, 22).

2. The interventional radiologist needs to have sufficient experience, facilities and equipment to perform the procedure safely and to deal with any complications which may arise. (See pages 14-18, 20).

3. Monitoring of pulse oximetry, blood pressure and ECG should be performed during all interventional radiology procedures; this should be done by someone other than the radiologist performing the procedure. (See page 17).

4. Cannulation of the femoral artery should always be below the inguinal ligament to avoid the danger of retroperitoneal haematoma. Medical and nursing staff must be aware of the risks of this serious complication in order to act early when necessary. (See pages 19-20).

5. Thrombolytic therapy should be used with caution, especially in the elderly (over 75 years) who are more prone to cerebral haemorrhage. Patients with thrombolysis continuing after they have left the radiology department should be nursed in a high dependency unit so that complications may be diagnosed and treated without delay. (See pages 21-22).

6. The number of neuroradiologists and support staff needs to increase to ensure a satisfactory on-call rota, including weekends. (See page 36).

7. There is a need for recognised training programmes in neuroradiology to meet the demand for more consultants. (See page 36).

8. Monitoring of the patient should be performed in all cases, and should be the responsibility of someone other than the neuroradiologist performing the procedure. (See page 38).

9. It is important that there are sufficient facilities for a prompt emergency service, and ICU/HDU beds for subsequent care. (See pages 36, 39).

2000 – Percutaneous Transluminal Coronary Angioplasty

1. Interventional cardiology centres should have a sufficient number of appropriately experienced clinicians and other staff to run an emergency PTCA service. (See pages 16-18).

2. 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. (See pages 6-7).

3. There is a need for consistency in the definition of cardiogenic shock, in order to give an accurate prognosis and compare outcomes of treatment. (See page 13).

4. All catheter laboratory staff should have regular resuscitation training. (See page 18).

5. Intra-aortic balloon pumps should be available for appropriate patients; staff should be familiar with their use. (See pages 15 and 24).

6. Catheter laboratories should have a designated person responsible for checking that all necessary equipment is both present and functional. (See page 18).

7. All catheter laboratories should have appropriately equipped recovery areas. (See page 23).

8. 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. (See pages 18-19).

9. 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. (See page 20).

10. Clinicians should be informed of the date and time that post-mortem examinations are being performed and should do their best to attend; a copy of the post-mortem report should always be sent to the appropriate clinician. (See pages 26-27).

11. Regular audit meetings should be held in all interventional cardiology centres. (See page 27).

12. 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. (See page 13).

13. Hospitals should provide access to case records for audit purposes. (See page 27).

2000 - Then and Now

1. Trusts and hospitals must establish systems to ensure that all patients' **medical records** are always available to clinicians. The inability to trace the notes, or parts thereof, of patients who have died, thus preventing surgeons and anaesthetists from completing returns to NCEPOD, is unacceptable. (See page 14).

2. In two of every five hospitals in which patients die following surgery there is no **high dependency unit** (HDU). Although the provision of essential critical care facilities has increased greatly since 1990, the absence of an HDU in an acute surgical hospital is detrimental to patient care. It places unreasonable pressure on surgeons and anaesthetists in their decision making and impedes a flexible and graduated use of expensive critical care resources. (See page 40).

3. The urgent and emergency workload in anaesthesia being undertaken by **non-consultant career grade (NCCG) doctors** is of considerable concern. These NCCGs are mainly staff grade anaesthetists, many of whom do not possess the Fellowship in Anaesthesia, and who are not receiving adequate consultant support. There are indications that the problem of unsupervised SHO anaesthetists, identified in previous NCEPOD reports, is being replaced by one of inadequately qualified, unsupervised NCCGs. (See page 51).

4. Despite the resources that have flowed into **audit** activities over recent years, anaesthetists reviewed less than a third of perioperative deaths at local meetings; this percentage has remained unchanged since 1990. Surgeons overall now review three-quarters of deaths at local audit meetings, but there are wide variations between the surgical specialties, from a minimum of 13% to a maximum of 82%. It is sometimes stated that studying expected perioperative deaths, most often in old and very ill patients, contributes little. The experience of NCEPOD in examining these deaths nationally does not support this contention; there is much that can be learnt from their careful examination. It is a professional responsibility to examine one's practice and seek ways to improve surgical and anaesthetic management. Clinicians must strive to achieve an audit record for all deaths if professional education, credibility and public support are to be maintained. (See pages 39 and 72-73).

2001- Changing the Way We Operate

1. Surgeons and anaesthetists should partake in **multidisciplinary audit,** specialists meeting together to discuss improvements in care. These meetings should concentrate less on asking 'Who is to blame?' and more on changing systems of practice to safeguard patients wherever possible. (See page 61).

2. All Trusts in the NHS should use **information systems** with a nationally agreed specification. This should apply to case notes, patient information systems etc. Such uniform systems would facilitate the retrieval of standardised information and ease the introduction of the Electronic Patient Record. (See page 23).

3. There is a gap in the levels of medical and nursing expertise between ICU/HDU services and ward based care. In particular, there is a need to increase the skills of nurses and doctors on the wards in **central venous pressure (CVP) management and interpretation.** This deficiency should be addressed. There ought to be sufficient ward equipment with transducer pressure monitoring facilities to allow accurate and continuous CVP monitoring. More national and local training programmes are required to provide education in the appropriate skills required to apply these techniques in ward areas. (See page 75).

4. The service provision for **cancer patients**, presenting either as an emergency or urgently, requires review. The current system is failing patients, despite the best efforts of clinical staff. Most patients with cancer who die within 30 days of an operation are admitted as an emergency or urgently and many are not referred either to a surgeon with a sub-specialised oncology interest, a multidisciplinary team, medical oncologist or specialist cancer nurse when it is indicated. Clinical networks and local guidelines should be constructed in order to ensure that all patients with cancer receive an early and appropriate referral to specialists. (Seepage 112).

5. **Clinicians, pathologists and coroners** should review their working relations and means of communication. The aim must be to improve the quality and timeliness of information provided, in order to inform the understanding of events surrounding a perioperative death. (See page 121).

6. There needs to be an education programme to re-establish public confidence in pathology services and the **post-mortem examination** as a vital tool with which to investigate a postoperative death. (See page 121).

7. There should be a uniform case note system in the NHS.

8. Hospitals should review the procedures for the storage and retrieval of deceased patients' notes.

9. A larger audit of data quality is needed. There should be a standard way of collecting data on deaths occurring within 30 days of surgery but happening outside hospital.

10. Trusts should ensure that all deaths (falling within the NCEPOD protocol) should be reported in a timely manner. Local Reporters should be given the necessary resources to ensure that this is possible.

11. Trusts should review the discrepancies between HES data and NCEPOD data and ensure accurate data returns for both purposes.

12. The names of anaesthetic personnel should be clearly recorded in the patient's case notes.

13. Medical Directors should ensure that all questionnaires are returned.

14. Immediately after their operation all patients not returning to a special care area (e.g. an ICU or HDU) need to be nursed by those who are trained and practised in postoperative recovery care. If there are separate arrangements for staffing the operating theatres out-of hours, these must include the provision of specialised recovery staff.

15. All hospitals where major acute surgery is undertaken should have a critical care facility that is appropriate for level 237 patients. Patients should be made aware when this facility is not available.

16. It is the responsibility of each anaesthetic department to ensure that the anaesthetists running emergency lists are of sufficient experience, and to provide appropriate consultant supervision.

17. Delays to operation due to the availability of emergency operating time or critical care facilities require close monitoring locally.

18. Where there is a definite risk of death and patients are in a poor physiological condition, junior doctors in training (SHO or pre-registration house officers) should not obtain consent for surgery.

19. Medical Directors should review the responsibilities of those consultant and NCCG surgeons who do not hold a higher surgical diploma.

20. There needs to be a much higher level of involvement of anaesthetic consultants in the care of those patients who are in a poor physical state and at risk of death.

21. Hospitals should identify and quantify inadequacies in their critical care facilities. If inadequacy exists discussions between intensive care consultants, surgeons, physicians, senior nursing staff and senior hospital management can agree organisational changes across the hospital that may improve its use.

22. Medical Directors should ensure that morbidity/mortality meetings are held in all specialities.

23. Anaesthetists should be cautious about the dose of local anaesthetic used for a regional technique in those patients who are predisposed to hypotension.

24. Operative hypotension demands an appropriate and timely response, especially for those patients who have a coexisting disease such that hypotension is potentially harmful.

25. Whenever possible the anaesthetist of a patient with aortic stenosis should obtain a preoperative echocardiogram of the aortic valve.

26. The availability of the echocardiography service for patients preoperatively should be accorded an appropriate priority in the funding and development plans of hospitals.

27. Preoperative resuscitation of patients and the success of its coordination should form part of multidisciplinary case review involving surgical, anaesthetic and nursing staff.

28. Guidelines to determine which patients should be referred to a critical care team should be developed locally and subsequently validated.

29. It is the consultant's responsibility to ensure that there are open lines of communication between them and the doctors that are under their supervision, and to ensure that those doctors are acting appropriately.

30. There should be more training programmes to increase the skills of nurses and doctors on the wards in CVP management and interpretation.

31. Early consideration of diagnostic or therapeutic radiological procedures might avoid surgery in some high risk patients.

32. Acute hospitals should continually review their radiological provision to ensure the availability of appropriate and modern methods for the investigation and treatment of emergency cases.

33. Fluid balance and urinary incontinence should be proactively managed especially in orthopaedic patients.

34. There needs to be sufficient ICU/HDU beds so that major elective arterial operations are not cancelled and emergency admissions can be cared for without the need to transfer the patient to another hospital or discharge another patient from the unit too early.

35. Those hospitals admitting vascular emergencies should now take steps to ensure that there are sufficient surgeons of appropriate ability to provide an acceptable emergency vascular surgical rota.

36. The concept of consultant invincibility is outmoded; surgical units should be organised to provide support for newly appointed surgeons, who are likely to be less experienced in the future.

37. There is a need for a scoring system to assess the likelihood of survival of a patient with a ruptured abdominal aortic aneurysm.

38. At the end of an aortic operation it is essential to assess the adequacy of the circulation in both legs and, if deficient, to correct it before the patient leaves the operating theatre.

39. Blood banks should have platelets readily available for the correction of coagulopathy for ruptured AAA cases.

40. Hospitals should review the availability of sub-specialists for those patients who present as an emergency.

41. Every effort should be made for all patients with a cancer to be considered by a linary oncology team. This applies especially to those patients admitted for urgent or emergency surgery.

42. All clinicians should use a recognised staging system in the management of patients.

43. All histology reports relating to oncology cases should match the Calman Minimum Datasets for the standardised reporting of common cancers.

44. Recently published national recommendations for obtaining informed consent to retain tissues and organs should be applied.

45. Defects in the quality of post-mortem reports should be remedied by consultation between clinician and pathologist before the post-mortem examination and before issuing the cause of death.

46. The Royal College of Pathologists' guidelines to the post-mortem examination should be updated into a minimum dataset format, with inclusion of guidance on ONS (formerly OPCS) formatting for cause of death.

47. The ONS guidelines should be modified with the adoption of a restricted list of acceptable conditions similar to national clinical disease coding lists.

48. Clinicians need to be informed of the time and place of the postmortem examination in order that they may attend and inform the process.

49. Completed reports on hospital (consented) and coroners' post-mortems should be available for review in multidisciplinary mortality audit meetings.

50. Full information should be available to the families about the results of post-mortem examinations.

2002 – Functioning As a Team?

1. Management should ensure that an appropriate number of funded sessions for consultants trained in critical care are allocated to the ICU to allow appropriately qualified medical staff to be available to the ICU at all times.

2. There are national agreed standards for anaesthetic monitoring. The absence of an essential anaesthetic monitor constitutes an unacceptable clinical risk that must be the subject of audit.

3. There need to be national guidelines for clinical prescribing in hospitals in order to reduce the risk of drug error.

4. Failure to diagnose acute appendicitis can still cause death in fit young adults. It is essential that experienced clinicians are available to ensure that cases are not missed.

5. If a medical team is involved in a patient's perioperative care it should also be involved in any morbidity/mortality review of the case and receive a copy of the discharge summary and, where available, the autopsy report.

6. Complications may arise following endoscopic surgery. Protocols should be available to deal with these and remedial actions should be rehearsed and involve senior experienced clinicians.

7. Autopsies should be the subject of a formal external audit process. Clinicians should be involved in evaluating the quality of reports and the basis of conclusions drawn, including the cause of death.

8. It is the responsibility of management to ensure that all deaths are reported to NCEPOD in a timely manner.

9. There should be a record of the name of the supervising consultant anaesthetist.

10. Standard information on hospital facilities should be available and should be accurate.

11. The adequacy of recovery beds should be reviewed.

12. Management should ensure that an appropriate number of funded sessions for consultants trained in critical care are allocated to the ICU to allow appropriately qualified medical staff to be available to the ICU at all times.

13. There are national agreed standards for anaesthetic monitoring. The absence of an essential anaesthetic monitor constitutes an unacceptable clinical risk that must be the subject of audit [13].

14. It is inappropriate for an SHO to anaesthetise an ASA 5 patient.

15. When operations are performed by the surgeon without the presence of an anaesthetist, the existing guidelines on patient monitoring, observation and record keeping should be followed.

16. Postoperative deaths should be the subject of anaesthetic and surgical review.

17. The anaesthetist, or the anaesthetic department, should be notified of elective patients who have significant operative risks, preferably in advance of their admission.

18. National protocols should be formulated to identify which inpatients would benefit from a more detailed preoperative cardiovascular assessment, including echocardiography.

19. When a formal preoperative medical assessment is indicated, an experienced physician, preferably a consultant, must make it. It is the responsibility of that physician to fully understand the operative risks of the patient's medical condition.

20. There need to be national guidelines for clinical prescribing in hospitals in order to reduce the risk of drug error.

21. The decision to operate in complex cases can benefit from the formal involvement of others apart from the surgeon.

22. Critical care specialists should be more directly involved.

23. Failure to diagnose acute appendicitis can still cause death in fit young adults. It is essential that experienced clinicians are available to ensure that cases are not missed.

24. Non availability of a patient's previous notes at the time of an acute admission is a major administrative failure and should be exposed as such.

25. Postoperative problems are common. It is essential that doctors who care for surgical patients should be trained in the management of these problems.

26. If a medical team is involved in a patient's perioperative care it should also be involved in any morbidity/mortality review of the case and receive a copy of the discharge summary and, where applicable, the autopsy report.

27. The maintenance of accurate fluid balance charts by nursing staff is vital; medical staff should review these daily.

28. Where perioperative complications contribute to the cause of death, these should be recorded on the death certificate.

29. Complications may arise following endoscopic surgery. Protocols should be available to deal with these and remedial actions should be rehearsed and involve senior experienced clinicians.

30. Autopsies should be the subject of a formal external audit process.

31. Clinicians should be involved in evaluating the quality of reports and the basis of conclusions drawn, including the cause of death.

2003 – Who Operates When?

1. Revise NCEPOD classification to include more specific definitions and guidelines, which are relevant across surgical specialities (NCEPOD responsibility).

2. Provide adequate information systems to record and review anaesthetic and surgical activity.

3. Ensure the correct ASA status is collected as it is an essential part of the patient assessment and record keeping.

4. Ensure that the information about hospital facilities is accurate in order to ensure that acute services are efficiently and safely managed.

5. Ensure that Strategic Health Authorities, together with NHS Trusts, collaborate to guarantee that all emergency patients have prompt access to theatres, critical care facilities, and appropriately trained staff, 24 hours per day every day of the year.

6. Ensure that all operating theatres have sufficient numbers of trained recovery staff available whenever those theatres are in use.

7. Provide regular resuscitation training for all clinical staff, which is in line with Resuscitation Council guidelines.

8. Ensure that all recovery bays have both a pulse oximeter and ECG monitor available. This applies whether patients are having local or general anaesthetic or sedation. The equipment used in recovery areas should be universally interchangeable and able to provide a printable record.

9. Nominate an arbitrator, who would decide the relative priority of theatre cases in order to avoid queuing for theatre spaces.

10. Ensure that systematic clinical audit includes the pattern of work in operating theatres.

11. Assess the competency of staff grade and Trust doctors and take this into account when allocating anaesthetic and surgical sessions.

12. Review guidance on which staff should anaesthetise and operate on day case patients.

13. Review the level of supervision of trainee anaesthetists working on their own in dedicated day case units.

14. Debate whether, in the light of changes to the pattern of junior doctors' working, non-essential surgery can take place during extended hours.

15. Ensure that all essential services (including emergency operating rooms, recovery rooms, high dependency units and intensive care units) are provided on a single site wherever emergency/acute surgical care is delivered.

