The drive for quality

How to achieve safe, sustainable care in our Emergency Departments?

System benchmarks & recommendations
The College of Emergency Medicine

Full Report

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On behalf of the QED Group

Foreword

Consistent delivery of high quality emergency care remains an elusive goal for Emergency Departments (EDs) in the UK at present. This publication, the first of its kind by the College, describes the key components needed by systems as they move towards this important goal.

Much has been written about how to measure and then improve the quality of care delivered by healthcare systems. In emergency care the challenge is especially great. System benchmarking is a well described tool in the wider healthcare industry. It is used to improve consistency and drive quality improvement. The Quality in Emergency care Dashboard (QED) project surveyed 131 EDs in the UK for the financial year 2011/12. It is the largest and most comprehensive study of its kind, certainly in the UK. EDs are struggling to ensure consistent, safe care as performance deteriorates across the wider healthcare system. Workloads are increasing and there is a worsening medical workforce crisis in our EDs. The results from the QED are therefore timely.

More importantly, this report makes 10 key recommendations that we believe should be a strong focus for active discussions between commissioners, clinicians and Trust Boards as they seek to prioritise, design and deliver safe emergency care. The recommendations have some ranking and suggested timelines to help act as a focus for change, but in essence we believe they must be taken together. If properly implemented we believe they will lead to stability and consistency for the care delivered in our EDs. We will repeat this exercise in 2014 to assess and help guide relevant stakeholders on their progress. Failure to improve could have grave consequences for our patients, our staff and our ability to attract the high quality trainees of the future that are vital to drive the quality care agenda.

The College will also use this report and its recommendations to help inform the Review of Urgent and Emergency Care led by Sir Bruce Keogh, discussions with NHS England on guidance for Clinical Commissioning Groups and also to the Health Select Committee which has recently announced a review into Emergency Services and Emergency Care in May 2013.

Our commitment to highlight these issues on behalf of our Fellows and their staff is strong. More importantly, especially in the post Francis era, our commitment to our patients seeking our help in an emergency will remain unswerving.

Mike Clancy, President

Recommendations

Workload: Commissioners and clinicians must work closely together as a matter of priority to better manage workload in their Emergency Departments. Clear targeted funding strategies and appropriate co-located primary care services are needed to cater for 15-30% of the present work in Emergency Departments. These will work best if Emergency Medicine Consultants as Directors of Emergency Care are given responsibility to lead on integrated care delivery, governance and training. Trust Executives must also ensure flow through the emergency care system.

TIMELINE: 1-6 months

Configuration of Services: The College recommends adherence to key principles of good reconfiguration. Urgent Care Centre development must be part of a wider networked solution that is cost effective and efficient especially if co-located next to Emergency Departments.

TIMELINE: 3-12 months

Medical Staffing in the ED: Trust Boards must urgently focus on, and commit to, the creation of consistent, safe and sustainable working patterns for Consultants in Emergency Medicine. Continued expansion of consultant numbers is vital. These should meet College standards. Good job planning will allow Consultants to deliver good clinical care and training consistently and also support important quality improvement activity within their Emergency Departments.

TIMELINE: 1-6 months

Nursing staff and skillmix: Commissioners and provider organisations should adhere to the guidance of the Royal College of Nursing with regard to nursing workforce and skillmix to maintain high quality care.

TIMELINE: 1-6 months

Clinical quality indicators of care: The College recommends that the Clinical Quality Indicators be applied together, as a suite, to produce a more holistic quality improvement programme.

TIMELINE: 3-12 months

Commissioning: Commissioners, clinicians and senior managers within provider organisations should make concerted efforts to create strong network solutions. These should lead to a shared vision for their emergency systems that can be delivered in a timely fashion.

TIMELINE: 1-3 months

Safety and governance: Provider organisations should ensure that they have robust and active clinical governance systems to support safety and continuous quality improvement. Consultants must be provided with appropriate time and resources to support quality improvement.

TIMELINE: 1-6 months

Observation medicine and ambulatory emergency care: Clinical Decision Units and ambulatory emergency care are an important component of Emergency Department function. The SDEC tariff for ambulatory emergency care should be applied to certain groups of patients in the Emergency Department to leverage change and optimise good gatekeeping of the hospital bedbase. This activity needs to be properly resourced

TIMELINE: 3-12 months

Tariffs and informatics systems: The College recommends that the Department of Health should urgently address and correct the tariff structures that recognise clinical activity in the Emergency Department. At present these are not fit for purpose. Trusts must also pay urgent attention to the utility and integration of their Emergency Department information systems.

TIMELINE: 3-12 months

The patient experience: The College recommends that more resources are provided to create tools that will more accurately measure patient experience in the Emergency Department as a vital marker of the quality of care delivered.

TIMELINE: 1-12 months

About the QED Project

Introduction

Within the wider system, better understanding and benchmarking of what is required to commission, run and maintain the quality of care in a high performing Emergency Department (ED) is a crucial issue for the NHS [1]. This was well described in the Institute of Medicine's landmark publication: *Crossing the Quality Chasm in 2001* and has now been translated into a framework for quality and safety for the ED by the International Federation for Emergency Medicine [2,3]. In addition, process driven benchmarking has been identified as being a powerful tool for quality improvement [4]. The ability of EDs to provide a high quality patient experience supported by the three strands of safety, effective clinical care and consistent system performance, lies at the heart of these efforts to improve emergency care. Measurement of better outcomes for specific clinical conditions is also vital, especially for certain time critical pathologies. This is the subject of separate work by both the College and other relevant bodies [5, 6, 7].

The College of Emergency Medicine is pleased to publish its first comprehensive report on the key components of services that are being provided in the UK at present. The information is derived from a detailed web-based survey completed by individual EDs in the UK. A total of 131 EDs across the UK submitted data to the QED project. This represents just over half of all EDs in the UK and nearly 60% of EDs in England – a representative dataset.

We hope that the report and its recommendations can be used by commissioners, clinicians and managers to help benchmark their systems against the best available evidence or standards set by national organisations. We have also suggested some timelines that we hope will help stakeholders focus their activities. This will identify some 'quick wins' as well as allow better linkage to national bodies (NHS England or equivalent) where central strategic support is required. We believe that timely action is essential. More importantly we want to build upon this first report by the College to refine our thinking for the future. In 2014 we will revisit the identified benchmarks and repeat the exercise, so that stakeholders in the process can measure the level of success they have achieved. Calibration of system design will be vital if we are to configure sustainable, cost effective, solutions that will drive consistent, quality improvement in the care we deliver to our patients.

Methodology

Phase 1;

A total of 10 sections mapping key areas of Emergency Medicine (EM) practice were identified by an expert consensus group in January - April 2011. Only two sections (activity in the ED and workforce issues) were launched in phase 1 (June 2011) as a pilot testing period. A total of 102 EDs participated in this phase and the pilot data and process of development proved useful at a number of levels.

Phase 2;

In April 2012, (following further review an expert consensus) a further 8 sections were launched (with refinement of the previous year's first two sections). The scale of the task of data completion of the QED proved challenging for a number of departments for a host of reasons (technicalities of the platform, engagement strategies and designing the "outputs from the QED" appropriately). Valuable lessons have been learnt.

Phase two of data collection was completed on 30th November 2012. A new feature is being developed on ENLIGHTENme for later in 2013 to allow EDs to compare their site data with others. Data is from the financial year 2011-12.

PLEASE NOTE: Throughout the report many percentages have been rounded up for ease of display. In some cases this means the total figures may not equal 100%.

Participants

131 EDs across the UK submitted data to the QED. This represents just over half of all EDs in the UK. Nearly 60% of England EDs submitted data. Most EDs were unable to answer every question in the QED for various reasons. For this reason throughout the report most points are illustrated by percentages of responses rather than total values. For most questions at least 100 EDs provided a response. Where less than 100 EDs responded, this has been stated in the report.

Sections 5 and 6 on commissioning only analyse responses from England EDs. All other sections report for the entire UK.

Table A1: Completion rates for the QED

Nation	Number EDs submitted QED data	Type 1 EDs per area	% Completion Rate
ENGLAND	114	197	58%
- East Midlands	6	11	55%
- East of England	11	18	61%
- London	12	32	38%
- North East	9	12	75%
- North West	18	31	58%
- South Central	4	12	33%
- South East Coast	7	17	41%
- South West	15	20	75%
- West Midlands	14	23	61%
- Yorks & Humber	18	21	86%
NORTHERN IRELAND	4	12	33%
SCOTLAND	7	25	28%
WALES	6	14	43%
UK	**131**	**248**	**53%**

Section 1 – Workload and Demographics

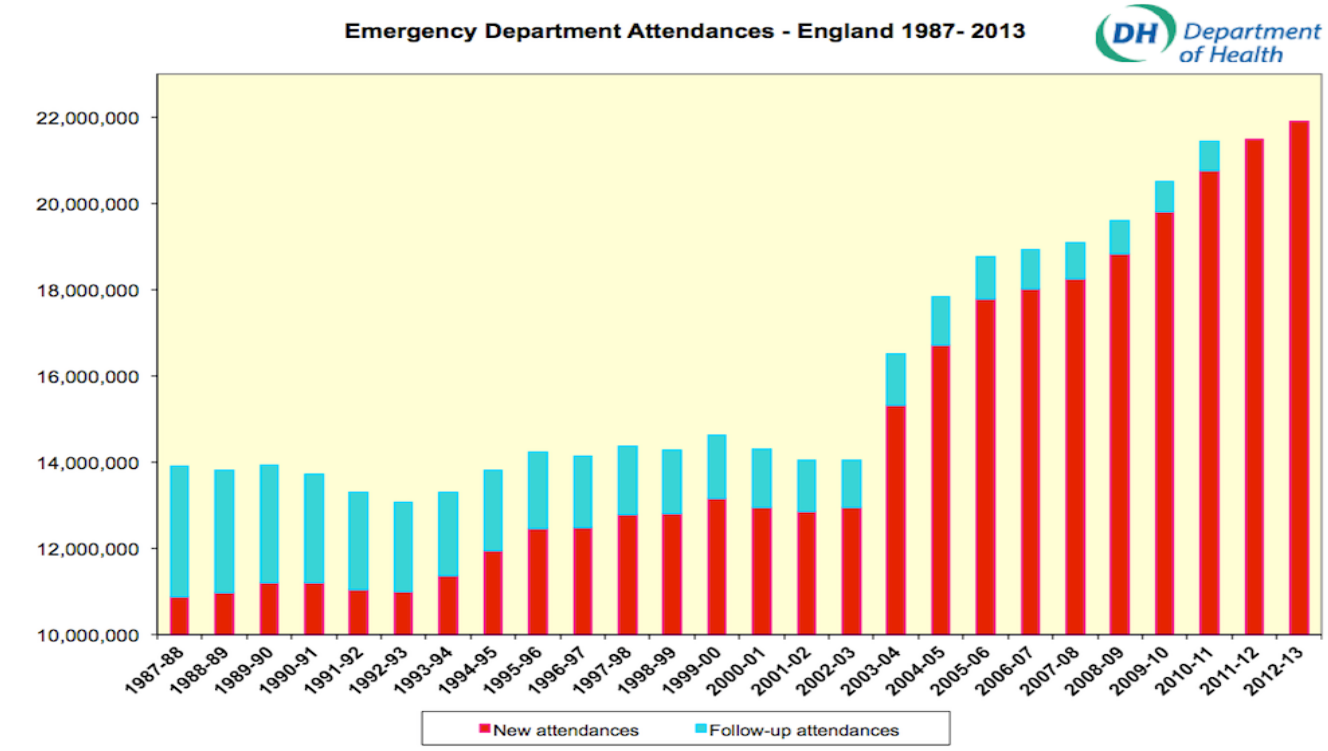
How busy are Emergency Departments?

