ACADEMY OF
MEDICAL ROYAL
COLLEGES

SEVEN DAY CONSULTANT PRESENT CARE

DECEMBER 2012

EXECUTIVE SUMMARY

The importance of consultants in providing high quality care for patients in hospital has been highlighted recently by the publication of *The Benefits of Consultant Delivered Care*[1]. This document recognises the significance of delivering the benefits identified in that report, seven days a week.

Currently, the availability of consultants varies widely by specialty and location in the evenings and at weekends. Many hospitals already have services in place to ensure that patients admitted in an emergency are seen by a consultant, or equivalent, within a few hours of their arrival in hospital. However, following the patient's transfer from the acute or admitting area of the hospital to a general ward, the provision for daily consultant review is considerably more limited.

Most hospitals and specialties already provide a non-resident consultant-led on-call rota, which should ensure that an acutely unwell or deteriorating patient has access to a consultant, and timely intervention. Physiological monitoring is becoming more sophisticated and linked to such escalation plans in some hospitals. However, in the absence of a daily 'planned' consultant review the remainder of the patient's care pathway is often put into hibernation particularly over weekends, resulting in delays in diagnosis, investigation, treatment and discharge from hospital.

The Academy of Medical Royal Colleges has developed three patient-centred standards to deliver consistent inpatient care irrespective of the day of the week. These standards reflect the importance of daily consultant review, and the consequent actions, to ensure progression of the patient's care pathway.

Standard 1: Hospital inpatients should be reviewed by an on-site consultant at least once every 24 hours, seven days a week, unless it has been determined that this would not affect the patient's care pathway.
Standard 2: Consultant-supervised interventions and investigations along with reports should be provided seven days a week if the results will change the outcome or status of the patient's care pathway before the next 'normal' working day. This should include interventions which will enable immediate discharge or a shortened length of hospital stay.
Standard 3: Support services both in hospitals and in the primary care setting in the community should be available seven days a week to ensure that the next steps in the patient's care pathway, as determined by the daily consultant-led review, can be taken.

Further detail on the rationale and practicalities of each of the three standards is given in the full report. Key points to note, that are all explained more fully in the body of the report, are:

- The method by which a consultant-led review takes place is likely to vary according to the local circumstances and specialty

- The consultant undertaking the review of the patient would be expected to have the necessary competencies to deal with the specific problems which the patient presents at the time of daily review

- It should be strongly emphasised that the standards should not be seen as detracting from existing or developing service standards in areas where even greater levels of consultant present care are required

- The Academy intends the term 'consultant' to include any doctor who is on the General Medical Council specialist register or certain senior doctors with appropriate competencies, to include those in Staff, Associate Specialist and Senior Specialty Doctor (SAS) grade posts and consultant clinical scientists.

The Academy does not see the three standards as a panacea for all patient safety issues, but as a strong contribution to improving parity and quality of patient care in all four countries of the UK. Whilst championing equitable, effective and excellent care for patients, the Academy recognises that the direct and indirect costs to implement these standards may be substantial and likely to have varying degrees of impact for service providers depending on their current levels of seven day consultant-present care. The Academy does not believe that the standards proposed in this report can be universally achieved within existing local resourcing arrangements and NHS tariff levels. Whilst full adoption of the standards may deliver some savings over time, it is not anticipated that they will be self-funding. Other interventions such as changes in working patterns and service reconfiguration onto fewer sites will be needed.

Local activity towards achievement of the standards can, and should, be made but there is also a need for a national level decision across all four countries in the UK on whether this patient safety initiative is to be supported and implementation resourced appropriately.

The Academy recognises that implementation of the standards will have different implications for different hospital specialties. Although some specialties already provide a seven day consultant presence which meets, or exceeds, these standards, for others the required changes will be considerable. The detail of how, and when, they will be implemented in each specialty is beyond the scope of this report. The Academy will coordinate a second document, during 2013, in which individual colleges and specialist societies will describe the implications for staffing, along with the resources, support services and timescales required to deliver the standards.

CONTENTS

1 INTRODUCTION

This report presents the Academy of Medical Royal College's (the Academy's) proposals for achieving parity for inpatient care throughout the week, in the light of evidence demonstrating less favourable patient outcomes at weekends compared to weekdays.

The report covers two main areas:

- Proposed standards for seven day consultant-present care in the delivery of inpatient care
- Consideration of the implications of the standards.

1.1 Background

In 2010, *Time for Training* recommended that a consultant-delivered service should be implemented and that 'consultants must be more directly responsible for the delivery of 24/7 care.'[2]

In 2011 the Dr Foster Hospital Guide[3] highlighted that patients are less likely to receive prompt treatment and more likely to die if they are admitted to hospital at the weekend. It also reported that the chances of survival are better in hospitals that have more senior doctors on site. Similarly, a report commissioned by NHS London in 2011[4] concluded that increasing cover by consultants in acute medical and surgical units at weekends could prevent more than 500 deaths a year in London alone.

In 2011, the Royal College of Surgeons England[5] produced standards for unscheduled surgical care. Recommendations included timely input of senior decision makers and a consultant-led service across all specialties.

In January 2012 the Academy published a report *The Benefits of Consultant Delivered Care*[1] which identified the following benefits of medical healthcare being delivered by consultant doctors:

- Rapid and appropriate decision making
- Improved safety, fewer errors
- Improved outcomes
- More efficient use of resources
- GP's access to the opinion of a fully trained doctor
- Patient expectation of access to appropriate and skilled clinicians and information
- Benefits for the supervised training of junior doctors.

The Department of Health has been concerned for some time about patient safety issues and promotion of greater access to services at evenings and weekends. NHS Improvement has been working with clinical teams across health and social care to identify examples of equality of treatment and outcome regardless of the day of the week. In February 2012 this work was published, giving implementation guidance and a number of case studies of seven day working service models across different clinical areas and levels of service.