2004 – Scoping Our Practice

Organisational Issues:

1. Hospitals should ensure that the appropriate monitoring equipment and resuscitation equipment is available in each of their endoscopy rooms and recovery areas. *(Local hospitals; Primary Care Trusts)*

2. In order to produce optimal care for what is a large group of severely ill patients, hospitals should consider establishing formal on-call arrangements. *(Local hospitals)*

Patient Assessment:

3. Patients must be assessed by the referring clinician and the endoscopist to justify that the procedure is in the patient's interest. *(Professional specialist associations)*

Patient consent:

4. The risks and benefits of therapeutic endoscopy should be explained to the patient, and this should be documented on the consent forms as laid down in the Department of Health guidelines. *(Local hospitals)*

5. The ability of those with dementia or acute confusion to provide consent should be tested and clearly documented. *(Local hospitals)*

Training and education:

6. There should be national guidelines for assuring continuing competency in endoscopy. *(Professional specialist associations)*

7. All endoscopy units should perform regular audit and all deaths during, or within 30 days of, therapeutic endoscopy should be reviewed. *(Local hospitals; Professional specialist associations)*

8. All those responsible for the administration of sedation should have received formal training and assessment. *(Local hospitals)*

Sedation and monitoring:

9. Sedation and monitoring practices within endoscopy units should be audited and reviewed. *(Local hospitals; Professional specialist associations)*

10. There should be national guidelines on the frequency and method of the recording of vital signs during the endoscopy. *(NPSA; Professional specialist associations)*

11. Clear protocols for the administration of sedation should be available and implemented. *(Local hospitals)*

Percutaneous Endoscopic Gastrostomy:

12. The decision to use a PEG feeding tube requires an in-depth assessment of the potential benefits the individual. All patients in whom PEG feeding is proposed should be reviewed by a multidisciplinary team. *(NICE)*

13. There is a need for more comprehensive national guidelines for the use of PEG feeding, including issues of patient selection. *(NICE)*

Endoscopic Retrograde Cholangiopancreatography:

14. Patients should be reviewed by the consultant endoscopist before therapeutic ERCP to ensure that the procedure is appropriate and that the patient's condition has been optimised. *(Local hospitals)*

Oesophagogastroduodenoscopy:

15. Only experienced endoscopists should treat patients with upper GI haemorrhage. Experience will vary by grade but competence should be assessed by the supervising consultant. *(Local hospitals)*

16. Optimising the patient's pre-endoscopy condition will reduce both morbidity and mortality. Early involvement of an anaesthetist/intensivist if necessary, will assist this. *(Local hospitals)*

Upper Gastrointestinal Dilation and Tubal Prosthesis Insertion:

17. A national audit across all specialities of specific techniques and equipment that is used for upper GI dilation and tubal prosthesis insertion is indicated. *(NPSA)*

Pathology:

18. The operative procedure should be included in the cause of death statement. *(Undergraduate and post-graduate deans; ONS)*

19. Post-procedure deaths (i.e. those occurring during or within 24 hours of anaesthesia or sedation or those where it is known that the procedure is implicated in the death) should be reported to the coroner. *(Local hospitals)*

20. Pathologists should think more carefully about all the clinical circumstances of a death, to produce an autopsy report more useful for clinical governance and audit. *(Professional specialist associations particularly the Royal College of Pathologists)*

21. NCEPOD supports the reforms of the 'coronial system' and death certification, which will result in better scrutiny of deaths. *(Home Office)*

2005 – Abdominal Aortic Aneurysm: A Service in Need of Surgery

Organisation of vascular services – Chapter 3:

1. Trusts should ensure the availability outside normal working hours of radiology services including CT scanners.

2. Clinicians, purchasers, Trusts and Strategic Health Authorities should review whether elective aortic aneurysm surgery should be concentrated in fewer hospitals.

3. Major elective surgery should not take place unless all essential elements of the care package are available.

Surgery – Chapter 4:

4. Patients with an aortic aneurysm requiring surgery must have equal priority with all other patients with serious clinical conditions for diagnosis, investigation and treatment.

5. Trusts should take action to improve access to Level 2 beds for patients undergoing elective aortic aneurysm repair so as to reduce the number of operations cancelled and inappropriate use of Level 3 beds.

6. Trusts should ensure that clinicians of the appropriate grade are available to staff preoperative assessment clinics for aortic surgery patients.

7. Strategic Health Authorities and Trusts should co-operate to ensure that only surgeons with vascular expertise operate on emergency aortic aneurysm patients, apart from exceptional geographical circumstances.

Anaesthesia – Chapter 5:

8. Trusts should ensure that anaesthetists can identify the major cases that they have managed in order to support audit and appraisal.

9. Anaesthetic departments should review the allocation of vascular cases so as to reduce the number of anaesthetists caring for very small volumes of elective and emergency aortic surgery cases.

10. Trusts should ensure they that they have robust systems for the postoperative care of epidural catheters with accompanying appropriate documentation.

11. Anaesthetic departments and critical care units should review together whether vascular surgery patients who routinely receive postoperative mechanical ventilation could be managed in a Level 2 High Dependency Unit breathing spontaneously.

2005 – An Acute Problem

Pre-ICU CARE:

1. Trusts should ensure that consultant job plans reflect the pattern of demand of emergency medical admissions and provision should be made for planned consultant presence in the evenings (and perhaps at night in busier units).

2. A consultant physician should review all acute medical admissions within 24 hours of hospital admission 2. Regular audit should be performed against this standard.

3. Trusts should ensure that consultant physicians have no other clinical commitments when on take. This may be through the development of acute physicians 2. This will allow for greater involvement in the assessment and treatment planning of new admissions and the review of deteriorating inpatients.

4. More attention should be paid to patients exhibiting physiological abnormalities. This is a marker of increased mortality risk.

5. Robust track and trigger systems should be in place to cover all inpatients. These should be linked to a response team that is appropriately skilled to assess and manage the clinical problems.

Patient Observations and Review Criteria:

6. A clear physiological monitoring plan should be made for each patient. This should detail the parameters to be monitored and the frequency of observations.

7. Part of the treatment plan should be an explicit statement of parameters that should prompt a request for review by medical staff or expert multidisciplinary team.

8. The importance of respiratory rate monitoring should be highlighted. This parameter should be recorded at any point that other observations are being made.

9. Education and training should be provided for staff that use pulse oximeters to allow proper interpretation and understanding of the limitations of this monitor. It should be emphasised that pulse oximetry does not replace respiratory rate monitoring.

Referral Process:

10. Consultant physicians should be more involved in the referral of patients under their care to ICU. The referral of an acutely unwell medical patient to ICU without involvement or knowledge of a consultant physician should rarely happen.

11. It is inappropriate for referral and acceptance to ICU to happen at junior doctor (SHO) level.

12. Any delay in admission to critical care should be recorded as a critical incident through the appropriate hospital incident monitoring and clinical governance system.

13. All inpatient referrals to ICU should be assessed prior to ICU admission. Only in exceptional circumstances should a patient be accepted for ICU care without prior review.

ICU Admission Process:

14. Trusts should ensure that consultant job plans reflect the pattern of demand for emergency admission to ICU and provision should be made for planned consultant presence in the evenings (and perhaps at night in busier units).

15. Patients should rarely be admitted to ICU without the prior knowledge or involvement of a consultant intensivist.

16. A consultant intensivist should review all patients admitted to ICU within 12 hours of admission 3. Regular audit should be performed against this standard.

Patients Who Died:

17. Training must be provided for junior doctors in the recognition of critical illness and the immediate management of fluid and oxygen therapy in these patients.

18. Consultants must supervise junior doctors more closely and should actively support juniors in the management of patients rather than only reacting to requests for help.

19. Junior doctors must seek advice more readily. This may be from specialised teams e.g. outreach services or from the supervising consultant.

Outreach:

20. Each hospital should have a track and trigger system that allows rapid detection of the signs of early clinical deterioration and an early and appropriate response.

21. Although this recommendation does not emerge from the findings in this report, NCEPOD echoes other bodies and recommends that trusts should ensure each hospital provides a formal outreach service that is available 24 hours per day, seven days per week. The composition of this service will vary from hospital to hospital but it should comprise of individuals with the skills and ability to recognise and manage the problems of critical illness.

22. Outreach services and track and trigger systems should not replace the role of traditional medical teams in the care of inpatients, but should be seen as complementary.

Quality of Medical Records and Audit:

23. All entries in the notes should be dated and timed and should end with a legible name, status and contact number (bleep or telephone).

24. Each entry should clearly identify the name and grade of the most senior doctor involved in the patient episode.

25. Resuscitation status should be documented in patients who are at risk of deterioration 8. Each trust should audit compliance with this recommendation by regular review of patients who

suffered a cardiac arrest and assessment of whether a 'do not attempt resuscitation' order should have been made prior to this event.

Pathology:

26. More care should be given to the formulation of the cause of death for presentation to the coroner and transfer into the medical certificate of cause of death.

27. On this group of patients, consented autopsies should be sought more often to evaluate complex clinical pathology.

28. In coronial autopsies on ICU patients, increased histopathological sampling should be undertaken to improve disease identification, with the consent of relatives, once the coroner's requirement is satisfied.

29. Pathologists should become more involved in the mortality meetings on ICU patients.

2006 – The Coroner's Autopsy: Do We Deserve Better?

1. Government should consider and agree the fundamental purposes of the coronial autopsy. An ideal opportunity exists to do this during the passage through Parliament of the Bill for reform of the coroner's system as recently announced.

2. There should be nationally uniform criteria and standards for investigation of reported deaths. This includes the diagnostic level of investigation at autopsy and the definition of what a post-mortem examination comprises.

3. There should be regular (independent) peer review of coronial autopsy reports and processes to maintain consistency of agreed standards and accountability, and all pathologists and coroners – in training and as continuing professional development – should review the autopsy reports and related documents of their peers.

Information Available to Pathologist Prior to Autopsy:

4. Specific written requests for investigations, made by a coroner, should be followed, or an account rendered in the autopsy report as to why this was not addressed.

5. The information provided by coroners' offices to pathologists should be in a standardised format that includes an agreed minimum clinical and scene of death dataset, including date of birth and occupation of deceased. Such information should be communicated in writing.

Case History:

6. A clinical and case history should be included in an autopsy report and should state the provenance of the information.

External Examination:

7. The height and weight should both be measured, the BMI calculated, and the data given in the report.

8. In all deaths, the report must clearly document external injuries or the absence of such injuries.

Evisceration of Bodies:

9. Before evisceration of a body, the pathologist must inspect the body first. This is to confirm identity, to observe any external features that might modify the process of examination and to consider the possible need for a forensic examination.

Internal Examination:

10. Normally a complete autopsy should be performed, with all organs including the brain examined. Limited autopsies – upon request – should be carefully considered on a case by case basis and when complete examination is essential to determine the cause of death the pathologist must insist upon that. If an organ system is not examined, consideration and account should be made of the potential information lost, in the context of the deceased's clinical pathology.

11. Decomposed bodies should be thoroughly examined (i.e. external and internal examinations) to identify significant injuries, primary pathologies and co-morbidities, and toxicology should be performed as appropriate.

Tissue Retention:

12. Autopsy reports must clearly indicate whether or not tissues were retained, and what they comprise, if retained.

13. There should be national criteria and standards on organ and tissue retention for histopathology in coronial autopsies, in order to provide convincing evidence of the cause of death.

14. Deaths in persons known or suspected to abuse alcohol and/or cases associated with drug toxicity should be properly investigated.

Causes of Death:

15. Sudden unexpected deaths suspected to be related to cardiomyopathy and arrhythmias (i.e. SADS) should be investigated according to best practice autopsy guidelines.

16. Deaths suspected to be related to epilepsy should be investigated properly, according to the Department of Health National Service Framework for Mental Health action plan: “Improving services for people with epilepsy”.

17. Deaths following medical interventions and complications require detailed investigation and consideration, and should not be summarised merely as (e.g.) ‘ischaemic heart disease’ or other underlying co-morbidity. If the procedure contributed to the death, then this should be indicated in the cause of death sequence.

Clinicopathological Correlation:

18. There should be a clinicopathological correlation in each report that reviews the case and robustness of the conclusions based on the available evidence.

The Mortuary:

19. Pathologists should wear protective clothing over appropriate scrub suits, not over their day clothes.

20. All mortuaries should be quality accredited.

21. The approach to infectious disease management in mortuaries should be reviewed and standardised.

2007 – Emergency Admissions: A Journey in the Right Direction?

1. The initial assessment of patients admitted as an emergency should include a doctor of sufficient experience and authority to implement a management plan. This should include triage of patients as well as formal clerking. The involvement of a more senior doctor should be clearly and recognisably documented within the notes. *(Clinical leads and heads of service)*

2. Patients admitted as an emergency should be seen by a consultant at the earliest opportunity. Ideally this should be within 12 hours and should not be longer than 24 hours. Compliance with this standard will inevitably vary with case complexity. *(Clinical directors)*

3. Documentation of the first consultant review should be clearly indicated in the case notes and should be subject to local audit. *(Clinical directors)*

4. Trainees need to have adequate training and experience to recognise critically ill patients and make clinical decisions. This is an issue not only of medical education but also of ensuring an appropriate balance between a training and service role; exposing trainees to real acute clinical problems with appropriate mid-level and senior support for their decision making. *(Clinical directors)*

5. Consultants' job plans need to be arranged so that, when on-take, they are available to deal with emergency admissions without undue delay. Limiting the number of duties that consultants undertake when on-take should be a priority for acute trusts. *(Medical directors)*

6. Appropriate mechanisms, both in terms of community medicine and palliative care, should be in place so that unnecessary admissions can be avoided. *(Primary care trusts and strategic health authorities)*

7. Hospitals which admit patients as an emergency must have access to both conventional radiology and CT scanning 24 hours a day, with immediate reporting. *(Medical directors and clinical directors)*

8. There should be no systems delay in returning the results of investigations. *(Clinical directors)*

9. There should be a clear rationale for the ordering of investigations. Omission of appropriate investigations can have a deleterious effect on patient care. *(Lead clinicians)*

10. All investigation results should be recorded with a date and time in the patient notes.

11. Following the initial assessment and treatment of patients admitted as an emergency, subsequent inpatient transfer should be to a ward which is appropriate for their clinical condition; both in terms of required specialty and presenting complaint. *(Clinical directors)*

12. Excessive transfers should be avoided as these may be detrimental to patient care. *(Clinical directors)*

13. Robust systems need to be put in place for handover of patients between clinical teams with readily identifiable agreed protocol-based handover procedures. Clinicians should be made aware of these protocols and handover mechanisms. *(Heads of service)*

14. All emergency admissions should receive adequate review in line with current national guidance. *(Clinical directors)*

15. A clear physiological monitoring plan should be made for each patient commensurate with their clinical condition. This should detail what is to be monitored, the desirable parameters and the frequency of observations. This should be regardless of the type of ward to which the patients are transferred. *(Clinical directors)*

16. Part of the treatment plan should be an explicit statement of parameters that should prompt a request for review by medical staff or expert multidisciplinary team (An Acute Problem?). *(Clinical directors)*

17. Further work is required by the NPSA to educate and inform clinical staff about the definitions surrounding adverse events. There must be standardisation of reporting and audit of that reporting to ensure that accurate data is obtained. *(National patient safety agency)*

2007 – Trauma: Who Cares?

Organisational Data:

1. There is a need for designated Level 1 trauma centres and a verification process needs to be developed to quality assure the delivery of trauma care (as has been developed in USA by the American College of Surgeons). (Royal College of Surgeons of England, College of Emergency Medicine)

Prehospital Care:

2. All agencies involved in trauma management, including emergency medical services, should be integrated into the clinical governance programmes of a regional trauma service. *(All healthcare providers)*

3. Airway management in trauma patients is often challenging. The prehospital response for these patients should include someone with the skill to secure the airway, (including the use of rapid sequence intubation), and maintain adequate ventilation. *(Ambulance and hospital trusts)*

Hospital Reception:

4. Trusts should ensure that a trauma team is available 24 hours a day, seven days a week. This is an essential part of an organised trauma response system. *(Hospital trusts)*

5. A consultant must be the team leader for the management of the severely injured patient. There should be no reason for this not to happen during the normal working week. Trusts and consultants should work together to provide job plans that will lead to better consultant presence in the emergency department at all times to provide more uniform consultant leadership for all severely injured patients. *(Hospital trusts and medical directors)*

Airway and Breathing:

6. The current structure of prehospital management is insufficient to meet the needs of the severely injured patient. There is a high incidence of failed intubation and a high incidence of patients arriving at hospital with a partially or completely obstructed airway. Change is urgently required to provide a system that reliably provides a clear airway with good oxygenation and control of ventilation. This may be through the provision of personnel with the ability to provide anaesthesia and intubation in the prehospital phase or the use of alternative airway devices. *(Ambulance trusts)*

Management of Circulation:

7. Trauma laparotomy is potentially extremely challenging and requires consultant presence within the operating theatre. *(Clinical directors)*

8. If CT scanning is to be performed, all necessary images should be obtained at the same time. Routine use of 'top to toe' scanning is recommended in the adult trauma patient if no indication for immediate intervention exists. *(Royal College of Radiology and radiology department heads)*

Head Injury Management:

9. Patients with severe head injury should have a CT head scan of the head performed as soon as possible after admission and within one hour of arrival at hospital. *(Trauma team leader and radiology heads)*

10. All patients with severe head injury should be transferred to a neurosurgical/critical care centre irrespective of the requirement for surgical intervention. *(Strategic health authorities, hospital trusts, trauma team leaders)*

Paediatric Care:

11. Each receiving unit should have up to date guidelines for children which recognise the paediatric skills available on site and their limitations and include agreed guidelines for communication and transfer with specialised paediatric services within the local clinical network. *(Strategic health authorities and hospital trusts)*

Transfers:

12. There should be standardised transfer documentation of the patient's details, injuries, results of investigations and management with records kept at the dispatching and receiving hospitals. (*Trauma team leader, Department of Health)*

13. Published guidelines must be adhered to and audits performed of the transfers and protocols. *(Hospitals trusts)*

Incidence of Trauma and Organisation of Trauma Services:

14. Given the relatively low incidence of severe trauma in the UK, it is unlikely that each individual hospital can deliver optimum care to this challenging group of patients. Regional planning for the effective delivery of trauma services is therefore essential. *(Strategic health authorities, hospital trusts)*

2008 – A Sickle Crisis?