The workload of the modern day ED is high with 22% of departments in the UK now seeing in excess of 100,000 patients /year (see chart B2). Overall, 10% of cases are triaged as category 1 or 2 and 38% of adults are category 3. Attendance rates continue to rise particularly in England. Other work suggests that this is 3-5% year on year although some systems report much higher increases especially out of hours [8]. Despite many initiatives to reduce demand over the last 10 years, none seem to have successfully created sustained change and diversion of work away from EDs.

It is vital that commissioners and clinicians understand the workload and case mix of patients presenting to their emergency care systems. They then need to develop systems to cope with this activity. Depending upon local casemix, resourced and accessible primary care services are vital. These may be housed in Urgent Care Centres (UCCs). Alternatively, co-located primary care services within or adjacent to EDs will help to decongest departments. They will focus on certain lower priority groups of patients, and allow optimal delivery of emergency care across the board. Whilst efforts to reduce demand will continue, this should not detract from the need to appropriately resource EDs to meet the more complex workload they are facing. Managing very busy periods of activity and surge in the ED require resilient escalation planning by the entire local healthcare system. The College has provided guidance on managing overcrowding in the ED [9].

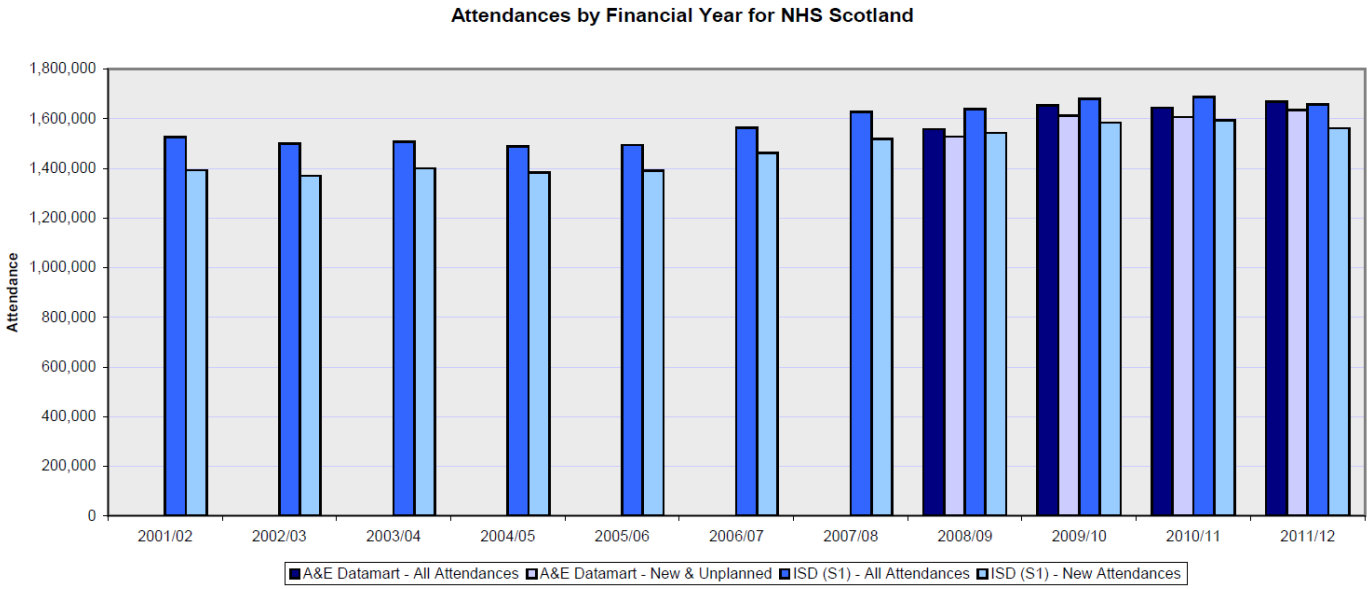
Poorly performing care systems have flows that lead to exit block and overcrowding. These failures by systems and organisations have now been clearly proven to lead to increased mortality and morbidity for patients [10, 11, 12, 13]. Executive teams of provider organisations and commissioners have responsibilities not only to their patients, but also to their staff to help them work safely and sustainably when performing clinical duties in the ED at times where the wider system is performing poorly.

Chart B1a: England ED attendances (1987-2013)



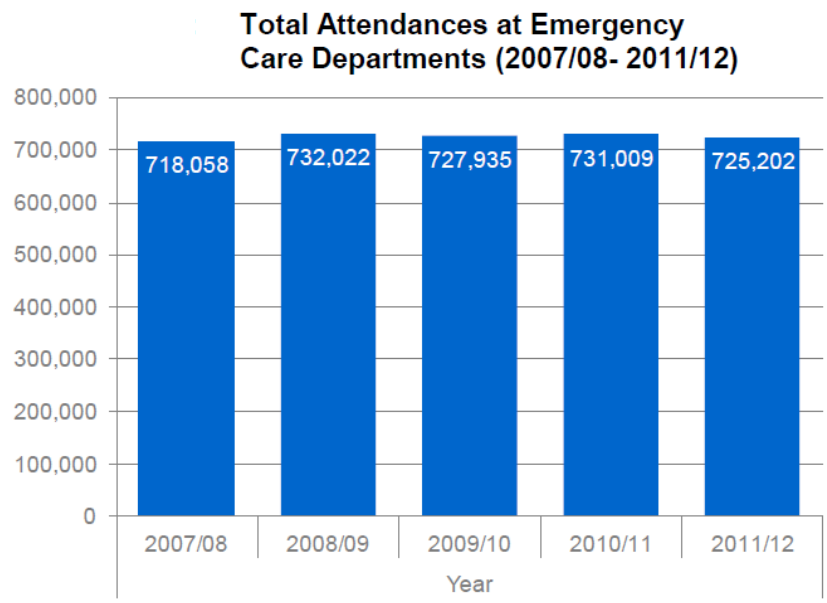
Source: Department of Health 2013

Chart B1b: Scotland ED attendances (2001-2012)



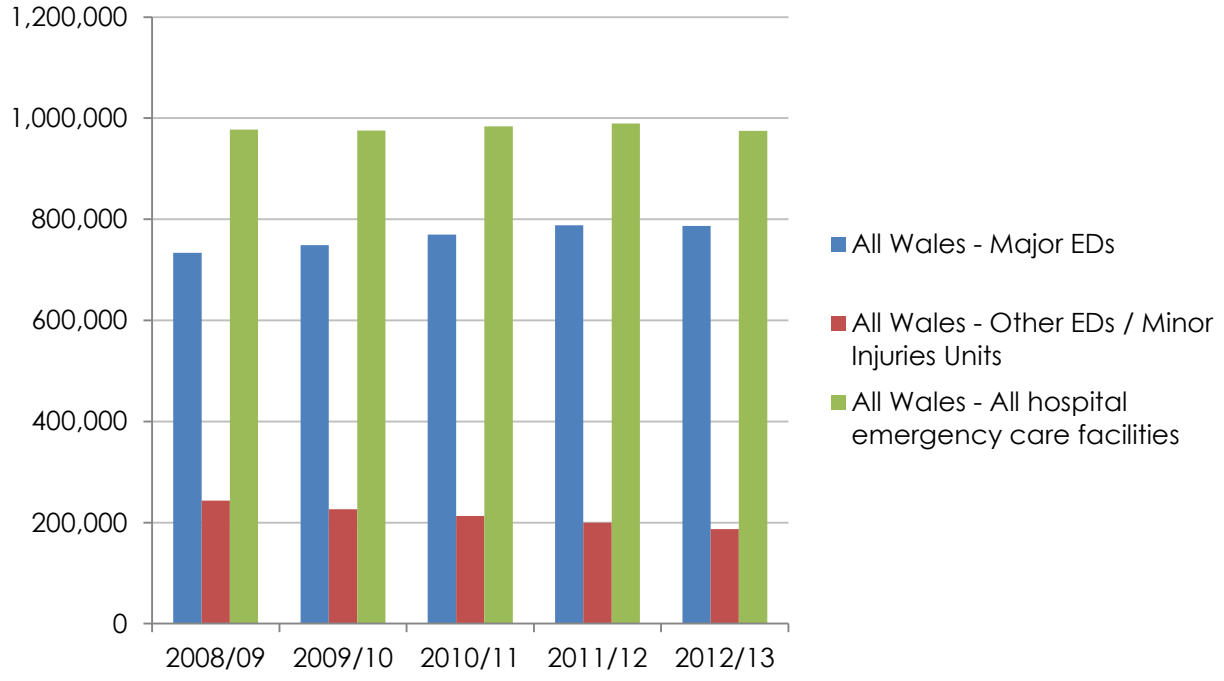
Source: Information Services Division 2013

Chart B1c: Northern Ireland ED attendances (2007-2012)



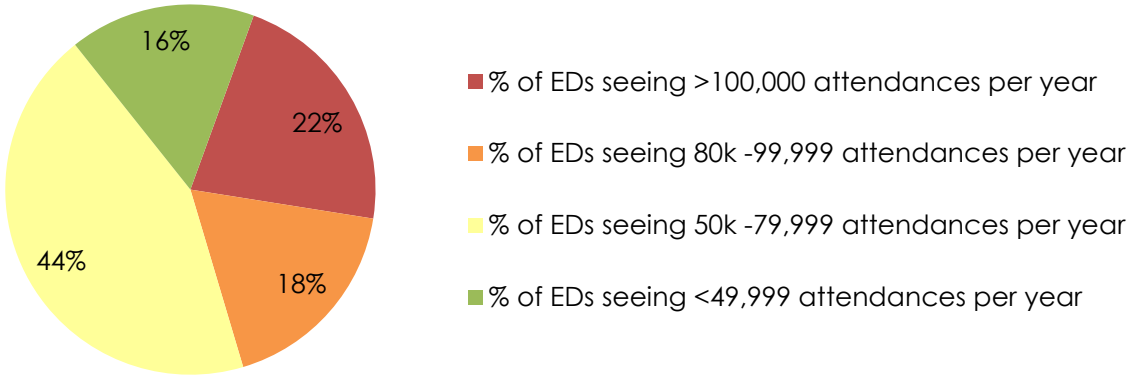
Source: Department of Health, Social Services and Public Safety 2013

Chart B1d: Wales ED attendances (2007-2012)



Source: NHS Wales Informatics Service 2013

Chart B2: Breakdown of total new ED attendances (UK)



Demographics and triage categories of Emergency Department patients

Older patients and paediatric patients form a significant proportion of the workload of the ED (20% of patients are over 65 years old and 22% of patients are under 16). Notably, 8% of patients are over the age of 80 and this number will certainly rise unless sustainable, appropriate, alternative solutions are found (See chart B3). A range of specific design strategies are required to manage the rising number of elderly patients who attend the ED but do not require emergency care.

The role that UCCs and co-located primary care services have had on ED function and activity is important and will be the subject of a more detailed report by the College later in 2013. Evidence suggests that the primary care workload is rising and that co-located primary care services could manage between 15-30% of existing ED workloads [14, 15]. In some systems it has been suggested that this could be greater, although the nature of the solution in such circumstances remains poorly defined. The best systems have optimal integration strategies between the ED and any co-located primary care service with an EM consultant as a single Director of Emergency Care.

Adult patients who are triaged show a consistent split with 10% being category 1 or 2 (the most serious cases requiring immediate or very urgent action), 38% being triaged category 3 and 47% being labelled category 4 with only 5% category 5 (see chart B4).

The breakdown of paediatric attendances show a similar number of serious cases but a much higher incidence of triaged category 4 (65%) and lower incidence of category 3 (19%) (See chart B5). Overall, 10% of cases are triaged as category 1 or 2 and 38% of adults are category 3.

