Organisational Audit Questions - Links to recommendations, standards and evidence

Question	Quoted recommendation/ standard / evidence	Source	Notes
Section 1 - Hospital characteristics			
1. a) How many adult in-patient or overnight beds (including 23- hours stay) are currently available within the hospital? b) How many of these beds are found on adult general surgical in-patient wards?		*Baseline data*	
2. Does your hospital accept acute general surgical admissions?		*Baseline data*	
3. Do you have a dedicated emergency surgical unit that is separate from elective workload?		*Baseline data*	
4. Is your hospital a tertiary referral centre for any gastro-intestinal surgical specialities?		*Baseline data*	
5. Is cardiothoracic surgery undertaken at this hospital?		[1]	
6. Does your hospital accept acute medical admissions?		*Baseline data*	
7. Do you have Elderly Medicine services on site?	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 (Medicine for care of older people) consultant and nutritional assessment	NCEPOD Age	
	Older people's care in hospital is delivered through appropriate specialist care and by hospital staff who have the right set of skills to meet their needs.	NSF older people	

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Question	Quoted recommendation/ standard / evidence	Source	Notes
Section 2 - Hospital facilities			
1. How many operating theatres are at this hospital?		*Baseline data*	
2. a) In a usual week, what is the total number of fully staffed operating theatres available for adult general surgical emergency cases?	Trusts should ensure emergency theatre access matches need and ensure prioritisation of access is given to emergency surgical patients ahead of elective patients whenever necessary as significant delays are common and affect outcomes.	RCS HR	
b) In a usual week, how many dedicated and planned consultant anaesthetic sessions (ie outside of on-call and other duties) support the theatres in question 2a?	The peri-operative anaesthetic care of ASA3 and above patients requiring immediate major surgery (and therefore with an expected higher mortality) is directly supervised by a consultant anaesthetist.	RCS USC	
c) Of the theatres in 2a, how many of these are reserved exclusively for emergency general surgical cases?	Adequate emergency theatre time is provided throughout the day to minimise delays and avoid emergency surgery being undertaken out of hours when the hospital may have reduced staffing to care for complex postoperative patients.	RCS USC	
	Even in the smallest centres the principle of dedicated commitment to Emergency General Surgery still applies.	ASGBI EGS	
3. Can any member of the surgical team book emergency general surgical cases for emergency theatre(s)?	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.	NCEPOD age	

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Question	Quoted recommendation/ standard / evidence	Source	Notes
4. Are emergency theatres staffed **at all times** by **non-medical** personnel (i.e. anaesthetic & scrub nurses, Operating Department Practitioners -ODPs, Health Care Assistants - HCAs) such that emergency cases can continue regardless of elective and emergency workload elsewhere (e.g. overrunning elective lists, recovery workload, obstetric emergencies, trauma & cardiac arrest calls)?	Hospitals accepting undifferentiated patients requiring immediate life and/or limb-preserving surgery are equipped and staffed 24/7 to manage the likely range of surgical emergencies.	RCS USC	
	All hospitals admitting emergency general surgical patients should have a dedicated, fully staffed, theatre available at all times for this clinical workload.	ASGBI EGS	
	Trusts should ensure emergency theatre access matches need and ensure prioritisation of access is given to emergency surgical patients ahead of elective patients whenever necessary as significant delays are common and affect outcomes.	RCS HR	
	Adequate emergency theatre time is provided throughout the day to minimise delays and avoid emergency surgery being undertaken out of hours, when the hospital may have reduced staffing to care for complex postoperative patients.	RCS USC	
5. Please indicate whether the following individuals are required to be resident when covering the out-of-hours emergency general surgical workload: Anaesthetic ODP/ Nurse Scrub Nurse/ ODP/ HCAs	*(As per 4.)*		
6. a) Is non-invasive cardiac output monitoring equipment available for use in the care of the patient undergoing emergency general surgery? b) If yes, is it for exclusive use in emergency theatre(s)?	There is good evidence to demonstrate that inappropriate peri and post operative fluid therapy is harmful. Dynamic monitoring of stroke volume and cardiac output avoids this, and should be considered in all patients undergoing major surgery	ASGBI pt safety	
	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.	NCEPOD Age	
	The CardioQ-ODM should be considered for use in patients undergoing major or high-risk surgery or other surgical patients in whom a clinician would consider using invasive cardiovascular monitoring.	NICE MTG3	