1. In our multi-racial society, it is essential that all doctors should have a basic understanding of the implications of thalassaemia and sickle cell trait. (General Medical Council)

2. Sickle cell trait and thalassaemia trait should rarely be included on the death certificate; and if included this should only be after review by an individual who has experience in haemoglobinopathies. (Pathologists)

3. As a minimum, the Department of Health guidance regarding vaccination and prophylactic antibiotics should be followed in order to prevent sepsis from hyposplenism. (Primary Care Trusts)

4. All children with sickle cell disease should receive pneumococcal vaccination according to national guidance and regular penicillin prophylaxis from the age of three months. Regular review in a specialist centre is advised. (Primary Care Trusts)

5. Patients should be encouraged to understand the importance of regular review to optimise the management of their condition. (Primary and Secondary Care Trusts)

6. There needs to be clear recording of vaccination status to prevent omission by default; liaison between primary and secondary care is needed. (Primary and Secondary Care Trusts)

7. Healthcare professionals should work in partnership with patients with sickle cell disease to develop individualised pain management strategies which should include patient education. (Primary and Secondary Care Trusts)

8. A multidisciplinary and multi-agency approach is needed in the ongoing pain management of patients with sickle cell disease – essentially this takes place outside hospitals for the majority of patients. (Primary and Secondary Care Trusts)

9. Those patients with sickle cell disease and drug dependency need special attention because of the episodic nature of the pain and the consequent requirement for opioids which can exacerbate their dependency problems. (Primary and Secondary Care Trusts)

10. Regular assessment of acute pain, sedation and respiratory rate should be undertaken and recorded for all patients admitted with sickle cell disease. The frequency of these observations should reflect the degree of pain and dose of opioids administered, to allow recognition of opioid overdose. The development of “track & trigger” systems would greatly enhance better pain control and patient safety. (Clinical Directors)

11. Expert assistance from senior doctors with experience in the management of sickle cell pain should be sought at an early stage for patients whose pain is not controlled using standard methods. (Clinical Directors)

12. Training for medical and nursing staff that care for patients with sickle cell disease in the management of both ongoing and acute pain needs to improve. This should include in-service training and specific tailor made courses for sickle cell pain management with regular updates. (Primary and Secondary Care Trusts)

13. Acute chest syndrome is a major cause of morbidity and mortality in patients with sickle cell disease. Management of patients with this complication should be according to local protocols and early advice from specialists is essential. (Primary and Secondary Care Trusts)

14. Chronic sickle chest disease is an expanding, complicated area and requires more careful correlation of pre-mortem clinical, physiological and imaging data with autopsy pathology. (Clinicians and Pathologists)

15. Patients with transfusion-dependent beta thalassaemia major need regular review at a specialist centre to ensure adequate assessment and management of iron overload. (Primary Care Trusts)

16. New national standards for the management of sickle cell disease are soon to be issued and it is to be hoped that these will include regular review of renal function. (Department of Health)

17. In all haemoglobinopathy patients who are acutely ill there should be a check to ensure that the kidneys are functioning properly. Acute illnesses may bring to light other problems such as renal tubular acidosis and all physicians caring for this group of patients must be aware of this. (Clinical Directors)

18. All staff should be aware that people with sickle cell disease are subject to the diseases that other patients suffer from as well. If there is uncertainty as to whether the problem is sickle cell related, advice should be sought from an experienced clinician. (Primary and Secondary Care Trusts)

19. Patients with sickle cell disease are often very skilled in knowing exactly how their crises develop and if they say that this problem '"is different" then the clinician should pay heed and seek further advice if appropriate. (Primary and Secondary Care Trusts)

20. Guidelines and education about vaccination and antibiotic prophylaxis for children should be followed. (Primary Care Trusts)

21. Early intervention is essential in children with sickle cell disease who become acutely unwell to reduce morbidity and mortality. Expert advice should be sought. (Primary and Secondary Care Trusts)

22. All sickle cell disease patients should have a carefully maintained fluid balance chart for the duration of their admission. (Nurses)

23. There is a need to ensure that any deterioration in vital signs is acted upon promptly. NCEPOD would urge those responsible for the continued development and education of staff to take note of these problems. (Clinical Directors)

24. Patients with sickle cell disease or beta thalassaemia major should be managed by, or have access to, clinicians with experience of haemoglobinopathy management. (Primary and Secondary Care Trusts)

25. All patients with sickle cell disease or beta thalassaemia major should be reviewed at least annually at a specialist centre. (Primary Care Trusts)

26. All haemoglobinopathy patients should have a named specialist, ideally a haematologist, responsible for their care. The haematologist must have an appropriate level of expertise to care for the patient or should make links with appropriate experts. (Primary and Secondary Care Trusts)

27. Healthcare centres responsible for the management of patients with haemoglobinopathies should have access to protocols/guidelines from their regional specialist centre. (Primary and Secondary Care Trusts)

28. Cause of death in sickle cell disease patients must be better evaluated, whether by clinicians reviewing the records and writing a death certificate or by pathologists performing an autopsy. Clinico- pathological correlation is critical in this complex disease. (Clinicians and Pathologists)

29. A national database of patients with haemoglobinopathies should be developed and maintained, to include standardised information on death, for regular audit purposes. (Department of Health)

2008 – Systemic Anti-Cancer Therapy: For Better, For Worse?

1. Cancer services managers and clinical directors must ensure that time is made available in consultants' job plans for clinical audit. They must also ensure that the time allocated is used for the defined purpose. (Cancer services managers and clinical directors)

2. Hospitals admitting patients with complications of SACT that do not have emergency general medical and surgical services on site should have a formal arrangement with a hospital that can provide these services. (Medical directors)
3. Hospitals that treat patients with SACT but do not have the facilities to manage patients who are acutely unwell should have a formal agreement with another hospital for the admission or transfer of such patients as appropriate. (Medical directors)

4. A palliative care service should be available for all patients with malignant disease. (Clinical directors)

5. NCEPOD supports the Manual for Cancer Services standard that initial clinical management plans for all cancer patients should be formulated within a multidisciplinary team meeting. The MDT should be responsible for agreeing clinical care pathways, including appropriate chemotherapy regimens, doses and treatment durations. (Clinical directors)

6. The decision whether or not to advise SACT should be undertaken by a consultant oncologist/haemato- oncologist after a comprehensive clinical review of the patient. (Clinical directors and consultants)

7. The decision whether to accept treatment should be made by the patient after they have been fully informed of the potential benefits and toxicities and have had sufficient time to consider their decision and discuss it with their family and carers. (Clinical directors)

8. There should be greater standardisation of the consent form. The name and grade of doctor taking consent should always be stated on the consent form. (Cancer services managers, clinical directors and medical directors)

9. Consent must only be taken by a clinician sufficiently experienced to judge that the patient's decision has been made after consideration of the potential risks and benefits of the treatment, and that treatment is in the patient's best interest. (Clinical directors)

10. Giving palliative SACT to poor performance status patients grade 3 or 4 should be done so with caution and having been discussed at a MDT meeting. (Consultants)

11. Junior medical staff at FY1, FY2, ST1 and ST2 grade should not be authorised to initiate SACT. (Clinical directors)

12. All independent and supplementary prescribers (specialist chemotherapy nurses and cancer pharmacists) and junior medical staff should be locally trained/accredited, following attendance

at a supplementary prescribers' course, before being authorised to prescribe SACT. (Cancer services managers and clinical directors)

13. The results of a pre-treatment full blood count and renal and liver functions tests should be assessed before each cycle of chemotherapy. (Clinical directors)

14. Toxicity check lists should be developed to assist record keeping and aid the process of care in prescribing SACT. (Cancer services managers and clinical directors)

15. Assessment of tumour response to treatment should be undertaken and recorded at appropriate intervals depending on the treatment intent and SACT regimen used. (Consultant oncologists and clinical directors)

16. All SACT prescriptions should be checked by a pharmacist who has undergone specialist training, demonstrated their competence and are locally authorised/accredited for the task. This applies to oral as well as parenteral treatments. (Clinical directors and pharmacists)

17. Pharmacists should sign the SACT prescription to indicate that it has been verified and validated for the intended patient and that all the safety checks have been undertaken. (Pharmacists)

18. If the patient has suffered clinically significant grade 3/4 toxicity with the previous cycle of SACT, a dose reduction or the use of prophylactic GCSF should be considered depending on the treatment intent. (Consultants and clinical directors)

19. Consultants should follow good clinical practice and consider:
    - Reducing the dose of SACT in patients that have: received a number of previous courses of treatment, have a poor performance status, have significant co-morbidity;
    - Reducing the dose of or omitting drugs excreted via the kidney, if the patient has impaired renal function;
    - Reducing the dose of or omitting drugs excreted via the liver, if the patient has impaired liver function.

    (Consultants and clinical directors)

20. A debate within the profession is needed to explore whether it is appropriate that patients treated with SACT should be admitted under general medicine if problems occur. Any substantial change would require expansion of the oncology workforce. An alternative would be a strengthening of links between oncology and general medicine to ensure protocols and training are in place for the management of complications of SACT. (Medical directors, cancer services managers and clinical directors)

21. Emergency admissions services must have the resources to manage SACT toxicity. These should include:

    - A clinical care pathway for suspected neutropenic sepsis;
    - A local policy for the management of neutropenic sepsis;

- Appropriately trained staff familiar with the neutropenic sepsis policy;
- The policy should be easily accessible in all emergency departments;
- Availability of appropriate antibiotics within the emergency department.
  (Cancer services managers and clinical directors)

22. In planning the provision of oncology services outside of cancer centres, commissioners should take into account the need for specialist advice to be readily available when patients are admitted acutely. (Cancer services managers)

23. A pro-active rather than reactive approach should be adopted to ensure that palliative care treatments or referrals are initiated early and appropriately. Oncologists should enquire at an appropriate time, about any advance decisions the patient might wish to make should they lose the capacity to make their own decisions in the future. (Consultants)

24. Regular clinical audit should be undertaken on the management of all cases of neutropenic sepsis following the administration of SACT. The process of care should be compared to standards agreed by the cancer network. Cancer centres and cancer units should collaborate in undertaking these audits. (Clinical directors)

25. All deaths within 30 days of SACT should be considered at a morbidity and mortality or a clinical governance meeting. (Clinical directors and consultants)

2008 – Coronary Artery Bypass Grafts: The Heart of the Matter

1. Cardiothoracic units need to adhere to the requirement of the National Service Framework for Coronary Artery Disease and use protocols for referrals to their unit. These protocols should be standardised nationally for patients who require coronary artery bypass graft surgery. The degree of urgency of referral should be emphasised within these protocols (Clinical Directors).

2. Cardiothoracic units need to ensure that monitoring systems are in place to record nationally agreed audit data on referrals and the decision to operate. These systems need to identify patients who are in danger of breaching national agreed waiting times so that surgery can be expedited (Clinical Directors).

3. If cardiothoracic units use integrated care pathways (ICPs) for patients requiring CABG surgery these should be fit for purpose. A standard minimum data set of information that should be included in these ICPs needs to be developed (Clinical Directors).

4. Pre-admission clinics have an important place in assessing and determining patient requirements for surgery. Cardiothoracic units need to review the function of these clinics to ensure that they meet nationally agreed requirements (Clinical Directors).

5. Patients who have acute myocardial ischaemia and require CABG require special attention. Many of these patients are intra or inter-hospital transfers. This group of patients should have surgery performed as soon as their clinical condition permits based on appropriate investigation and pre-operative therapeutic optimisation (Clinical Directors).

6. Each unit undertaking coronary artery bypass grafting should hold regular pre-operative MDT meetings to discuss appropriate cases. Core membership should be agreed and a regular audit of attendance should be performed (Clinical Directors).

7. Each unit should have a clear policy for which cases should be discussed at pre-operative MDT meetings (Clinical Directors).

8. There should be a clear protocol for deciding on best treatment strategy (surgery v PCI) that involves both cardiologists and surgeons (Clinical Directors).

9. A clear written plan should be made pre-operatively for all patients (with the exception of salvage cases) (Clinical Directors).

10. Trusts and consultants should identify time within the agreed job plan to allow participation in MDT meetings (Clinical Directors).

11. There should be a written protocol available for the pre- operative investigation of all patients (Clinical Directors).

12. Pre-operative investigations should be contemporaneous; where delay has occurred between assessment and surgery consideration should be given to repeating investigations (Clinical Directors).

13. There must be a system in place to ensure that pre- operative investigations are reviewed by a senior clinician and acted upon (Clinical Directors).

14. Further studies should be undertaken to establish the risks and benefits of continuing pre-operative medication. Guidelines should be produced based upon sound evidence (Society for Cardiothoracic Surgery in Great Britain and Ireland / NICE).

15. NCEPOD supports the guidance of the American College of Cardiology and the American Heart Association that clopidogrel should be stopped prior to surgery wherever practicable.

16. There should be a protocol to ensure timely and appropriate review of unstable cases that involves both cardiologists and cardiac surgeons (Clinical Directors).

17. The senior surgeon needs to be aware of any change in clinical status in the pre-operative period to ensure that surgery is still appropriate (Consultant Cardiothoracic Surgeons).

18. Given the high mortality when operating soon after an acute infarct more use should be made of strategies to optimise clinical condition, provide symptom relief and allow surgery to be performed at a later date (IABP and PCI) (Clinical Directors).

19. A “track and trigger” system should be used to provide early recognition of clinical deterioration and early involvement of consultant staff (Clinical Directors).

20. All patients should have height, weight and a BMI recorded on admission, unless their clinical condition precludes this (Medical Directors).

21. Where pre-operative co-morbidity exists, there should be a clear written management plan which is followed in order to optimise the physical status of the patient prior to surgery, and identify the need for specific postoperative support to be available (Clinical Directors).

22. There should be clear guidance about how to estimate LV function, and at what point in the patient journey this should be ascertained and recorded. Units should audit discrepancies in recorded LV function from surgeons and anaesthetists and where there are significant differences ensure that systems are in place to address this (Clinical Directors and Audit Leads).

23. Patients who have a more complicated postoperative period are difficult to manage. Any interaction between different medical specialities about patient management should be at consultant-to-consultant level, in particular for patients with suspected intra-abdominal pathology (Consultants).

24. Cardiac recovery areas/critical care units are best suited to managing the majority of patients who recover uneventfully. Patients who are developing critical illness and additional organ failure should be managed in an environment with sufficient throughput of such patients to have the resources and experience to provide optimum outcomes (General Critical Care Units).

25. Cardiac critical care units should have the facility to provide renal replacement therapy (Cardiac Critical Care Units).

26. Senior clinicians should be readily available throughout the peri-operative period in order to ensure that complications (which occur commonly) are recognised without delay and managed appropriately (Clinical Directors and Consultants).

27. A clear written operative plan should be available. This should include contingency arrangements where the findings at surgery dictate an alternative approach (back planning) (Clinical Directors and Consultant Cardiothoracic Surgeons).

28. Where unexpected events occur during surgery, surgeons should have an adaptable approach, and modify the operation to suit the circumstances of the case (Cardiothoracic Surgeons).

29. A clear description of the extent of the disease should be recorded (Cardiothoracic Surgeons).

30. Where an operation performed deviates from the operation planned, the reason for this should be clearly documented (Cardiothoracic Surgeons).

31. Protocols must exist for handover between clinical teams and patient locations to ensure effective communication and continuity of care (Clinical Directors).

32. All patients should receive an information sheet describing the proposed operation (Consultant Cardiothoracic Surgeons).

33. A consultant should obtain consent for coronary artery bypass grafting (Consultant Cardiothoracic Surgeons).

34. Potential complications must be recorded on the consent form. This should detail the likely complications and the incidence of these complications based on local data (Clinical Directors and Consultant Cardiothoracic Surgeons).

35. An accurate risk of death must be quoted on the consent form. This should take into account the proposed procedure and clinical status of the patient (Clinical Directors and Consultant Cardiothoracic Surgeons).

36. Morbidity and mortality audit meetings should be held in all cardiothoracic units. The majority of units should hold meetings at least monthly. If the numbers of cases performed in a unit are small, alternative arrangements should be made to incorporate these cases in other surgical audit meetings (Clinical Directors and Audit Leads).

37. The personnel present at morbidity and mortality audit meetings should reflect the composition of the multidisciplinary cardiothoracic team (The Cadiac Team and Clinical Directors).

38. A clear record should be kept of morbidity and mortality audit meeting which should comply with national guidelines (Audit Leads).

39. A common system for grading of quality of care of patients should be employed for all patients discussed in morbidity and mortality audit meetings. The peer review scale used by NCEPOD provides such a system (Clinical Directors).

40. There should be robust systems in place to learn from the findings of morbidity and mortality meetings. The cardiothoracic audit leads should be responsible for managing this process (Audit Leads).

41. The decline in the number of autopsies performed following deaths from first time coronary artery bypass grafting needs to be reversed. To achieve an increase in the autopsy rate will require a substantial change to both the coronial system and hospital autopsy service (Chief Executives, Medical Directors and Clinical Directors).

2009 – Acute Kidney Injury: Adding Insult to Injury?

1. Initial clerking of all emergency patients should include a risk assessment for AKI. (Clinical Directors and Medical Directors)

2. All patients admitted as an emergency, regardless of specialty, should have their electrolytes checked routinely on admission and appropriately thereafter. This will prevent the insidious and unrecognised onset of AKI. (Clinical Directors and Medical Directors)

3. Predictable and avoidable AKI should never occur. For those in-patients who develop AKI there should be both a robust assessment of contributory risk factors and an awareness of the possible complications that may arise. (Clinical Directors and Medical Directors)

4. Undergraduate medical training should include the recognition of the sick patient and the prevention, diagnosis and management of AKI. (Deaneries)

5. Postgraduate training for all specialties should include awareness, causes, recognition, management and complications of AKI. (Deaneries)

6. Reagent strip urinalysis should be performed on all emergency admissions. (Clinical Directors and Medical Directors)

7. NCEPOD recommends that the guidance for recognising the acutely ill patient (NICE CG 50) is disseminated and implemented. In particular all acute patients should have admission physiological observations performed and a written physiological monitoring plan made, taking into account the degree of illness and risk of deterioration. (Clinical Directors and Medical Directors)

8. Trusts need to put in place a mechanism to ensure that NICE guidance (CG 50) has been implemented. An audit of patients who suffer serious adverse events (cardiac arrest or unplanned admission to critical care) to assess compliance with NICE CG 50 should be presented to the Trust Clinical Governance Committee on an annual basis. (Clinical Directors and Medical Directors)

9. When referral is made for specialist advice from nephrologists prompt senior advice and a review where appropriate is required. All patients with AKI should be promptly discussed by the renal registrar with their consultants. (Clinical Directors and Medical Directors)

10. Every hospital should have a written guideline detailing how the three clinical areas where patients with AKI are treated (critical care unit, the renal unit and the nonspecialist ward) interact to ensure delivery of high quality, clinically appropriate care for patients with AKI. (Clinical Directors and Medical Directors)

11. Early recognition of at risk patients should allow patient involvement in treatment limitation decisions before clinical condition deteriorates and the opportunity for this involvement is missed. (Clinical Directors and Medical Directors)

12. Treatment limitation decisions should be made with reference to guidance produced by the GMC and within the legislative framework of the Mental Capacity Act. (Clinical Directors and Medical Directors)

13. All acute admissions should receive adequate senior reviews (with a consultant review within 12 hours of admission as previously recommended by NCEPOD3. (Clinical Directors and Medical Directors)

14. There should be sufficient critical care and renal beds to allow rapid step up in care if appropriate. (Department of Health)

15. All acute admitting hospitals should have access to either onsite nephrologists or a dedicated nephrology service within reasonable distance of the admitting hospital. (Clinical Directors and Medical Directors)

16. All acute admitting hospitals should have access to a renal ultrasound scanning service 24 hours a day including the weekends and the ability to provide emergency relief of renal obstruction. (Clinical Directors and Medical Directors)

17. All level 3 units should have the ability to deliver renal replacement therapy; and where appropriate these patients should receive clinical input from a nephrologist. (Clinical Directors and Medical Directors)

2009 – Deaths in Acute Hospitals: Caring To the End?