Chart B3 – Age breakdown of total ED attendances (UK)

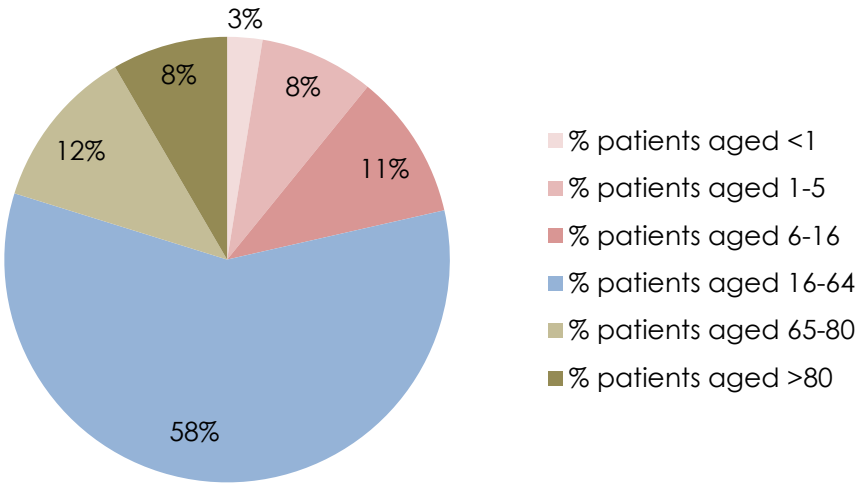


Chart B4 – Adult new attendances by triage category (UK)

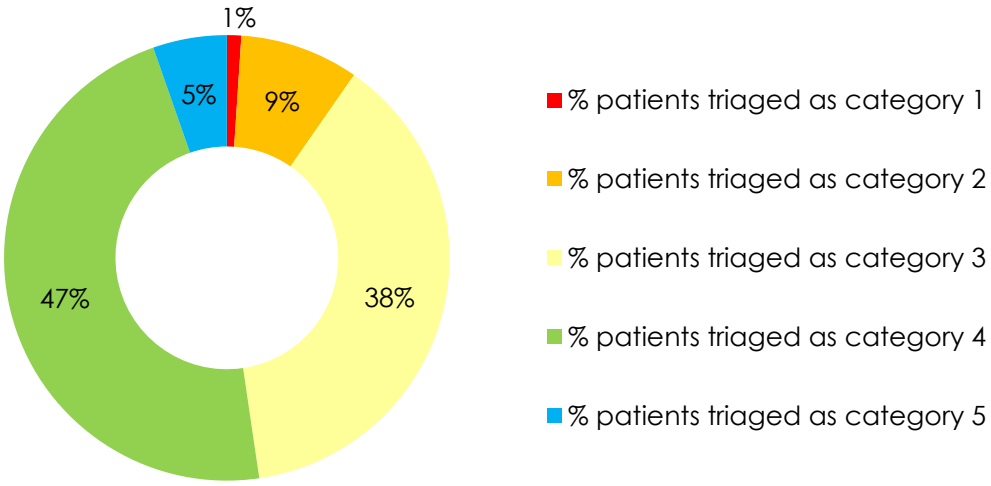
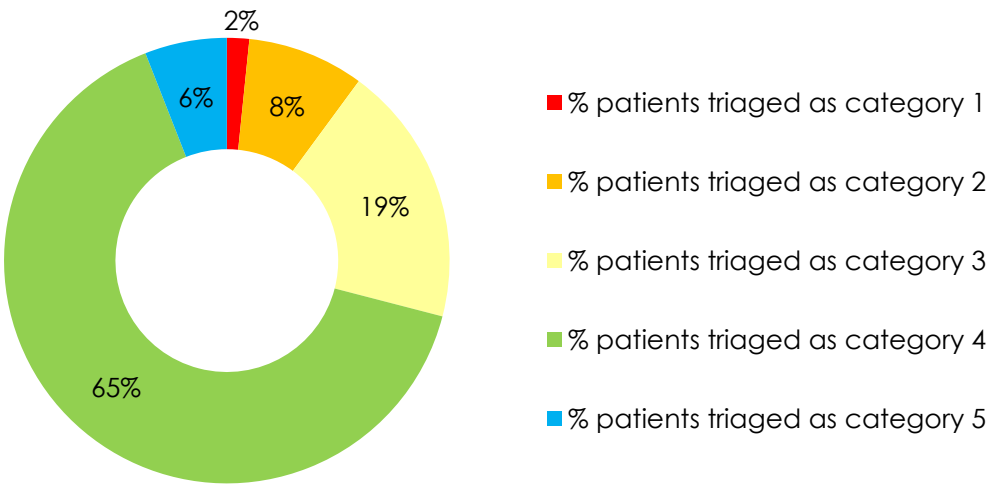


Chart B5 – Paediatric new attendances by triage category (UK)



Triage Category definitions (MTS)		
Category 1	Red	Immediate
Category 2	Orange	Very urgent
Category 3	Yellow	Urgent
Category 4	Green	Standard
Category 5	Blue	Non-urgent

Section 2 – Configuration of Services

The results of the QED show that optimal configuration of services required to support a modern ED or Major Trauma Centre continues to be a challenge for commissioners, provider organisations and clinicians alike. The College has previously provided guidance on the key principles that support good reconfiguration [16]. Solutions that will ensure safety, efficiency and clinical effectiveness must lie at the heart of all re-design. The QED data suggests that there is significant variation in how services are configured and how some EDs are supported on site. More work is required to understand how networked solutions and integrated pathways can best support delivery of high quality care.

What services are located on the same hospital site as Emergency Departments?

Table C1 details the availability of in-hospital services co-located on the same site as the ED. The College view is that an ED must have 24/7 support services from Acute Medicine, Intensive Care/Anaesthesia, diagnostic imaging and laboratory services, including blood bank.

It also remains the view of the College that the required support for an ED is provided by the "seven key specialties"- Critical Care, Acute Medicine, Imaging, Laboratory Services, Paediatrics, Orthopaedics and General Surgery [17]. However, it is appreciated that inpatient teams may not be able to sustain full 24/7 services on all current sites. There is a balance between centralising or rationalising some services with the consequent risk of patient deterioration en route and the economic cost and reduced expertise of maintaining numerous smaller units. This remains an area of continuing research.

Preferably Paediatrics, General Surgery and Orthopaedics should be on site. If they are not, then robust and safe pathways should be in place for the management of severe illness or injury in these groups. This may mean ambulances bypassing the nearest ED or clear procedures for rapid stabilisation and summoning retrieval teams if there is a long journey to the nearest appropriate facility. Again the economic implications of such networked solutions and the impact on neighbouring systems are poorly researched and yet there is tremendous drive for change in some systems due to financial and human resource imperatives.

Where key support services such as Orthopaedics, General Surgery or Paediatrics are not on site, then the need for more senior emergency practioners to assess, stabilise and treat patients prior to discharge or transfer is self-evident. There must also be clear procedures and protocols for dealing with common problems, for example, acute abdominal pain and the pyrexial child.

Table C1 – Services located on same site as ED (UK)

Service	*Major Trauma Centres*	*EDs (Not MTCs)*	*CEM recommendation that service should be present in all EDs* (*Paediatric EDs only ˚See above)
Acute Medicine	91%	86%	✓
Acute Stroke	78%	76%	
Adult critical care	83%	87%	✓
Alcohol and substance abuse	87%	71%	
Anaesthesia	100%	88%	✓
Cardiac ICU	57%	33%	
Cardiology	87%	83%	
Cardio-thoracic	74%	8%	
Community Crisis Resolution	78%	75%	
Dermatology	70%	75%	
Ear, Nose & Throat	87%	68%	
Gastroenterology	87%	86%	
General Paediatric Medicine	87%	79%	✓
General Psychiatry	74%	60%	
General Radiology	96%	87%	✓
General Surgery	91%	84%	✓˚
Gynaecology	70%	80%	
Interventional Radiology	96%	58%	
Medicine for Elderly	78%	86%	
Neonatal ICU	70%	47%	
Neurology/Medicine	83%	64%	
Neurosurgery	87%	5%	
Obstetrics	70%	82%	
Ophthalmology	78%	66%	
Orthopaedics	100%	84%	✓˚
Paediatric ICU	61%	9%	✓*
Paediatric Specialities	74%	25%	✓*
Paediatric Surgery	65%	18%	✓*
Plastics	65%	18%	
Radiology (Other)	39%	10%	
Respiratory Medicine	91%	87%	
Rheumatology	91%	77%	
Self-harm	78%	68%	
Sports Injury Medicine	26%	19%	
Thoracic	61%	11%	
Vascular Surgery	87%	51%	

Emergency Departments and Urgent Care Centres

The design, function and role that UCCs can provide in supporting EDs continues to be a poorly researched area due often to operational imperative. The QED report reveals significant variation in UCC design and system integration. The College has also previously published guidance on unscheduled care facilities and provided a toolkit for systems wishing to develop such models [18, 19]. More recently a review by the Primary Care Foundation of a cohort of UCCs revealed a continuing variation in standards of practice and concerns about value for money [20]. The College will seek to do further collaborative work with NHS England, the Royal College of General Practitioners, and the Primary Care Foundation in this important area in order to provide recommendations on the best models of cost effective and efficient care delivery.

Only 10% of participating Trusts reported having a co-located UCC with their ED. As shown in Chart C2b there is no set model for staffing of UCCs and their workforce comprises a broad range of specialists across EM and primary care. The proportion of EDs with co-located out of hours GP services delivering unscheduled primary care within EDs is higher at 36%.