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Question	Quoted recommendation/ standard / evidence	Source	Notes
7. Have you audited adequacy of provision of emergency theatres within the last 2 years?	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.	NCEPOD age	
	As per 4.		
8. Does your hospital have plans in place to increase emergency theatre provision within the current or next financial year?			
9. Are there currently plans to reconfigure emergency surgical services with neighbouring Trusts within the next 2 years?	*As per 7.*		
10. Is there 24 hour on-site access to the following? Biochemistry Haematology Microbiology Blood bank/transfusion	24-hour test availability including FBC, sickle cell screen, coagulation screen, group and save, and availability of blood components	RCS USC	
	Clinical telephone haematology advice available 24/7.	RCS USC	
	Prompt availability of blood components and massive haemorrhage protocol available in all key areas.	RCS USC	
	24-hour availability of comprehensive infectious diseases and infection control advice.	RCS USC	
	Wherever general and regional anaesthesia is administered there is access to an appropriate range of laboratory and radiological services.	RCS USC	

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Question	Quoted recommendation/ standard / evidence	Source	Notes
Section 3 - Perioperative Care			
At your trust are there formal written pathways/protocols/policies applicable to the emergency general surgical patient incorporating the following: *These may exist within pathways/protocols, or be incorporated into a single policy relevant to the unscheduled adult surgical patient.*	The care of emergency surgical patients should be delivered to equal standards as those accepted for elective surgical practice	ASGBI EGS	
1. Monitoring plan compliant with NICE CG50 pathway (Acutely ill patients in hospital)	Adult patients in acute hospital settings for whom a clinical decision to admit has been made should have a clear written monitoring plan that specifies which physiological observations should be recorded and how often. The plan should take account of the: patient's diagnosis, presence of comorbidities and agreed treatment plan. Physiological observations should be recorded and acted upon by staff who have been trained to undertake these procedures and understand their clinical relevance.	CG50	
	Physiological track and trigger systems should be used to monitor all adult patients in acute hospital settings. Physiological observations should be monitored at least every 12 hours, unless a decision has been made at a senior level to increase or decrease this frequency for an individual patient. The frequency of monitoring should increase if abnormal physiology is detected, as outlined in the recommendation on graded response strategy.	CG50	
	Staff caring for patients in acute hospital settings should have competencies in monitoring, measurement, interpretation and prompt response to the acutely ill patient appropriate to the level of care they are providing. Education and training should be provided to ensure staff have these competencies, and they should be assessed to ensure they can demonstrate them.	CG50	

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	All patients should have a clear diagnostic and monitoring plan documented on admission. The monitoring plan must be compliant with National Institute for Health and Clinical Excellence (NICE) CG50 guidance	RCS HR	
	Guidance contained within NICE CG504 is adhered to.	RCS USC	
2. Timing of surgery according to clinical urgency	Trusts should formalise their pathways for unscheduled adult general surgical care. The pathway should include the timing of diagnostic tests, timing of surgery and post-operative location for patients.	RCS HR	
	Surgical patients often require complex management and delay worsens outcomes. The adoption of an escalation strategy which incorporates defined time-points and the early involvement of senior staff when necessary are strongly advised.	RCS HR	
	Patients admitted with septic shock should have an operation to treat the source of sepsis within 3hrs of admission.	RCS HR	
	Patients with an intraabdominal pathology and organ dysfunction should be operated on within 6hrs of onset of organ dysfunction.	RCS HR	
	Time to operate within 2hrs of decision to operate for high risk group.	RCS HR	
	For non-high-risk group definitive operation within same working day from time of decision to operate.	RCS HR	
	Agreed escalation protocols are in place to deal with the deteriorating patient.	RCS USC	
	The time of surgery is determined by its urgency based upon the needs of the individual patient. Pre-operative anaesthetic assessment and optimisation is undertaken as soon as the patient has been referred for surgery.	RCS USC	
3. A formal calculation of risk that provides an estimation of peri-operative mortality	(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.	NCEPOD KTR	
	An assessment of mortality risk should be made explicit to the patient and recorded clearly on the consent form and in the medical record.	NCEPOD KTR	
	A robust method of risk assessment for elderly patients presenting with an acute intra-abdominal catastrophe should be developed.	NCEPOD age	
	Each hospital should work towards identifying patients at risk of adverse outcomes and put in place a system to try and reduce their morbidity and mortality.	NCEPOD KTR	