1. The seniority of clinical staff assessing a patient and making a diagnosis should be determined by the clinical needs of the patient, and not the time of day. Services should be organised to ensure that patients have access to consultants whenever they are required. The organisation of services will vary from specialty to specialty, but may require input from clinical directors, medical directors and the Strategic Health Authority.

2. Better systems of handover must be established, and this must include high quality legible medical record keeping. (Consultants)

3. The benefits and risks to patient safety of reduced working hours should be fully assessed, and clinical teams must be organised to ensure that there is continuity of care. (Clinical Directors)

4. Systems of communication between doctors and other health care professionals must improve. In particular trainees must seek consultant input at an early stage to assist in the management of emergency patients. (Clinical Directors and Medical Directors)

5. The training of nurses and doctors must place emphasis on the basic skills of monitoring vital functions, recognising deterioration, and acting appropriately (which will often be to seek senior input). (Deaneries, Clinical Directors)

6. All trainees need to be exposed in an appropriate learning environment to the management of emergency patients. Clinical services must be organised to allow appropriately supervised trainee involvement. Organisation of services must address training needs, and this will vary from specialty to specialty. (Clinical Directors)

7. Anaesthesia Anaesthetic charts should routinely have a section that allows the recording of anaesthetic information (leaflets received, risks etc.) given to patients. (Clinical Directors)

8. Anaesthetic charts should record the named consultant and the grade of the anaesthetist anaesthetising the patient. (Clinical Directors and Consultants)

9. All trainees and staff and associate specialist grades should record the name and location of a supervising consultant and whether they have discussed the case with that consultant. (Clinical Directors and Consultants)

10. All admissions to hospital should have appropriate investigations and these should be performed without unnecessary delay. (Consultants)

11. Hospitals which admit patients as an emergency must have access to plain radiology and CT scanning 24 hours per day, with immediate reporting (This recommendation was previously reported in 'Emergency Admissions: A Journey in the Right Direction?' in 2007). (Medical Directors)

12. There should be robust mechanisms to ensure communication of critical, urgent or unexpected radiological findings in line with guidance issued by the Royal College of Radiologists. (Clinical Directors)

13. Diagnostic and interventional radiology services should be adequately resourced to support the 24 hour needs of their clinicians and patients. (Clinical Directors)

14. Any difference between the provisional and final radiology report should be clearly documented in the final report. (Consultants)

2010 – Parenteral Nutrition: A Mixed Bag

Adult Parenteral Nutrition:

1. PN should only be given when enteral nutrition has been considered, and excluded, as either inappropriate and/or impracticable. However situations may arise where both enteral and parenteral nutrition are necessary. (Consultants)

2. Where the possibility exists that a patient may require PN this should be recognised early. Subsequently, should PN become a clinical necessity, this should be rapidly actioned and PN started at the earliest opportunity. However, there is rarely, if ever, an indication to start adult PN out of normal working hours. (Consultants)

3. Patient assessment should be robust to ensure that PN is the appropriate nutritional intervention and that adequate PN is administered. The clinical purpose and goal of the PN should be documented. (Consultants)

4. Regular documented clinical monitoring, of the patient and PN prescription, should be mandatory. Monitoring should include daily weights (where possible) and documentation of the success of the PN within the overall clinical picture. (Consultants)

5. Regular documented biochemical monitoring should be mandatory to ensure avoidable metabolic complications never occur. (Clinical Directors)

6. Additional intravenous fluids should only be prescribed where there has been an active assessment of the volume of PN already being administered and there is clear indication that further fluids/electrolytes are required. (Consultants)

7. There must be active under/post graduate education about the role of PN, its complications and side effects. (Deaneries)

8. All hospitals should have a PN proforma which includes: Indication for PN; Treatment goal; Risk of and precautions taken against re-feeding syndrome; PN prescription; Weight and Biochemical monitoring. (Medical Directors)

Neonatal Parenteral Nutrition:

9. Careful and early consideration should be given to the need for PN in neonates and once the decision to commence PN is made it should be started without undue delay. (Consultants)

10. The first PN given must be appropriate to the neonate's requirements. (Consultants)

11. Close monitoring of the patient must be achieved so that metabolic complications can be avoided. (Consultants)

12. Neonatal Units should have an agreed policy for nutritional requirements and use a proforma that includes this information which is tailored for each infant and placed in the case notes. (Clinical Directors)

13. Hospitals in which neonates are cared for should develop a team approach to ensure safe and effective nutritional support, recognising that this should be a multidisciplinary exercise with sharing of expertise. Depending on the type of institution and availability of personnel, the composition of these teams may vary but could include neonatologists, paediatricians, paediatric surgeons, pharmacists, dietitians and experts in nutrition. This team could also provide support to other clinical areas caring for children and have a role in education and training for those involved in PN care. (Medical Directors)

14. There is an urgent need for Neonatal Units across the UK to have a consensus on best PN practice based on current scientific evidence. (Consultant Neonatologists)

15. Neonatal units should undertaken regular audit of PN practice which should include the complications of PN. (Clinical Directors)

16. The National Institute for Health and Clinical Excellence should develop guidelines on nutritional support for neonates and children in a similar manner to their recommendations for adults. (NICE)

17. CVC insertion is an invasive procedure with well recognised risks. Insertion should be clearly documented in the case notes including: the designation of the operator, the type of CVC, a description of the insertion technique, the use of imaging, confirmation of the position of the catheter tip. (Consultants)

18. All hospitals must have policies on the management CVCs which should include: insertion of CVC, care of indwelling CVC, detection and management of complications, monitoring and audit, including adherence to the policies (Medical Directors)

19. There must be improved education around CVC insertion and management; as well as the recognition and management of CVC complications. (Clinical Directors)

20. Nutrition teams have an important role in ensuring quality control around the initiation, supply and monitoring of PN. Whilst the data from this study did not show a clear correlation between overall care and the involvement of a nutrition team it was not designed to do so and no adverse inference should be made from this. All hospitals involved with PN should have a multidisciplinary nutrition team involved in both enteral and parenteral nutrition. (Medical Directors)

21. All hospitals should keep a central record of where and to whom PN has been supplied. (Medical Directors and Heads of Pharmacy)

22. All hospitals should have policies on initiating PN to avoid inappropriate use and safe prescribing. (Medical Directors)

23. All hospitals should have a dedicated CVC/PICC service to ensure high-level expertise is practised within this interventional area. (Medical Directors)

24. Surgical teams are high volume users of PN. As such they need to engage more in clinical nutrition issues and increase their profile within nutrition teams. (Medical Directors and Clinical Directors)

2010 – Cosmetic Surgery: On The Face Of It

1. Regulatory bodies, such as the Care Quality Commission, should more closely monitor the adherence to national requirements for audit and scrutiny of sites under licence. The scope of regulation should include all sites including those only undertaking consultation.

2. National professional cosmetic surgery bodies should issue guidelines as to the training, level of knowledge and experience required for a cosmetic surgeon to achieve and maintain competence in the procedures which he or she undertakes.

3. Those considering having cosmetic surgery should be advised to check Care Quality Commission registration of any site they attend.

4. Guidelines for the equipping of theatres and the perioperative monitoring of patients must be followed.

5. Good practice demands a two-stage consent process for those undergoing cosmetic surgery.

6. A national cosmetic surgery outcome database should be considered.

7. More formal training programmes must become established, and like any other surgical training, these should be subject to rigorous assessment of competence, which should lead to a certificate attesting to the surgeon's level of competence in specified procedures. The present reliance on inclusion on the specialist register does not give any assurance that a surgeon has received adequate training in cosmetic surgery.

8. Cosmetic surgical practice should be subject to the same level of regulation as any other branch of surgery.

9. Independent health care providers should only allow practising privileges to those cosmetic surgeons who can demonstrate that they have achieved and are able to maintain competence in the procedures which they offer.

10. Defence organisations might consider whether it is appropriate to indemnify practitioners who are unable to demonstrate the attainment and maintenance of appropriate levels of competence for the procedures which they perform.

11. Psychological assessment is an important part of any patient's cosmetic surgery episode and should be routine. This part of a patient's care must be delivered by those adequately trained and reliable psychological assessment tools need to be developed.

12. Regulation should be introduced to prevent the use of financial inducements to influence the process of informed consent.

2010 – Surgery in the Elderly

1. Routine daily input from Medicine for the Care of Older People should be available to elderly patients undergoing surgery and is integral to inpatient care pathways in this population. (Trusts, Clinical Directors and Commissioners)

2. All hospitals should address the need for nutrition and mental capacity to be assessed and documented in the elderly on admission as a minimum standard. (Trusts and Clinical Directors)

3. Comorbidity, disability and frailty need to be clearly recognised and seen as independent markers of risk in the elderly. This requires skill and multidisciplinary input including early involvement of Medicine for the Care of Older People. (Clinical Directors and Trusts)

4. Assessment of capacity and appropriate use of the consent process should be clearly understood and documented by all clinicians taking consent in the elderly. (Clinical Directors)

5. Medicine reviews need to be a regular daily occurrence in the peri-operative period. Input of both Medicine for the Care of Older People (MCOP) clinicians and an experienced ward pharmacist may greatly assist this process. (Clinical Directors and Trusts)

6. Delays in surgery for the elderly are associated with poor outcome. They should be subject to regular and rigorous audit in all surgical specialities, and this should take place alongside identifiable agreed standards. (Clinical Directors and Governance Leads)

7. Senior clinicians in surgery, anaesthesia and medicine need to be involved in the decision to operate on the elderly. Risk assessment must take into account all information strands, including risk factors for acute kidney injury. (Consultants, Clinical Directors and Trusts)

8. An agreed means of assessing frailty in the perioperative period should be developed and included in risk assessment. (Specialist Associations)

9. Pain must be assessed and managed as a priority before operation. (Consultants and Trusts)

10. All elderly surgical admissions should have a formal nutritional assessment as soon as practicable after their admission so that malnutrition can be identified and managed appropriately. (Trusts, Hospital Nutrition Teams)

11. Temperature monitoring and management of hypothermia should be recorded in a nationally standardised anaesthetic record. This is particularly important in elderly patients. (Clinical Directors)

12. There should be clear strategies for the management of intra-operative low blood pressure in the elderly to avoid cardiac and renal complications. Non invasive measurement of cardiac output facilitates this during major surgery in the elderly. (Clinical Directors and Specialist Associations)

13. There is an ongoing need for provision of peri-operative level 2 and 3 care to support major surgery in the elderly, particularly for those with comorbidity. For less major surgery extended recovery and high observation facilities in existing wards should be considered. (Commissioning Leads, Trusts, Clinical Directors)

14. Post operative Acute Kidney Injury (AKI) is avoidable in the elderly and should not occur. There is a need for continuous postgraduate education of physicians, surgeons and anaesthetists around the assessment of risk factors for the development of AKI in the elderly surgical patient. (Postgraduate Deans, Medical Directors)

15. Fluid management must be clearly documented, and form part of the routine review and handover between theatres and wards. This should continue on at least a daily basis thereafter, alongside monitoring of biochemical function. (Consultants, Nurses and Governance Leads)

16. Pain is the 5th vital sign, and requires the same status as heart rate and blood pressure in the assessment and management of all patients. Clear and specific guidance on the recognition and treatment of pain in the elderly should be incorporated into education programmes. (Clinical Directors, Postgraduate Deans, Trusts)

17. A fully resourced acute pain service (APS) is essential within the context of modern secondary care services. This includes the Independent Sector. (Clinical Directors and Commissioners)

18. The British Orthopaedic Association and The British Geriatric Society should provide more specific guidance on the ideal levels of seniority and speciality input into the assessment and decision making phase of the care pathway for patients with fractured neck of femur. (British Orthopaedic Association, British Geriatrics Society)

19. The decision about when a patient's physical condition is optimised and when to operate in patients with fractured neck of femur is critical, and requires multi-disciplinary input and expertise. There must be senior surgical, medical and anaesthetic input at this point in the care pathway. (Clinical Directors, Consultants)

20. Greater vigilance is required when elderly patients with non-specific abdominal symptoms and signs (diarrhoea, vomiting, constipation, urinary tract infection) present to the Emergency Department. Such patients should be assessed by a doctor with sufficient experience and training to exclude significant surgical pathology. (Trusts, Clinical Directors)

21. The elderly should receive no different level of care from other patients. As NCEPOD has previously recommended10 when admitted to a medical ward consultant review should occur within 12 hours. (Consultants, Clinical Directors and Commissioners)

22. Clear protocols for the post operative management of elderly patients undergoing abdominal surgery should be developed which include where appropriate routine review by a MCOP consultant and nutritional assessment. (Clinical Directors)

23. A robust method of risk assessment for elderly patients presenting with an acute intra-abdominal catastrophe should be developed.

24. Trusts should audit delays in proceeding to surgery in patients requiring emergency or urgent abdominal surgery and implement appropriate mechanisms to reduce these. (Trusts, Clinical Directors)

2011 – Surgery in Children: Are We There Yet?

Surgical workload:

1. All hospitals that undertake surgery in children must have the necessary information systems in place to determine the number of patients that are treated within their hospital for monitoring, clinical governance and financial purposes. (Trust Chief Executives)

Clinical networks for children's surgery:

2. There is a need for a national Department of Health review of children's surgical services in the UK to ensure that there is comprehensive and integrated delivery of care which is effective, safe and provides a high quality patient experience. (Department of Health and Devolved Administration Governments)

3. National NHS commissioning organisations including the devolved administrations need to adopt existing recommendations for the creation of formal clinical networks for children's surgical services. These need to provide a high quality child focused experience which is safe and effective and meets the needs of the child. (National Commissioners)

Transfer of children:

4. All hospitals that admit children should have a comprehensive transfer policy that is compliant with Department of Health and Paediatric Intensive Care Society guidance and should include; elective and emergency transfers, staffing levels for the transfer, communication procedures, family support, equipment provision and transport arrangements. (Medical Directors)

Team working:

5. All hospitals that provide surgery for children should have clear operational policies regarding who can operate on and anaesthetise children for elective and emergency surgery, taking into account on-going clinical experience, the age of the child, the complexity of surgery and any co-morbidities. These policies may differ between surgical specialities. (Medical Directors)

Clinical governance and audit:

6. All hospitals that undertake surgery in children must hold regular multidisciplinary audit and morbidity and mortality meetings that include children and should collect information on clinical outcomes related to the surgical care of children. (Medical Directors)

Pre-operative assessment of elective paediatric surgical patients:

7. Hospitals in which surgery in children is undertaken should provide written information for children and parents about anaesthesia. Good examples are available from the Royal College of Anaesthetists website. (Clinical Directors in Anaesthesia)

Theatre scheduling for children:

8. Hospitals that have a large case load for children's surgery should consider using dedicated children's operating theatres. (Clinical Directors in Surgery and Anaesthesia and Medical Directors)

9. Hospitals in which a substantial number of emergency children's surgical cases are undertaken should consider creating a dedicated daytime emergency operating list for children or ensure they take priority on mixed aged emergency operating lists. (Clinical Directors in Surgery and Anaesthesia and Medical Directors)

Specialised staff for the care of children:

10. Children admitted for surgery whether as an inpatient or an outpatient must have immediate access to paediatric medical support and be cared for on a ward staffed by appropriate numbers of children trained nurses. (Clinical Directors)

11. There is a need for those professional organisations representing peri-operative nursing and operating department practitioners to create specific standards and competencies for staff that care for children while in the operating theatre department. (British Anaesthetic and Recovery Nurses Association, College Operating Department Practitioners, Association for Perioperative Practice, Royal College of Nursing)

Management of the sick child:

12. All hospitals that admit children as an inpatient must have a policy for the identification and management of the seriously ill child. This should include Track & Trigger and a process for escalating care to senior clinicians. The National Institute for Health and Clinical Excellence needs to develop guidance for the recognition of and response to the seriously ill child in hospital. (Medical Directors, National Institute for Health and Clinical Excellence)

13. All hospitals that admit children must have a resuscitation policy that includes children. This should include the presence of onsite paediatric resuscitation teams that includes health care professionals who have advanced training in paediatric resuscitation. (Medical Directors and Resuscitation Leads)

14. Paediatric acute pain management Existing guidelines on the provision of acute pain management for children should be followed by all hospitals that undertake surgery in children. (Medical Directors)

15. Necrotising enterocolitis Medical notes for babies with NEC require careful audit to ensure that the views and decisions of all members of the multi-disciplinary team are accurately recorded. (Medical Directors)

Paediatric acute pain management:

16. Existing guidelines on the provision of acute pain management for children should be followed by all hospitals that undertake surgery in children. (Medical Directors)

17. Team working All hospitals that provide surgery for children should have clear operational policies regarding who can operate on and anaesthetise children for elective and emergency surgery, taking into account on-going clinical experience, the age of the child, the complexity of surgery and any co-morbidities. These policies may differ between surgical specialities. (Medical Directors)

Inter-hospital transfer:

18. National standards, including documentation for the transfer of all surgical patients, irrespective of whether they require intensive care need to be developed by regional networks. (Network Leads)

19. Hospital teams working in both specialist and non specialist centres should be in a state of readiness for transfer of babies and children requiring emergency surgery, and be prepared to provide high level and timely support for these transfers. Surgical emergencies may require rapid triage, simultaneous with resuscitation and communication with tertiary care providers. (Medical Directors and Clinical Directors)

20. When a decision to transfer a patient for (less urgent) surgical care has been made, this should be expedited. Transfer method and personnel should be agreed in advance. (Clinical Directors)

Pre-operative care:

21. Expertise in paediatric radiology is an essential adjunct to the running of a service for children requiring surgery.