Chart C2a – Trusts with Urgent Care Centres

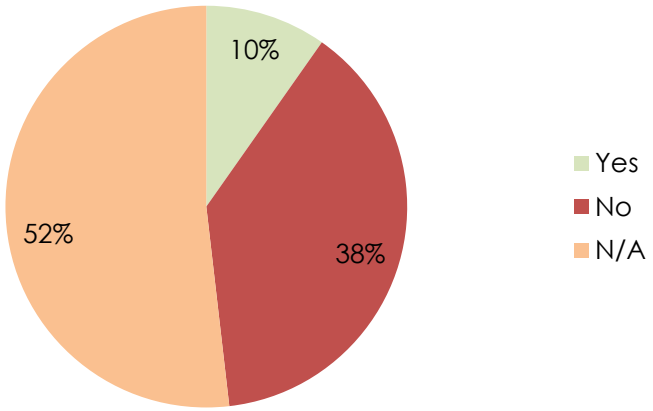


Chart C2b – Staffing of Urgent Care Centres

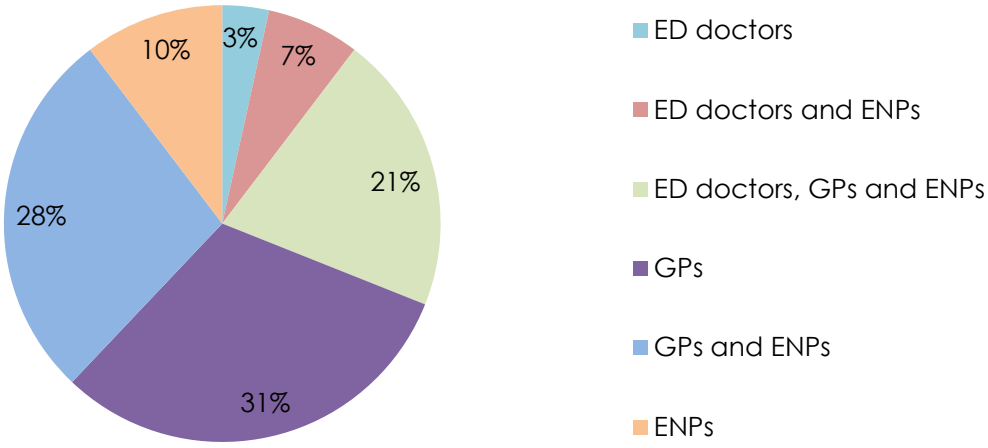


Chart 2c – Trusts with out of hours GP service

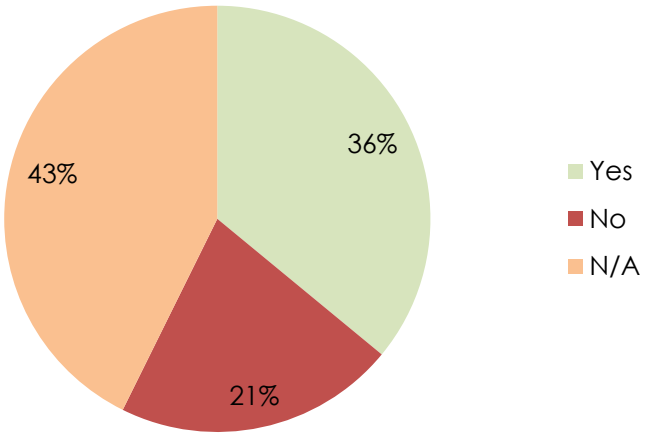
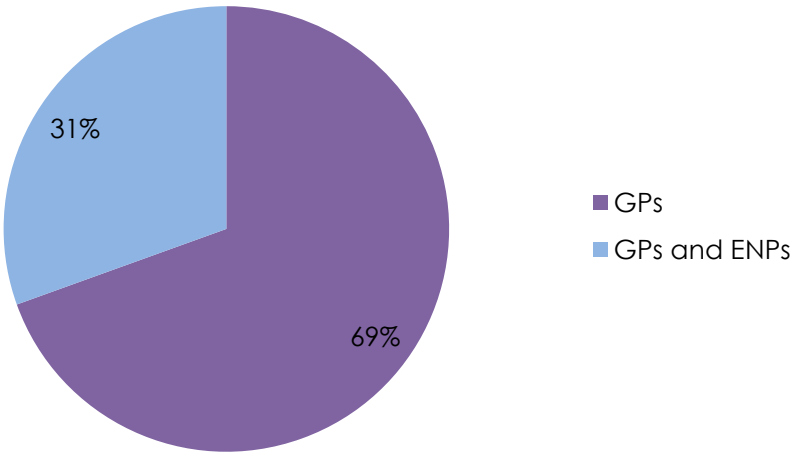


Chart 2d – Staffing of GP out of hours services



Section 3 - Medical staffing in the ED

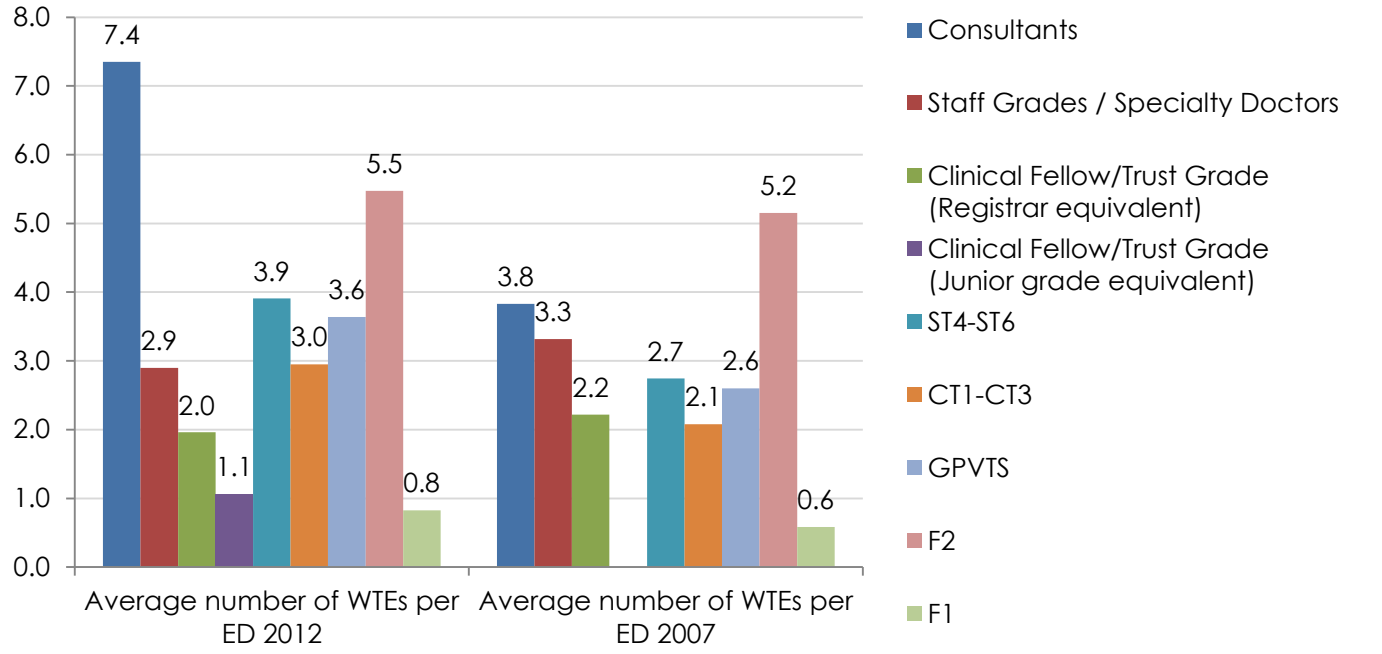
Numbers of medical staff in Emergency Departments

The number of EM Consultants in post has risen over the last five years. The average number of whole time equivalent (WTE) Consultants per ED is now 7.4, compared to 3.8 in 2007/8. Whilst this expansion is welcomed, the average number is still significantly below the College's minimum recommendation of 10 WTE Consultants per ED and up to 16 Consultants in larger departments. The College's recommended levels are designed to provide sustainable cover, with up to 16 hours EM Consultant presence per day, 7 days a week, in every department [21]. Increased EM Consultant numbers will also ensure adequate 'depth of cover' to help manage EDs during busier times and surges. Finally they will ensure better supervision of juniors and protected training time.

The average number of Higher Specialist Trainees (HST4-6) posts available has risen slightly in the same 5 year time period (2007-12) but the steep fall off in recruitment into ST4-6 posts has created significant vacancy or locum rates of 29% for HST. Vacancy rates for SAS doctors have similarly deteriorated. These issues are proven to have resulted in significant clinical and financial risk for the NHS [22]. Urgent work is required to improve working and training conditions for these groups. Trends in recruitment to HST posts over the last 3 years suggests shortages in ST4-6 posts will continue for the foreseeable future if no action is taken to create sustainable working patterns that are attractive to the trainees of the future.

Junior grade vacancy rates are relatively low. This reflects the fact that most junior doctors are placed in EDs as part of training rotations. However, the attrition rate between core training and higher specialist training suggests that an unreasonable burden of service delivery is placed on junior staff, negatively influencing choice of specialty.

Chart D1 – Average WTE medical staff numbers (filled posts) by grade per ED 2011/12 and 2007/8*



* 2012 data from QED project. 2007 data is from Healthcare Commission Urgent Care Review 2007 (2007 data from England only) NOTE: no data available from 2007 for junior clinical fellows / trust grades.

Table D2: Average number of WTE staff (filled posts) per size of ED (UK)

Doctors	Av. number in post (WTE)				
	All EDs	**>100,000 attendances per annum**	**80-99,999 attendances per annum**	**50-79,999 attendances per annum**	**<49,999 attendances per annum**
Consultants	**7.4**	9.8	8.6	6.5	5.0
Staff Grades / Specialty Doctors	**2.9**	2.3	2.1	3.4	2.9
Clinical Fellow/Trust Grade (Registrar equivalent)	**2.0**	2.4	2.4	1.5	2.0
Clinical Fellow/Trust Grade (Junior grade equivalent)	**1.1**	2.1	1.1	0.7	0.8
ST4-ST6	**3.9**	5.9	5.8	3.0	2.0
CT1-CT3	**3.0**	4.8	3.4	2.1	2.9
GPVTS	**3.6**	4.3	3.9	3.2	2.6
F2	**5.5**	8.5	6.3	3.9	4.2
F1	**0.8**	0.8	1.2	0.7	0.4

Reliance on locums and vacancy rates in the ED workforce

There is a heavy reliance on locums to fill senior doctor positions across the UK. On average an ED will employ locums in 9% of consultant posts, 17% of SAS doctor posts, 17% of clinical fellows/trust grade posts and 12% of Higher Specialist Trainees posts (see chart D3). The average number of WTE locums per grade is detailed in chart D4 and table D5.

Senior doctor posts also have high vacancy rates across the UK. On average an ED will have funded but unfilled positions for 8% of consultant posts, 12% of SAS doctor posts, 12% of clinical fellows/trust grade posts and 15% of Higher Specialist Trainees posts (see chart D3). The average number of vacancies (WTE) per grade is detailed in chart D4 and table D6. The number of vacancies places a severe strain on the ability of EDs to staff rotas. There is no clearly identifiable supply of doctors to fill these vacancies although a variety of strategies are being tried around the UK.

The vacancy rates and heavy reliance on locums have been proven to have significant clinical and financial risk implications for the NHS and urgent work is required to improve working and training conditions for these groups.

Chart D3 – Average breakdown of substantive, locum and vacant posts 2011/12 (UK)

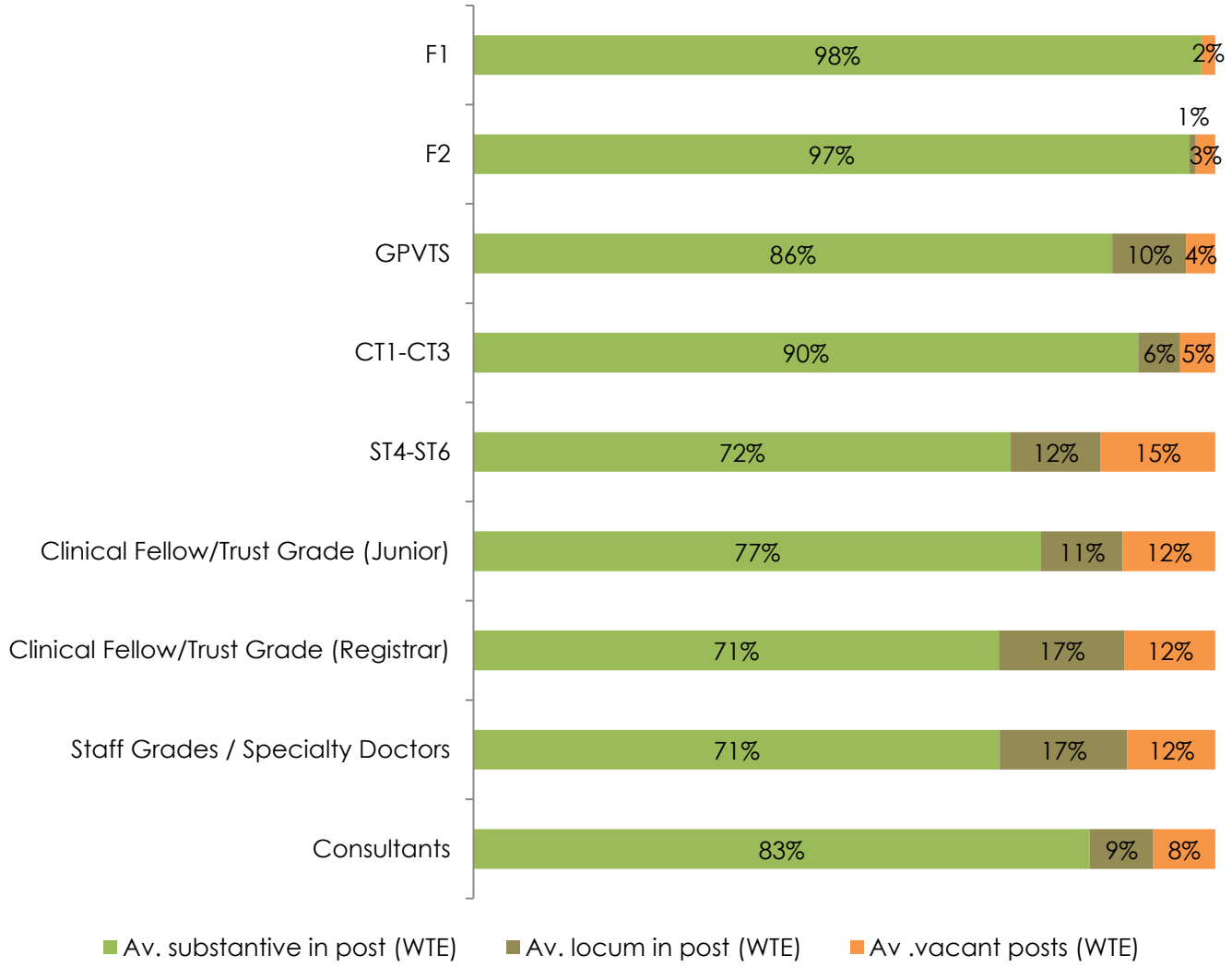


Chart D4 – Average WTE numbers of locums and vacant posts by grade per ED – 2011/12 (UK)