	Each patient should have his or her expected risk of death estimated and documented prior to intervention and due adjustments made in urgency of care and seniority of staff involved.	RCS HR	
	High risk patients are defined by a predicted hospital mortality ≥5%: they should have active consultant input in the diagnostic, surgical, anaesthetic and critical care elements of their pathway.	RCS HR	
	We recommend that objective risk assessment become a mandatory part of the pre-operative checklist to be discussed between surgeon and anaesthetist for all patients. This must be more detailed than simply noting the American Society of Anesthesiologists (ASA) score.	RCS HR	
	Formal identification of risk can help identify when surgery for frail and critically ill patients may be futile and where end of life care may be more appropriate.	RCS HR	
	Clear communication between surgeons, anaesthetists and intensivists with the common goal being the welfare and best interests of the patient.	RCS USC	
4. Seniority of anaesthetist present in theatre according to calculated risk of death?	Each patient should have his or her expected risk of death estimated and documented prior to intervention and due adjustments made in urgency of care and seniority of staff involved.	RCS HR	
	Each higher risk case (predicted mortality ≥5%) should have the active input of consultant surgeon and consultant anaesthetist. Surgical procedures with a predicted mortality of ≥10% should be conducted under the direct supervision of a consultant surgeon and a consultant anaesthetist unless the responsible consultants have actively satisfied themselves that junior staff have adequate experience and manpower and are adequately free of competing responsibilities	RCS HR	
	The [monitoring and treatment] plan must match competency of the doctor to needs of the patient	RCS HR	
	Surgical patients often require complex management and delay worsens outcomes. The adoption of an escalation strategy which incorporates defined time-points and the early involvement of senior staff when necessary are strongly advised.	RCS HR	
	The peri-operative anaesthetic care of ASA3 and above patients requiring immediate major surgery (and therefore with an expected higher mortality) is directly supervised by a consultant anaesthetist.	RCS USC	

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5. Seniority of surgeon present in theatre according to calculated risk of death?	A consultant surgeon (CCT holder) and consultant anaesthetist are present for all cases with predicted mortality ≥10% and for cases with predicted mortality >5% except in specific circumstances where adequate experience and manpower is otherwise assured.	RCS USC	
	Each patient should have his or her expected risk of death estimated and documented prior to intervention and due adjustments made in urgency of care and seniority of staff involved.	RCS HR	
	Each higher risk case (predicted mortality ≥5%) should have the active input of consultant surgeon and consultant anaesthetist. Surgical procedures with a predicted mortality of ≥10% should be conducted under the direct supervision of a consultant surgeon and a consultant anaesthetist unless the responsible consultants have actively satisfied themselves that junior staff have adequate experience and manpower and are adequately free of competing responsibilities	RCS HR	
	Surgical procedures with a predicted mortality of ≥10% should be conducted under the direct supervision of a consultant surgeon and consultant anaesthetist unless the responsible consultants have satisfied themselves that their delegated staff have adequate competency, experience, manpower and are adequately free of competing responsibilities.	RCS HR	
	Consultant Surgeon involved in decision making for high risk group within 1hr of identification as high risk.	RCS HR	
	All patients admitted as emergencies are discussed with the responsible consultant if immediate surgery is being considered.	RCS USC	
	The [monitoring and treatment] plan must match competency of the doctor to needs of the patient	RCS HR	
	Surgical patients often require complex management and delay worsens outcomes. The adoption of an escalation strategy which incorporates defined time-points and the early involvement of senior staff when necessary are strongly advised.	RCS HR	
6. Location of post-operative care according to calculated risk of death	Each patient should have their risk of death re-assessed by the surgical and anaesthetic teams at the end of surgery, using an 'end of surgery bundle' to determine optimal location for immediate post-operative care.	RCS HR	
	There is an ongoing need for provision of peri-operative level 2 and 3 care	NCEPOD age	