22. Multidisciplinary team meetings for complex cases should be undertaken pre-operatively except when this is predicated by the urgency of the case. Documentation of inter-professional discussions is essential even if written in retrospect. (Medical Directors and Clinical Directors)

Consent and information for patients & parents:

23. Consent by a senior clinician, ideally the one performing the operation should be normal practice in paediatrics, as in other areas of medicine and surgery. Documentation of grade confirms that this process has occurred. This is already a national recommendation. (Medical Directors and Clinical Directors)

24. In surgery which is high risk due to co-morbidity and/or anticipated surgical or anaesthetic difficulty, there should be clear documentation of discussions with parents and carers in the medical notes. Risk of death must be formally noted, even if difficult to quantify exactly. (Consultants)

End of life care:

25. National guidance should be developed for children that require end-of-life care after surgery. (Department of Health, Royal Colleges, appropriate specialist societies)

26. Clinicians must ensure that appropriate records are made in the medical notes of all discussions that take place with a child's parents or relatives after death. In addition it is mandatory that the name and grade of clinicians involved at all stages of care are clearly recorded in the medical notes and on anaesthetic and operation records. (Guidelines from Royal Colleges/specialist societies and Medical Directors)

27. Confirmation that a death has been discussed at a morbidity and mortality meeting is required. This should comprise a written record of the conclusions of that discussion in the medical notes. (Medical Directors)

Clinical governance and audit:

28. All hospitals that undertake surgery in children must hold regular multidisciplinary audit and morbidity and mortality meetings that include children and should collect information on clinical outcomes related to the surgical care of children. (Medical Directors)

This survey and the advice from our specialist:

29. Advisors have highlighted the difficulties in decision-making during both medical management and the decision to operate in babies with NEC. A national database of all babies with NEC might facilitate this aspect of care and generate data upon which to base further research. (Department of Health, Specialist Societies)

30. Neurosurgery Urgent completion of the "Safe and Sustainable Review of Children's Neurosurgical Services" is required with implementation of the appropriate pathways of care that this is likely to recommend. This should be followed by a further audit to ensure compliance with national standards and models of care for all children requiring neurosurgery.

2011 – Peri-Operative Care: Knowing the Risk

1. There is a need to introduce a UK wide system that allows rapid and easy identification of patients who are at high risk of postoperative mortality and morbidity. (Departments of Health in England, Wales & Northern Ireland)

2. The decision to operate on high risk patients (particularly non-elective) should be made at consultant level, involving surgeons and those who will provide intra and postoperative care. (Clinical Directors and Consultants)

3. An assessment of mortality risk should be made explicit to the patient and recorded clearly on the consent form and in the medical record. (Consultants)

4. Once a decision to operate has been made there is a need to provide a package of full supportive care. This may include critical care admission or support, for the higher risk patients. If critical care admission is not possible then the decision to operate is being made without provision of an appropriate package of care: this should be communicated to the patient as part of the consent procedure. (Clinical Directors and Consultants)

5. Better intra-operative monitoring for high risk patients is required. The evidence base supports the use of peri-operative optimisation and this relies on extended haemodynamic monitoring. NICE Medical Technology Guidance 3 relating to cardiac output monitoring should be applied. (Clinical Directors)

6. The postoperative care of the high risk surgical patient needs to be improved. Each Trust must make provision for sufficient critical care beds or pathways of care to provide appropriate support in the postoperative period. (Medical Directors)

7. To aid planning for provision of facilities for high risk patients, each Trust should analyse the volume of work considered to be high risk and quantify the critical care requirements of this cohort. This assessment and plan should be reported to the Trust Board on an annual basis. (Medical Directors)

8. All elective high risk patients should be seen and fully investigated in pre-assessment clinics. Arrangements should be in place to ensure more urgent surgical patients have the same robust work up. (Clinical Directors and Consultants)

9. Greater assessment of nutritional status and its correction should be employed in high risk patients. (Consultants)

10. High risk patients should have fluid optimisation in a higher care level area pre-operatively, if it is to be adequate and contribute to better outcomes. (Consultants)

11. The adoption of enhanced recovery pathways for high risk elective patients should be promoted. (Clinical Directors)

12. Given the high incidence of postoperative complications demonstrated in the review of high risk patients, and the impact this has on outcome there is an urgent need to address postoperative care; this supports the prospective data. (Clinical Directors)

2012 – Cardiac Arrest Procedures: Time to Intervene?

1. Standards of clerking/examination and recording thereof should be improved. Each hospital should ensure that the detail required in clerking and examination is explicit and communicated to doctors-in-training as part of the induction process. A regular (6-monthly) audit of performance against these agreed standards should be performed and reported through the governance structure of the organisation. (Medical Directors and all Doctors)

2. Hospitals must ensure appropriate supervision for doctors-in-training. Delays in escalation to more senior doctors due to lack of recognition of severity of illness by doctors in training are unacceptable and place patients at risk. (Medical Directors)

3. Each Trust/hospital must provide sufficient critical care capacity or pathways of care to meet the needs of its population. (Chief Executives)

4. Each entry in a patient's case notes must contain date, time, location of patient and name and grade of staff and their contact details. It must also contain information on the most senior team member present during that patient contact (name and grade). (All health Care Professionals)

5. As previously recommended by NCEPOD and the RCP, all acute admissions must be reviewed at consultant level within 12 hours of admission. Earlier consultant review may be required and arrangements should be in place to ensure that this is available. A regular (6-monthly) audit of performance against this standard should be performed and reported through the governance structure of the organisation. (Medical Directors and Consultants)

6. CPR status must be considered and recorded for all acute admissions, ideally during the initial admission process and definitely at the initial consultant review when an explicit decision should be made, and clearly documented (for CPR or DNACPR). When, during the initial admission, CPR is considered as inappropriate, consultant involvement must occur at that time. (All Doctors)

7. NICE Clinical Guideline 50 (Acutely Ill patients in hospital: Recognition of and response to acute illness in adults in hospital) is not applied universally. Each hospital must ensure that they comply with this NICE guidance. (Medical Directors)

8. For all patients requiring monitoring, there must be clear instructions as to the type and frequency of observations required. Where 'track and trigger' systems are used the initial frequency of observations should be stated clearly by the admitting doctor. (All Doctors)

9. Where patients continue to deteriorate after non-consultant review there should be escalation of patient care to a more senior doctor. If this is not done, the reasons for non-escalation must be documented clearly in the case notes. (All Doctors)

10. Hospitals should undertake a detailed audit of the period prior to cardiac arrest to examine whether antecedent factors were present that warned of potential cardiac arrest and what the clinical response to those factors was. (Medical Directors)

11. A national standard dataset should be developed to audit antecedent factors against.

12. An effective system for recording all decisions and discussions relating to CPR/DNACPR must be established, allowing all people who may care for the patient to be aware of this information. (Medical Directors)

13. Health care professionals as a whole must understand that patients can remain for active treatment but that in the event of a cardiac arrest CPR attempts may be futile. Providing active treatment is not a reason not to consider and document what should happen in the event of a cardiac arrest. (All Health Care Professionals)

14. The use of 'ceilings of care' documentation would facilitate decision making and clarity of intent. There is need for a national project to lead this work.

15. Hospitals must arrange services and equipment to ensure that defibrillation is delivered within three minutes of cardiac arrest (for shockable rhythms). (Medical Directors)

16. All CPR attempts should be reported through the Trust/Hospital critical incident reporting system. This information should be reported to the Trust/Hospital Board on a regular basis. (Medical Directors)

17. Each Trust/Hospital should set a local goal for reduction in cardiac arrests leading to CPR attempts. Progress against this goal should be reported to the Trust/Hospital Board on a regular basis. (Medical Directors)

18. Each hospital should ensure there is an agreed plan for airway management during cardiac arrest. This may involve bag and mask ventilation for cardiac arrests of short duration, tracheal intubation if this is within the competence of members of the team responding to the cardiac arrest or greater use of supraglottic airway devices as an alternative. (Medical Directors)

19. Each hospital should audit all CPR attempts and assess what proportion of patients should have had a DNACPR decision in place prior to the arrest and should not have undergone CPR, rather than have the decision made after the first arrest. This will improve patient care by avoiding undignified and potentially harmful CPR attempts during the dying process. (Medical Directors)

20. Consultant input is required in the immediate post arrest period to ensure that decision making is appropriate and that the correct interventions are undertaken. (Consultants)

21. Coronary angiography and PCI should be considered in all cardiac arrest survivors where the cause of cardiac arrest is likely to be primary myocardial ischaemia. (Consultants)

22. Organ donation should be considered in every case where life sustaining therapies are being withdrawn. (Consultants)

2012 - Bariatric Surgery: Too Lean A Service?

1. It should be the duty of all bariatric surgery teams to follow-up patients by telephone or in person at regular intervals post surgery. The first of these follow-up calls should be within seven days of surgery and frequently thereafter to complement outpatient follow-up. (Clinical Directors and Consultants)

2. In common with other types of specialist surgery, bariatric surgery is not for the occasional operator. The Specialist Associations involved with bariatric surgery should provide guidance regarding the numbers of procedures which both independent operators and institutions should achieve in order to optimise outcomes. (Specialist Associations)

3. All hospitals that undertake weight loss surgery on morbidly obese patients or admit patients as an emergency must have appropriate, properly fitting antiembolism stockings (or equivalent). (Ward Managers)

4. There is a global need to provide imaging modalities that are suitable for morbidly obese patients, wherever they are admitted and this may be best dealt with by an escalation process and by specification at the time of refurbishment. (Executive Boards and Clinical Directors)

5. All patients considered for weight loss surgery should receive dietary assessment and education preferably prior to referral, but definitely prior to surgery. (Consultants, Dietitians and General Practitioners)

6. All patients must have access to the full range of specialist professionals appropriate for their needs in line with NICE guidelines. (Clinical Directors and Medical Directors)

7. The value of MDTs, their optimal configuration, and their appropriateness for bariatric patients with different needs to be agreed by the healthcare professionals involved in their care. (Specialist Associations)

8. The outcome of all MDT discussions must be documented in the medical records. Where an MDT discussion has not taken place this must also be documented with reasons. (Consultants)

9. There should be a greater emphasis on psychological assessment and support and this should occur at an earlier stage in the care pathway for obese patients. Psychological screening tools are available and may be of value in identifying those patients requiring formal psychological intervention. (Consultants)

10. All bariatric patients should have an assessment of the predicted difficulty of intubation recorded. (Anaesthetists)

11. All bariatric patients should attend a pre-assessment clinic, during which they should have access to a full range of health professionals appropriate to their needs, including where required pre-admission assessment by an anaesthetist. (Clinical Directors and Consultants)

12. As for all elective surgery, a deferred two-stage consent process with sufficient time lapse should be utilised, and details of benefits and risks should be clearly described, and supported with written information. The consent process should not be undertaken in one stage on the day of operation for elective bariatric surgery. (Medical Directors [policy] and Consultants [implementation])

13. Given the potential for significant metabolic change (and its dietary dimension) after bariatric surgery, good quality care is supported if patients have clear post-operative dietary guidance and a timely and complete discharge summary, with full clinical detail and post discharge plan to ensure safe and seamless care. This must be provided to the GP as soon as possible following discharge, preferably within 24 hours. (Consultants and Dietitians)

14. All patients nursed outside of critical care should be managed with a 'track and trigger' system. (Medical Director or Nursing Director)

15. Surgery and follow-up data on all patients undergoing bariatric surgery, in the NHS and independent sector, should be entered into the NBSR. (Consultants)

16. A clear, continuous long-term follow-up plan must be made for every patient undergoing bariatric surgery. This must include appropriate levels of informed surgical, dietitian, GP and nursing input. An assessment for the requirement of physician and psychology/psychiatric input must be made and provided should the patient require it. (Consultants)

17. Professional associations and regulators should agree a code of conduct for advertisements for weight loss surgery in the UK which safeguard and appropriately advise patients seeking this increasingly popular method of weight control. (Professional Associations)

2013 – Alcohol Related Liver Disease: Measuring the Units

1. A system should be in place to ensure that all patients admitted to hospital and subsequently identified as being at risk from an alcohol-related disease, are promptly referred to an appropriate support service. This system should be subject to regular audit. (Clinical Directors and Consultants)

2. A multidisciplinary Alcohol Care Team, led by a consultant with dedicated sessions, should be established in each acute hospital and integrated across primary and secondary care. (Medical Directors)

3. Each hospital should have a 7-day Alcohol Specialist Nurse Service, with a skill mix of liver specialist and psychiatry liaison nurses to provide comprehensive physical and mental assessments, Brief Interventions and access to services within 24 hours of admission. (Medical Directors)

4. Robust guidelines should be available to every unit admitting patients with alcohol-related liver disease. All physicians managing such patients should be familiar with those guidelines and trained in their use. (Medical Directors)

5. Trusts should ensure that medical patients are reviewed by a consultant within a maximum of 12 hours of admission, as suggested in the Royal College of Physicians London acute care toolkit, Society of Acute Medicine quality standards and previously by NCEPOD. This standard should be the subject of regular audit. (Clinical Directors and Consultants)

6. All patients presenting with decompensated alcohol related liver disease should have blood cultures included in their initial investigations on admission to hospital. (All Doctors)

7. All patients admitted as an emergency, regardless of specialty, should have their electrolytes checked routinely on admission and appropriately thereafter. This will help prevent the insidious and unrecognised onset of acute kidney injury. (Clinical Directors and Medical Directors)

8. If ascites is present in patients presenting with decompensated alcohol-related liver disease, a diagnostic ascitic tap should be performed as part of their initial assessment. Coagulopathy is not a contraindication to this procedure. (All Doctors)

9. Patients who present acutely with decompensated liver disease, and who drink alcohol at a potentially harmful level, should not be assumed to have alcohol-related liver disease. A full assessment to exclude all other potential causes of liver disease should be performed as soon as possible after admission to hospital. (All Doctors and Consultants)

10. A toolkit for the acute management of patients admitted with decompensated alcohol-related liver disease should be developed and made widely available to all physicians / doctors involved in the care of patients admitted to acute hospitals.

11. All patients presenting to hospital services should be screened for alcohol misuse. An alcohol history indicating the number of units drunk weekly, drinking patterns, recent drinking behaviour, time of last drink, indicators of dependence and risk of withdrawal should be documented. (All Doctors)

12. As recommended by NICE, assessment tools such as the Alcohol Use Disorders Identification Test (AUDIT) and the Clinical Institute Withdrawal Assessment – Alcohol, revised (CIWA-Ar) should be readily available for use by all health care professionals who should be competent in their use. (Medical Directors and Clinical Directors)

13. Alcohol withdrawal scales should be used, as suggested in NICE guidance, to guide treatment decisions to prevent the alcohol withdrawal syndrome. (All Doctors)

14. Treatment for alcohol withdrawal should be tailored to the individual patient. The presence of encephalopathy, or other features of liver disease, can make the administration of sedatives inappropriate and may indicate the need to consider transfer to a higher level of care. (All Doctors and Consultants)

15. All patients admitted with decompensated alcohol related liver disease should be seen by a specialist gastroenterologist / hepatologist at the earliest opportunity after admission. This should be within 24 hours and no longer than 72 hours after admission to hospital. (Consultants)

16. Trusts should ensure that all patients admitted with alcohol-related liver disease receive early specialist input from a gastroenterologist / hepatologist and a specialist practitioner in alcohol addiction. (Medical Directors and Clinical Directors)

17. All patients with alcohol-related liver disease and a history of current alcohol intake, in excess of recommended limits, should have thiamine (oral or intravenous) administered on admission to hospital. (All Doctors)

18. In patients with decompensated alcohol-related liver disease and deteriorating renal function, diuretics should be stopped and intravenous fluid administered to improve renal function, even if the patient has ascites and peripheral oedema. (All Doctors)

19. As for all patients, patients with alcohol-related liver disease should have accurate monitoring of fluid balance. Systems to ensure accurate monitoring of fluid balance should be in place in all Trusts. (Medical Directors and Nursing Directors)

20. NICE recommends that a nutritional assessment of all patients should be made within the first 48 hours of admission (CG32). This should include patients with alcohol-related liver disease. (All Health Care Professionals)

21. If ascites is present in patients presenting with decompensated alcohol-related liver disease, a diagnostic ascitic tap should be performed as part of their initial assessment. Coagulopathy is not a contraindication to this procedure. (As p53) (All Doctors)

22. The findings in this small group of patients suggest that a larger study is indicated to identify areas for improvement in the care of patients undergoing endoscopy for gastrointestinal bleeding.