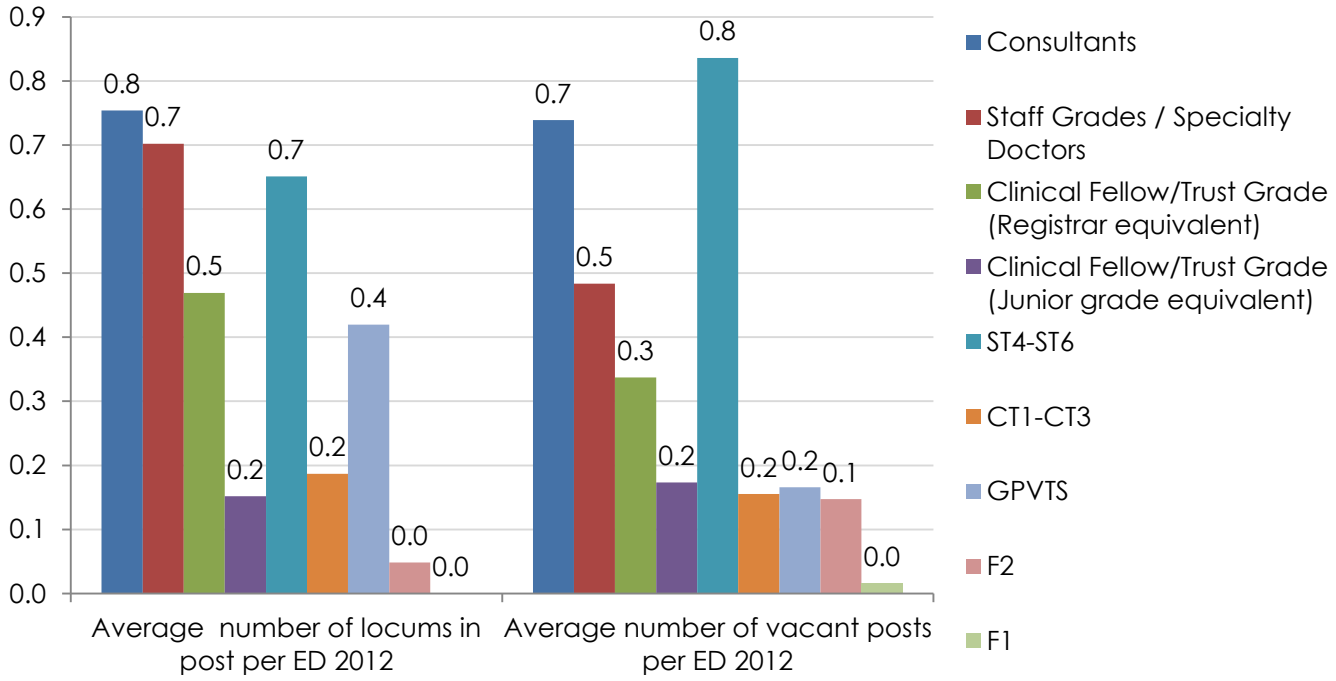


Table D5: Average number of WTE locums in post per size of ED (UK)

Doctors	Av. number of locums in post (WTE)				
	All EDs	**>100,000 attendances per annum**	**80-99,999 attendances per annum**	**50-79,999 attendances per annum**	**<49,999 attendances per annum**
Consultants	**0.8**	1.1	0.7	0.6	0.6
Staff Grades / Specialty Doctors	**0.7**	0.4	0.3	1.0	0.6
Clinical Fellow/Trust Grade (Registrar equivalent)	**0.5**	0.3	0.5	0.4	0.4
Clinical Fellow/Trust Grade (Junior grade equivalent)	**0.2**	0.3	0.2	0.1	0.2
ST4-ST6	**0.7**	0.6	0.8	0.6	0.6
CT1-CT3	**0.2**	0.3	0.2	0.1	0.2
GPVTS	**0.4**	0.3	0.4	0.4	0.5
F2	**0.0**	0.1	0.0	0.1	0.0
F1	**0.0**	0.0	0.0	0.0	0.0

Table D6: Average number of WTE vacancies per size of ED (UK)

Doctors	Av. number of vacant posts (WTE)				
	All EDs	**>100,000 attendances per annum**	**80-99,999 attendances per annum**	**50-79,999 attendances per annum**	**<49,999 attendances per annum**
Consultants	**0.7**	1.4	0.7	0.5	0.5
Staff Grades / Specialty Doctors	**0.5**	0.2	0.5	0.7	0.3
Clinical Fellow/Trust Grade (Registrar equivalent)	**0.3**	0.3	0.4	0.3	0.2
Clinical Fellow/Trust Grade (Junior grade equivalent)	**0.2**	0.5	0.1	0.0	0.2
ST4-ST6	**0.8**	1.4	0.9	0.7	0.6
CT1-CT3	**0.2**	0.3	0.2	0.1	0.1
GPVTS	**0.2**	0.2	0.3	0.2	0.0
F2	**0.1**	0.1	0.2	0.1	0.2
F1	**0.0**	0.0	0.0	0.0	0.0

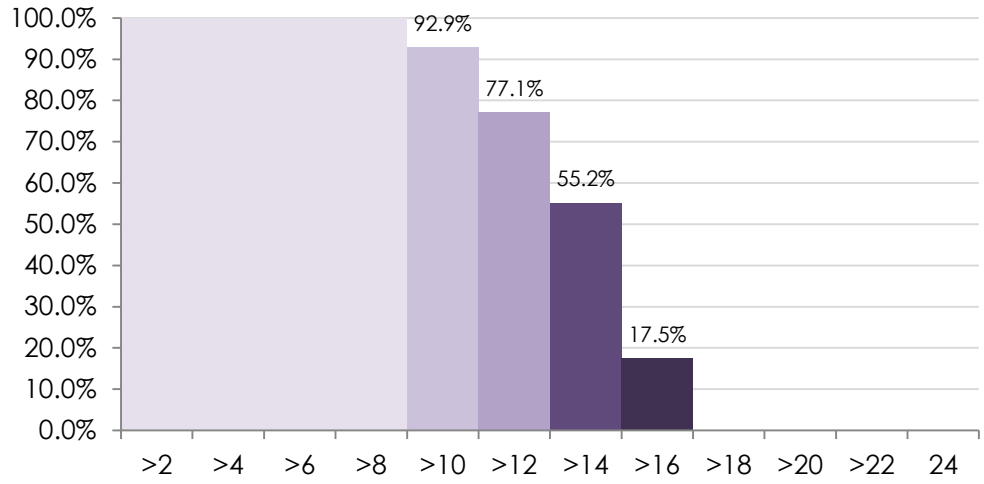
How much clinical cover is provided by senior doctors in EDs?

Consultants in EM are providing significant direct 'shop-floor' cover to help maintain safety in EDs, especially out of hours, within limited available resources. Over 77% of EDs reported that they had at least one EM consultant present in the ED over 12 hours per weekday, but only 17% reported such presence for 16 hours. At weekends the number of departments with 'shop-floor' cover for at least 12 hours / day, falls to 30%. The College believes that EM Consultants are at the leading edge of 7 days working as espoused by the Medical Director, Sir Bruce Keogh as well as the Academy of Medical Royal Colleges within the constraints of the resources available[23, 24]. It should be noted that the intensity of working is not reflected in these numbers. Other work by the College is seeking to understand and give guidance on safe and sustainable working practices by Consultants.

Chart D7 - Consultant 'shop-floor' coverage - hours present per day in EDs (UK)

A) Monday-Friday

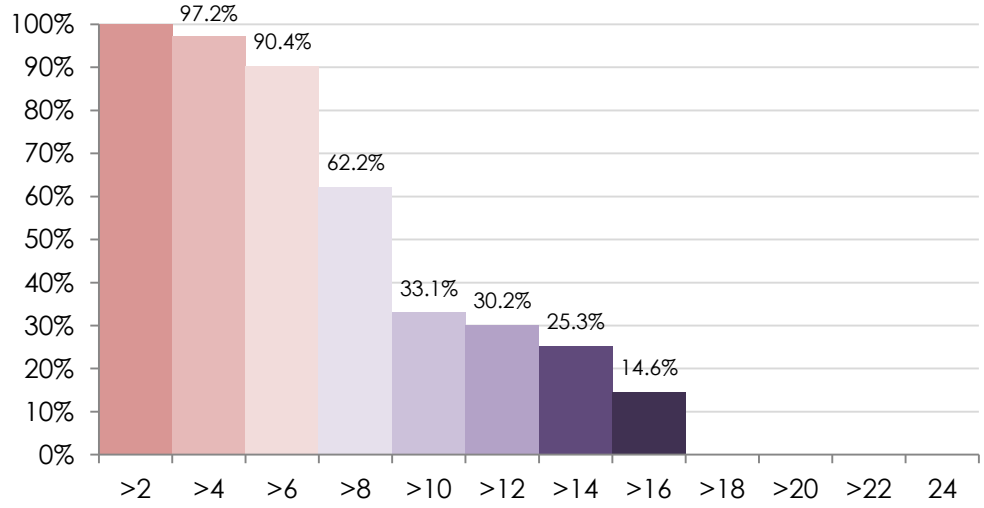
% of EDs



Number of hours where at least one consultant is present in the ED per day

B) Saturday and Sunday

% of EDs



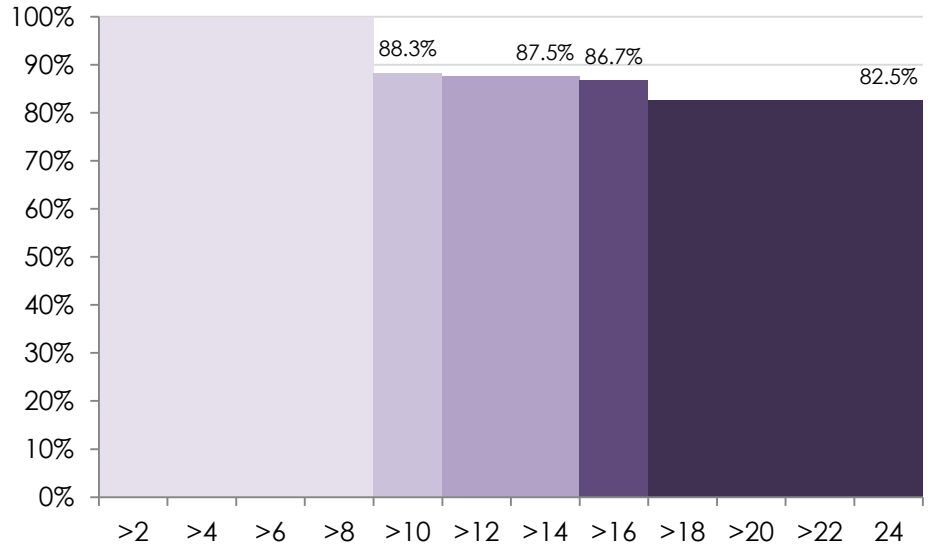
Number of hours where at least one consultant is present in the ED per day

Middle-grade presence in the ED is generally good, with 82% of EDs reporting a 24 hour per day presence during the week and 79% had 24 hour presence at weekends (see charts D8A and D8B). However, this equates to 1 in 5 EDs reporting they have no senior doctors present in the ED overnight.