	to support major surgery in the elderly, and particularly those with co-morbidity. For less major surgery extended recovery and high observation facilities in existing wards should be considered.		
	All high risk patients should be considered for critical care and as a minimum, patients with an estimated risk of death of ≥10% should be admitted to a critical care location.	RCS HR	
	Intensive care requirements are considered for all patients needing emergency surgery. There is close liaison and communication between the surgical, anaesthetic and intensive care teams peri-operatively with the common goal of ensuring optimal safe care in the best interests of the patient.	RCS USC	
	The outcome of high-risk general surgical patients could be improved by the adequate and effective use of critical care in addition to a better pre-operative risk stratification protocol.	ASGBI pt safety	
	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	NCEPOD KTR	
	Trusts should formalise their pathways for unscheduled adult general surgical care. The pathway should include the timing of diagnostic tests, timing of surgery and post-operative location for patients.	RCS HR	
	High risk patients are defined by a predicted hospital mortality ≥5%: they should have active consultant input in the diagnostic, surgical, anaesthetic and critical care elements of their pathway.	RCS HR	
7. Explicit arrangements with Elderly Medicine for review of selected patients.	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.	NCEPOD Age	
	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.	NCEPOD Age	

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	Processes to minimise risk should include twice daily ward rounds and nursing handovers and the close involvement of paramedical, palliative care, physiotherapy, pharmacy and dietetic teams. A multi-disciplinary team approach is essential to the maintenance of good clinical practice in the modern NHS.	ASGBI pt safety	
8. Formalised provision for the deferment of elective activity in order to give adequate priority to unscheduled admissions.	Trusts should formalise their pathways for unscheduled adult general surgical care. The pathway should include the timing of diagnostic tests, timing of surgery and post-operative location for patients.	RCS HR	
	Trusts should ensure emergency theatre access matches need and ensure prioritisation of access is given to emergency surgical patients ahead of elective patients whenever necessary as significant delays are common and affect outcomes.	RCS HR	
	Each patient should have his or her expected risk of death estimated and documented prior to intervention and due adjustments made in urgency of care and seniority of staff involved.	RCS HR	
	Critically ill patients have priority over elective patients. This includes the delay of elective surgery to accommodate emergency surgical patients if necessary.	RCS USC	
9. Formalised provision for the transfer of care of emergency surgical patients between consultants to ensure that they receive appropriate subspecialty care.	Structured arrangements are in place for the handover of patients at each change of responsible consultant/medical team. Time for handover is built into job plans and occurs within working hours.	RCS USC	
10. A formal pathway for the involvement of diagnostic and interventional radiology in the care of emergency general surgical patients.	Trusts should formalise their pathways for unscheduled adult general surgical care. The pathway should include the timing of diagnostic tests, timing of surgery and post-operative location for patients.	RCS HR	
	Definitive diagnostic CT as early as possible but should be within 4hrs of identification as high risk.	RCS HR	
	CT for non-high risk group within 24hrs of decision to undertake a CT.	RCS HR	
11. A formal pathway for the management of patients with sepsis.	Set end points should be achieved within 6 hours and 24 hours respectively. Its early phase recommends speedy, protocol based fluid resUSCitation, antibiotics to be given within 1 hour but preceded by cultures, inotropic support for full but failing circulation (CVP) and adequate source control by the least invasive method possible.	ASGBI pt safety	
	The source of sepsis must be identified and adequately treated using	ASGBI pt safety	