Their case study pages demonstrate where extended working days or weeks have been successfully implemented to ensure that patients are able to readily access both acute, elective and re-enablement services across primary and secondary care. Further details of this can be read in the report *Equality for all: Delivering safe care – seven days a week*.[6]

In March 2012, the National Institute for Clinical Excellence (NICE) announced 123 new quality standards that they would be developing. One of which will be a Seven Day Working Service Standard. Academy representatives will be joining the development group for this standard, which is expected to be published in 2013.[7]

In April 2012 the Royal College of Paediatrics and Child Health published *Consultant Delivered Care – an evaluation of new ways of working in paediatrics*.[8] This six-month project carried out a survey of all paediatric inpatient and neonatal trusts in the UK to look at the extent to which consultant-delivered care models are already being used. Based on the results of this survey, in-depth site visits were conducted at ten trusts to look at how these ways of working impacted team members, resident consultants and a range of indicators. The report concludes that children would receive better care if they had 24/7 access to a consultant or equivalent senior doctor.

In September 2012, the Royal College of Obstetricians and Gynaecologists published its report *Tomorrow's Specialist*[9]. The report notes that '*tomorrow's specialists will work differently: in teams with peers, providing on-site care 24 hours a day, 7 days a week, in non-hospital settings, as 'localised where possible, centralised where necessary' becomes the norm*'. The report emphasises that the trend towards increased consultant-delivered care must continue so that more consultants are employed to provide care 24 hours a day, seven days a week.

In October 2012, the fourth in the series of acute care toolkits from the Royal College of Physicians of London (RCPL) was produced in collaboration with the Society for Acute Medicine (SAM). The toolkit provides practical guidance for hospitals to enable the delivery of a consultant presence on the Acute Medical Unit for a minimum of 12 hours a day, seven days a week.[10]

Also in October 2012, the RCPL and Royal College of Nursing issued a joint statement[11] calling for ward rounds to be made the cornerstone of patient care, and for a 'concerted culture change' with clinical staff, managers and hospital executives engaging with, and focusing on, improving the quality of ward rounds.

The RCPL is currently undertaking a project, the Future Hospital Commission (FHC)[12] to review all aspects of the design and delivery of inpatient hospital care. The FHC aims to address growing concerns about the standards of care currently seen in hospitals and to make recommendations to provide patients with the safe, high-quality, sustainable care that they deserve.

The project, due to complete in 2013, will examine organisational structures processes and standards of care, focusing on five key areas:

- Patients and compassion
- Place and process
- People
- Data for improvement
- Planning infrastructure.

The Academy's Seven Day Consultant-Present Care project has maintained close links with the FHC as the FHC wishes to ensure that its own recommendations complement and support the Academy project outcomes. It should be noted, however, that the Academy project applies to all specialties and all four nations – the FHC scope relates only to Internal Medicine in England and Wales.

The Royal College of Radiologists (RCR) is working on chemotherapy components of care through the National Chemotherapy Implementation Group (NCIG) and also the RCPL (through the Joint Collegiate Council for Oncology). For Radiotherapy, the RCR is working with the National Radiotherapy Implementation Group to look at the most effective patterns of service delivery to fulfil seven day and extended hours working.

In June 2012, the National Institute of Health Research issued a commissioned call for research projects examining the organisation and delivery of 24/7 healthcare under their Health Services and Delivery Research programme.[13]

The Health Foundation Flow Cost Quality Programme,[14] due to formally report late 2012, is looking at the emerging relationship between poorly managed patient care pathways through a hospital and the wider healthcare system and the outcomes of care as measured by a hospital's standardised mortality rate (HSMR). Early learning from the programme has found a persistent mismatch between the predictable variations in emergency demand and the availability of workforce capacity. At one site, two-thirds of the daily demand had to be 'stored' overnight during weekdays and reworked on subsequent days, wasting resources and causing stress to staff and patients. At weekends, two days' worth of patients had to be 'stored' until Monday. Mapping a patient's journey revealed that 83% of the resources were wasted in this way. The situation was worse during public holidays.

A more detailed literature review is contained in Appendix B illustrating the growing number studies suggesting that mortality rates are higher for patients admitted to hospital in the evenings and at weekends.

1.2 Project Rationale and Aims

The project builds on the Academy's *The Benefits of Consultant Delivered Care*[1] report. If the medical profession accepts that consultant-delivered care provides better patient outcomes, it would seem ethically unjustifiable to deprive patients of those benefits during the weekend. The Academy instigated the Seven Day Consultant-Present Care project to make recommendations to deliver a consistent high quality of care for patients in hospital across the whole week, for all specialties. The Academy sub-group took the view that this was best conceptualised in terms of generic patient care pathways rather than proposing specialty-specific consultant rotas, and should be focussed on developing patient-centred standards based on the principle of daily consultant review.

1.3 Terminology

The Academy recognises that the use of the term 'consultant' itself potentially causes difficulties. Equally the term 'fully trained' implies that learning and development is complete which will not be the case.

In this document the term consultant refers to those hospital doctors who have either a Certificate of Completion of Training (CCT) or Certificate of Eligibility for Specialist Registration (CESR) and are thus eligible to be on the General Medical Council (GMC) Specialist Register, or certain senior doctors with appropriate competencies, to include those in Staff, Associate Specialist and Senior Specialty Doctor (SAS) grade posts. The term 'consultant' is being used because it is believed that this is a term broadly understood by doctors and the public.

However, the term 'consultant' is not meant to be synonymous with the current terms and conditions of the consultant contract. The pay and career structure for post-CCT doctors should be considered separately from issues relating to the benefit, or otherwise, of care being primarily delivered by consultants.

It is also important to state that the Academy is not suggesting that it should only be consultants who deliver medical care. The Academy recognises and supports the principle that successful care is based on a team approach where a range of healthcare professionals contribute to the delivery of a successful patient outcome. Staff, Associate Specialist and Senior Specialty (SAS) doctors, trainee doctors, nurses, allied healthcare and healthcare science professionals, clerical and administrative staff also play a fundamental role in the provision of care.

2 METHOD

The Academy established a steering group in April 2012 with representatives from all medical Royal Colleges, led by Professor Norman Williams (President of the Royal College of Surgeons England) to oversee the project. From this a sub-group was convened, with members representing the specialties considered most likely to be impacted. Members of the steering group and sub-group are listed in Appendix A.