Chart D8 – Middle-grade 'shop-floor' coverage – hours present per day in EDs (UK)

A) Monday-Friday

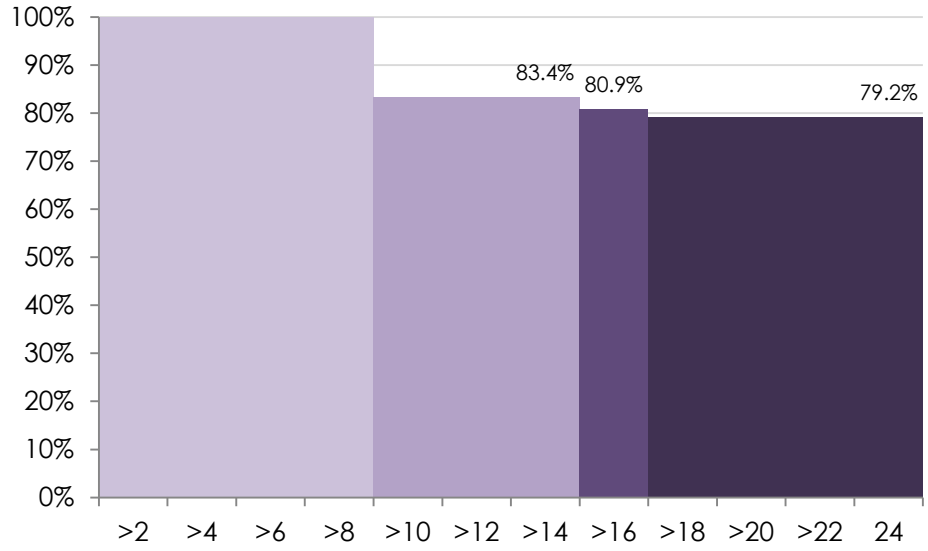
% of EDs



Number of hours where at least one middle-grade is present in the ED per day

B) Saturday and Sunday

% of EDs

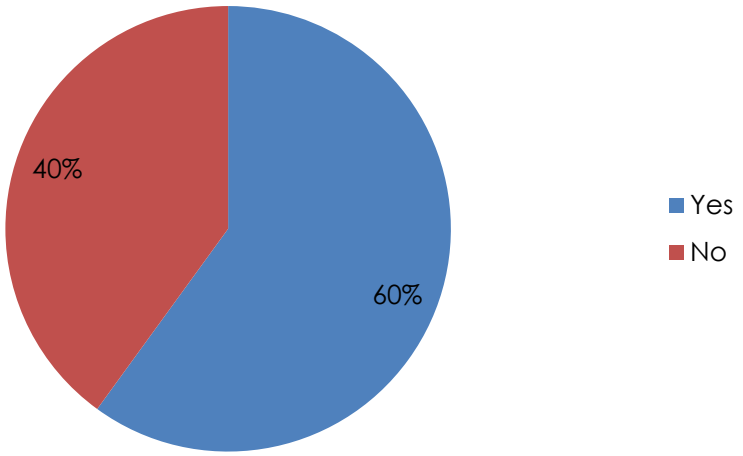


Number of hours where at least one middle-grade is present in the ED per day

How much time is provided to senior ED doctors for Supporting Professional Activities?

The QED has identified that 60% of EDs adhere to national College, Academy of Medical Royal Colleges and BMA guidelines on job planning: specifically the inclusion of 2.5 PAs of Supporting Professional Activity within job plans. This time is vital if EM Consultants are to lead, project manage, and deliver a host of training, quality improvement and governance activities. The College will carry out further work to explore the impact in systems where there is such variation in national recommendations.

Chart D9: Percentage of EDs following BMA & CEM guidance on SPA time as per the Consultant contract (7.5 DCC / 2.5 SPA)



The very serious medical workforce challenges facing EDs will only be properly addressed by creating safe and sustainable working patterns that meet appropriate standards, thus allowing good training environments and attracting trainees of the future. The College has published standards on minimum consultant staffing levels for different sized EDs. Most hospitals continue to fall short of these standards. Provider Trusts must create and show commitment to their long term vision for staffing EDs. They must support working practices for Consultants that ensure sustainability. The College will publish further guidance on safe, sustainable working practices in the summer of 2013.

Section 4 - Nurse staffing and skillmix

The QED has provided the first comprehensive view on the levels of nursing staff working in EDs in the UK. Whilst no trend data is available, the average nursing staff numbers reveal that EDs rely heavily on Band 5 nurses, supported by Band 6 and 7s to provide 'shop-floor' leadership. The Royal College of Nursing is currently leading work to develop appropriate skillmix tools. This will support the recommendations for core ED nursing staff levels.

The role of Emergency Nurse Practitioners in seeing minor injury patients is well established. This is demonstrated by this survey. A small but slowly increasing number of EDs have Advanced Nurse (or Clinical) Practitioners (ANP or ACPs) that are able to work as part of the ED team in the majors area. It is still too early to assess the potential impact of these posts for most departments, although anecdotal evidence suggests that the greatest benefit occurs when working as a fully integrated part of the ED team. The role of Physician Assistants in some EDs is also being explored and encouraged.

Delivery of high quality care in the ED requires a strong multidisciplinary workforce with the correct skillmix. The College will continue to work closely with the Royal College of Nursing and sub specialty associations to ensure that recommended levels of nurse staffing for core ED function are attained. Provider organisations must review their nurse staffing levels to ensure standards are met and maintained. The delivery of high quality nursing is essential for effective emergency care. This requires strong nursing leadership on a shift by shift basis, as well as at Departmental level.

Chart E1 – Average nursing staff numbers (filled posts) per ED 2011/12 (UK)

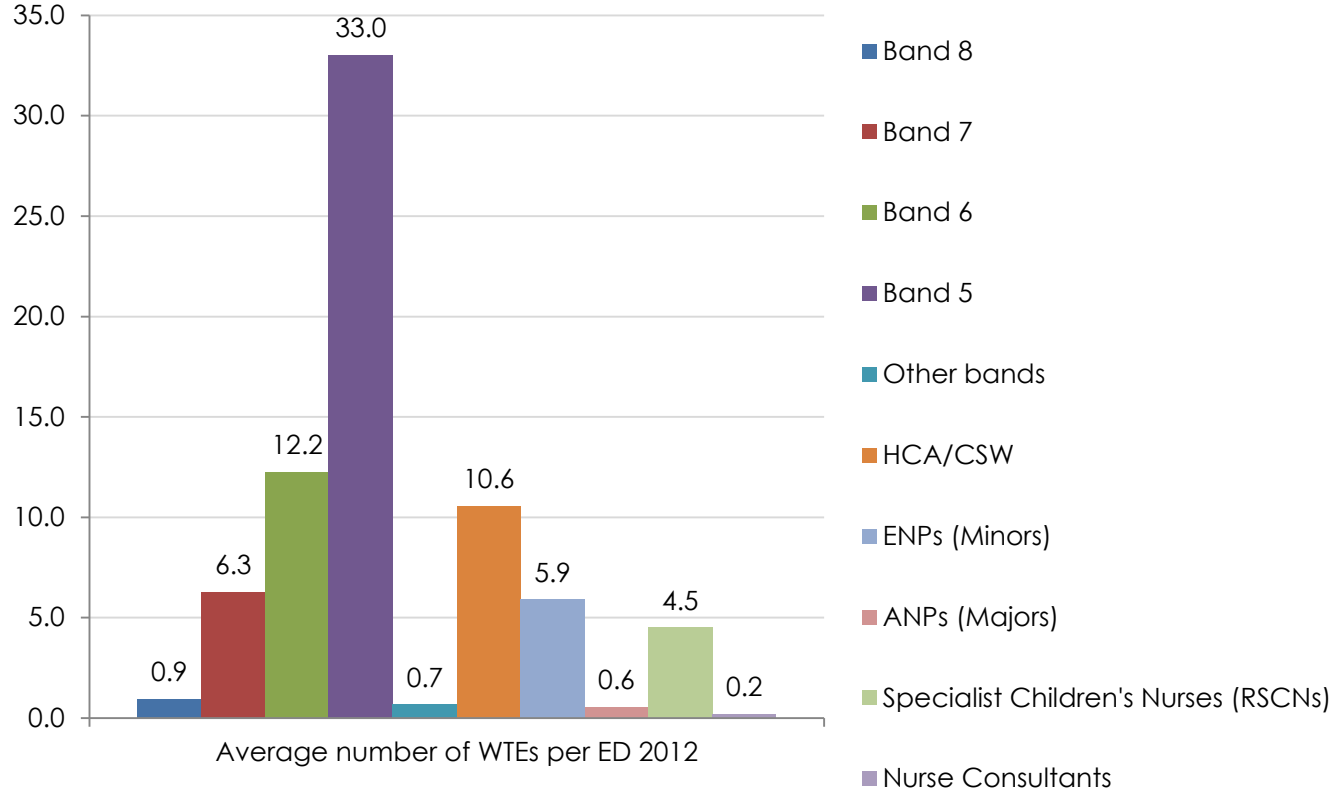


Chart E2 – Average nursing staff numbers (filled posts) per size of ED 2011/12 (UK)

Nurses	Av. number in post (WTE)				
	All EDs	**>100,000 attendances per annum**	**80-99,999 attendances per annum**	**50-79,999 attendances per annum**	**<49,999 attendances per annum**
Band 8	**0.9**	1.5	1.2	0.8	0.5
Band 7	**6.3**	9.3	8.4	4.6	3.7
Band 6	**12.2**	16.5	13.3	10.3	8.9
Band 5	**33.0**	42.4	40.4	27.8	23.7
Other bands	**0.7**	1.1	2.4	0.0	0.7
HCA/CSW	**10.6**	16.2	12.3	7.3	8.8
ENPs (Minors)	**5.9**	7.5	6.5	4.9	4.3
ANPs (Majors)	**0.6**	1.4	0.6	0.2	0.4
Specialist Children's Nurses (RSCNs)	**4.5**	9.0	4.5	2.9	4.0
Nurse Consultants	**0.2**	0.3	0.3	0.1	0.1

Section 5 - Clinical quality indicators of care

In 2010 new Clinical Quality Indicators (CQIs) for Urgent and Emergency care were introduced into England with the intention of driving better patient care in EDs. These related to timeliness of care, quality of care, and the patient experience. In Northern Ireland, Scotland and Wales variants of these indicators (with the main focus on the 4 hour indicator) have also been introduced. In the Republic of Ireland similar discussions have taken place.

Measuring and improving the quality of care delivered in the ED must be evidence based. The CQIs developed by the Department of Health, in conjunction with expert groups including the College of Emergency Medicine represent a suite of indicators which if applied appropriately will act as a powerful lever for improving care in the ED. The data reveals that the total time spent in the ED remains the most commonly used indicator of performance for commissioned services (87% of EDs in England). In this survey less than half of EDs reported that patient experience was being used as an indicator of care (43%) and only a third of EDs were using the consultant sign off indicator (34%). On average only 52% of patients were treated by a doctor or practitioner within 60 minutes of arrival (see Table F1).

Further work is clearly required to use the existing indicators more consistently, as part of a suite focusing on quality improvement rather than an isolated system performance indicator (greater than 95% of patients spending less than 4 hours in the ED)[25]. Urgent work is required to further refine the CQIs to meet challenges in system design. Measurement and consistent improvement of a suite of indicators will require extra resources in a number of systems.