	surgery, radiology and microbiology... Achieving optimal results requires continuity of care, training and leadership: senior input is needed for both organisation and procedural patient care.		
	[In] patients with severe sepsis (sepsis with organ dysfunction) … surgery or equivalent (eg radiological drainage) should be carried out within six hours from the onset of deterioration. These patients require immediate broad-spectrum antibiotics with fluid resUSCitation, urgent but not immediate surgery, frequent monitoring (as per NICE CG50) in an appropriate environment during the interim to promptly identify development of hypotension.	RCS HR	
	Source control for patients with sepsis but without organ dysfunction should always be carried out within 18 hours. Immediate broad-spectrum antibiotics are required.	RCS HR	
	Patients admitted with septic shock should have an operation to treat the source of sepsis within 3hrs of admission.	RCS HR	
12. A formal pathway for the enhanced recovery of the emergency surgical patient?	The adoption of enhanced recovery pathways for high risk elective patients should be promoted.	NCEPOD KTR	
13. Do you have a single pathway/policy for the care of the Unscheduled Adult General Surgical patient?	Trusts should formalise their pathways for unscheduled adult general surgical care	RCS HR	
14. a) Is there regular (ie at least bi-monthly) review of all deaths following emergency general surgery ? If Yes, which of the following specialities provide input into this review Surgery Anaesthesia Radiology Critical care Elderly Medicine	Adverse events should be studied using morbidity and mortality (M&M) meetings	ASGBI pt safety	
	Local audit of outcomes is an important driver for change. The processes advocated in this report should be audited in each hospital	RCS HR	
	M&M reviews in cases with poor outcome (including performance of coronial autopsy as appropriate).	RCS uc	
	Trusts should audit delays in proceeding to surgery in patients requiring emergency or urgent abdominal surgery and implement appropriate mechanisms to reduce these.	NCEPOD age	
	All deaths/serious morbidity should be reviewed formally by a senior member of the anaesthetic department.	RCS USC	
	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.	NCEPOD age	

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Section 4 - Critical care and outreach			
1. Is there a dedicated critical care unit with 24 hour cover by a named consultant with regular sessions in critical care?	Trusts should formalise their pathways for unscheduled adult general surgical care. The pathway should include the timing of diagnostic tests, timing of surgery and post-operative location for patients.	RCS HR	
	There is 24-hour cover of the ICU by a named consultant with appropriate experience and competences.	RCS USC	
1. Please specify the number of funded Level 2 and Level 3 beds routinely available for adult (>18 years) general surgical patients? *If the numbers vary according to Level 2/3 occupancy, please indicate nominal figures:*	Hospitals should plan their critical care resource to match need in order to avoid shortages and define critical care areas accordingly.	Department of Health Working Group "The Higher Risk General Surgical Patient"	
	Level 2 and level 3 bed provision is sufficient to support the anticipated emergency surgical workload. Measure: Continuous audit of patients not admitted, and managed at a lower level of care because of lack of capacity.	RCS USC	
	Critical care facilities are available at all times for emergency surgery. If this is not the case, agreed protocols for transfer are in place.	RCS USC	
	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	NCEPOD KTR	
	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	NCEPOD KTR	
3. What was the total number of level 2 admissions between 1st April 2012 and 31st March 2013? 4. What was the total number of level 3 admissions between 1st April 2012 and 31st March 2013?	Level 2 and level 3 bed provision is sufficient to support the anticipated emergency surgical workload.	RCS USC	
5. a) Is there a critical care outreach service responsible for the review patients 'at risk' and those with deranged physiological parameters? (*other names might include rapid response team etc.*)	Each hospital should ensure that there is a system to rapidly recognise and deal appropriately with postoperative deterioration.	NCEPOD KTR	
	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.	NCEPOD KTR	
	Prompt recognition and treatment of emergencies and complications is essential to improve outcomes and reduce costs.	RCS HR	

	Prompt intervention is fundamental to the successful treatment of the patient who deteriorates after surgery	RCS HR	