The project had three distinct phases:

1) A call for information from medical Royal Colleges specifically asking for:
   - Current initiatives in seven day consultant-present care in their specialty
   - Views on the most appropriate level of consultant-present care for their specialty
   - The equivalent level of input they expected from other specialties and supporting services.

2) A literature review of current evidence and information on seven day consultant-present care. This drew on a diverse literature encompassing weekend versus weekday mortality and adverse events, patient safety, daily effects on outcome in specific diseases, medical rotas and staffing, fatigue and burnout, workforce, and emergency care.

3) Consideration of all the evidence in order to develop a common position on how to ensure parity of quality of care for inpatients across the whole week.

3 RESULTS

The Academy collated information from each medical Royal College on their current approach to seven day consultant presence (summarised in Appendix C). This varies between specialties, and unsurprisingly shows that those involved in acute and emergency care have more advanced guidance or position statements relating to levels of consultant presence.

Colleges were also asked which specialties they considered should have consultant-presence seven days a week and these are listed below:

- Anaesthetics
- Intensive Care Medicine
- Emergency Medicine
- General Practice*
- Obstetrics and Gynaecology
- Paediatrics
- Chemical Pathology
- Histopathology
- Medical Microbiology
- Medical Virology
- Acute Internal Medicine
- Cardiology
- Clinical Pharmacology and Therapeutics
- Gastroenterology
- General Internal Medicine
- Geriatric Medicine
- Haematology
- Infectious Diseases
- Medical Ophthalmology
- Neurology
- Renal Medicine (Nephrology)
- Respiratory Medicine (Thoracic Medicine)
- Rheumatology
- Stroke Medicine
- Cardio-thoracic Surgery
- General Surgery
- Neurosurgery
- Trauma and Orthopaedic Surgery
- Child and Adolescent Psychiatry
- General Psychiatry
- Clinical/Diagnostic Radiology
- Clinical Oncology (Radiotherapy)

** Whilst General Practice falls largely outside the scope of this report, which focuses on inpatient care, responses from the medical Royal Colleges acknowledged the importance of GP availability seven days a week to ensure inter-professional liaison and patient transfer between the hospital and community.*

4 PROPOSED STANDARDS AND PRINCIPLES

The standards proposed by the working party are rooted in the concept of the patient care pathway and rest on the following basic principles:

- Consultants 'add value' through diagnosis (choosing the correct care pathway) and ensuring timely transit along that pathway (investigations, treatment and destination)
- Other pathway components must also be optimally configured, including the supporting clinical team, diagnostic and therapeutic services, administrative and clerical support, and community care at discharge.

Currently the availability of consultants varies widely by specialty and location, particularly in the evenings and at weekends. For emergency admissions, patients are generally seen by a consultant within a few hours of their arrival. However, following discharge from acute areas to general wards the frequency of consultant review falls significantly. The result is that departures from the care pathway are not uncommon, and are not detected in a timely manner. While physiological monitoring is becoming more sophisticated and linked to escalation plans in some hospitals, the rest of the care pathway is often put into hibernation, particularly over weekends, resulting in delays in diagnosis, treatment and discharge decisions.

The working party has proposed three standards:

Standard 1: Hospital inpatients should be reviewed by an on-site consultant at least once every 24 hours, seven days a week, unless it has been determined that this would not affect the patient's care pathway.
Standard 2: Consultant-supervised interventions and investigations along with reports should be provided seven days a week if the results will change the outcome or status of the patient's care pathway before the next 'normal' working day. This should include interventions which will enable immediate discharge or a shortened length of hospital stay.
Standard 3: Support services both in hospitals and in the primary care setting in the community should be available seven days a week to ensure that the next steps in the patient's care pathway, as determined by the daily consultant-led review, can be taken.

4.1 Standard 1

Hospital inpatients should be reviewed by an on-site consultant at least once every 24 hours, seven days a week, unless it has been determined that this would not affect the patient's care pathway.

What this means in practice is that the status of every inpatient whose care pathway would be altered by daily consultant-led review should be considered at least once in every twenty-four hour period to check five elements:

- Physiological safety
- Diagnosis and correct treatment
- Timely investigations
- Clear communication with patient and colleagues
- Discharge planning.

This is distinct from the need to provide 24 hour consultant-led intervention for patients whose clinical condition requires this. Existing out-of-hours consultant on-call rotas in the acute setting lie outside the scope of this standard.

4.1.1 Rationale

Admission to hospital can be categorised as planned or unplanned. Planned admissions are those where the patient requires a scheduled procedure or investigation which cannot be performed in an outpatient or primary care setting. Unplanned admissions may be driven by unexpected changes in a person's health requiring urgent or emergency assessment, monitoring, investigation and treatment. Whatever the reason for admission, the patient's on-going treatment is defined according to a care pathway which depends on the nature of the problem and the patient's response to treatment.

Following unplanned hospital admission there is often an initial period of uncertainty while a diagnosis is being made. During this period the patient may be physiologically unstable, requiring close monitoring, repeated assessment and appropriate intervention. The importance of consultant involvement during this period has been highlighted in a number of reports, and guidelines have been produced recommending early consultant review for all patients in this setting, seven days a week.[15,10]

The mechanisms to ensure that seven day consultant-led care, is provided for patients after this initial 24 hour period are often less robust. Early Warning Scoring systems may trigger the need for senior clinical review of patients who are physiologically unstable. However, it is not uncommon for patients whose condition is not deteriorating to wait until the next scheduled weekday review before being seen by a consultant. For example, a patient who is admitted on a Thursday night will usually be seen by a consultant on Friday morning, but may then wait until Monday for their next scheduled consultant review. The wait may be even more prolonged for patients admitted during or prior to a Bank Holiday weekend.

During the period between consultant reviews there may be considerable changes in a patient's condition. Daily consultant-led review could result in earlier recognition of deterioration in a patient's condition, or identify a diagnosis that was not apparent at the time of the initial consultant review. Recognition of improvement in a patient's condition could also result in earlier discharge from hospital.

4.1.2 Practicalities

Current systems usually require that clinical teams identify specific patients who would benefit from consultant-led reviews over the weekend, with the presumption that other patients can wait until the next normal working day for review.