Table F1 - How are EDs performing against the quality indicators for urgent & emergency care? (ENGLAND ONLY)

QI performance averages (except patient experience and consultant sign-off)	All EDs	>100,000 attendances	80,000 – 99,999 attendances	50,000 – 79,999 attendances	<49,999 attendances
Time in the ED – % less than 4hrs	95.57	95.31	95.29	95.47	95.74
Time to initial assessment for patients arriving by ambulance – % less than 15 minutes	74.19	71.03	69.57	80.28	65.02
Time for arrival to treatment by a decision maker – % within less than 60 minutes	52.10	49.21	48.80	53.88	53.98
% Left Without Being Seen	2.47	2.68	2.90	2.43	1.70
% Unplanned re-attendance to the ED within 7 days	4.23	5.00	4.91	3.62	3.75
% of patients where ED stay ED exceeding 6hrs	2.62	2.27	3.79	2.46	2.16

Section 6 - Commissioning

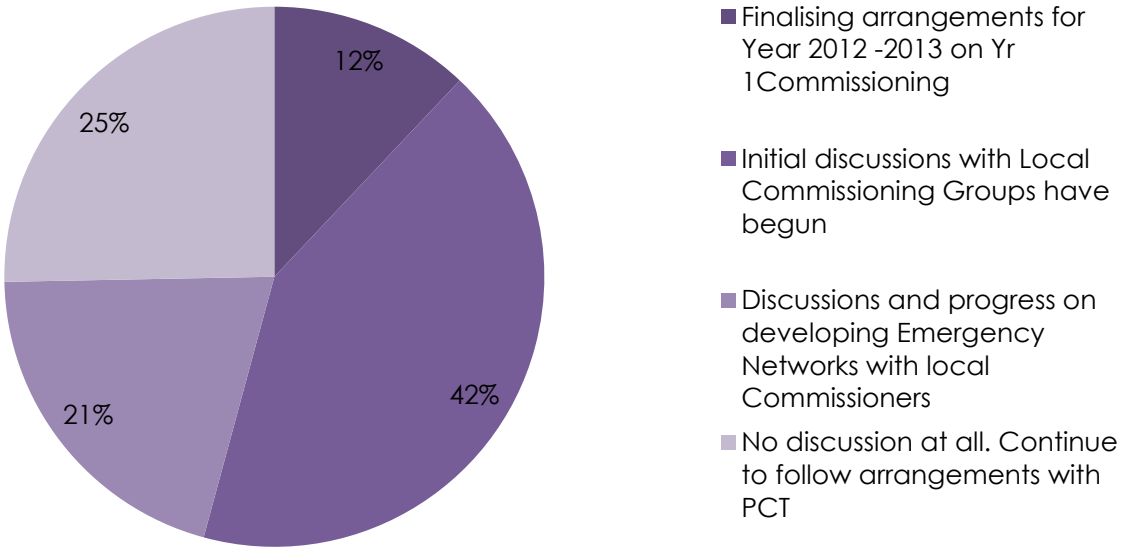
How are arrangements for urgent & emergency care commissioning progressing?

The new commissioning framework for England was specifically surveyed. Respondents were asked to describe the ways in which commissioners and providers of emergency healthcare systems were working together to produce a joint vision to create cost effective and efficient solutions. There are useful lessons for the other devolved countries in this regard. Commissioning arrangements have progressed significantly since the QED project was undertaken. However, the findings from 2012 reveal that despite an urgent need and seeming desire by all sides, there were significant areas where the commissioning process for emergency care remained embryonic, with a lack of communication.

Respondents reported a lack of active engagement between commissioners and EM clinicians about new commissioning arrangements. 25% of EDs stated no discussion had taken place at all, whilst another 42% stated that only initial discussions had begun. Only 33% of EDs reported that EM clinicians were directly involved in discussions with their local Clinical Commissioning Groups (see Chart G2).

The emergency care landscape for commissioners, clinicians and executive teams of provider Trusts, continues to face major challenges. Close collaborative working will produce the most cost effective and efficient solutions**.** This evidence suggests that there is still much to do.

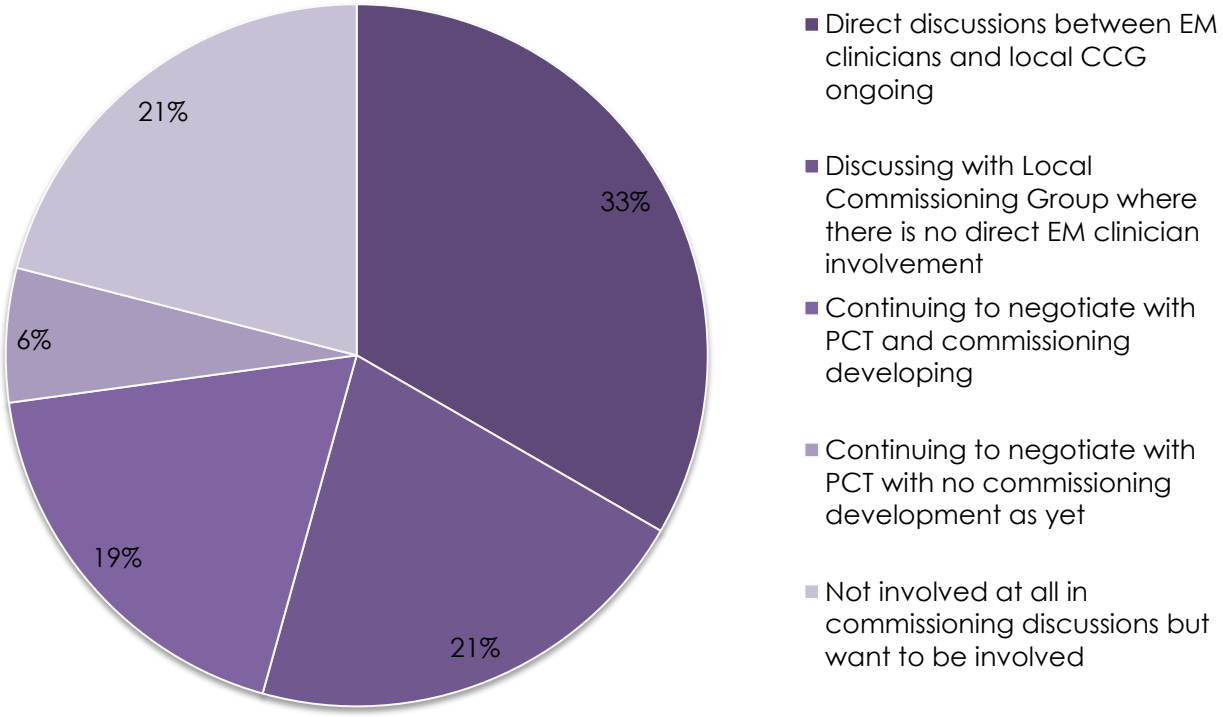
Chart G1 - What arrangements for 'Commissioning' of services for ED & Urgent care have been developed so far? (England only)



Selected comments about commissioning arrangements so far:

- "Despite attempts and enthusiasm from our side to get involved it remains unclear who is actually influential or driving things from the PCT"
- "Leads for CCG not yet appointed but initial contact with potential lead made and importance of ED involvement agreed upon"
- "Commissioning group shadow-form no direct engagement with ED clinicians on a formal basis. Current commissioning is on a block contract rather than PBR as a result in changes to EDs during the year"
- "We have developed and are in the early stages of implementing an urgent care strategy that hinges around seven key areas. Emergency physicians have been involved in conceiving and beginning to implement this strategy with the urgent care commissioning leads for our local CCG"

Chart G2 – Commissioning levels of engagement and EM representation (England only)



Selected comments about commissioning engagement and EM representation so far:

- "There is a general belief within the CCG that they can run the acute services more efficiently than the ED but every attempt that they have made so far and every suggestion has shown a lack of understanding of the clinical and logistical skill set required for EM"

- "We in the ED are keen to maintain a presence at commissioning discussions, however we do not have a formally recognised clinical director and this and the pressure of work makes maintaining a presence at all relevant meetings challenging"

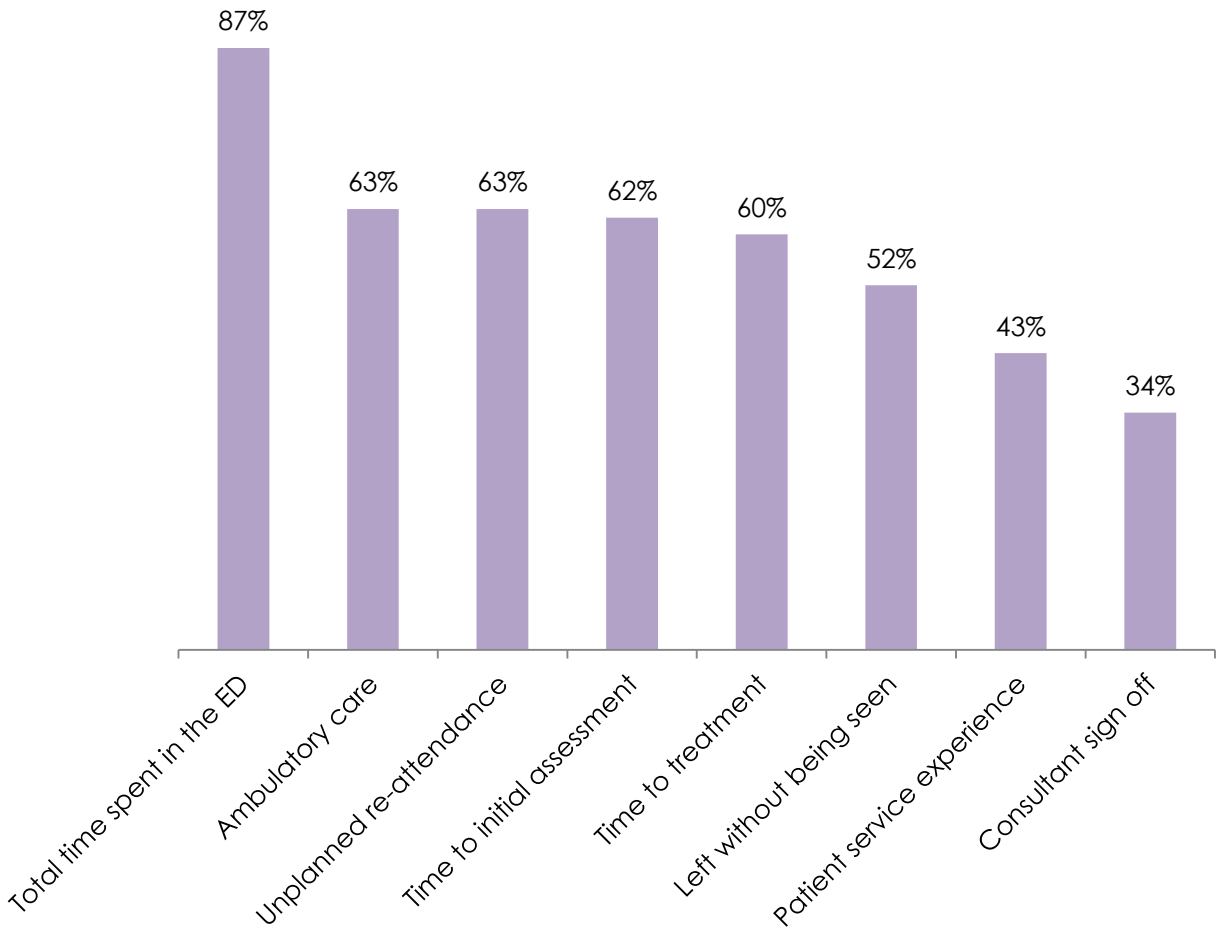
- "The CCG feels as though it is immature and in development so difficult to sense any real progress. The PCT discussions with Trust remain combative rather than mature and synergistic whole system perspective which is of concern as in this environment we are clearly mutually dependent on each other and good relationships and communication for our survival on both sides"

- "I've contacted CCGs directly with no interest to involve EM in commissioning. Trust is involved but no direct EM representation. Contact with CCG from a clinical POV though"

How are the quality indicators being used in urgent & emergency care commissioning?

The data collected reveals that the total time spent in the ED remains the most commonly used indicator of performance when services are commissioned (87% of EDs in England). The indicators when used in their entirety could prove to be a powerful lever for tracking trends and improvements in quality of care. In this survey less than half of EDs reported that patient experience was being used as an indicator of care (43%) and only a third of EDs were using the consultant sign off indicator (34%).