23. In line with NICE guidance, unless contraindicated, all patients with alcohol-related liver disease, who present with gastrointestinal bleeding, should be offered antibiotics and terlipressin until the outcome of their endoscopy is known. (All Doctors and Consultants)

24. Deterioration in renal function in patients with liver disease should not be assumed to be due to the hepatorenal syndrome, as other potential causes are often present and should be actively excluded. (All Doctors and Consultants)

25. Escalation of care should be actively pursued for patients with alcohol-related liver disease, who deteriorate acutely and whose background functional status is good. There should be close liaison between the medical and critical care teams when making escalation decisions. (Consultants)

26. When a decision is made not to escalate, or to actively withdraw treatment for a patient with alcohol-related liver disease, this decision should be made by a consultant. The decision making process should involve specialists with appropriate training to identify what interventions are likely to be of benefit to the patient. Such decisions should be discussed with the patient and the patient's representative (if appropriate) and documented clearly. Where there is doubt or disagreement about such decisions, the opinion of a second consultant should be sought, as outlined in guidance issued by the General Medical Council. (Consultants)

27. All patients presenting to hospital services should be screened for alcohol misuse. An alcohol history indicating the number of units drunk weekly, drinking patterns, recent drinking behaviour, time of last drink, indicators of dependence and risk of withdrawal should be documented. (As p53) (All Doctors)

28. All patients presenting to acute services with a history of potentially harmful drinking, should be referred to alcohol support services for a comprehensive physical and mental assessment. The referral and outcomes should be documented in the notes and communicated to the patient's general practitioner. (All Doctors)

29. All deaths due to alcohol-related liver disease should be reviewed at a local morbidity and mortality, clinical governance meeting to ensure that lessons are learned and to give assurance that high quality care is being provided. (Consultants)

30. Where the cause of death is unclear, or death was not anticipated, this should be discussed with the coroner. (Consultants)

2013 – Subarachnoid Haemorrhage: Managing the Flow

1. Formal networks of care should be established, linking all secondary care hospitals receiving subarachnoid haemorrhage patients to a designated regional neurosurgical/neuroscience centre. (Medical Directors)

2. All hospitals should undertake regional audit or multi-disciplinary team meetings, in order to share learning that could improve the care provided to aneurysmal subarachnoid haemorrhage patients. (Medical Directors and Clinical Directors)

3. The availability of interventional neuroradiology services should be such that hospitals can comply with the 'National Clinical Guideline for Stroke' stating that patients should be treated within 48 hours of their aneurysmal subarachnoid haemorrhage. (Medical Directors and Clinical Directors)

4. The clinical presentation of aneurysmal subarachnoid haemorrhage should be highlighted in primary and secondary care education programmes for all relevant health care professionals, including the guidelines for the management of acute severe headache published by the College of Emergency Medicine. (Local Education and Training Boards/Deaneries, Medical, Surgical & Nursing Royal Colleges and Specialist Associations)

5. All patients presenting with acute severe headache in a secondary care hospital should have a thorough neurological examination performed and documented. A CT scan should be performed immediately in this group of patients as defined by the 'National Clinical Guideline for Stroke'. (All doctors)

6. Standard protocols for the care of aneurysmal subarachnoid haemorrhage patients in secondary care should be developed and adopted across formal networks. These should cover, as a minimum, initial assessment and diagnosis, management, referral, transfer to a neurosurgical/neuroscience centre and subsequent repatriation to secondary care, including rehabilitation. These protocols should take into account existing guidelines where relevant. (Medical Directors)

7. All patients diagnosed with a subarachnoid haemorrhage should be commenced on nimodipine immediately as recommended in the 'National Clinical Guideline for Stroke', unless there are contraindications to its use. (All doctors)

8. Relevant professional bodies should develop a nationally-agreed and audited protocol for the management of aneurysmal subarachnoid haemorrhage in tertiary care that addresses initial assessment, multi-disciplinary management and documentation, informed consent, timing of interventions, peri-operative care, management of complications and rehabilitation. (Royal Colleges and Specialist Associations)

9. Mental capacity of aneurysmal subarachnoid haemorrhage patients to give their own consent should be reviewed and a consensus document developed (with consideration of the Mental Capacity Act 2005). (Royal Colleges and Specialist Associations)

10. The nationally-agreed standard ('National Clinical Guideline for Stroke') of securing ruptured aneurysms within 48 hours should be met consistently and comprehensively by the health care professionals who treat this group of patients. This will require providers to assess the service they deliver and move towards a seven-day service. (Medical Directors)

11. Neurosurgical/neuroscience centres must ensure that trainees in neurosurgery and neuroradiology develop the appropriate competencies for future consultant practice. (Local Education and Training Boards/Deaneries, Royal Colleges, Medical Directors and Clinical Directors)

12. Appropriately funded rehabilitation for all patients following an aneurysmal subarachnoid haemorrhage should include, as a minimum, access to information for patients and relatives, specialist subarachnoid haemorrhage nurses and comprehensive in-patient and out-patient rehabilitation services including appropriate neuropsychological support. (Specialist Associations, Medical Directors and Commissioners)

13. Organ donation rates following fatal aneurysmal subarachnoid haemorrhage should be audited and policies adopted to increase the frequency with which this occurs. (Medical Directors)

2014 – Tracheostomy Care: On the Right Trach?

1. Tracheostomy insertion should be recorded and coded as an operative procedure. Data collection in all locations should be as robust as that for a theatre environment. This will facilitate better care planning and allow for national and local review and audit. (Medical Directors and National Coding Systems)

2. Critical care units need a rapidly available difficult airway trolley/fibreoptic laryngoscopy. This recommendation reinforces the Intensive Care Society and Royal College of Anaesthetists' recommendations. (Clinical Directors)

3. Training programmes in blocked/displaced tubes/ airways and difficult tube changes should be delivered in accordance with clinical consensus guidelines as stated by the National Tracheostomy Safety Project and the Intensive Care Society. (Medical Directors and Directors of Nursing)

4. Capnography must be available at each bed space in critical care and should be continuously used when patients are ventilator dependent. This reinforces the recommendation from NAP4 and others. (Clinical Directors)

5. Core competences for the care of tracheostomy patients, including resuscitation, should be set out by all Trusts using existing national resources available. (Medical Directors and Directors of Nursing)

6. Consent and WHO type (surgical) checklists should be adopted and used prior to tracheostomy insertion, wherever it is performed. (Medical Directors and Clinical Directors)

7. The diameter and length of the tube used should be appropriate for the size and anatomy of the individual patient, therefore an adequate range of tracheostomy tubes needs to be stocked by units. Operators should be aware of the types of tube available and in particular recognize that adjustable flanged tubes are available with inner tubes. Professionals need to continue to work closely with manufacturers to optimise design and tube options for a non standard population. (Consultant Operators, Theatre and Critical Care Managers and Professional Health Care Bodies)

8. Confirmation of tube placement must be obtained using capnography. This should be readily available and the events documented. (All Health Care Professionals)

9. Appropriate positioning of the tube should be made using airway endoscopy. This should be readily available and the events documented. (All Consultants)

10. When changing a tracheostomy tube factors that increase the risk of obstruction or loss of airway should be considered. These include tube size/ configuration and length. This is particularly important in the obese/high BMI patient. (All Consultants)

11. Unplanned tube changes pose additional risks. All unplanned tube changes should be reported locally as critical incidents and investigated to ensure that lessons are learned and reduce the risk of future events. (All Health Care Professionals and Risk Managers)

12. Particularly careful consideration should be made at discharge from the critical care unit as to whether a cuffed tube is still indicated, and reasons must be documented. If it is, then there must be equipment and competences available on the ward for cuff pressure measurement. (Critical Care Consultants and Tracheostomy Leads)

13. All Trusts should have a protocol and mandatory training for tracheostomy care including guidance on humidification, cuff pressure, monitoring and cleaning of the inner cannula and resuscitation. The clinical practices around tracheostomy care should be the subject of local quality improvement initiatives. Tube data should be more clearly recorded and made available for review at the bedside and thereafter facilitated by a 'passport' for each patient, with all data included. (Medical Directors, Directors of Nursing and Health Care Commissioners)

14. All hospitals should adhere to recommendations already made by the National Tracheostomy Safety Project to maintain an essential box of equipment which is sufficiently portable to be moved around with the patient. (Clinical Directors and Tracheostomy Leads)

15. In order to facilitate decannulation and discharge planning multidisciplinary care needs to be established as part of the routine pathway for ALL tracheostomy patients. Whilst on the critical care unit where there will be at least daily reviews, key additional team members should be involved at an early stage. The team composition should be flexible to properly reflect the patient's needs and provide excellent continuity of care. There are several key team members who one would expect should always participate, e.g. physiotherapy, speech and language therapy, outreach nurses and dietitians. Hospitals need to provide adequate staff to ensure this happens routinely and in a timely manner. (Clinical Directors and Critical Care Managers)

16. Involvement of Speech and Language Therapy in critical care needs to be facilitated particularly for more complex patients and to assist clinicians with high quality communication strategies as well as day to day ward care and according to patient needs. (Clinical Directors and Speech and Language Therapists)

17. Dysphagia reported in tracheostomy patients warrants ongoing and further study in terms of risk factors, identification and natural history. (All Professional Health Care Bodies involved with tracheostomy care)

18. There needs to be improved recognition of the incidence of swallowing difficulty in tracheostomy patients at all points in the care pathway. Early referrals to Speech and Language Therapy with specific competences are recommended. (All Consultants and Speech and Language Therapists)

19. Bedside staff who care for tracheostomy patients must be competent in recognizing and managing common airway complications including tube obstruction or displacements and as

described by the National Tracheostomy Safety Project algorithms. (Medical Directors and Directors of Nursing)

20. Emergency action plans must clearly reflect the escalation policy in order to summon senior staff in the event of a difficult airway event. Equipment including capnography must be always available, checked and utilised in patient care and in training scenarios. This reinforces the recommendation in the NAP4 guidance. (Clinical Directors)

21. In patients undergoing a tracheostomy without a trial of extubation the reason should be clearly documented. (All Health Care Professionals)

22. Unplanned and night time critical care discharge is not recommended, particularly in patients with a newly formed tracheostomy and/or patients recently weaned from respiratory support. This reinforces the Intensive Care Society's general recommendation about night time discharges. (Clinical Directors and Risk Managers)

23. Wards accepting tracheostomy patients should be in a state of readiness in terms of equipment and competences. (Clinical Directors and Directors of Nursing)

24. Multidisciplinary agreement about minimum airway assessments prior to decannulation needs to be established including availability of equipment and competences. (Professional Health Care Bodies)

25. Quality of discharge documentation should be improved. A structured and detailed summary must be provided between wards and between hospitals and the community at the point of transfer. (All Health Care Professionals and Tracheostomy Leads)

2014- Lower Limb Amputation: Working Together

1. A 'best practice' clinical care pathway, supporting the aims of the Vascular Society's Quality Improvement Framework for Major Amputation Surgery, and covering all aspects of the management of patients requiring amputation should be developed. This should include protocols for transfer, the development of a dedicated multidisciplinary team (MDT) for care planning of amputees and access to other medical specialists and health professionals both pre- and post operatively to reflect the standards of the Vascular Society of Great Britain and Ireland, the British Association of Chartered Physiotherapists in Amputee Rehabilitation and the British Society of Rehabilitation Medicine. It should promote greater use of dedicated vascular lists for surgery and the use of multidisciplinary records. (*Vascular Society of Great Britain & Ireland (development), Medical Directors (implementation*))

2. All patients with diabetes undergoing lower limb amputation should be reviewed both pre- and post operatively by the specialist diabetes team to optimise control of diabetes and management of co-morbidities. The pre-operative review should not delay the operation in patients requiring emergency surgery. (*Consultant Diabetologists*)

3. As recommended in the Quality Improvement Framework for Major Amputation Surgery (VSGBI), all patients undergoing major lower limb amputation should have a named individual responsible for the co-ordination of their rehabilitation and discharge (amputation/discharge co-ordinator). Their role should include the provision of detailed written information for patients and their relatives covering the whole clinical pathway. (*Medical Directors, Clinical Directors*)

4. The decision to undertake a major amputation should be made by a multidisciplinary team (MDT) including vascular surgery, physiotherapy, occupational therapy, diabetology, radiology, specialist nursing and an amputation/discharge co-ordinator. Where the urgency of surgery prevents this, as a minimum patients should be discussed with a consultant vascular surgeon and reviewed by a consultant anaesthetist, before amputation. (*Medical Directors*)

5. All Trusts should have formal access to a consultant service in rehabilitation medicine that includes the post operative care of patients after major lower limb amputation. (*Medical Directors*)

6. When patients are admitted to hospital as an emergency with limb-threatening ischaemia, including acute diabetic foot problems, they should be assessed by a relevant consultant within 12 hours of the decision to admit or a maximum of 14 hours from the time of arrival at the hospital, in line with current guidance. If this is not a consultant vascular surgeon then one should be asked to review the patient within 24 hours of admission. (*Medical Directors*)

7. A model for the medical care of amputees, should be introduced which includes regular review by a physician and a surgeon throughout the in-patient stay. The existing orthogeriatric model serves as a good example in current practice. (*Medical Directors and Specialist Commissioners*)

8. NICE recommends that a nutritional assessment of all patients should be made within the first 48 hours of admission (CG32). This guidance should be implemented for all patients requiring lower limb amputation. (*All Health Care Professionals*)

9. All patients admitted electively for lower limb amputation should be seen in a pre-assessment clinic to optimise medical co-morbidities and to plan post operative rehabilitation. (*Clinical Directors, Consultant Anaesthetists*)

10. For patients undergoing major limb amputation, planning for rehabilitation and subsequent discharge should commence as soon as the requirement for amputation is identified. All patients should have access to a suitably qualified amputation/discharge co-ordinator. (*Medical Directors*)

11. Clear guidelines on obtaining consent from patients requiring amputation should be developed to address the deficiencies identified in this study. (*Vascular Society of Great Britain & Ireland*)

12. A consultant vascular surgeon should be present in the operating theatre for all amputations performed by a non-CCT trainee. (*Medical Directors*)

13. A care bundle should be developed to ensure the structured management of amputation patients. Audit of this should form part of the National Vascular Registry (*Vascular Society of Great Britain & Ireland, Vascular Anaesthesia Society of Great Britain and Ireland*)

14. All patients undergoing lower limb amputation must be screened pre-operatively for MRSA, as recommended by the Department of Health. (*All Consultant Surgeons*)

15. As recommended in the Quality Improvement Framework for Major Amputation Surgery (VSGBI), amputations should be done on a planned operating list during normal working hours and within 48 hours of the decision to operate. Any case waiting longer than this should be the subject of local case review to identify reasons for delay and improve subsequent organisation of care. (*Medical Directors*)

16. Hospitals require a properly funded and staffed acute pain service with capacity to manage patients with critical limb ischaemia and both pre- and postamputation pain. (*Medical Directors*)

17. Insulin should be prescribed according to National Patient Safety Agency (NPSA) recommendations. (*All Doctors*)

18. Hospitals should have clear guidelines for the management of blood glucose levels when they are outside the acceptable range. These guidelines should be implemented for all patients undergoing lower limb amputation. (*Medical Directors, All Consultants*)

19. A falls risk assessment should be undertaken in all patients undergoing lower limb amputation, and measures should be put in place to reduce the risk of a subsequent fall during the in-patient stay. (*Medical Directors, Physiotherapists*)

20. As recommended by the British Association of Chartered Physiotherapists in Amputee Rehabilitation and British Society of Rehabilitation Medicine, when it is possible to choose the level of amputation, the physiotherapist should be consulted in the decision making process regarding the most functional level of amputation for the individual. Post operative physiotherapy should commence on the first day where possible and should include exercise, oedema management and use of early walking aids as appropriate. (*Consultant Vascular Surgeons, Physiotherapists*)

2015 – Gastrointestinal Haemorrhage: Time to Get Control?

1. Patients with any acute GI bleed should only be admitted to hospitals with 24/7 access to on-site endoscopy, interventional radiology (on-site or covered by a formal network), on-site GI bleed surgery, on-site critical care and anaesthesia. (Medical Directors, Ambulance Trusts and Commissioners)

2. Hospitals that do not admit patients with GI bleeds must have 24/7 access to endoscopy, interventional radiology and GI bleed surgery for patients who develop a GI bleed while as an inpatient for another condition by either an on-site service or a formal network. (Medical Directors, Chief Executives and Trust Boards)

3. Network arrangements for GI bleeds must include repatriation as well as referral, transfer and admission in their protocols and should take into account any existing networks for other conditions which require these services and integrate with them. (Medical Directors and Commissioners)

4. The traditional separation of care for upper and lower GI bleeding in hospitals should stop. All acute hospitals should have a Lead Clinician who is responsible for local integrated care pathways for both upper and lower GI bleeding and their clinical governance, including identifying named consultants, ideally gastroenterologists, who would be responsible for the emergency and on-going care of all major GI bleeds. (Medical Directors, Clinical Directors)

5. Care pathways for all GI bleeds should include, as a minimum, risk assessment, escalation of care, transfusion documentation, core procedural documentation, network arrangements and re-bleed plans. The pathway needs to be clearly documented. (Lead Clinicians for GI Bleeds and Medical Directors)

6. All patients who present with a major upper or lower GI bleed, either on admission or as an inpatient, should be discussed with the duty or on-call (out-of-hours) consultant responsible for major GI bleeds*, within one hour of the diagnosis of a major bleed. (All Doctors) *see recommendation #4

7. The ongoing management of care for patients with a major bleed should rest with, and be directed by the named consultant responsible for GI bleeds*; to ensure timely investigation and treatment to stop bleeding and reduce unnecessary blood transfusion. (Lead Clinicians for GI Bleeds, Medical Directors, Clinical Directors) *see recommendation #4

8. As previously stated by NICE (QS38), all patients with a GI bleed and haemodynamic instability should have 24/7access to an OGD within two hours of optimal resuscitation. (Lead Clinicians for GI Bleeds, Medical Directors and Commissioners)

9. Endoscopy lists should be organised to ensure that GI bleed emergencies can be prioritised and all acute patients with GI bleeding have their endoscopy within 24 hours. (Clinical Directors)

10. Hospitals should improve access to colonoscopies for patients with a major GI bleed to avoid the unnecessary delays seen in this report. (Clinical Directors)

11. GI bleed specialists need to develop risk stratification methods relevant to all GI bleeding. (Professional Societies)

12. All patients with a GI bleed must have a clearly documented re-bleed plan agreed at the time of each diagnostic or therapeutic intervention. (Gastroenterologists, Radiologists and GI Bleed Surgeons
13. Resuscitation and airway support during endoscopy and interventional radiology procedures should be equivalent to facilities during emergency surgery. Unstable patients should have anaesthetic and/or critical care support. (Clinical Directors and Consultants in Anaesthesia and Critical Care Medicine and Medical Directors)

14. Minimal monitoring during procedures for major GI bleeds should be blood pressure, pulse oximetry and ECG. Monitoring should be provided by suitably skilled individuals who are separate from the procedural team and available 24/7. (Lead Clinicians for GI Bleeds, Clinical Directors and Medical Directors)

15. Endoscopy equipment and nursing support should be comparable in all locations where endoscopy is performed. (Clinical Directors and Directors of Nursing)

16. Core procedural data to be recorded at every OGD should be defined and audited. (Lead Clinicians for GI Bleeds, Professional Societies)

17. All patients with a possible lower GI bleed should have 24/7 access to proctoscopy/rigid sigmoidoscopy. (Medical Directors, Clinical Directors and Commissioners)

18. All hospitals must have an integrated replacement plan for all high cost equipment which plans 5 years ahead and is reviewed annually. (Medical Directors, Finance Directors, Chief Executives and Trust Boards)

19. Hospitals should have contingency plans for failure of endoscopy, interventional radiology or surgical equipment. (Clinical Directors)

20. All deaths from major GI bleeds within 30 days of admission should undergo combined multidisciplinary peer review to identify remediable factors in patient care. (All Clinicians and Allied Healthcare Professionals)

21. The NICE Clinical Guideline (CG141) and Quality Standard (QS38) for Acute Upper GI Bleeding should be adhered to. (All Doctors)

22. Guidelines need to be developed for the optimal management of lower GI bleeds. (British Society for Gastroenterologists, Medical and Surgical Royal Colleges and Specialist Associations and NICE)

23. Consideration needs to be given to developing a combined guideline for all GI bleeding (to include NICE CG 141, QS 38, SIGN guidelines and the recommendations from this NCEPOD report). (Led by the BSG and NICE and to include, but not limited to, SIGN, RCR, BSIR, ASGBI, AAGBI, RCoA, ICS, FICM)

24. All hospitals to which patients with a GI bleed are admitted should have their endoscopy units accredited by the Joint Advisory Group (JAG) on GI Endoscopy. (Medical Directors and Chief Executives)

25. The Joint Advisory Group (JAG) on GI Endoscopy should consider including access to and delivery of 24/7 endoscopy for GI bleeding in their Global Rating Scale. (Joint Advisory Group (JAG) on GI Endoscopy)

26. A consensus exercise should be undertaken by specialties with an interest in GI bleeds to define 'major/severe' GI bleeding. (Relevant Royal Colleges, Specialist Associations and Professional Societies)

2015 – Just Say Sepsis!