The standard therefore represents a shift from the current usual working practice of 'opting-in', to a system where all patients are assumed to need a daily consultant-led review unless it is specified that this is *not* required. Standard 1 is therefore an 'opt-out' system, in which the default position is daily consultant review.

The method by which a consultant-led review takes place need not be constrained to formal, physical bed-side ward rounds by a consultant. Other appropriate methods of consultant-led review could include:

- Ward round undertaken by a doctor in training or SAS doctor, followed by a discussion of all, and review of selected, patients by the consultant
- A multi-disciplinary team 'board-based' round.

Physical presence of the consultant in the clinical environment is a key component of this recommendation, so that issues arising from the daily review can be identified and appropriate actions instigated without delay.

There may be some inpatients whose care pathway is not likely to be influenced by a daily consultant-led review. These will often be patients who have already been in hospital for a number of days, whose clinical condition has remained stable and whose expected date of discharge is not imminent. Additionally, some care pathways include discharge criteria which permit discharge without further consultant-led review. This effective use of the skills and experience of a multi-disciplinary team should be preserved.

Specialties will need to develop robust mechanisms to identify those patients for whom consultant-led review is not likely to influence the patient's care pathway; it is recognised that this will be particularly important for those specialties with large numbers of inpatients whose care pathways progress relatively slowly (e.g. Internal Medicine and Medicine for the Elderly). The mechanisms whereby this process is developed will be described in the follow up report, to be published during 2013.

Mechanisms should be in place to ensure that a daily consultant-led review can be re-instated, if required, due to a change in the patient's condition. It should also be recognised that some patients will require consultant-led review more than once in every 24 hour period.

Defining minimum standards for consultant-led care for inpatients will allow hospitals to determine the consultant staffing levels required in each specialty. Specialties which involve significant procedural activity in addition to ward-based inpatient care may require these duties to be separated. For example, a surgical service may require one consultant to be in theatre, while another consultant leads inpatient reviews.

The duration of a consultant-led review will vary according to the patient's needs, but will also be influenced by the nature and size of the supporting clinical team. Optimum use of the consultant time will be achieved if the consultant is on-site, leading a team comprising doctors in training, SAS grade doctors, nurses and allied healthcare professionals supported in the clinical areas by adequate administrative and clerical staff.

Efficient use of consultant time may also be improved by adopting working practices which support continuity of care. The time taken to review a patient will be considerably shortened if the consultant has been previously involved with their care.

Increasing the frequency of consultant-led review is likely to increase the number of consultants involved in the care of any one patient. Development of working practices to optimise continuity are essential, along with effective consultant to consultant handover. The Academy acknowledges the potential challenges of specialist versus generalist consultant review. These challenges will vary according to the specific needs of the patient and the make-up of the workforce, including those on flexible working patterns but should not detract from the Academy's overall view that application of Standard 1 will result in higher quality patient care.

4.2 Standard 2

Consultant-supervised interventions and investigations along with reports should be provided seven days a week if they will change the outcome or status of the patient's care pathway before the next 'normal' working day. This should include interventions and investigations which will enable immediate discharge or a shortened length of hospital stay.

What this means in practice is that the progress of a patient along their care pathway should not be delayed because investigations or interventions are not available on certain days of the week. While the delivery of the intervention or investigation may be delegated to any appropriately trained and competent clinician, the overall provision of the service should be supervised by a consultant.

4.2.1 Rationale

Most hospitals currently provide seven day access to investigations and other interventions when a patient's life may be at risk, or to prevent an imminent deterioration in their condition. However, the same level of service may be required in less urgent circumstances in order to facilitate progression of the patient's care pathway. This may result in a change in diagnosis, alteration in treatment or an earlier discharge from hospital.

Provision of appropriate investigations and interventions is essential to ensure that the maximum benefit of daily consultant-led review is realised.

The investigations and interventions required will vary according to the patient's specialty problem, and this will be defined more explicitly in the second stage of this report, due for publication in 2013. However, it is likely that this will include the provision of radiological services (including cross sectional imaging and ultrasound), non-invasive cardiological investigations, endoscopic procedures and laboratory services.

Consultant-supervised interventions should also include the provision of specialist advice, wherever possible, seven days a week.

4.2.2 Practicalities

It is difficult to quantify the impact of implementation of Standard 2. While the overall number of investigations and interventions should not increase, an increased number of these may be undertaken at weekends which may require significant reorganisation of services and personnel.

It is possible that the overall number of interventions may fall as daily consultant-led review leads to the selection of more appropriate tests, first time.

The impact of this standard will need to be evaluated in hospitals of different sizes and configurations, and will vary across different specialties.

4.3 Standard 3

Support services both in hospitals and in the primary care setting in the community should be available seven days a week to ensure that the next steps in the patient's care pathway, as determined by the daily consultant-led review, can be taken.

As with Standard 2, this means that the progress of a patient along their care pathway should not be delayed because a support service, either in hospital or in the community, is not available on certain days of the week. This includes the ability to ensure safe discharge from hospital.

4.3.1 Rationale

Many specialties rely heavily on the contribution of a hospital-based multi-professional team to enable the patient to progress along their care pathway. Specialist nurses, physiotherapists, occupational therapists, social workers, pharmacists, speech and language therapists, dieticians and other healthcare professionals provide a key role for many patients, including those recovering from surgery and medical patients with complex needs.

Ensuring that key staff are available to provide appropriate interventions will be crucial if the full benefit of seven day consultant presence is to be realised. Such interventions should include those designed to expedite hospital discharge as well as those required to prevent deterioration in patients with more critical illness. The need to access patient records should also be recognised.

For surgical specialties, access to a fully staffed operating theatre to enable provision of appropriate interventions as defined by the consultant-led review will also be a requirement.

Close liaison with community teams is an essential component of safe discharge from hospital. Difficulties in ensuring continuity of care following discharge from hospital at a weekend may currently result in delays in discharge, and increase the likelihood of early readmission. Provision of appropriate support staff in the community is therefore important to optimise the benefit of daily consultant-led review.

For some patients, progression of the care pathway may benefit from direct communication between the consultant and general practitioner (GP). Current arrangements for out-of-hours primary care at weekends do not facilitate such direct communication.