Section 5 - Surgical on-call commitments			
1. How many consultant surgeons participate in the general surgical emergency rota?	Specialty teams develop rotas of clearly identified, adequately experienced staff who can provide advice or attend and review patients expeditiously on the AMU within a maximum of four hours of a request and ideally sooner. Measurement criteria: Operational policy for unit, including: • staffing levels and rotas • competencies • clinical governance structure	RCS USC	
	For a typical major hospital, the emergency general surgical team will comprise a consultant surgeon (CCT holder), middle grade (MRCS holder), core trainee and foundation doctor. As major procedures often require three surgeons, the effect on other activities during major surgery should be anticipated.	RCS USC	
	There must be a clear and identifiable separation of delivery of emergency and elective care.	ASGBI EGS	
	It is important that there are effective arrangements for refereeing the priority of competing interests at all times of the day and night. ASGBI considers that this is best delivered by dedicated clinical leadership.	ASGBI EGS	
	All hospitals admitting emergency general surgical patients should have 24-hour cover by a consultant with a general surgical CCT or equivalent.	ASGBI EGS	
	Surgeons providing emergency general surgical cover in remote areas will need to develop their skills and competencies to suit local needs.		
2. What are the subspecialties of the consultants on the general surgical emergency rota? *Upper GI includes oesophageal, hepatobiliary and bariatric surgery* Colorectal Upper GI General Vascular	The assessment, prioritisation and management of emergency general surgical patients should be the responsibility of accredited General Surgeons.	ASGBI EGS	
	It is not appropriate for medical or surgical colleagues from other disciplines [other than accredited General Surgeons] to assume responsibility for the diagnosis and management of emergency general surgical admissions	ASGBI EGS	
	A trained and accredited General Surgeon is one who has completed a	ASGBI EGS	

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Breast Endocrine	general surgical training programme (is on the specialist register and/or is a CCT holder). An essential prerequisite for the CCT in General Surgery is competence to manage unselected general surgical emergencies		
3. How many surgical tiers cover the emergency general surgical workload for each timeframe?	In highly specialised areas, better outcomes are achieved if the emergency theatre team is familiar with the type of surgery to be undertaken.	RCS USC	
	Surgical procedures with a predicted mortality of ≥10% should be conducted under the direct supervision of a consultant surgeon and consultant anaesthetist unless the responsible consultants have satisfied themselves that their delegated staff have adequate competency, experience, manpower and are adequately free of competing responsibilities.	RCS HR	
4. For each tier, please indicate whether at least one individual is free from all elective and non-acute commitments (e.g. elective lists, outpatient clinics) for the whole period whilst they are covering emergency general surgical workload: *(Please refer to definitions if clarification is required)*	Delivering an effective emergency general surgical service requires the entire team to be free of all other commitments, except in a few hospitals with low emergency workloads.	RCS USC	
	There must be a clear and identifiable separation of delivery of emergency and elective care.	ASGBI EGS	
	Surgical procedures with a predicted mortality of ≥10% should be conducted under the direct supervision of a consultant surgeon and consultant anaesthetist unless the responsible consultants have satisfied themselves that their delegated staff have adequate competency, experience, manpower and are adequately free of competing responsibilities.	RCS HR	
	In specialties with a high emergency workload, the surgical team is free of elective commitments when covering emergencies.	RCS USC	
	Wherever possible, emergency and elective surgical pathways are separated.	RCS USC	
5. Please indicate whether any of these tiers cover more than one hospital site when providing cover for emergency general surgical cases?	In specialties with a high emergency workload, the surgical team is free of elective commitments when covering emergencies. This requires description of rota arrangements.	RCS USC	
	In specialties with a high emergency workload, consultants do not cover (ie are expected to be available on-site) more than one site.	RCS USC	
6. Are emergency patients that still require assessment and treatment at the end of the consultant's period of on-call retained by the	Patients admitted via the emergency general surgical service should remain under the care of this service until formally transferred to another team and accepted by them.	ASGBI EGS	

admitting consultant?	Structured arrangements are in place for the handover of patients at each change of responsible consultant/medical team. Time for handover is built into job plans and occurs within working hours.	RCS USC	