Chart G3 - Clinical quality indicators being used to commission urgent & emergency care – by % of responses (England only)



82 EDs in England responded to this question

Section 7 – Safety and Governance

System design that has safety and high quality integrated clinical governance is vital to all healthcare systems. Such systems are vital to allow recognition of safety issues and for calibration to occur. A general overview of governance systems in EDs was sought by the QED. Overall, 88% of departments reported having a safety lead in EM and 94% reported having a Clinical Risk Register. A total of 88% of departments reported having regular clinical governance meetings with ED staff (see Table H3). The actual quality of the clinical governance meetings, active linkage to their risk registers, the outputs from meetings, and the impact that they had on successful quality improvement and patient experience, was not measured. We hope this will be a major focus of future activity. The amount of time set aside within job plans for robust clinical governance and quality improvement activity was also not directly measured, though as described above only 60% of EDs met national standards in allowing adequate job planning for general 'Supporting Professional Activities'.

Only 43% of departments reported using even low fidelity simulation in the Resuscitation Room a component of teaching, to enhance team working. The smallest sized EDs had higher than average levels of critical incidents reported. Crucially, 6% of EDs reported that a 'never event' occurred within their ED in 2011/12 (see chart H2). This is a vital area of work and the College will continue to provide tools by which these issues can be explored and addressed in greater detail.

High quality clinical governance systems that lead to successful change and continuous quality improvement require dedicated resources. This will ensure that the many facets of system design, human factors engineering, and safety can be focused upon. The College has provided clear guidance on the requirements within job planning to allow these types of activities to be performed. The College recommends 2.5 programmed activities (PAs) within a standard job plan. We will be publishing further guidance in 2013 on aspects of system design linked to active clinical governance which can help monitor and improve activity in this area.

Table H1 – Average number of incident reports per ED	Serious Untowards Incident (SUI)	Incident Record 2 (IR2)	Incident Record 1 (IR1)
All EDs	5	86	254
>100,000 attendances	3	104	389
80,000 – 99,999 attendances	2	67	287
50,000 – 79,999 attendances	4	82	162
<49,999 attendances	18	112	247

Chart H2 – Percentage of UK EDs reporting a 'Never Event' in 2011.

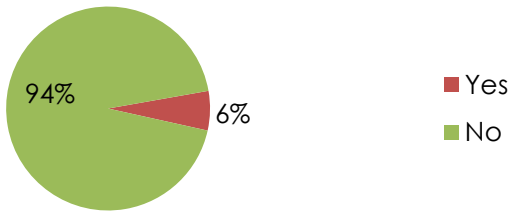


Table H3 – Safety processes in EDs

	Safety lead in the ED	Clinical Risk Register	Regular governance meetings with all ED staff	Regular ED simulation meetings for team working
Yes	88%	94%	88%	43%
No	12%	6%	12%	57%

Section 8 – Observation medicine and ambulatory emergency care

EDs with dedicated short stay observation ward areas / Clinical Decision Units (CDUs) have been proven to optimise gate keeping into the hospital bed base, provide added opportunity for safer discharge from the ED and also act as an area for ambulatory emergency care to be focused [26, 27, 28].

46% of EDs reported that they have dedicated CDUs / observation wards where patients with a range of conditions can be safely discharged following a short, intense period of investigation or a brief period of treatment and observation. Some units are more highly developed than others and a variety of different 'virtual' models also exist. The ability of the ED to provide an area with a robust gate-keeping function as well as ensuring safe discharge after a short period of observation or therapy will become increasingly important. This is especially true where bed bases are reduced and service reconfiguration occurs.

Notably, a significant proportion of ambulatory emergency care activity is led by EM physicians in EDs. This allows the gatekeeping function to be maximised and also produce safer discharge from the ED. The College was a leader in the development of the tariff designed to encourage ambulatory emergency care (Same Day Emergency Care – SDEC tariff)[28]. We believe that with further work this tariff could be extended to certain groups of patients in the ED, and if appropriately resourced will drive provision of even more cost effective 'one stop' solutions. This will reduce diversion of patients into the main hospital bed base, which attracts greater lengths of inappropriate stay and tariff costs.

Ambulatory emergency care and observation medicine / CDUs are proven to be cost effective and efficient strategies for certain groups of patients attending the ED. They lead to safer care. Appropriate resources are required to deliver this function. Further work is required with the Department of Health to explore ways in which the SDEC tariff can be applied to certain groups of patients in the ED as well as on ward areas in order to drive a greater focus on ambulatory emergency care.

Table I1 – Facilities for ambulatory care/observation medicine (UK)

Arrangements for ambulatory care/observation medicine	
Dedicated Clinical Decision Unit/Short Stay ward	46%
Average number of beds per CDU	9
Average number of trolleys per CDU	1
Average number of chairs	2
Shared facility with in-hospital specialties	17%
Average number of beds	14
Average number of trolleys	1
Average number of chairs	2
'Virtual Clinical Decision Unit' function within the ED	5%
Other model	24%
No answer	8%

Section 9 – Tariffs and informatics systems

At the heart of an ED's ability to gauge its quality of care delivery lies its ability to measure how well it is performing. The increasing complexity of modern healthcare also relies upon connectivity to a range of other systems to enhance efficiency and effectiveness.

81% of EDs reported that their information system was either poorly integrated with or isolated from hospital and/or primary care systems. A range of difficulties were identified. Information systems that are not fit for purpose, have a lack of universal coding and are linked to inappropriate tariff arrangements have the combined potential for their EDs to be poorly reimbursed for their activity leading to wider instability in healthcare provision as has been shown elsewhere [29].

- Patient management
- Recording clinical activity including presentation, diagnosis, investigations and procedures
- Timely communication of information with ambulance services, GPs and in-hospital services
- Informing development of quality services
- Research
- Disease and injury surveillance
- Ensuring EDs are correctly remunerated for their activity.

As a minimum Emergency Department Information Systems (EDIS) must be able to produce the relevant datasets for the EM tariffs and mandatory reports, integrate with the main hospital patient database and be compatible with the radiology and laboratory systems. They should also be able to generate meaningful discharge summaries to GPs.

Standardisation of Emergency Department Information Systems

At least 24 different EDIS were identified from the QED submissions, with many EDs reporting use of other systems without specifying details. The lack of commonality increases the difficulties in providing regional networks for exchanging data.

How good are the systems in use?

Overall opinion about the suitability for purpose of EDIS is decidedly mixed, with 12% of EDs reporting their systems were very poor and 10% of EDs stating their systems were very good (see table J1). The QED has shown that 81% of EDs reported that their information system was either poorly integrated with or isolated from hospital and/or primary care systems. A range of difficulties were identified (see table J2).

Table J1 – Overall opinion of EDIS in use

Rating	*% of responses*
1= Very poor	12%
2 = Poor	21%
3 = Acceptable	32%
4 = Good	25%
5 = Very good	10%

Table J2 – Opinion of EDIS integration with other hospital/pre-hospital systems

Opinion	*% of responses*
Standalone- generally isolated from other clinical information systems	32%
Some (poor) integration with the rest of the hospital and /or primary care information systems	49%
Mostly (effective) integration with the rest of the hospital and primary care information systems	11%
An integrated element within a broader organisation wide clinical information system	8%

What information do systems currently provide?

EDs were asked to select what information their EDIS can routinely provide. The results are detailed in table J3. The results show that current systems are generally poor at providing detailed information about patient's medical records.

Table J3 – Information available on EDIS

Information	*Yes*	*No*
ED attendance records	69%	31%
Hospital inpatient records	20%	80%
Hospital outpatient clinic letters	41%	59%
Previous ECGs	39%	61%
Previous Laboratory results	56%	44%
General Practitioner records	13%	87%

Standardisation of clinical coding

CEM has developed a Unified Diagnostic Dataset (UDDA). This creates a bridge between ICD10, SNOMED, CDS and "real world" descriptions of disease. The aim is to enable consistent coding in EDs, in a way that is easy for IT systems providers to implement.

CEM has also developed a Minimum Data Set to promote improved data collection with a focus on activity and quality of care provided in EDs, and on creating a common standard for communication with GPs and other health and social care providers.

Only 66 EDs responded to questions about the coding system they use, but 45 (68%) reported that they used a locally developed coding system.

Current arrangements for reimbursement of activity

To provide high quality care, EDs need to be properly funded. Currently the information upon which reference costs are based is poor, and the reference costs are therefore inaccurate. Tariffs, which should be based on reference costs are consequently not a true reflection of costs. HRG 4.0 offers an opportunity for improved coding of activity within EDs.

Block contracting, whereby commissioners pay a fixed sum for activity over a period of time, is not an appropriate method to fund emergency care. Block contracts are usually based on historical financial and activity data. In a specialty where demand is rising, and historical funding is inadequate, this will lead to a substantial funding shortfall. Table J4 reveals that 30% of EDs are receiving funding via block contracts.

Table J4 – Current reimbursement arrangements for ED activity

Rating	*% of responses*
Income primarily based on HRG 4 tariff, no cap	43%
Block contract	30%
Income primarily based on HRG 4 tariff, capped	21%
Income based on a locally negotiated tariff	2%
Other - please specify	4%

Urgent work is required to improve the informatics systems in EDs in the UK to meet international standards. These systems will be vital towards providing the infrastructure to track patients, measure trends in quality improvement, and ensuring safe cost effective care.

Section 10 – The patient experience

How are EDs measuring patient experience?

This appears amongst the many recommendations of the Francis Report and is in many ways the most important of all indicators of quality [30, 31, 32]. However, the measurement tools for tracking progress continue to be poorly developed and evolve all too slowly, especially for adults. In children better progress is being made with joint work between the CEM, the RCPCH and the Picker Institute [32].

For the QED project, a range of narrative responses were received describing how hospitals are attempting to address this difficult area. This confirms the lack of standardisation. The measurement and calibration of patient experience is a vital marker of quality in EDs in the UK. Resources are required to create robust tools that will meet the needs of all patients – young, old, ill and injured, to record their patient experience and feedback ways that support systems to improve. It is not clear whether the recently introduced friends and family test will prove a robust discriminatory tool at this stage.

Selected QED responses:

- "Patient feedback surveys. Touch-screen data capture. Emails and postal questionnaires."
- "Volunteers in department with questionnaire. Senior nurses surveying patients with post attendance phone calls."
- "We have a portable touchscreen patient experience tracker which asks patients a number of questions about the quality of their care and service received in the department. We are provided with summary data on a regular basis which is used to review and revise our action plan on improving the patient experience. The action plan is available of our Trust website."
- "We are conducting quarterly semi-structured interviews. The recordings are then transcribed and read for emerging themes or significant comments. This then forms the basis of the action plan to take forward to the next quarter."
- "Specifically measured Obs ward patient satisfaction using questionnaire suggested by EMJ article from Hong Kong."
- "We have tried paper survey on a single day but feel a more robust tool is needed at a national level so that we can bench mark and find out what we can do to improve."
- "Not being measured at present. Discussions in progress as to how best to measure it."

- "Monthly report by patient-experience lead summarising patient engagement in previous month, including surveys, focus groups, involvement in redesign projects."
- "Pt surveys 8 patients daily completing questionnaire using a tablet computer. Pt surveys by commissioners regarding pt choice of healthcare provider. Comtrica questionnaires."

Conclusions & future work

This report has made a number of important recommendations that require urgent action. We hope that relevant national policy makers, commissioning groups and provider organisations will now take the next steps based on these recommendations. The suggested timelines are provided to act as a guide to encourage focused activity. The College and the wider Emergency Medicine workforce will work closely with all stakeholders as required. We hope that through this approach we can effect positive change for the benefit of our patients who seek our help in an emergency.

We encourage colleagues to share these findings widely and also visit the College's ENLIGHTENme platform *Systems Design* section to share good practices at

www.enlightenme.org/em-system-design

Acknowledgements

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