Given that general practitioners provide the equivalent of 'consultant-present care' for patients in the community, the provision of direct 'consultant-to-GP' handover for selected patients at weekends would help to ensure that they remain on the appropriate care pathway after discharge from hospital.

4.3.2 Practicalities

In many cases the availability of services in the community at a weekend is a major limiting factor in the discharge process. Although the NHS provides a seven day out-of-hours service for patients becoming unwell at a weekend in the community, there may be times when discharge could occur if adequate nursing and social care could be started on a weekend day, and in some complex cases a medical review may be needed within 48 hours of discharge. Difficulties in ensuring the appropriate 'safety net' to allow discharge of a patient with more complex needs may result in this discharge being delayed.

General Practitioners provide the equivalent of consultant-present care for their patients. Although this project has not specifically looked at reconfiguration of primary care, further consideration needs to be given to how 'consultant to consultant handover' can be provided out of hours where there are patients for whom ongoing daily review would help to ensure that they make an effective transfer back into the community. The Academy recognises this is an issue to be addressed.

5 IMPACT ASSESSMENT OF THE STANDARDS

5.1 Benefits

Providing consultant-present care, seven days a week and implementing these standards should strengthen the benefits identified in *The Benefits of Consultant Delivered Care*[1]. The subheadings in this section reflect the potential benefits identified in that document.

Greater parity of care across a seven day week

By setting a standard of care that is irrespective of the day of the week, patients should receive a quality of care dictated by the status of their health, not by the working pattern of their healthcare providers.

High level of clinical competence ensuring rapid and appropriate decision making

The standards provide the opportunity at least once in every 24 hours to confirm that the patient is on the most appropriate care pathway and to ensure that progress along the care pathway is not delayed on certain days day of the week.

Improved outcomes for patients which follow from timely diagnosis and clinically skilled interventions

Additional evidence of benefits to patient outcomes has been collected since the Academy's *The Benefits of Consultant Delivered Care*[1] Report published in January 2012. The Royal College of Physicians report, An evaluation of consultant input into acute medical admissions management in England[16] found that '*Hospitals where the admitting consultant was present for more than four hours for seven days a week had a lower 28 day readmission rate*.'

Skilled judgement and performance leading to the most effective working and more efficient use of resources

Daily consultant-led reviews of patients, combined with appropriate support services irrespective of the day of the week allows for discharge decisions to be made without the pressure of considering the proximity of the weekend. This could reduce the risk of discharge taking place too early or delays to discharge. The experience of the consultant should ensure that, whilst the numbers of investigations may increase during the weekend by providing parity of service, unnecessary workload should be minimised.

GP's access to the opinion of a fully trained doctor

Seven day consultant presence will mean easier weekend access for GPs needing a consultant's opinion. Similarly, full implementation of Standard 3 would increase weekend access to informed primary care clinicians for consultants.

Training opportunities for the benefit of junior doctors

Greater levels of consultant presence over a seven day week provides more opportunity for consultant supervision of trainee doctors. The recent Royal College of Paediatrics and Child Health review into consultant-present care noted greater trainee satisfaction where consultants were present seven days a week.[8]

Meeting patient expectation for appropriate and skilled clinicians and information in a timely fashion

Patients expect treatment by competent clinicians and a parity of care irrespective of the day of the week. The Department of Health is also keen that patients make choices about when they receive healthcare and there is a general drive to ensure patients feel involved and in control of their treatment.

While the standards in this report are not directly looking to make elective services more widely available, implementing the resourcing and working practices to meet the standards may indirectly enable healthcare providers to increase provision of weekend elective care in future.

5.2 Implementation implications

5.2.1 Impact on Consultant Workforce

A variety of factors may impact on the required number of additional weekend and weekday consultant hours to deliver these standards. These may include: the current frequency of consultant-led review, the numbers of patients deemed not to require daily consultant-led review and the duration of each consultant-led review.

The specific workforce implications for each specialty will vary considerably, and will be dealt with more specifically in the second report of this project, due for publication later in 2013.

5.2.2 Demand on investigation and intervention specialties and support services

It is anticipated that Standards 2 and 3 should largely level out demand for investigation, intervention and support services over a seven day week, rather than creating new demand. However, the overall impact is unknown and will need to be carefully evaluated to ensure appropriate allocation of resources.

Provision of certain investigations and interventions at weekends may require that a patient is transferred to a different hospital. This will have implications for ambulance services and other staff involved in the transfer process which will need to be considered.

5.2.3 Addressing the implementation implications

In aspiring to achieve the highest possible quality of care for patients, the Academy believes that the standards set out in this report describe the ‘right thing to do’. The Academy does not see the three standards as a panacea for all patient safety issues, but as a strong contribution to improving parity and quality of patient care. It should be strongly emphasised that the standards should not detract from existing or developing service standards in areas where even greater levels of consultant-present care are required. For example the Royal College of Obstetricians and Gynaecologists has recommended development of a 24-hour consultant

presence in the majority of obstetric and acute gynaecology units; the Royal College of Physicians recommends twice daily consultant review for all patients on the Acute Medical Unit, seven days a week; the Faculty of Intensive Care Medicine recommends daily consultant-led ward rounds seven days a week with consultant review within 12 hours of admission and the Royal College of Paediatrics and Child Health are developing specific standards for paediatric consultant availability.

The standards do not imply that consultants do not already work across all the days of the week, and the Academy is aware that all hospital patients already have the 'safety net' of 24/7 emergency on-call arrangements. Seven day consultant-present care is already provided in most Emergency Departments, Acute Medical Units, Intensive Care Units, many acute surgical specialties, and obstetrics.