Section 6 - Anaesthetic on-call commitments			
1. How many anaesthetic tiers cover the emergency general surgical workload for each timeframe?	All patients undergoing emergency surgery requiring anaesthesia should be seen by an anaesthetist for assessment and pre-operative optimisation; the exact timing of this visit will be dependent upon the urgency of surgery.	RCS USC	
	In some patients, particularly those with uncontrolled bleeding, surgery is regarded as part of resUSCitation; anaesthetists, as part of the multidisciplinary team, should ensure surgery is not delayed. Such patients require care from a consultant anaesthetist and one other anaesthetist – at least until they are stabilised.	RCS USC	
	The time of surgery is determined by its urgency based upon the needs of the individual patient. Pre-operative anaesthetic assessment and optimisation is undertaken as soon as the patient has been referred for surgery.	RCS USC	
2. Whilst covering the emergency general surgical workload, please indicate whether at least one individual from each of the following tiers is free at all times from covering other areas of the hospital (such as critical care, obstetrics and trauma calls) so they can immediately return to theatre	All patients undergoing emergency surgery requiring anaesthesia should be seen by an anaesthetist for assessment and pre-operative optimisation; the exact timing of this visit will be dependent upon the urgency of surgery.	RCS USC	
3. Do you have a policy requiring consultants to formally hand over to one and other in person?	Structured arrangements are in place for the handover of patients at each change of responsible consultant/medical team. Time for handover is built into job plans and occurs within working hours.	RCS USC	

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Section 7 - Multidisciplinary input			
1. What type of input does Elderly Medicine provide in the **preoperative** period for patients admitted as emergency general surgical patients?	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. 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.	NCEPOD Age	
	Processes to minimise risk should include twice daily ward rounds and nursing handovers and the close involvement of paramedical, palliative care, physiotherapy, pharmacy and dietetic teams. A multi-disciplinary team approach is essential to the maintenance of good clinical practice in the modern NHS.	ASGBI pt safety	
2. What type of input does Elderly Medicine provide in the postoperative period for the emergency general surgical patients?	Better working relationships with services providing care for the elderly and primary care, although currently difficult in emergency settings, can only be an advantage	RCS HR	
3. In the elderly patient undergoing emergency general surgery, are there formal pathways/protocols for the routine assessment of: Frailty Nutritional status Cognitive Function Functional status	Comorbidity, Disability and Frailty need to be clearly recognised 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.	NCEPOD age	
	All elderly surgical admissions should have a formal nutritional assessment during their admission so that malnutrition can be identified and treated.	NCEPOD age	
4. What type of input is available from General Internal Medicine for emergency general surgical patients who suffer acute medical complications in the perioperative period?	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	NCEPOD age	

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Section 8 - Radiology, imaging and endoscopy			
1. Is there 24 hour on-site access to diagnostic x-ray? 2. Is there 24 hour on-site access to diagnostic ultrasound?	The delivery of quality clinical care is dependent on access to supporting facilities. Rapid access to CT imaging, U/S scanning and laboratory analyses are critical to the efficient diagnosis, resuscitation and prioritisation of these patients.	ASGBI EGS	
3. With regard to access to on-site diagnostic CT, please indicate how this is provided?	Best practice: Hospital has agreed integrated pathway to facilitate the following within a defined timescale: (includes) - Urgent access to imaging (CT). - Timely definitive treatment (surgery/radiology/medical).	RCS USC	
	Scheduled seven-day access to diagnostic and treatment procedures such as diagnostic GI endoscopy, bronchoscopy, echocardiography, diagnostic ultrasound, CT and MRI. Where imaging will affect immediate outcome, emergency surgical patients have access to CT, plain films and US within 30 minutes of request. When MRI is required and not available patients are transferred to the appropriate centre. Advice on appropriate imaging is available immediately.	RCS USC	
	Definitive diagnostic CT as early as possible but should be within 4hrs of identification as high risk.	Department of Health Working Group "The Higher Risk General Surgical Patient"	
	Emergency surgical services delivered via a network have arrangements in place for image transfer and telemedicine and agreed protocols for ambulance bypass/transfer.	RCS USC	
4. Is there a formal rota of radiologists who provide on-site **interventional** radiology: 5. Is there a formal rota of clinicians for the provision of on-site **diagnostic endoscopy:** 6. Is there a formal rota of clinicians for the provision of on-site **interventional endoscopy?** 7. Are clinicians performing endoscopy supported by dedicated endoscopy staff as opposed to	Hospitals should also ensure that there are clear arrangements in place for interventional radiology, especially out of hours.	Department of Health Working Group "The Higher Risk General Surgical Patient"	
	Hospitals providing emergency surgical services have access to 24/7 interventional radiology. Interventional radiology services are staffed by fully trained interventional radiologists, interventional nurses and interventional radiographers. Best practice: Interventional radiology services are ideally on the same	RCS USC	