1. All hospitals should have a formal protocol for the early identification and immediate management of patients with sepsis. The protocol should be easily available to all clinical staff, who should receive training in its use. Compliance with the protocol should be regularly audited. This protocol should be updated in line with changes to national and international guidelines and local antimicrobial policies. (Medical Directors)

2. Training in the recognition and management of sepsis in primary and secondary care should be included in educational materials for healthcare professionals undertaking new posts. Where appropriate this training should include the use of a standardised hospital protocol (Medical Directors, Nursing Directors, Postgraduate Deaneries, Health Education England, Royal Colleges)

3. A Clinical Lead in sepsis should be appointed in every Trust/Health Board to champion best practice and take responsibility for the clinical governance of patients with sepsis. This Lead should also work closely with those responsible for antimicrobial stewardship in their hospital(s). (Medical Directors, Nursing Directors, Trust Chief Executives)

4. Trusts/Health Boards should use a standardised sepsis proforma to aid the identification, coding, treatment and ongoing management of patients with sepsis (some examples are available at sepsistrust.org and survivingsepsis.org). To ensure continuity of care, this proforma should be compatible, where possible with any similar proforma or system used in primary care and should permit the data to be shared electronically. (Medical Directors, Primary Care Practitioners, Commissioners)

5. An early warning score, such as the National Early Warning Score (NEWS) should be used in both primary care and secondary care for patients where sepsis is suspected. This will aid the recognition of the severity of sepsis and can be used to prioritise urgency of care. (General Practitioners, Ambulance Trusts, Health Boards, NHSE, Clinical Directors, Royal Colleges)

6. Primary care providers should ensure that robust safety netting arrangements are in place for those patients who are suspected to be at risk of sepsis.(General Practitioners)

7. To facilitate the transition from primary to secondary care, a standard method of referral should be introduced in primary care for patients who are in need of a hospital admission for, or thought to be at risk of, sepsis. This should include a full set of observations/vital signs/risks/relevant history (such as previous sepsis) and any early warning scores used. (Primary Care Practitioners, Commissioners)

8. On arrival in the emergency department a full set of vital signs, as stated in the Royal College of Emergency Medicine standards for sepsis and septic shock should be undertaken. (Emergency Medicine Physicians, Clinical Directors, Nursing Directors)

9. Where sepsis is suspected, early consideration should be given to the likely source of infection and the ongoing management plan recorded. Once identified, control of the source of infection

should be undertaken as soon as possible. Appropriate staffing and hospital facilities (including theatre/interventional radiology) should be available to allow this to occur. (Medical Directors, Clinical Directors)

10. The importance of early identification and control of the source of sepsis should be emphasised to all clinicians, and be reinforced in any future guidelines or tools for the management of sepsis. (International Sepsis Forum, UK Sepsis Trust, NICE, Health Education England, Postgraduate Deaneries, Royal Colleges)

11. In line with previous NCEPOD and other national reports' recommendations on recognising and caring for the acutely deteriorating patients, hospitals should ensure that their staffing and resources enable: a. All acutely ill patients to be reviewed by a consultant within the recommended national timeframes (max of 14 hours after admission) b. Formal arrangements for handover c. Access to critical care facilities if escalation is required; and d. Hospitals with critical care facilities to provide a Critical Care Outreach service (or equivalent) 24/7. (Medical Directors, Nursing Directors,Commissioners)

12. All patients diagnosed with sepsis should benefit from management on a care bundle as part of their care pathway. The implementation of this bundle should be audited and reported on regularly. Trusts/Health Boards should aim to reach 100% compliance and this should be encouraged by local and national commissioning arrangements. (Medical Directors, Clinical Directors, Commissioners)

13. For any invasive procedure a surgical site bundle should be employed as specified in NICE Clinical Guideline 74. (Medical Directors, Clinical Directors)

14. All healthcare providers should ensure that antimicrobial policies are in place including prescription, review and 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, Commissioners, General Practitioners, Postgraduate Deaneries, Health Education England)

15. There should be senior microbiology input into the management of all patients identified with sepsis. This input should be available 24/7 and sought early in the care pathway. (Medical Directors, Sepsis Leads, Clinical Directors)

16. A booklet that provides patients and their relatives with easy to understand information on the recognition of sepsis, its long-term complications, recovery and risk of recurrence should be available from all healthcare providers and be provided to patients with sepsis at discharge from hospital. Some examples can be found at the UK Sepsis Trust (sepsistrust.org) and ICU Steps (icusteps.org). (Medical Directors, Commissioners)

17. As for all acutely ill patients who are admitted to critical care, a follow-up service for patients with sepsis should be provided by the hospital which includes support and rehabilitation services, as recommended in NICE Clinical Guideline 83 and the Faculty of Intensive Care

Medicine and Intensive Care Society Guidelines for the Provision of Intensive Care Services (GPICS). (Medical Directors, Clinical Directors, Sepsis Leads)

18. All patients discharged following a diagnosis of sepsis should have sepsis recorded on the discharge summary provided to the general practitioner so that it can be recorded in the patient's GP record. (All Hospitals Doctors, General Practitioners)

19. For patients who die with sepsis, the care provided should always be discussed at a hospital multidisciplinary mortality meeting to encourage learning, and, where the source of sepsis has not been identified, an autopsy should be undertaken. (Medical Directors, Clinical Directors, Clinical Governance Leads, Sepsis Leads, All Clinical Staff)

20. When diagnosed, sepsis should always be included on the death certificate, in addition to the underlying source of infection. (All Doctors including Sepsis Leads)

21. The use of national coding for sepsis must be improved in order to aid clinical audit, national reporting and shared learning. Use of a standardised proforma as described in recommendation 4 should help improve this process, and may help in the development of a national registry. (Chief Executives, Medical Directors, Clinical Governance Leads, Sepsis Leads)

2016 – Acute Pancreatitis: Treat the Cause

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 Back to contents 72 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)

2017 – Mental Health in General Hospitals: Treat as One

1. The overarching theme of this report is that the divide between mental and physical healthcare needs to be reduced. This will require long-term changes in both organisational structures and individual clinical practice to produce a working environment where the mind and body are not approached separately. The following are a series of recommendations that should be undertaken now to help that process.

2. Patients who present with known co-existing mental health conditions should have them documented and assessed along with any other clinical conditions that have brought them to hospital. These should be documented:
    a. In referral letters to hospital
    b. In any emergency department assessment
    c. In the documentation on admission to the hospital
    d. Existing guidance in these areas for specific groups should be followed which includes but is not limited to NICE CG16 and CG113 (General Practitioners, Community Care Teams, Community and Hospital Mental Health Teams, Paramedics, Allied Health Professionals (e.g. Occupational Therapy) Emergency Medicine Consultants, Medical Directors of Mental Health Hospitals, Medical Directors of General Hospitals, Directors of Nursing and all Hospital Doctors and Nurses)

3. The recognition of potential mental health conditions in all patients presenting to a general hospital would require routine screening at presentation and during the hospital stay. This would be an enormous change in practice and the benefits and challenges of this need to be investigated. (All relevant Royal Colleges, Specialist Colleges and Specialist Associations and led by the Academy of Medical Royal Colleges)

4. National guidelines should be developed outlining the expectations of general hospital staff in the management of mental health conditions. These should include:
    a. The point at which a referral to liaison psychiatry should be made
    b. What should trigger a referral to liaison psychiatry
    c. and
    d. What relevant information a referral should contain (All relevant Royal Colleges, Specialist Colleges and Specialist Associations, and led by the Academy of Medical Royal Colleges)

5. As recommended by the Psychiatric Liaison Accreditation Network, mental health liaison assessments should be made in an appropriate timeframe, and by a mental health professional of appropriate seniority to meet the needs of the patient. (Medical Directors of General Hospitals, Directors of Nursing, Faculty of Liaison Psychiatry, Royal College of Psychiatrists)

6. Patients who have been admitted to hospital and have been referred to liaison psychiatry should have a named liaison psychiatry consultant documented in the general hospital case notes and

recorded centrally wherever possible. (Medical Directors and Clinical Directors of General Hospitals, Faculty of Liaison Psychiatry, Royal College of Psychiatrists)

7. Liaison psychiatry review should provide clear and concise documented plans in the general hospital notes at the time of assessment. As a minimum the review should cover:
    a. What the problem is (diagnosis or formulation)
    b. The legal status of the patient and their mental capacity for any decision needing to be made if relevant
    c. A clear documentation of the mental health risk assessment – immediate and medium term
    d. Whether the patient requires any further risk management e.g. observation level
    e. A management plan including medication or therapeutic intervention
    f. Advice regarding contingencies e.g. if the patient wishes to self-discharge please do this '…'
    g. A clear discharge plan in terms of mental health follow-up (Faculty of Liaison Psychiatry, Royal College of Psychiatrists)

8. All healthcare professionals must work together to eradicate terms such as 'medically fit' or 'medical clearance'. The terms 'fit for assessment', 'fit for review' or 'fit for discharge' should be used instead to ensure parallel working. (All Healthcare Professionals)

9. Patients with mental health conditions should be supported in overcoming/managing alcohol and/or substance abuse. Smoking cessation services and brief interventions must be offered to all patients who would benefit. (All Healthcare Professionals)

10. All general hospital pharmacy departments should be able to undertake medicines reconciliation of medications for mental health conditions within the first 24 hours of admission. Communication between general hospital and mental health hospital pharmacists should be encouraged. (Medical Directors of Mental Health Hospitals, Medical Directors of General Hospitals, Pharmacy Leads)

11. The use of mental health one-to-one observation support needs to be available for patients in a general hospital setting. Organisations should determine whether this occurs via training of their own general hospital staff or by arrangement with the local mental health service. The sole use of security staff or other staff members who are not trained for this purpose must not occur. (Medical Directors of Mental Health Hospitals, Medical Directors of General Hospitals, Directors of Nursing)

12. Mental capacity assessments should be documented in the case notes using the language of the relevant Act, and regular audits of the quality of the documentation undertaken. (Medical Directors and Clinical Directors of General Hospitals and Directors of Nursing)

13. If the primary clinical team has concerns about mental capacity in patients who have a mental health condition, they should involve liaison psychiatry to assist in decision making. (All Consultants, Liaison Psychiatry)

14. General hospitals must have a robust centralised hospital system for the management of mental health legislation processes whether by themselves or with their local mental healthcare providers. This should be audited regularly to ensure that the law is complied with. (Medical Directors of General Hospitals, Directors of Nursing and Chief Operating Officers)

15. Mental healthcare should be routinely included in step-up and step-down documentation to critical care, with appropriate involvement from liaison psychiatry. (Medical Directors and Clinical Directors of General Hospitals, Directors of Nursing and Faculty of Liaison Psychiatry, Royal College of Psychiatrists)

16. Discharge planning for patients with mental health conditions should involve multidisciplinary input, including liaison psychiatry where appropriate and in all cases where the patient has been under the care of liaison psychiatry. The discharge letter should be copied to all specialties providing ongoing mental and physical healthcare outside of the general hospital. Sharing of clinical information between care providers using a Summary Care Record or equivalent should be utilised. (Medical Directors and Clinical Directors of General Hospitals and Liaison Psychiatry)

17. All hospital staff who have interaction with patients, including clerical and security staff, should receive training in mental health conditions in general hospitals. Training should be developed and offered across the entire career pathway from undergraduate to workplace based continued professional development. (Medical Directors and Clinical Directors of General Hospitals and Directors of Nursing)

18. In order to overcome the divide between mental and physical healthcare, liaison psychiatry services should be fully integrated into general hospitals. The structure and staffing of the liaison psychiatry service should be based on the clinical demand both within working hours and out-of-hours so that they can participate as part of the multidisciplinary team. (Medical Directors of General Hospitals, Medical Directors of Mental Health Hospitals, Directors of Nursing and Clinical Commissioners)

19. Liaison psychiatry consultants and associated mental health staff should be actively integrated into all relevant general hospital governance structures and committees. This should include issues around audit, risk management, education and training, serious/adverse incident investigations and senior director level meetings. (Medical Directors of General Hospitals)

20. Record sharing (paper or electronic) between mental health hospitals and general hospitals needs to be improved. As a minimum patients should not be transferred between the different hospitals without copies of all relevant notes accompanying the patient. (Medical Directors and Clinical Directors)

21. NCEPOD supports the continued successful implementation the Psychiatric Accreditation Liaison Network nationally. (Medical Directors and Clinical Directors)

22. Diagnostic coding of mental health conditions must be improved. Liaison psychiatrists should enter the diagnosis in the general hospital notes so that they can be coded appropriately and included in discharge summaries made by general hospital doctors. This will help with local and national audit. (Faculty of Liaison Psychiatry, Royal College of Psychiatrists, General Hospital Doctors)

2017 – Non Invasive Ventilation: Inspiring Change

1. All hospitals should have a clinical lead for their acute non-invasive ventilation (NIV) service. The clinical lead should have time allocated in their job plan with clear objectives, including audit and governance for this service. (Medical Directors and Nursing Directors)

2. Continuous positive airways pressure (CPAP) and non-invasive ventilation (NIV) should be coded separately. They are two distinct treatments given for different conditions and separate coding will reduce clinical confusion and improve reporting of outcomes.
(NHS Digital and the Association of Clinical Coders)

3. Acute non-invasive ventilation treatment should only be provided in clinical areas equipped with:
a. Continuous pulse oximetry;
b. Continuous ECG monitoring; and
c. Rapid access to the results of blood gas analysis.
(Medical Directors and Nursing Directors)

4. In line with current British Thoracic Society guidelines, patients with known chronic obstructive pulmonary disease, or other known risk factors for hypercapnic respiratory failure, should have an oxygen saturation of 88-92% maintained, both prior to admission and on admission to hospital. The device used for oxygen delivery, the concentration of oxygen administered and the target saturation should be documented in the relevant patient record. (Ambulance Trusts and Emergency Medicine Physicians)

5. Treatment with acute non-invasive ventilation (NIV) must be started within a maximum of one hour of the blood gas measurement that identified the need for it, regardless of the patient's location. A service model whereby the NIV machine is taken to the patient to start treatment prior to transfer for ongoing ventilation will improve access to acute NIV.
(All Clinical Staff Providing Acute Non-Invasive Ventilation and Acute Non-Invasive Ventilation Service Leads)

6. In all areas providing acute non-invasive ventilation (NIV), a minimum staffing ratio of one nurse to two acute NIV patients must be in place, as recommended in the British Thoracic Society guideline. The duration for which this should continue will be determined by each individual patient's response to ventilation. (Nursing Directors and Medical Directors)

7. All hospitals where acute non-invasive ventilation (NIV) is provided must have an operational policy that includes, but is not limited to:
a. Appropriate clinical areas where acute NIV can be provided, and in those areas the minimum safe level of staff competencies;
b. Staff to acute NIV patient ratios;
c. Escalation of treatment and step down care procedures;
d. Standardised documentation; and
e. Minimum frequency of clinical review, and seniority of reviewing clinician
Compliance with this policy should be part of the annual audit process. (Medical Directors, Nursing Directors and Acute Non-Invasive Ventilation Service Leads)
*See Appendix 1 – British Thoracic Society competency checklist www.brit-thoracic.org.uk/ standards-of-care/guidelines/ btsrcpics-guideline-for-non- invasive-ventilation/

8. All staff who prescribe/make changes to acute non-invasive ventilation treatment must have the required level of competency as stated in their hospital operational policy. A list of competent staff should be maintained. (Medical Directors and Nursing Directors)
*See Appendix 1 – British Thoracic Society competency checklist and NIV prescription chart www.brit-thoracic.org.uk/ standards-of-care/guidelines/btsrcpics-guideline-for-non- invasive-ventilation/

9. All patients treated with acute non-invasive ventilation (NIV) must have a treatment escalation plan in place prior to starting treatment. This should be considered part of the prescription for acute NIV and include plans in relation to:
a. Escalation to critical care;
b. Appropriateness of invasive ventilation; and
c. Ceilings of treatment.
This should take into account:
d. The underlying diagnosis;
e. The risk of acute NIV failure; and
f. The overall management plan.
(All Clinical Staff Responsible for Starting Acute NIV)
*See Appendix 1 – British Thoracic Society NIV prescription chart www.brit-thoracic.org.uk/ standards-of-care/guidelines/btsrcpics-guideline-for-non- invasive-ventilation/

10. All patients treated with acute non-invasive ventilation (NIV) must be discussed with a specialist competent in the management of acute NIV at the time treatment is started or at the earliest opportunity afterwards.
Consultant specialist review to plan ongoing treatment should take place within a maximum of 14 hours. (Acute Non-Invasive Ventilation Service Leads)

11. All patients receiving acute non-invasive ventilation (NIV) should receive, as a minimum, daily consultant review while they remain on ventilation. This consultant must be competent in acute NIV management. (Clinical Directors and Consultants Responsible for Acute NIV)

12. All patients treated with acute non-invasive ventilation must have their vital signs recorded at least hourly until the respiratory acidosis has resolved. A standardised approach such as the National Early Warning Score is recommended. (Nurses and Acute Non-Invasive Ventilation Service Leads)
*See Appendix 3 – National Early Warning Score (NEWS)
www.rcplondon.ac.uk/projects/outputs/national-early-warningscore-news

13. Documentation of all changes to ventilator settings is essential and the use of a standardised proforma is recommended. (Acute Non-Invasive Ventilation Service Leads)
*See Appendix 1 – British Thoracic Society NIV prescription and settings chart www.brit-thoracic.org.uk/ standards-of-care/guidelines/btsrcpics-guideline-for-non- invasive-ventilation/

14. The use of acute non-invasive ventilation could act as a flag to consider referral to palliative care services, as this may be valuable for both active symptom control and end of life care. (Clinical Staff)

15. Following an acute non-invasive ventilation episode, a structured plan for future treatment should be discussed with the patient and/or carer either at the point of discharge from hospital or at subsequent follow-up. This must be documented and a copy of the plan given to the patient and to the patient's general practitioner. (Clinical Staff)

16. In the absence of a recognised indication for acute non-invasive ventilation (e.g. chronic obstructive pulmonary disease) patients with acute ventilatory failure and evidence of pneumonia have a high risk of death and acute NIV should not be considered standard treatment.
Escalation of treatment should be actively considered.
There should be close liaison between senior members of the medical and critical care teams to agree the most appropriate approach to management. (Consultants)

17. Governance arrangements for acute non-invasive ventilation (NIV) services should be in place in all organisations that provide acute NIV treatment. These should include all disciplines and specialities involved in the delivery of NIV. Depending on the local service model, those involved in the governance of acute NIV services are likely to include medical, nursing and physiotherapy staff from Emergency Medicine, Acute Medicine, Respiratory Medicine and Critical Care.
(Medical Directors, Nursing Directors and Acute Non- Invasive Ventilation Service Leads)

18. All acute non-invasive ventilation services should have a record kept of the number of patients treated, to aid service planning. (Acute Non-Invasive Ventilation Service Leads)

19. All acute non-invasive ventilation services should be audited annually. The audit results should be reported to the Hospital Board.
(Acute Non-Invasive Ventilation Service Leads and Medical Directors)

20. All hospitals should monitor their acute non-invasive ventilation mortality rate and quality of acute NIV care. This should be reported at Board level.
(Chief Executives, Medical Directors, Nurse Directors and Acute Non- Invasive Ventilation Service Leads)

21. A quality standard for acute non-invasive ventilation is required to facilitate quality improvement in acute non-invasive ventilation services. (British Thoracic Society and Local Quality Improvement Leads)

NCEPOD strongly encourages the establishment of quality improvement work both locally and nationally to target the issues identified by this study. A gap analysis table to start this is available at www.ncepod.org.uk/niv

Effective quality improvement initiatives and their results should be shared locally and nationally wherever possible. NCEPOD would support dissemination of this work at future NCEPOD report launches and in NCEPOD newsletters.