In delivering the patient safety benefits of consultant-present care, there should be associated improvements in productivity, with the right care being given at the right time. The Centre for Workforce Intelligence (CfWI) commented that the number of consultant appointments has not kept pace with the number completing specialist training; with increasing numbers of CCT holders taking up SAS roles the number of trained doctors available to deliver these standards may be greater than would be apparent, if focussing only on those in existing consultant posts.[17]

The Academy also recognises that the direct and indirect costs to implement these standards may be substantial and likely to impact service providers, dependent on their current levels of seven day consultant presence. Robust workforce implications require systematic modelling that is outside the scope of this report, and will differ depending on patient and specialty related variables. The Academy does not believe that the standards proposed in this report can be universally achieved within existing funding and NHS tariff levels. In addition, it is likely that service reconfiguration onto fewer sites will be needed. Whilst full adoption of the standards may deliver some savings over time, it is not anticipated that they will be self-funding. Local activity towards achievement of the standards can, and should, be made but there is also a need for a national level strategic decision across all four countries in the UK.

Meeting the implementation challenge is unlikely to be achieved through a 'one size fits all' solution. Depending on the circumstances of the individual service provider, a combination of approaches may prove most appropriate. Bearing that in mind the Academy suggests that the following local and national work force planning issues should be considered in implementing the standards.

The most efficient use of consultants' time should be ensured by:

- Reviewing the levels of consultant presence required across each 24 hour period
- Matching skills to roles, and considering the appropriate resource mix for a team
- Considering local organisational and process changes, such as 'slow-stream' and 'fast-stream' wards and encouraging discharge-planning from the point of admittance
- Remodelling theatre resource allocation, or considering use of 'hot clinics' in order to increase emergency theatre access. If emergency operating is concentrated in daily lists, with trauma and general emergencies separated, this can allow concentration of expertise at key times.

Local service providers could also consider a phased approach to the implementation of the standards. For example, priority could be afforded to those patients judged to benefit most from a daily consultant-led review until resources are sufficient to enable full implementation of Standard 1. In this context, patients transferred from acute areas in the preceding 24 hours should be considered a high priority for consultant-led review.

An initial prioritisation of investigations and interventions may also need to be considered, for example giving a higher priority to those that might lead to a more immediate change of treatment or outcome, pending full implementation of Standard 2.

Implementing these standards also needs to be considered in the wider context of large-scale service reconfiguration. Regionalisation and concentration of acute services in a smaller number of centres may be needed to maximise quality and improve efficiency and productivity. The Royal College of Physicians' Future Hospital Commission[12] is also evaluating different models of acute care consultant provision in hospitals. Reconfiguration decisions would need to consider impact on areas such as transport and transfer services; this will be dealt with in more detail in the following document to this report, later in 2013.

Efficiency gains elsewhere in service delivery might contribute to the ability to increase consultant hours for patient review and seven day investigation, intervention and support services. The joint NHS Confederation, BMA, JMCC and Academy Report Clinical Responses to the Downturn[18] contains ideas developed by clinicians, for efficiencies and productivity gains within the areas of: Neurosurgery; Elderly Care; Vascular Services; Pathology; Orthopaedics; Neonatology and Dermatology.

There may be potential to off-set some of the set-up costs for implementing a seven day standard for a consultant-led review and seven day supporting services against any activity a local service provider may be considering or undertaking to provide income generating, elective services seven days a week.

6 NEXT STEPS

As noted previously this report follows on from the publication of the *The Benefits of Consultant Delivered Care*[1] by identifying standards to enable consultant-present care regardless of the day of the week.

The Academy will begin work in 2013 with individual Royal Colleges and Specialist Advisory Boards to determine the likely implications of implementation of these standards for each hospital specialty. This will include examination of changes to the consultant workforce for each specialty, the necessary support services and the likely timescale.

The Academy is also now looking to work with the NHS Commissioning Board (to include in annual appraisal criteria for primary care services), Health & Social Well-being Boards, NHS Employers as well as individual service provider organisations so that the standards can be supported and included in future service work force planning. The Academy also hopes that these standards will be used to inform other seven day standard initiatives being developed by organisations such as NICE. Systematic evaluation of the standards is also required, within a research framework.

APPENDIX A
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APPENDIX B
SEVEN DAY CONSULTANT PRESENT CARE - LITERATURE REVIEW

October 2012

Evidence that weekends are 'dangerous'
There is a growing body of evidence that case mix-adjusted mortality rates are higher for patients admitted electively or as emergencies to hospital 'out-of-hours', with most research focussing on weekends [Freemantle 2012, Mohammed 2012, Cram 2004, Cavallazzi 2010, Aylin 2010, Kruse 2011, Buckley 2012, MaGaughey 2007, James 2010, Worni 2012, De Cordova 2012, Deshmukh 2012]. The size of the weekend effect lies between 0.2% and 1% absolute increase in crude mortality over all admissions, detectable with large populations but not large enough to use mortality as an end-point in interventional studies.

Not all studies report a positive association however [Byun 2012; Kazley 2010; Kevin 2010; Myers 2009]. One recent publication has demonstrated that the 'weekend effect' is more marked for elective admissions than for emergency admissions [Mohammed 2012]; a potential explanation requiring further investigation is incomplete adjustment for case mix of weekend elective admissions, with patients with complex and comorbid disease being more likely to be admitted well in advance of surgery for investigation and stabilisation.

The rational for seven day working: Unreliable care and poor process control contribute to the 'weekend effect'.
Factors contributing to increased mortality may include inadequate numbers of skilled staff [Kane 2007, Cho 2008, Kane 2007, Needleman 2002, Pronovost 2002, Wallace 2012, Kim 2010, Aiken 2002, Penoyer 2010], healthcare error and adverse events [Hogan, Vlayen, Buckley], lack of organisation and structure for care delivery [Anderson], and reduced access to specific interventions [Kostis, Deshmukh]. In the RCP consultants' survey [RCP 2010] only 19% of responding hospitals reported having a formalised acute response team for acutely ill patients.

A single formal ward round was conducted in Acute Medical Units (AMUs) at weekends in 29% of hospitals, and two or more formal rounds in 69%. However, only 20% of consultants were available at weekends for periods exceeding 8 hours, and 18% reported no weekend attendance at hospital, while 73% of acute physicians did not work at weekends. Only 39% of consultants working in acute medical units reported having protected time for this work free of other duties, and providing care for blocks of time greater than a single day. The largest gap in terms of consultant input (and in reliable information on current practice) would appear to be in the care of patients following their discharge from the AMU for continuing care on ordinary wards.