other nursing staff (e.g. from theatre)?	site as the emergency services. Where they are not, or where high end intervention is necessary, there are clear and unambiguous patient pathways to deliver those services through a network solution. Interventional radiology services have an identified consultant radiologist available 24/7. Best practice: Interventional radiology services for emergency patients are available within one hour of request.		
	Hospitals should ensure that there are clear arrangements in place for interventional radiology, especially out of hours.	RCS HR	
	Hospitals providing emergency surgical services have access to 24/7 interventional radiology. Interventional radiology services are staffed by fully trained interventional radiologists, interventional nurses and interventional radiographers	RCS USC	
	Interventional radiology services have an identified consultant radiologist available 24/7.	RCS USC	

Organisational Audit Questions - Links to recommendations, standards and evidence

[ASGBI EGS]	ASGBI emergency general surgery consensus statement (2007) http://www.asgbi.org.uk/en/publications/consensus_statements.cfm
[ASGBI PS]	ASGBI patient safety: a consensus statement (2009)
[NCEPOD Age]	Wilkinson K et al. An age old problem: A review of the care received by elderly patients undergoing surgery. *NCEPOD*, London 2010 http://www.ncepod.org.uk/2010report3/downloads/EESE_fullReport.pdf
[NCEPOD KTR]	Findlay GP, Goodwin APL, Protopapa K, Smith NCE, Mason M. Knowing the risk: a review of the perioperative care of surgical patients. *NCEPOD*, 2011 http://www.ncepod.org.uk/2011report2/downloads/POC_fullreport.pdf
[NICE CG50]	National Institute for Health and Care Excellence Clinical Guideline 50: Acutely ill patients in hospital, 2007 http://publications.nice.org.uk/acutely-ill-patients-in-hospital-cg50
[NICE MTG3]	National Institute for Health and Care Excellence medical technologies guidance: CardioQ-ODM http://www.nice.org.uk/guidance/MTG3
[NSF older people]	Department of Health. The National Service Framework for older people. 2001. Crown Copyright https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/198033/National_Service_Framework_for_Older_People.pdf
[RCS HR]	Anderson ID. The Higher Risk General Surgical Patient: towards improved care for a forgotten group. *RCSEng and DH*, London 2011. http://www.rcseng.ac.uk/publications/docs/higher-risk-surgical-patient/
[RCS USC]	RCSEng 2011 "Emergency Surgery Standards for unscheduled surgical care" http://www.rcseng.ac.uk/publications/docs/emergency-surgery-standards-for-unscheduled-care

1. Ghaferi, A.A., et al., *Hospital characteristics associated with failure to rescue from complications after pancreatectomy.* J Am Coll Surg, 2010. 211(3): p. 325-30.
2. Ghaferi, A.A., J.D. Birkmeyer, and J.B. Dimick, *Variation in hospital mortality associated with inpatient surgery.* N Engl J Med, 2009. 361(14): p. 1368-75.

(All standards correct as of June 2013)