2018 – Chronic Neurodisability: Each and Every Need

The overarching aim of this report is to improve the care provided to children and young people aged 0-25 years with a chronic neurodisability. The cerebral palsies have been used in the study as examples of neurodisabling conditions.

The recommendations with a shaded background relate only to patients with a cerebral palsy.

The term 'clinician' has been used to encompass all healthcare professionals, although individual specialties have been listed where appropriate.

The text in italics after each recommendation is a suggestion as to who should be aware of / lead on the recommendation, but this will vary locally so please include all groups who need to be involved.

The PRINCIPAL RECOMMENDATIONS have been ranked by all involved as those recommendations of primary importance.

Improving clinical coding and quality of routine data

1. PRINCIPAL RECOMMENDATION
Clinical coding of neurodisabling conditions in all healthcare records and routinely collected datasets must be accurate and consistent if data are to be meaningful, comparable and useful to inform health outcome reviews and patient care.

- Cerebral palsy and other chronic neurodisabling conditions should be added to the standard list that "must always be coded for any admitted patient care episode (including day case patients) when documented in the patient's medical record for the current hospital provider spell, regardless of specialty."[i]

- Standardised healthcare data should be captured by clinicians each time a patient is seen, in ALL settings (to include community based organisations)

- Data collection about patients with neurodisabling conditions must include measures of clinical severity and functional abilities to enable detailed analysis

- Clinical coding systems should be harmonised across routinely collected datasets in England, Wales, Scotland and Northern Ireland to enable data analysis throughout the UK

- Patient records and routine data collections across different healthcare providers (community care, primary care, secondary care and mental health) should be linked to provide the greatest potential for quantifying healthcare utilisation and patient outcomes on a population basis. (Responsibility for action rests with Clinicians to capture data about needs at the point of care; Chief Executives to provide easy to use electronic data capture interfaces for clinicians to achieve this; Commissioners to ensure the above are in place and the Governments or those with responsibility in England, Scotland, Northern Ireland, Wales, Guernsey, Jersey and the Isle of Man to ensure that the system specifications for electronic records are adequate for the task in all settings where clinical activity occurs.)

As hospitals move to electronic patient records, this should facilitate better data linkage between healthcare providers. Work is underway to include SNOMED CT (Systematized Nomenclature of Medicine - Clinical Terms
- a standardised vocabulary of clinical terminology) into the routine coding system for UK NHS data. SNOMED CT already captures the 'Surveillance of Cerebral Palsy in Europe' preferred diagnostic terms (including measures of disease and functional severity). These are incorporated into the Community Services Data Set in England and the Community Health Activity Data in Scotland, and NHS providers are mandated to report these diagnostic data at each non-inpatient healthcare contact. However, introduction of SNOMED CT is taking a phased approach, neither SNOMED CT nor the Community Services Data Set/ Community Health Activity Data is used across the UK.

2. Access to existing routinely collected national datasets needs to be improved. The governance and application process to the four nations should be harmonised to promote data linkage and encourage the use of population datasets more effectively and efficiently.
   (NHS Digital, NHS England, NHS Scotland, NHS Wales, Northern Ireland Statistics and Research Agency, Guernsey, Jersey and the Isle of Man)

Recommendations 1 and 2 should therefore be considered as hospital systems are planned to ensure a seamless transition from one coding system to another.

i. National Clinical Coding Standards ICD-10 5th Edition

Clinical care - diagnosis and management

3. PRINCIPAL RECOMMENDATION
Patients suspected of having a neurodisabling condition should have an expert assessment by clinicians who have the competences to consider the range of possible diagnoses. For those patients with a cerebral palsy, the clinician must be able to recognise and describe the tone variation and distribution pattern of motor impairment, as informed by 'NICE Guideline 62'[ii] and the 'Reference and Training Manual of the Surveillance of Cerebral Palsy in Europe'[iii].
(Clinicians, Medical Directors, Commissioners, Regulators, Royal Colleges and Specialty Associations)

4. Patients with a cerebral palsy should have the pattern of their motor impairment (e.g. unilateral/bilateral) and tone variation (spasticity, dyskinesia, dystonia, ataxia or choreoathetosis) assessed and recorded in the clinical notes by the clinician undertaking the assessment. (Clinicians, Regulators)

5. Patients with a cerebral palsy should have their level of motor functioning described and documented in every clinical communication, using the Gross Motor Function Classification System. (Clinicians, Regulators)

6. Clinicians offering assessments to consider neurodisabling conditions as possible diagnoses should have timely access to magnetic resonance neuroimaging (MRI), including facilities for sedation and/or general anaesthesia if required. These may be within a network of care. MRI should not be provided without appropriate neuroradiological expertise to inform the imaging protocols used and to accurately interpret the images obtained.
   (Clinicians, Medical Directors, Commissioners, Regulators)

7. PRINCIPAL RECOMMENDATION
Patients with a neurodisabling condition should have access to an appropriate multidisciplinary team to proactively monitor their health status when their needs are complex and/or when

there is a change in their functional status, physical condition or environmental situation. For those patients with a cerebral palsy, this access should reflect 'NICE Guideline 62'.[ii] (Medical Directors, Clinical Directors, Clinicians, Commissioners, Regulators)

8. Patients with neurodisabling conditions should have their weight and nutritional status considered at every healthcare encounter and assessed and recorded based on clinical need. (Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, Commissioners, Regulators)

9. As for all patients, those with a neurodisabling condition who also have a learning disability should have this clearly documented in their clinical records by all healthcare providers (e.g. in primary and/or specialist healthcare). (Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, Regulators)

10. Oral health and dental care for patients with a neurodisabling condition must be considered as a matter of routine by their lead clinician. (Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, Commissioners, Regulators)

11. PRINCIPAL RECOMMENDATION

All patients with complex needs and, where appropriate, their parent carers or legal guardians, should be offered the opportunity to develop a patient-held Emergency Health Care Plan/Emergency Care Summary to facilitate communication in the event of a healthcare emergency.
[iv] This should include as a minimum:
a) information about the patient's health conditions and treatment;
b) who to contact in a range of scenarios and what to do;
c) a statement about what has been discussed and agreed about levels of intervention including palliative care planning; and
d) the existence of any advance directives (for those over 18 years), lasting power of attorney or any other measure.

The existence of this Emergency Health Care Plan/Emergency Care Summary must be recorded in all communication and case notes and this should be subjected to local audit.
(Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, General Practitioners, Commissioners, Regulators)

12. Patients with a neurodisabling condition should have an assessment completed by their lead clinician to determine their risk of respiratory compromise. This should be reviewed as appropriate for the complexity of the patient's needs. Those patients at significant risk of respiratory compromise should be assessed by clinicians with expertise in respiratory medicine, in order to discuss with the patient and their family the range of interventions most likely to lead to the best outcome. 'What to do' and 'who to contact' in the event of respiratory symptoms should be documented in the patient-held Emergency Health Care Plan.
(Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, Commissioners, Regulators)

13. As for all patients, those with a neurodisabling condition admitted to an acute general hospital as an emergency should have timely assessment and senior review within 14 hours of admission by a specialist relevant to the emergency as recommended by the Royal College of Paediatrics and Child Health in 'Facing the Future'[v] and the Royal College of Physicians of London in the 'Acute Care Toolkit 4'[vi]

(Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, Commissioners, Regulators)

14. Patients should undergo timely review prior to major surgery and/or if they have complex co morbidity by key team members to ensure optimal preparation and planning. This must include senior members of the surgical, anaesthetic and medical teams.
(Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, Commissioners, Regulators)

15. Pain scoring tools should be understood and used in the peri-operative/peri-procedure period for patients with a neurodisabling condition. Healthcare staff should be trained in their use.
(Medical Directors, Directors of Nursing, Clinical Directors, Clinicians)

ii. NICE Guideline 62 - Cerebral palsy in under 25s: assessment and management
iii. Reference and Training Manual of the Surveillance of Cerebral Palsy in Europe
iv. Emergency Health Care Plan – Council for Disabled Children and Emergency Care Summary - Scotland
v. Facing the Future and Emergency Care Summary - Scotland – Royal College of Paediatrics and Child Health
vi. Acute Care Toolkit 4 – Royal College of Physicians Clinical care - clinical leads and care plans

16. Patients with a neurodisabling condition who need ongoing medical and therapeutic input should always have a named lead clinician to co-ordinate care across healthcare services and all age groups. Any change in lead clinician should include planning and a thorough handover.
(Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, General Practitioners, Commissioners, Regulators)

17. Patients with a neurodisabling condition should be on an appropriate care pathway. For those with a cerebral palsy this should include arrangements for surveillance of hips, spine and growth until skeletal maturity and in the longer term, nutritional surveillance and the identification and management of pain.
(Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, Commissioners, Regulators)

18. PRINCIPAL RECOMMENDATION
Patients with a neurodisabling condition should have a clear care plan that describes and addresses all of their needs. For those with a cerebral palsy this should specifically include pain, growth, nutritional status, safety of eating and drinking and other medical conditions such as seizures or mental health or behavioural issues. This care plan should be reviewed and updated when in hospital and on discharge to the community. Where the patient has complex needs this should be readily accessible to patients, their parent carers and clinicians e.g. as part of a patient-held patient passport.[vii]
(Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, Commissioners, Regulators)

19. All medically frail patients with a neurodisabling condition, and where appropriate, their parent carers or legal guardians, must be offered the opportunity to discuss with their lead clinician, their care wishes in the event of serious illness or sudden collapse. This should be recorded in their patient-held Emergency Health Care Plan. This may include discussing Do Not Attempt Cardio Pulmonary Resuscitation decisions and palliative care plans, which should be validated at

each point of care according to the existing legal requirements and professional guidance. This is particularly important to have in place at handover during transition to adult services. (Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, General Practitioners, Commissioners, Regulators)

vii. Example of a patient-held passport

Transition and age appropriate care

20. To facilitate transition to adult services there must be a clear, documented plan developed between the young person with complex needs and their multidisciplinary team. NCEPOD supports 'NICE Guideline 43'[viii] that transition planning should have begun by the age of 14. (Clinicians, General Practitioners, Commissioners, Regulators)

21. Healthcare organisations must better consider the needs of young people in the organisation, planning and delivery of healthcare. Age appropriate care must include dedicated physical space as well as agreed policies and procedures to be used in all clinical areas to facilitate patient privacy, dignity and inclusion. (Medical Directors, Clinicians, Commissioners, Regulators)

22. PRINCIPAL RECOMMENDATION

The transition plan between children's to adults' services should be co-ordinated by the lead clinicians and integrated within other multiagency plans e.g. health education, social care planning and mental healthcare services. The patient's team in primary care must be part of the planning process (Clinicians, General Practitioners, Commissioners, Regulators)

23. Care pathways for adolescent patients should promote dignity and independence when a hospital stay is needed and include ready access to single room accommodation, space for special equipment and the facility for parent carers to stay on-site when required[ix] and as recommended by the Royal College of Physicians of London in the 'Acute Care Toolkit 13'. [x] (Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, Commissioners, Regulators)

24. General Practitioner Networks, Federations, Clusters, Health Boards and Partnerships, should consider developing Clinical Champions for neurodisabled patients to lead and help 'bridge the gap' between specialist neurodisability teams and primary/community care. Leads could be engaged in care from the early teens and function as an essential link with the wider paediatric multidisciplinary teams.
(General Practitioners, Royal College of General Practitioners, Commissioners, Regulators)

viii. NICE Guideline 43 - Transition from children's to adults' services for young people using health or social care services
ix. 'You're Welcome' Standards
x. Royal College of Physicians of London in the 'Acute Care Toolkit 13'.

Clinical care – communication

25. As for all patients, those with neurodisabling conditions should have their preferred method of communication clearly documented in their clinical records (electronic and/or paper) across all healthcare providers (e.g. in primary and/or specialist healthcare).
(Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, General Practitioners, Commissioners, Regulators)

26. Each consultation with patients with a neurodisabling condition should be used as an opportunity to enquire whether they and their family have the information and support they need. (Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, Regulators)

27. All healthcare professionals who might work with patients with a neurodisabling condition should be able to make a range of reasonable adjustments to accommodate them, such as providing support for a range of communication, learning and physical access needs. 'Disability Matters' is a key resource that should be embedded in the training of all healthcare professionals.[xi]
(Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, Commissioners, Regulators)

28. Patients with a neurodisabling condition, and where appropriate, their parent carers or legal guardians should have access to information and training in optimum self-management, problem-solving and how to get the right help and support as required in line with 'NICE Guideline 62'.[ii] (Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, Commissioners, Regulators)

29. Clinicians should be aware of, and comply with, the ethical and legal requirements for consent to surgery as defined by the General Medical Council and requirements for mental capacity assessments which will vary depending on UK country in which they live. These requirements must be communicated clearly to patients and parent carers and documented in the case notes. (Clinicians, Commissioners, Regulators)

30. Patients with a neurodisabling condition should be involved in all communications and decision-making about their care and management where possible, and where appropriate, with adjustments in place to support their involvement, including specialist speech and language therapists as required. Parent carers or legal guardians must also be included in these conversations as appropriate.
(Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, Commissioners, Regulators, Patients)

31. After a period of inpatient care patients with a neurodisabling condition should have their ongoing function and daily needs assessed and documented. Any significant change which would necessitate a planned alteration to day-to-day care must be clearly communicated in discharge plans. The discharge plan should be sent to the patient and their parent carers and their multidisciplinary team including their GP.
(Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, Commissioners, Regulators)
ii. NICE Guideline 62 - Cerebral palsy in under 25s: assessment and management
xi. Disability Matters

32. Clinicians should be trained to be able to communicate effectively with patients with a range of communication needs. They must be able to make a structured assessment of overall needs alongside management of the presenting condition.
(Medical Directors, Directors of Nursing, Clinical Directors, Clinicians, General Practitioners, Commissioners, NHS Scotland, Regulators)

Organisation of care

33. All providers of healthcare for patients with a cerebral palsy or other chronic neurodisability should have clear care pathways described for patients, parent carers and referrers which are easily available e.g. on the hospital website with named contact details.[xii]
(Medical Directors, Directors of Nursing, Clinical Directors, General Practitioners, Commissioners, NHS Scotland, Regulators)

34. To accommodate patients with neurodisabling conditions all healthcare facilities should:
a) Be fully accessible;
b) Have appropriate high quality equipment available including hoists, weighing scales, height measuring facilities, places to allow changing and wheelchairs to support participation in everyday activities and proactive independence. These should be easily available and maintained regularly. (Medical Directors, Directors of Nursing, Clinical Directors, Commissioners, NHS Scotland, Regulators)

35. Hospitals should review their day-case facilities and policies to ensure they are inclusive for neurodisabled patients with complex needs.
(Medical Directors, Directors of Nursing, Clinical Directors, Commissioners, NHS Scotland, Regulators)

xii. British Academy of Childhood Disability – Quality Principles for Paediatric Disability Services
Whilst each recommendation should be read to determine if it is relevant to you or your organisation, the table below summarises a quick glance view of which ones should be looked at depending which 'audience' you are. A gap analysis tool, by audience is available on the report study page at www.ncepod.org.uk

Audience *Recommendation number(s)*
Chief Executives *1*
Clinical Directors *7,8,9,10,11,1,13,14,15,16,17,18 ,19,23,25,26,27,28,30,31,32,33, 34,35*
Clinicians *1,3,4,5,6,7,8,9,10,11,12,13,14,15, 16,17,18,19,20,21,22,23,25,26,27, 28,29,30,31,32*
Commissioners *1,3,6,7,8,10,11,12,13,14,16,17,18, 19,20,21,22,23,24,25,27,28,29,30, 31,32,33,34,35*
Directors of Nursing *8,9,10,11,12,13,14,15,16,17,18,19 ,23,25,26,27,28,30,31,32,33,34,35*
General Practitioners *11,16,19,20,22,24,25,32,33*
Guernsey *1,2*
Isle of Man *1,2*
Jersey *1,2*
Medical Directors *3,6,7,8,9,10,11,12,13,14,15,16,17 ,18,19,21,23,25,26,27,28,30,31,3 2,33,34,35*
NHS Digital *2*
NHS England *1,2*
NHS Scotland *32,33,34,35*
NHS Wales *1,2*
Northern Ireland *1,2*
Patients *30*
Regulators
3,4,5,6,7,8,9,10,11,12,13,14,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35
Royal College of *1,2*
General Practitioners *24*
Royal Colleges *3*
Specialty Associations *3*