Unreliable delivery of best practice care is a major public health problem for all health systems, characterised by the classic McGlynn paper [McGlynn NEJM 2003] now replicated with similar results in Australia [Runciman MJA 2012]. Adverse event rates are increased at weekends with a reported weekend-weekday incident ratio of 2.74 [Buckley 2012]. One example of the consequences of unreliable care is unplanned admission to intensive care, which is commonly preceded by errors in clinical management [McQuillan 1998, Braithwaite 2004, Vlayen 2011], and which is also associated with hospital admission at nights and weekends [Tam 2008]. In an examination of the case records of patients suffering surgical complications or death, the reviewers found that the majority could be attributed to poorly organised care, particularly failures in critical thinking or undisciplined treatment strategies [Anderson 2012]. Gaps and discontinuities in care make this worse; in the Royal College of Physicians consultant survey, 28% reported that they considered continuity of care to be poor in their own hospital [RCP London 2012].

Contrary to expectations, elective hospital admissions may be more susceptible to error than emergency admissions [Hogan 2012], an unexpected finding which parallels the observation [Mohammed 2012] that elective admissions at weekends have a higher case mix-adjusted mortality rate than emergency admissions. Hogan et al [Hogan 2012] also reported that errors were more likely in patients without severe health impairment, again suggesting that when patients are identified as being high risk, the system is capable of responding appropriately, but may then miss those patients perceived as being low risk. The main errors associated with preventable deaths in Hogan's study included poor clinical monitoring, diagnostic errors, and inadequate drug or fluid management.

It is possible therefore that what makes the difference between weekend and weekday care, between a complicated and an uncomplicated clinical course, is the track or pathway on which the patient is travelling. Elective admissions in an emergency environment do no better than emergency admissions in an elective environment, because neither is on the right rails, and both are therefore susceptible to gaps and discontinuities in care. However, while the 'weekend effect' may not be more important for the acutely ill patient than for patients admitted electively to hospital, the acutely ill patient does present special challenges for the healthcare system in terms of volume, risk, cost, and competition for elective pathways.

The acutely ill patient is a major challenge for health services

Acutely ill patients are not usually perceived as a coherent group because of the traditional disease-specific compartmentalisation of specialist practice, but they present a major challenge to healthcare in terms of volume, risk, safety, costs, and impact on elective care pathways. In 2008-9 there were 5M emergency admissions to hospitals in England, a rise of 11.8% since 2004/5, and representing 35% of all hospital admissions [Blunt 2010]. This has increased to 5.2M emergency admissions for 2010 and 2011 [Monthly HES data]. HES data for 2009-10 analysed in the survey by the Royal College of

Physicians [Lambourne 2012] identified 1.3M emergency discharges from acute hospitals in England, with a mean (range) per hospital of 13,550 admissions (5,479-56,853) (reproduced in Table 1).

Emergency admissions are estimated to cost the NHS around £11Bn per year [Blunt 2010]. Given the additional (unquantified) numbers of elective hospital admissions who develop complications during their hospital stay requiring urgent or enhanced levels of care (such as admission to intensive care units), the acutely ill patient population is the single largest group of patients in the NHS.

Acutely ill patients represent a high-risk population

The mortality rate at hospital discharge or 30 days is 0.7% for elective hospital admissions but 3.6% for emergency admissions, with a palliative care diagnosis being coded in only 17.2% of admissions who died (overall, 1%) [HES data 2011]. Mortality risk is much higher for specific conditions such as myocardial infarction (32%) [Smolina BMJ 2012], stroke (around 20%) [McKinney 2011], fractured proximal femur (10%) [Wu 2011], and septic shock (30-40%) [Levy 2010].

Prevention: linking interventions to outcomes in complex systems

Although there is a clear association between suboptimal healthcare organisation and outcome, a causative link between diverse interventions and improvements in care is much less obvious. Several studies demonstrate that behavioural interventions to improve reliability of delivery of best practice may have imperceptible effects on care processes even though outcomes improve over time [Benning 2011; Benning 2011; Matching Michigan Collaboration 2012]. The scope for preventing errors leading to adverse outcomes may be limited, with estimated preventability rates of only 5-6% [Hayward &Hofer 2001, Hogan 2012], though others report higher preventability rates for errors which precede ICU admission [Vlayen 2011]. It is also notable that systems-level interventions designed to facilitate earlier intervention in patients at risk of deterioration, including medical emergency teams or outreach [McGaughey 2007] and 'hospital at night' interventions [Hospital at Night 2010] have been unable to identify strong evidence of effectiveness, but these interventions are specifically designed to work-around the lack of consultant input on wards or out-of-hours.

This lack of apparent impact on outcomes might be real, or a sample size effect, or because systems-level interventions do not distinguish the content of the intervention from the delivery device, or the effect may be confounded by the context in which these interventions are placed. For example, night-time intensivist staffing is associated with reduced case mix-adjusted mortality, but only in ICUs with low-intensity intensivist staffing during the day, [Wallace 2012], suggesting that there may be an optimal dose-response effect in relation to other contextual factors.

A recently reported 8-week block cross-over pilot study in two Canadian ICUs staffed by intensivists has reported that resident night-time intensivist staffing was not associated with detectable improvements in patient outcomes or family satisfaction, but was associated with less burnout symptoms amongst the intensive care specialists and with more role conflict reported by the nursing staff [Garland 2012]. A five-ICU four-hospital study from the USA has reported that an intensivist two-week continuous rota produced greater continuity but more burnout and no improvements in patient outcomes [Ali 2011].

Survival rates within 30 days of procedure or hospital discharge have improved significantly between 2000-2 and 2009-10 for conditions for which there are well-defined pathways and interventions: non-elective surgery, coronary artery bypass surgery, myocardial infarction and stroke. Admission rates and mortality following myocardial infarction have reduced by 27% and 50% respectively [NHS Information Centre report]. Hip fracture mortality rates are also slowly diminishing [Wu 2011], the slower trend perhaps reflecting a combination of the susceptible population (dependent elderly with complex comorbidities) and the lack of well-defined treatment pathways resulting in unreliable clinical management.

Explicatory mechanisms for these improvements (or possible 'protective' effects for weekday versus weekend admission) are likely to include a combination of better preventative medicine, easier access to and use of technical interventions (e.g.: infection control), and better process control – clearly defined patient pathways, high quality local clinical commitment and leadership, better staffing, and more reliable delivery of care. These mechanisms are more likely to reside in a model of care in which the consultant is present at the bedside.

Specific initiatives to improve outcomes

Of the projects on seven day working reported by NHS Improvement, the great majority are focussed on increasing the amount of time senior experienced staff spend in the clinical environment at weekends and at night, with a smaller number examining new technologies such as electronic prescribing, the electronic patient record, and telemedicine [Steventon 2012], all of which are likely to have an increasingly important role in clinical decision support systems. The Health Foundation's Safer Clinical Systems programme is also currently evaluating quality improvement methodologies in clinical handovers, and in prescribing [Safer Clinical Systems 2012].

In addition to these specific interventions, there are several national initiatives focussed on improving team-working and clinical leadership in caring for the acutely ill patient, and developing standards for consultant involvement in the organisation and delivery of healthcare. Seven day consultant working is being considered by Medical Education England's Shape of Medical Training [MEE 2012a] and by the Centre for Workforce Intelligence's Shape of the Medical Workforce [CfWI 2012], and is also being piloted as part of Better Training, Better Care [MEE 2012b] following on from recommendations for more consultant-delivered care to lead and protect postgraduate education in the Temple Report

[Temple 2012]. The Royal College of Physicians (RCP) evaluation of consultant input into acute medical admissions [Lambourne 2012] found that amongst the 61% of responding Trusts, almost half were unable to dedicate the on-call consultant solely to emergency care. Case mix-adjusted mortality rates were lower in hospitals with consultants dedicated to the on-call work, working in blocks of several days, and offering two formal patient reviews a day. RCP standards recommend that consultant physicians managing acute medical admissions should be present in the acute medical unit (AMU) for more than 4 hours a day, should be available on site for 12 hours a day, seven days a week, free of other competing duties, should review patients in AMUs formally twice a day, and that there should be additional research to determine the relationship between organisational structures and workforce on weekend mortality [RCP Standards document 2011].

These standards have been adopted by London Health care for commissioning [NHS London Health Programme 2011]. The Society of Acute Medicine has defined standards for the staffing and organisation of acute medicine units [WMQRS-SAM 2012; Lees 2012] which emphasise the importance of the supporting infrastructure which surrounds consultant-led care; the Society is developing a standard for 12-hour consultant presence in the AMU. The Faculty of Intensive Care Medicine and the Intensive Care Society are also developing joint national standards which will include recommendations for consultant presence in ICUs. This year has seen the launch by the Royal College of Physicians of the Future Hospital Commission [RCP London 2012] which will produce recommendations for the reconfiguration of hospital services particularly those focussed on acute care. The Academy of Medical Royal Colleges (AoMRC) has published an evidence review showing the benefits of consultant-delivered care, and has called for more robust research in this area [AoMRC 2012].

Summary

The weekend effect is very likely attributable to deficiencies in care processes linked to the absence of skilled and empowered senior staff in a system which is not configured to provide full diagnostic and support services seven days a week. The inexorable increase in emergency admissions creates additional tensions in delivering elective care. Diseases with well-defined diagnostic and treatment pathways are less susceptible to the weekend effect, probably because of better process control. The most effective way to improve outcomes for patients admitted to hospital at weekends is to ensure that care is delivered by adequately supported consultants and monitored using care pathways.

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APPENDIX C
PUBLISHED STATEMENTS ON SEVEN DAY CONSULTANT PRESENCE

Medical Royal College, Organisation or Specialty	Statement	Document / Date
Anaesthetists		Guidelines for the provision of Anaesthetic Services, 2009
Association of Surgeons of Great Britain and Ireland	The provision of protected and separately staffed, consultant-based theatre access from 15.00 to 22.00 would make a considerable impact on delays and outcomes.	Emergency General Surgery, 2012
Emergency Medicine	Every Emergency Department should have at least 10 EM consultants to provide up to 16 hours of direct patient care seven days a week.	Emergency Medicine Operational Handbook – The Way Ahead, December 2011
Geriatric Medicine		NCEPOD – An age old problem, 2010
	Discharge to an older persons normal residence should be possible within 24 hours, seven days a week.	The Silver Book, 2012
Haematology	Haematologists offer a broad, uninterrupted clinical and advisory service for all sub-specialty problems 24 hours a day.	Haematology Consultant Workforce – the next ten years, 2008
Intensive Care Medicine	Patient Care Directed By A Consultant Intensivist Consultant Intensivist Patient Review Within 12 Hours Of Emergency Admission to ICU Routine Multi-Disciplinary Ward Round every day of the year Standardised Handover Procedure For Discharging Patients	Submission to National Institute for Clinical Excellence October 2011
Obstetricians and Gynaecologists	Hours of consultant presence defined by unit size – incorporated into NHS LAs in 2012	Safer Childbirth 2007

Medical Royal College, Organisation or Specialty	Statement	Document / Date
Paediatrics and Child Health		Consultant Delivered Care – An evaluation of new ways of working in paediatrics, April 2012
Pathologists		Medical & Scientific Staffing of NHS Pathology Departments, 1999
Physicians, London	Any hospital admitting acutely ill patients should have a consultant physician on site for at least 12 hours per day seven days per week, with no other duties scheduled during that time	College Council Position Statement, November 2010
Psychiatrists		Safe patients – High quality Services: A guide to job descriptions and job plans for Consultant Psychiatrists, May 2012
Radiologists		Investing in the Clinical Radiology Workforce – the Quality and Efficiency Case, June 2012 Guide to Job Planning in Clinical Oncology – second edition
Society of Acute Medicine		Acute Medicine Toolkit, 2012
Stroke medicine	All suspected stroke patients to have 24/7 access to immediate assessment and thrombolysis where appropriate.	National Stroke Strategy, 2007
Surgeons, England	Recommendations include: Adequate emergency theatre time throughout the day Timely input of senior decision makers A consultant-led service across all specialties	The Higher Risk General Surgery Patient, 2011 Emergency Surgery – Standards for unscheduled surgical care, 2011

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